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**MEETING SUMMARY**  
**MARYLAND CLIMATE CHANGE ADVISORY GROUP**  
**Agriculture, Forestry, and Waste Management Technical Work Group**  
**(AFW TWG)**  
Call #11, February 05, 2008

**Attendance:**

*Technical Working Group:* Cindy Parker (Johns Hopkins), Laura Miller (Montgomery County)

*Maryland State Department Representatives:* Rene Fizer (MDE), Liz Entwisle (MDE), Katy Perry (MDE).

*Center for Climate Strategies (CCS):* Gloria Flora, Steve Roe, Joe Pryor, Rachel Anderson, Jen Jenkins, Brad Strode

*Public Attendees:* None

**Background documents:** ([www.mdclimatechange.us/GHG\\_Agriculture\\_Forestry.cfm](http://www.mdclimatechange.us/GHG_Agriculture_Forestry.cfm))

1. Meeting Notice and Agenda
2. AFW Straw Proposal/Policy Options Document

**Discussion items and key issues:**

1. Call to order and roll call
2. Review updated goals and quantification process and results to date.
3. Identify areas needing attention and further work.
4. Next Steps for AFW TWG
5. Public Input and Announcements
6. Agenda, Time and Date for Next Meeting & Subsequent TWG Meetings

*Discussion:*

**1. Next MWG meeting – February 19, 2008**

- a. Goals for each option need to be finalized.
- b. Initial quantifications will be presented at this meeting.

*General Direction for Policy development:*

1. See other notes in document in addition to the comments below. New additions are highlighted.
2. CCS Leads for each option will contact the relevant sub-groups
  - a. AFW-1, 2, 3, 4 (Forestry) – Jen Jenkins ([j.jenkins@carbodynamicsllc.com](mailto:j.jenkins@carbodynamicsllc.com))
  - b. AFW-7 Rachel Anderson ([rachel.anderson@pechan.com](mailto:rachel.anderson@pechan.com))
  - c. AFW – 4 (Ag), 5, 6, 8 – Joe Pryor ([joseph.pryor@pechan.com](mailto:joseph.pryor@pechan.com))

- d. AFW- 9 – Brad Strobe ([brad.strobe@pechan.com](mailto:brad.strobe@pechan.com))
3. Please send your updates to the person responsible for the Policy Option(s) you are commenting on.

*Specific Direction for Each AFW Policy Option from TWG Discussion:*

**AFW-1: Forest Management for Enhanced Carbon Sequestration.**

1. Data availability on enhancing existing forest land is limited. As a result, there is a need to use expert opinion and make assumptions.
2. In 1605 b guidelines, focused primarily on loblolly/short leaf pine, they have two curves which have average and maximum. One option is to use the difference between the two. Could use this across all forest types. Carbon is stored in greater quantities in larger trees, volume of trees could be correlated with crown cover.
3. Laura to look at the timber (volume) benefits from certain practices and relate to carbon benefits. Will provide by Monday at the latest.
  - a. increase in amount of wood volume
  - b. look at difference between managed and non-managed forests
  - c. increases in volume could be reflected in increase in crown (canopy cover).
  - d. Assume forest soil sequestration the same in managed and unmanaged forest

**AFW-2: Managing Urban Trees and Forests for Greenhouse Gas Benefits.**

1. Assumptions about the percentage of biomass from management that ends up in durable wood products vs. available for energy are discussed in AFW 5.

**AFW-3: Afforestation, Reforestation and Restoration of Forests.**

1. Completed.
2. Added text on RGGI's tight definitions of afforestation. (RGGI is also looking at reforestation and urban trees but has not adopted.)
3. Afforestation project outlined in RGGI rule would be difficult to implement in MD. Suggested that these costs be excluded as it is unlikely be able to be broadly used in MD.
4. Keep text in about requirements for RGGI but don't include costs of easements or costs of certification (both required by RGGI) in our quantifications.
5. Clarify policy design that all types of afforestation projects could be included (i.e. broader than RGGI).
6. Goals Section: four bullets, only first is quantified. Second talks about Chesapeake Bay Goals which are included in AFW 4, except riparian goals.
7. Add riparian goal to the wetland component. Quantification of carbon storage in riparian area is possible.
8. 35 foot riparian width (either side) is the agreed minimum requirement. Recommend that goal should be 50 foot buffer per side be used (noting that in some cases only one side implemented).
9. 900 miles per year applies to one side.
10. Use the same costs for riparian as other areas.

