



Our Coast, Our Future

Planning for Sea Level Rise and Storms in the San Francisco Bay Area

Kelley Higgason, Project Coordinator, GFNMS
GFNMS Advisory Council Meeting
November 20, 2013



Goal

Provide science-based, decision support tools to help understand, visualize, and anticipate coastal climate change impacts to Bay Area communities and ecosystems.



Objectives

Model vulnerabilities to SLR & storm hazards

- Seamless DEM (2 m res); 40 SLR and storm scenarios using CoSMoS
- Inputs: water levels, wave heights, flooding + vertical land motion, flood flows, Delta discharge, wind waves for SF Bay

Assess stakeholder information needs

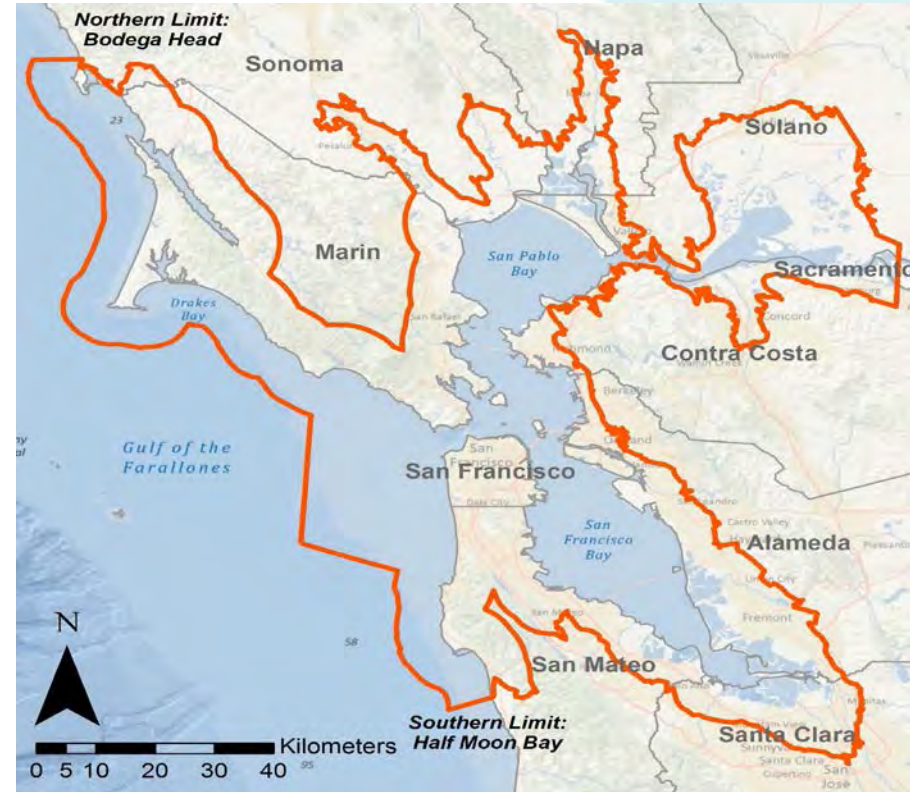
- 3 Scoping Workshops
- 2 Outer Coast Focus Group Meetings
- Quarterly SF Bay Advisory Committee Meetings

Map vulnerabilities at appropriate scale for management action

- Online mapping tool including infrastructure and ecosystem vulnerabilities

Project Scope

- Outer Coast Nov 2010
- SF Bay Nov 2011, expanded:
 - Geographic scope
 - Model inputs
 - Stakeholder engagement
 - Partners
 - Technical Assistance



Diverse Team

Team Leads



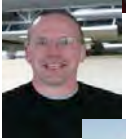
Barnard, USGS

- DEM and scenarios with CoSMoS



Ballard/Fitzgibbon, Point Blue

- Online decision support tools



Higgason, GFNMS

- Project management



Psaros, Coravai LCC

- Collaborative process

Other Partners

- Coastal Services Center
- SF Bay NERR
- National Park Service
- EBM Tools Network

Funders

- NOAA Climate Program Office
- NERRS Science Collaborative

Assess Vulnerabilities with Data and Flood Map

- Species protection plans
- Habitat restoration plans
- Resource management plans
- Municipal plans (General Plans, Climate Action Plans, Local Coastal Plans)
- Infrastructure maintenance plans (levees, roads, etc)



WELCOME

Our Coast Our Future (OCOF) is a collaborative, user-driven project focused on providing San Francisco Bay Area coastal resource and land use managers and planners locally relevant, online maps and tools to help understand, visualize, and anticipate vulnerabilities to sea level rise and storms within the bay and on the outer coast from Half Moon Bay to Bodega Bay.

Beta Version: The OCOF web site is now ready for use on the outer coast. We welcome your feedback and want to know what you think of this project and research.

What's New?

The Beta version of the Our Coast Our Future (OCOF) website is now available.



Ocean Beach



Embarcadero



Rio Del Mar

Frequently Asked Questions about Our Coast Our Future (OCOF)

Please click on a question to reveal the answer.

GENERAL

What is OCOF?

How can the OCOF scenario models and interactive tools help me?

How is this tool different from other sea level rise mapping efforts?

1. **NOAA Sea-level Rise Viewer:** The NOAA Coastal Services Center's Sea Level Rise and Coastal Flooding Impacts Viewer provides users the ability to visualize areas potentially impacted by sea level rise side-by-side with other data such as critical infrastructure, roads, ecologically sensitive areas, demographics, and economics. This is a sophisticated screening level tool that models coastal flooding from the combination of a high tide and sea level rise only. The data and maps do not include storm surges nor do they account for erosion, subsidence, or future construction. The tool uses a modified bath-tub approach that accounts for local tidal variability using the NOAA VDATUM model and includes hydraulic connectivity.
2. **FEMA California Coastal Analysis and Mapping Project (CCAMP):** The CCAMP study area covers the entire California open Pacific coast, including the nine San Francisco Bay Area counties. The new detailed coastal engineering analyses and mapping will revise and update the flood and wave hazard data shown on the coastal Flood Insurance Study reports and Flood Insurance Rate Maps based on existing conditions for each of the twenty coastal counties. Through Risk MAP, CCAMP will develop enhanced products and tools to help communities understand and mitigate existing coastal flood hazards and risks, while OCOF's online decision support tools project future flood hazards and risks resulting from sea level rise and storms within the San Francisco Bay Area.

What is the difference between PRBO Future San Francisco Bay Tidal Marsh website and OCOF?

If I have questions about sea level rise in San Francisco Bay, should I use OCOF or PRBO's Sea Level Rise website?

GEOGRAPHIC COVERAGE

What is the current geographic extent and resolution of the Digital Elevation Model and decision support tool?

How did you choose the OCOF project boundary?

DATA

Which LIDAR data do you use?

Our Coast Our Future Web Tool Tutorial



PRBOConsSci · 19 videos

2 views



Subscribe 20

0 likes 0 dislikes

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Add to



Published on Feb 18, 2013

Watch this tutorial to learn how to use the tools on this website. The tools are aimed at San Francisco Bay Area coastal resource and land use managers and planners.

Show more

All Comments (0)

Sign in now to post a comment!



Rich Stallcup (1944-2012) Memorial Tribute, Jan

by PRBOConsSci
127 views



Rich Stallcup Visual Tribute (8 min)- PRBO

by PRBOConsSci
188 views



PRBO San Francisco Bay Sea Level Rise Tool

by PRBOConsSci
44 views



Badger Foraging in CA Grasslands

by PRBOConsSci
360 views



STRAW Virtual Summit 2011: Park School at

by PRBOConsSci
178 views



Living the Legacy

by PRBOConsSci
78 views



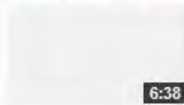
A Tour of Pickleweed Park by students in

by PRBOConsSci
158 views



Top 3 Most Common Birds

by PRBOConsSci
86 views



How to Find Birds, BIG and small, at

by PRBOConsSci
67 views

OCOF
OUR COAST OUR FUTURE
Interactive Map

get started
clear
recenter

1) Choose a topic.

Flooding shows the extent of flooding with SLR and storm surge.

Flooding Waves
Current Uncertainty

[What do the Topics represent?](#)

2) Choose a Sea Level Rise (cm) level.

