



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

## NEWSLETTER

Winter 2009-2010

### PRESIDENT'S MESSAGE

By Al Tucker, President, 2010



The CEPA Forum on Feb. 26 focuses on an underlying issue no one really wants to confront when it comes to cleaning up the Bay, our country, or our planet. That fundamental issue is whether the population has exceeded the carrying capacity of the planet's ecosystems. Whether or not we have may be debatable, but we certainly have

exceeded the capacity in some local ecosystems. This will be the question before the CEPA forum: have we approached that limit in the Bay watershed? Our speakers, Mr. Charles Fox, EPA administrator for the Chesapeake Bay and Tom Horton, noted author and Bay environmentalist, will present their opinions on what the future holds.

In his monograph, "Growing! Growing! Gone!"<sup>1</sup>, Mr. Horton presents the case that the footprint of people in the Bay's watershed is too large; we are consuming fundamental resources and fouling the air, land and water faster than they can be replenished. He argues that everyone must focus on the concept of sustainability, where nature can replenish resources as we use them. To reach a sustainable equilibrium requires a stable population and an economy that does not degrade nature.

***Don't miss CEPA's best forum yet.  
February 26, 2010 at Southern H.S.  
See details on Page 2.***

Both ideas are controversial. The first requires curtailing population growth and the second opposes current economic thinking, which does not include the costs of depleting the ecosystem. Mr. Horton states that in spite of the tremendous amount spent on research, engineering solutions, and regulations, the Bay continues to degrade at an alarming rate. By shifting the focus from consumption to reuse and replenishment, we can bring our lifestyles into equilibrium with the earth's resources. Mr. Horton further argues that results can occur only by ending growth as we know it today and changing our economic thinking. What is needed is not more refined analysis, but a fundamental change in economic vision where the economy is an open subsystem of the ecosystem.<sup>2</sup> In such an economy, the true costs of consuming finite resources are considered. Regrettably, Mr.

Horton's views will take time for the general public to assimilate and to acknowledge that radical lifestyle changes will ultimately become necessary to move toward a sustainable future.

Mr. Fox, on the other hand, is concerned with the here and now, because he has to fix the problem. His task is to use existing regulations that will have a relatively immediate impact on the water quality in the Bay. Unfortunately, he will have to do this with the proverbial one hand tied behind his back. His ultimate strategy for compliance and enforcement derives from the Federal Clean Water Act. The act gives the EPA strong tools to use against point source polluters, but it has almost no authority to regulate non-point source pollution. The implementation of TMDLs (Total Maximum Daily Loads) for nutrients means that restrictions on point sources will tighten, forcing non-point sources to become the larger issue. This will set up the classic political confrontation between those regulated and the regulators. Those regulated will claim that the economic costs will be too high and will seek "regulatory" relief. Meanwhile, the non-point polluters will have done nothing and will not have carried their burden of the cost. Currently, non-point sources such as air pollution and urban run-off contribute 41% to the nitrogen pollution to the Bay, while urban run-off contributes 31% of the phosphorus<sup>3</sup>. These percentages are not trivial. And, as point sources diminish these non-point sources become the major factors, so placing stricter constraints on point source pollution will result in diminishing returns. To control the non-point sources will require legislation. At that time the debate envisioned by Mr. Horton will happen. But that may be too late!

The gulf between what Mr. Fox can do and the future that Mr. Horton envisions seems almost unbridgeable. The concept of a sustainable future is not well understood by the public, and involves complex socio-economic issues. The sooner we start discussing these, the better we will understand the consequences of the decisions and trade-offs we will most certainly have to make concerning the future of the Bay.

It is CEPA's hope that this forum will contribute to this public discussion. Ordinary citizens need to understand the urgency and that they must be able to convince their political leaders to develop the will and the muscle to make changes that offer a better future for the Bay.

