

ENVIRONMENTAL SYNOPSIS

The Chairman's Corner

Rep. Scott E. Hutchinson, Chairman



The questions in blue below are just some of those raised by the Joint Conservation Committee in this year's "Public Mind Survey", an annual statewide telephone survey of 2,200 Pennsylvanians conducted by Mansfield University. The questions bear some historical relevance since the committee and the university asked many of the same questions in 2000 and again in 2001.

In This Issue...

- The Chairman's Corner p. 1
- Notes From the Director p. 2
- Research Briefs..... p. 3-6
 - ✓ More EPA Help Needed on Water Quality
 - ✓ Voluntary Reporting and Global Climate Change
 - ✓ Some Like it HOT
 - ✓ PA Forest Resource Study
- On the Horizon..... p. 7
- Committee Chronicles..... p. 7

What kind of environmentalists can be found in Pennsylvania? How many are there? What makes an environmentalist?

Nearly 64 % of Pennsylvanians say they are environmentalists, a percentage up from 2000 (60 %) and 2001 (59 %). While declaring oneself to be an environmentalist is a subjective rating, it is one that can be "defined" by actions. Self-described environmentalists would be expected to engage in any or all of several actions that would have an environmental impact. The measurement of a number of these actions has been dubbed the "Environmental Action Index" (EAI) and the results are shown on page 8.

The demographic profile of those who describe themselves as environmentalists is as follows:

- **Older** - 74.7 % of those age 65+, trending downward to 49 % of those age 18-34;
- **Female** - 67.5 % of women compared to 59.7 % for men;
- **Better educated** - 66.2 % of college grads trending downward to 59.1 % of non-high school graduates.

While the statistics bear out the self-assessments above in most cases, it is not universally so. While older Pennsylvanians lead the way in calling themselves environmentalists, their age group is either at the bottom or next to the bottom in four of six action categories that help to define environmentalists.

(continued on page 8)

NOTES FROM THE DIRECTOR



CRAIG D. BROOKS, DIRECTOR

"Forest sustainability, the idea that healthy, well managed forests can support multiple land use goals while remaining healthy in perpetuity is a cornerstone of Pennsylvania's forest resource management. In practice, this means future generations will be able to enjoy the forests and the goods and services they provide, just as we do now. In managing these forests, it's recognized that they are dynamic systems that continually change and evolve, and that we need to rely on expertise, technology and the science of forestry to accomplish our resource goals..." (Report of the Forestry Task Force, 2003)

Pursuant to House Resolution 263 of 1994, the Joint Committee's first Legislative Forestry Task Force (FTF) was created nearly a decade ago to study the issues concerning the regeneration and management of Pennsylvania's forests. The FTF tackled the problems of forest renewal and deer management, biological diversity and old-growth forests, management of privately owned forestlands, and timber management on more than 2 million acres of state-owned forestlands. The FTF had broad support and issued a report to the General Assembly with specific recommendations for each issue.

The 2003 Forestry Task Force report is available on our website at <http://jcc.legis.state.pa.us>

Because of the early success of the FTF, it has been reestablished three times through resolution and has an impressive track record of looking at a wide range of forest resource issues. Among these are the Sustainable Forestry Initiative, the certification of Pennsylvania's state forests, educational programs for private forest landowners and best management practices on forestlands. The FTF was responsible for legislation that established specific requirements for road bonding activities related to timbering in Pennsylvania, and legislation that increased much needed funding for long-term forestry research.

The most recent efforts of the FTF have just been released in a report to the General Assembly, and once again, the FTF had the opportunity to work with federal, state and local government forestry professionals, private foresters, the wood products and timber industry, environmental organizations, academic institutions and individual forest landowners. Pursuant to Senate Resolution 81 of 2001, the FTF offered recommendations concerning the federal Forest Legacy Program, forest management in Pennsylvania State Parks, the forest industry's use of best management practices in riparian areas, and tax policies and valuations of forestlands in the commonwealth. The latest report can be viewed on the committee's website at <http://jcc.legis.state.pa.us> or by contacting the committee office. Past FTF reports are also available through the committee office.

We look forward to the reestablishment of the FTF this session and anticipate reviewing government and non-government forestland acquisition, recreational opportunities on state parks and forests, forest bioreserves and federal and state forest management planning processes. Dates and times for future FTF meetings will be listed in the "On the Horizon" section of future newsletters.

