Sea Level Rise – The Next 100 Years

The following are notes from this workshop, held on September 22, 2010, at the Elkhorn Slough National Estuarine Research Reserve.

Agenda

1pm – Climate Change
Sea Level Rise
Question and Answer
Sea Level Rise Projections
Question and Answer
-Break-
Participant Brainstorm
Concerns, Questions, Changes
Prioritization
4pm   Closing

Objectives

1) You understand the current science on sea level rise
2) We understand your information needs for additional science on sea level rise

Presentations

You can view the presentations, and selected scientific references from those presentations, on our website, at:

http://www.elkhornsloughctp.org/training/show_train_detail.php?TRAIN_ID=SeBYD9A

Discussion Section Notes

The following list presents participant notes from the discussion session. Notes were recorded on flip charts with the titles presented as below.

All votes for each prioritized item are presented. Each participant received 3 votes, 3=highest, 1= lowest.

What to Keep About the Project

- Linkage of all three watersheds (3,3)
- Nice colors on the map (3, 2)
- Good perspective/approach (3)
- Ocean elevation map (2)

- Regional v. global analysis
- Up or down land movement

What to Change About the Project

- Timelines in highly populated areas (10 yr, 20 yr, 100 yr …) (3)
- Less technical summary (2)
- Bigger numbers on the charts (1, 1)
- Zoom in on key areas (1)

- Compare Beth's measurements with analytical models
- Terminology could be less technical
- Different presentations for different audiences, i.e. local vs. global
- The meeting time so it's not on a work day
- Meet with potential funders of future projects, i.e. to address sea level rise
- Move politicians to areas that would be inundated

What to Add to the Project

- Overlay of species and habitat (3,3,1,1,1)
- Calculate impacts on areas of high economic values (good v. bad) (3,3,2,2)
- Impacts from storm surges in the model (3,3,2,2)
- More attention to Watsonville and fresh water/salt water interaction (3,2,1,1)
- Undeveloped parcels should be highlighted (3,3)
- Overlay flood control jurisdictions on the map (2, 2)
- Sand migration and beach erosion (1,1)
- Acres of different types of land that will be impacted (3)
- Levee stability, height, and infrastructure (2)
- Opportunities for marsh migration (2)
- Guideposts on the maps (2)
- Where to put recharge basins (2)
- Cost-benefit regional analysis of armoring, farming, etc. (2)
- Maps of existing infrastructure (2)
- Seasonal inundation periods (2)
- Water table depletion/interactions (1)

- Timelines
- Curbing tidal action in the Elkhorn Slough
- Label urban areas on the maps
- Current effects on tidal control structures
- Email list share
- More in-depth analysis of sea level rise
- More subsidence info (combine with sea level rise info)
- Compare lidar info to historic hydrology
- Build in more time at the end of the session for answers to questions raised during the presentations
- Impact of Moss Landing desalinization on ground water
- Map of Sacramento/San Joaquin Valley and American River with sea level rise
- Get local media involved
- Integrate infrastructure with future models
- Design a similar study for the Pajaro watershed (like with EAS and Salinas River)
- 100 year floodplain, side by side maps
- Geologic/tectonic overlay to explain subsidence, etc.
- Overlay flooding with sea level rise
- Emphasis on regional v. global in analysis of climate change
- Compare findings from different regions and national level

Concerns About the Project

- Integrate all regional models, including city of Santa Cruz, salt water intrusion, Pajaro flood models, etc. (3)
- Put sea level rise in Monterey in the context of larger processes (2)

- Media misrepresenting info
- Salt water intrusion
- The map is too big – losing the core message
- Natural/unaccounted for tidal structures

Questions

- What causes the bulk of these changes? (3)
- What are the colors on the maps?
- Are there areas where the sea level has declined?
- Does gravity help sea level?
- Relative magnitude of sea level rise?
- What's that smell?
- How good a fit is the regression line?
- How good are computer models at predicting present/past data?
- What did you use for your data baseline?
- Is the peak of normal curves the inferred average for different models?
- What is the trend for 2004 – present?
- Area oceanic temperatures static or will they change?
- Are sea levels tied to wind and currents?
- What explains the blue areas on the sea level rise map?
- Are storm frequencies incorporated into the S.L.A.M.M. model?
- What methods are used to collect on-site data?
- What were your outreach efforts?
- How have major events (earthquakes, etc.) impacted the current sea level?

Notes About the Project

- Important to capture oral history (3,1)
- Collaboration conservation blueprint (3)

- Consider floodplains transparently
- What causes differences in models and can we control those variables? (driving factors)
- Using local info for a global model
- Who was contacted in the outreach (power plant, businesses),(follow up with email)?

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