

Conserving Water and
Preventing Pollution
Go Hand-In-Hand!

MDE Environment

Maryland Department of the Environment

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**19th North American
Motor Vehicle Emissions Control
Conference, December 12-15
in Baltimore!**

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Drought Restrictions Get Marylanders Asking Questions and Learning About Conservation

by Christine Plummer

Just after Governor Parris N. Glendening announced Maryland's mandatory water restrictions at a State House press conference in late July, the Maryland Department of the Environment's drought hotline phones began to ring. In those first days, nearly 400 calls per hour were logged by MDE staff and in the the first week, 49,000 citizens visited Maryland's new drought related website to get answers to their questions. As of late August, the drought hotline has received an estimated 21,000 calls.

The pace of incoming calls to the drought hotline has slowed. Yet, the questions that staff are

receiving are essentially the same. As each new exemption is approved or denied, private citizens and businesses ask "How do these restrictions affect me, my family, my business?"

The following is a sample of some of the frequently asked questions that MDE has received from citizens across the state that may help answer your questions as well.

Q: May I water my shrubs and trees?

A: You may water trees or shrubs using a watering can, bucket, or hand-held hose. However, established trees have built-in mechanisms to withstand drought conditions, and should survive without supplemental watering.

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Towson's Bel-Loc Diner is just one of many businesses cooperating with drought restrictions.

National Pollution Prevention Week Kicks-Off New Business Services

by Laura Armstrong

The Maryland Department of the Environment is offering new pollution prevention (P2) technical services to Maryland businesses to increase production and energy efficiency, reduce regulatory concerns, improve worker safety, and provide businesses a greater competitive edge. As part of the program, businesses receive a free, confidential, non-regulatory evaluation of pollution prevention opportunities through a new partnership with the University of Maryland Technology Extension Service (TES).

Pollution prevention measures, which aim to reduce or eliminate waste streams before they are created, may include process

changes, equipment modifications, material substitutions, improved housekeeping, preventive maintenance, and inventory control. Ininitially, assistance will be focused on businesses such as vehicle maintenance and repair shops, printers, wood finishers, and metal finishers in the Baltimore Harbor watershed area.

Interested businesses are encouraged to call MDE's Pollution Prevention Program to request a scheduled pollution prevention visit. The business will then be contacted by the University of Maryland Technology Extension Service to answer questions and to schedule a visit. A Technology Extension Service representative will tour the facility with the owner or operator to discuss processes and pollution prevention opportunities. Most site visits take about one hour to

complete, depending on the size and complexity of the facility.

These pollution prevention opportunity assessments are not inspections. The purpose is not to evaluate a facility's compliance with environmental regulations, but rather to assess voluntary measures that can be taken to make the most efficient use of materials, energy, and water which will protect the environment, the workers and save money.

Following the visit, the business will be provided with a follow-up report which summarizes the visit and provides recommendations for appropriate best management practices and waste reduction

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DROUGHT

FAQs

Q: May I spray a water-insecticide mixture on my diseased trees?

A: Yes. Watering of trees is allowed, as long as you use a hand-held hose.

Q: May I use bay or river water to water my lawn?

A: No, you may not water your lawn using any source of water. In the case of bay water, the salt in the water would probably harm your grass more than help it.

Q: Am I allowed to fill my hot tub? How about an above-ground pool?

A: No, filling of pools, including hot tubs, is prohibited under the Executive Order. First time filling of in-ground pools is allowed to prevent property loss due to cracking of the concrete. This cracking will not occur in hot tubs or above-ground pools.

Q: Can I give my dog a bath?

A: It's okay to wash your pets.

Q: May I wash my truck? A motorcycle?

A: Private citizens may not wash their own vehicles.

Q: My business is detailing cars. Can I wash the cars?

A: Yes, you may continue to operate, but you should voluntarily reduce your water consumption by at least 10%.

Q: The water company is flushing water mains through the fire hydrants. This seems wasteful. Are they allowed to do this?

A: Flushing of water mains is an activity that water systems must do in order to maintain water quality. While water companies can reduce water usage by postponing regular preventive maintenance flushing, some flushing of hydrants to maintain drinking water quality cannot be discontinued. Recently constructed water pipes or pipes that have gone through a lining process must be flushed before they can be used to safely convey drinking water. Like other businesses in the State, however, the contractors doing this work are subject to an overall ten percent reduction in water usage.

