

ENVIRONMENTAL SYNOPSIS

The Chairman's Corner

Rep. Scott E. Hutchinson, Chairman



State government expended lots of energy talking about energy in the past couple of weeks. Gas prices of over \$2 a gallon, hot and humid temperatures and the advent of vacation traveling season can do that. The question is, did we learn anything new?

The Joint Conservation Committee did when it hosted another of its Environmental Issues Forums last month on energy issues.

Pennsylvania Department of Environmental Protection (DEP) Deputy Secretary for the Office of Energy and Technology Development Dan Desmond spoke about the Rendell administration's energy initiatives and about energy supplies and prices.

Desmond offered one nugget that I found interesting but somewhat disheartening. During the oil crisis of the 1970's, he said, the United States was 30 percent dependent on imports of foreign oil. Now, that level of dependency has risen to close to 60 percent. This despite years of calls for development of more efficient alternative sources of energy, efforts to increase domestic production and emphasis on energy conservation and savings.

Research cited in a recent story in the Christian Science Monitor indicates that energy efficiency has improved, but that if the cost of driving or running an air conditioner is cheap enough, the American people will simply use more energy. This is seen in the doubled size of homes in the past century, longer and more numerous commutes and more and more use of electronic gear. The conclusion of a number of researchers is

that Americans can and will conserve but only when it hits them sufficiently hard in the wallet.

Recent polls, however, find contradictory responses in that regard. A new USA Today/CNN/Gallup poll, for example, found that 59 percent of Americans said high prices at the gas pump would cause them to drive less this summer than they normally would. AAA, however, predicts that drivers will hit the road in record numbers this summer, despite high gas prices.

Deputy Secretary Desmond also imparted a second bit of disheartening news when he reported that most of the major oil fields around the world that supply oil for the U.S. are at or past their "prime". He related that there is usually a 40-year time lag between the peak of discovery and the peak of production. These fields are now on the down side of 40.

There was some good news, however, from the Electric Power Generation Association (EPGA) in testimony before the Pennsylvania Public Utility Commission (PUC) last week. The EPGA reported that, "All fuel supplies are expected to be adequate for summer 2004."

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NOTES FROM THE DIRECTOR

CRAIG D. BROOKS, DIRECTOR

When we think of farming in Pennsylvania, most of us think of land, crops, harvests and machinery. But there's another kind of farming that's almost as popular...aquaculture, and it involves the farming of fish.

Fish farming is the fastest growing sector of the agricultural business worldwide. Here in Pennsylvania, the advantages of fish farming for recreational fishing, tourism, the food industry and other related activities generate more than an estimated \$1.6 billion for the state's economy each year. Big business!

Sport fishing in Pennsylvania supports 14,000 jobs and generates \$53 million in annual revenue for the state's general fund. The travel and tourism related economic benefits are also spread across the commonwealth with nearly 2 million people, including about 500,000 children, fishing in Pennsylvania waters.

Let's not forget the commercial food and restaurant businesses. Pennsylvania ranks fifth nationally in trout production, with 2 million pounds produced at a value of \$5.4 million. The 70 aquaculture operations in Pennsylvania alone generate just over \$9 million in sales. Again...big business!

The Committee plans a series of public hearings and tours later this summer in regard to fish advisories and public consumption

However, this past February, the Pennsylvania Fish and Boat Commission (PFBC) issued yet another update of their "recreationally caught, sport fish consumption advisory to the Commonwealth". According to PFBC, all recreationally caught sport fish in Pennsylvania are subject to a one-meal-per-week consumption advisory. In addition, Pennsylvania has four other categories of consumption advisories: two meals per month; one meal per month; one meal every two months; or do not eat. One meal is considered to be one-half pound of fish for a 150-pound person.

"These fish consumption advisories apply only to recreationally caught sport fish. The advisories do not apply to the fish raised in commercial hatcheries or bought

in stores or restaurants," says the PFBC. "Consumption advisories are information tools, not regulatory or safety restrictions. They are intended to inform not alarm." This is where the problem lies.

