

# ST. AUGUSTINE, FL BACK BAY COASTAL STORM RISK MANAGEMENT FEASIBILITY STUDY

## MONTHLY PLANNING MEETING

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|                   |  |
|-------------------|--|
| Date:             | July 20, 2023  |
| Time:             | 1:00PM - 2:30PM  |
| Meeting Location: | WebEx Virtual Meeting<br><a href="https://usace1.webex.com/meet/martin.t.durkin">https://usace1.webex.com/meet/martin.t.durkin</a> |

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### IN ATTENDANCE: 41 ATTENDEES IN TOTAL

#### USACE

- Kathryn Lebow, Katherine Bailey, Martin Durkin, Amanda Bredesen, Brennan Banks, Ceyda Polatel, Christopher Bukolt, Darren Pecora, Glorimar Torres, Hunter Bredesen, Jason Harrah, Joel Belsterling, Michael Hollingsworth, Michelle Viera, Vongmony Var, Zuzana Chovanec, Brooke Warlithner, David Ruderman,

#### City of St. Augustine

- Caitlyn Sargent

#### Agencies and Public

- Donna Dove, Camryn Dillon, Doug White, Dustin Mobley (Black and Veatch), Eddie Creamer, Erin, Kurt Foote, Pete, Roxana Dow, Rachel Rhode, Lisa Sterling, Steph Jones (FWC), Terri Newman, Todd Grant, Bob Carey (FWS), Brendan Myers (FWS), Brooke Morris, Arnoldo Valle-Levinson, Gordie Wilson, Mary, Frances Arflin, Kaitlyn Dietz (GTMNERR).

### OPENING REMARKS

- The month of August will have a new webinar address that will be released on the USACE social media site. To join the webinar on August 17, 2023, please use the below address...

<https://usace1.webex.com/meet/martin.t.durkin>

Join by phone.

+1-844-800-2712 US Toll Free

+1-669-234-1177 US Toll

Access code: 199 614 3322

## STUDY OVERVIEW

- Large study area – covers the entire city.
  - 17 distinct neighborhoods (2 of which are environmental justice communities (i.e., socially, or demographically disadvantaged))
  - Upcoming modeling effort will cover entire area within red geographic boundary.
- Very comprehensive and complex study which has led us to a longer and more expensive study.
- Objectives are based on a 50-year period of analysis.
  - Manage risk of coastal flood damages
  - Manage risk to health and life safety.
  - Preserve cultural and natural resources and maintain aesthetic quality.
  - Manage flooding impacts to the local economy.
- The non-federal sponsor is the City of St. Augustine.
- Local Considerations
  - Avoid or minimize adverse effects to cultural resources.
  - Consideration of local affordability.
  - Consider local responsibilities for technical operations and maintenance.
  - Avoid or minimize designs that do not conform to the city's historic character.
  - Avoid or minimize encroaching on navigational or recreational features.
  - Avoid environmental impacts.
  - Avoid or minimize impacts to community cohesion.
- Initial Alternatives
  - Walls, levees, or dune features would physically stop flooding at the back bay shoreline.
  - Surge barrier or gate feature would physically stop flooding before it gets into the back bay water bodies in the study area.
  - In BLUE: Interior drainage features would get flooding out of upland areas. Interior drainage features would be implemented in conjunction with wall, levee, or dune features to ensure that flood waters would not get trapped behind those structures.
  - Nonstructural features would get structure out of the way of flooding without physically altering the flooding processes or extent.
  - Breakwaters or Natural and Nature Based Features (NNBFs) would function to reduce wave energy and wave contribution to total water levels before it reaches the back bay shorelines. These features would likely be implemented in conjunction with a wall, levee, or dune feature. It should also be noted that levees or dune could be considered an NNBF themselves depending on their design.