A Special Note...A New Look

On behalf of the Joint Conservation Committee chairman Rep. Scott E. Hutchinson, committee members and staff, I hope you like the new look of the *Environmental Synopsis*. New printing technology has enabled us to add more color to the publication, and required a change in paper to show it off more clearly. We took advantage of these changes to include some design changes as well...the first in approximately 3-4 years. The color photos and highlight color are great new additions and are intended to be more attractive for and easier on the eye without losing any of the serious content to which readers have become accustomed. We appreciate any input and feedback you may wish to offer on the update. Please e-mail me or call or write the office (see page 8) with comments.

Craig D. Brooks, Executive Director
Joint Conservation Committee
cbrooks@jcc.legis.state.pa.us

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.

EPA Guidance Could Help States Improve Water Quality Management

— Tony M. Guerrieri, Research Analyst

Water quality standards are regulatory tools used by states and the U.S. Environmental Protection Agency (EPA) to protect the nation's waters. Standards are composed of designated uses and criteria. Designated uses identify the existing or potential uses of the water. This might include supporting activities like recreation, fishing, and irrigation. Water quality criteria identify specific benchmarks that describe the quality of water needed to be able to use the water for those purposes. States are required to review their water's designated uses and associated criteria periodically and propose changes to the EPA as appropriate.

According to a report by the U.S. General Accounting Office (GAO), the EPA should provide states with additional guidance for changing the designated use of water bodies and take steps to help state decision makers establish appropriate water quality criteria. The GAO report suggests that without good water quality standards, current programs might focus on the wrong waters or the wrong pollutant sources and potentially waste billions of dollars.

While relatively few changes have been made to water quality standards, nearly all states reported they have water bodies that currently need changes to their designed uses. In addition, the GAO found improvements to state water quality standards could significantly affect state total maximum daily load (TMDL) programs. According to the report, 30 states reported if improvements were made to the process of modifying standards, different waters would be identified for TMDL development.

Under the EPA's TMDL program, waters not meeting standards are listed as "impaired". These waters are targeted for the development of TMDL programs, which are used as the basis for planning how to reduce pollutants so the water bodies can meet applicable standards.

Some states reported being unable to make designated use changes because of such barriers as a lack of resources and monitoring data. Given the barriers to making improvements, some states are opting to develop "bad" TMDLs rather than making needed standard changes, the GAO said.

Many states said they need more help from the EPA to make accurate decisions on what some believe will be a much larger number of designated use changes in the coming years. For example, states cited a need for additional EPA guidance that clarifies both the circumstances under which a use change is acceptable and the type of evidence needed to support those changes.

In some instances, another key reason needed use changes have not been made is states' uncertainty over the circumstances in which use changes are acceptable to the EPA. The GAO report recommends that the EPA clarify its guidance to states and regions on when a use change is appropriate, and what constitutes an approved designated use change. The EPA also should develop a clearinghouse that provides states and regions with examples of approved changes.

Another problem that may be contributing to the states' uncertainty is the absence of EPA approved criteria. According to the report, the EPA has developed and published criteria for a wide range of pollutants. However, the agency has not developed criteria for sedimentation or finalized criteria for nutrients, the pollutants that, according to EPA data, account for a relatively large share of the nation's impaired waters.

While most states cited resource constraints as a barrier that affects their ability to modify criteria, more than half also cited the EPA's approval process. For example, they said there is insufficient assistance from their respective EPA regional offices in helping them understand what data is necessary to justify criteria modification.

The GAO recommended that the EPA:

- set a time frame for developing and publishing sedimentation criteria;
- develop alternative, scientifically defensible monitoring strategies that states can use to determine if

water bodies are achieving their water quality criteria; and

— develop guidance and a training strategy that will help EPA regional standard staff determine the scientific defensibility of proposed criteria modifications.

The report is based on information obtained through a web-based survey of water quality officials from all 50 states and the District of Columbia as well as interviews with representatives of various stakeholder groups.

The GAO report, *“Water Quality: Improved EPA Guidance and Support to Help States Develop Water Quality Standards That Better Target Cleanup Efforts”* (GAO-03-308), is available at <http://www.gao.gov/new.items/d03308.pdf> on the World Wide Web. To order printed copies, call the GAO at (202)-512-6000.

Voluntary Green House Gas Reduction Program

— Jason H. Gross, Research Analyst

The Energy Information Administration has recently compiled the 2001 study *“Voluntary Reporting of Greenhouse Gases”*. The study is used as a registry by federal government programs to determine the extent of greenhouse gas emissions. The Energy Information Administration is an independent statistical agency housed within the Department of Energy. The study was published in February 2003.

