

ENVIRONMENTAL SYNOPSIS

The Chairman's Corner

Rep. Scott E. Hutchinson, Chairman

Did you know that April 19-27 is National Park Week? It is an annual observance, created by presidential proclamation, to celebrate and recognize national parks.

The observance caught my eye after reading two articles. The first had to do with being part of and enjoying the great outdoors. The second had to do with statistics regarding visitation to our

nation's national parks. While initially the headlines of the two articles seemed contradictory, a closer reading of both showed that they really were not so different after all. And that was disconcerting and somewhat disturbing.

The first article was a newspaper story entitled "Less Company for Mother Nature" and it summarized a national study published recently in the Proceedings of the National Academy of Sciences and funded by the Nature Conservancy. The study's authors, Bryn Mawr ecologist Patricia Zaradic and University of Illinois conservation geneticist Oliver R. W. Pergams, found that the nation is turning away from outdoor activities. They said that participation in outdoor activities has declined in recent years by 18 to 25 percent. More on this study in a moment.

The second article was a press release from the National Park Service. Its headline read, "National Park System Attendance Rises in 2007." The release stated that more than 275 million visits were recorded in America's national park system in 2007, an increase of three million visits from the previous year. The release spoke glowingly about the number of visits,

with National Park Service Director Mary Bomar being quoted as saying, "With all the recreation choices available, national parks still draw more visits than Major League baseball, the National Football League, professional basketball, soccer and NASCAR combined."

The release then went on to say, however, that after a high point of 287 million visits in 1999, and a one-year "bump" in visits in 2004 – attributed to the opening of the World War II Memorial in Washington, D.C. – the number of visits to national parks has been in decline. The release went on to quote Director Bomar as saying, "Hopefully the 2007 figures are a permanent rebound from 2006 when [there were] 272.6 million visits."

The Zaradic-Pergams study links the decline in outdoor activities to what the authors call "videophilia". As you may have guessed, videophilia means doing indoor activities in front of a screen, whether it is a TV, a computer, or playing some type of electronic game instead of taking a hike, mountain biking, fishing, hunting and the like. But the study also cites such factors as increased homework, more scheduled, formal activities which are not always outdoors, neighborhood covenants which may limit such items as tree houses and basketball hoops, concerns about West Nile virus and Lyme disease, unavailability of wild areas and a preference for more modern activities rather than primitive ones.

(continued on page 8)



In This Issue...

- The Chairman's Corner p. 1
- Notes From the Director p. 2
- Research Briefs p. 3-6

- ✓ Have You Been Greenwashed?
- ✓ The State of the Chesapeake Bay
- ✓ Ranking the Nation's Greenest Cities
- ✓ The Greening of Infrastructure

- On the Horizon p. 7
- Committee Chronicles p. 7

NOTES FROM THE DIRECTOR

CRAIG D. BROOKS, EXECUTIVE DIRECTOR

A renewable biofuel economy is being projected as a pathway to reduce reliance on fossil fuels, reduce greenhouse gas emissions and enhance rural economies. Recent information from the Ecological Society of America (ESA) suggests that systems for growing energy crops should strive to maintain overall environmental health and examine how much energy is produced in growing the biofuels versus the amount of energy that is consumed.

Ethanol is the most common biofuel in the United States and is projected to increase in the short term because of the voluntary elimination of Methyl Tertiary Butyl Ether (MTBE) in conventional gasoline, and in the long term because of the federal mandates governing alternative fuels.

It is becoming evident that ethanol production (from corn as the primary feedstock), will eventually have limited expansion capabilities because of competing feed and food demands on grain supplies and prices.

Switchgrass is being grown and managed as an energy crop and may be superior to corn

Because of this, switchgrass is now receiving more attention and is being grown and managed as an energy crop. According to a recent study, switchgrass can generate more renewable energy than is consumed in production and conversion. The study also found that manufacturing ethanol from switchgrass produces fewer emissions than corn-based ethanol because the crop absorbs carbon dioxide from the atmosphere as it grows.

