

Draft Survey Questions for the Sea-level Rise Planning Database (AB2516, Gordon)
California Ocean Protection Council
DRAFT 5/6/15 for public comment

Public Comment on Draft Survey

Please send comments by May 20, 2015 to SLR.Database@resources.ca.gov (preferred), or mailed to:

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In addition to suggestions on revisions to the content of the questions, we are interested in feedback on the format and type of responses (e.g. drop-down menu options). We are sensitive to needing to scale back the number of questions, so please provide feedback on questions that you think are least useful, unclear, or difficult to answer.

Background and Credits

The Ocean Protection Council and the California Natural Resources Agency have developed this survey based on the AB2516 Sea Level Rise Planning Database legislation and through recommendations provided by Megan M. Herzog, Susanne C. Moser, Sarah Newkirk, along with consultations with staff from the UCLA's School of Law's Emmett Institute on Climate Change and the Environment, Resources Legacy Fund, Stanford University, and the Center for Ocean Solutions.

Overview and Goals

The Ocean Protection Council and the California Natural Resources Agency are collecting information from entities named in Public Resources Code Division 20.6 §30961-30968 generated by AB2516 (Gordon) to create the Sea Level Rise Planning Database. These questions are designed to support the following goals:

- A. **Assess implementation of key state policies**, including:
 - i. *Governor Brown's Executive Order B-30-15*;
 - ii. *State of California Sea-level Rise Guidance Document and Ocean Protection Council Resolution on Sea-level Rise (2011)*; and
 - iii. *Safeguarding California Plan (2014) and Ocean Protection Council Resolution on Implementation of the Safeguarding California Plan (2014)*.
- B. **Provide information on sea-level rise planning activities** to support coordination, collaboration and prevent redundancy.
- C. **Assess aspects of successful adaptation with an emphasis on capacity.**

Draft Survey Questions

A. Assessment of Implementation of Key State Policies:

Name of entity:

Are you a state agency? (yes/no)

If yes, then answer the following questions in Section A related to state policy for state agencies.

For **non-state entities**, are you implementing a project with state funds, or on state lands, including those granted by the Legislature? If yes, please answer the following questions (A.2-A.3) related to the *Ocean Protection Council Resolution on Sea-level Rise (2011)* and *Ocean Protection Council Resolution on Implementation of the Safeguarding California Plan (2014)*.

1. Governor's Executive Order B-30-15

Drop down menu: yes, somewhat, not at this time, not applicable, uncertain

- a. Are you taking sea-level rise into account in your planning and investment decisions?
- b. Do you employ full life-cycle cost accounting that includes consideration of the need for future adaptation to sea-level rise to evaluate and compare infrastructure investments and alternatives?
- c. Are your entity's planning and investment decisions guided by the following principles?
 1. Priority should be given to actions that both build climate preparedness and reduce greenhouse gas emissions;
 2. Where possible, flexible and adaptive approaches should be taken to prepare for uncertain climate impacts;
 3. Actions should protect the state's most vulnerable populations; and
 4. Natural infrastructure solutions should be prioritized.

2. OPC Resolution on Sea-level Rise (CA Sea-level Rise Guidance Document)

Are you incorporating consideration of the risks posed by sea-level rise into the following types of activities for areas or programs potentially affected by sea-level rise?

(Drop down menu: yes, somewhat, not at this time, not applicable, uncertain)

- a. Flooding and inundation vulnerability assessments,
- b. Shoreline change (erosion) studies,
- c. Land use planning,
- d. Design of development projects,

- e. Permitting of development projects,
- f. Implementation of development projects,
- g. Strategic planning
- h. Capital planning,
- i. Other funding decisions,
- j. All relevant decision-making
- k. Other: _____

3. Safeguarding California Plan

(Drop down menu: yes, somewhat, not at this time, not applicable, uncertain)

- a. Are you encouraging innovative design of new structures and infrastructure in areas vulnerable to sea-level rise, storms and erosion?
- b. Are you giving priority to green or nature-based solutions that use natural processes and habitats to reduce risk from flooding and erosion?
- c. Are you building, planning to build, leasing, funding or permitting projects that include the following approaches?
 - 1. managed retreat,
 - 2. living shorelines,
 - 3. low-impact development,
 - 4. other designs that use natural processes and habitats to reduce risk from flooding, inundation and erosion.
- d. Are you building, planning to build, leasing, funding or permitting any significant **new** structures or infrastructure that will require new protection from sea-level rise, storm surges or coastal erosion during the expected life of the structure, beyond routine maintenance of existing levees or other protective measures?
- e. If you answered yes or somewhat to question d, are you only doing so in cases where there is a compelling need (*e.g.* coastal-dependent marine terminals or marinas that must necessarily be sited in areas at risk)?
- f. If you are building or planning to build, leasing, funding, or permitting structures that will require additional new expenditures for sea-level rise protection during the expected life of the new structures, are you ensuring that the project:
 - 1. Minimizes risks through siting, design and engineering?
 - 2. Ensures viable funding sources for building, monitoring and maintaining new sea- level rise protections?
 - 3. Ensures that any new protections must consider how risk changes over

time, ensures that actions to reduce risk in the short-term do not increase risk in the long-term; and ensures that any new protections are capable of being augmented over time; designs protection in a manner that maximizes conservation of natural resources and public access?

