Climate Resiliency Workgroup Meeting

Monday, October 19, 2020
1:30 PM – 3:30 PM

Webinar*: https://global.gotomeeting.com/join/153563869
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Meeting Materials:
https://www.chesapeakebay.net/what/event/climate_resiliency_workgroup_october_2020_in_person_meeting

This meeting will be recorded for internal use to assure the accuracy of meeting notes.

Action Item

- ✓ Breck Sullivan (bsullivan@chesapeakebay.net) will send out the most updated Strategy Review System (SRS) Presentation and Narrative analysis along with information to the Scientific, Technical Assessment and Reporting Team Meeting on Thursday, October 22nd for the CRWG SRS Dry Run Presentation.
- ✓ Provide feedback on the SRS Presentation and Narrative Analysis by October 28th.

AGENDA

1:30 PM **Welcome and Meeting Overview – Chair Mark Bennett (USGS)**
Workgroup Announcements:
- Big thanks to Erik Meyers for co-chairing the CRWG the past few years!

1:35 – 3:10 **Topic Discussion: Expert Presentations on Blue Carbon**
Presenters will give an overview on existing blue carbon protocols, process of considering blue carbon projects in the carbon market, and provide examples of current or potential qualifying restoration projects. This discussion will support the efforts of the CRWG to draft a STAC workshop to identify science/information gaps that would affect the Chesapeake Bay region to participate in carbon crediting programs.

1:35 PM **Status and Challenges of Wetlands in Carbon Markets - Sarah Mack (Tierra Resources)**
Sarah presented on the broader carbon market, protocols, and her efforts to register wetlands.

Sarah provided slides to briefly go over blue carbon sinks and carbon sequestration. She mentioned that most people when they think of blue carbon

think saltwater, but freshwater wetlands also can participate in “blue” carbon market strategies. While most blue carbon projects are saltwater-related, they are beginning to explore the use of freshwater wetlands. An area that is also still a gap in the science (saltwater and freshwater) is what happens to carbon during wetland loss (conversion to open water). Sarah also provided the definition for offset to show how it is the standard unit used to compensate for an equivalent emission occurring elsewhere.

There are a few different markets for carbon markets which includes voluntary markets, compliance markets, and carbon credit/offset. The voluntary markets are usually the testing grounds for the regulatory market. Once success is demonstrated, compliance markets will more likely consider incorporating it into their methods. Voluntary markets prices are more variable, which can equate to higher risk. Regulatory market prices are more stable and usually pay more than voluntary markets. Carbon markets have mostly been under forestry protocols.

Sarah mentioned how a wetland project may be more interesting to investors in a voluntary market because of co-benefits (e.g., water quality, habitat, carbon sequestration, resilience to wave energy), which make it more appealing. Voluntary markets tend to involve corporate social responsibility projects. However, additionally has to occur. For instance, wetland mitigation banking would not quality under some carbon protocols since it’s not considered additional; compensates for wetland loss somewhere else.

Carbon markets look at what’s happening globally, not just what’s happening in the U.S. Example: International airfare planned to participate in a carbon market program, but is facing a challenge with establishing their baseline. They were going to use 2020 as their baseline year, but due to covid-19 affecting the international travel market, it won’t be representative.

The voluntary and compliance markets have the following offset criteria:

- Real
    - It can be accurately measured
    - Can be accomplished without leakage
- Permanent
    - Will retain stored carbon for the life of the project
- Additional
    - Occurs outside a regulatory requirement
- Verifiable
    - It can be independently verified
- Enforceable
    - Its ownership is undisputed
    - No double counting

Sarah also provided a list of wetland carbon methodologies which is specific to an area's region and activity. She recommended that we look into the REDD+ since it is likely most relevant for the Chesapeake Bay region. In general, when starting a project, they begin with a project design phase that includes a feasibility analysis. Once this is approved, the project design document goes through validation and registration. It then enters the project implementation stage which includes monitoring, verification, and issuance.