0 25 50 75 100 125
150 175 200 500

[What Sea Level Rise scenario should I use?](#)

3) Choose a storm scenario frequency

None Annual 20 year 100 year

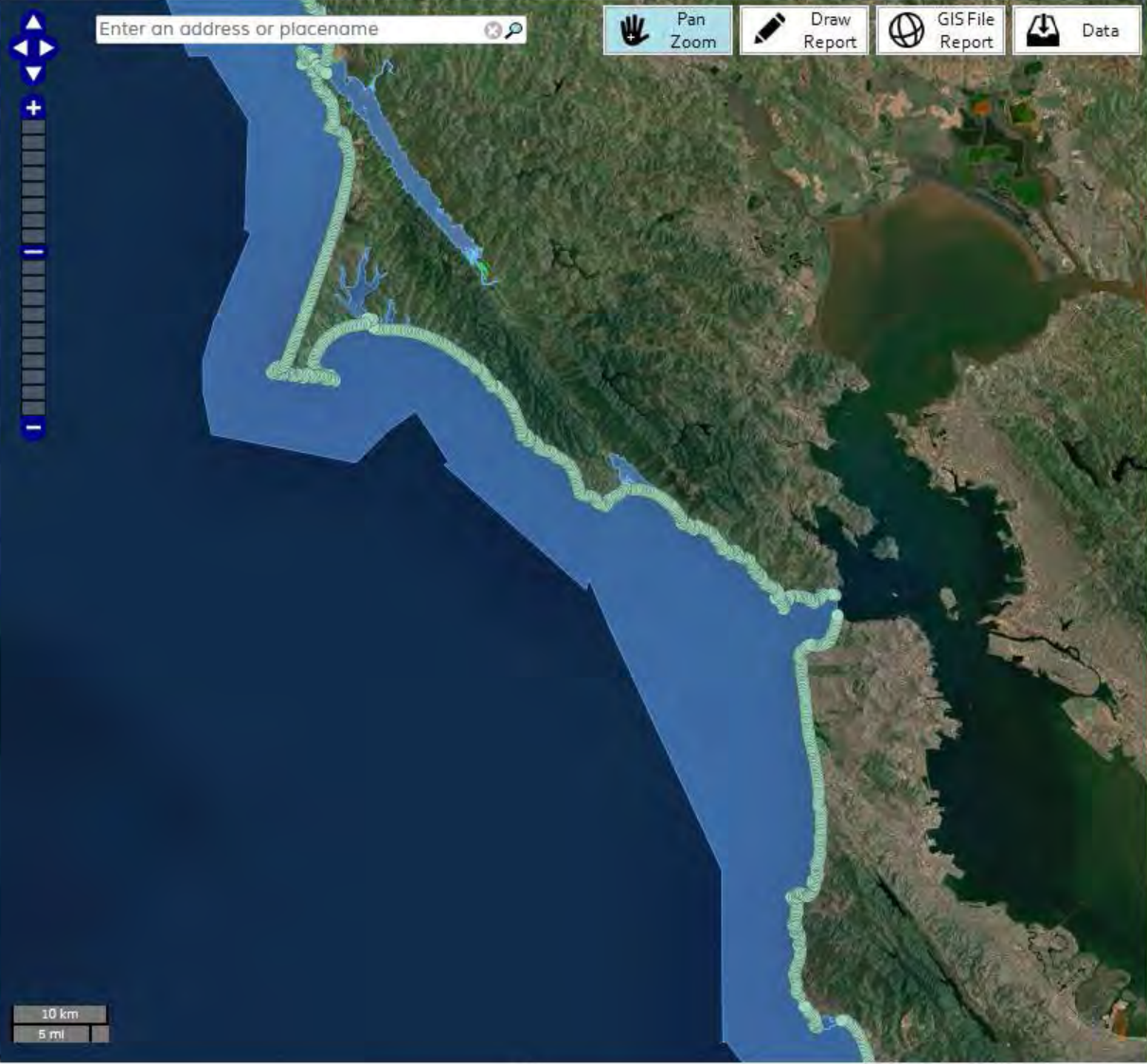
4) Choose other layers to view with topic data.

- Placenames
- Land Use
- Protected Areas
- Rivers & Streams
- Cliff Retreat
- Coastal Armoring

Detail View

Enter an address or placename

Pan Zoom Draw Report GIS File Report Data



Max Wave Runup during Flood
000cm SLR + Wave 000

Flood-prone Low-lying Areas
000cm SLR + Wave 000

Flood Hazard 000cm SLR +
Wave 000

Flood Depth 000cm SLR +
Wave 000

0 cm
250 cm
500 cm
750 cm

OCOF
OUR COAST OUR FUTURE
Interactive Map

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0	25	50	75	100	125
150	175	200	500		

[What Sea Level Rise scenario should I use?](#)

3) Choose a storm scenario frequency

None Annual 20 year 100 year

4) Choose other layers to view with topic data.

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- Cliff Retreat
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Enter an address or placename
Flood Depth 000cm SLR + Wave 000 = 0 cm (37.9946, -122.3496)

Pan Zoom Draw Report GIS File Report Data

OCOF Interactive Map Help

Enter an address or placename in the area at the top of the map and click the magnifying glass to zoom into a specific location.

Select the buttons on the left to choose a combination of:

- 1) the Topic you are interested in
- 2) an amount of Sea Level Rise in centimeters
- 3) a Storm Scenario

Switch between different levels of Sea Level Rise and Storm Scenarios to see changes in storm intensity and water levels. Turn on Other Layers to see the effects relative to natural and built features within your area of interest.

If you need help with choosing a Sea Level Rise amount, [click here](#) to view a comparative look at current global and state projections.

The icons in the upper right part of the window provide the following functionality:

Pan Zoom Panning and zooming in the map with your mouse.

Max Wave Runup during Flood 000cm SLR + Wave 000

Flood-prone Low-lying Areas 000cm SLR + Wave 000

Flood Hazard 000cm SLR + Wave 000

Flood Depth 000cm SLR + Wave 000

0 cm
250 cm
500 cm
750 cm

Detail View 10 km 5 mi

1) Choose a topic.

Flooding shows the extent of flooding due to SLR, waves, and storm surge.

- Flooding
- Waves
- Current
- Uncertainty

[What do the Topics represent?](#)

2) Choose a Sea Level Rise (cm) level.

0	25	50	75	100	125
150	175	200	500		

[What Sea Level Rise scenario should I use?](#)

3) Choose a storm scenario frequency

- None
- Annual
- 20 year
- 100 year

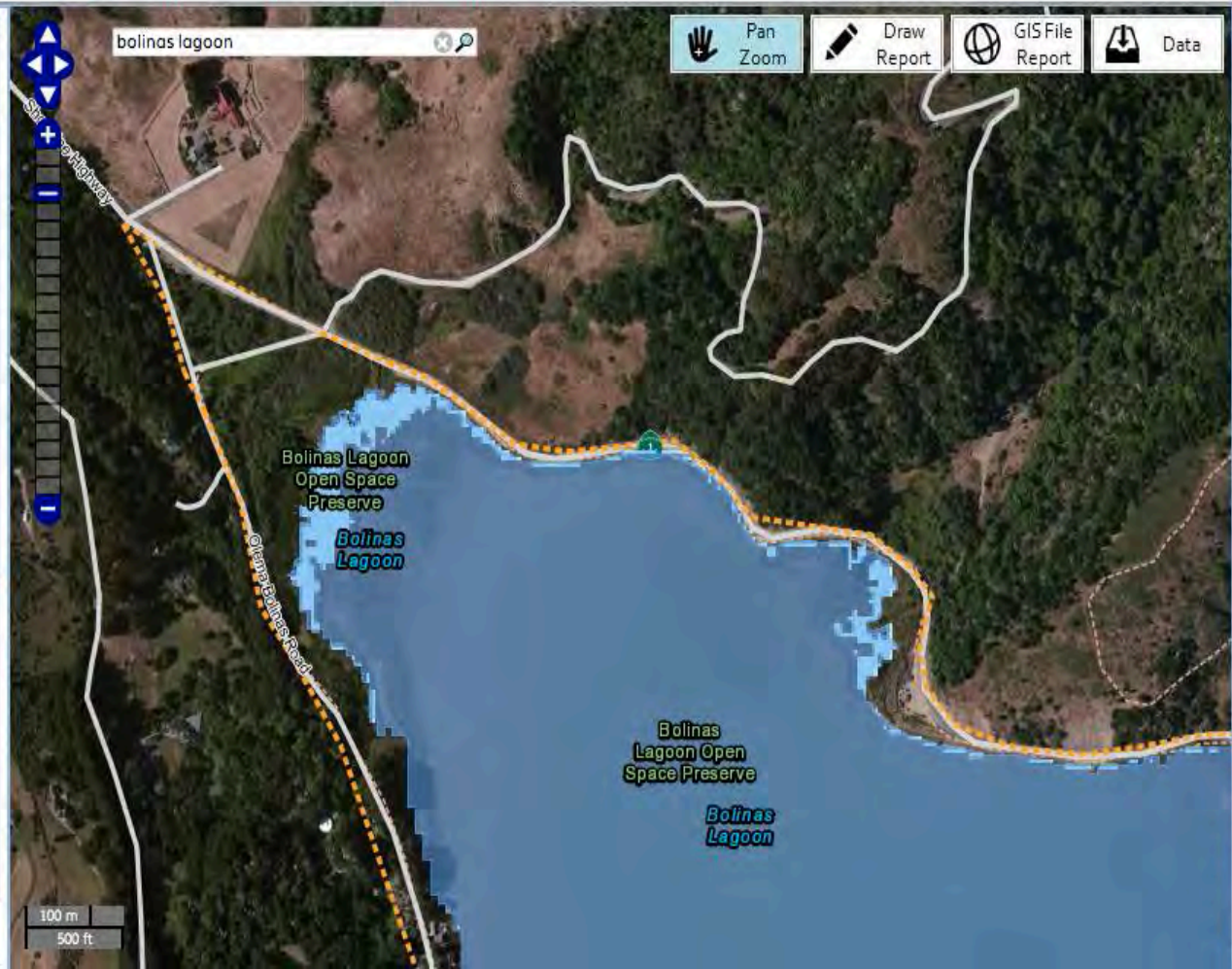
4) Choose other layers to view with topic data.