B. Provide information on sea-level rise planning activities to support coordination, collaboration and prevent redundancy.

AB2516 calls for you to provide us with information on “studies, programs, modeling, mapping, cost-benefit analyses, vulnerability assessments, adaptation, assessments, and local coastal programs . . . that have been developed for the purposes of addressing or preparing for sea level rise.” Please provide the following information for each of the projects fitting this description that are being conducted by your entity, or which have been completed within the last five years, since July 1, 2010. There may be multiple projects submitted by each entity.

1. What is the name of the project that was developed for the purpose of addressing or preparing for sea-level rise?
2. Select which of the following describe the type of project related to sea-level rise planning: (checklist)
 - Modeling
 - Mapping
 - Cost-benefit analysis
 - Vulnerability assessment
 - Risk assessment
 - Analysis of adaptation options
 - Design of adaptation project
 - Local Coastal Program development or update (including Land Use Plan or Implementation Plan for certification by the Coastal Commission)
3. What was the purpose of the project? (long text answer)
4. What is the name of a contact person for this project? (short text answer)
5. What is the email address of the contact person for this project? (short text answer)
6. Who were contributors or collaborating partners on this project?
(Drop down menu including common state and federal partners such as: NOAA, USGS, USFWS, Coastal Conservancy, Coastal Commission, BCDC, Ocean Protection Council, State Lands Commission, State Parks, Cal Trans, Sea Grant and “other” with short text answers)
7. Was this project related to sea-level rise planning required to be developed by local, state or federal law? (Drop down menu: yes, no, uncertain)

8. Please select all of the counties that were partially or fully included as part of the geographic scope of the project. (drop-down list)
9. Please select the cities that were partially or fully included as part of the geographic scope of the project. (drop-down list)
10. Please indicate the objectives for this project - Select all that apply:
 - Governance
 - Environmental
 - Economic
 - Social equity
 - Public education
11. Please indicate the land use types or considerations that were addressed as part of the sea-level rise planning project: Select all that apply:
 - Wetlands
 - Other coastal and estuarine habitats
 - Residential development
 - Commercial development
 - Industrial development
 - Transportation structures
 - Energy facilities
 - Other utilities
 - Wastewater treatment facilities
 - Emergency management facilities
 - Public access and recreation
 - Contaminated lands
 - Other: (short text answer)
12. What was the total cost to conduct this project? (short text answer)
13. What was the source of funding for this project? (drop down menu: Federal grant, federal loan, state grant, state loan, private grant, self-funding, other: (short text answer))
14. What sea-level rise scenarios were used as part of the project? Please include the time horizon associated with each scenario, if a time horizon was used. (short text answer)

15. Did the project include analysis of impacts from a SLR scenario that represents the upper limit of the range in the following table for the relevant region and time horizon? (drop-down menu: yes, no, uncertain)

Time Period	North of Cape Mendocino	South of Cape Mendocino
2000 - 2030	-4 to 23 cm (-0.13 to 0.75 ft)	4 to 30 cm (0.13 to 0.98 ft)
2000 – 2050	-3 to 48 cm (-0.1 to 1.57 ft)	12 to 61 cm (0.39 to 2.0 ft)
2000 – 2100	10 to 143 cm (0.3 to 4.69 ft)	42 to 167 cm (1.38 to 5.48 ft)

Table taken from National Research Council’s *Sea-Level Rise for the Coasts of California, Oregon, and Washington* (2012)

16. Do you include analysis of the following factors as part of your assessment of sea-level rise? (Drop down menu: yes, somewhat, not at this time, not applicable, uncertain)

- Storms
- Shoreline change
- Land elevation change (uplift/subsidence)
- Inland flooding