## KEY ONGOING ACTIVITIES

- Generation II Coastal Risk Model (G2CRM)
  - A probabilistic life-cycle model used to evaluate the interaction between the driving forces (storms) and economic assets (infrastructure) over the 50-year period of analysis.
  - Captures that there is a lot of uncertainties with regards to how the city will flood in the future
  - As flooding occurs in the model, it will link how that flooding impacts structures in the city.
  - Account for storms, sea level rise, high/low tide, within a storm database called "Storm Suite."
  - First – "Future Without-Project Condition" will be run with as-is conditions to establish baseline flood expectations over the next 50-years.
  - Second – run the model with various alternatives to compare to future without-project condition to evaluate alternative performance.
- Discipline Specific Updates and Actions:
  - Planning Technical Lead (Marty Durkin)
    - Working with the team to get the G2CRM model set up and running.
      - Anticipating having the "without project" results/model run in or around March 2024
    - Getting a landscape architect for Visual Resource Assessment (VRAP)
      - Aesthetics, viewshed, how the city is used, development of a baseline to give us a quantifiable assessment of how any effects from the alternatives might best be avoided or minimized.
  - Engineering Technical Lead (Patrick Snyder)
    - Additional modeling setup
      - HECRAS – riverine contributions to flooding.
      - Elevation information
      - GIS Database and public mapping webpage – Galveston district developed a "Story Map" independent webpage that provides a lot of additional information in an interactive format that Jacksonville District is looking to develop for this study.
  - Environmental Lead (Darren Pecora)
    - Tracking set-up of environmental sub-group and initial meeting anticipated for August.
      - Will discuss engineering with nature, alternatives, data needs, data collection, etc.
    - If there are any environmental organizations that would like to be included, email Jason Harrah
  - Economics Lead (Vongmony Var)
    - Working on the economic portion of the model set-up, specifically the Structure Inventory

- The team has downloaded very good, consistent data from the St. Johns County property appraiser website.
- Cultural Resources Lead (Zuzana Chovanec)
  - Cultural resources sub-team has been formed and kickoff meeting was held last month.
  - Data collection will be the next hurdle.
  - Next steps are to continue information related to CR and set up an agenda for the next meeting.
  - Email Jason Harrah for any cultural resources organizations that would like to be involved in the sub-team meeting.
- Real Estate Lead (Chris Bukolt)
  - No updates – we are early in the study for Real Estate updates.
- Office of Counsel (Katie Gwin)
  - No updates

**SCHEDULE REVIEW:**

- 90 Days Schedule Window:

| TASK   | START            | END              |
|--|------------------|------------------|
| <b>Initial Flood Driver Screening (Scope Decision Point)</b>   | <b>3/10/2023</b> | <b>5/17/2023</b> |
| Coordination for Collecting and Compiling Data for Inventory   | 3/10/2023        | 10/27/2023       |
| Refined Existing Data Inventory & Analysis / New Data Collection & Analysis                                    | 3/10/2023        | 10/27/2023       |
| Inventory of Existing & Future Cultural Resources with   | 3/13/2023        | 4/5/2023         |
| Inventory of Existing & Future Environmental Resources with Mapping  | 3/13/2023        | 4/5/2023         |
| Inventory of Existing & Future Economic Resources with   | 3/13/2023        | 4/5/2023         |
| Inventory of Existing & Future Flooding with Mapping (just 4-8 flood scenarios to be used for the AMM)         | 3/13/2023        | 4/5/2023         |
| Inventory of Existing Geological Conditions with Mapping   | 3/13/2023        | 4/5/2023         |
| Inventory of Existing & Future Local Projects with Mapping   | 3/13/2023        | 4/5/2023         |
| Initial Entries into Risk Register   | 3/13/2023        | 4/5/2023         |
| Review Plan (Complete Draft) Sent to PCX-CSRM for Review & Endorsement   | 3/13/2023        | 4/7/2023         |
| Coastal Barrier Resources Act (CBRA) Coordination w/USFWS  | 3/13/2023        | 4/24/2023        |
| GIS & Inventory of Baseline Structure Elevations & Properties Built Prior to 1978 (Cultural, Real Estate, GIS) | 3/13/2023        | 11/20/2023       |
| Identify Initial Area of Potential Effect (APE)  | 3/14/2023        | 4/24/2023        |
| SAJ Vertical Team Alignment Memo (VTAM) to South Atlantic Division (SAD)                                       | 3/20/2023        | 4/12/2023        |
| Pre-IPR Discipline Specific VT Coordination Meetings As  | 3/27/2023        | 4/12/2023        |
| Web Map Viewer   | 4/3/2023         | 5/1/2023         |
| Parametric Costs for Initial Array of Alternatives   | 4/5/2023         | 4/24/2023        |
| Real Estate Considerations for Initial Array of Alternatives   | 4/5/2023         | 4/24/2023        |
| Environmental Resource Considerations for Initial Array of Alternatives  | 4/5/2023         | 4/24/2023        |
| AMM Read Ahead Prep & Presentation Dry Runs  | 4/5/2023         | 4/28/2023        |
| Vertical Team (VT) IPR #1 Status Update  | 4/12/2023        | 4/12/2023        |
| Pre-AMM Discipline Specific VT Coordination Meetings As Needed   | 4/17/2023        | 4/28/2023        |
| Data Gathering and Digital Elevation Model (DEM) creation  | 4/17/2023        | 5/30/2023        |
| Develop Environmental Resources Subgroup   | 4/24/2023        | 5/26/2023        |
| Develop Cultural Resources Subgroup  | 4/24/2023        | 5/26/2023        |
| <b>AMM Milestone Meeting</b>   | <b>5/1/2023</b>  | <b>5/1/2023</b>  |

