

**Lifting the Fog:**  
**Bringing Clarity to Shoreline Change Models and Sea Level Rise Tools**  
May 22, 2014 || Oakland, CA

**Workshop Proceedings Report**

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# INTRODUCTION

## Background

With the proliferation of sea level rise (SLR) guidance, tools, and models across the state, a new challenge is arising: decision-makers struggle to understand how to utilize these tools in their work, recognize tool differences and similarities, and decide which to apply in their own planning efforts. At the “Lifting the Fog” workshop, hosted on May 22, 2014, we undertook a facilitated process to engage in dialogue and seek answers these questions, and begin to develop a shared communication framework to help end-users navigate the different planning tools and data available to them. In addition, there are two informational matrices that are in the process of being developed, which can help us compare and contrast tools and models. We reviewed them, confirmed the descriptions for accuracy and utility to the end-user, and discussed how best to use them in an effort to “lift the fog.”

## Workshop Goals and Objectives

- Development teams and end-users meet, work together, and better understand each other’s methods, needs, and objectives.
- Workshop attendees increase their capacity to describe the range of sea level rise tools and models available in California.
- Tool and model development teams collaborate on creating a shared communication framework that will help end-users navigate the different planning tools and data available to them. We will work to develop a path forward to share next steps and discuss potential connections for future collaborations.
- End-users understand the utility and applications for the planning tools and data available to them, and provide feedback to tool and model developers on future planning support needs. One of the outcomes of this workshop will be a special session at the California Adaptation Forum in Sacramento, CA on August 18, 2014 to present communication outcomes and findings from this workshop.

## Workshop Structure and Format

The day was organized into 3 parts (“Right Now”, “Near Term”, and “Long Term”) in order to assess the current state of tool development and utility in California, identify near-term needs and opportunities, and identify opportunities for future collaboration and guidance to government agencies and funders. This report walks through the major sections of the workshop and summarizes the discussion and action items identified during those time period.

Please see Appendix A for full workshop agenda. The workshop was facilitated by Genevieve Taylor of Global Genesis, with support from the entire planning team. The workshop was structured so that there were very limited formal presentations, focusing instead on eliciting ideas through small and large group discussions and exercises.

Attendees at the workshop included development teams from the majority of the currently available California SLR models and tools, technical assistance professionals, and selected “end-users” who were primarily from state agencies that are committed to SLR adaptation efforts, or who set policy for local jurisdictions.

## Opening and Framing

Sam Schuchat, Executive Officer of the California Coastal Conservancy kicked the day off with three highly-relevant points:

1. *Let's stop the 'age of dithering'.* The SLR tool development community is in a unique position to provide resources and guidance to communities that must begin to plan for sea level rise, instead of continuing to 'dither' and take no action.
2. *All sea level rise is local.* SLR adaptation planning will take place primarily at the level of local governments. End-users for SLR tools include planning commissioners, city councilors, and other local elected officials who must balance competing interests and need bottom-line answers about potential impacts.
3. *Tools must answer concrete questions.* The questions that people want answers to are not, "How many centimeters will seas rise?", but rather "If we fund a staircase down to the beach in Malibu, how long will it be operational?".

Mr. Schuchat's comments primed the group for a discussion on the end-users of SLR tools in California. We identified the following types of end-users who use decision-support tools and models to inform their efforts on sea level rise adaptation planning. This portion of the workshop included a discussion of defining these end users, and what kinds of end-users might be included in different categories of end users. The final decision-making of the group was to agree that these categories and definitions reflected where the group landed on the subject. Each end-user category is defined based on notes from this discussion in Appendix C.

- Scientists
- GIS Technicians
- Planners
- Project Managers/Asset Managers (land trusts, land owners, etc.)
- Builders/Engineers
- Elected Decision-makers
- Media
- General Public

We agreed to a number of guidelines to enhance collaboration and consensus in the group. One guideline was to "define important words." The workshop facilitator led the group through a discussion about definitions for end-users that we could all "live with" for the purposes of meeting our workshop objectives. Creating shared terminology was also a major stated goal by the group as a whole, and one that we worked on throughout the day.

