

Chester County Greenhouse Gas Reduction Task Force (GHRRTF)

Sub-committee: Agriculture and Forestry

Chester County Library, Exton. March 26th, 2008 at 2.00 pm.

Attending: Paul Belezza, Mike Bullard, Victoria Laubach, Duncan Allison (chair)

Gene Wilson could not attend due to prior medical appointment.

Introduction. There was discussion around compilation of the final report and recommendations from the sub-committee. Each member of the committee had taken on the responsibility of researching one or more of the different segments that had been agreed at our last meeting. One member was adamant in wishing his report to be provided to the Steering Committee as written and in his name. The chair pointed out that any report and final recommendations would be the result of the input, interaction and final agreement of all members of the sub-committee. Since agreement could not be reached on this point, discussion was closed.

Minutes were approved but Paul wished it to be recorded that he also undertook to cover Pasture and associated grasslands. This item had been corrected and included in the agenda for the 3/26 meeting. Discussion on energy audits and carbon rating systems had also not been mentioned.

Segments of agriculture in the county

1. Energy generation from biomass including cellulose. Tabled for this meeting.

2. Pasture. Paul presented some research findings regarding effect of climate on the ability of pastures to sequester carbon. Census and other sources of acreage data would be checked so that the acreage figures used in our report reflect the most accurate and reliable figures. Concern was expressed about possible contamination of hay harvested from fields that has been involved in sewage effluent spray irrigation. This potential for contamination would be investigated. The exact amount of carbon sequestration by pastures was discussed and would be investigated further.

3. Tillage, fertilizer use. The use of conservation tillage reduced tractor passes and so energy use and was strongly promoted. Efforts were being made to assess the extent of no-till and the potential for further increase. Nitrogen fertilization resulted in some generation of nitrous oxide but both nitrogen source and method of application could influence the quantity. Mike pointed out that there must be data on nitrous oxide generation and carbon sequestration in soils from different tillage methods so that tables could be prepared. Aim to have more data on the current situation and potential of changes so that appropriate recommendations can be discussed.

4. Tree planting, riparian buffers. Mike is still gathering usable information on tree cover. Study of some satellite derived maps of vegetative cover indicated 160,000 acres of woodland of which 140,000 were deciduous and 20,000 acres evergreen. Trees are known to provide valuable levels of carbon sequestration and so increased planting offers significant potential to reduce carbon dioxide levels. Planting trees in riparian areas not only increases carbon sequestration but provides shade and so maintains water temperature more suitable for optimal fish populations. Vegetated buffers also reduce nitrate and other potential water pollutants from reaching the streams. All agreed that every effort should be made to increase tree planting.

Green Industry. This very diverse segment included nurseries, landscapers etc. It has not been easy to gain data on the size of this segment in relation to acreage, GHG emissions and energy use. Energy is used for mowing and other field operations. Landscapers could play a critical role in maintaining tree cover, particularly if effort is made to ensure that trees are maintained rather than cut down. Use of spent mushroom soil (SMS) could be encouraged in landscaping by county setting up distribution centers. Adequate levels of nitrogen are required to maintain healthy lawns, mowed to 2½" so as to reduce surface runoff. Homeowners should be encouraged to plant more trees to avoid mowing (energy use) and increase potential for carbon sequestration.

Mushroom production. The production of mushroom requires the largest user of energy of any agricultural enterprise in the U.S. GHG emissions are probably minimal but this will be explored further. There has been intensive investigation of ways to reduce energy use and energy costs for lighting, pasteurization, heating and air conditioning. Spent mushroom soil is already widely used for spreading on farm fields and as base or additive for added-value composts. The committee agreed to explore further the potential for spent mushroom soil to provide an energy source.

Local Food Production. It is estimated that around 15% of food cost is taken up in transportation costs so that any food produced locally reduces this cost. A small meeting is being organized of local producers of direct consumer produce and farm products to review the current level of local food production and to gain some understanding of the potential for future growth.

Outline of process for making recommendations. Discussion centered on paragraph 2 of the original draft. It was decided to head this paragraph Targets and Goals. Mike agreed to find existing tables that would indicate appropriate templates for CO₂E emissions etc. The working draft as upgraded is attached for further refinement as the committee moves forward.

Coordination with other committees. It was agreed that it will be important to gain input from other committees on overlapping subjects such as land use, open space

and energy generation. Our committee may not be quite ready for a joint meeting with other committees.

Meeting adjourned at 5.12 pm

Next meeting April 16th, 2008.

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