While the intent is to inform the public, the perception and public reaction to fish advisories is very different. The Committee has fielded concerns from aquaculturists and members of the General Assembly regarding fish consumption guidelines and advisories and the impacts these have on the aquaculture industry in Pennsylvania.

In a brief examination of these consumption advisories, the Committee found that Pennsylvania raised fish are safe and rarely, if ever, exceed the FDA tolerance levels for toxins such as PCBs. Meanwhile, other food sources with higher levels of toxins are devoid of consumption advisories. Because of this, we plan to evaluate the aquaculture industry in Pennsylvania, review the federal guidelines for fish consumption and explore the disconnect between fish advisories and consumption safety levels of farm-raised fish with a series of public hearings and tours set for later this summer.



A scene from a Pennsylvania aquaculture business. See Committee Chronicles on page 7 for more scenes from the committee's visit to a southcentral Pennsylvania aquaculture operation.

RESEARCH BRIEFS

Each month, the committee's staff researches and prepares a number of "briefs" on several topics relevant to the Joint Conservation Committee's mission. Very often, these briefs include references to reports and further research on the topics so that readers may pursue issues on their own.

Renewable Energy Could Mean More Jobs

– Tony M. Guerrieri, Research Analyst

Electricity use in the Mid-Atlantic states of Maryland, Delaware, New Jersey, and Pennsylvania is projected to grow by almost 20 percent over the next decade. Much of the resulting energy needs can be satisfied by wind and solar energy, according to a report by the New Jersey Public Interest Research Group.

The report, "*Renewables Work: Job Growth from Renewable Energy Development in the Mid-Atlantic*", suggests that more jobs can be created by investing in and developing renewable energy than by staying with fossil fuels. According to the report – which compared job creation from clean energy technologies to those using fossil fuels – renewable energy, such as from wind and solar resources, would create jobs in manufacturing, operation and maintenance, as well as reduce environmental toxins.

The report cites estimates by the National Renewable Energy Laboratory (NREL), showing that the Mid-Atlantic region has enough natural wind resources to generate more than 52 million megawatts per year, over 17 percent of current demand. This does not include the potential of offshore wind power. Additionally, the NREL predicts that by 2030, 10 percent of the United States electricity demand will be met with solar energy.

Wind industry experts place the economically developable wind potential of the Mid-Atlantic states at around 10,000 megawatts. Developing this amount of energy by 2015 could satisfy just over half of new electricity demand, generate over nine percent of regional electricity needs, and power over three million homes. Through 2014, the benefits of this scenario for the Mid-Atlantic region include:

- 11,100 year-long jobs in wind turbine manufacturing and installation, with a total payroll of \$334 million;
- 740 permanent jobs in wind farm operation and maintenance, with a yearly payroll of \$30 million;
- 12,700 year-long jobs and 850 permanent jobs indirectly supported by wind turbine manufacturing, installation, and service;
- at least \$23 million in royalties paid to rural landowners who lease land for wind generation.

Installing a two-kilowatt photovoltaic system on just one out of ten homes in the Mid-Atlantic region would:

- create 5,710 year-long local jobs in installation, operation, and maintenance and 8,080 year-long manufacturing jobs, many of them in the Mid-Atlantic;
- reduce electricity rates paid by all electricity consumers, especially during summertime peaks in demand when solar panel output is highest;
- help to hedge against future blackouts like the one that struck the Northeast in August 2003.

In examining job creation scenarios, the report suggests that choosing wind power over a comparable amount of natural gas-fired generation would create more than twice as many jobs. Also, the report states, because the fuel is free, wind and solar expenditures support more local jobs than natural gas with its ongoing fuel expenses.

In addition, installation, operation, and maintenance jobs for wind farms are likely to be located in rural, mountainous counties where coal-mining jobs have been on the wane. Pennsylvania coal mining employment, for example, is now less than half what it was in 1990. Some of these jobs may be replaced by wind development.