## PART I: FOCUSING ON THE NOW

### Where We Are with SLR Adaptation and How We Talk About It

The first part of the workshop focused on what resources are currently available or in production that will further the goal of raising awareness of existing SLR tools. The Nature Conservancy and NOAA Coastal Services Center are developing a key resource, the *Sea Level Rise Tool*

*Comparison Matrix*, with support from the Resources Legacy Fund. This matrix compares 6 publically available SLR tools for California. The matrix was developed collaboratively with the help of the tool development teams, representing a fairly complete picture of the existing tools available to planners, managers and decision-makers.

Though the matrix represents much of the functionality of these tools, it is a fairly lengthy document and is therefore difficult for busy professionals to use. This plethora of information, though a benefit overall, does not facilitate a quick and intuitive comparison of functionality among the tools. The goal of this session was to develop more "user friendly" communication products, based upon the tool matrix, which could be rolled out to end-users to better communicate how these tools are different and similar.

To accomplish this, participants were divided into 5 groups and asked to first think about end-user needs in completing their planning activities. The groups were then asked to brainstorm ideas for specific communication products, based on the tool matrix, which could be developed to help accomplish these objectives. The groups were not limited to the matrix, and were asked to think about other communication products that might build the capacity of the end-users. Please refer to Table B for a list summary of proposed final communications deliverables for this group and ideas for next steps of these projects.

#### **Ideas Generated by Breakout Groups**

- Develop point-of-contact list for follow-up technical assistance
- Identify a subset of distinguishing features
- Develop simplified summary tables highlighting distinguishing features
- Shared terminology, ensure all tools and subsequent products use similar terms
- Compile screen shots of tool outputs (maps, etc.) to help visually distinguish localized differences and similarities between tools
- Use icons for tool comparison tables
- Develop graphic to depict how tools may be used in planning processes
- Develop case studies that summarize how tools have been used in previous planning processes
- Place links to matrix and tools on state and national geoportals
- Develop a "shopper's comparison" interface (e.g., cell phone shoppers guide) where users can compare between two or more tools and generate reports
- Develop ways to use tools to communicate about the HERE and NOW (i.e., King Tide, 100-year storms, El Niño)
- Develop a "decision-tree" interface, where users can narrow down what tools are most relevant to their specific planning needs
- Develop an online relational database for updating/maintaining and custom report generation
- Develop a web-based interface with dropdowns to guide users through different tools and models available to them.

Short-term ↑

↓ Long-term

Participants said in general that they wanted to clarify both what tools *do* as well as what tools *don't* do, to make the tools relatable to the general public, to take advantage of the opportunity to educate decision-makers as they are using the tools, and to create ways that users can easily compare outputs from the tools.

## **PART II: FOCUSING ON THE NEAR TERM**

### **What We Need to Develop, Do, or Say over the Next 12 Months**

The purpose of this session was to discuss strategies to disseminate and distribute collective messaging and communication products, using our existing funding and resources. Organizers identified several key themes and products and led a break out group conversations to refine topics. Participants were then invited to do a Gallery Walk, to view and comment on each of the ideas that came out of break out group discussion, and offer feedback and resources.

### **Developing shared language**

This break out group was interested in identifying opportunities to create and share terminology and content in order to help minimize confusion among end-users, the media, and the public. Two products discussed during the small group and the Gallery Walk were: 1) a shared FAQ of non-technical information, and 2) a shared glossary of terms. Next steps for these items are listed below and in the Next Steps section, and an initial glossary of terms can be found in Appendix B.

#### Next Steps

1. Collect existing FAQs and glossaries for each tool and model.
2. Compare terms and language, identify areas of agreement and disagreement.
3. Craft new shared language, where appropriate.
4. Test language with end-users.

### **California Adaptation Forum Special Session**

This group discussed specific opportunities for joint outreach, in particular the Climate Adaptation Forum (CAF) in August 2014, where a special pre-workshop session will be held on August 18, 2014. Based on feedback from participants, the CAF session will consist of three primary sections:

1. Tools cafe where developers can interface directly with end-users about their tools.
2. Tools feedback session collecting information on user experience with tools. Make sure to clarify user-needs associated with utilization of tools tools versus user-needs associated with better understanding basic/fundamental concepts associated with tools/models.
3. Case study panel, highlighting examples of applications of tools across diverse scales.