- Placenames
- Land Use

Detail View

bolinas lagoon

Pan Zoom
 Draw Report
 GIS File Report
 Data



Max Wave Runup during Flood 000cm SLR + Wave 000

Flood-prone Low-lying Areas 000cm SLR + Wave 000

Flood Hazard 000cm SLR + Wave 000

Flood Depth 000cm SLR + Wave 000

0 cm
250 cm
500 cm
750 cm

Public Transportation

- Ferry Landing
- BART Station
- Caltrans Facility
- Bus Stop
- Metro Stop

Public Parking

P

1) Choose a topic.

Flooding shows the extent of flooding due to SLR, waves, and storm surge.

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[What do the Topics represent?](#)

2) Choose a Sea Level Rise (cm) level.

0	25	50	75	100	125
150	175	200	500		

[What Sea Level Rise scenario should I use?](#)

3) Choose a storm scenario frequency

- None
- Annual
- 20 year
- 100 year

4) Choose other layers to view with topic data.

- Placenames
- Land Use

Detail View

bolinas lagoon

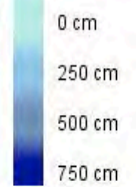


Max Wave Runup during Flood 000cm SLR + Wave 020

Flood-prone Low-lying Areas 000cm SLR + Wave 020

Flood Hazard 000cm SLR + Wave 020

Flood Depth 000cm SLR + Wave 020



Public Transportation

- Ferry Landing
- BART Station
- Caltrans Facility
- Bus Stop
- Metro Stop

Public Parking

P

bolinas lagoon

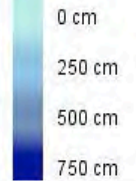


Max Wave Runup during Flood 050cm SLR + Wave 000

Flood-prone Low-lying Areas 050cm SLR + Wave 000

Flood Hazard 050cm SLR + Wave 000

Flood Depth 050cm SLR + Wave 000



Public Transportation

- Ferry Landing
- BART Station
- Caltrans Facility
- Bus Stop
- Metro Stop

Public Parking



1) Choose a topic.

Flooding shows the extent of flooding due to SLR, waves, and storm surge.

[What do the Topics represent?](#)

2) Choose a Sea Level Rise (cm) level.

0	25	50	75	100	125
150	175	200	500		

[What Sea Level Rise scenario should I use?](#)

3) Choose a storm scenario frequency

4) Choose other layers to view with topic data.

- Placenames
- Land Use

Detail View

100 m
500 ft

bolinas lagoon



Max Wave Runup during Flood 050cm SLR + Wave 020



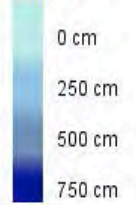
Flood-prone Low-lying Areas 050cm SLR + Wave 020



Flood Hazard 050cm SLR + Wave 020



Flood Depth 050cm SLR + Wave 020



Public Transportation

- Ferry Landing
- BART Station
- Caltrans Facility
- Bus Stop
- Metro Stop

Public Parking



1) Choose a topic.

Flooding shows the extent of flooding due to SLR, waves, and storm surge.

[What do the Topics represent?](#)

2) Choose a Sea Level Rise (cm) level.

0	25	50	75	100	125
150	175	200	500		

[What Sea Level Rise scenario should I use?](#)

3) Choose a storm scenario frequency

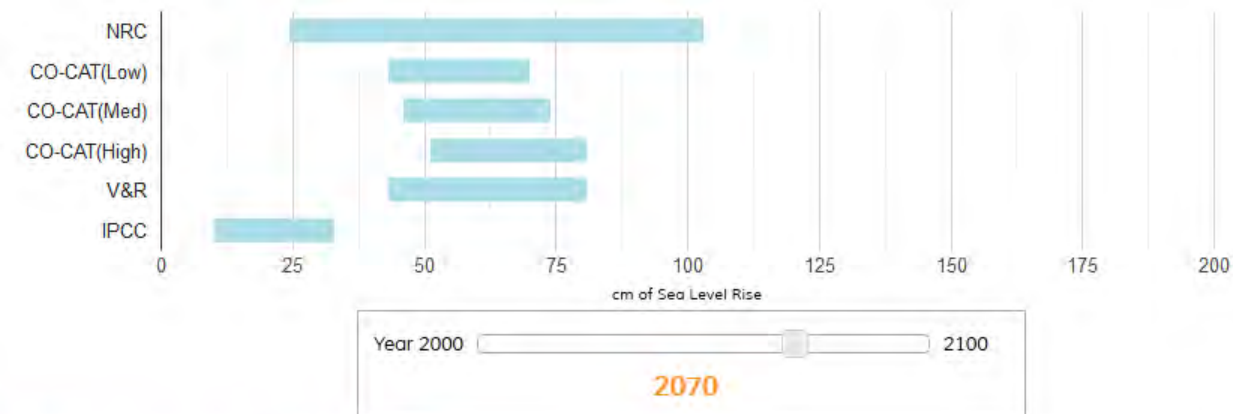
4) Choose other layers to view with topic data.

- Placenames
- Land Use

Detail View

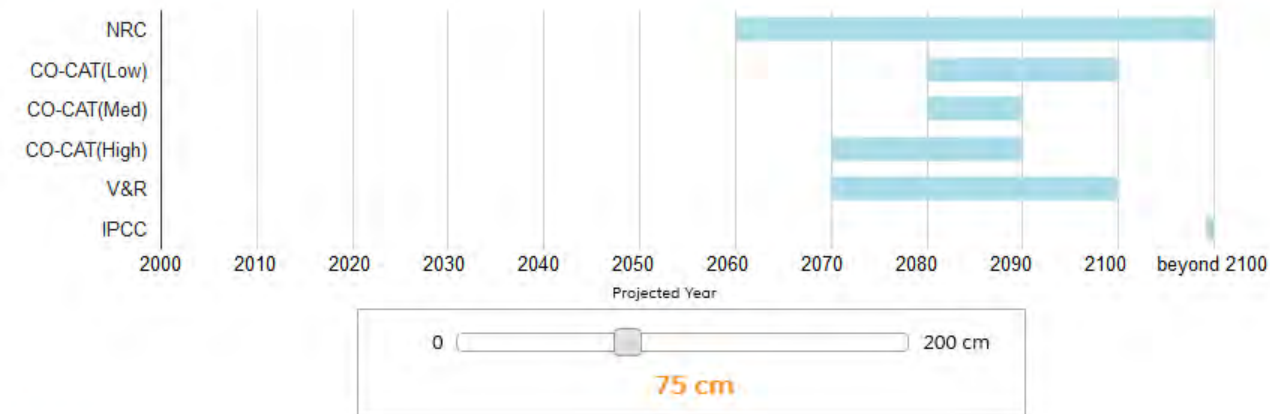
What projections are likely to occur in a given year?

Move the slider control below the graph left and right to see how different climate experts projections of sea level rise compare to one another. Hold your mouse over each bar for details.



When is a projection likely to occur?

Move the slider control below the graph left and right to see how different climate experts projections of when sea level rise will occur compare to one another. Hold your mouse over each bar for details.



Citations

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Interactive Map

get started
clear
recenter

1) Choose a topic.

Wave Height shows how high the waves are coming to shore.

Flooding Waves
Current Uncertainty

[What do the Topics represent?](#)

2) Choose a Sea Level Rise (cm) level.

0	25	50	75	100	125
150	175	200	500		

[What Sea Level Rise scenario should I use?](#)

3) Choose a storm scenario frequency

None Annual 20 year 100 year

4) Choose other layers to view with topic data.

