



CHESAPEAKE ENVIRONMENTAL PROTECTION ASSOCIATION, INC.
 P.O. Box 117, Galesville, Maryland 20765

NEWSLETTER

Winter 2007-2008

PRESIDENT'S MESSAGE

Al Tucker, President, 2008



This year brings new legislative issues and environmental challenges that have a significant impact on the quality of life in Maryland. It will be critical for CEPA to consider the following issues:

- Updating of the general development plan for Anne Arundel County,
- Levying impact fees,
- Managing stormwater
- Monitoring the expansion of nuclear power and coal-fired power plants, and
- Assessing the need for and the environmental impact of the Mid-Atlantic Power Pathway from Northern Virginia, across Southern Maryland, the Bay, and up through Delaware to New Jersey.

Each one of these has a common thread - they are interrelated by commercial and residential growth. Unrestricted growth, fueled by permissive zoning, leads to more infrastructure for water supply, sewerage treatment, landfills, roads, county maintenance facilities, schools, and so on and on. Thus, each new residence and commercial establishment requires new infrastructure (and hence impact fees), and produces more impervious surface than the building alone (and hence more stormwater). The limits of our resources in Maryland have already been breached:

- Rivers and streams are deteriorating faster than programs can restore them,
- The Aquia aquifer is below management levels in Anne Arundel County,
- Our nuclear and coal-fired plants are being asked to produce more power for more communities outside our region, and thus,
- New power lines and existing lines will traverse ecologically sensitive areas.

Clearly a significant change of viewpoint is required and we will be expecting bold leadership from our elected officials. The general development plan should adopt a sustainable growth viewpoint; one that looks to the future where the natural resources of the region are in balance with their use. Presently Anne Arundel is far behind the requirement for

updating its general development plan. We will monitor, comment and contribute to the process.

Also, in 2006, state legislation imposed three key requirements for all comprehensive plans:

- The Water Resources Plan Element: must identify drinking water and other resources adequate for existing and future needs in the comprehensive plan
- The Municipal Growth Element: must look at population projections, land capacity, infrastructure needs and sensitive areas
- The Priority Preservation Element: counties with agriculture preservation programs must have local policies that stabilize land base so that development does not compromise agricultural and forest resources.

The first two must be completed October 1, 2009 and the last by July 1, 2008.

CEPA will continue its efforts to educate and work with local and state legislators concerning these requirements, especially as they adversely affect the lives of local citizens. Also CEPA will be implementing its expanded role of monitoring of the PST landfill.

In closing, I urge all members to come to our Groundwater Forum. It will present all with a snapshot of the future issues surrounding conservation of our water resources.

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FORUM ON
GROUNDWATER
SPONSORED BY CEPA

Friday, February 29, 2008, 7 PM

**South River High School Auditorium,
Edgewater**

*Dr. Robert Summers, Deputy Secretary,
Maryland Department of the Environment
(MDE)*

*Dr. Gordon Wolman, Professor, Environmental
Engineering, Johns Hopkins University*

*Robert Shedlock, Associate District Chief &
Supervisory Hydrologist, US Geodetic Survey*

Explosive development has caused the water levels in our aquifers to dramatically fall over the last 30 years, and now part of South County is prohibited from tapping into the Aquia Aquifer because it is below "management level," -- only 20% of its historic level. At the same time, the recharge area, in the northern and western parts of the County is being paved over. And now there are new concerns about the quality of our water. Flyash dumping was found to be responsible for heavy metals and sulfates in some residents' wells in the Gambrills area. Not so well publicized is the Arsenic recently found in wells on the eastern end of the Mayo Peninsula.

And then there is the PST landfill in Harwood, which, while now closed, only a few years ago was receiving more waste than the Millersville landfill. Most people were not aware of it because it was not open to the public. It did not have a liner, which would be required today, and, as a result, there is concern about contaminants leaking into the water supply in that area.

During the Ehrlich and O'Malley administrations, a Water Resources Committee has been studying our water supplies and how they can best be managed. CEPA was instrumental in establishing this committee, which issued one report in 2004 with another one due in 2008.