Q: Are fire departments allowed to continue washing fire engines and other emergency vehicles?

A: Fire engines and other emergency vehicles may be washed only to the extent necessary to maintain public health and safety or the safe and efficient operation of the vehicle. If a

vehicle has hazardous materials on its surface, it may be washed.

Q: How will the Governor decide when to lift the water use restrictions?

A: The Governor's Drought Committee is meeting regularly to evaluate drought conditions. Water suppliers will report to the committee weekly and the Committee will evaluate this data as well as statewide monitoring information on water levels in rivers, reservoirs, and ground water aquifers. When the Committee is confident that water supplies are sufficient to meet demands, they will recommend to the Governor that water use restrictions be modified or lifted.

Q: How do I apply for financial assistance to repair leaks in my home?

A: Governor Glendening set aside \$250,000 in grant funds to help seniors and those with lower incomes save water by buying water-conserving shower heads and repairing leaky faucets. The Maryland Department of Housing and Community Development is currently developing guidelines for distributing these funds. Call 1-800-492-7127 for additional information on the grant program.

Maryland – EPA Enter Into Third Environmental Performance Partnership Agreement

by Susan Scotto

On July 30, Secretary Jane Nishida of MDE, Department of Natural Resources (DNR) Secretary Sarah Taylor-Rogers and Mike McCabe, Regional Administrator for the US Environmental Protection Agency (EPA) Region III, entered into the third Environmental Performance Partnership agreement (EnPA.) The purpose of this agreement is to enable the three agencies or "partners" to evaluate how well program activities are improving the quality of Maryland's air, land, water and natural resources, and evaluate how well the partners are working together to achieve these improvements.

In the past few years, states and the federal government have entered into agreements that seek to better coordinate efforts to protect human health and the environment. In 1998, Maryland entered into its first agreement with EPA. The purpose of the FY 1998 Agreement was to provide for the development of a long-term, results-based management plan that will improve the effectiveness of Maryland's

environmental programs and strengthen the relationship between the Maryland Departments and EPA. That agreement documented several joint efforts, including:

- Developing a multi-year strategic planning/agreement process that set forth Maryland's environmental goals;
- Identifying the programs designed to achieve those goals;
- Adopting environmental indicators to measure progress;
- Describing existing workload responsibilities;
- Defining the State/EPA relationship; and
- Developing a comprehensive public participation process that helped guide future program direction.

The partners agreed that the first two agreements (FY 1998 and FY 1999) would document what the environmental conditions and protection activities were at that time, and then target the FY 2000 Agreement as the time frame in which significant changes could

begin to be implemented. The FY 1999 Agreement presented the partners' commitments to using interagency workgroups to address seven important issues:

1. Updating the environmental indicators used to measure and report performance
2. Managing data systems and identifying data gaps
3. Reducing the reporting burden on Maryland where possible
4. Improving training coordination
5. Better aligning the state and federal fiscal year time frames
6. Improving interagency coordination on federal facilities
7. Improving public outreach efforts.

The FY 2000 agreement provides a status report on the workgroups' activities including their recommendations to improve Maryland - EPA program outcomes. In many cases, these recommended changes serve as the basis for the changes envisioned in the FY 2000 agreement.

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Cooperation In Minerals Education

by Molly K. Gary, C.P.G.

In an exciting collaboration between the Maryland Department of the Environment (MDE), Maryland State Department of Education (MSDE) and the Maryland mining industry lesson plans are being developed for use in high schools to teach the importance of minerals in every day life. The lesson plans will help teachers across Maryland meet core learning goals for earth science and government.

Many people take for granted the importance that rocks and minerals excavated from the earth play in the comfort of daily life. As the saying goes, if it can't be grown, it has to be mined! Name one thing that doesn't somehow come from the earth. It can't be done, and for that reason a commitment was made at MDE to educate future generations on the many ways rocks and minerals contribute to modern life.

To fully explore these ideas there has to be a discussion of mining, the process by which those rocks and minerals are extracted for our use. Discussions with representatives from the mining industry in Maryland

indicated they had a similar desire to provide education to the public. Through a series of meetings with MSDE it was discovered that our goals and objectives could be met while at the same time helping MSDE achieve the very important task of implementing core learning goals in Maryland's high schools. Development of lesson plans best fit everyone's needs, a set to be used in government classes and a set to be used in earth science classes. It is interesting to note how well mining and minerals can teach economics, government processes, geography and earth science.

