



# Climate Resiliency Workgroup Meeting

Wednesday, March 2, 2016

10:00AM – 3:00 PM

## MINUTES

**Welcome & Introductions** (Co-Chair Mark Bennett, USGS and Co-Chair Erik Meyers, The Conservation Fund)

**Announcements** (Zoë Johnson, CBP Climate Change Coordinator)

- Two-Year Work Plan - Public Comment Period
  - 2 year work plan is still out for 45 day review for public comments. This is part of larger work plan process. [Click for more information on workplan.](#)
- [STAC Workshop: Climate Forecasts and Projections – March 7-8, 2016](#)
- STAC Workshop Proposal: Monitoring Needs and Adaptive Management – Spring 2017.
  - Proposing three small, one day workshops- SAV, Blue Crab, and Oysters. The goal is to determine any long-term trends
  - Lew Linker suggested to think ahead about a series of workshops in this topic.
- Chesapeake Decisions – Discovery Process
  - CBP just recently launched Chesapeake Progress that allows public to more easily track goal attainment. Other parts of the release include Chesapeake Decisions and Chesapeake Data, all under the umbrella of Chesapeake STAT.
- Jennifer Demooy- [A Primer/ Introduction](#) document put together with practical information regarding green Infrastructure to improve climate resiliency for Delaware.

**Climate Resiliency Workgroup Governance Document** (Kyle Hinson, CRC Staffer)

- The document provides core objectives and values for the climate resiliency workgroup.
- Chesapeake Bay Commission should be added on list of Jurisdictional Members. Kyle will forward it out to the group for comment.
- A focus should be given on what makes for an optimal size of the group.
- Workgroup's webpage address will be sent to the group and will contain this governance document.

**Coastal Resiliency Work Plan – Update on Collective Efforts** (Zoë Johnson, CBP Climate Change Coordinator)

**Objective: Review ongoing collective efforts that are part of the Climate Resiliency work plan and also receive feedback and updates from other work plan partners concerning collective actions.**

- Climate Resiliency Assessment and Adaptive Management Matrix (CRAAMM)
  - Status of Chesapeake Bay Trust RFP Process
- Current Adaptation Effort Update

- TetraTech will be soliciting updates from leads on projects to create a template to create a document that can be used as a pdf to display efforts.
- EPA Region 3 - Adaptation Database (Andrew Wynne, EPA Region 3)
- Andrew Wynn- Resilience and Adaptation in New England. [www.Epa.gov/raine](http://www.Epa.gov/raine).  
Currently a Region 1 project. Looking to expand this project into a Region 3 project. Includes adaptation plans and adaptations in state, county, and local levels, as well as a connection between communities to compare projects and situations. Allows for specific searches by parameters, including population, location, specific impacts, etc.
- Chesapeake Resiliency News
  - April 2016 edition – Content Solicitation

**Future Meeting – Key Action/Seminar Focus Areas (Zoë Johnson. CBP Climate Change Coordinator)**

- Discussed by the group, with additions to this list made. See attached notes at end of document. This can direct our future meetings. Also focus on realizing where other GITs fit into our work plan areas and invite them into our workgroups. Invitation to serve on an agenda steering committee given to the group.
- Local streams should be a focus as well for local buy in and support. As well as a water resource concern. Flood effects.
- Everyone’s input will be put together to determine gaps and interest in these current work plan areas.
- Climate change impacts to headwater wetlands, larger order stream impacts. Ties in with integrating stormwater.
- Which tasks will help us to fill gaps most rapidly or will not undergo significant change if more information is brought forth?

**Objective: The workgroup will identify “Key Action” focal areas and a proposed schedule for dedicated work sessions at bi-monthly meetings. The participants will be asked to review and prioritize the focus areas listed below for future meetings.**

- Green Infrastructure and Coastal Resiliency
- Research Agenda, Capacity and Needs
- Monitoring Needs and Long-Term Trend Assessments
- Ocean Acidification
- Water Quality and the 2017 Mid Assessment
- Climate Impact Vulnerability Assessments
- Climate Change Indicators and Performance Metrics
- Climate Data and Information Portals
- Climate Change and Diversity
- Communications, Outreach, Education and Capacity Building

**Future Meeting - Schedule and Meeting Dates (Melissa Merritt, CRC Staffer)**

[Future Meetings- Key Action Priorities Document](#)

**Objective: Available dates for a consistent Climate Workgroup Meeting time are provided. Participants will be asked to determine what date would work best for consistent, bi-monthly meetings.**

- Proposed Bi-Monthly In-Person Meetings (10:00 a.m. – 2:00 p.m.) - May, July, Sept., Nov., Jan., March, May, etc.
  - Fishshack is available every other month, starting in May (until Mar of next year) on:
    - 1<sup>st</sup>, 3<sup>rd</sup> Mondays
    - 4<sup>th</sup> Monday (except May)
    - 2<sup>nd</sup> Thursday (except July)
- Proposed Bi-Monthly Conference Calls (2 hours) - April, June, August, Oct, etc.
- Determined that the 3<sup>rd</sup> Monday will work for Climate Resiliency In-person meetings. Should also allow Water Quality GIT reps to attend, since their meetings do not occur those days.