For an alternative transportation fuel to be a substitute for conventional gasoline, ESA suggests that the alternative fuel have superior environmental benefits, be economically competitive, have meaningful supplies to meet energy demands and possess a positive net energy value.

Current corn production has increased 160 percent in the United States in the last four decades due to increased grain yields (although plantings are projected to decrease in 2008) and it is estimated that improvements in research and development of corn genetics and agronomics can be achieved for dedicated energy crops which will improve biomass yields and energy efficiency.

According to the study:

1. Switchgrass produced 540 percent more renewable energy than non-renewable energy consumed.
2. Switchgrass that was managed for high yield production produced more than 93 percent more biomass yields than those that previously received low agricultural inputs.
3. Estimated greenhouse gas emissions from cellulosic ethanol derived from switchgrass were 94 percent lower than the estimated greenhouse gas emissions from gasoline.

The study, performed on 10 farms in the Midwest, was the first large-scale study of the energy efficiency of ethanol derived from switchgrass. Previous studies were much smaller and overestimated the energy inputs needed to produce ethanol from switchgrass.

The study, "*Net Energy of Cellulosic Ethanol from Switchgrass*", is available at <http://www.pnas.org/cgi/reprint/0704767105v1>.



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.

What's the Truth Behind Green Marketing?

– Tony M. Guerrieri, Research Analyst

Every day green consumers who are trying to make smart, environmentally and socially responsible choices are bombarded with products that promise eco-friendly ingredients, but can they back up their boasts? A report by TerraChoice Environmental Marketing suggests that just because a product's label says it's "green," "all natural" or "Earth-friendly" does not mean it is.

The report, *"The Six Sins of Greenwashing: A Study of Environmental Claims in North American Consumer Markets"*, examines 1,018 common consumer products, ranging from toothpaste to caulking and shampoo to printers, at six category-leading "big box" retail stores.

Turning to definitions for a moment, you're probably familiar with the use and meaning of the term "whitewash." Greenwashing has a similar meaning but is specifically used to describe the act of misleading consumers regarding the environmental practices of a company or the environmental benefits of a product or service so as to present an environmentally responsible public image.

What do you look for if you want to find out if you're being "greenwashed"?

Returning to the consumer products study, the products examined bore 1,753 "green" claims. According to the report, after reviewing these environmental claims, exactly one product came out completely greenwash-free (a house-branded paper towel sold by one Canadian retailer), while the environmental marketing on all of the others showed signs of at least one kind of misleading or outright false statement. The report does not identify specific products or manufacturers, it only points to product categories, and notes examples of problems.

The environmental shortcomings were so prevalent

that based on its research, TerraChoice separated them into six types of labeling problems – or the "Six Sins of Greenwashing." According to the report, consumers should look for the following sins to know if they are being greenwashed:

– **The Sin of the Hidden Trade-off** - Committed by suggesting a product is "green" based on a single attribute (the recycled content of paper, for example) or an unreasonably narrow set of attributes (recycled content and chlorine-free bleaching) without attention to other important environmental issues (such as energy, global warming, water, and forestry impacts of paper). This was the most frequently committed "sin," made by 57 percent (or 998 products) of all environmental claims examined.

– **The Sin of No Proof** - Any environmental claim that cannot be substantiated by easily accessible supporting information, or by a reliable third-party certification. TerraChoice says "no proof" occurred if supporting evidence was not accessible at either the point of purchase or at the product website. Environmental claims about 454 products (26 percent) committed this "sin."

– **The Sin of Vagueness** - Committed by every claim that is so poorly defined or broad that its real meaning is likely to be misunderstood by the intended consumer. Seen in 196 products (11 percent), items claimed to be 100 percent natural, but that alone does not mean a product is "eco-friendly," as many naturally occurring substances are hazardous, like arsenic and formaldehyde.