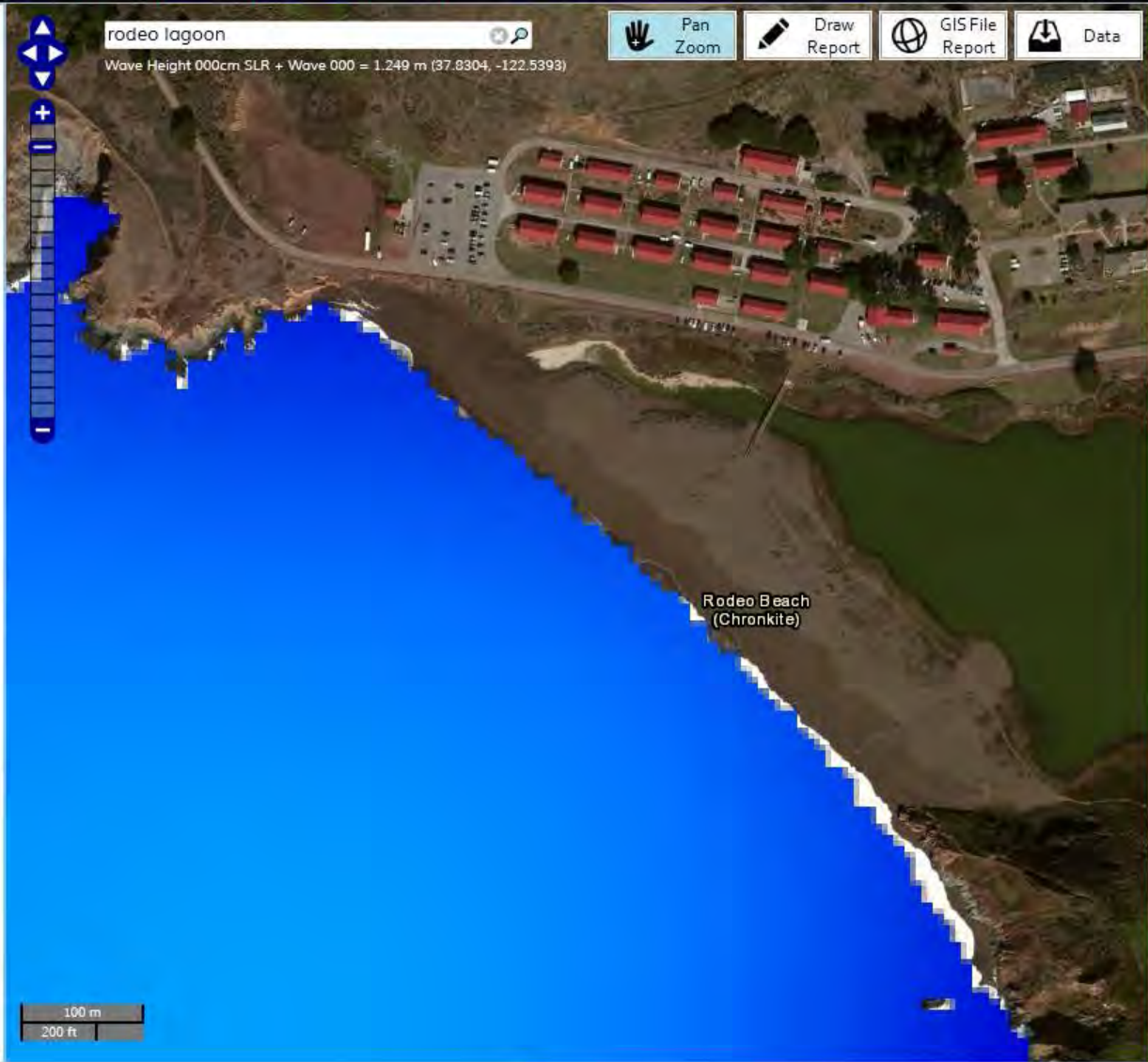
- Placenames
- Land Use
- Protected Areas
- Rivers & Streams
- Cliff Retreat
- Coastal Armoring

Detail View

rodeo lagoon

Wave Height 000cm SLR + Wave 000 = 1.249 m (37.8304, -122.5393)

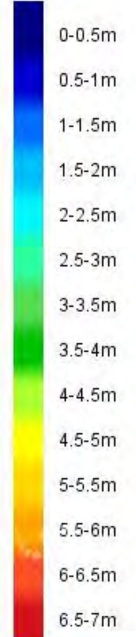
Pan Zoom Draw Report GIS File Report Data



Max Wave Height 000cm SLR + Wave 000

- ◇ Less than 1m
- ◇ 1-2m
- ◇ 2-3m
- ◇ 3-4m
- ◇ 4-5m
- ◇ 5-6m
- ◇ 6-7m
- ◇ 7-8m
- ◇ 8-9m
- ◆ Greater than 9m

Wave Height 000cm SLR + Wave 000



100 m
200 ft

get started
clear
recenter

1) Choose a topic.

Wave Height shows how high the waves are coming to shore.

Flooding Waves
Current Uncertainty

[What do the Topics represent?](#)

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0	25	50	75	100	125
150	175	200	500		

[What Sea Level Rise scenario should I use?](#)

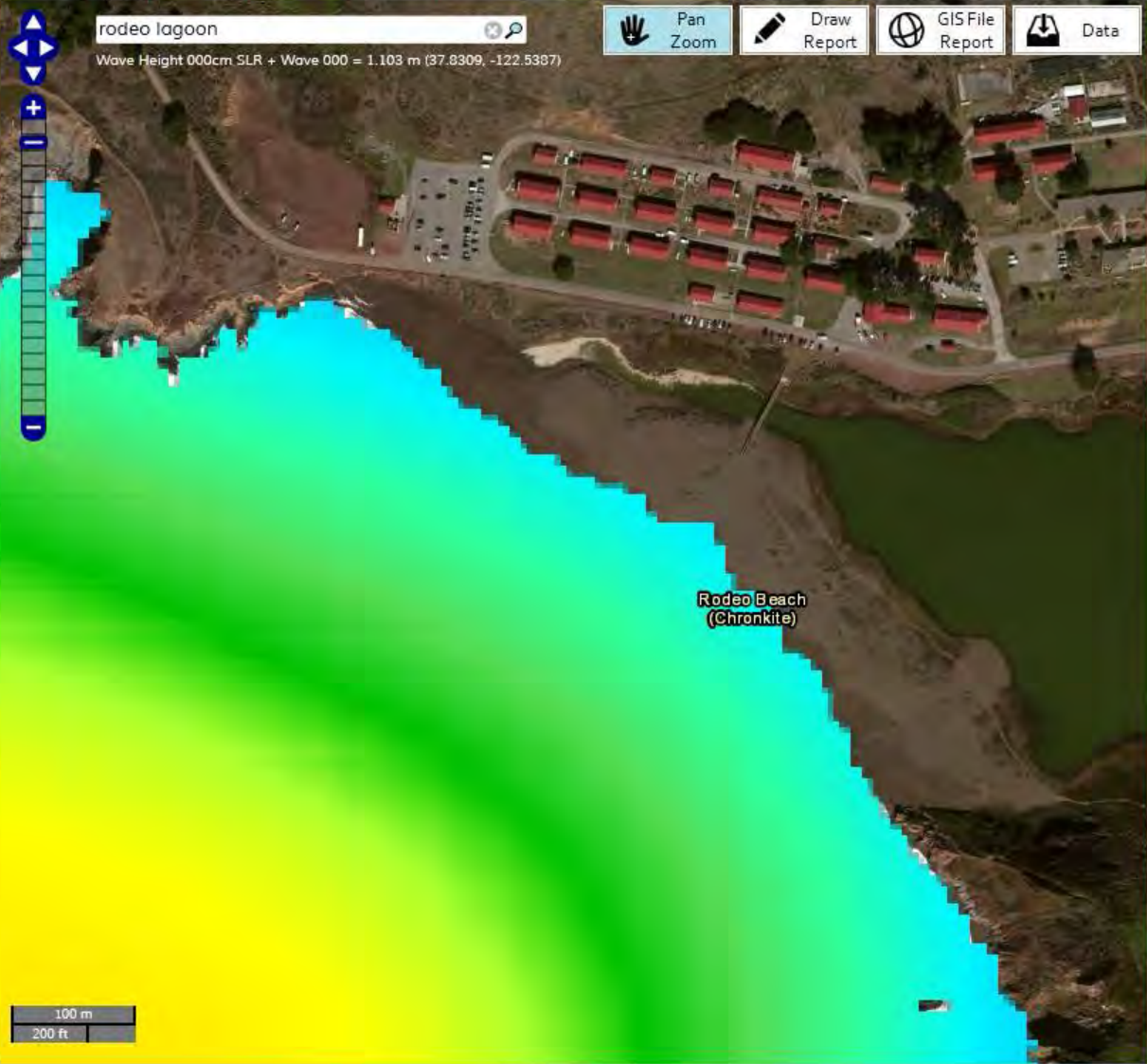
3) Choose a storm scenario frequency

None Annual 20 year 100 year

4) Choose other layers to view with topic data.

- Placenames
- Land Use
- Protected Areas
- Rivers & Streams
- Cliff Retreat
- Coastal Armoring

Detail View

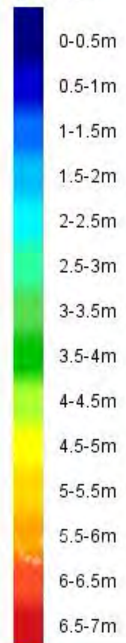


Pan Zoom Draw Report GIS File Report Data

Max Wave Height 000cm SLR + Wave 020

- ◇ Less than 1m
- ◇ 1-2m
- ◇ 2-3m
- ◇ 3-4m
- ◇ 4-5m
- ◇ 5-6m
- ◇ 6-7m
- ◇ 7-8m
- ◇ 8-9m
- ◆ Greater than 9m

Wave Height 000cm SLR + Wave 020



100 m
200 ft

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1) Choose a topic.

Wave Height shows how high the waves are coming to shore.

Flooding Waves
Current Uncertainty

[What do the Topics represent?](#)

2) Choose a Sea Level Rise (cm) level.

0	25	50	75	100	125
150	175	200	500		

[What Sea Level Rise scenario should I use?](#)

3) Choose a storm scenario frequency

None Annual 20 year 100 year

4) Choose other layers to view with topic data.