**AFW-4: Protection and Conservation of Agricultural Land, Coastal Wetlands and Forested Land.**

1. Forestry component completed.

2. Used easement costs from MALPF for 2006 - \$4,492/acre for conservation easements.
3. Historical net loss is very small. Difficult to estimate since there are no additional sequestration benefits. Avoided emissions and sequestration are two types of saving.
4. The impacts of climate change on forest health have not been included.
5. Are there additional forests that are in danger of development? E.g. steep slopes and wetlands are not developable. Other areas may be more susceptible to development and this is where we focus our effort.
6. Add text to the goal section indicating that some acres protected under this option are already protected under other programs including wetlands. Also add similar text to the design section. Needs to indicate that protected areas should be well distributed geographically and in cover type.
7. Agriculture and forestry components to assume the same cost of easements (FY07 from MALPF)

**AFW-5: “Buy Local” Programs for Sustainable Agriculture, Wood and Wood Products.**

1. Are local food programs already implemented in MD?
2. Need an MDA contact to help estimate implementation and marketing costs of promoting this program.
3. Need to change goal to indicate wood products rather than just local lumber. The volume and product comes from urban trees and better managed forests.
4. Forest products need to go to the highest value-added outcomes. But for quantification will assume that additional wood (e.g. from AFW-1) will be split 50-50 (on average) between wood products and energy, noting that urban and traditional forests will have different end products but likely will balance out.
5. AFW-1 may provide additional feedstock for AFW-5 and AFW-6.
6. Dan Rider will be a good contact.

**AFW-6: Expanded Use of Forest and Farm Feedstocks and Bi-Products for Energy Production**

1. Methane management to focus on dairy, swine and poultry (not beef). Beef is not as confined and therefore more difficult to capture the methane.

**AFW-7: In-State Liquid Biofuels Production**

1. No change since the last call.
2. Percentage of food crop to be used as a feedstock? MWG wanted to avoid using food crops for biofuels.
3. Use only cellulose for ethanol. For biodiesel, soy bean oil is now a primary feedstock.
4. Fossil diesel replacement goal is centered on MD feedstocks.
5. Phase out soybean feedstock for bio-diesel production from 2008 to 2015. After 2015, focus on emerging technologies (e.g. algal technologies) in the post 2015 part of the policy period.

**AFW-8: Nutrient Trading with Carbon Benefits**

1. Don't have information on the costs of a nutrient trading program. Germane documents will be coming out next month. Will need to make assumptions on these costs.

### **AFW-9: Waste Management through Source Reduction & Advanced Recycling**

1. GHG reductions and costs have been estimated using EPA WARM model and baseline MD solid waste and recycling reports.
2. Waste leaving MD is assumed to be all landfilled and count towards MD's GHG emissions.
3. Used MD-specific data where possible. Waste characterization information provided by EPA national averages (e.g. proportion of paper, glass etc in waste)
4. Biggest question is centered on cost. Source reduction is usually cost savings (e.g. saving on transport and collection etc) of \$1 per person per year. This is based on studies from Washington and Colorado. CCS welcomes MD specific information.
5. Second part of costs is Recycling, primarily cost of collection. If cost of collection is greater than waste collection, need to account for this and any additional capital costs. Avoided costs include landfill tip fees (\$52/ton in MD).
6. Need to know current collection costs in MD? Are there waste industry people to speak to? Contact Ed Dexter. Otherwise use default data from other states.
7. This option doesn't specifically include organics composting but drawn out through analysis. Info such as tipping fee at composting facilities would be useful. End product also has value that will off-set costs.
8. It would be helpful to speak to an MD waste economic expert. CCS will follow up with Ed Dexter.

### **Next steps and agreements:**

1. CCS to finalize analysis and send out POD for review by the TWG. TWG to provide comments to CCS. Any comments received by February 11 will be included in the written POD presented to the MWG. Comments received after February 11 but before February 15 will be reflected to the MWG verbally at the February 19 meeting.
2. CCS will send out information regarding the next TWG meeting (Call #12), possibly February 26 or 27. The purpose of the next call will be to review the MWG comments and to finalize policy options and quantifications.
3. Group members who cannot make the call can request a personal update in addition to the meeting notes.
4. Next MWG meetings are February 19, 2008 and March 19, 2008. At the March meeting, the MWG is expecting the final draft of the POD.
5. TWG members are encouraged to forward germane data and reference material to the facilitator addressing the policy option that their comments pertain to.
6. The final MWG Meeting will be April 22, 2008, if necessary.
7. **Milestones:** The Final Report is targeted for the end of April, 2008.

Materials for each call will be posted at the Maryland Climate Change website (see address above). CCS will notify the TWG members when the materials are available for review.

Thanks again to the TWG members who attended. We recognize this is work above and beyond your already full schedules. Your meaningful contributions and excellent discussions are very encouraging.