She then gave an example of the St. Charles Parish project outside of New Orleans. The mission of the project is to provide high quality, efficient services to sustain and enhance the quality of life for all residents because they been hit by around 25 hurricanes and subject to flooding and tidal surges due to wetland loss. They were also attempting to support their levee system with the restoration of wetlands and develop sustainable infrastructure under hurricanes (e.g., forested wetlands in front of levees would reduce damage from hurricanes). They hoped to compensate landowners for the use of their land without additional cost to parish or citizens.

One of the obstacles they learned from this project is that they wanted to incorporate sites they already started monitoring before the start of the project so that they could incorporate long-term monitoring. This item wasn't flagged by the carbon protocol verification team as not allowed because it did not meet the randomization criteria of the protocol. As a result, they couldn't use the historical data. Lesson learned: even though the data from these sites were used in peer-reviewed publications and the scientific community found it acceptable, it may not be accepted by the Carbon Market. It might be different for different protocols, but the lack of historical data hurt their project because it forced them to use methods that resulted in higher uncertainty factors for crediting. With additional verification monitoring being asked to address the uncertainty and the challenge of access to the wetlands, the team opted to not apply for continuous carbon credits since the cost of monitoring outweighed and financial benefit.

Sarah provided factors to consider when pursuing carbon crediting projects:

- Price of carbon offset
- Inclusion of wetlands in CORSIA (wetlands in regulatory compliance market will give higher credit)
- Incorporating prevented wetland loss with sequestration in carbon accounting
- Quantity of wetlands that can be successfully restored for the project life (800 acres is considered a small project)
- Costs for developing a project – projects seeking carbon credits require maintenance and monitoring which can cost a lot of money so if the wetland is lost due to sea level rise, storms, or other events, the project may not be able to pay for the upkeep of monitoring
- Eligibility Rules
    - Start date

    - Easement type
    - Use of federal funds
    - Buffer deductions
- Public-private partnerships
    - Revenue share
    - Roles
    - Quantifying co-benefits/credit stacking (some registries allow stacking of water quality, carbon, and resilience credits)

Carbon Market Challenges includes:

- Fully accounting for carbon (lack of data on accretion rates and carbon release during wetland loss)
- Some registries do not allow the use of federal funds for projects (projects are not considered "additional)"
- Monitoring – once you transect credits, long-term monitoring and quantification needed
    - Access
    - Cost – part of this is due to access so they are trying to see if they can develop models (need to justify cost from a risk standpoint)
    - Remote sensing – could be helpful, but only can quantify carbon above ground and not what is stored in soil
- 40 – 100 year commitment is hard to get across to landowners and hard to convince to invest
- Uncertainty greater for wetland projects than forestry projects, but wetland projects have potentially more options for stacking credits if allowed.

Their next phase is with a TNC Grant for a gaps assessment legal analysis.

Lisa Wainger asked do current compliance market rules allow credit stacking of carbon with nutrient credits? With the American Carbon Registry they can do it, but it might depend on the registry.

Chris Spaur asked if emissions produced during project construction are considered? Presumably could be substantial if lots of earth-moving, etc. Sarah said they do. All emissions of the project activity must be included.

2:15 PM **Blue Carbon Methodologies – Amy Schmid (Verra)**

Amy presented on targeted protocols and efforts in the Chesapeake Bay such as their VA eelgrass project.

Amy shared that she is the natural climate solutions manager at Verra and is located in Washington D.C. and leads the work in the blue carbon voluntary greenhouse gases program focusing on the Verified Carbon Standard (VCS). VCS includes independent auditing, a registry system, and accounting methodologies.

Accounting Methodologies set out the ways different project types can quantify the greenhouse gas emissions. They are comprised of:

- applicability conditions
- project boundary – this does not just refer to the geographic region. It also refers to the greenhouse gas emission sources and carbon tools that can be quantified in the project
- baseline scenario - it refers to the actions that would or would not have occurred in the absence of the project.
- additionality – the carbon credits claimed are representing emission removals in the baseline scenario
- quantification of ERRs
- monitoring procedures – It sets out the specific data and parameters that need to be monitored and how they can be monitored

Under VCS Blue Carbon Methodologies, Coastal Wetland Creation and Tidal Wetland and Seagrass Restoration applies to restoration only. REDD+ Methodology Framework includes crediting for conservation and restoration.

