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Reducing Atmospheric Carbon Dioxide

Steve Brachman

Global warming concerns have resulted in numerous initiatives to reduce carbon dioxide releases to the atmosphere. Typically, these have focused on improving building and transportation efficiency (while expanding alternative sources of energy), since these areas contribute the most CO₂.



However, recent efforts to develop mitigation strategies have begun to assess available carbon sinks and sequestration rates from terrestrial, aquatic, and geologic perspectives. Based upon this analysis, Chuck Rice from Kansas State University has determined that agriculture can be a major source of carbon sequestration. Soils for example can capture carbon through plant growth and storage, with clay soils performing the best in this area. Cropland practices are also important. Best management practices such as reduced tillage, rotations that reduce

fallow, cover crops, fertility management, erosion control and irrigation management are all important. Crop choice is also an important factor; soybeans for example do not sequester much carbon. Rice has concluded that with proper management, the use of a soils based CO₂ reduction strategy could offset carbon emissions by 15% from today's levels.

Businesses Going Green...

Steve Brachman

What drives a business to go green? A recent study by the University of Nebraska – Omaha revealed that five major factors are important to this decision. Using the original research of Lyon and Maxwell in 2000, students at UNO interviewed a number of businesses to assess key reasons that business green their practices. Based on their analysis, the following rationales seemed to play a critical role in this decision:

- Unlimited opportunity
- Saves money
- The government is going to make you
- Your competitors are
- It's the right thing to do

In addition, this research demonstrated that corollary factors seem to fit nicely into this matrix. For example, risk management is also a driver and is part of the external pressure category. Lack of resources is important, but also has fit under the cost savings category.

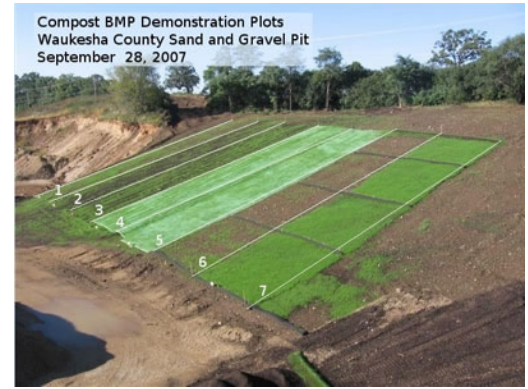
Lyon and Maxwell's landmark study, *Corporate Environmentalism and Public Policy*, focused on the following business drivers:

- Government regulations*
- Growth into new markets*
- It's the right thing to do*
- Create efficiencies/save money*
- External pressure from important stakeholders*

Compost and Stormwater Management

Joe Van Rossum

Presentations and photos from a program providing information and best practices for "Using Compost to Improve Stormwater Management and Erosion Control on Roadsides" have been posted by EPA Region 5, Chicago. The program profiled research from Iowa State University as well as practical examples from Texas and Minnesota Department of Transportations. One of the highlights of the program was a demo plot at a non-metallic mine in Waukesha County. The demo placed seven erosion control practices side by side on a 3:1 slope. Visit the EPA Region 5 Composting website for further information:



<http://www.epa.gov/reg5rcra/wptdiv/solidwaste/recycle/compost/roundtable.htm>

The Associated Recyclers of Wisconsin is planning a follow-up visit to the demo site during June in conjunction with a quarterly meeting of the Organics Working Group. For more information on this event, contact Kathy Powell at 715-345-5972 or via email at ExecDirector@arow-online.org

American Chemistry Council Releases Plastic Bag Recycling Report

Joe Van Rossum

With many communities and states investigating options to reduce litter from plastic bags, the American Chemistry Council released the 2006 National Post-Consumer Plastic Bag and Film Report at the end of March. The study conducted by Moore Recycling Associates determined that 406,000 tons of post-consumer film, including plastic bags, were recovered for recycling in the United States during 2006. While the report does not calculate a recycling rate, it was noted the volume of material collected during 2006 was 24% more than collected the previous year. Data for the report was collected from plastic film recyclers and exporters.

The major market for plastic film is currently the composite lumber industry accounting for 64% of the market share. Export of film was the other major category, totaling 110,000 tons or 27% of film collected for recycling. The increased volume of material collected for recycling was due to an increase in the number of curbside programs and retailers collecting bags and film. Finally the report notes the price paid by recyclers remained "steady and strong indicating that demand continues to outpace supply."

