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**MEETING SUMMARY**  
**MINNESOTA CLIMATE CHANGE ADVISORY GROUP**  
**Agriculture, Forestry, and Waste Management Technical Work Group**  
**(AFW TWG)**

Call #6, September 6, 2007, 1:00PM – 3:00PM

**Attendance:**

1. Technical Working Group members: Ted Troolin, Andy Hart, Greg Miller, Shalini Gupta, Jim Kleinschmit, Stacey Bohlen, Julie Ketchum, Tim Gieseke, Dave Tilman, Dave Zumeta, Will Anthony, Mitch Davis, Cheryl Miller
2. Center for Climate Strategies (CCS) staff:  
Stephen Roe, Brad Strode, Gloria Flora
3. Minnesota Department of Commerce (DOC) and Pollution Control Agency (PCA)  
Liaisons and Attendees:  
Liaison: David Richfield, MPCA  
Other MPCA: Jim Chiles, Allen Dotson, Anne Claflin, Peter Cibrowski, Bill Sierks, Ginny Black  
DNR: Keith Wendt, Clarence Turner  
Agriculture: Paul Burns, Micheal Yost  
Met Council: Rebecca Flood  
Commerce: Linda Limback
4. Public Attendees: Mathew Lemke, Winthrop & Winestine (representing Flint Hills); Doug Carnival, NSWMA
5. Observers: Dan Donkers, Ramsey County; Darwin Schultz, Hennepin County

**Background documents:** (see [http://www.mnclimatechange.us/Agriculture\\_Forestry.cfm](http://www.mnclimatechange.us/Agriculture_Forestry.cfm))

1. Summary of Call # 5
2. Meeting Notice and Agenda
3. PowerPoint for Teleconference.

## Discussion items and key issues:

### *General:*

1. CCS conducted roll call and reviewed the Agenda.
2. The key purpose of this meeting is to work through straw proposals submitted by the work groups. If time is available, we can discuss the Draft Inventory and Forecast.
3. CCS reviewed, and the TWG accepted, the summary of Call #5.
4. All TWG members were encourage to join a straw proposal work group.
5. **The deadline for the final drafts of the straw proposals is Tuesday, September 18** so that CCS has time to prepare the proposals in advance of the MCCAG meeting.

### *Straw Proposal Review:*

Each subgroup leader led a discussion of the current drafts of their team's straw proposals. The revised proposals will be posted on the AFW TWG web page as soon as updates are received.

CCS clarified that the numerical achievements for 2025 will be listed under Goals. The Timing section will list incremental targets and should include at least a 2012 target. The end period should be 2025, not 2020, when setting long-term goals.

1. AFW-1: Currently, the option is divided into two sections: cultivation practices and fertilizer nutrient management. A TWG member commented that outcomes should replace practice-based recommendations because agricultural operation and settings differ widely. These outcome-based strategies could be used with management indices. For example, recommend a phosphorus index that allows farmers to change their practices to achieve that outcome, rather than a best management practices (BMP) which prescribes specific action. Flexibility is important

One member noted that manure-spreading, a frequently used process, significantly increases tillage. Recommendations to spread manure but limit tillage need to be balanced within the framework of CO<sub>2</sub> sequestration and emissions.

Another member suggested the nutrient management section include research on alternative crops that enhance sequestration and serve as biofuels.

Numeric goals have not been established yet because baselines, such as amount of fertilizer used statewide or acres in no-till management are unknown. Members asked that anyone with such figures please assist. Some data are available in the Agriculture Appendix of the Draft Inventory and Forecast (see website).

The subgroup will revise this straw proposal.

2. AFW-2: This sub-group had not met yet. The work group volunteers agreed to complete a draft soon. A TWG member suggested that the policy description be similar to AFW-6 without overlapping. A TWG member noted that the impacts of climate change on the carbon sequestration level of peatlands and wetlands is highly uncertain.
3. AFW-3: The goals of this option are geared around displacing fossil fuel consumption in the transportation sector, as well as the elimination of fossil inputs to the production of biofuels. It was suggested that municipal solid waste and oil crops be included as a potential feedstocks.

A TWG member voiced a concern from the forests products industry about the potential competition between the use of raw forest materials for biofuels feedstock vs. wood fiber products. Wood fiber could become more expensive with such competition. Private landowners (half the wood fiber in MN comes from private lands) would have incentives to market their products differently. He suggested that the language be changed to agri-forestry feedstocks. There was not full TWG agreement with this suggestion.

One member suggested a registry be developed to identify and categorize lands suitable for biofuels feedstocks so soils would not be depleted, nor habitats marginalized, from inappropriate or overly-aggressive harvest.

CCS noted Policy Design #2 will likely overlap options from the TLU TWG. Typically, AFW TWG's focus on the supply-side of biofuels. The sub-group was reluctant to remove this option and would like more time off-line to refine it. CCS suggested that the low carbon fuel standard could be implemented under policy options in AFW-3.