The Coastal Wetland Creation Methodology must create new coastal wetlands through substrate and/or vegetation establishment. It is only allowed to occur in tidal or estuarine systems, and on wetlands that are degraded and open water in the baseline scenario. It only includes U.S. projects. The Tidal Wetland and Seagrass Restoration Methodology can have the following project activities and is globally applicable:

- creating, restoring and/or managing hydrological conditions
- altering sediment supply
- changing salinity characteristics
- improving water quality
- introducing native plant communities
- improving management practices

The REDD+ Methodology Framework has activities for restoration and conservation. Restoration crediting is based on Tidal Wetland Conservation Methodology. Conservation is adapted from the REDD+ methodologies for the conservation projects of forests. Therefore, eligible activities are avoided unplanned wetland degradation and avoided planned wetland degradation.

Most of the methods have similar monitoring requirements which includes:

- above and belowground biomass carbon stock changes
- soil carbon stock
- emissions from fossil fuel use, biomass burning, dredging, etc.
- Allochthonous carbon estimation
- Area of wetland degradation (conservation projects)
- Estimation of non-permanence risk (including sea level rise)

All coastal wetland projects must take expected sea level rise into consideration of 100 years projection from the start of the project. The project must assess the expected impact of carbon stocks due to sea level rise and consider wetland migration due to it. The 100 year timeframe creates a lot of uncertainty. They are evaluating whether to change procedures to allow a shorter timeframe. Unlike some other protocols, federal funds can be used with VCS as long as funding the projects isn't required by law.

Amy shared an example on the Virginia Seagrass Project that is still under development but will focus on the Eastern shore of VA. It is being led by The Nature Conservancy using the Tidal Wetland Restoration methodology.

Verra also started a Blue Carbon Working Group in 2020 to explore key barriers and opportunities for tidal wetland conservation and restoration activities. They also want to identify recommendations for how standards could better support tidal wetland activities. Some of the barriers they would like to address are the technical complexity of wetlands and methodologies and the lack of data available. Projects rely on scientific literature, but there is not enough to answer all questions. Amy encouraged the group to pursue studies on blue carbon to help fill in information gaps. Amy also mentioned

There are additional certifications that allows for a label to be added to carbon credits to show there are other climate and social benefits. The first certification is Climate, Community and Biodiversity Standards. The second one is Sustainable Development Verified Impact Standard. Amy mentioned that since Verra works with standards, they are not involved with carbon transactions.

Chris Spaur stated in Chesapeake Bay, seagrass health is essentially controlled by water clarity. The Bay is an algal soup. Are credits given for reduction in bioavailable nutrient loads as means to help SAV? (In VA coastal bays, SAV could be propagule limited. It's not in Chesapeake Bay). Amy stated that one of the possible activities under the Tidal Wetland Restoration is improving water quality so if reducing the nutrients running off from agricultural or other sources improves the water quality then it could be used. A requirement is measuring the amount of seagrass growing because of the reduction.

Julie stated the CBP has an Outcome established through the Chesapeake Bay Watershed Agreement to establish a certain about of wetlands by 2025. She asked if the CBP would be limited if it is a legal requirement to restore the wetlands. Amy said the CBP would be restricted if it's a legal requirement. Renee Thompson was able to find that outcomes are considered voluntary.
Renee shared language from the Bay Agreement:
"As Chesapeake Bay Program Partners, we acknowledge that this Agreement is voluntary and subject to the availability of appropriated funds. This Agreement is not a contract or an assistance agreement. We also understand that this

Agreement does not pre-empt, supersede or override any other law or regulation applicable to each signatory. "

Nicole Carlozo commented in MD they fund projects for water quality benefits, but funds cannot support compensatory mitigation, etc. Very similar practice.