CEPA is pleased to announce the sponsorship of a forum on groundwater in February. Our keynote speaker, Dr. Summers, Deputy Secretary of MDE, is a member of the Water Resources Committee, and Dr. Wolman is the Chairman of that Committee. We will also hear from Robert Shedlock from the US Geodetic Survey about their work in mapping the aquifers and the impact of urban sprawl.

**FOR MORE INFORMATION Call 410-257-6947
Or go to www.cepaonline.org**

RIVERKEEPER'S REPORT

Bob Gallagher, West/Rhode Riverkeeper, Inc.



The thing that drew me to the Waterkeeper movement was its commitment to aggressive advocacy. We have read about the enormous problems facing the bay and about the decades-long studies of those problems. Billions of dollars have been spent on restoration work but water quality continues to decline. It seems clear to me that we will not reverse the decline until we are willing to use all available means to force polluters to stop polluting and to force reluctant public officials to take the issue seriously.

Aggressive advocacy includes grass roots organizing, lobbying campaigns focused on specific issues, effective use of the media and, in some cases, litigation. Litigation is an inefficient dispute resolution device. Large amounts of money that otherwise could go to solving a problem go to lawyers, expert witnesses and court costs. But, in some cases, it may be the only way to force a polluter to stop polluting or to force a public official to do his or her job.

By the time you read this, we will have filed our first litigation. Joining with other Maryland Waterkeepers and represented by the University of Maryland School of Law Environmental Law Clinic, we will sue the Maryland Department of Agriculture to force it to provide, under the Public Information Act, copies of nutrient management plans filed by certain large chicken farming operations on the Eastern Shore.

Farms produce more than one-half of the nutrients and sediments that pollute the Bay but enjoy broad exemption from many environmental laws. They are, however, required to prepare and file with the MD DOA nutrient management plans that describe what practices they will use to reduce sediment and nutrient runoff. It has been reported that some farmers don't file the required plans. For those who do file them, the DOA does virtually nothing to assure that plans are followed.

The Clean Water Act relies to a large degree on citizen enforcement of the law through citizen lawsuits. The ability of citizens to enforce the filing requirement and the terms of nutrient management plans is dramatically limited because the DOA takes the position that farmers enjoy an exemption from the Public Information Act which otherwise would require public disclosure of nutrient management plans. We are unable to determine which farms have filed plans, or the terms of any plan that has been filed. While we don't have any chicken farms in our watershed, the inability to get access to nutrient management plans affects us as well. In recent months, I have received complaints about two farms: one that permits animals to wade in streams and another that stores unprotected manure close to a stream. I also have observed major sediment runoff from other farms. Several residents have complained that sediments from farms are filling in their creeks. Without access to the nutrient

management plans we can't tell which rules these farms may be required to follow.

I hope no one interprets this as an attack on farmers. Every other business that discharges water into our creeks is required to follow the terms of various permits and is accountable for doing so. The rules governing farmers are more relaxed but they still should be followed and be enforceable.

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THIRD REACTOR PROPOSED FOR CALVERT CLIFFS



Photo by Rich Romer

At CEPA's November Board of Trustees meeting, our guest speakers told us about plans to build a third nuclear reactor at Calvert Cliffs. The discussion was led by Mr. Rod Krich, Senior V.P., Regulatory Affairs of Unistar Nuclear Energy. Representing Constellation Energy was Ms. Bonnie Johansen, Senior V.P. for Governmental Relations.

Unistar Nuclear is a company formed by Constellation Energy and Electricity de France that has contracted with the French company Areva to build an evolutionary 1600 Mwe nuclear power plant in the U.S. Possible sites are Calvert Cliffs, MD and Oswego, NY, both existing nuclear power plant locations.

The plant, including both its spent fuel pool and cooling water supply, is designed to withstand a commercial aircraft impact by using a "building within a building" concept. This is further addressed in the Preliminary Safety Analysis Report (PSAR) under preparation and to be submitted to the Nuclear Regulatory Commission (NRC) in 2008.

Existing transmission lines were originally built to handle the added 1600 Mwe (except switching station upgrades, etc.), so no new lines are required.

