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

NEWSLETTER

Fall 2010

PRESIDENT'S MESSAGE

By Al Tucker, President, 2010

In reviewing our current annual plan (which you can read on www.cepaonline.org), there are two areas I would like to bring to your attention and discuss in further detail:

(1) Groundwater Resources and
(2) Population and Development Management

In many respects these two topics are not independent of one another. Additional population growth will result in the need for more water. Those population increases stress the environment in more ways than simply the need for water. More people drive complex feedback loops that require more energy, which requires again more water, which requires more energy and over and over again. In the next newsletter, I will spend more time on the issues of population and development issues; for this issue I would like to focus on those for water resources. The main question facing Marylanders in particular is, "Will there be enough water in 20, 50 or 100 years?"

Around the world water is rapidly emerging as a contentious issue that will redefine national boundaries and relocate people. Fresh water represents a small portion of the earth's water supply, only 3%, and of that 69% is tied up in ice, 30% in groundwater and a minuscule 0.3% of the fresh water is surface water. For most of the world, groundwater represents nearly all the water available to sustain people.

Aquifers are being pumped without regard to treating them as a sustainable resource, extracting more than recharging can replace. The miracle of agriculture that has sustained the geometric expansion of population depends on the ability to pump groundwater to irrigate food crops. Pumping relies on the availability of petroleum to run pumps and generators. In arid regions groundwater supplies nearly 100% of the region's needs for cooking, bathing, irrigation, etc. Yet, little is known about the hydrology of aquifers, other than "drill deeper" and pump more water. This approach perniciously requires more energy per unit of water pumped.

Of course, such an approach is not evident in Maryland – correct? Actually, Maryland belongs in the same league. There is no central authority for understanding and forecasting water needs. Maryland Department of the Environment (MDE) is charged with ensuring a safe and adequate supply of water for all Marylanders. If MDE does not perform long range planning or forecasting for the water supply in the state, then how can we be sure there will be an adequate supply? MDE does issue permits for water withdrawals, but this process does not consider the future adequacy of the supply. Agriculture on the Eastern Shore has been increasing water withdrawal from the coastal (unconfined) aquifers at the rate of 8% per year. Yet, MDE has no idea what the long-term consequences will be.

For those parts of the state that are lucky enough to get their water from either the Potomac or Susquehanna River, their respective river commissions do perform forecasts of future needs. However, their solution to the problem will be to build bigger reservoirs. In the past, Maryland has had almost total control over the Potomac, but recent court rulings have given Northern Virginia a larger portion of the flow. The reality is that Maryland does not have a unified understanding of the state of drinking water within its boundaries.

The challenges for sustaining water quality and availability require us to balance the needs of nature along with our own. We have to ask ourselves how much water we need to leave in order to not destroy the ecosystem of streams and the Bay. On the coastal plain, the surface aquifers are critical in maintaining minimum stream flows, but the science of that relationship is not very well understood. Budget cuts have resulted in a reduction in the numbers of streams in the state that are now monitored. There seems to be little coordination in managing both surface waters and aquifer storage as sustainable resources. Clearly, the main aquifers that sustain the Western and Eastern Shores of the Chesapeake have been dropping at exponential rates. And some of the results that one would expect, like subsidence, salt water intrusion, reduced stream flow, etc are being observed; yet no one seems to be raising alarm bells and asking the critical questions about the sustainability of our water supply.

This year CEPA intends to take these questions more seriously; we hope to create a chart of who in the state has a responsibility for monitoring water and forecasting future needs. At that point we will be able to formulate and direct the questions to appropriate levels in state government.

The April 2010 issue of *National Geographic* is entirely devoted to the world's water supply, and is highly recommended reading.

IN THIS ISSUE:
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WEST/RHODE RIVERKEEPER'S REPORT

By Chris Trumbauer
www.westrhoderiverkeeper.org).

We have all heard the expression "actions speak louder than words." West/Rhode Riverkeeper has always believed this, and that's why we have fought hard to make a real difference. Our mission is to protect families and communities by stopping pollution. Our primary focus in achieving this goal has always been – and will continue to be – advocacy actions. Without proper implementation and enforcement of environmental regulations, we will never be able to restore the health of our rivers.

However, over the past two years, we have also engaged in another scope of effort to compliment our advocacy work – restoration actions. To achieve our vision for the West and Rhode Rivers, we will need to manage the existing problems which contribute to the poor condition of our rivers. The two main problems we can address in our area are stormwater runoff and shoreline erosion. We have been working for several years on restoration actions, and members of our community will be pleased to see the results of those efforts being implemented at this very moment.

In July, 2008 we applied to the Chesapeake Bay Trust for a Targeted Watershed grant to do an assessment of the West River watershed, from Galesville all the way around the river to Shady Side. This grant resulted in a prioritized list of restoration actions we could take to benefit the river. Part of this work also included design and construction or two bio-retention areas (or "raingardens") to treat runoff from parking lots, rooftops, and roads. One design was for the Galesville waterfront park, and the other for Discovery Village in Shady Side. Both projects are now complete and functional, helping to capture runoff pollution from storms and let it soak into the ground, rather than flowing straight into our rivers.