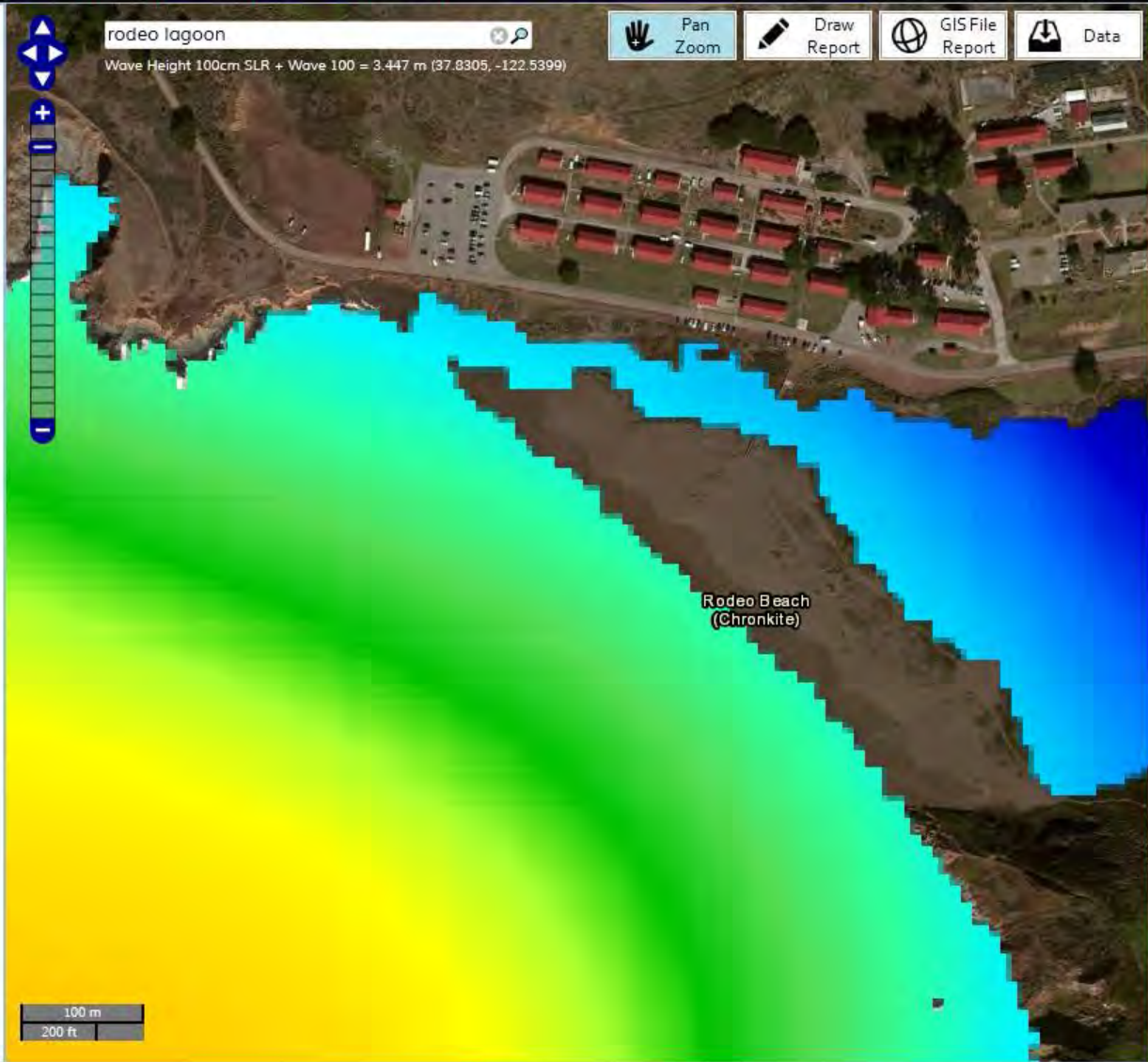
- Placenames
- Land Use
- Protected Areas
- Rivers & Streams
- Cliff Retreat
- Coastal Armoring

Detail View

rodeo lagoon

Wave Height 100cm SLR + Wave 100 = 3.447 m (37.8305, -122.5399)

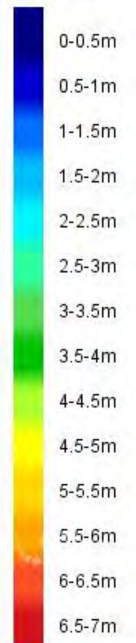
Pan Zoom Draw Report GIS File Report Data



Max Wave Height 075cm SLR + Wave 020

- ◇ Less than 1m
- ◇ 1-2m
- ◇ 2-3m
- ◇ 3-4m
- ◇ 4-5m
- ◇ 5-6m
- ◇ 6-7m
- ◇ 7-8m
- ◇ 8-9m
- ◆ Greater than 9m

Wave Height 075cm SLR + Wave 020



100 m
200 ft



get started
clear
recenter

1) Choose a topic.

Current shows the velocity of the ocean waters in a scenario.

- Flooding
- Waves
- Current**
- Uncertainty

[What do the Topics represent?](#)

2) Choose a Sea Level Rise (cm) level.

0	25	50	75	100	125
150	175	200	500		

[What Sea Level Rise scenario should I use?](#)

3) Choose a storm scenario frequency

- None**
- Annual
- 20 year
- 100 year

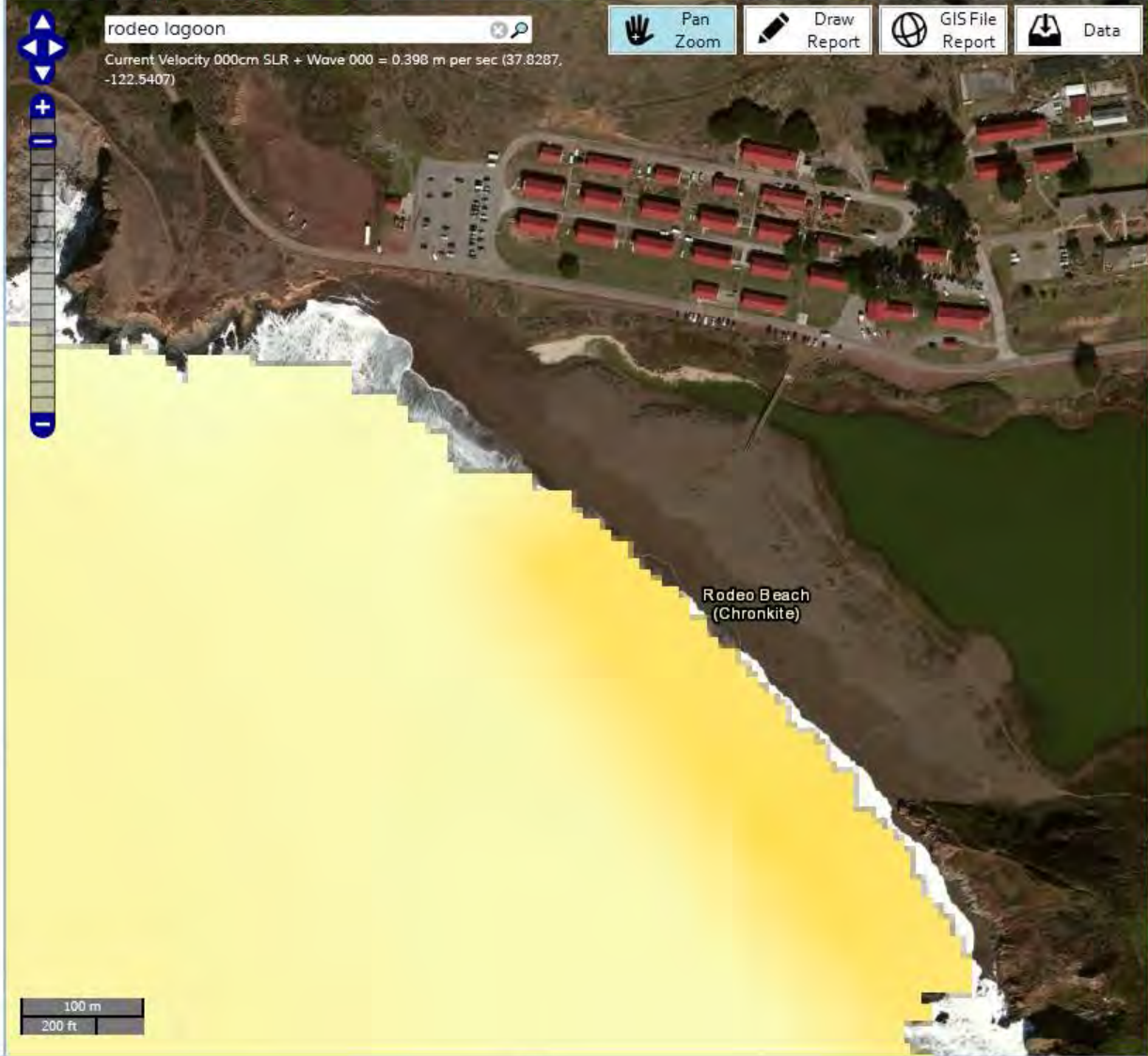
4) Choose other layers to view with topic data.