The report includes several policy recommendations that states could adopt in order to promote the development of renewable energy and position themselves to supply growing worldwide demand for renewable energy technologies, thus creating significant regional economic growth.

The main policy recommendation was for strong Renewable Portfolio Standard laws in the Mid-Atlantic states. Other policy recommendations included in the report are improving net metering systems in Pennsylvania and surrounding states, and improving state purchasing programs. Under a net metering system, owners of small renewable systems sell their unused electricity onto the grid, to be used by other consumers. State purchasing programs tap the purchasing power of state agencies, by requiring state and local government agencies to obtain a certain percentage of their electricity from renewable energy sources.

A copy of the full report is available on the Internet at: <http://njpirg.org/reports/RenewablesWorkNJ.pdf>.

Highway Congestion Study

– Jason H. Gross, Research Analyst

The American Highway Users Alliance recently released a study examining the causes of highway congestion, listing the benefits of relieving congestion, and how to effectively relieve congestion. The study, entitled "*Unclogging America's Arteries: Effective Relief for Highway Bottlenecks*" examines the highway traffic congestion that is a major source of frustration for American travelers, sapping an estimated 3.5 billion hours in delays from our collective lives. Besides adding frustration and stress to our lives, congestion also has strong economic, environmental, and safety consequences. When vehicles are delayed in traffic they emit far more pollutants and consume far more fuel than when rolling freely. These facts gain added importance as gasoline pump prices spike well over \$2 per gallon.

The study updates one done in 1999 - the first national-level analysis examining highway bottlenecks, the major cause of traffic congestion. Bottlenecks are easily identified; they are locations of heavy traffic congestion during rush hour that slow travel time enough so that the same trip is 52 percent or more longer than if there had been no congestion. The report focuses on the easily recognizable bottlenecks because their removal can lead to immediate and positive improvements in traffic flow.

The seemingly simple causes of bottlenecks and traffic congestion are not so simple after all. Congestion is caused by excess demand for physical capacity. Just like a pipe carrying a water supply, there are only so many units that can be moved at a given time. Transportation engineers refer to this as the physical capacity of the highway system. Physical capacity is determined by how many lanes carry traffic, the curvature of the highway, side clearance, and interchange design (i.e., ramps and turning lanes). Bottlenecks are locations where the physical capacity is restricted, with flows from "upstream" locations being funneled into them. Think of a storm drainpipe that can only carry so much water. During floods of water - or cars - the excess backs up behind it, causing a clog. Congestion is also comprised of external factors such as crashes, vehicle breakdowns, work zones, bad weather and poorly timed traffic signals.

The study has several objectives with regard to its analysis of traffic bottlenecks:

- identify the worst traffic bottlenecks in each metropolitan area and make comparisons to previous studies of those areas;
- estimate the benefits to travelers and the environment by removing the bottlenecks based on actual improvement plans if they existed;
- estimate the benefits that would be derived from removing bottlenecks nationwide.

Many people believe that gridlock is an unavoidable part of commuting and modern life. And, many public

officials and motorists appear to be resigned to the belief that congestion can only get worse and never get better. While, past experience shows that no single strategy can address all the problems of metropolitan traffic congestion, the report states that increasing road capacity and the intelligent planning of road design are the best ways to reduce overall congestion.

Many effective solutions are arising that can reduce traffic congestion. The study states that metropolitan areas can realize significant benefits by focusing on improvements to traffic bottlenecks as a first step in an overall congestion relief plan. The study shows this by going into detail regarding specific areas of the country with traffic problems and analyzing the progress and changes that were made in those areas over a five-year period of time.

According to the study, a balanced comprehensive approach to traffic congestion that uses all the tools at our disposal can come together to reduce the gridlock found on our nation's highways. This unified approach can include improving public transportation as a component of reducing the strain on the roads. For their part, transportation agencies have come to realize that congestion is a complex problem with system-wide implications, and comprehensive mitigation strategies must be developed to deal with it.