| TASK   | START     | END        |
|--|-----------|------------|
| Complete/Review/Send SAD VTAM (to cover 3x3x3 exception package) to Headquarters (HQ)  | 5/2/2023  | 5/9/2023   |
| <b>TENTATIVELY SELECTED PLAN (TSP) PHASE</b>   | 5/9/2023  | 2/2/2027   |
| TSP Phase Supervisor Support   | 5/9/2023  | 2/2/2027   |
| General PDT Coordination & Participation   | 5/9/2023  | 2/2/2027   |
| Neighborhood Outreach Meetings   | 5/9/2023  | 2/2/2027   |
| Ongoing Draft Report Writing and Preparation to have complete draft report and appendices by the TSP.  | 5/9/2023  | 2/2/2027   |
| Environmental Surveys  | 5/9/2023  | 2/2/2027   |
| GIS Support (Web Mapper, Figures, Story Map, etc) through TSP  | 5/9/2023  | 2/2/2027   |
| Future Without-Project (FWOP) Hydrologic Engineering Center's River Analysis System (HEC RAS) Modeling for Generation 2 Coastal Risk Model (G2CRM) Hydrographs | 5/17/2023 | 10/5/2023  |
| Characterize Systems Protective System Elements (PSEs)   | 5/17/2023 | 10/19/2023 |
| Coordinate with H&H as needed to characterize storms and any other H&H data  | 5/17/2023 | 10/27/2023 |
| Delineate Study Area into Model Areas  | 5/17/2023 | 10/27/2023 |
| Develop Modeling Strategy for Comprehensive Benefits   | 5/17/2023 | 10/27/2023 |
| Engineering Inputs for G2CRM (including Coastal Hazards System (CHS) based storm suite from Engineer Research and Development Center (ERDC))                   | 5/17/2023 | 12/5/2023  |
| Characterize Assets  | 8/1/2023  | 11/17/2023 |
| Develop First Floor Elevations   | 8/14/2023 | 11/17/2023 |
| Develop/Verify/Update Structure & Content Values   | 9/5/2023  | 11/17/2023 |
| Develop/ Verify Damage Functions   | 9/11/2023 | 11/17/2023 |
| Develop/ Verify Damage Function Matrix   | 9/18/2023 | 11/17/2023 |
| Public Input/Discussion Session #1   | 9/27/2023 | 9/27/2023  |
| Populate G2CRM Model Representation  | 10/2/2023 | 11/17/2023 |

- o The currently ongoing tasks are primarily associated with getting the G2CRM model set up and running.