**Lunch Seminar:** Principles of Coastal Resiliency and Green Infrastructure – Baltimore Wilderness Project (Erik Meyers, The Conservation Fund)

**SEE PRESENTATION.**

*For a project funded by the NFWF Hurricane Sandy Competitive Coastal Resiliency Grants Program, The Conservation Fund has been leading a project team examining how green infrastructure across the full range of scales (landscape to site levels) can be used to increase resiliency in a region affected by climate change generally, including coastal storms specifically. The presentation will describe the spatial context of the project and the approach being taken to rating and ranking elements of green infrastructure for their contribution(s) to increased climate resiliency. The analytic framework is intended to be especially applicable at the regional scale but would also be useful at more localized and even site scales to articulate and “rate” benefits.*

*Presenter: Erik J. Meyers, VP of The Conservation Fund, and Principal Investigator for the 2014-16 NFWF project entitled “Creating Green Infrastructure Resiliency in Greater Baltimore and Annapolis Watersheds.”*

- How to prioritize green infrastructure projects with selection criteria and weightings. This project will be completed by the end of August. A public document, and a longer technical document, [all posted on the web](#).
- Question about data
  - How can opportunities map tie in to actionable items?

**Climate Resiliency Workgroup – Work Session: *Coastal Resiliency and Green Infrastructure Solutions***

**Objective: Several presentations regarding these solutions as they relate to the Climate Resiliency work plan will be presented.**

**Presentations:**

- *Targeting Tools* – Maryland Coastal Resiliency Assessment (Nicole Carlozo, Maryland Dept. of Natural Resources)
  - [SEE PRESENTATION](#)

- In-depth discussion about using modeling to determine efficacy of shoreline projects
- Possible use of EJ Screen overlay on Nicole's model
- Utilizing shoreline type, elevation, sea level rise, wave exposure, surge potential, and historic erosion data to target the high-hazard areas, as well as taking into account current habitat ranks providing a buffer capacity. Illustrating the most important habitat areas that should be protected. Also a review of the newly updated Maryland's Coastal Atlas. This tool to be completed by the end of March. Hope to take this project to the county planner level.
- Would be nice to get an update on this project on the April call.
- *On the Ground Project Implementation and Performance Metrics* (Rick Bennett, USFWS, DOI Metric representative)
  - [SEE PRESENTATION](#)
  - Rick discussed the development of socio-economic and ecological performance metrics to assess services post Sandy
  - Long discussion about the role of funding, maintenance and upkeep of projects in monitoring effectiveness
  - Looking to improve the amount of data from projects long term to make sure there's actual improvement from the projects. Also, working to develop core metrics, across agencies, to demonstrate that natural infrastructure is effective and cost effective. <http://sagecoast.org/>
- *Training Needs and Resources* – Avalon Mehta , National Wildlife Federation
  - [SEE PRESENTATION](#)
  - Looking for funding, capturing attention of citizens and regulators. Facilitating the improved use of natural and nature-based features in MD.
  - Contact Avalon Mehta for more information. (443) 842-7528.

## Discussion

**Objective: Climate Resiliency Workgroup members to discuss the nexus between projects and necessary next steps to support implementation. A general discussion will follow, regarding the applicability and outcome of these projects related to other workgroup actions and ongoing regional efforts.**

- May be helpful to mine work plan for updates we need to look for regarding milestones
- Will engage with Kristin Saunders, Cross-GIT coordinator, to get our information out.

## **CBP CLIMATE RESILIENCY WORKGROUP**

### **Future Meeting – Key Action Focus Areas**

- **Water Quality and the 2017 Mid Assessment**

- Priority: High
- Timing: Immediate
- Steering committee:
- Cross GIT/Workgroup/Organization Collaboration:
  - Water Quality GIT
  - Modeling Workgroup
- Topics:
  - Climate data and information needs
  - Watershed Modeling efforts
  - Policy discussion
  - BMP effectiveness studies
  - Co-Benefits ( Coastal Resiliency Benefits of Water Quality Related BMP's)
  - Wetlands
  - Groundwater recharge
  - Priority to connect water quality BMP's with climate change impacts
  - Crosses with implementation and communication to grant applicants

- **Monitoring Needs and Long Term Trend Assessments**

- Priority: High
- Timing:
- Steering committee:
  - Avalon Mehta, NWF
  - Sarah Wilkins, CBSSC
- Cross GIT/Workgroup/Organization Collaboration:
  - NOAA Chesapeake Sea Level Sentinel Site Cooperative
  - Maryland DNR/CBNERR (Jenny Allen, Amanda, Jenn Raulin)
  - Gary Berti, Trout Unlimited
  - Habitat GIT
  - Todd Petty
- Topics:
  - GIT/Workgroup Needs
  - Seasonal, Decadal and Future Climate Projection Data and Information Needs
  - Stream trend, brook trout and monitoring in headwater streams
  - Climate impacts on lower order streams
  - Downstream strategies
  - Monitoring pre and post-construction of coastal resiliency projects
  - Important to promote to distribute monitoring results