Currently greenhouse gas emission reporting is only done through the Voluntary Program. The report records the results of actions to reduce, avoid, or sequester greenhouse gases so that the gases do not reach the ozone layer where they do the most damage. According to the report, because of the growing concern over greenhouse gases, interest has increased in the voluntary reporting system. The Voluntary Reporting Program database provides examples of the types of actions that organizations take in reducing greenhouse gas emissions. The program has provided a training ground for determining the best measures for measuring and reporting greenhouse gas emissions.

The government has created a credit program to create incentives for voluntary greenhouse gas emission reduction. The credit program offers regulatory credit to companies who voluntarily decide to provide early reporting data. The credit comes in the form of a “carbon allowance” against a future cap on greenhouse gas emissions. Organizations that take steps to reduce their emissions now, voluntarily, will receive the carbon allowance credit toward future emissions. The exact method of implementing a credit program is currently

being debated among policymakers, interest groups, and corporations.

The main contributor to emissions is poor energy producer efficiency. Unfortunately, producers are not able to convert all of the thermal energy produced by power plants into electrical energy. If efficiency were to improve, emissions produced per kilowatt would effectively decrease. Most U.S. power plants operate at about 33 percent efficiency. If efficiency can be increased then overall output can be decreased. If output is decreased then gas emissions are in turn reduced. The report suggests using technologies such as methane recovery, fuel cells, and renewables (such as wind power) to combat the emissions created by poor efficiency.

According to the report several policy initiatives were introduced in the United States in order to address the issue of global climate change. To this end the Global Climate Change Initiative includes an enhancement of the voluntary reporting program. Although the new changes do not affect the information available in the current report, the new policies do have significant implications for the future of the Voluntary Reporting Program. The primary goal of the Global Climate Change Initiative is to slow the growth rate of greenhouse gas emissions while sustaining positive economic growth. This initiative uses market mechanisms and energy technology development such as fuel cells, methane recovery, and carbon sequestration in order to forward the goal of reducing emissions.

The initiative relies on voluntary measures of industry to achieve emission reduction goals. As a result, enhancement of the Voluntary Reporting Program is an important part of the initiative. The Voluntary Program will be combined with several other programs such as expanded scientific research funding, advanced technology development, tax incentives, and challenges for businesses to undertake voluntary reductions. The Initiative will also include future progress checks, which will be measured by the Voluntary Program.

The full report is available via the web at <http://www.eia.doe.gov/oiaf/1605/vrrpt/>. Included in the report are voluntary reporting forms that can be submitted for participation in the program.



Report Suggests Changing Carpool Lanes Into Toll Lanes

— Tony M. Guerrieri, Research Analyst

Would you pay 30 cents a mile to drive in a freeway toll lane at high speeds during rush-hour gridlock? A report by the Reason Foundation (foundation) recommends giving commuters the option of a congestion-free trip by transforming existing High-Occupancy Vehicle (HOV) lanes into a network of High-Occupancy Toll (HOT) lanes that would guarantee motorists at least one lane moving at the maximum speed limit, at all times, on most urban freeways. The proposal banks on the willingness of motorists to pay the extra cost to escape from congestion.

The foundation's report, *"HOT Networks: A New Plan for Congestion Relief and Better Transit"*, provides practical suggestions for turning underutilized HOV lanes into HOT lanes. The report labels HOV lanes "a valiant but largely unsuccessful effort to reduce traffic congestion," noting that the percentage of American commuters who carpool dropped between 1990 and 2000.

A critical element of the report's HOT lane proposal is public transit. Buses and high capacity vans would use the lane free of charge, while individual motorists and carpools would pay a variable toll.

The tolls would not be paid at tollbooths but electronically, using prepaid debit accounts and windshield-mounted transponders, thus doing away with tollbooths and cash transactions. The electronic toll-collection system would collect tolls at freeway speeds. This allows motorists to avoid tollgates and waiting lines, thereby eliminating one of the causes of congestion.

The number of vehicles in the managed lanes would be controlled through variable pricing, ensuring the lanes are free-flowing at all times and providing local transportation agencies with a significant source of income for construction and maintenance projects. The fees, displayed to drivers on electronic billboards, would rise and fall with congestion levels – from a minimum of ten cents a mile to perhaps as high as 35 cents or 40 cents a mile – to keep the lanes free-flowing.

In Los Angeles, the report recommends tolls of 20 cents per mile in off periods and 40 cents during rush hour. Converting the HOV lanes in Los Angeles to HOT lanes could generate \$2.8 million a day - more than \$900 million per year – which could help pay for \$10.7 billion needed to complete a system of HOT lanes in the region. In Washington D.C. and San Francisco, toll revenues would surpass \$400 million per year.