Another restoration project that was identified from our West River assessment would treat the runoff from the new dining hall and parking lot at the West River Center. This project was "adopted" by the latest class of Watershed Stewards. The Watershed Stewards Academy trains and supports community leaders to serve as Master Watershed Stewards in the protection, restoration and conservation of our watersheds. We are pleased to have this partnership, and are eager to see the result of their restoration site.

The West River Center has also recently completed a living shoreline project on their waterfront. Living shorelines use a combination of structural shoreline stabilization with habitat creation. Common examples include rock breakwaters with gaps in them to allow wildlife access to the marsh grasses which are planted behind the rocks. West/Rhode Riverkeeper volunteers also helped plant the living shoreline project at the Galesville waterfront park last year. Our biggest restoration project of all is a combination living shoreline/wetland creation at the Shady Cove Natural Area near the mouth of Parish Creek.

The Shady Cove project involves installation of 3 acres of tidal wetlands at the tip of a county owned park, protecting the peninsula from additional erosion. The area has experienced significant erosion over the past 10 years, threatening a significant wetland system. The newly created wetland will protect the existing wetland system as well as a cove home to overwintering waterfowl. This project received funding from the federal stimulus, and the construction is being done by a local firm, providing resources into our local economy.

These restoration actions are important. Not only will they help reduce pollution in their immediate vicinity, they will serve as demonstration projects to inspire others to do similar work. They also give credibility to our advocacy actions. We are fighting for better enforcement of our clean water laws, and at the same time we are investing our resources into projects that make a difference. Together, our words and actions are working to improve the health of our rivers.

PST LANDFILL REPORT

By Mike Lofton
Chairman, Landfill Committee

CEPA has a grant from Anne Arundel County to oversee the monitoring of the now closed PST Landfill on Sands Road in Harwood. Waste Management Company owns the landfill and is required to submit periodic reports on test wells on the property. In CEPA's 2009 report to AA County, we expressed concern about samples from the ground water monitoring wells at the site continuing to show contaminants in the ground water. Federal limits are exceeded in the cases of arsenic, beryllium, cadmium, chromium and vinyl chloride. CEPA is continuing to watch closely for adverse impacts on area water supplies near the landfill.

In response to CEPA's report, we received the following letter dated July 1, 2010 from the AA County Health Department addressed to Al Tucker, President of the Chesapeake Environmental Protection Association:

"The Anne Arundel County Department of Health has been aware of the discovery of contaminants in excess of Federal MCLs (Maximum Contaminant Levels) in monitoring wells at the site. The levels of these contaminants (arsenic, beryllium, cadmium, chromium and vinyl chloride) continue to

be monitored By the Maryland Department of the Environment (MDE) and the County Department of Health. As noted in your report, the Department of Health conducted water quality tests on five residential wells around the former PST Landfill, with all results being negative for those contaminants. The Department of Health continues to receive ongoing reports of monitoring well data from MDE and reviews this data closely. Furthermore, the five residential wells tested in 2009 by the Department will be retested on a two year interval; subject to availability of funds……..The protection of the health and safety of the residents near the landfill remains a high priority."
Signed
Douglas L. Hart
Acting Health Officer

A YEAR WITH A GEOTHERMAL HEAT PUMP

By Gary Antonides

In the Spring 2009 and Fall 2009 issues of the CEPA newsletter, I wrote about geothermal heating and air conditioning systems in general, and about my experience in having such a system installed. It has been a year since I had my system installed and am now able to compare costs. For the year, operating the geothermal system was $1400. cheaper than the old oil furnace with baseboard heat and an air source air conditioner. That includes a savings of $200. that I would have paid for a maintenance contract on the oil furnace. I don't have a maintenance contract on the new geothermal system yet, but will probably get one when the system is a few years old.

This past winter was considerably more severe than the winter before, but I did take into account the differences in temperatures, so the $1400 should be a realistic number.

There has been a recent development regarding grants for geothermal systems. In addition to the state and federal incentives, Anne Arundel County will now give tax credits for geothermal systems. The credit is the lesser of $2500. or 50% of the cost of the system less the federal and state incentives. The one-time credit is applied to real estate taxes on *dwellings*, *not on land.* It applies to geothermal units installed after January 1, 2009. In my case, the tax on my *house* is considerably less than $2500. Part of the reason for that is I've been here for 30 years and the homestead tax credit is substantial. No mention is made by the County as to the effect of the homestead tax credit or if the credit can carry over to the next tax year if it exceeds your annual tax. Consequently, I'm not sure how much my credit will amount to, but it should be at least $800, in which case, the cost and incentives for me were:

Cost	$22,585.
Federal income tax credit	$6,775.
State grant	$2,000.
County real estate tax credit	$800.
My cost	$13,010.

For more information and an application form for the AA County tax credit, go to www.aacounty.org/Finance/Resources/Geothermal_Tax_Credit_App.pdf.

TO GET ON CEPA'S MAILING LIST:

CEPA distributes its newsletter primarily by electronic means, but if you prefer to get it by mail, please let us know. Either way, contact Gary Antonides (garyanto@verizon.net). Newsletters are posted on www.cepaonline.org. When a new newsletter is available, we send an email notification with a direct link to it.

2009 CEPA MEMBERSHIP
and/or RIVERKEEPER CONTRIBUTION

A CEPA membership entitles you to receive our newsletter and to vote for our Trustees.

We also provide you the opportunity to support the West/Rhode River Riverkeeper. Those donations go directly to that organization.

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