Investigating smart road technologies such as synchronized traffic lights, computerized route control systems, and reversible commuter lanes with movable barriers are systems that when combined together can effectively reduce traffic congestion. Also, strategies must be targeted toward improving reliability of travel in order to give consistent and predictable travel times.

Despite the use of innovative systems in relieving congestion, the report states there is no substitute for building more road capacity at key points. Providing capacity by removing strategic bottlenecks can be part of a comprehensive congestion relief program that will reduce the amount of time commuters spend on the road, save lives, prevent thousands of injuries, and help safeguard the environment.

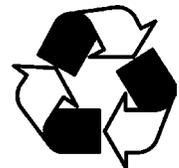
For more information and a copy of the full report please visit this Internet address: <http://www.highways.org/bottleneck/2004/complete.cfm>.

News to Use in the Environmental Synopsis...

share it with a friend

The *Environmental Synopsis* is issued monthly. The newsletter examines timely issues concerning environmental protection and natural resources.

If someone you know would like to receive a copy of the *Synopsis* each month, please contact the committee office at 717-787-7570.



Colorado River Tops 2004 List of Endangered Rivers

– Tony M. Guerrieri, Research Analyst

The Colorado River, one of the world's most utilized waterways, is also America's most endangered, according to a report by the national river conservation organization American Rivers. The report, "*America's Most Endangered Rivers of 2004*", included the Colorado as number one on its 2004 list of endangered rivers.

Meanwhile two western Pennsylvania rivers find themselves joined at number five on the list.

The report ranks ten rivers in the U.S. based on the size of the threats to the rivers, upcoming major decisions that will affect those threats, and the significance of the rivers. It also presents alternatives to proposals that would damage rivers, identifies those who will make the crucial decisions, and points out opportunities for the public to take action on behalf of each listed river.

The Colorado River wanders 1,500 miles from the peaks of the Rocky Mountains in Colorado, traversing through five states, before flowing into the Gulf of Baja in Mexico. The designation is meant to attract attention to the river that supplies drinking and irrigation water to as many as 25 million Americans, including residents of Los Angeles and Las Vegas.

Two western Pennsylvania rivers can be found at number five on the endangered rivers list

After being on the group's top-10 list four times previously, the Colorado River was singled out this year not because there might be water shortages but because there is too much contamination. The quality of water in the Colorado is threatened by three main contaminants: nitrates, the rocket fuel chemical perchlorate, and radioactive mill waste. The area below Hoover Dam has the nation's highest concentration of people using septic systems, which, as they become overloaded, leach nitrates into the river. A former military facility near Henderson, Nevada releases 400 pounds of ammonia perchlorate - an ingredient from rocket fuel - daily. Farther upstream, an estimated 110,000 gallons of radioactive groundwater seeps into the river each day from an unlined riverbank impoundment where some 12 million tons of radioactive waste is stored. The report suggests that local communities' efforts to upgrade their wastewater infrastructures have been hampered by lack of federal support.

The Big Sunflower River in Mississippi is number two on the group's list. It was the most endangered river last year because of an Army Corps of Engineers pumping and dredging project that American Rivers said would destroy wetlands and stir up toxins in the riverbed. Without firm opposition from the U.S. Environmental Protection Agency and the U.S. Fish and Wildlife Service, the report indicates that the Corps of Engineers will dredge more than 100 miles of the riverbed, destroying even more wetlands.

The river report highlights acute threats and approaching crucial crossroads, not chronic conditions

The report also said dams along the Snake River (#3) in Wyoming, Idaho, and Washington have caused steep declines in the once abundant wild salmon population, and said inadequately treated sewage is polluting the Tennessee River (#4) in Tennessee, Alabama, Mississippi, and Kentucky.