Please see Appendix E for full proposed working agenda for this session, which is being sponsored by the NERRS Science Collaborative and NOAA Coastal Services Center.

## Identify and Communicate Distinguishing Features of Different Tools

This group was formed as a result of large group discussions in the morning, which identified the need to clearly articulate the distinguishing features of each model or tool for end-users. The following characteristics were identified as being important focal areas for future communications products:

1. **Questions the tool was designed to answer:** The primary goal of highlighting this characteristic is to help end-users determine the most appropriate application of the model/ tool (e.g., plan updates, policy, advocacy, education, communication).. For instance, if an agency is planning for a specific coastal use (e.g., port, road, natural habitat), what models are out there that would be relevant to that agency's decision-making process, and what tool outputs (e.g., flooding probability) are provided in addressing the organizations specific focal areas? Additionally, is the model useful as a general education tool, or can it be used to specifically inform planning on the project level (i.e. screening, scoping)?
2. **Geographic extent of tool:** The geographic extent of the tool should be addressed on two levels: (1) For what geographic region is the tool available (i.e., national, state, regional, and local); and (2) What is the resolution of the tool, and how does that inform the scale at which the tool should be used (e.g., parcel-level versus community level)? Additionally, workshop participants suggested outlining political, natural, or management boundaries the tool may address, including water districts, special asset districts, and wastewater management areas.
3. **Physical coastal processes incorporated into tool:** End-users need understand what physical coastal characteristics and scenarios are incorporated and visualized within the tool, including storms, waves, erosion, fluvial components, hydrologic connectivity, and cumulative shoreline change.
4. **Vulnerabilities and potential impacts analyzed by tool:** Coastal managers and planners need to know what specific vulnerabilities a tool addresses. Does the tool show damage to specific properties or land uses? Does the tool show how natural resources, infrastructure, public health and safety (i.e., contaminated lands), economy, or socially vulnerable communities are impacted?
5. **Accessing tool outputs:** It's important to not only know how to access the tool outputs but to know what outputs are publicly available (e.g., GIS download, generic or customized reports, screen capture / view online, data, maps, etc.).
6. **Important dates in tool development:** End-users need to know not only when the tool was originally developed and last updated but also the date of data collection (e.g., lidar collection or topographic data- DEM underlying data).

Another more general comment that came up with the participants of this group pertaining to tools and models was that we need to begin to develop common standards among modelers (e.g., all using the same Lidar), as this is important in establishing baseline standards to ensure that the same areas are not "mapped twice", and tools are more easily comparable in the long-term.

## Transferring the Matrix and Communication Products to Other Regions

This group discussed the utility of taking the lessons and products generated from this workshop and using it to inform the deliberations in other regions around the country. Climate Central and NOAA Coastal Services Center both have a national focus and the ability to help propagate ideas and products from workshop discussions across the country. The group discussed how this might be done, and more specifically, how to use the upcoming June 9<sup>th</sup> release of Surging Seas (version 2) in California, as a test case on how to handle new tool updates and releases. Next steps identified by this group are as follows:

1. **Develop two versions of Matrix:** Creating two versions of the matrix will be useful in helping to communicate to different types of end-users. Having a more “Advanced” matrix (potentially merge with current model matrix), is useful for end-users who require a more detailed or technical understanding of the tool. Secondly, having a more general, simplified version of the matrix is helpful in introducing end-users to the tools, and helping them to begin to understand the utility of each tool for their purposes. The simplified matrix should focus on the following information about each tool: (1) Purpose, (2) Geographic Coverage, (3) Key Distinctions (3-4), and (4) Strengths & Limitations.
2. **Matrix development:** The matrices will most likely be finalized through face-to-face meetings or calls to standardize language among model development teams. If possible, integrate FEMA into future iterations of comparison matrices.
3. **“Getting the word out”:** Develop talking points based on the simplified matrix to better communicate with a variety of end-users. Release the final matrix in different formats (e.g., “pdf,” “Excel”, etc.), increasing overall accessibility for end-users. When complete the matrix should reside in the following publically accessible sites: (1) climate.data.gov, (2) California Climate Commons, and (3) Individual SLR sites.

