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Environmental Synopsis

The Chairman's Corner

Rep. Scott E. Hutchinson, Chairman

Have you been getting "bugged" recently as you spent time outdoors? Found yourself slapping at annoying insects and wondering what to do about the pests?

This is the time of year for mosquitoes, and they can be more than just pests. Mosquitoes are carriers of the West Nile virus, a disease that first came to Pennsylvania in 2000 and which can cause serious illness (encephalitis) and even death to humans.

Pennsylvania has a comprehensive surveillance and control network in place in all of its 67 counties to combat the spread of the virus, including a spraying program, trapping of mosquitoes, monitoring horses, people and sentinel chickens, and collecting dead birds to determine if the virus is present in their bodies. DEP personnel and county West Nile virus coordinators also monitor the type, location and population of both adult mosquitoes and immature (larvae and pupae) mosquitoes. This information is then used to treat areas with high populations of mosquitoes known to be carriers of the virus.

The virus has been found in 11 Pennsylvania counties so far this year, according to the state Department of Environmental Protection's (DEP) website. Up until the first week of August, the virus had been found only in mosquito samples, with no positive tests for humans or in dead birds that have been tested. On August 1, however, the state Health Department confirmed the first case of West Nile virus in humans in a Clearfield County man. Thankfully, he is recovering and has been discharged from the hospital.

To control West Nile virus, Pennsylvanians are urged to "Dump it, Drain it and Treat it"

While Pennsylvania will continue its statewide efforts, there are a number of simple things that individuals can do to control mosquitoes in their own backyards. This is an important and effective part of West Nile virus control efforts.

What the DEP recommends is to eliminate mosquito-breeding sites around your home. The courses of action recommended by DEP are simple: "…Dump it if it has water in it; drain it if it can be drained; and treat it if it has standing water."

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In This Issue...

Joint Legislative Air and Water Pollution Control and Conservation Committee

NOTES FROM THE DIRECTOR

CRAIG D. BROOKS, EXECUTIVE DIRECTOR

When Congress passed the BEACH Act of 2000, (Act) it required coastal and Great Lakes states and territories to maintain water quality monitoring and report to the Environmental Protection Agency (EPA) those areas that show when levels of certain bacteria exceed standards. In 2004, EPA finalized more protective standards for E.coli and other bacteria for recreational waters for those states that had not yet complied with the BEACH Act of 2000. Twenty-one states and territories were affected by this rule, while the other 14 states had standards in place that were as protective of human health as EPA's standards.

When limits are exceeded, states and local agencies notify the public of potential health risks. These beach notifications are usually a beach advisory, warning of possible health risks associated with swimming, or beach closings. The good news is that out of more than 676,000 beach days in the United States in 2006, less than 5 percent were restricted due to contaminated-related closings. In addition, more than half of those closings lasted only one or two days.

The good news: less than five percent of U.S. beach days in 2006 were restricted due to contaminated-related closings

According to EPA, beach days are those counted during the customary beach season for a given area. Many beach days are seasonal, although they may be counted for most or all of a calendar year in warmer climates. States and territories monitored more than 3,700 beaches under EPA's beach program last year looking for contamination from stormwater runoff and other sources. EPA and its state partners have been improving data collection, data reporting and recovery, which has provided a more complete picture of the water quality at our nation's beaches.

Of the 3,771 coastal beaches that were monitored in 2006, just over 1,200 (32 percent) had at least one advisory or closing during their beach season. This was actually an increase from the previous year, but has been attributed to improved data collection and the result of several states consolidating smaller beaches into larger ones, thereby reducing the total number of beaches monitored. As mentioned, the majority of beach notification actions during the 2006 season were of relatively short duration. Of the 6,786 notification actions reported, 47 percent (3,186 actions) were only one or two days long. This represents an improvement over 2005 when 43 percent of the actions were just one or two days long.