Two rivers flowing through Pennsylvania share the number five slot. The Monongahela and Allegheny rivers were ranked the fifth most endangered, largely due to runoff from abandoned mines. According to the report, at least 2,100 miles of western Pennsylvania streams are contaminated by mine runoff. American Rivers argues that unless the Abandoned Mine Land Trust Fund is reauthorized, ongoing efforts to fix this problem will cease and the amount of pollution reaching the Allegheny and Monongahela rivers will increase, threatening 42 public drinking water intakes, thousands of private wells, and fish and wildlife.

The next four most endangered rivers on the group's list are the Spokane River (#6) of Idaho and Washington, the Housatonic River (#7) of Massachusetts and Connecticut, the Peace River (#8) of Florida, and Big Darby Creek (#9) in Ohio.

The final river on the most endangered top ten list is America's longest, the Mississippi River, which flows through or borders ten states. The group said the mighty Mississippi faces, "ecological collapse," with negative economic impacts to tourism and recreation industries worth \$21 billion per year.

Each year since 1986, American Rivers and its partners in the river movement have released the America's Most Endangered Rivers report to highlight rivers nationwide reaching crucial crossroads. The report highlights acute threats rather than chronic conditions; it is not a list of the nation's worst or most polluted rivers.

Copies of the American Rivers 2004 report are available on the Internet at http://www.amrivers.org/doc_repository/MER2004/2004Report.pdf.

What Water Quality Standards?

– Jason H. Gross, Research Analyst

In a recent report *"Flying Blind"*, the Environmental Integrity Project (EIP) analyzed water quality monitoring and assessment programs and the standards used to report data to the U.S. Environmental Protection Agency (EPA). The report focuses its attention on the standards that each state and EPA use to determine water quality and then compares them to determine if there is any true standard by which water quality is measured.

EIP found that states are far from achieving comprehensive, reliable, and standardized water monitoring and assessment standards. Further, the report found that national and regional pictures of water quality are overstated in their accuracy and are often misleading. According to the report, 30 years after the passage of the Clean Water Act, we still know little about what is in our water. The public expects the states and EPA to present a clear picture and an honest assessment of water quality because when it comes to matters affecting human health, water quality is of the utmost importance. However, the report says these standards are far from being reached.

When investigating the yardsticks used to measure water quality, the EIP found that EPA provides Congress with a view of water quality based on whether desired uses for a given water body have attained compliance with the Clean Water Act. Language that supports this approach is the fishable and swimmable requirements in the Clean Water Act. However, states do not agree on basic definitions or report a consistent set of designated uses. These disparate approaches and varying water quality standards create challenges in drawing region-wide comparisons and in assessing trends. In short, the report takes the position that it is tough to compare reporting standards if there is no water quality standard.

The report recommends that EPA require states to adopt consistent water quality standards

The report recommends that EPA should require states to adopt consistent water quality standards, particularly where states have failed to adopt their own standards or where states have made little progress measuring water quality. EIP also recommends that EPA should require states to establish consistent and objective water quality standards for wetlands. Deadlines set by EPA for the states to develop wetland standards have come and gone without full assessments. According to the report, the time has come for EPA to

hold states accountable and to require them to adopt objective numeric wetland standards.

The report found that basic Clean Water Act reporting requirements on the number and percentage of assessed rivers, streams and waterways are not being reached. While EPA admits that most of the nation's waters have not been assessed, EPA presents what appear to be state and regional assessments that lead many in Congress to believe that our waters are being adequately monitored and that most of our waters are clean. The facts, according to the report, are that states have only monitored a fraction of lakes and streams and waterway assessment is anything but clear.

Consistent, objective and numeric state wetland standards are another recommendation

The report recommends that EPA explain inaccuracies when presenting its national assessment to Congress. EPA's role in presenting a national assessment should go beyond simply collecting various state reports that do not fully agree on a method of data collection, reporting, or analysis.

EIP also recommends that EPA appoint a scientific panel to grade state reports so that the scientific content of quality and reliability of the data is standardized.