– **The Sin of Fibbing** - Committed by making environmental claims that are simply false, typically by misusing or misrepresenting certification by an independent authority, when no such certification has been made. About 10 manufacturers (less than one percent) falsely claimed that they met a recognized environmental standard, like EcoLogo, Energy Star or Green Seal, when in actuality they did not.

– **The Sin of Irrelevance** - Committed by making an environmental claim that may be truthful but is unimportant and unhelpful for consumers seeking environmentally preferable products. It distracts the consumer from finding a truly greener option. In labeling on 78 products (four percent), manufacturers patted themselves on the back for leaving out hazardous ingredients, that were banned by law for almost 30 years.

-- The Sin of Lesser of Two Evils -- "Green" claims that may be true within the product category, but that risk distracting the consumer from the greater environmental impacts of the category as a whole. TerraChoice considers a claim to commit the Sin of Lesser of Two Evils when environmental qualifiers such as "organic" or "green" are placed on products in which the entire product category is of questionable environmental value, such as organic cigarettes and environmentally friendly pesticides. Seventeen products (one percent) fell into this category.

The report offers suggestions for manufacturers to avoid each of the six sins in the future, and to consumers to help them ask tough questions when they see marketing claims.

TerraChoice Environmental Marketing, a Pennsylvania-based firm, provides a range of environmental marketing, market research and third-party validation services. To download a copy of the 15-page report, "*The Six Sins of Greenwashing: A Study of Environmental Claims in North American Consumer Markets*", go to www.terrachoice.com and click on the "The Six Sins of Greenwashing".

Chesapeake Bay Nutrient Limits Unlikely to Be Met

– Craig D. Brooks, Executive Director

Despite progress made in water quality in the Chesapeake Bay watershed, wastewater utilities in the Chesapeake Bay states will not be able to meet their nutrient limits by 2010 if critical upgrades to achieve those limits are not made in time, according to a report by the Environmental Protection Agency's (EPA) inspector general. EPA has identified nutrient overload as the primary cause of water quality degradation in the Chesapeake Bay watershed. Nutrients consisting of nitrogen and phosphorus salts fuel the growth of large algae blooms that upon decomposition deplete oxygen levels in the water.

The report, "*Despite Progress, EPA Needs to Improve its Oversight of Wastewater Upgrades in the Chesapeake Bay Watershed*", assessed how much progress the 402 municipal wastewater plants and 81 industrial plants in the Chesapeake Bay watershed are making in meeting the limits prescribed in the 2010 goal. According to the report, wastewater utilities are responsible for only 20 percent of the nutrient discharges into the bay.

The discharges are governed by National Pollutant Discharge Elimination System (NPDES) permits. Revising and updating NPDES permits is crucial because it

enables the wastewater utilities and industrial plants to figure out which technology may be best suited to meet the level of reductions needed for nitrogen and phosphorus. As of July 2007, 156 of the 483 facilities have received nitrogen and phosphorus permit limits. These 156 facilities represent 55 percent of the discharges.

According to the report, annual nitrogen runoff to the bay declined from 63 million pounds in 2000 to 54 million pounds in 2005. Annual phosphorus runoff was 4.3 million pounds in 2000, declining to 4 million pounds in 2005.

While acknowledging progress has been made, critical upgrades are needed quickly to meet 2010 goals, according to EPA

In 2000, the District of Columbia, Delaware, Maryland, New York, Pennsylvania, Virginia and West Virginia agreed to limit nitrogen runoff into the bay to 46.3 million pounds per year and phosphorus runoff to 3.3 million pounds by 2010. According to the report, these reductions are to be made by installing biological nutrient technology and improved treatment capabilities at both wastewater and industrial plants.

In addition to the slow pace of permit revisions, the report identified a lack of funding to install nutrient removal technology as an impediment to meeting baywide nutrient limits. According to EPA, a minimum of \$3.36 to \$3.96 billion is needed to upgrade wastewater treatment plants to meet those goals. The report makes it clear that there is a need for a dedicated trust fund for wastewater utility upgrades while at the same time, the federal budget will provide \$44 million less for low-interest loans to the Chesapeake Bay states. The report noted that Maryland and Pennsylvania are providing low-interest loans and grants to these utilities but that it would be insufficient to cover the costs.