The entire report can be found online at: 2006 National Post-Consumer Plastic Bag and Film Report

http://www.americanchemistry.com/s_plastics/doc.asp?CID=1593&DID=7140

2009 Household and Agricultural Clean Sweep Grant Pre-Announcement

In early June, the Wisconsin Department of Agriculture, Trade, and Consumer Protection (DATCP) will release grant application materials for the collection and disposal of unwanted chemicals and pesticides from households, farms, and businesses. Around \$900,000 will be released through this grant application process. Applications will be due back to the Department by late July.

The 2009 Prescription Drug Grant Program will not be coordinated with grants released through this call for proposals. Municipalities interested in 2009 drug grants will be able to apply later this year and these collections will not have to be run in conjunction with regular chemical clean sweeps.

Counties and regional planning commissions can apply for agricultural and/or household grants, but cities, villages, towns, and special districts can only apply for household grants. All grantees must provide hazardous waste services to businesses (Very Small Quantity Generators) either on-site OR through referral to adjacent collection programs. Counties in rural and developing areas are expected to seek Agricultural Clean Sweep grants on a regular basis to serve farmers and abandoned farm properties.

Municipalities interested in 2009 grant funds should take this opportunity to: 1) assess their hazardous waste disposal needs; 2) meet with citizen groups, farmers, businesses, and other agencies to develop partnerships; 3) contact other municipalities to determine if joint clean sweeps are desired; and 4) determine what additional services could be added to chemical clean sweeps to provide a "one-stop" disposal or recycling opportunity for the public.

For a complete review of the rule that governs Clean Sweep operations and administration, ATCP 34, go to <http://www.legis.state.wi.us/rsb/code/atcp/atcp034.pdf> . Should questions arise in advance of the official grant release in early June, please contact Roger Springman, Program Manager at 608-224-4545 or via e-mail at roger.springman@datcp.state.wi.us .

Environmental News Briefs of Interest.....

Web-based Environmental Compliance Tool Available for Colleges

EPA recently announced a new Web-based environmental compliance assistance center developed by the National Association of Colleges and University Business Officials with support and funding from EPA. The Web site makes it easier for school officials to learn more about applicable environmental regulations and ensure a safe and sustainable environment for their students, faculty and staff. The online center provides information on topics including waste management, air and water resources, drinking water, and public safety. Viewers can find out what types of campus activities are regulated by EPA, see how best to comply with environmental regulations, query federal enforcement and compliance data, learn how to apply for federal grants, and e-mail comments to EPA on regulations under development. The new Campus Environmental Resource Center is located at: <http://www.campuserc.org> EPA also sponsors 15 other Web-based compliance assistance centers. For information on all of the compliance assistance centers: <http://www.epa.gov/compliance/assistance/centers/index.html>

College Students Find Greener Solutions: EPA P3 Award Winners



EPA's recently announced the annual People, Prosperity and the Planet (P3) competition winners. This national competition, sponsored by EPA's Office of Research and Development, encourages college students to create sustainable solutions to environmental problems through technological

innovation. These sustainable solutions must be environmentally friendly, efficiently use natural resources and be economically competitive. Each P3 award winner receives funding up to \$75,000 to further develop their designs and implement them in the field or move them to the marketplace. The P3 Award competition was held at EPA's 4th Annual National Sustainable Design Expo on the National Mall in Washington, D.C., April 20-22. For information about the P3 award winners and their projects go to: <http://www.epa.gov/p3/08/winners> and for more information about the P3 Award competition go to: <http://www.epa.gov/P3>

EPA Seeks Public Comment on Water Strategy to Respond to Climate Change

The U.S. Environmental Protection Agency is seeking public comment on a draft strategy that describes the potential effects of climate change on clean water, drinking water, and ocean protection programs and outlines EPA actions to respond to these effects. The *National Water Program Strategy: Response to Climate Change* focuses on actions designed to help managers adapt their water programs in response to a changing climate. The public comment period is open for 60 days. For information on the National Water Program Strategy and how to comment go to <http://www.epa.gov/water/climatechange>

EPA Publishes Annual National Greenhouse Gas Inventory

April 15th The U.S. Environmental Protection Agency released the *Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2006*, which is the latest in an annual set of reports that the United States submits to the Secretariat of the United Nations Framework Convention on Climate Change. EPA prepares the annual report in collaboration with experts from multiple federal agencies and after gathering comments from a broad range of stakeholders across the country. The inventory tracks annual greenhouse gas emissions at the national level and presents historical emissions from 1990 to 2006. The inventory also calculates carbon dioxide emissions that are removed from the atmosphere by "sinks," e.g., through the uptake of carbon by forests, vegetation and soils. For information on the greenhouse gas inventory report: <http://www.epa.gov/climatechange/emissions/usinventoryreport.html>

