

Maryland Commission on Climate Change

Mitigation Working Group

May 11, 2017 – 10:00AM - 12:00PM

Meeting Minutes

Attendance: Jim Strong, Rachel Marks (DNR), Larry Kasecamp, Colby Ferguson, Colleen Turner, Tom Ballentine, Susan Payne, John Fiastro, Michael Powell, Tad Aburn, Brian Hug, Michael Locklear (Chesapeake Center for Regenerative Agriculture), George Hurtt (UMD), Ray Weil (UMD), Margie Brassil (for Delegate Stein), Hampden Macbeth (Georgetown Climate Center), Christy Brown (NRCS), Patty Engler (NRCS), Nevelle Henry (Nativas Solar LED USA), Katelyn Dolan (UMD), Louise Mitchell (Climate Health Solutions), Rachel Lomb (UMD), Suzanne Dorsey (UMD), Lori Arguelles (Alice Ferguson Foundation), Earl Lewis (MDOT), Barbara Hesselgrave (Erosion Control Management), Sara Via (UMD), Luke Wisniewski (MDE), Chris Hoagland (MDE), Chris Beck (MDE), Joe Lutz (MDE), Jess Herpel (MDE), Lisa Nissley (MDE), Erick Thunell (MDE), John Sullivan (MDE), Liz Entwisle (MDE)

Phone: Dan Engleberg, Mike Tidwell, Tamara Toles O’Laughlin, Ben Hobbs, Megan Goold (EPA R3), Stuart Clarke (Town Creek Foundation), Tom Walz (DHCD), Paul Faith (Cadmus Group), Grant Samms (Washington College), Caroline Varney-Alvarado (DHCD)

10:00AM MWG Meeting Begins

1. Introductions – MWG Co-Chairs – 5 minutes

- Mike Powell emphasized the importance of having actionable recommendations

2. Panel Speakers – 60 minutes (all presentations are available on the MCCC Website; clarifying information in response to follow-up questions provided below)

- Dr. Ray Weil, UMD – “Soil Carbon: A Major Player in MD’s Greenhouse Gas Balance”
 - We have less info on the potential for tidal wetlands to sequester carbon, but they do also release methane, a potent greenhouse gas.
 - Soils also have impacts on methane, NO_x - bacteria that consume methane exist in well-managed soils
 - Lawns are included in the category of “turf grass”, and have been shown to have good potential for sequestration. Pastures, which were not included, should also be explored to improve the efficiency of management.
 - The potential for sequestration is greater in more degraded soil; sandy soils, such as those on the coastal plain, do not have as high a capacity to hold carbon.
 - The greatest benefits of actions can be seen in the first year, declining in later years (logarithmic growth curve)
- Dr. George Hurtt, UMD – “NASA Carbon Monitoring System”
 - Forest biomass can be increased by waiting for currently recovering forest to age and put on more biomass (from land which was historically cleared)
 - It would not be beneficial to artificially increase the forest density (of these recovering forests). The options are mainly (1) allow forest to regrow, and (2) reforestation.
 - Concerns were expressed for elimination of cropland being the most effective place for reforestation - Dr. Hurtt clarified that he is not suggesting any actions in particular, simply that the tool he presented may be of use for decision-making.

- It was noted by other members and stakeholders that forested buffers and agroforestry may have potential
- Michael Locklear – “Reversing Climate Change: Restore the Soil to Save Humanity and the Planet”
 - CH₄ and NO_x consumption co-benefits of healthy soil
 - Nutrient density of food can be increased with better Ag practices
 - Mycorrhizal fungi is key to sequestration - and will increase in healthy soil
 - Economic benefits are measurable as farmers become more profitable

3. **Healthy Soils and Carbon Sequestration Discussion** – MWG Members – 40 minutes

- Brian provided a reminder that we are looking for recommendations to include in the annual report. Soils have a key role in GHG mitigation and there is an opportunity for enhanced soil sequestration in agriculture and forestry.
- Clarification on how MDE is currently calculating sequestration: EPA models with national average data for soils, wetlands, agriculture, etc. (all sinks). Potential for improvement by using more site-specific data such as the LiDAR presented by Dr. Hurtt.
 - We may not be fully accounting for the sequestration that is already happening in agriculture
 - We may also need to get more comfortable with ranges, since it is difficult to come up with one perfect number
- It sounds like there is a need to protect existing resources. Beyond that, do we have any ideas of what types of improvements may be agreeable to the agricultural community?
 - Many practices already being undertaken for the Bay goals also sequester greenhouse gases, and can be changed slightly to have even more benefits (no till, cover crops with deep roots)
 - The Maryland farmer is already doing a lot. Perhaps farmers should get more credit for what they’re already doing. Small farms/next gen family farms are more capable of engaging in these management practices.
 - No till does less damage to microbiota; cover crops with deep roots increase these colonies 9-10 feet deep in the soil. Improved soil health will increase the agricultural yield.
- Reminder that the GGRA is for incremental progress - our recommendation *can* be to study the situation further
- Questioned the value in sequestering carbon versus food miles, etc.
- In terms of potential recommendations, common-sense pasture management, diversified grasses and those w/ deeper roots
 - How to get this done? Education/Incentives (outreach to the public, funding for the cover-crop program, sustainable food label w/ market premium)

4. **Other Business** – 5 minutes

- No additional business was brought forward

5. **Public Comment** – 10 minutes

- No comments were provided

12:00PM Meeting Adjourns

12:00 - 12:30PM – Demonstrations by Dr. Sara Via (botanist with the University of Maryland Extension)