- Placenames
- Land Use
- Protected Areas
- Rivers & Streams
- Cliff Retreat
- Coastal Armoring

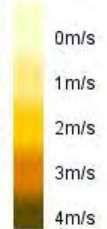
Detail View

rodeo lagoon

Current Velocity 000cm SLR + Wave 000 = 0.398 m per sec (37.8287, -122.5407)



Current Velocity 000cm SLR + Wave 000



Rivers and Streams

- Stream
- Intermittent Stream



get started
clear
recenter

1) Choose a topic.

Current shows the velocity of the ocean waters in a scenario.

- Flooding
- Waves
- Current**
- Uncertainty

[What do the Topics represent?](#)

2) Choose a Sea Level Rise (cm) level.

0	25	50	75	100	125
150	175	200	500		

[What Sea Level Rise scenario should I use?](#)

3) Choose a storm scenario frequency

- None
- Annual
- 20 year**
- 100 year

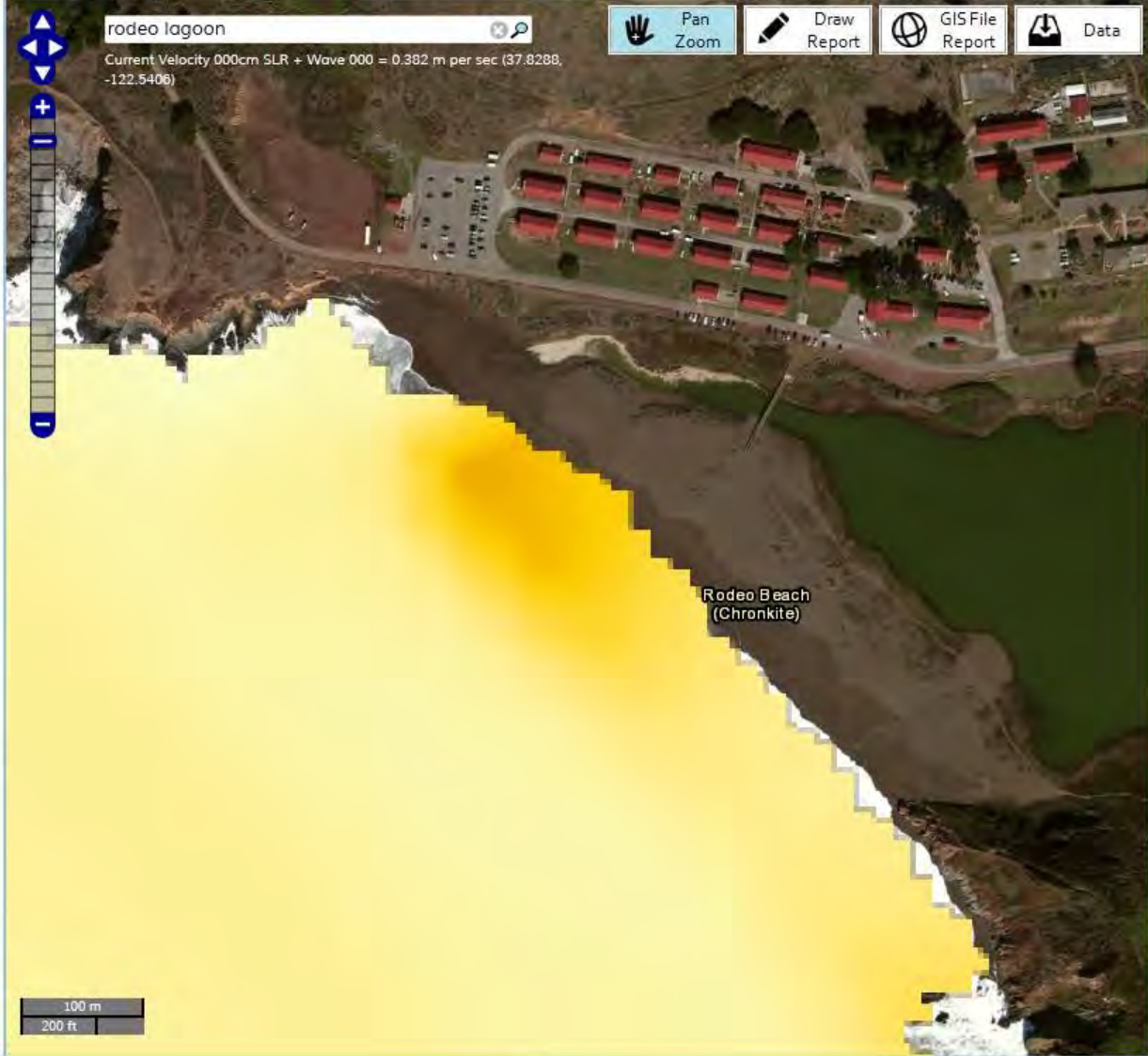
4) Choose other layers to view with topic data.

- Placenames
- Land Use
- Protected Areas
- Rivers & Streams
- Cliff Retreat
- Coastal Armoring

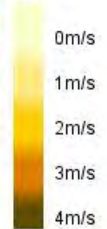
Detail View

rodeo lagoon

Current Velocity 000cm SLR + Wave 000 = 0.382 m per sec (37.8288, -122.5406)



Current Velocity 000cm SLR + Wave 020



Rivers and Streams

- Stream
- Intermittent Stream



get started
clear
recenter

1) Choose a topic.

Flooding shows the extent of flooding with SLR and storm surge.

- Flooding (selected)
- Waves
- Current
- Uncertainty

[What do the Topics represent?](#)

2) Choose a Sea Level Rise (cm) level.

0	25	50	75	100	125
150	175	200	500		

[What Sea Level Rise scenario should I use?](#)

3) Choose a storm scenario frequency

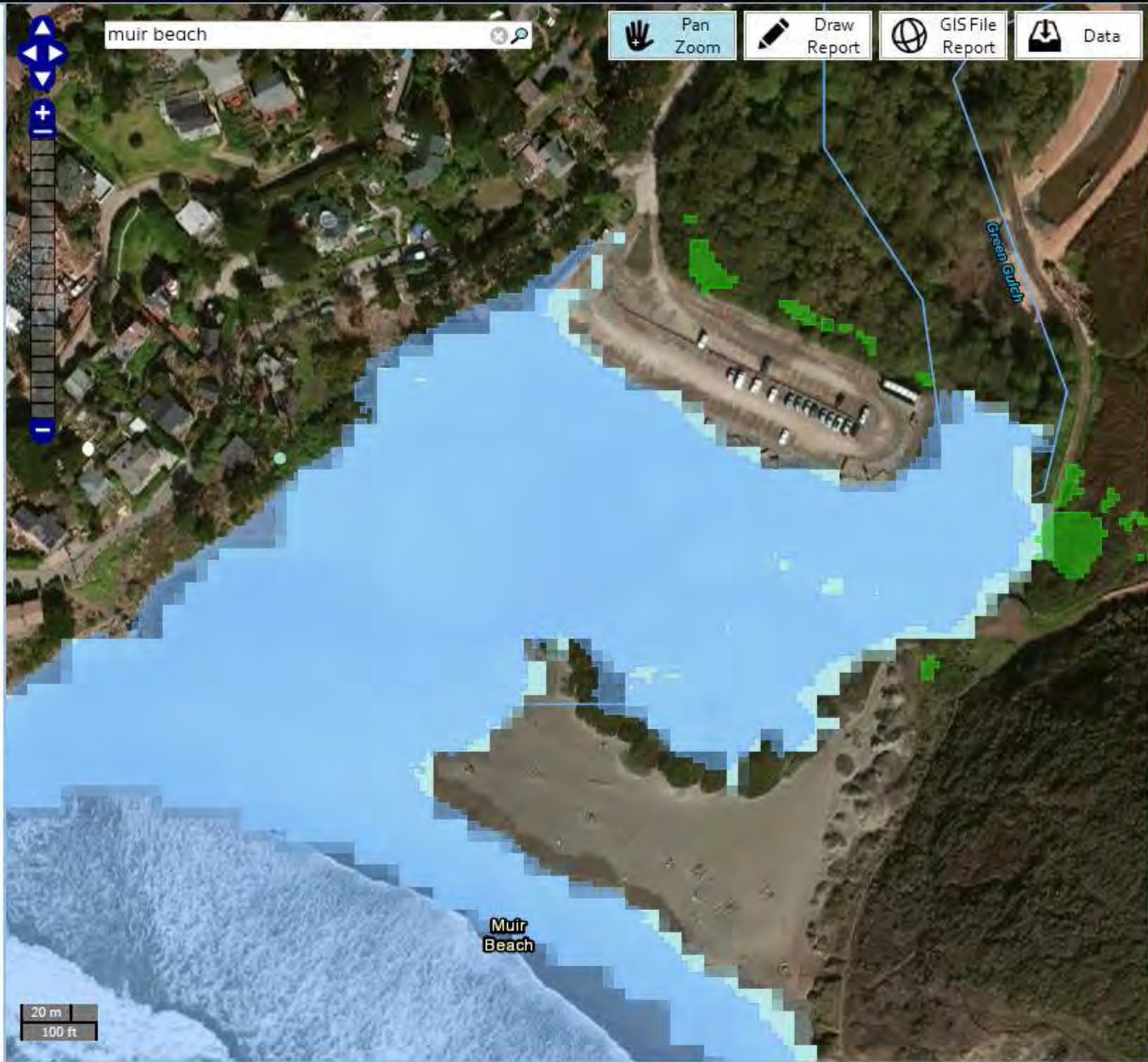
- None
- Annual
- 20 year (selected)
- 100 year

4) Choose other layers to view with topic data.