The report investigated to what degree waters are fishable (a major requirement under the Clean Water Act).

The report found that fish consumption provides the greatest potential for human exposure to waterway toxic substances. Some states fail to report to the EPA that their waters are unfishable even though public health officials in those states have issued blanket fish consumption warnings.

Since each state determines to whom it will release consumption warnings, the warnings are often only issued to anglers and consumers within the borders of the state of residence despite the fact that fish swim beyond state borders.

The report recommends that EPA set standards that measure progress realistically.

For more information and a copy of the full report visit the Internet address <http://www.environmentalintegrity.org/pub164.cfm>.

ON THE HORIZON . . .

A LOOK AT UPCOMING EVENTS



There are no new events at this time. Environmental Issues forums will resume with the fall legislative session. Visit our website (<http://jcc.legis.state.pa.us>) or check future editions of the *Environmental Synopsis* for upcoming events.

COMMITTEE CHRONICLES . . .

REVIEW OF SOME MEMORABLE COMMITTEE EVENTS

The committee staff recently visited an aquaculture operation to get a better idea of how “fish farming” works. Brent W. Blauch, owner/operator, provided the tour of Susquehanna Aquacultures, Inc. in York Haven. Blauch raises live hybrid striped bass and provided an interesting explanation of how the operation works and the problems it and other aquaculture operations face.

Pictured here are some of the “runs” where fish are raised (right) and part of the transfer operation of young fish to bigger quarters.

For more on aquaculture see Craig Brooks’ Notes From the Director on page 2.



The EPGA cited figures from the PJM Interconnection, administrator of the largest electricity market in the world, which indicate that 11,700 MW of capacity have been added to the PJM market in the last five years, and another 4,200 MW are under construction. As a result, PJM enjoys a surplus of generating capacity compared to expected summer 2004 peak demand. PJM serves more than 25 million customers in Pennsylvania and neighboring Mid-Atlantic states.

See upcoming editions of the *Environmental Synopsis* for responses to the Joint Committee's environmental and energy questions in *The Public Mind* statewide survey

Meanwhile, the Joint Committee was reviewing the results of environmental and energy questions it asked as part of the 2004 *The Public Mind* statewide telephone survey conducted by Mansfield University. The Joint Committee continues to try to gauge the level of support for non-polluting alternative forms of energy, focusing for the second year on wind power, which has shown the most growth of such alternatives.



The survey results show that there is continued support, but that not much has changed in a year. The percentage of Pennsylvanians willing to pay more for wind power increased slightly (59.8 percent in 2004, 57.4 percent in 2003), but that increase is within the survey's margin of error (2.4 percent).

In 2004, 73.4 percent of those willing to pay more would pay between \$5 and \$9 a month more, 17 percent would pay \$10 a month more and 9.6

percent would pay greater than \$10 a month more. In 2003, 65 percent were willing to pay \$5 a month more, 25.3 percent \$10 a month more and a nearly identical 9.7 percent more than \$10 a month.

The survey did show that Pennsylvanians who considered themselves to be environmentalists are more likely to "put their money where their mouth is", as the old saying goes. Of those who do consider themselves to be environmentalists, 67.5% are willing to spend more for electricity if it comes from wind, while only 49.1% of those who do not consider themselves to be environmentalists are willing to do so.

Look for continued energy discussions from state and federal government. For example, another House committee held a hearing last month on legislation to establish a statewide energy advisory board, a Senate committee took testimony on Renewable Energy Portfolio Standards, DEP offered some tips to conserve fuel and cut gasoline costs, the Rendell administration announced legislation to provide sales tax holidays on energy efficient appliances, Ford said it would have a hybrid fuel SUV for sale this summer and the Bush administration unveiled some ideas to increase fuel supplies and fight soaring prices.

And, look for more details from the 2004 *The Public Mind* survey in upcoming months' editions of the *Environmental Synopsis*.



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