## Moving the Model Matrix Forward

In keeping with the theme of simplifying the matrices for broader consumption and easier use, the group decided to focus on: (1) the key distinguishing features of each model; (2) the types of work they are appropriate for; and (3) their cost. Each modeler shared their impressions of their own model, and commented on the strengths of the others.

**Table A: Simplified Tool Comparison**

Tool/ Model	Key Features	Appropriate for:
NOAA SLR viewer	<ul style="list-style-type: none"> <li>• Linear superposition</li> <li>• Modified bathtub</li> <li>• Focus on future high tide, given the current configuration of the shoreline</li> </ul>	<ul style="list-style-type: none"> <li>• DoD BRAC closure?</li> <li>• Screening / Scoping: Highlight where planners need to know more</li> <li>• Can be used for local/ jurisdictional planning</li> </ul>
USGS CoSMOS	<ul style="list-style-type: none"> <li>• Dynamic/hydrodynamic</li> </ul>	<ul style="list-style-type: none"> <li>• Climate impact assessment</li> </ul>



	<ul style="list-style-type: none"> <li>• Includes extreme events</li> <li>• Forcing mechanisms</li> </ul>	<ul style="list-style-type: none"> <li>• Good for local/jurisdictional planning</li> </ul>
<b>ESA/PWA</b>	<ul style="list-style-type: none"> <li>• Shoreline response</li> <li>• Extreme events</li> <li>• Capable of working directly with communities</li> </ul>	<ul style="list-style-type: none"> <li>• Climate impact assessment</li> <li>• Good for local/jurisdictional planning</li> </ul>
<b>FEMA SLR pilot</b>	<ul style="list-style-type: none"> <li>• Regulatory base data</li> <li>• Shoreline response and extreme events</li> <li>• 50-year hindcast</li> </ul>	<ul style="list-style-type: none"> <li>• Will support national mapping</li> </ul>

The group discussed which of the following was the most appropriate cost point to reference: (1) cost per linear distance to run the model; or (2) cost of model development plus cost to run. Most participants agreed that (1) was the most critical piece of information to convey to end-users, but it was noted that cost of development (as a proxy for quality) might be interesting to funders. It was also noted that there is, at this point, no data acquisition cost, since the data necessary to run any of the models is fairly universally available.

### **Next Steps**

1. Develop an Executive Summary that includes an example-driven, “choose your own adventure”-style selection procedure.
2. Work together to develop a description of regionally-specific modeling resources.
3. Form a modeling collaborative and work on a statewide-modeling effort that uses the best features of each model.

## **PART III: FOCUSING ON THE FUTURE**

### **Benefits, Barriers and Next Steps for Working Together**

This session was intended to explore opportunities to work together; address real and perceived barriers and boundaries; and identify specific actions to coordinate and share. The facilitator led the group through a discussion on benefits, barriers and next steps for working together. Notes from this discussion are reflected below.

#### Themes from discussion on “Benefits and Incentives of Collaboration”

- Limits duplication of efforts
- Avoid surprises

- Decreases litigation
- Learn faster by working together
- Improves communication on different tools
- Improves funding

#### Themes from discussion on “Barriers to Collaboration”

- Lack of staff resources and capacity
- Death by email/meetings/conference calls
- Too many leaders/too much strategy
- Ability and speed to get things done
- The competitive nature of funding, turf, resources
- Different agency missions and mandates lead to different results (100 yr. storm vs. SLR)
- Different scales(e.g., use of “feet vs inches”) for different tools

### **Creating a community of practice**

There seemed to be general agreement that it was valuable to bring this particular group of people together to share plans and expertise.