The impacts of construction and operations on Calvert County are addressed in the Preliminary Environmental Report (PER) submitted to the NRC in July 2007 (available at www.nrc.gov under "New Plant Licensing") as well in the Certificate of Public Convenience and Necessity License (CPCNL) application submitted Nov. 13, 2007, to the MD Public Service Commission (PSC).

The new plant will use a cooling tower design which minimizes the use of Bay water (less than 2% of that used for the existing two 825 MWe units).

Spent fuel will be contained in protected staged wet and dry storage on site. In addition, federal agencies continue to address nuclear waste repositories and the possibility of nuclear waste reprocessing in the U.S., a process used in some other countries, notably France.

The license approval process will carry into 2011, and operations would not commence before 2015. Before issuing a license to construct and operate the plant, the NRC will prepare both an Environmental Impact Statement and a Final Safety Analysis Report., both of which involve numerous opportunities for public review and comment. Similarly, the PSC will hold numerous public hearings.

CEPA will continue to participate in the public review process for the planned nuclear power plant. More concrete information on the risks, and on the environmental and other impacts of the planned new reactor will be revealed, and we will pass along our observations and opinions as the process unfolds.

GREEN POWER IN MARYLAND

For those of us who get their electrical power from BGE, it is now possible to choose to use wind-generated electricity. With deregulation, BGE has agreed to provide power from any one of five power companies. Each must be licensed by the Maryland Public Service Commission and qualified by BGE to provide power to BGE customers. The web sites of those companies indicate that three of them will provide wind power or other green power (as well as conventional power).

To find out details of all the plans offered through BGE, go to www.bge.com, click on *Energy Choices*, then *Choice – Residential Supplier List*. The situation seems to be in flux right now as evidenced by at least three of the web sites (including BGE's) having changed in the last month, along with some of the prices.

As an example, one of those companies, Commerce Energy offers two wind power plans. They provide power (or gas) in California, Michigan, Georgia, Maryland, New Jersey, New York, Ohio, Pennsylvania, and Texas. In each state, Commerce Energy deals with particular power distribution companies. In Maryland it is BGE. The price for their wind power (as compared to 10.9 cents for BGE power) is 13.4 cents per kWh for 50% wind power, or 13.7 cents for 100%. Their prices involve a one year commitment, with a \$75.. fee for early termination. (These prices have changed recently – in December it was 13.4 cents for 100% wind power.)

There are basically two ways that individuals can buy green power. The first is the type of deal mentioned above, and it can apply to other types of green power (solar, bio-mass, hydro, etc.) as well as wind power. Commerce Energy's agreement says that they will purchase the amount of wind-generated electricity (from suppliers in the area) needed to serve a customer's account for the next year. That wind-generated electricity is sent to the grid to replace electricity that normally would have been generated by other non-environmentally friendly sources. Many programs, including that of Commerce Energy, are certified by Green-e, a non-profit organization that conducts an annual audit of their

activities to ensure that the clean energy purchased is actually bought and placed in the grid.

The other way is to buy *Renewable Energy Credits (RECs)*. RECs represent the difference between renewable energy costs and conventional power costs. They were created by the FDA to help the sale of renewable energy across the country. Renewable electricity generation is separated into two parts: (1) the power produced by a green power generator, and (2) the renewable "attributes" of that generation. The "attributes" include the tons of greenhouse gas that were avoided by using a renewable power generator instead of coal, nuclear, or gas. These attributes are sold separately as RECs. One REC is issued for each MWh of renewable power produced. RECs contain specific information about the renewable energy generated, including type of generator and when and where it was generated. Green-e Energy Certified RECs cannot be sold more than once. Dealers who sell RECs combine them with purchases of renewable power and sell them to power distributors like BGE at conventional power rates. The difference between clean and conventional power rates is usually about 1 to 2.5 cents per kWh, depending on the local market. Some RECs are also used to develop new clean energy projects. The Green-e certification program ensures that the REC seller does what he is supposed to with the credits. Buying RECs does not require you to change electrical suppliers.

A major problem with wind energy is that the wind doesn't always blow. This means it is often used as a supplement to some other form of power. Solar energy has the same sort of problem when the sun isn't shining, but there are forms of green energy that can be used anytime. Landfills generate methane gas which can be burned in a power plant. That process generates some carbon dioxide, but methane is about 20 times more potent as a greenhouse gas, so the process is very effective in reducing the greenhouse effect. Other bio-mass, geothermal, and hydroelectric systems are also included in many clean energy programs.

