

GOMA Federal Working Group Call Notes
5.28.15

Participants:

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Agenda:

GOMA Update

- Don't forget about the All-Hands meeting in Biloxi in 2 weeks.
- Dept of Navy is hosting a CMSP meeting on Tuesday from 1-4 p.m. part of Regional Ocean Body effort. If interested, Todd will provide more info.

Billy Sweet – Nuisance Flooding

- Focus on built environment. Flooding is nuisance to those who experience it. Requires population and infrastructure. Take-away msg is that SLR has increased flooding at many locations.
- NOAA tech report on SLR and nuisance flooding is available as well as a journal article that talks about what is expected in the future. These are sources for this talk. See references in powerpoint slides.

- We see evidence of relative SLR in many places. SL is not a fixed entity.
- Working with CO-Ops to share SL trends. Tide gages are 1 of many instruments that track SL change. Gives us a benchmark to relate elevations on land to datums we use to calculate sea level. This data is also important for looking at extremes and impacts, which is the focus for today.
- Tides have typical highs and lows each year. We are increasingly vulnerable to these events.
- Most discussion of sea level focuses on mean SL, but it's really the events that we feel. We aren't talking about extreme hurricane events but more minor or moderate events for flooding. We find ourselves increasingly in areas of rapid transition where impacts are more exacerbated.
- In the Gulf there is variability in "nuisance" levels of flooding. Take home message is that infrastructure is increasingly vulnerable to impacts.
- Looking at tide gage records for exceedances and how these change over time. Important to match time and date from gages to records of events (King Tides).
- Nuisance flooding is highly localized, tidally driven and recurrent.. More often it's minor flooding .
- What does nuisance flooding look like? Could be a flooded roadway or parking lot. Not catastrophic or newsworthy...but mostly an inconvenience.
- We can look and see when these events typically occur. In Gulf and SE it's a fall season event usually. Take Miami for instance. Last King tide was in October. Actual observations show nuisance flooding during October event that were not storm driven.
- What are the impacts of SLR? In LA you can say that over a decade you can see SLR happen b/c land is disappearing. We know it exacerbates extreme probabilities, but it can be obscured by rare large events like Sandy or Katrina. Better indicator is the lesser extreme event or nuisance floods that people notice and are happening more frequently.
- In the end there's a decreasing gap b/w high tide and our infrastructure.
- Looking at tide distributions, mean SL is changing. If you add your nuisance level, what does it mean to annual impacts? Once you start noticing problems, they will accelerate quickly. Charleston, Beaufort, Jacksonville, Naples, Key West all show accelerating trends.
- Important to realize the Gulf has a tight tidal range. Looking at differences in tide ranges to see what it means for events....Can look at exceedances over a foot above MHHW in Galveston. You can see the numbers of exceedances are growing. This is important for planning
- Tipping point = 30 days of impact/year. Took latest IPCC projections for Galveston and applied typical nuisance flood probabilities to see the number of days of impact. Projections start to diverge in mid-century. In next 20-30 yrs we will be beyond the 30 days of flooding tipping point in Galveston.
- Note chart that tells users at what year they will start experiencing 30 days (+) of flooding. This gives planners flood frequency info. Gets people thinking about thresholds for systems.

Migratory Species - Brenner

- Migratory connectivity helps us coordinate and understand what is needed from a management perspective (e.g., conservation efforts), and it's generally poorly known.
- Focus of this work is on ecological process, biodiversity, connectivity needs, and resilience.
- Looking at 26 different species including mammals, bird and fish
- Not meant to be a full conservation plan.
- Multiple partners have helped collaborate on the project.
- Goals are to map diversity, identify corridors.
- Mapping species hot spots and migratory corridors

- For some species we have more tracking data than others.
- Look to series of maps in Jorge's presentation for an overview of findings by species as well as higher level looks at aggregations and corridors for combined species.
 - Sperm whale distribution and migration patterns. Shows which corridors are most heavily used. Also includes a threat analysis.
 - Green sea turtle distribution and density
 - Bluefin tuna distribution and migration corridors
 - Atlantic tarpon migration corridors
- Next steps include increasing our understanding of connections b/w coastal and offshore marine environments and implications for habitat restoration; working more with Mexico and Cuba to enhance our understanding of the whole system; expanding to include new species like lobster, rays, other sharks, turtles and birds.