Tim Male stated Sarah talked about complexities of verification and the cost of monitoring in coastal Louisiana. How do they keep these kinds of costs from dooming projects in the Bay from utilizing blue carbon markets? Amy said this is topic they are exploring in the Blue Carbon Working Group. One thing they are discussing is using remote sensing and also looking into ways the process could be streamlined especially for smaller projects.

Julie – Next steps for the CRWG is to look into the STAC workshop funding guidelines and assess if there are areas that STAC can assist the workgroup with based on what we learned from the carbon crediting presentations. One possible area could be assessing the current CBP monitoring protocols for wetlands and comparing them to the requirements of the carbon crediting methodologies to identify possible scientific gaps that would influence our participation.

3:10 PM **SRS Update: Narrative Analysis – Julie Reichert-Nguyen (NOAA)**

Julie went over highlights from the Draft Narrative Analysis and requested feedback from the workgroup.

Members were asked to provide any feedback by October 28th because the materials are due to the Management Board on October 29th.

Julie asked the workgroup if there were any parts that stood out to them that should be fixed or revised. There were no comments.

She then gave highlights to question 3 and 4 because these will help shape the updated Logic & Action Plan for the next two years.

Question 3 asks, “What scientific, fiscal and policy-related developments will influence your work over the next two years?” CRWG leaders stated the following was the workgroup’s most influential developments. The CRWG has made progress in monitoring and assessing physical climate change trends, but more progress is needed to connect these efforts with impacts on natural resources and communities to support resiliency strategies. The CRWG would also like to help the states with the adaptation plans, but there is a lack of funding among CBP partners for climate adaptation projects. CRWG is exploring other avenues to fund restoration projects such as working with finance coaches available through a GIT Funding project. Funding is also needed to develop a research agenda around BMP performance related to changing climate conditions. One of the biggest challenges impacting progress is that the CRWG faces a resource (staff and funding) capacity issue. The workgroup needs to

define how we can work with other groups at the CBP to accomplish our outcomes. We need to clearly identify projects where we can be the lead versus projects that we can support from an advisory capacity.

Question 4 asks, "Based on your response to the questions above, how will your work change over the next two years?" The CRWG leaders stated they would like focus efforts on supporting BMP climate resilience assessments, data/model synthesis projects to inform adaptation targeting, continued exploration of alternative financing strategies, and further development of the climate indicators.

Workgroup members did not provide any additional items to add to the Narrative during the meeting.

3:25 PM **Wrap up**

- FY20 GIT-Funded Projects Requesting CRWG Involvement – Julie Reichert-Nguyen (NOAA)
    - Synthesis of Shoreline, Sea Level Rise, and Marsh Migration Data for Wetland Restoration Targeting (Lead: Wetland Workgroup)
    - Modeling Climate Impacts on SAV in Chesapeake Bay (Lead: SAV Workgroup/STAR)
    - Forage Indicator Development: Using Environmental Drivers to Assess Forage Status (Lead: Forage Team/Fisheries GIT)
    - CBP Social Science Assessment and Integration Road Map Development (Lead: Stewardship GIT)

3:30 PM **Meeting Adjourn**

Next Meeting: November 16, 2020 1:30 – 3:30

Participants: Amy Schimd, Breck Sullivan, Mark Bennett, Sarah Mack, Julie Reichert-Nguyen, Adrienne Kotula, Becky Swerida, Benjamin McFarlane, Cassandra Davis, Chris Spaur, Lena Easton-Calabria, Elizabeth Andrews, Erik Meyers, Erin Shields, George Kelly, Heidi Bonnaffon, Jake McPherson, Jennifer Miller Herzog, Jeremy Hanson, Jessica Rodriguez, Julianna Greenberg, Katherine Dyer, Katie Matta, Krista Romita Grocholski, Lauren Fety, Lindsay Byron, Lisa Wainger, Meredith Malone, Kelly Maloney, Mark Trice, Matthew Konfirst, Melissa Deas, Meryem Karad, Neil Ganju, Nicole Carlozo, Megan Ossmann, Taryn Sudol, Tim Male, Bruce Vogt, Justin Shapiro, Julie Herman, Jim George, Chris Spaure, Jeremy Hanson, Zoe Johnson