MSDE assembled a talented group of four teachers to take on the writing task. Staff from MDE took the teachers on tours of a coal mine, two-rock quarries and a sand and gravel mine. Familiarizing the teachers with the mining process and all of the uses of mined products was thought to be the best way to help them focus on the lesson plans. The teachers had a terrific time and asked lots of questions of the industry representatives. They then spent a week writing the draft of the lesson



MDE staff and task group members on a learning field trip to a local mine.

plans complete with hands on activities. MDE staff had spent time before the teachers arrived collecting useful materials for the teachers; all four went home loaded down with posters, brochures and other useful information.

The task group and staff at Maryland State Department of Education are now reviewing the draft lesson plans. The teachers will be back in early August to compile suggestions and finalize the lesson

plans. MDE staff is planning to add to the Mining Program web page with copies of the lesson plans, support materials and the Interstate Mining Compact Commission (IMCC) poster highlighting reclamation that MDE staff developed. To assure these lesson plans are fully utilized MDE is planning a one-day conference for June 2000 at which the lesson plans and supporting documents will be made available to teachers from across the state.

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Third Environmental Partnership Agreement

The primary benefits of this partnership agreement will be to continue improving the effectiveness of Maryland's environmental programs and strengthening the relationship between the departments and EPA. The agreement also should result in administrative benefits, including, for example, increased flexibility, eliminating administrative burdens, joint goal setting and program evaluation, and reducing federal oversight of programs judged by EPA to be successful. In future years, shared state-EPA activities involving assessment, planning, education, compliance assistance, enforcement, reporting, and/or grant writing all can be developed and evaluated in the context of mutually agreed upon environmental goals.

The partners are already receiving benefits from using agreed-upon goals and program performance evaluation data to improve outcomes. For example, in FY 1999, MDE reviewed resource allocations for the Superfund Program's site assessment activities and found them to be insufficient to meet the environmental goal. MDE advised EPA and they agreed to provide flexibility to allow shifting of

funds to conduct site surveys under the context of the goal. After securing funds from EPA, MDE was able to secure additional state financial resources. Another benefit has been the partners' increased understanding of how the different media programs work together to achieve the shared goals.

MDE and the federal government link their programs with environmental goals. Maryland, in developing its goals and management objectives, looked first at its environmental and public health conditions. Maryland's Governor Parris N. Glendening has created a Managing Maryland for Results system, a results-based approach to management that includes strategic planning, continuous quality improvement, and performance planning and evaluation, which includes self assessment. MDE is evaluating and reporting its environmental program performance through use of performance measures that include environmental indicators, outcomes, outputs, input, quality and efficiency measures. MDE has integrated the Performance Partnership Agreement, including the environmental indicators and workplan commit-

ments, into its Managing for Results strategic plans.

Involving the public throughout the Environmental Performance Partnership process has been a guiding principle for all of the partners. Over the past 2 years, formal public meetings and stakeholder briefings were held at over 30 locations across the state. The partners once again affirm the importance of public participation and are looking at new ways of engaging their stakeholders and the public. For example, in the winter of 1999, the partners developed an updated Environmental Indicators Report and presented it to their stakeholders and the public. Based on the feedback received, the partners revised the Indicators Report, which is part of the FY 2000 EnPA and will soon be available at MDE's Web Site.

The Partners will be implementing the 7 workgroups' recommendations as well as identifying additional opportunities to improve environmental outcomes and State - Federal relations. New FY 2000 initiatives include:

- Continuing to identify and pursue opportunities for further burden reductions associated with reporting State program informa-

tion to EPA;

- Developing a process that will be used to negotiate future commitments on a multi-media basis using a holistic approach to environmental protection;
- Agreeing to use where feasible outcome-based measures as the basis for reporting progress under the program grants;
- Working together to identify data sharing and streamlining opportunities;
- Refining data gaps in areas of insufficient or inferior data collection;
- Utilizing recommended standards for collecting, managing, and transferring data for reporting requirements;
- Working together to develop an MDE enterprise-wide data management system;
- Developing a cooperative strategy by which MDE and EPA seek environmental improvements at Federal Facilities; and
- Identifying opportunities for the Partners to collaborate on achieving improvements in erosion and sediment control compliance.