- Placenames
- Land Use
- Protected Areas
- Rivers & Streams
- Cliff Retreat
- Coastal Armoring

Detail View

muir beach

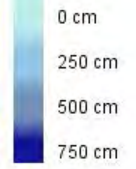


Max Wave Runup during Flood 075cm SLR + Wave 020

Flood-prone Low-lying Areas 075cm SLR + Wave 020

Flood Hazard 075cm SLR + Wave 020

Flood Depth 075cm SLR + Wave 020



Rivers and Streams

- Stream
- Intermittent Stream

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get started
clear
recenter

1) Choose a topic.

Uncertainty shows the degree of uncertainty in the scenario results.

Flooding Waves
Current **Uncertainty**

[What do the Topics represent?](#)

2) Choose a Sea Level Rise (cm) level.

0	25	50	75	100	125
150	175	200	500		

[What Sea Level Rise scenario should I use?](#)

3) Choose a storm scenario frequency

None Annual **20 year** 100 year

4) Choose other layers to view with topic data.

Placenames
 Land Use
 Protected Areas
 Rivers & Streams
 Cliff Retreat
 Coastal Armoring

Detail View



Minimum Inundation 075cm SLR + Wave 020

Maximum Inundation 075cm SLR + Wave 020

Rivers and Streams

Stream
Intermittent Stream

Muir Beach

1) Choose a topic.

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- Flooding
- Waves
- Current
- Uncertainty

[What do the Topics represent?](#)

2) Choose a Sea Level Rise (cm) level.

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[What Sea Level Rise scenario should I use?](#)

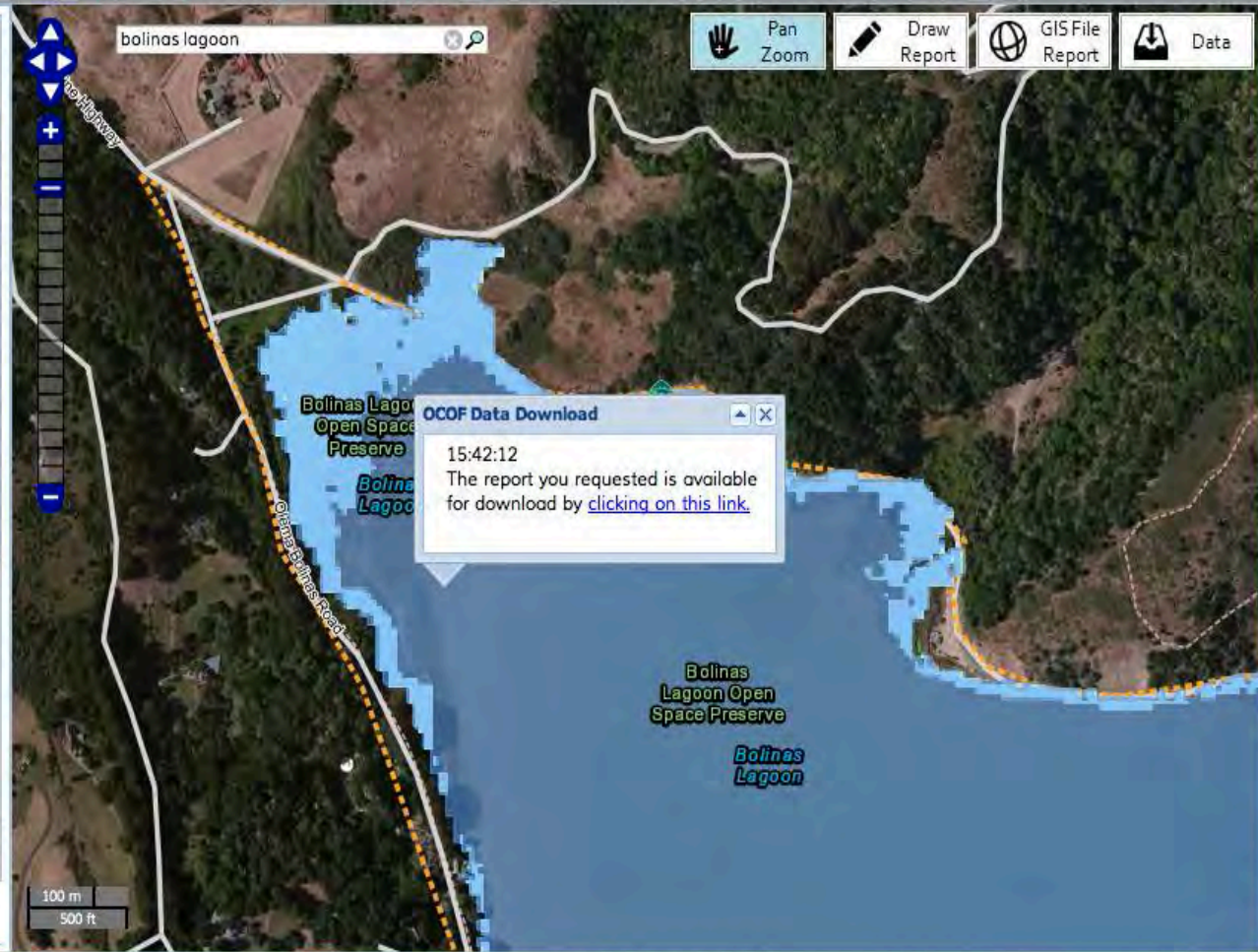
3) Choose a storm scenario frequency

- None
- Annual
- 20 year
- 100 year

4) Choose other layers to view with topic data.

- Placenames
- Land Use

Detail View

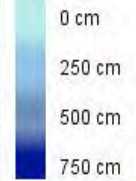


Max Wave Runup during Flood 025cm SLR + Wave 020

Flood-prone Low-lying Areas 025cm SLR + Wave 020

Flood Hazard 025cm SLR + Wave 020

Flood Depth 025cm SLR + Wave 020



Public Transportation

- Ferry Landing
- BART Station
- Caltrans Facility
- Bus Stop
- Metro Stop

Public Parking

P

This is the sea level rise and storm scenario report for the area you selected. This report was designed to provide information to help you identify vulnerabilities to sea level rise and storm surges.

Area and Elevation Information

Area is the size of selected polygon, in square meters, acres and hectares, and Elevation is the average, minimum and maximum elevation from the Digital Elevation Model (DEM) within the polygon.

Area:	576,111.45 m ² 142.35 ac 57.61 ha	Elevation:	Mean - 4.39 meters Minimum - 0.29 meters Maximum - 51.37 meters
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Projected Percent Area Flooded for the Selected Area

Values indicate the percentage of the selected area flooded for the Storm and Sea Level Rise Scenario combination.

Storm Scenario	Sea Level Rise Scenario									
	100 yr Storm	20 yr Storm	Annual Storm	No Storm	none	50 cm	100 cm	150 cm	200 cm	500 cm
100 yr Storm	8%	16%	17%	19%	24%	28%				
20 yr Storm	7%	15%	17%	21%	24%	28%				
Annual Storm	6%	14%	17%	20%	23%	28%				
No Storm	4%	9%	15%	18%	21%	28%				

under 25% flooded
 25-50% flooded
 50-75% flooded
 over 75% flooded

Projected Average Flood Depth for the Selected Area

Values indicate the average flood depth (in feet and centimeters) over the Mean Higher High Water (MHHW) within the selected area for each Storm and Sea Level Rise Scenario combination. Values include modeling uncertainty bracket of +/- 40 cm.

Storm Scenario	Sea Level Rise Scenario									
	100 yr Storm	20 yr Storm	Annual Storm	No Storm	none	50 cm	100 cm	150 cm	200 cm	500 cm
100 yr Storm	30 - 110 cm 1 - 3.6 ft	50 - 130 cm 1.6 - 4.3 ft	90 - 170 cm 3 - 5.6 ft	130 - 210 cm 4.3 - 6.9 ft	160 - 240 cm 5.2 - 7.9 ft	405 - 485 cm 13.3 - 15.9 ft				
20 yr Storm	25 - 105 cm 0.8 - 3.4 ft	50 - 130 cm 1.6 - 4.3 ft	90 - 170 cm 3 - 5.6 ft	115 - 195 cm 3.8 - 6.4 ft	160 - 240 cm 5.2 - 7.9 ft	415 - 495 cm 13.6 - 16.2 ft				
Annual Storm	15 - 95 cm 0.5 - 3.1 ft	35 - 115 cm 1.1 - 3.8 ft	70 - 150 cm 2.4 - 4.9 ft	105 - 185 cm 3.4 - 6.1 ft	130 - 210 cm 4.3 - 6.9 ft	410 - 490 cm 13.5 - 16.1 ft				
No Storm	0 - 60 cm 0 - 2 ft	15 - 95 cm 0.5 - 3.1 ft	45 - 125 cm 1.5 - 4.1 ft	85 - 165 cm 2.8 - 5.4 ft	115 - 195 cm 3.8 - 6.4 ft	360 - 440 cm 11.8 - 14.4 ft				

average less than 1 ft
 1 to 3 ft
 3 to 5 ft
 over 5 ft

Map of Area



1) Choose a topic.

