



RSAP Webinar 2 Exercise: Using the RSAP Atlas to Assess Exposure and Identify Priority Areas

Overview

This exercise is intended to walk you through the steps to assess exposure of your plan area to the Coastal Flood Hazards and Sea Level Rise Scenarios and identify priority areas using the RSAP Atlas.

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Resources

RSAP Atlas <https://rsap-atlas.bcdc.ca.gov/>

RSAP <https://www.bcdc.ca.gov/wp-content/uploads/sites/354/2024/12/regional-shoreline-adaptation-plan-spreads.pdf>

Glossary <https://www.bcdc.ca.gov/wp-content/uploads/sites/354/2024/12/regional-shoreline-adaptation-plan-spreads.pdf#page=104>

Introduction

The RSAP Element C: Vulnerability Assessment requires a summary of shoreline exposure to the Coastal Flood Hazards and Sea Level Rise Scenarios. It also requires identification of priority areas based on specific criteria, and assessment of vulnerability within these priority areas. To address these requirements – detailed in RSAP Element C1-a – the RSAP Atlas provides exposure analysis maps and summary tables specific to your jurisdiction. After identifying exposed areas, additional criteria must be applied that identifies priority areas as required by RSAP Element C2-a.

Priority areas should be identified using the following criteria:

- Exposure to the 0.8 ft (2050) sea level rise scenario (C1).
- Applicable Strategic Regional Priorities.
- Vulnerable communities (A4).
- Baylands habitats (B2-c).
- Locally identified significant high priority populations, assets, and services, as applicable.

Only identified priority areas are then required to undergo vulnerability assessment – a combined analysis of sensitivity, adaptive capacity, and consequence – as specified in RSAP Element C2-b. This exercise simulates the steps you might take to evaluate a subset of the information needed for identifying priority areas.

Note: This exercise does not comprehensively address all RSAP requirements, evaluate all data layers required by the priority area identification criteria, or demonstrate the additional step of assessing vulnerability of the priority areas as required in RSAP Element C2-b. The Equity Assessment Standard also requires that communities are involved in the identification of priority areas, specifically to identify locally significant priorities. This step is not included in this exercise.

Scenario

- As a planner for your jurisdiction, you are using the RSAP Atlas to help you comply with the RSAP Element C: Vulnerability Assessment.
- You will be generating summaries of exposure for the Critical Infrastructure and Services Topic Area using the Plan Assistant tool.
- Then, you will review mapped Strategic Regional Priorities to identify potential priority areas using the Map Layers tool.

Estimated completion time: Approximately 15 minutes

Exercise Instructions

Step 1:

In this step, use the **Plan Assistant** tool to map and summarize the exposure of Critical Infrastructure and Services to the 0.8 ft (2050) Sea Level Rise Scenario as required in RSAP Element C1-a.

In the steps below, select the following inputs to apply filters, display the desired data layers in the map, and generate results for your jurisdiction:

- Choose **jurisdiction type**.
- Choose **your jurisdiction**.
- Choose RSAP Element **C: Vulnerability Assessment**.
- Choose the **Critical Infrastructure and Services** RSAP topic.
- Choose the **0.8 ft (2050) SLR Scenario**.

Note: The 0.8 ft (2050) sea level rise scenario is required for identifying priority areas (RSAP Element C2-a).

- Select **Submit**.

Learning Outcome of Step 1:

In Step 1, you used the Plan Assistant to generate exposure analysis results and map data layers specific to your jurisdiction. In an actual planning process, you would need to repeat these steps for each of the Minimum Categories and Assets (Step 1d) and each of the required Sea Level Rise Scenarios (Step 1e).

The screenshot shows the 'Plan Assistant' interface. At the top, there is a title bar with a search icon and the text 'Plan Assistant'. Below this is a descriptive paragraph: 'Use Plan Assistant to search for data needed in a Subregional Plan. Search by Plan element, topic, and sea level rise scenario. Create maps, tables, and summaries that may be used in Plan submittals. [Learn more.](#)'

The main content area is titled 'Filter' and contains five dropdown menus:

- 'What type of jurisdiction are you planning for?' with 'County' selected.
- 'Which jurisdiction are you planning for?' with 'Alameda' selected.
- 'What RSAP element are you working on?' with 'C: Vulnerability Assessment' selected.
- 'What topic are you interested in?' with 'Critical Infrastructure and Services' selected.
- 'What sea level rise scenario do you want to see?' with '0.8 ft (2050) SLR Scenario' selected.

At the bottom of the filter section, there are two buttons: a blue 'Submit' button and a red 'Reset' button.

Step 2:

In this step, you will explore the exposure analysis results and map data layers for your jurisdiction as required in RSAP Element C1-a. In the steps below, review the contents in each of the Planning Assistant Results tabs (Tables, Layers, Stats).

a. Select the Tables tab and find a table that has rows of information. **Explore the tables** and make note of any exposed assets.



Note: Tables can be exported from the RSAP Atlas using the Export to CSV button.