At the state level, Virginia and Maryland are responsible for reducing 81 percent of the additional 10.4 million pounds of nitrogen needed to meet the 2010 goal. West Virginia, Virginia and Maryland are responsible for 73 percent of the additional 724,000 pounds needed annually to meet the phosphorus goal.

The report is available at <http://www.epa.gov/oig/reports/2008/20080108-08-P-0049.pdf>.

Portland, Oregon Ranks First in Popular Science List of Top 50 Green Cities

– Tony M. Guerrieri, Research Analyst

Most Americans live in cities, and environmental quality, along with housing, crime, and other factors, is important to the quality of life. But how do you compare one city's "greenness" with another's? Which cities have cleaner air, or more public parks? Which do a better job at keeping streets clean, drinking water pure, and toxic wastes under control? Which cities are wasteful in their use of water or energy? To answer these questions, *Popular Science* magazine published an "America's 50 Greenest Cities" ranking in its March 2008 edition.

Ranking cities according to their environmental quality and level of environmental awareness is a daunting task. The magazine based its results on survey data and government statistics in more than 30 categories from the National Geographic Society's Green Guide and the U.S. Census Bureau for American cities with populations over 100,000 people, including air quality, electricity, transportation use and access to recycling. After compiling all the statistics they were combined into four broad categories. Each category held a point value of either 5 or 10 possible points. The sum of these four scores determines a city's place in the ranking.

The categories are:

- Electricity (10 points): Cities score points for drawing their energy from renewable sources such as wind, solar, biomass and hydroelectric power, as well as for offering incentives for residents to invest in their own power sources.
- Transportation (10 points): High scores go to cities whose commuters take public transportation or carpool. Air quality also plays a role.
- Green living (5 points): Cities earn points for the number of buildings certified by the U.S. Green Building Council, as well as for devoting area to green space, such as public parks and nature preserves.
- Recycling/green perspective (5 points): This measures how comprehensive a city's recycling program is (if the city collects old electronics, for example) and how important its citizens consider environmental issues.

The result: Portland, Oregon, with a score of 23.1 out of a possible 30, won the top spot as the greenest city in America. (Its breakdown: 7.1 out of 10 points on electricity; 6.4 out of 10 on transportation; 4.8 out of 5 on green living; and 4.8 out of 5 on green perspective). But what exactly makes Portland green? First, the city earned points for having half of its energy generated by renewable sources. When it came to transportation, the study showed a quarter of the workforce commuted by bike, carpool or public transportation. And, in terms of green living, Portland has 35 buildings certified by the U.S. Green Building Council.

After Portland, the top five green cities were San Francisco with 23 points, Boston (22.7 points) was third due to its recycling program, public transportation and a plan to generate electricity from yard clippings, Oakland, California (22.5 points) was fourth and Eugene, Oregon was fifth. Eugene scored 22.4 and was the only city to receive a perfect 10 under the category "Electricity" because most of its power is generated by hydroelectric dams or wind energy and because of its policy of purchasing excess power from residents who install solar panels.

No Pennsylvania cities made the list of the top 50 greenest cities in the U.S.

The five cities that trailed Eugene that rounded out the top 10 included Cambridge, Massachusetts and Berkeley, California (both with 22.2 points), Seattle (22.1 points), Chicago (the category leader in "Green Space" with 21.3 points), and Austin, Texas (with 21 points). In an additional note about Chicago, the city has devoted 12,000 acres to public parks and waterfront space, and the U.S. Green Building Council has awarded four city projects with a "platinum" rating, its highest award.

California dominated the survey with 14 cities on the list. Texas came in second with four, and New York state and Illinois were tied for third with each having three cities on the list.

In addition to the list, *Popular Science* has put together an information gallery of six case studies (Oakland, Chicago, San Francisco, Santa Rosa, California, Salt Lake City, and New York), spotlighting some of the more innovative programs and projects underway in these green cities.