Ad Hoc Committee on Oil CELEBRATES 25 YEARS OF SERVICE

by Herb Meade & Ed Weber

Sixty thousand gallons of number 6 heavy oil spilled into the Northwest Branch of the Patapsco River near the Baltimore Harbor when an oil barge was overfilled in 1970. Immediately following this incident, Maryland began to take steps to initiate an oil spill control program. By 1973, petroleum industry and Maryland Department of Natural Resources representatives began meeting as the Ad Hoc Committee on Oil Spills and, for the past 25 years, Maryland has relied on these committee members for guidance on many, important oil related issues.

The committee, now known as the Ad Hoc Committee on Oil, was tasked with the development of the state's oil spill control and cleanup programs which are now part of the Maryland Department of the Environment. Over the years the committee has advised the state and commented on key issues such as:

- Equipment needs and contingency planning for spill response in the State and on the Chesapeake Bay.

- Establishing a subcommittee on federal legislation which effects the State's response to oil spills
- Development of underground storage tank regulations.
- Approval of underground tank testing equipment.
- Certification of tank installers and removers.
- Proper handling, including recycling, of oil-contaminated soil.
- Stage I and II vapor recovery issues.
- The annual Tawes award.
- Motor fuel tax issues.
- And, recently, Weight and Measure issues associated with the sale of petroleum products.

Some of the founding members of the Ad Hoc committee included Donald Schroeder, Maryland Petroleum Council; Sharp Paxson, Exxon; Captain Robert Wilcox and Colonel Paul La Pierri; Maryland Port Administration; and Herbert Sachs, Henry Silbermann, and Ed Weber, DNR Water Resources Administration.

"The committee has grown from a small core group to include



Left to right: Dr. Roy Littlefield, executive director, Maryland/D.C. Service Station and Automotive Repair Association, Al Thomas, chair, Maryland Ad Hoc Committee on Oil and Horacio Tablada, deputy director of MDE's Waste Management Administration, at the 1999 Tawes Award in May.

representatives from throughout the industry," said Maryland Petroleum Council's Don Schroeder. "It is a wonderful opportunity for industry, citizens and the state to meet and discuss regulations and legislation that affects oil in Maryland."

The committee meets approximately 8 times per year. Monthly meetings are open to the public and are attended by State, local and federal regulators, oil industry representatives, petroleum equipment manufacture's, environmental

consultants and private citizens.

A summer work group will examine upcoming issues for the committee to address and is anticipating requests from MDE as well as the State Comptroller's office and the Department of Agriculture. The expertise within the committee will be used for study and advice on any petroleum related issue. The next general meeting of the committee is scheduled for September 16 at 10am at the West Street Library in Annapolis and is open to the public.

The Politics of Global Warming

by Jeannie Haddaway

Speaking at a White House Conference in 1997, President Clinton said "I'm convinced that the science of climate change is real...the bottom line is that, although we do not know everything...It would be a grave mistake to bury our heads in the sand and pretend the issue will go away." Despite the President's statement, not everyone, including some scientists, is as convinced that the earth's climate is dramatically changing as a result of global warming.

Most researchers agree on the process of the greenhouse effect, in which water vapor and gases in the lower atmosphere trap heat from the sun and warm the earth. Yet, not all agree that this process is being dangerously propelled by human activities to the point that climatic changes are resulting. Those who do agree, predict the melting of polar ice caps, loss of coastlines and severe droughts as future consequences.

More recently, however, the debate

has become much more political. Those who believe in global warming would like to be safe rather than sorry and begin planning for future problems. But when and how to start preparations are open arenas of debate for both environmentalists and legislators alike. The politicization of this issue is due in part to the December 1997 U.N. Conference in Kyoto Japan that resulted in an international treaty known as the Kyoto Protocol. The conference, attended by 150 nations, established global standards for the reduction of greenhouse gases (GHG). These reduction standards call for GHG levels 6-8 percent lower than 1990 levels and are to be achieved between the years 2008-2010.

Although the treaty's main purpose is global GHG reduction, it also targets other global warming issues. Industrialized nations that participate in protectionist activities for natural sinks, elements within the environment

that naturally absorb carbon such as forests and microorganisms in soil and oceans, will receive emissions credits. In addition, the treaty addresses the need for increased research and technological development in areas of energy efficiency and agricultural practices. It also requires the creation of a subsidiary body to advise governments on future climate-change policies and the production of an inventory list for each nation's GHG sources and natural sinks.