Green energy sales have increased by an average of 46% per year during the period 2003 through 2006, and the majority of green energy goes to non-residential customers. Government agencies, large businesses, and academic institutions are increasingly buying some or all of their electricity from green sources. Large non-residential customers are able to negotiate for lower prices and, hopefully, their support of the green power industry will eventually result in lower prices for everybody.

Locally, Montgomery County is planning to use wind power in all of their county-owned buildings, and The Morning Call (www.mcall.com/news/local/) reports that they will be one of the country's top ten wind energy purchasing local governments. They figure it's the same as taking 3,700 vehicles off the road. They are buying "wind energy credits," a form of REC.

Another factor greatly affecting the green power market is the requirement of a number of states (23 if them) that power companies supply a certain percentage of green power. This is called a Renewable Portfolio Standard (RPS), and Maryland's requirement is 9.5 % by 2022. A Maryland Summit on Electrical Power in January 2008 recommended that be increased to 20% by 2022. Due to all these factors, some experts believe that the demand for green power will exceed the supply in the next year or two, causing prices to rise somewhat. (A fixed price agreement for a year or two with a supplier may be wise.) The higher prices should be

temporary, and as more green power generators are brought on line, the price should become more competitive. The high price of oil, of course, helps the green power industry.

There seem to be many variations on these products. At the website www.greentagsusa.org/greentags/calculator, you can calculate how many pounds of greenhouse gas are associated with your electricity, heating, automobile travel, and air travel. The site will tell you how many "Green Tags" you need to buy to compensate for all of your greenhouse gas emissions or some part thereof. The Green Tags are a form of REC, but they pay for a wider range of green projects than most, even including watershed restoration. As an example, the average household could offset its total greenhouse gas emissions, including traveling, for about 4 tags/month at \$20./tag. Just offsetting the average electrical bill would be about one tag or \$20/month. By way of comparison, the increase in the price of Commerce Energy's 100% wind power would be about \$23./month.

We are all concerned about reducing greenhouse gases, and, even though some of the market's mechanisms for doing that can be pretty complicated, it is hoped that this information will help you evaluate your options.

PROFILE OF A TRUSTEE

ALBERT TUCKER, Ph.D.



Photo by Rich Romer

Al, a physicist and engineer by training and a naturalist at heart, has lived in Maryland for over 40 years. He has a strong commitment to the preservation of farms and open space. Currently, he has returned to operating a 147-acre farm, raising hay for horses, while devoting time to CEPA and the Friends of Jug Bay. He originally heard the call to action 36 years ago over the proposed commercial development of Jug Bay. Through concerted community outreach, political advocacy and legal efforts, Jug Bay Wetlands Sanctuary was established in 1985.

Al studied physics at University of Massachusetts, engineering mechanics at Penn State and received his doctorate from Catholic University in structural acoustics. His entire career was with the US Navy with assignments to the Office of the Secretary of Defense and Defense Research Projects Agency. First he performed research on submarine quieting at David Taylor Naval Ship Research and Development Center. Then, at the Office of Naval Research, he was a Program Officer and Division Director of Ship

Research, where he was responsible for basic and applied research as well as major technology development. In addition, Al has led high-level international cooperative research programs and delegations for the Secretary of Defense and other government agencies.

One particular assignment Al enjoyed was working with Al Gore on the Partnership for a New Generation of Vehicles, which led to the development of hybrid car technology.

Al continues his professional interests as a member of the Institute for Electrical & Electronic Engineers, where he is a member of several committees that establish engineering standards for electric power systems. He is also a member of the American Society of Naval Engineers and the Sigma Xi Research Society.

His return to farming, coupled with his professional experience, made him aware of the critical need to understand the complex interrelationship of nutrients, soil erosion and run-off. Hence, he chose to raise perennial grass crops that build soil and are extremely effective for controlling nitrogen, while preserving large open areas for wildlife. Al's technical and professional career as a program manger and administrator brings CEPA valuable expertise to help deal with the myriad of environmental issues facing Maryland and the Bay.

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