1. Horton, T. F., "Growing! Growing! Gone!", The Abell Foundation, [www.abell.org](http://www.abell.org) (2008)  
(Copies will be made available at the Forum)
2. Daly, H.E, "Beyond Growth", Beacon Press, (1996)
3. "Draft Chesapeake Bay Compliance & Enforcement Strategy", <http://www.epa.gov/region03/index.htm>, (Nov 2009)

*Chesapeake Environmental Protection Association*  
**PRESENTS**

**THE HEALTH OF THE BAY AND YOU**

*FEATURING*



**J. CHARLES "CHUCK" FOX**

Special Assistant to the  
EPA Administrator for the Chesapeake Bay

*AND*

**TOM HORTON**

Environmentalist and Author



*Friday, February 26, 2010 from 7 to 9 PM*  
Southern High School Auditorium in Harwood

Suggested Contribution: \$10 to the Bay Restoration Fund

Tom Horton's Monograph

**"GROWING! GROWING! GONE!"**

The Chesapeake Bay and the Myth of Endless Growth"  
will be distributed free to all attendees.

For more information see: [www.cepaonline.org](http://www.cepaonline.org) or  
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### WEST/RHODE RIVERKEEPER'S REPORT

By Chris Trumbauer

[www.westrhoderiverkeeper.org](http://www.westrhoderiverkeeper.org)



Two recent high profile federal actions have the potential to significantly affect the fight for improved health of the Chesapeake Bay, and thus the health of the West and Rhode Rivers.

First, on November 11, the Obama administration released its draft strategy for restoring the Bay, as required by the President's Executive Order issued back in May. The

strategy calls for "expanded action and increased accountability by the federal government" to oversee the Bay cleanup efforts. I join many other environmentalists in applauding this sentiment. For too long, the States have been given the lead role in devising and implementing the policies to improve Bay health. Any of us who follow the health of the Bay (or even just read the headlines) know that this approach has not led to success.

The Chesapeake Bay watershed covers parts of six states and Washington, DC. This fact in itself helps underscore the need for federal involvement. The Bay cleanup needs to be a coordinated effort among all the jurisdictions, and leaving this to the States has brought us the voluntary measures and compromising philosophy which has failed to make the improvements we need. That is why I am disappointed that the new strategy lacks specifics such as program goals, deadlines, and exactly how these strategies will be implemented. Also missing are details on exactly how EPA will address agricultural pollution and pollution from urban stormwater.

If this new initiative results in the same voluntary agreements as in the past, then I am afraid we can expect similar unacceptable results. Most discouraging is that the draft strategy backs off from an earlier commitment to enable EPA to mandate action, and instead gives the States another shot at proposing plans first. If the States' plans are not good enough, then the EPA reserves the right to step in, but again the details and specifics are lacking on what the timeline and expectations are.

Because of the vagueness of the new federal strategy, many in the environmental community are staking their hopes on new legislation being proposed by Senator Ben Cardin and Congressman Elijah Cummins, both of Maryland. This bill, known as the Chesapeake Clean Water and Ecosystem Restoration Act, amends the Clean Water Act and will provide additional funding to reduce stormwater pollution, set rigid pollution reduction goals, and stronger federal oversight. However, it also sets up a nutrient-trading program. This is where it gets tricky.

Many Waterkeepers in the Chesapeake feel that the bill could potentially have unintended but very detrimental impacts on water quality protection efforts. The Clean Water Act mandates a zero-pollution policy. In contrast, the bill before Congress sets up a "nutrient trading" policy which establishes limits for "allowable" pollution, and polluters could buy "credits" rather than implement pollution reduction measures. While the intention is to limit the overall amount of pollution entering the Bay, it could create hotspots of pollution in areas where industry chooses to buy credits rather than manage their discharge. Pollution trading could also jeopardize future citizen enforcement actions by undercutting a recent court decision, *Friends of Pinto Creek v. EPA*. This decision prohibits EPA from issuing discharge permits into waterways that do not meet water quality standards, even if the new discharge is offset by the elimination of an existing source upstream.