16. Please provide a link to an internet site that can provide further information on the project. (short answer text)

C. Assessment of aspects of successful adaptation with a focus on capacity:

1. Capacity

- a. What is the approximate length of the shoreline that your entity manages or is concerned about (i.e., entire length of coastal waterfront, including ocean, bay, lagoon, and estuarine shorelines, within your jurisdictional limits)? [Drop-down menu with options such as entire state, outer coast excluding SF Bay, SF Bay, etc. and “other” with a short answer numeric entry for number of miles.]
- b. What is the total amount of funds available to your entity during this fiscal year for activities related to addressing sea-level rise and related coastal climate impacts (e.g., vulnerability or risk assessments, options assessments, planning activities, implementation of any adaptation-related tasks, monitoring and evaluation, stakeholder engagement and communication throughout the process etc.)? [Short answer text.]
- c. In the past six months, how much funding has your entity sought from each of the following for the purposes of addressing sea-level rise and related coastal climate impacts:
 - 1) state funding, [Short answer text.]

- 2) federal funding, [Short answer text.]
 - 3) private funding, [Short answer text.]
 - 4) foundation funding, and [Short answer text.]
 - 5) funding from non-grant sources, including general funds, general operating funds and/or bond funds? [Short answer text.]
- d. In the past six months, how much funding has your entity received from each of the following for the purposes of addressing sea-level rise and related coastal climate impacts:
- 1) state funding, [Short answer text.]
 - 2) federal funding, [Short answer text.]
 - 3) private funding, [Short answer text.]
 - 4) foundation funding, and [Short answer text.]
 - 5) funding from non-grant sources, including general funds, general operating funds and/or bond funds? [Short answer text.]
- e. What is the estimated gap between the funds available to your entity and the funds needed to address sea-level rise and related coastal climate impacts in the next **year**? [Short answer text.]
- f. What is the estimated gap between the funds available to your entity and the funds (including for staff) needed to address sea-level rise and related coastal climate impacts in the next **five years** [Short answer text]?
- g. Please comment on the key challenge(s) your entity has faced in seeking, obtaining, and utilizing funding from the above sources for the purpose of addressing sea-level rise and related coastal climate impacts. [Long answer text.]

Staffing Capacity. The following questions address the number of staff working on projects of which addressing sea-level rise is an express purpose (either in whole or in part) or an incidental purpose.

- h. How many staff are currently working at your entity at least one-quarter time to develop or advance policies, programs, or projects of which addressing sea-level rise is an express purpose (either in whole or in part)? [short answer text]
- i. What is the sum of staff working at your entity to develop or advance policies, programs, or projects of which addressing sea-level rise is an express purpose (either in whole or in part), with the sum being the total of percentage of staff devoted to working on projects which address sea-level rise? For example, if there are two people working half time and one person working one-quarter time, the sum is 1.25 of a staff person. [short answer text]
- j. How many staff are currently working at your entity at least one-quarter time to develop or advance policies, programs, or projects of which addressing sea-level rise is an incidental purpose (e.g., LCP updates)? [Short answer text.]

- k. What is the sum of staff working at your entity to develop or advance policies, programs, or projects of which addressing sea-level rise is an incidental purpose (either in whole or in part), with the sum being the total of percentage of staff devoted to working on projects which address sea-level rise? For example, if there are two people working half time and one person working one-quarter time, the sum is 1.25 of a staff person. [Short answer text.]
- l. How many additional staff would your entity need to fully address sea-level rise? [Short answer text.]
- m. How many staff at your entity have addressing sea-level rise, climate change, and/or coastal climate adaptation expressly written into their job description? [Short answer text]
- n. Please comment on your entity's greatest perceived staffing and skill-building need(s) in terms of stakeholder engagement and communication expertise. [Long answer text.]

Institutional Capacity.

- o. Indicate which of following institutional mechanisms and pathways your entity is currently utilizing to address sea-level rise and related coastal climate impacts. [Check all that apply.]
 - 1) strategic plan,
 - 2) capital investment plan,
 - 3) funding guidelines,
 - 4) general plan update,
 - 5) hazard mitigation plan,
 - 6) LCP,
 - 7) climate action plan,
 - 8) resilience, adaptation, or sustainability plan, and/or
 - 9) other. [List.]
- p. Please indicate which of following institutional mechanisms and pathways your entity currently is in the process of developing or updating to address sea-level rise and related coastal climate impacts. [Check all that apply.]
 - 1) strategic plan,
 - 2) capital investment plan,
 - 3) funding guidelines,
 - 4) general plan update,
 - 5) hazard mitigation plan,
 - 6) LCP,
 - 7) climate action plan,
 - 8) resilience, adaptation, or sustainability plan, and/or
 - 9) other. [List.]

2. Process

a. Which category best describes your entity's current phase of sea-level rise planning and implementation? [Multiple choice.]