Because the United States is one of the world's largest emitters of greenhouse gases, U.S. support for the treaty was crucial. U.S. Congressional support for the treaty was equally as important because the Senate is required to approve all treaties by a 2/3 vote. Despite some unresolved issues during the initial negotiations and the knowledge that the Senate would be unlikely to approve it, the Clinton Administration signed the agreement promising a 7

percent reduction. This figure disappointed a number of environmentalists who thought 7 percent was too low and worried U.S. legislators who called the treaty "dead on arrival" upon reaching the Senate for ratification.

Much of the debate on the Kyoto Protocol revolves around the fact that developing nations are exempt from mandatory reductions and are only responsible for voluntary actions. This includes China, the second largest emitter of carbon dioxide in the world, and India, the sixth largest. The other part of the debate concerns economic issues. Actual figures for control costs are hard to ascertain because of uncertainty in how the nation will implement its GHG programs. There are also worries over a rise in energy costs, job losses and shrinkage of tax revenues. On the other hand, emissions credits obtained

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MDE Loan Program is Good News for Local Governments, Environment and Public Health

by Virginia Kearney

Between July of 1998 and June of 1999, the Maryland Department of the Environment was busy preparing and processing documents to provide loan assistance to 19 loans totalling over \$54 million to municipalities across Maryland. These low interest loans were made available to nine water and 10 wastewater projects to help Maryland's local governments meet environmental standards, protect public health, and do their part for the protection and restoration of the state's water resources.

The water projects financed in FY'99 through the Maryland Drinking Water Revolving Loan Fund (DWSRF) will provide an estimated 216,200 citizens with safe and adequate drinking water. Several of the projects, for example, the new water system to serve the Towns of Boonsboro and Keedysville, will provide filtration needed to ensure that potentially dangerous microorganisms are removed before the water supply is distributed. The Town of Myersville was able to obtain financing

for the complete replacement of its aging and inadequate water treatment plant, which was under a complaint and consent order by MDE for non-compliance. The purpose of these improvements is to upgrade the Myersville Water Treatment Plant to meet the Surface Water Treatment Rule as set forth in federal regulations. In addition, the town will provide filtered drinking water to twelve homes currently on springs, which are under the influence of surface water. The fund also provided financing for the replacement of the seriously deteriorated and undersized water supply and distribution system for the community of Braddock Heights, outside of the City of Frederick. This system had come under a consent order from MDE following the discovery of problems with the water storage facilities. In the small community of Lodge Cliff, in Dorchester County, 103 homes were provided with a new distribution system to replace the old, undersized pipes that delivered inadequate supplies to this neighborhood.

Among the wastewater projects financed through the Water Quality

State Revolving Loan Fund, three include upgrades at wastewater treatment plants to voluntarily reach a better level of nitrogen removal in the treated effluent discharge. These projects are a major component of Maryland's efforts to meet the Chesapeake Bay 40 percent nutrient reduction goal through the installation of Biological Nutrient Removal (BNR) facilities at the plants. Combined, the upgraded plants at Hagerstown, Cumberland and Taneytown will reduce nitrogen discharges to the Bay by 721,452 lbs. per year. These loans provided the local share of a State cost share program, for which the State provides 50 percent of the BNR-related costs.

In addition, a loan of \$120,175 to the small community of Jennings in Garret County leveraged \$1,307,739 in Federal and state grant funds to abandon 84 old and failing on-site sewage disposal systems in this established community. In all, the projects financed through the fund will result in the provision of improved wastewater treatment and water quality to the citizens of Maryland.

MDE has worked to make the loan programs more competitive, user friendly and flexible. All of the projects funded were reviewed to determine their consistency with the Governor's Smart Growth Initiative, and for possible environmental and historical constraints. In addition, they were approved by the Board of Public Works before the loan closings occurred. For each loan, MDE staff, with the borrower, reviews the local water and/or sewer utility finances, to ensure that the loan will be affordable to the ratepayers. Where costs of the proposed project will exceed affordability, MDE strives to provide grants and/or works with other funding agencies to reduce the financial impact to the rate payers. The most common funding partners are the USDA Rural Utilities Service and the Community Development Block Grant Program administered by the Department of Housing and Community Development. Approximately half of the projects financed during FY 1999 also received MDE grants.

For more information about available loans and grants from MDE, call (410) 631-3574

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Global Warming

through preservation and creation of sinks will help to offset the total costs. In addition, the overall reduction of climate change would be priceless if predictions of crop-damaging droughts and devastating floods from global warming turn out to be true.