Houston, for example, would end up with a 500-lane-mile HOT system, way up from the 133 HOV freeway miles it now has, at a cost of \$3.6 billion. Seattle's system would be 505 lane miles, up from 205 HOV lane miles now, for \$4.3 billion. The report estimates that up to \$2.9 billion could be raised annually from the HOT lanes in the nation's most congested regions.

The report concludes that the projected toll revenues would enable tax-exempt toll revenue bonds to cover two thirds of the \$43 billion in capital required to add new lanes and interchanges that would be necessary to create a seamless network of HOT lanes in most cities. The rest of the funding would come from traditional federal and state transportation programs such as gas-tax-funded trust funds – and they also would have to approve tolls, now prohibited, for HOV lanes on interstates.

The report offers maps, detailed descriptions of construction costs, and toll revenue projections for HOT networks in eight of the country's most congested cities, including: Washington D.C., Atlanta, Dallas, Houston, Los Angeles (and Orange County), Miami, Seattle, and San Francisco.

Two such systems have been operating successfully for several years in California's Orange and San Diego counties. A recent evaluation of Orange County's HOT lanes found that although the lanes represent only 33 percent of the freeway's capacity, they carry over 40 percent of the traffic during the busiest peak hours – an indication that HOT lanes are more effective than HOV lanes. Furthermore, vehicles in the HOT lanes move at 65 miles per hour, while the other lanes average 10 to 20 miles per hour at rush hour.

The Reason Foundation is a nonprofit think tank based in Los Angeles, California. A copy of the Reason Foundation's report is available online at www.rppi.org/ps305.pdf.



Pennsylvania Forest Inventory

— Jason H. Gross, Research Analyst

A report by the USDA Forest Service's Forest Inventory and Analysis (FIA) program is a summary of new data and systems for inventorying and monitoring Pennsylvania's forest resources. This system was initiated in 2002 and this report entitled "Annual Inventory Report for Pennsylvania's Forests: Results from the First Two Years" summarizes the first two years of the program.

The FIA program has been conducting forest inventories since the 1950's. Reports on the status and changes in forest conditions occur periodically in an effort to give an inventory of Pennsylvania's forest resources. In the past, inventories occurred in 10 to 15 year intervals. Because of the natural value of Pennsylvania's forests, a timelier interval of reporting is being scheduled. The new interval has been shortened to 5 years.

The data collection for the report occurs in three phases. In phase one traditional aerial photography and satellite based remote sensing will occur which will measure the overall size, shape, and density of forestation. Phase two consists of field measures that occur at every three miles across the landscape. Sample locations are laid out on a hexagonal grid. Every year 20 percent of the grid locations are measured, with the full sampling being finished after 5 years. Phase three is conducted on a limited number of phase two locations where more extensive forest health measurements are conducted over a ten-week period in the summertime.

In order to better address the issue of forest regeneration in the state, the PA Bureau of Forestry is funding a study to quantify the composition, abundance, and quality of tree seedlings and other understory vegetation on phase two plots. The Pennsylvania Regeneration Study is part of a larger initiative being undertaken by a host of forest services across the northeast. This data supplements the data collected by FIA and contributes to the overall information in the report.

According to the report, a complete mix of land uses characterizes Pennsylvania's landscape with forestland relegated to the residual land use or the use for which there is no higher economic demand. Different land use, geography, climate, and pest/pathogens have joined together to create a diverse mix of forest conditions. This results in a diverse set of ways needed to deal with forest health issues.

According to the report, the distribution of live trees by various measures is a valuable indicator of forest changes that are occurring in Pennsylvania. Overall

total tree inventory volume increased, as did the volume of live trees and growing stock. The total volume of live trees increased 23 percent. This compares to a ten percent increase in the volume of growing stock trees. The largest volume of live trees is comprised of red maple, black cherry, northern red oak, sugar maple, chestnut oak, white oak, white ash, and yellow-poplar. Red maple makes up 20 percent of the total volume of live trees and accounts for 60 percent of the increase in volume. Thus we can see that the rate of increase is directly dependent on the composition and nature of the specific tree species that comprise the forest.

The report states further that sawtimber volume is also positive. The total volume of sawtimber increased by 18 percent. Increases were noted for both softwoods and hardwoods. Although increases are evident it is at a slower rate than in the previous inventory periods except for sugar maple and hemlock, Pennsylvania's top tree species used in sawtimber volume.

Even though volume has increased it has not done so at the rates of past inventories. According to the report, by every measure the prospective future regeneration picture in Pennsylvania is bleak based on the findings for the first panel of regeneration measurements. If commercial species were deemed acceptable for future management, one third to one half of the forest land would fail to regenerate without the additional stocking that comes from other sources following a disturbance such as logging or fire. According to the report, poor regeneration is common across Pennsylvania and is not specific to a region or forest type.