- Points of contact / technical assistance hotline: Identify who would be available to answer questions about tools and models. Start with POCs identified on tool matrix.
- Start to develop peer-to-peer networking opportunities
- Host rotating brown bag lunches to build more personal connections and professional sharing opportunities
  - Next action to move this forward: Identify a lead interested in organizing the first brown bag
- Publish articles in *Coastal Beat* and other trade publications to keep each other up to date on what we’re doing
  - Next action to move this forward: Interested individuals should speak with Vince Geronimo.
- Place links for tools and the matrix on other resource sites (i.e. climate.data.gov, CA Climate Commons, etc.)

### **Future communication products**

Below is a synthesis of the product ideas that were discussed throughout the day. Some of these communication products are still in need of a contact person from the group of organizers or participants at the workshop.

**Table B: Future Communication Products**

Products	Next Steps	Contact Person
<p><b>King Tides Project</b> Engaging citizen scientists to document high tides and storm events for model validation and El Nino monitoring</p>	<ul style="list-style-type: none"> <li>• Convene interested individuals to discuss related citizen science projects underway at agencies including USGS, FEMA, and NOAA.</li> <li>• Conduct pilot projects Nov 2014 – Feb 2015</li> </ul>	Marina Psaros
<p><b>Continued Support and Development of the Tool Matrix</b> Building upon the California Tool Matrix, continue to populate with new products and allow use in other regions of the country</p>	<ul style="list-style-type: none"> <li>• Work with FEMA and others to include additional SLR Tools</li> <li>• Work with Climate Central, the Nature Conservancy, NOAA and others to look for opportunities to ‘nationalize’ the matrix</li> </ul>	John Rozum
<p><b>Simplified Products</b> Simplified summary tables highlighting the distinguishing features and use cases for each tool</p>	<ul style="list-style-type: none"> <li>• Discuss incorporating results from TNC report as outreach products.</li> <li>• Use distinguishing features to develop new, simplified products from the Matrix</li> <li>• Review other outreach products (i.e. Rutgers SLR Tools pub)</li> </ul>	John Rozum
<p><b>Point of Contact List:</b> A short list of the technical and non-technical contact person for each tool</p>	<ul style="list-style-type: none"> <li>• This list will be distributed at the California Adaptation Forum workshop</li> <li>• This list will be distributed to each tool development team for internal and external publication as appropriate</li> </ul>	Kelley Higgason
<p><b>Shared Glossary</b> of technical terms</p>	<ul style="list-style-type: none"> <li>• Gather existing glossaries from Fog workshop participants to analyze content and language use</li> </ul>	** Volunteer still needed for this item**
<p><b>Shared Talking Points</b> Boilerplate language and guidance on messaging and communications strategies</p>	<ul style="list-style-type: none"> <li>• Talk with interested Fog workshop attendees to determine the scope and content of such a document</li> </ul>	Marina Psaros
<p><b>Case Studies</b> Examples of how different decision</p>	<ul style="list-style-type: none"> <li>• Compile existing case studies from across CA on tools (OCOF, NOAA CSC and others)</li> </ul>	Heidi Nutters

Products	Next Steps	Contact Person
support tools have been used in real-world planning projects	<ul style="list-style-type: none"> <li>Find a primary website to house case studies and share as a resource</li> </ul>	
<b>Online ‘Choose Your Own Adventure’ Tool</b> An online, interactive comparison tool to allow users to search and browse information about different options	<ul style="list-style-type: none"> <li>This idea generated significant interest and discussion among workshop attendees, but would require additional funding or staff time beyond what is currently available.</li> </ul>	John Rozum
<b>Shared Calendar</b> A condensed listing of SLR tool-related trainings, events, and important dates.	<ul style="list-style-type: none"> <li>Create a calendar of planned outreach and training events happening across the state</li> <li>Will collect data on this from the special session at the California Adaptation Forum</li> </ul>	Marina Psaros

## Appendix

### Appendix A: Workshop Agenda

#### Lifting the Fog:

#### Bringing Clarity to Shoreline Change Models and Sea Level Rise Tools

Pre-workshop Webinar: May 20, 2014, 9:30 – 11:30 am, Remote Access

Workshop: May 22, 2014, 8:45 am – 4:30 pm

OakStop, 1721 Broadway, Oakland, CA

We’re excited that you will be joining us for this fast-paced, interactive discussion to move sea level rise adaptation tools forward in California. We want our time together to be a lively exchange of ideas, culminating in concrete next steps for partnerships, products, and key messages.

