

## Coastal Inundation Working Group: past activities and future plans

### Working Group Co-chairs

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## Briefing Overview

- Background: Efforts to Date
- July 2011 Summer Workshop
- Next Steps

# Background

- **SDR CIWG began meeting in 2009 as an Ad Hoc group**
  - Developed draft charter
- **By June 2010**
  - Created a 2-page white paper on benefits and examples of interagency collaboration on inundation
  - Inventoried federal coastal inundation models
- **Resumed efforts in Spring 2011**

## Participating Agencies:

DOT, USACE, USGS, FEMA, NOAA, USAID, Navy, USCG, NIST, USAID, NIH, CDC, EPA, DOI, USNRC

## Other groups:

CEQ, OSTP, USGCRP, ISC, SOST

# Challenges and Drivers: Inundation

- **Customers/Decision Makers ask:**

- Who will get flooded?
- Who will get flooded? How much?
- When will floodwaters arrive and leave?
- What will the impacts be?
- How often will it occur? What is the risk?
- How should I respond?

- **Requires:**

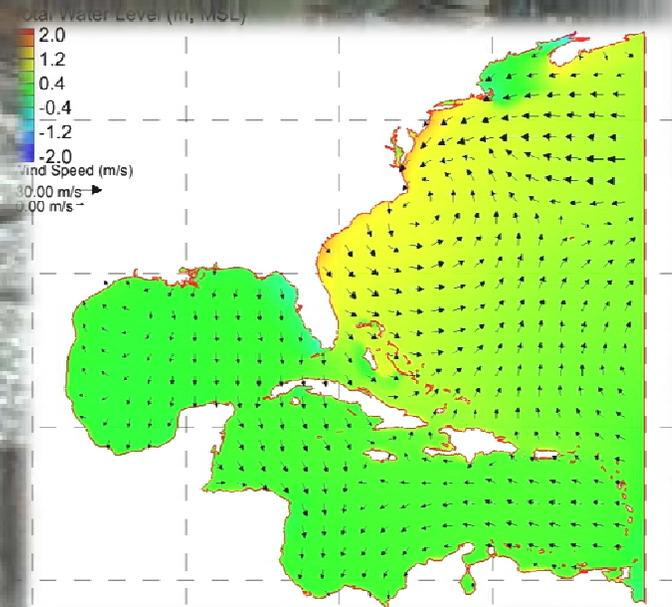
- Improve determination of storm water levels, timing & other responses (erosion, waves, etc)
- Describe flooding as inundation above ground level
- Communicate actionable information that promotes sound decision-making

# July 2011 Workshop

- **Two-day workshop in Silver Spring**
- **Attendees: USACE, Navy, USGS, FEMA, NOAA, NIST**
- **Major Topics**
  - Data Sharing
  - Integrating Products and Messages
  - Communication; Coordinating Awareness Outreach
  - Measuring Effectiveness
  - Integrating Science & Technology Development

# Data Sharing *(July 2011 Workshop)*

- **Shared Data and Development Tools**
  - DEM's, bathy/topo, model grids, high res model output from previous studies, storm data, collaboration in model evaluation testbed
- **Planning**
  - Sharing tools, outreach, relating storm data to actual impacts, sharing infrastructure data
- **Pre Storm**
  - Prepositioning assets; coordinating actions
- **Real Time**
  - Forecasts; Robust observations, Winds optimized for surge input
- **Post Storm**
  - Data Collection; Forecast Evaluations; Performance Assessments



# Integrating Products & Messages

*(July 2011 Workshop)*

- **FEMA RiskMAP program**
- **Risk Scenario projects**
- **Consistent messaging and shared communication**
  - Synergizing terminology and reference points for inundation
  - Booklet on agency products and roles over the timeline of inundation (e.g. Planning tools, event-related activities, points of contact for your state)
- **Which products for which Customers?**
  - Public, non-Fed decision makers, Feds
  - Different requirements; different products?
  - What is the best way to communicate confidence/ uncertainty?



**RiskMAP**  
Increasing Resilience Together

## Measuring Effectiveness *(July 2011 Workshop)*

- **Reducing the area evacuated; measure ratios**
  - Area forecast/Area impacted
  - Area evacuated/Area impacted
  - What protocols might change?
- **Reducing damage, costs, no loss of life**
  - What is the appropriate measure of success in an increasingly developed environment (\$, %)?
  - What products/tools/outreach are actually changing behavior
  - What partnerships are needed to improve resilient building, and overall resilient communities
  - What are actual costs/benefits of federal risk reduction measures?

## Integrating S&T Development

*(July 2011 Workshop)*

### Key Areas

- **Developing and delivering risk information**
  - Baseline risk, rare events, understandable probabilities
- **Visualization tools**
  - Collaborative Decision Support Tools
  - Possible pilot project with hydro efforts (IWRSS), inundation mapping in a coastal watershed?
- **Social science studies**
  - Product design, effectiveness in influencing behavior
- **Model development**
  - Community modeling approach
- **Model Test and Evaluation**
  - IOOS testbed

# Next Steps

- **Near Term**
  - Shared Outreach Efforts to Communities
  - Booklet/ppt on agency products and roles over the timeline of inundation
  - Customer focus: mine existing needs assessment data; integrate social science
  - RiskMAP – explore outreach opportunities
- **More Challenging**
  - Synergy on products
  - Developing enhanced risk communication science and products (assist with spring workshop?)

## Discussion

Comments, questions?