- **QUESTION: WHAT ARE THE EXPOSED CRITICAL INFRASTRUCTURE AND SERVICE ASSETS IN YOUR JURISDICTION? (Examples: Wastewater Treatment Facilities, Power Plants, Fire Stations)**
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b. On the map, view the legend to familiarize yourself with the flood hazard and asset symbology. **Explore the exposure map** for your plan area.

Note: Expand the map legend by clicking and dragging the bottom right corner of the legend pane.

c. On the map, click on an asset to get more detailed information from the popup, including the “0.8 ft SLR Scenario Hazard Type”.

- **QUESTION: WHAT HAZARD TYPE(S) IS THE ASSET EXPOSED TO FOR THE 0.8 ft (2050) SLR SCENARIO? (Examples: Tidal Indundation with Storm Surge, Shallow Groundwater)**
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d. Select the “Stats” tab and scroll to explore the available exposure summary statistics.

- **QUESTION: WHAT IS THE PERCENTAGE OF AN EXPOSED ASSET IN YOUR JURISDICTION? HOW DOES THAT COMPARE TO THE REGION? (Example: 1.4% - Number of Exposed Power Plants in Napa COUNTY compared to REGIONAL total)**

e. Collapse the Results window by **clicking the ‘carrot’ on the top right** of the window.

Learning Outcome of Step 2:

In Step 2, you reviewed the exposure analysis tabular results, map layers, and summary statistics specific to your jurisdiction.

Step 3:

In this step, use the **Map Layers** tool to add information to your exposure analysis to inform the identification of priority areas within your jurisdiction. In the previous step, you already identified assets that are exposed to the 0.8 ft sea level rise scenario, which is a required criterion for priority areas. In this step, you will be identifying any applicable Strategic Regional Priorities* (SRP), another criterion for priority areas that is outlined in RSAP Element C2-a.

**Note: Strategic Regional Priorities are key policies that address regionally significant issues stemming from the One Bay Vision. “Applicable” SRPs – required in RSAP Element C2-a – are those that are located within your jurisdiction. Example with Critical Infrastructure and Services - One Bay Vision: As sea levels rise, critical services are reliable; Strategic Regional Priority: reliable critical and emergency services.*



a. Navigate down to the **Map Layers** tool. **Expand the Map Layers tool** and navigate to the **Strategic Regional Priorities** group. **Click the dropdown ‘carrot’** to the left of the checkbox to expand the group layer.



- b. Click** the following SRP group layer boxes:
- “Ecosystem Health and Resilience”
 - “Transportation and Transit”

Note: The “Ecosystem Health and Resilience” SRP group layer includes “Existing Baylands Habitats”, a required dataset in the criteria for identifying priority areas.

c. Use the legend and map to note the types of features located within your jurisdiction and areas where these features overlap in proximity.

d. On the map, locate Transportation and Transit assets near Existing Baylands Habitats and Critical Infrastructure and Services assets.

Note: For the “Regional Movement of People and Goods” SRP, regionally significant transportation and transit includes highways, passenger rail and stations, freight rail, ferry terminals exposed to the 6.6 ft (2100 High) SLR scenario as well as seaports and airports designated as priority use areas in the SF Bay Plan.

- **QUESTION: WHAT SHORELINE AREAS SHOW OVERLAP BETWEEN EXPOSED CRITICAL INFRASTRUCTURE, TRANSPORTATION/TRANSIT ASSETS, AND BAYLANDS HABITATS? (Describe geographic location)**
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Learning Outcome of Step 3:

In Step 3, you combined Strategic Regional Priorities layers with the exposure analysis from Step 2 and identified locations where multiple SRP layers overlapped in proximity to exposed Critical Infrastructure and Services assets.

Note: the SRP map layers focus on regionally important assets, and they do not include all assets required to be analyzed in a subregional plan.

End of Exercise

Exercise Review & Insights for Next Steps:

In this exercise, you assessed exposure of your plan area to the Coastal Flood Hazards and Sea Level Rise Scenarios using the RSAP Atlas. You also applied an additional map layer required in the RSAP Element C2-a criteria to inform a preliminary identification of priority areas.

In a real planning process, you would also consider layers representing all Minimum Categories and Assets exposed to the 0.8 ft (2050) sea level rise scenario (C1), all applicable Strategic Regional Priorities, vulnerable communities (A4), Baylands habitats (B2-c), and locally identified significant high priority populations, assets, and services, as applicable. You would also include the community in the identification of priority areas, as required by the relevant Equity Assessment Standard.

For the complete list of Minimum Categories and Assets that must be assessed in subregional plans, please see RSAP Section 3.3.2 (pg. 147).

Only identified priority areas are then required to undergo vulnerability assessment (sensitivity, adaptive capacity, and consequence), as specified in RSAP Element C2-b.

To learn more about the RSAP planning process and other resources to help you get started, please visit BCDC's [Local Sea Level Rise Plans webpage](#).



The RSAP Atlas is in Beta. How is it working? We want to hear from you!
Reach out to GIS@bcdc.ca.gov with your feedback or questions.