#### Goals

- Development teams and end-users meet, work together, and better understand each other’s methods, needs, and objectives.
- Workshop attendees increase their capacity to describe the range of sea level rise tools and models available in California.

- Tool and model development teams collaborate on creating a shared communication framework that will help end-users navigate the different planning tools and data available to them. We will work to develop a path forward to share next steps and discuss potential connections for future collaborations.
- End-users<sup>1</sup> understand the utility and applications for the planning tools and data available to them, and provide feedback to tool and model developers on future planning support needs. One of the outcomes of this workshop will be a special session at the California Adaptation Forum to present communication outcomes and findings from this workshop.

### **Homework**

In advance of the workshop, attendees should review the model and tool comparison matrices (to be sent soon) and websites from each tool, model, or project represented at the workshop. These include:

- ✓ [NOAA SLR Viewer](#)
- ✓ [Our Coast Our Future](#)
- ✓ [Climate Central's Surging Seas](#)
- ✓ [CalAdapt](#)
- ✓ [Climate Understanding and Resilience in the River Valley](#)
- ✓ [Coastal Resilience Ventura](#)
- ✓ [CoSMoS 2.0 Southern California](#)
- ✓ [Silicon Valley 2.0](#)
- ✓ [CCAMP: San Francisco Bay Coastal Study FEMA Pilot](#)
- ✓ [AECOM/BCDC Sea Level Rise Maps](#)

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<sup>1</sup> “End users” include our primary audience, coastal decision-makers. Secondary end-users include media, elected officials, and others with coastal-focused planning and management interest.

# Agenda

- 8:15am **Check in and Refreshments**  
Caffeine and light breakfast to get you ready for a big day.
- 8:45am **Welcome and Introductions**
- Part 1: Focusing on the Now**  
**Where We Are with SLR Adaptation and How We Talk About It**  
Large and small group work to identify and refine key messages and communications products. The purpose of the morning session is to get us thinking about how SLR tool developers and adaptation experts can best communicate with coastal stakeholders about adaptation planning (includes a.m. break and refreshments).
- 12:00 pm **Lunch**
- 12:45 pm **Part 2: Focusing on the Near Term**  
**What We Need to Do, Make, or Say Over the Next 12 Months**  
Discuss strategies that can be used to disseminate and distribute collective messaging and communication products to end-users about tools, including planning for the California Adaptation Forum special session.
- Break**
- 2:00 **Part 3: Focusing on the Future**  
**Real Plans for Moving Forward Over the Mid- to Long-Term**  
Explore opportunities to work together; address real and perceived barriers and boundaries; identify specific actions to coordinate and share.
- 4:00 **Part 4: Summarizing and Signing on the Dotted Line**  
Review action items from the day, agree on a path forward.
- 4:30 **Happy Hour!**  
Wait out the rush hour traffic jams with a drink, some nibbles, and continued conversation.



## APPENDIX B: List of Terms to Jointly Define

(\* = “public” terms)

\* Flooding (coastal, fluvial)

\* Inundation

\* Surge

\* Threat

\* Risk

\* Vulnerability

Overtopping

MSL, MHW

Total water level

“Fully integrated analysis of SLR projections with flood risk”

Projections

Erosion

Basemap

Scenario

Projection

Coastal Evolution

\*Storm Events

Tool (decision support, visualization)

Model

Waves (setup, transformation, runup)

Hydraulic connectivity

Bathtub

Coastal confluence

Backshore

Beach

Cliff / bluff

uncertainty versus variability

projection versus prediction (especially in the context of scenarios)

The relationship between “information”, “models,” and “tools”

## **Appendix C: Defining End User Definitions**

The following describes a working draft of end user definitions based on notes from the morning discussion at the workshop.

**Scientist: A professional expert who conducts applied science, and whose research informs adaptation planning around climate change.**

Full definition: A person having expert knowledge of one or more sciences, especially a natural or physical science.