#### Upcoming Key Dates

| Dates                             | Events                                |
|-----------------------------------|---------------------------------------|
| August 17 <sup>th</sup> , 2023    | Monthly Planning Webinar              |
| September 21 <sup>st</sup> , 2023 | Monthly Planning Webinar              |
| Late-September 2023               | Public Workshop (Date & Location TBD) |
| October 19 <sup>th</sup> , 2023   | Monthly Planning Webinar              |
| November 16 <sup>th</sup> , 2023  | Monthly Planning Webinar              |
| December 21 <sup>st</sup> , 2023  | Monthly Planning Webinar              |

\*Note: Monthly Planning Webinar for August will be at a different webinar address\*

## QUESTIONS/COMMENTS

- Lisa Sterling: will damages be the only cost evaluated for alternatives? Will you be monetizing env benefits/costs?
  - Marty Durkin: we won't be monetizing environmental benefits, but we will be quantifying loss of environmental habitat and other social effects such as business disruptions, resident displacement and life loss. It won't be monetized, but it will be considered and factored into our plan selection.
- Arnoldo Valle-Levinson: Coastal phenomena to consider inter-decadal variability of sea level; compound flooding (excessive precipitation combined with coastal ocean surge); flooding from Matanzas Inlet (instead of the barrier to the south of Rt 312)
- Rachel Rhode: Why are there no charrettes or workshops being held prior to an initial array of alternatives? It seems like there are a lot of assumptions made in terms of alternatives at the onset without public input or what would be locally supported. There should be extensive public input prior to any evaluation of any alternatives before a TSP. Miami and Collier found that out the hard way.
  - Jason Harrah: We will be having multiple public meetings/workshops along the way, especially as more data becomes available. We are targeting to have a public workshop in Sep/Oct timeframe and roughly every 6 months thereafter. Public input will be crucial, and we will make sure the study is transparent along the way.
  - Rachel Rhode: Highly suggest multi-day charrettes with subject matter experts and stakeholders to develop and refine any initial array of alternatives before evaluation.
  - Jason Harrah: Thanks for the feedback
  - Marty Durkin: The initial array is more like an "initial" initial array that was developed during a charrette with the City and stakeholders at the kickoff of the study. We are working to include the public through workshops and meetings as the study progresses and will get input as the initial array is developed.
- Rachel Rhode: Interested to know if the modeling team is planning on looking at the next gen modeling framework to address compound flooding.
- Arnoldo Valle-Levinson: Agreed with Rachel Rhode
- Caitlyn Sargent (COSA): Thank you everyone for calling in and participating. We will be sure to publish these meetings in our press releases. Be sure to submit comments during this time as well.
- Kurt Foote (NPS): National Park Service is supplying storm recovery funding to Castillo to mitigate our section of seawall. We are in the process of

assembling a national level and regional level team to help us with the eventual environmental compliance document.

- Steph Jones (FWC): No questions at this time, thank you for the update.
- Roxane Dow: No questions
- Rachel Rhode: With the Environmental Defense fund here as a resource for the study, also involved with the Norfolk district with the Collier County and Miami Backbay studies.
- Donna Dove: I am a resident of South Davis Shores, we started at 3 years, and I am hearing that we are now up to 6 years?
  - Marty Durkin: The study will be 5 years and 9 months starting from the end of January 2023. The study will be completed in 2028. That is a very lengthy timeframe, but as Ms. Rhodes alluded to public input will be paramount to this study. We have to take each neighborhood and get input, so we are going to be slow and methodical in our approach to include all of the public feedback so that we get to the correct answer that the public supports.
- Rachel Rhode: Something to consider is an EJ working group similar to what you have for the other pieces.
  - Jason Harrah: We have an environmental subcommittee group that will be meeting separate from these meetings. Reach out to Darren Pecora. It would be good to have you guys call into those.
- Jason Harrah: Also, please remember to check the USACE Jacksonville District social media pages (Facebook, Twitter, Instagram, LinkedIn) for updates to these meetings, upcoming workshops, etc. This info is also made available on COSA websites.