- **Climate Data and Information Portals**

- Priority:
  - Timing: Short-term
  - Steering committee:
    - Darlene Finch, NOAA
    - Sarah Wilkins, CBSSC
    - Jennifer DeMooy, DE
  - Cross GIT/Workgroup/Organization Collaboration:
    - NALCC/AP LCC (Scott Schwenk)
    - Ginny Kreidler, APP LCC
  - Topics:
    - Data Portals
    - Web-based tools
    - Climate Projections and scenarios
    - Resources, tools and training information
    - Linkage with Chesapeake Decisions
    - Tools to support decision –making
- **Communications, Outreach, Education and Capacity Building**
    - Priority: High
    - Timing:
    - Steering committee:
      - Avalon Mehta, NWF
      - Britt Slattery, MD DNR
      - Coreen Wielminister, MD DNR
      - Bart Merrick, NCBO
    - Cross GIT/Workgroup/Organization Collaboration:
      - Kristen Luke – American Bird Conservancy
      - Habitat GIT
      - Atlantic Coast Joint Venture
    - Topics:
      - Chesapeake Resiliency News
      - Formal and informal education
      - Stakeholder Engagement
      - Local Government Capacity Building
      - Techniques
      - How to help people sort through information
      - Contractor training on NNBF
      - Tell the story of tidal marsh and waterfowl wintering in the watershed
      - Risk Communication
      - Best Practices
- **Green Infrastructure and Coastal Resiliency**
    - Priority: High
    - Timing: Mid-long term

- Steering Committee
  - Bhaskar Subramanian, MD DNR
  - Chris Becraft, MD DNR
  - Darlene Finch, NOAA
  - Avalon Mehta, NWF
- Cross GIT/Workgroup/Organization Collaboration:
  - Matt Whitbeck, Blackwater NWR
- Topics
  - Comprehensive Planning
  - Targeting Tools
  - Training, Information and Data Needs
  - Financing
  - Updates on On the ground project implementation
  - Performance metrics and quantification
  - Concerns regarding impacts to headwater or low-order stream habitats
  - Integrating sub watershed scale green infrastructure with larger green infrastructure network
  - Lessons learned from Sandy Projects
    - Design, specs and performance
  - Impact of climate change on performance of GI projects (similar to BMP effectiveness study)
  - Communication/Success Stories Integration of storm water with larger watershed green infrastructure
- **Research Agenda, Capacity and Needs**
  - Priority:
  - Timing:
  - Steering committee:
  - Cross GIT/Workgroup/Organization Collaboration:
    - STAC
    - Academic Partners
    - Regional Coordination (LCC, USDA Climate Hubs, Climate Science Centers)
    - SAGE (contact Susan Taylor)
  - Topics:
    - Bay-wide littoral drift data needs
- **Ocean Acidification**
  - Priority:
  - Timing:
  - Steering committee:
    - Darlene Finch, NOAA
  - Cross GIT/Workgroup/Organization Collaboration:
    - Sustainable Fisheries GIT
    - NOAA Ocean Acidification Program

- Topics:
  - State of the Science
  - MD Task Force Recommendations
  - Regional efforts (e.g., NOAA Ocean Acidification Program )
  - Long-term monitoring needs
  - Connect to economy - aquaculture and working waterfronts
  - Connection to water quality impacts and fisheries
- **Climate Change and Diversity**
  - Priority:
  - Timing:
  - Steering committee:
    - Regina Poeske, EPA
    - Avalon Mehta , NWF
    - Chris Becraft, MD DNR
  - Cross GIT/Workgroup/Organization Collaboration:
    - Diversity Action Team
  - Topics:
    - Outreach
    - Targeting Tools
- **Climate Impact Vulnerability Assessments**
  - Priority:
  - Timing:
  - Steering committee:
    - Jennifer DeMooy , DE
    - Sarah Wilkins, CBSSC
  - Cross GIT/Workgroup/Organazation Collaboration:
    - CBNERR (research and feed-in)
  - Topics:
    - Application of climate projections and forecasts
    - Coastal community based-assessments
    - Jurisdictional or site-level assessments
    - Resource-based (e.g., wetland) assessments
    - Site specific assessments
    - Resource based assessments
    - Ecosystem Services of tidal wetlands/coastal habitats
- **Climate Change Indicators and Performance Metrics**
  - Priority:
  - Timing:
  - Steering committee:
    - Andrew Wynn, EPA
  - Cross GIT/Workgroup/Organization Collaboration:



- Natural Infrastructure Metrics Workgroup
- North Atlantic LCC/Climate Metrics Workgroup
- Topics:
  - Ecosystem Response
  - Programmatic Progress
  - How climate change will effects mgmt. actions

## PARTICIPANTS

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