**GIS Technicians: GIS technicians are professionals who make maps and manipulate, understand, and manage digital land data.**

Full Definition: GIS technicians make maps and manipulate customized geographic information systems (GIS) applications and manipulate data to serve a variety of purposes. They read and interpret maps, manipulate and understand digital land data, and manage data entered into a GIS database.

**Planners: Professional who looks to optimize the effectiveness of a land use and infrastructure through a range of community plans.**

Full Definition: A planner is a professional whose job is to optimize the effectiveness of a community's land use and infrastructure. In developing their plan for a community (whether commercial, residential, agricultural, natural or recreational), planners must consider a wide array of elements such as sustainability, air pollution, traffic congestion, crime, land values, legislation and zoning codes. Increasingly, they have to decide whether and how sea level rise impacts each of these elements, and design a plan for overall community resilience.

**Managerial Decision-makers: A private or public sector manager who makes choices regarding the management of built and natural assets.**

Full Definition: A managerial decision-maker is a person in either the public or private sector who makes choices regarding the management of built and natural assets. Managerial decision-makers are often acting within the parameters of a plan, but may have a variety of alternatives for implementation. A public sector managerial decision-maker can be – for example – an agency lead who decides among alternative highway designs. A private sector managerial decision-maker can be – for example – a farmer who decides whether or not to levee her fields to protect her crops from flooding.

**Elected Decision-makers: Someone who is elected to be responsible for approving plans and making executive and administrative choices on behalf of a constituency.**

Full Definition: An elected decision-maker is a person who serves a constituency and makes executive and administrative choices on behalf of that constituency. Elected decision-makers



may be ultimately responsible for approving the plans and designs selected by planners and managerial decision-makers, and are also responding directly to the interests of the general public.

**General Public/ Media: "General Public" refers to the members of a community, exclusive of the categories above. "Media" are the entities that communicate information to a large audience, including print, television, radio and online outlets.**

Full Definition: The term "general public" is meant to refer to the members of a community, exclusive of the categories above. The general public is motivated by an interest in overall community well-being and productivity, but is also driven by personal motivations including health, safety, income and happiness. The term "media" means the suite of entities that communicate information to a large audience – typically the general public. The media includes print, television, radio, and online outlets.

## Appendix D: Lifting the Fog Workshop Participants

<b>Lifting the Fog: Bringing Clarity to Shoreline Models and Sea Level Rise Tools</b> <b>22-May-14</b> <b>Attendee Contact List</b>			
Full Name	Title	Organization	Email address
Dani Boudreau	Coastal Training Program Associate	Tijuana River National Estuarine Research Reserve	dboudreau@trnerr.org
Heidi Nutters	Coastal Training Program Coordinator	San Francisco Bay National Estuarine Research Reserve	heidin@sfsu.edu
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Kristen Goodrich	Coastal Training Program Coordinator	Tijuana River National Estuarine Research Reserve	kgoodrich@trnerr.org
Marina Psaros	Principal	Coravai LLC	marina@coravai.com
Sarah Newkirk	Coastal Project Director	The Nature Conservancy	snewkirk@tnc.org
Participants			
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David Revell	Senior Coastal Geomorphologist	ESA PWA	drevell@esassoc.com
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Jeremy Lowe	Coastal Geomorphologist	ESA	jlowe@esassoc.com

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Zach Ferdana	Marine Conservation Planner	The Nature Conservancy	Zferdana@tnc.org

## **Appendix E: California Adaptation Forum Workshop Agenda for August 18, 2014**

- 2:00 Introduction to session
- 2:10 Overview of SLR Tools in California
- 2:30 Tool Cafe
  - Introduction to the tools
  - Tools represented:
    - Our Coast Our Future
    - NOAA's Sea Level Rise and Coastal Flooding Viewer
    - Coastal Resilience Ventura
    - Cal-Adapt
    - Silicon Valley 2.0
    - Adapting to Rising Tides Portfolio
- 2:55 Facilitated discussion in Three Parts
  - Challenges in using tools and data in adaptation planning
  - Communicating the availability of tools and soliciting user feedback
  - Moving forward: next steps in tool development and adaptation planning
- 3:55 Final Thoughts