Even though we recognize these concerns with the current version of the bill, we wholeheartedly support the leadership of Senator Cardin and Congressman Cummings to address the need to toughen federal resolve to clean up the Bay. In collaboration with other Waterkeepers and advocacy groups, we will work in a positive way to help strengthen this legislation.

### GRAYWATER

By Gary Antonides



In recent years, concerns over dwindling reserves of groundwater and overloaded or costly sewage treatment plants have generated much interest in the reuse or recycling of graywater.

<http://en.wikipedia.org/wiki/Graywater> defines graywater as any wastewater generated in the home, except water from toilets, which is blackwater. Graywater includes dish, shower, sink, and

laundry water and comprises 50–80% of residential "wastewater." In some places, kitchen sink water or water used for washing diapers is not considered usable graywater.

Graywater may be used for several purposes in the home, primarily toilet flushing and landscape irrigation.

However, concerns over potential health and environmental risks results in many jurisdictions not allowing the reuse of graywater, or demanding such intensive treatment systems that the commercial cost is higher than for fresh water. Despite these obstacles, graywater is often reused at least for irrigation, but often illegally.

Conventionally, both graywater and blackwater are removed together using a shared sewerage system. Sewage water can then be treated to limit pollution and health risks, before being returned to the environment at large, usually ending up in rivers and oceans. Despite treatment, the graywater arguably results in greater contamination of natural waters than it would if it were used for irrigation because the natural purification capacity of soil is greater than most treatment systems. Simply allowing graywater to soak into the soil and feed plants, from an ecological standpoint, is less damaging than sending highly treated graywater directly into natural waters. Plants use the alleged contaminants of graywater, such as food particles, as nutrients in their growth.

### **Graywater recycling systems**

If collected using a separate plumbing system from blackwater, domestic graywater can be recycled directly within the home or garden and used either immediately or processed and stored. Recycled graywater of this kind is never clean enough to drink, but filtration and disinfection might be used to provide water for flushing toilets. Relatively clean graywater might be applied directly to a garden, where it receives high level treatment from soil and plant roots.

Regulations change by country and region, but common guidelines for safe usage of graywater include not storing it for more than 24 hours, ensuring it cannot pool on the surface or run off, and depositing it with subsurface irrigation. Plumbing systems can be as basic as running the outlet hose from a washing machine out a window to the garden, or can be designed in as a permanent part of the home plumbing. Graywater from the shower or bath is generally good quality water for the garden. The soap levels at the dilutions typical are actually good for the garden as they are a wetting agent. When laundry graywater is diverted to the garden the laundry products must be chosen carefully to ensure phosphate and salt levels are low, and the pH balance is neutral.

Recycled graywater from showers and bathtubs can be used for flushing toilets in most European and Australian jurisdictions and, in the United States, in jurisdictions that have adopted the *International Plumbing Code* and don't have additional restrictions. In Maryland, it is not allowed. Many states use the older *Uniform Plumbing Code*, which prohibits any graywater use indoors. While they are not common, toilet flushing systems are available in this country. Sloan Valve Company's AQUUS® Graywater System (see figure) takes graywater from bathroom lavatory drains and reuses it in toilets after filtering and disinfecting with tablets.

In many cases, the hardware required for using graywater is complicated and expensive enough that the effort and energy in manufacturing and installing it does not justify the savings in fresh water. The most effective systems are the simplest, but there are more advanced systems that treat graywater to a standard that, it is claimed, can be used in washing machines.



There are potential health problems with irrigating fruits and vegetables with graywater, so the best things to use graywater for are trees (including fruit trees), bushes, and flowers that have mulch basins to absorb the water. Irrigating lawns with sub-surface piping with holes in it is acceptable, but it may be difficult to find a system that distributes the water evenly and doesn't clog. Converting areas of grass to gardens with mulch basins is a very desirable practice.