Flooding shows the extent of flooding with SLR and storm surge.

Flooding Waves

Current Uncertainty

What do the Topics represent?

2) Choose a Sea Level Rise (cm) level.

0 25 50 75 100 125
150 175 200 500

What Sea Level Rise scenario should I use?

3) Choose a storm scenario frequency

None Annual 20 year 100 year

4) Choose other layers to view with topic data.

- Placenames
- Land Use
- Protected Areas
- Rivers & Streams
- Cliff Retreat
- Coastal Armoring
- Roads and Transportation
- Buildings
- Utilities & Services

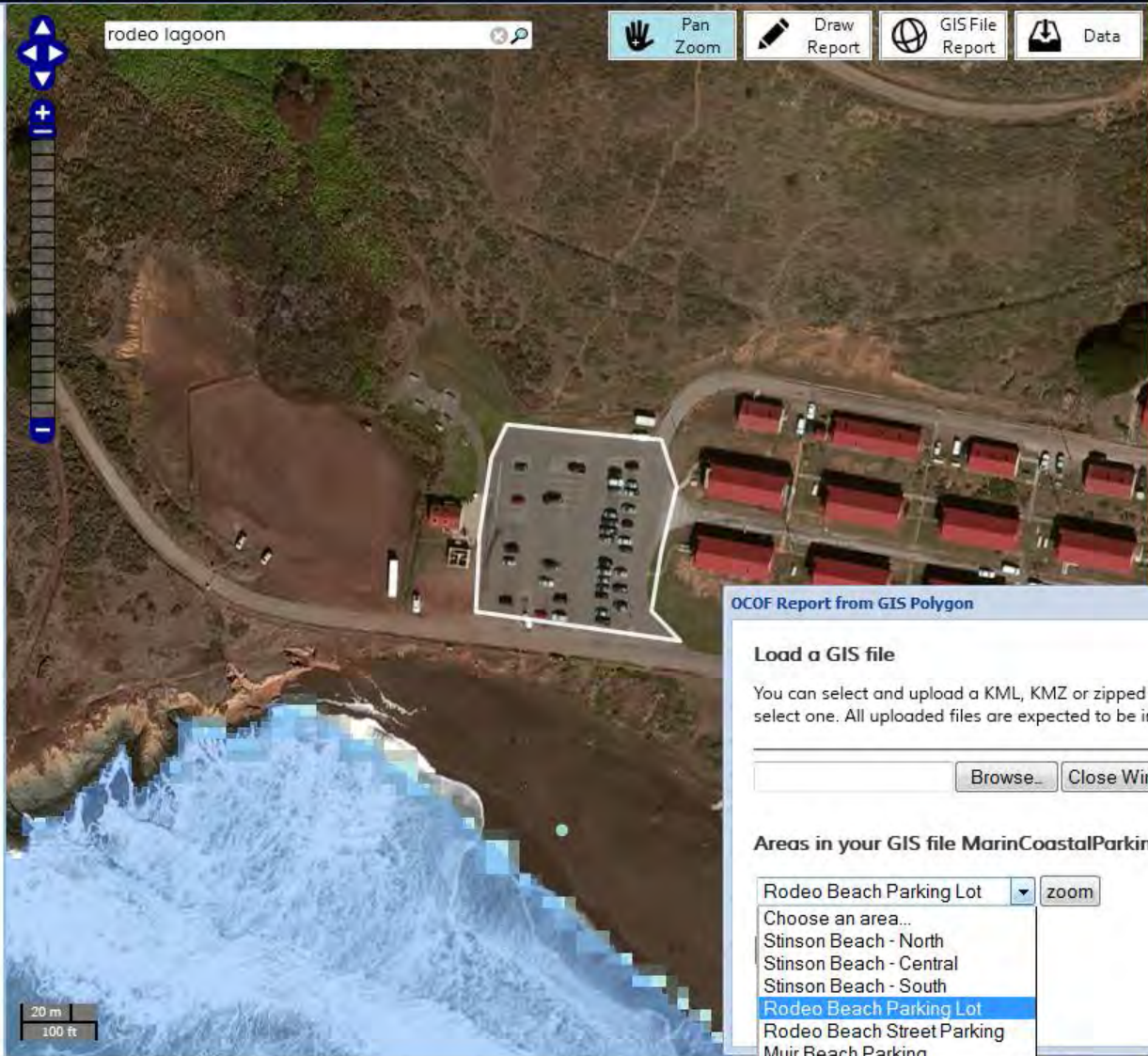
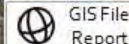
Opacity

Detail View



20 m
100 ft

rodeo lagoon



Max Wave Runup during Flood 000cm SLR + Wave 000

Flood-prone Low-lying Areas 000cm SLR + Wave 000

Flood Hazard 000cm SLR + Wave 000

Flood Depth 000cm SLR + Wave 000

0 cm
250 cm
500 cm
750 cm

Rivers and Streams

OCOF Report from GIS Polygon

Load a GIS file

You can select and upload a KML, KMZ or zipped SHP file with polygons and select one. All uploaded files are expected to be in Latitude/Longitude WGS-84.

Browse... Close Window

Areas in your GIS file MarinCoastalParking.kmz

Rodeo Beach Parking Lot zoom

Choose an area...

- Stinson Beach - North
- Stinson Beach - Central
- Stinson Beach - South
- Rodeo Beach Parking Lot
- Rodeo Beach Street Parking
- Muir Beach Parking

get started
clear
recenter

1) Choose a topic.

Flooding shows the extent of flooding with SLR and storm surge.

- Flooding (selected) Waves
- Current Uncertainty

[What do the Topics represent?](#)

2) Choose a Sea Level Rise (cm) level.

0	25	50	75	100	125
150	175	200	500		

[What Sea Level Rise scenario should I use?](#)

3) Choose a storm scenario frequency

- None (selected)
- Annual
- 20 year
- 100 year

4) Choose other layers to view with topic data.

- Placenames
- Land Use
- Protected Areas
- Rivers & Streams
- Cliff Retreat
- Coastal Armoring

Detail View

muir beach

Pan Zoom
 Draw Report
 GIS File Report
 Data



Max Wave Runup during Flood
000cm SLR + Wave 000

Flood-prone Low-lying Areas
000cm SLR + Wave 000

Flood Hazard 000cm SLR + Wave 000

Flood Depth 000cm SLR + Wave 000

0 cm
250 cm
500 cm
750 cm

Rivers and Streams

Stream
Intermittent Stream

MAXIMUM FLOOD DEPT: x

file:///C:/Users/mfitzgibbon/De: [star] [refresh] [home] [back] [forward]

Citation_Information:

Originator: U.S. Geological Survey
 Originator: Patrick Barnard
 Originator: Amy Foxgrover
 Originator: Li Erikson
 Title: MAXIMUM FLOOD DEPTH
 Online_Linkage: <<http://data.prbo.org/apps/ocof>>

Description:

Abstract:

Model projections of MAXIMUM FLOOD DEPTH using the Coastal Storm Modeling System (CoSMoS). Models cover the entire outer coast of the Our Coast Our Future (OCOF) California study area from Bodega Head south to Half Moon Bay including the entire San Francisco Bay shoreline and baylands. Projections include a suite of scenarios for both sea-level rise and storm scenarios. Sea-level rise scenarios span 0-2 meters in 50 cm

Download_Summary.htm Firefox HTML Document

flooddepth_metadata.html Firefox HTML Document

SLR000Wave000_flddeep.asc ASC File

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SLR000Wave000_flddeep.png IfanView PNG File

SLR000Wave000_flddeep.prj PRJ File

SLR000Wave000_flddeep.tfw TFW File

SLR000Wave000_flddeep.tif IfanView TIF File

SLR000Wave000_flddeep.txt TXT File

Used size: (multiple values) Ratio: (multiple values)
 Size: 22.9 KB Date modified: 11/30/2012 4:12 PM - 2/19/2013 ...

muir beach

Pan Zoom Draw Report GIS File Report Data

OCOF Data Download

7:54:48
 The dataset you requested is available for download by [clicking on this link.](#)

Max Wave Runup during Flood 000cm SLR + Wave 000

Flood-prone Low-lying Areas 000cm SLR + Wave 000


Flood Hazard 000cm SLR + Wave 000

Muir Beach

Data downloaded from th x

file:///C:/Users/mfitzgibbon/Desktop/del [star] [refresh] [home] [back] [forward]

Data downloaded from:



Downloaded Data Description

Dataset	CoSMoS Model Results Product Suite More information or discussion on these modeling results
Layer	flddeep - Flood Depth More information
Units	cm
Description	Maximum Depth of Flooding Surface above base elevation of Mean High High Water.

Files included in this download (within zip file)

Content	Format	File name	Notes
The	GeoTiff	SLR000Wave000_flddeep.tif	Data in 4 byte floating point