EPA is working to improve its beach advisory notification system known as the BEACON system

For the past seven years, EPA has made available nearly $62 million in grants to 35 coastal and Great Lakes states and territories to fund improvements in water quality monitoring and public information programs to alert beachgoers about the health of their beaches. The funding level for beach monitoring will continue at $9.9 million this year.

EPA is working to improve the delivery of its beach advisory information to the public through its BEACON (BEach Advisory and Closing Online Notification) system as part of their overall eBeaches effort to provide information about beach conditions and health risks through electronic means.

The agency has also ramped up its beach research to include development of a faster test for water-borne pathogens, correcting sources of disease causing microorganisms and determining the incidence of health effects associated with beach water.

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.

Automaker Rankings: The Environmental Performance of Car Companies

– Tony M. Guerrieri, Research Analyst

Japanese automakers are manufacturing vehicles that are easier on the environment than those of their U.S. counterparts, who are producing cars and trucks ranked among the worst when it comes to smog emissions and global warming (carbon dioxide) emissions. This according to a report by the Union of Concerned Scientists (UCS). In short, Honda and Toyota left Detroit's "Big Three" in the dust in the UCS biennial ranking of the greenest automakers.

For the fourth time in a row, Honda topped the UCS's ranking as the country's greenest automaker. Toyota came within 3 percentage points of earning the report's top overall ranking, surging to second place by making significant cuts in global warming pollution. Hyundai-Kia ranked third among the nation's top eight automakers. Nissan and Volkswagen were in the middle of the pack, coming in fourth and fifth, respectively. Ford and General Motors (GM), meanwhile, were at the back of the pack, and German-American automaker DaimlerChrysler finished dead last in the final rankings for the third time in four tries.

The UCS report, *"Automaker Ranking 2007: The Environmental Performance of Car Companies"*, analyzed the performance of 10 classes of vehicles produced by the eight automakers, which comprised 96 percent of the U.S. car and light truck market in model year 2005.

Each automaker was rated on how its vehicles compared to the industry average on global warming and smog-forming pollution. Cars and light trucks account for 25 percent of the nation's global warming pollution and 20 percent of its smog-forming pollution.

Honda and Toyota had better-than-average global warming scores in every class in which they competed. Despite producing pickup trucks and large SUVs, Toyota's use of emission-cutting technology across its entire fleet helped it to pull up just behind Honda, which did not compete in these vehicle classes.

Ford was the cleanest of the Detroit automakers, finishing sixth. But if Ford had made the same progress cutting global warming pollution in its U.S. fleet as it has with its European fleet, it would have finished fifth, according to the report.

U.S. automakers took it on the chin again in the latest ranking of the greenest automakers

GM, which placed last in UCS's 2003 model rankings, moved past DaimlerChrysler by reducing its fleet's smog-forming emissions. But the country's largest automaker failed to improve its global warming pollution score since the last UCS automaker ranking. In model year 2005, GM had the dubious distinction of selling the most vehicles rated at 15 miles per gallon or worse in city driving.

DaimlerChrysler came in last with the highest scores for both smog and global warming pollution. Its cars and trucks emit 70 percent more smog-forming pollutants and nearly 30 percent more global warming pollutants per mile than those made by Honda.

Scores are given relative to an industry average score of 100, based on emissions-per-vehicle-mile across the eight studied automakers. Honda gets a score of 78, or 78 percent of the average, while Toyota has a score of 81. DaimlerChrysler has a score of 115, 37 percent higher than Honda.

The UCS report suggests that hybrids helped improve environmental performance while diesels generally held automakers back. Volkswagen's diesel engines, for example, slightly improved its global warming score, but significantly dragged down its smog score. Hybrids, meanwhile, helped Toyota cut its global warming pollution fleetwide because the company produced them in large numbers. Honda and Ford, which produced fewer hybrids, did not see the same improvement.

Formed in 1969, the UCS is a leading science-based non-profit advocacy group out of Cambridge, Massachusetts. Its first automaker ranking report was

released in 2000 and was based on 1998 model year vehicles.