EPA Report Profiles Energy Star Partners for Reducing Greenhouse Gas Emissions

Energy Star award winners were showcased in a report released April 1st by EPA for reducing greenhouse gas emissions through energy efficiency. The report, "Profiles in Leadership, 2008 Energy Star Award Winners," highlights 74 award-winning organizations across many sectors of the U.S. economy, including schools, hospitals, real estate, manufacturing, chemicals and home building. The award winners were selected from over 12,000 organizations that partner in the Energy Star program. Through their pioneering efforts, the winners have made substantial reductions in greenhouse gas emissions by means of energy efficiency and awareness. Energy Star was introduced by the U.S. Environmental Protection Agency in 1992 as a voluntary market-based partnership to reduce greenhouse gas emissions through increased energy efficiency. For more information about Energy Star and the award winners visit: <http://www.energystar.gov/awards>



EPA Announces New Energy Star Specifications for Television Boxes

April 24, 2008 EPA announced a new specification for boxes that deliver television and video content, also called set-top boxes. Effective Jan. 1, 2009, new cable, satellite, and telecom set-top boxes that carry the Energy Star will be at least 30 percent more efficient than conventional models. For the first time, EPA will also partner with the cable, satellite and telecommunications companies that deliver content to consumers. As Energy Star partners, these companies agree to improve the energy efficiency of a significant number of set-top boxes by offering newly qualified boxes to subscribers or by upgrading boxes already in homes. For more information, visit: <http://www.energystar.gov>

EPA Increases Transparency of Regulatory Development

EPA recently began using "Action Initiation Lists" (AILs) to notify the public about new rules and other regulatory actions as soon as the agency begins development of a new rule. AILs will be posted on the EPA Web site at roughly the end of each month and each will describe those actions that were approved for commencement during the given month. The AILs provide summaries, agency contacts, and other information about the rules EPA has approved for development. The February and March 2008 AILs are available and EPA expects to release the April AIL around April 30. For access to the AILs <http://www.epa.gov/lawsregs/search/ail.html> For EPA's Semiannual Regulatory Agendas:

<http://www.epa.gov/lawsregs/search/regagenda.html>

Internet Reporting Now Available for All Facilities Reporting TRI Data

For the first time since the inception of the Toxics Release Inventory (TRI) all facilities that are required to submit data to TRI will be able to do so over the Internet, using the "TRI-ME" software. Companies will no longer have to mail reports on compact disks or paper to EPA, both of which consume more natural resources and slow release of information to the public. The Internet system also has quality checks built into the software, which will improve data quality. This year, companies are required to submit calendar year 2007 data to TRI by July 1, 2008. Facilities will be able to use the Internet to send information directly to EPA through the Central Data Exchange. The TRI-ME Software and other information related to the program is located at <http://www.epa.gov/tri/report/software/index.htm#usetri> and for more information about the Toxic Release Inventory go to <http://www.epa.gov/tri/>

New Report on Pollution Reduction Costs of U.S. Manufacturers

The U.S. manufacturing sector spent \$5.9 billion dollars on capital expenditures and \$20.7 billion dollars on operating costs for pollution prevention and treatment in 2005. The estimates were reported in a recent U.S. Census report, "Pollution Abatement Costs and Expenditures (PACE): 2005". The PACE report is the latest in a series conducted since 1973 to assess annual costs for pollution abatement by the manufacturing sector. This is the first year of data since EPA, in consultation with U.S. Census, began a multi-year effort to evaluate the quality of the survey instrument, and the accuracy and reliability of the data collected in the survey responses. As a result, an improved survey was developed by EPA and administered by the U.S. Census Bureau in 2006 to collect the 2005 expenditure data.

The report provides additional details on pollution abatement expenditures, categorized by type of pollution media and abatement activity by industry and state. The reported costs include capital and operating costs for treatment/capture, prevention, recycling, and disposal, as well as depreciation of pollution abatement equipment. For more information on the 2005 PACE go to:

<http://yosemite.epa.gov/ee/epa/eed.nsf/pages/pace2005.html>

Events, Training, Workshop and Tour Opportunities.....

May 8, 2008 **Hazardous Waste Training- Annual RCRA Refresher**, Midway Hotel Brookfield. The Federation of Environmental Technologists (FET) one-day seminar, www.fetinc.org or call 414-354-0700 for assistance.

June 20-22, 2008 **Renewable Energy and Sustainable Living Fair**, Custer, WI. For more information go to the Midwest Renewable Energy Association's web site www.the-mrea.org