### **Harvesting rainwater**

Another way to lower demand on municipal supplies is the collection of rainwater. This can potentially save 50% of domestic water consumption. This water can be used not only for garden and lawn watering and toilet flushing but for clothes washing. Rainwater is very soft and free of chlorine, which makes it acceptable for all these uses. In order to maintain the quality of water at acceptable levels, organic matter must be filtered out. Incoming rainwater introduces oxygen into the storage systems, and when the water is kept aerobic in this way, foul odors do not develop, and no further treatment is needed. The most common way to use rainwater involves the humble rain barrel which captures rain from summer showers and allows gardeners to apply the water when and where it is needed.

Household rainwater systems are much more sophisticated and their installation is quite complex. In practice, most domestic roof areas are too small to satisfy all the household needs regardless of the size of the storage cistern.

Some of the considerations when harvesting rainwater are: using a suitable roof material, keeping leaves out, avoiding pooling (mosquitos), using screens on tanks, using pumps if required, and providing for make-up water from the main supply if required.

### **Regulating Graywater**

In recent years, many states have passed legislation concerning the use of graywater, and it is expected that there will be many more changes in the next few years. The next newsletter will discuss the regulation of graywater.

**PROFILE OF A TRUSTEE**  
**Ron Tate**



Ron is an electrical engineer, having graduated from Virginia Tech in 1969 with a BS in Electrical Engineering. He has a broad range of experience in instrumentation and control systems design and development. He spent 35 years with the government doing R&D for the Navy on shipboard automation and control systems. This included supporting the pollution abatement group with instrument and control system issues. He then spent 5 years in private industry working on shipboard pollution abatement systems and has subsequently done some consulting on instrumentation and predictive maintenance systems.

Ron has spent most of his life in the Chesapeake Bay watershed, and enjoys canoeing, kayaking and hiking the headwaters as well as sailing, boating and swimming in the Bay and its tributaries. He has seen first hand the decline of this national treasure and its abuses throughout the watershed.

He recently graduated from the CBF Voices - Chesapeake Bay Steward program and the Arlington Echo Outdoor Education Center's Watershed Stewards Program where he has gained a better understanding of the problems facing the Chesapeake watershed. He is a volunteer with the CBF Oyster Restoration effort and a South River Riverwatcher, helping to monitor water quality in the South River. He is very concerned with issues regarding a sustainable quality of life for the future.

**OBITUARY**

**Lauraine Elizabeth Kirkpatrick-Howat, 87**, a two-year resident of Ginger Cove Retirement Community and formerly a 60-year resident of Contee Farm in Edgewater, died Dec. 12 at Anne Arundel Medical Center of natural causes.

She was born April 12, 1922, in Mahwah, N.J., to the late Michael Spiech and Paraska Nalesnik. She attended school in Mahwah, N.J. graduating with a degree in nursing. After her marriage she attended classes at George Washington University and Anne Arundel Community College.

She enlisted in the Army as a nurse during World War II becoming a 2nd Lieutenant. She served at several army hospitals and on hospital trains traveling throughout the United States and Canada.

She was a past president and officer of the Four Rivers Garden Club where she was a member since 1950, and an early supporter of Historic London Town and Gardens, serving as a garden guide. She also volunteered at the Anne Arundel Medical Center for many years.

She was a lifetime reader and a many year member of the Great Books Group based in South County. She traveled throughout the world with a particular interest in the cultures of Central America.

She was preceded in death by her husband of 55 years, Yvon Kirkpatrick-Howat; and two sisters, Mary Tennyson of Naples, Fla. and Stella Jarred of Ocala, Fla.

Survivors include one daughter, Betsy Kirkpatrick-Howat of Edgewater; two grandchildren, Peter Drake of Annapolis and Michelle Drake of Edgewater; and one sister, Veronica Winchell of Sandy Spring, Okla.

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