Over the years, Pittsburgh and Philadelphia have racked up their share of top magazine rankings. In 2007, Pittsburgh earned the title of "America's Most Liv-

able City” by Places Rated Almanac, with Philadelphia being ranked as the nation’s fifth most livable city. However, neither city could clinch a green city ranking this year. In fact, no city in Pennsylvania was among the top 50 in the magazine’s list of greenest cities in the U.S.

For details on the study, including a listing of the 50 greenest cities (along with their scores) go to the magazine’s website at: <http://www.popsci.com/environment/article/2008-02/americas-50-greenest-cities?page=1>.

EPA Releases Green Infrastructure Plan

– Craig D. Brooks, Executive Director

A strategy to implement green infrastructure practices that are designed to manage stormwater runoff and curb sewer overflows has been released by the Environmental Protection Agency (EPA). “*Managing Wet Weather with Green Infrastructure: Action Strategy 2008*”, describes how practices such as the use of grassy swales, rain barrels and permeable pavements can be used at low cost to manage stormwater and reduce burdens on cities and towns with combined sewer systems that are designed to carry both stormwater and wastewater.

The strategy explains how states, municipalities, permitting authorities and non-governmental organizations can use such practices to meet water quality goals while reducing the burden on aging wastewater infrastructure that is unable to handle deluges of stormwater and wastewater when it rains heavily. It promotes green infrastructure as the environmentally preferable alternative to building traditional infrastructure such as curbs, gutters and impervious drains.

What is “green infrastructure” and where does it fit in replacing and updating aging wastewater infrastructure?

EPA defines “green infrastructure” as the strategic use of soil and plants to help absorb, infiltrate, evaporate or reuse excess stormwater and associated pollutants instead of, or in addition to pipes, pumps, storage tunnels and other hard infrastructure that traditionally is used to collect, store and transport water through large buried sewer systems. EPA says that this approach can also be used to reduce stormwater discharges and to help restore the natural hydrology, water quality and habitat of urban and suburban watersheds.



The strategy outlines seven approaches to promote green infrastructure among communities:

- **Research** – Ensure that technical, administrative and financial information is available to those promoting green infrastructure.
- **Outreach and Communication** – Make available educational and informational source materials for new technologies, their benefits and performance standards.
- **Tools** – Establish technical models and support documents for integrating green infrastructure technologies into commonly used plans for wet weather controls.
- **Clean Water Act Regulatory Support** – Clarify for regions and states that the use of green infrastructure is acceptable for stormwater and other discharges within the Clean Water Act framework.
- **Economic Viability and Funding** – Document economic advantages of employing green infrastructure approaches and provide costs savings.
- **Demonstrations and Recognition** – Use existing projects to design and distribute performance data.
- **Partnerships** – Work with large retailers and government agencies to develop and agree upon implementing green infrastructure at retail and government warehousing establishments.

The strategy is available at <http://www.epa.gov/np-des/greeninfrastructure/general>.

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.



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ON THE HORIZON . . .

A LOOK AT UPCOMING EVENTS

✓ Monday, May 12, 12 noon, Room 205, Matthew J. Ryan Building, Capitol complex, Harrisburg, PA - Environmental Issues Forum featuring a presentation on the services of the Environmental Management Assistance Program provided by the PA Small Business Development Center

✓ Monday, June 16, 12 noon, Room 205, Matthew J. Ryan Building, Capitol complex, Harrisburg, PA - Environmental Issues Forum featuring a presentation on the services provided by the Pennsylvania Technical Assistance Program (PennTAP)

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



The Joint Legislative Air and Water Pollution Control and Conservation Committee's (Committee) most recent Environmental Issues Forum featured a presentation by the Northampton Generating Company, L.P., which is located in Pennsylvania's Lehigh Valley.

Northampton Generating's Environmental Manager Dan Traynor (photo at left) spoke about the cogeneration facility's recently permitted use of waste tires as a supplemental fuel for the plant's Circulating Fluidized Bed boiler energy generation system. The plant has the potential to consume more than 20 million waste tires a year.