There are currently more than 14 pieces of legislation in Congress concerning the Protocol including Senate Bill 547, the Credit for Voluntary Reductions Act. Introduced in March 1999, the Act's purpose is to "encourage voluntary actions to mitigate potential environmental impacts of greenhouse gas emissions". This would be achieved by allowing U.S. based businesses to receive credits for any voluntary reduction performed before 2008 which could then be traded among businesses and applied to the 7 percent reduction requirements of

the Protocol after the due date.

Currently, to meet its proposed standards, the U.S. would have to reduce oil and coal consumption by 30 percent from projected levels for the next decade. To cut down consumption at this level programs that promote renewable energy sources and energy efficiency will be examined.

One such program is the Presidential initiative to establish one million solar energy systems in U.S. buildings by 2010. Governor Glendening has already pledged Maryland's participation. An EPA program called Energy Star has encouraged electronics companies to voluntarily increase energy efficiency in their products. The EPA estimates that in addition to reducing energy consumption, consumers could save up to 30 percent on electric bills by using Energy Star-approved products

throughout their homes.

The EPA also sponsors a program called the Climate Wise Partner Achievement Awards program. This program, which has over 460 participants, recognizes voluntary GHG-reducers in the corporate sector. With participants like General Motors, Anheuser-Busch, Gillette and Motorola among the participants, the program is estimated to reduce carbon dioxide emissions by 18 million metric tons by the year 2000 (a level comparable to the emissions of four million cars).

While there are other voluntary programs going on around the nation, many more are needed to significantly reduce GHG. Each of these steps will require partnerships by federal, state and local governments, as well as by individuals, to offer new solutions to the clean air problem.

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Free Pollution Prevention Business Assistance

opportunities. To learn more about this unique opportunity to gain an unbiased, confidential perspective on your facility, contact Laura Armstrong, in the Environmental Permits Service Center at 1-800-633-6101, extension 4119. Visits will be scheduled on a first-come, first-served basis.

Of course, the benefits of pollution prevention aren't limited to industry, everyone can apply these concepts to to save money and reduce impacts on their environment. Make a commitment during this year's National Pollution Prevention Week to explore changes in your lifestyle and product choices. Visit MDE's website at www.mde.state.md.us for ideas.

The North Branch

Reversing the Legacy of the Past, Realizing the Promise of Tomorrow

by Constance Lyons

Hidden deep within the dark green Appalachian Mountains and sparkling streams of western Maryland and West Virginia lies the source of the mighty Potomac, a small spring at the foot of the Fairfax Stone in West Virginia known as the North Branch. Flowing into Maryland, the North Branch marks the boundary between the two states, becoming a large river over 150 feet wide when it reaches Jennings Randolph Lake. Many miles downstream the North Branch joins with the South Branch to form the Potomac River which flows past our nation's capital.

Settled in the early 19th century, this rugged land with its swift mountain streams and rich natural resources of timber and coal became home to immigrants from the coal mining countries of the British Isles and Europe. Underground coal mines, tunneling into thousands of acres, were developed in the North Branch watershed as the demand for coke coal by the steel industry skyrocketed during two world wars. These mines spawned large and small mining towns along the banks of the river and its tributaries in Maryland and West Virginia. Prosperity came to America after World War II, but not to this land that had fueled the war machine. All that was left of the thriving Maryland coal towns of Vindex and Kempton were stone foundations, unsightly and dangerous gob piles of coal rejects, and iron-laden red stained streams. The closing of the mines at the towns of Shallmar and Kitzmiller left empty buildings and many residents without jobs.

Decimated by years of acid mine discharges from these pre-law abandoned coal mines, the North Branch, from Kempton to Bloomington, was considered dead and useless by the citizens of Maryland and West Virginia that lived along its banks. State and federal agencies often reported the poor condition of the river's aquatic resources during the 1960s, 70s and 80s.