A copy of the full report is available via the World Wide Web at the following address: http://www.fs.fed.us/ne/newtown_square/publications/resource_bulletins/pdfs/rbne156.pdf.

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



Printed on
Recycled Paper

ON THE HORIZON . . .

A LOOK AT UPCOMING EVENTS

◆ **Tuesday, June 24, 8:30 a.m., Hearing Room 1, North Office Building, Capitol Complex, Harrisburg, PA - Environmental Issues Forum.** The special guest speaker will be Joseph Pierre, Manager of Tactical Marketing for the Siemens Westinghouse Power Corporation of Pittsburgh. Pierre will provide a review and update of Siemens-Westinghouse's efforts to develop stationary solid oxide fuel cell technology.

Environmental Issues Forums are open to the public.
Please call the committee office at (717) 787-7570 if you would like to attend.

COMMITTEE CHRONICLES . . .

REVIEW OF SOME MEMORABLE
COMMITTEE EVENTS

On April 10, the committee held a meeting regarding scrap tire clean up and market development. Michael Blumenthal, executive director of the Scrap Tire Management Council and senior technical director of the Rubber Manufacturers Association (pictured at right) reviewed the association's latest report, *U.S. Scrap Tire Markets 2001*.

A number of entrepreneurs in the scrap tire processing and recycling industry (several of whom are pictured below) also spoke on the need for more market development in the industry.

Look for more about the market report and the meeting in future newsletters.



Conversely, the low percentage (49 %) of those ages 18-34 who consider themselves to be environmentalists **is** borne out by the numbers. This age group ranks dead last in three of six categories and next to last in a fourth. According to the numbers, the prime years for environmental action are 35-64, with that age bracket ranking at the top in every action category.

Environmental Action Index

Of those who **do** consider themselves environmentalists:

- 91.3% recycle aluminum cans
- 60.1% have refused to buy something because it is harmful to the environment
- 56.8% have contributed money to an environmental group
- 58.3% are more likely to vote for an environmental candidate
- 65.9% are willing to spend more for electricity if it comes from wind
- 34.2% have volunteered for an environmental improvement project
- 14.1% are or were a member of an environmental group

Of those who **do not** consider themselves environmentalists:

- 71.3% recycle aluminum cans
- 29.9% have refused to buy something because it is harmful to the environment
- 22.3% have contributed money to an environmental group
- 20.3% are more likely to vote for an environmental candidate
- 43.7% are willing to spend more for electricity if it comes from wind
- 15.1% have volunteered for an environmental improvement project
- 9.3% are or were a member of an environmental group

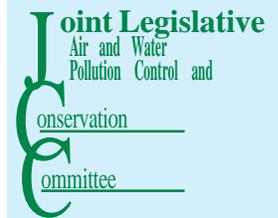
The committee asked one question to determine how far people were willing to go to get electricity from a growing form of alternative energy – wind power. The Commonwealth and a number of PA universities have committed themselves to purchasing larger portions of their power generated by wind, and wind farms are sprouting up in several different locales.

Would you pay more for electricity generated by the wind?

In certain cases, consumers can designate that a portion of the power they purchase from their supplier comes from “green” sources - that source very often being wind power. There is usually an increased cost attendant with that choice, often beginning in units of \$5/ month depending on how much wind power you want to “use”. Accordingly, the JCC tweaked a past question which asked if one would be willing to pay \$3 more per month for power from a non-polluting source like wind or solar energy. This year, the committee used the \$5 per month figure and focused only on wind. The results demonstrated some shifting.

Overall, a solid majority – 57.4 % – said they would be willing to pay more for electricity generated by wind power. Of that number, 65.0 % were willing to ante up \$5 a month more. Another 25.3 % said they would pay \$10 a month more and 9.7 % were willing to pay more than \$10 a month. In 2000, 73 % of those surveyed said they would pay \$3 a month more, and in 2001, the number was 63 %.

The complete results of the survey are available in newsletter form by contacting the committee office, and may also be found on the committee’s website at <http://jcc.legis.state.pa.us>.



How to Contact The Joint Conservation Committee

Phone:
717-787-7570

Fax:
717-772-3836

Location:
Rm. 408, Finance Bldg.

Internet Website:
<http://jcc.legis.state.pa.us>

Mail:
Joint Conservation Committee
PA House of Representatives
House Box 202254
Harrisburg, PA 17120-2254