Traynor also told the audience (photo below) about Northampton Generating's use of anthracite coal, which consumes about 600,000 tons a year of waste coal and has resulted in the company reclaiming more than 200 acres of abandoned mine land. As a result, Northampton Generating has received a Department of the Interior National Award for Excellence in Reclamation and a



Pennsylvania Governor's Award for Environmental Excellence.

The authors feel that not only are there health issues in play (i.e., obesity) if outdoor activities decrease, but also conservation issues. It is their view that young people who do not spend time in nature and do not learn to appreciate it at an early age will not help to preserve nature as they grow older. As a result, more hands-on programs which expose children as young as two to nature are cropping up.

Another cause of concern is concurrent national research done by the U. S. Fish and Wildlife Service which shows declines of 16 percent among anglers, 11 percent among hunters and 23 percent among those taking trips to watch wildlife.

Such statistics made me wonder about Pennsylvania. According to the Pennsylvania Department of Conservation and Natural Resources (DCNR), total attendance at state parks in 2007 was estimated at 34.55 million, down from 2006's 35.64 million and below the 10-year average of 35.77 million. The question is, is that significant. Well, one factor to consider is the rising price of gasoline which may mean more folks stay at home. Also, in 2007, DCNR said that several popular parks were out of commission. Point State Park in Pittsburgh, for example, was closed for renovations, and the 60-mile long Delaware State Park was hit hard by flooding.

DCNR tends to think that while the numbers are what they are, it's tough to take them as a long-term trend. Weekend campsites, for instance, are booked solid, recreational vehicle sites are routinely reserved well in advance, despite the high fuel prices, and park managers report that environmental education and other park events are well attended.

Is "videophilia" behind a decline in outdoor activities?

Usage studies of state forests also show a strong interest in the outdoors. A 2007 survey of users of the Tiadaghton and Tioga state forests found that 27 percent of all visitors were first-time visitors, that nearly half of the visitors came in family groups and that if they had been unable to visit the selected state forest this trip, 55.8 percent of them would have gone somewhere else similar to pursue the same activities. More than 90 percent of those surveyed stated that the condition of the natural environment, attractiveness of the forest landscape and the scenery were their most important priorities as visitors. And, a similar survey question found that experiencing natural surroundings, being outdoors and being able to relax and get away from routine activities were prime motivations for visiting. Other motives included the social benefits of family recreation, being with friends and getting physical exercise. Nearly one-third said they visited the forests because they "enjoy being in the forest". Others liked the increased time they got to spend with friends and family and the remainder said the forests were good places for the chosen activities they enjoyed like hunting, hiking and fishing. A similar study of the Allegheny National Forest found much the same things.

Pennsylvania is blessed with 117 state parks, millions of acres of forestland and enthusiastic hunters and fishermen – ranking fifth in the nation in the number of hunters/anglers and first in the actual number of days spent in the fields and woods.

Outdoor activities also play an important economic role in Pennsylvania. It is estimated, for example, that spending by hunters/anglers supports 51,000 jobs, puts \$1.7 billion worth of payroll in workers' pockets and generates \$371 million in state and local taxes. Add to that what is spent in visiting Pennsylvania's parks and forests and the great outdoors is quite an economic machine.

A trail utilization study of Venango County's Oil Heritage Region – my home stomping grounds – found that there were an estimated 82,930 trail users from July 2006 to October 2006. Non-local trail users spent an average of \$32.93 per person per day, creating an economic benefit of \$2.22 million for the July-October period. For the year 2006, the estimated 160,792 trail users had an estimated economic impact of \$4.31 million.

Let's remember what an asset our outdoor natural areas are. And, as spring and summer approach, let's pledge to spend time outdoors, whether it be in a park or forest, on a bike trail, in a stream or on the playground. It will do us good as individuals and it will also benefit our state as a whole. While numbers may be down now, they don't have to stay down.

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