- not yet begun,
- understanding (e.g., assessing risks and vulnerabilities),
- planning (e.g., assessing adaptation options),
- implementing, or
- monitoring and evaluating implemented options.

b. If your entity has begun considering the impacts of sea-level rise, approximately how long have you done so? [Multiple choice.]

- not applicable,
- less than 6 months,
- 6 months to 1 year,
- 1-3 years,
- 3-5 years,
- more than 5 years.

3. Decision-Making and Information

a. **Information Used.** Please list the top three most-referenced resources (i.e., information, reports, tools, datasets, maps, computer models, guidance documents, etc.) that your entity has utilized for the purposes of each of the following:

- 1) evaluating historical coastal hazards,
- 2) projecting future sea-level rise and related coastal climate impacts (e.g., which climate change scenarios, sea-level rise projections, storm scenarios, any downscaled or locally modeled sea-level rise impacts), and
- 3) assessing physical, ecological and socioeconomic vulnerability or risk to projected sea-level rise and related coastal climate impacts.

b. **Approaches Used.** To your knowledge, which of the following types of assessments has your entity used to determine its risks and adaptation options? [Check all that apply.]

- 1) scenarios analysis,
- 2) robust decision-making framework,
- 3) climate impacts or risk assessment,
- 4) vulnerability assessment,
- 5) cost-benefit or cost-effectiveness analyses, and/or
- 6) valuing ecosystem services analyses.

c. **Information Needs.** Rank the following types of information in terms of their priority as an informational need for your entity. [Rank on a scale of 1-3: highest priority, medium priority, lowest priority.]

- locally specific coastal flooding maps (30-100 years out, with uncertainty),

- locally specific coastal erosion information (30-100 years out, with uncertainty),
 - regionally specific projections of temperature extremes (extreme lows, extreme highs, with seasonal detail),
 - regionally specific projections of precipitation extremes (very dry, very wet periods; with seasonal detail),
 - regionally specific projections in storm regimes (with uncertainty),
 - locally specific ecological information,
 - legal guidance or analysis,
 - cost estimates (with uncertainty) of different adaptation options.
- Other [long text answer]

4. Actions Taken/Implementation Achieved to Date

a. Has your entity taken significant action since January 1, 2010 to: [Yes/No/Currently in Progress/Do Not Know]

- improve staff's understanding of sea-level rise and other coastal climate impacts and/or adaptation planning and implementation (e.g., trainings, hiring experienced staff, information exchanges),
- seek or obtain funding for actions related to sea-level rise and other coastal climate changes,
- create work groups that will focus on adaptation-related efforts,
- develop a stakeholder engagement process,
- educate stakeholders or the broader public,
- assess vulnerability to sea-level rise and other coastal climate impacts,
- assess risks associated with sea-level rise and other coastal climate impacts,
- set adaptation objectives or develop a vision for the entity successfully adapting to sea-level rise and coastal climate change,
- develop and evaluate potential adaptive responses to projected sea-level rise and other coastal climate impacts,
- select adaptation strategies or actions,
- integrate adaptation strategies, plans or actions into existing policies, hazard mitigation plans, or other plans,
- implement adaptation strategies, plans or actions,
- monitor existing adaptation strategies, plans or actions, or
- modify existing adaptation strategies, plans or actions?

b. Does you have an express policy or policies to address sea-level rise and other coastal climate changes? [Yes/No/Do Not Know; if yes, request copies of those policies.]

5. Barriers Overcome

a. Whether or not your entity has already taken action to prepare for the possible impacts of climate change, how much of a hurdle has each of the following issues been in your efforts to date? [Rank on a scale of 1-3: big hurdle, small hurdle, not a hurdle.]

- lack of funding to implement a plan,
- lack of funding to prepare a plan,
- insufficient staff resources to analyze relevant information,
- current pressing issues are all-consuming,
- lack of technical assistance from state or federal agencies,
- lack of public demand to take adaptation action,
- internal disagreements on the importance of climate change,
- lack of social acceptability of adaptation strategies,
- opposition from stakeholder groups,
- lack of clarity about what adaptation options are available,
- lack of a legal mandate to take climate change impacts into account,
- lack of access to relevant information and data,
- the magnitude of the problem is too overwhelming to address,
- the science is too uncertain,
- legal pressures to maintain the status quo,
- lack of clarity about how climate change relates to staff's jobs.

6. Outcomes

Measuring Success.

Does your entity have an established mechanism(s) for evaluating the success of adaptation projects? [Yes/No/Do Not Know; if yes, describe those mechanisms in a long answer text box.]

Entity's Desired Adaptation Outcomes.

Please describe in your own words your entity's desired adaptation outcomes, if it has been described in any policy documents by your entity. [Long answer text including reference to policy document]