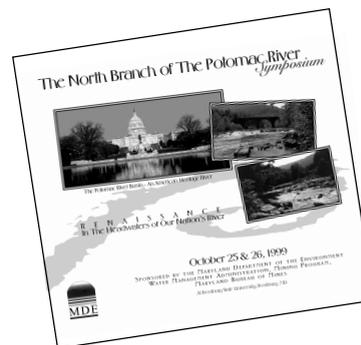
Restoring aquatic life to the Upper North Branch of the Potomac River (North Branch) watershed is an important goal of the Maryland Department of the Environment

(MDE). Studies of the water quality in the early 1980s, showed that new regulations and better mining practices had improved water quality in the North Branch, but slugs of acidic water from numerous abandoned pre-law sites remained barriers to the return of the river's living resources. The Maryland Department of the Environment is responsible for addressing pre-law mine problems through its Title IV Abandoned Mine Reclamation Program. In 1988, efforts began to restore the environmental quality of over 35 miles of the headwater reaches of the North Branch. In a comprehensive study, MDE with co-funding from the Office of Surface Mining and the West Virginia Department of Environmental Protection, identified 52 pre-law mine sites within the 221 square mile watershed area above the Jennings Randolph Lake and Dam. Thirteen of the sites contributed 90 percent of the acid loading to the river, lowering pH well below the level needed to support aquatic resources.

Looking for a new and cost effective solution to a decades old problem, MDE adapted Swedish acid rain technology to remediate the acid mine drainage problem. Since 1992, two types of machines, electric-powered automated and water-powered, have been installed at five sites along the North Branch to inject alkaline lime slurry directly into the stream (lime dosers). The success of the dosers in eliminating acid slugs and the responsible mining of coal by today's industry has maintained the river pH above 7.0. The stability of the pH levels in the river has led to two historical events--the annual stocking of trout by the Maryland Department of Natural Resources and the growth of recreational outfitters and resident fishing in the premier trout fishery.

Since 1994, native reproducing fish and benthic invertebrate populations have been observed in the North Branch and its tributaries. The success of this landmark project has been scientifically documented through two years of pre-doser data and five years of post-doser biological and chemical monitoring data collected and analyzed by the University of Maryland, Center for Environmen-

The North Branch of the Potomac River Symposium



The Maryland Department of the Environment is sponsoring a symposium to showcase the North Branch of the Potomac River October 25 to 27 at Frostburg State University in hopes that the symposium will bring together a broad base coalition of river stakeholders to work toward a better Potomac River.

Cooperation by state, federal, and local governments has resulted in significant improvements in the North Branch which is polluted by acid mine drainage. During the symposium, special emphasis will be placed on the Kempton mine site with discussion of its important relationship to restoring the North Branch of the Potomac River.

The first day of the seminar, which will be held in the Performing Arts Center of Frostburg State University, will showcase past, present, and future efforts in the remediation of the river. A field trip of significant sites in Allegany and Garrett Counties, relating to the North Branch remediation efforts, will highlight the second day. This will be limited to 125 participants. An invitational agency partnership breakfast will be held the third day to review aspects of remediation and the recommitment to the cooperative efforts of improving the North Branch of the Potomac River. The Key Note speaker is the Honorable Paul S. Sarbanes, U.S. Senator for Maryland. Senator Sarbanes is a dedicated and important ally of the Potomac River renaissance. Don't miss this opportunity to meet the diverse stakeholders of the river, to hear the interests of the grassroots, and to talk to representatives of government with an interest in the river. Call Mary Lynn Pegg at 301-687-4721 for more information.

tal Science, Appalachian Laboratory under contract with MDE.

The return of the river's living resources has spurred the search for more permanent solutions than the dosers to remediate acid discharges from large mine sites like the 10,000-acre Kempton Mine Complex in southern Garrett County. MDE has reclaimed several sites in the watershed: the 55-acre Vindex abandoned mine site in Three Forks Run, the 28-acre Town of Kempton gob piles removal and wetland restoration project on the North Branch, the construction of two passive treatment systems on Elklick Run, and smaller reclamation projects along the tributaries. MDE plans to reclaim the abandoned mine land sites adjacent to the towns of Shallmar and Kitzmiller using Title IV funds. The largest single source of acid loading to the river is the Kempton Mine Complex (Kempton). Over six million gallons per day of acid and metal laden water

discharge from Kempton and are treated by two dosers on Laurel Run before flowing into the North Branch below Dobbin, Maryland. Efforts to find a more permanent solution to problems like Kempton are a high priority for MDE, the Maryland Department of Natural Resources, Power Plant Research Program (PPRP), and the coal industry. Achieving a more permanent solution to problems the magnitude of Kempton requires the best minds, total commitment, significant sources of funding, and the support of the many stakeholders of the river.

MDE is committed to addressing the acid mine drainage issues at their sources, restoring the streams to support stocked and native aquatic resources, and in returning pre-law abandoned mine lands back to productive use wherever possible through our existing regulatory authority and in cooperation with other stakeholders in the river.