4. AFW-4: This option incorporates both increases for feedstocks and improved conversion technologies to achieve GHG reduction. The group discussed options for feasible goals and intermediate targets. CCS stated that the purpose of this analysis is to identify the current level of the resource, rather than considering individual generation technologies and transportation issues. These are issues that will be qualitatively assessed and relayed to the Committee later in the Process.
5. AFW-5: (The subgroup leader noted the group had no representation from the conservation community.)
  - a. Goal #1 will be reworded to 'forestation' vs. reforestation or afforestation. The feasibility of the numeric goal was unknown.
  - b. Goal #2: It was noted that 15mm acres of land in MN have been converted to non-forest since the late 1800's.
  - c. Goal #3: An emphasis on diverse treatments and combining fuel reduction with biomass energy production was suggested.
  - d. Goal #4: It was noted that this one could be quite controversial. The Forest Products Industry group that developed the Plan referenced in Goal #4 are meeting with the Governor 9/11, so the Plan may be modified before being accepted. TWG members urged that to retain this as a goal, it should emphasize that measures listed would only be included if it could be shown that they reduce GHG emissions. Goal #4 will be reworked. (CCS would like to work with the work group volunteers on-line to re-work the goal.)
  - e. Many TWG members questioned the viability of selecting numerical targets without adequate knowledge of baseline data. CCS assured the Group that there will be time during the process to assess and amend these targets to both achieve the desired GHG reductions and assure economic implementation feasibility.
6. AFW-6: The discussion focused on the goal of no net loss of forest carbon stocks and what data sources will be used to determine current levels of forest carbon stocks. It was suggested that part of this goal may be a subset of AFW 2.

7. AFW-7: The sub-group volunteers noted that their revised title was not in the draft. (This has been corrected).
8. AFW-8: This option focuses on end-use waste management, specifically reducing the GHG impact of waste management after front-end practices in AFW-7 are addressed. The sub-group members plan to refine the goals on this option.
9. Please click on the links below to view examples of Policy Options Documents from other States. Pay particular attention to the Policy Design sections:
  - a. <http://www.ncclimatchange.us/ewebeditpro/items/O120F11667.pdf>
  - b. <http://www.vtclimatechange.us/ewebeditpro/items/O123F12488.pdf>
  - c. <http://www.mtclimatechange.us/ewebeditpro/items/O127F12594.pdf>
  - d. <http://www.coloradoclimate.org/ewebeditpro/items/O14F12851.pdf>

\*Note that these documents are in Draft form.

***Public Input:***

Members of the public were offered the chance to provide input. Mathew Lemke, a member of the TLU TWG requested that he be able to communicate with the group working on AFW-3. CCS will send an e-mail to pass along contact info for those group members.

1. Doug Carnival requested that CCS make available the worksheet that provides detailed analysis of the options. CCS stated that the Policy Option Document is the format for detailing the analysis in a transparent manner.

**Next steps and agreements:**

1. **The next meeting of the AFW TWG is set for October 11, 2007, 1:00 to 3:00 PM.** In the interim, the MCCAG will meet on September 27, 2007. As usual, all non-CCAG members of the TWG are invited to attend the meeting, although voting is restricted to CCAG members.
2. Please send all Straw Proposal language to Gloria Flora ([gflora@s-o-solutions.org](mailto:gflora@s-o-solutions.org)) for incorporation into the Priority Options Template.
3. TWG members have been sent an e-mail with the contact information for all members. This information is for the benefit of the members of this group and will not be made public.

<b>Revised Number</b>	<b>Preliminary Number</b>	<b>Preliminary Title</b>	<b>TWG Volunteers (leader in bold)</b>
<b>AFW-1</b>	AFW-1	Agricultural Crop Management	<b>Andy Hart</b> , Staci Bohlen, Jim Kleinschmit, Dave Tilman, Greg Miller, Tim Gieseke
<b>AFW-2</b>	AFW-5	Land Use Management Approaches for Protection & Enhancement of Soil Carbon	<b>Stan Ellison</b> , Staci Bohlen, Will Anthony, Jim Kleinschmit, Cheryl Miller, Dave Tilman, Tim Gieseke
<b>AFW-3</b>	AFW-7	In-State Liquid Biofuels Production	<b>Shalini Gupta</b> , Andy Hart, Dave Tilman
<b>AFW-4</b>	AFW-4	Expanded Use of Biomass Feedstocks for Electricity, Heat, or Steam Production	<b>Greg Miller</b> , Stan Ellison, Will Anthony, Shalini Gupta,
<b>AFW-5</b>	AFW-2	Forestry Management Programs to Enhance GHG Benefits	<b>Cheryl Miller</b> , Dave Zumeta, Joe Maher, Peter Aube
<b>AFW-6</b>	AFW-6	Forest Protection – Reduced Clearing and Conversion to Nonforest Cover	<b>Dave Zumeta</b> , Cheryl Miller, Joe Maher, Peter Aube
<b>AFW-7</b>	AFW-3	Integrated Waste Management	<b>Julie Ketchum</b> , Ted Troolin, Jim Kleinschmit, Shalini Gupta
<b>AFW-8</b>	AFW-8	End of Use Waste Management Practices	<b>Ted Troolin</b> , Julie Ketchum, Shalini Gupta, Jim Kleinschmit