The Union of Concerned Scientists report, *"Automaker Ranking 2007: The Environmental Performance of Car Companies"*, can be found at: http://www.ucsusa.org/assets/documents/clean_vehicles/autorank_2007report.pdf.

Strategy Needed to Coordinate Biofuels Production With Infrastructure

– Craig D. Brooks, Executive Director

A report by the Government Accountability Office (GAO) suggests that the Department of Energy (DOE) needs to develop a more comprehensive approach to expanding the production of biofuels, and coordinate this with infrastructure needs and vehicle production. The 2005 Energy Policy Act requires the United States to produce 7.5 billion gallons of ethanol and other biofuels by 2012. With the nation on track to exceed that mandate, Congress has already been sent a proposal that calls for the production of 35 billion gallons of biofuels and other alternatives to gasoline by 2017.

The growth of ethanol and biofuel production may be stunted if less expensive production methods are not developed and coordinated with a fuel distribution strategy and vehicles which use such fuels

Although ethanol and biodiesel production have been increasing rapidly, GAO has concluded that such fuels are unlikely to displace a considerable amount of petroleum unless less expensive production methods are developed. The report says that the main factor is the rising costs of the primary feedstocks – corn and soybeans – which are also used for livestock food and human consumption.

GAO found that the average wholesale price of ethanol per gallon was about 33 percent higher than the average wholesale price of gasoline in 2006. In addition, ethanol is not a gallon-for-gallon replacement for gasoline because it only contains about two-thirds of the energy of gasoline per gallon. The report suggests that federal policies that support cellulosic ethanol and biofuels could make a difference, but only if such efforts drive down the costs associated with those materials. Cellulosic feedstocks such as corn stalks, switchgrass, and other plants are cheap and plentiful but the production costs of using those materials are twice those of corn ethanol.

According to the report, significant expansion of biofuels production will be unlikely without policies that put a priority on support for cellulosic ethanol research and development and offer enhanced incentives for its production. The report found that DOE's efforts to increase production of both corn and cellulosic ethanol are not coordinated with a fuel distribution strategy and the production of vehicles that would use these fuels. Such an approach, says GAO, could assist in determining which blend of ethanol (E10, E85 or something in between) would most effectively and efficiently increase the use of the fuel. It would also help determine what level of distribution infrastructure and vehicle production is needed.

Consumer demand for E85, which is a blend of 85 percent ethanol and 15 percent gasoline, has been limited due to the lack of fueling stations outside the Midwest. About 4.5 million flexible fuel vehicles (FFV) are capable of running on E85. The report suggests that several policies such as higher tax credits for FFV production could increase the number of these vehicles on the road, but would likely have little impact on biofuel use until E85 is less expensive and more widely available. The report also suggests that limitations may occur due to the freight rail system and the lack of a dedicated pipeline system if one is needed.

The GAO report, *"DOE Lacks a Strategic Approach to Coordinate Increasing Production with Infrastructure Development and Vehicle Needs" (GAO-07-713)* is available at http://www.gao.gov/new.items/d07713.pdf.

Philadelphia a Leader in Commuter Use of Public Transit, Walking

– Tony M. Guerrieri, Research Analyst

Philadelphia is among the nation's top five cities where commuters take public transportation or walk to work, according to a U.S. Census Bureau analysis of data from its 2005 American Community Survey (ACS). The ACS focused on commuters in 50 American cities with at least 65,000 residents.

Philadelphia ranked fifth in the survey in the number of commuters using public transportation. It had about 139,143 commuters, or almost 26 percent of its 537,233 work force, using the bus or light rail to and from work. Philadelphia also ranked fifth in the nation in the percentage of commuters who walk to work – 8.1 percent.

While Philadelphia's 26 percent of mass transit use is higher than the national average (4.7 percent), it pales in comparison to New York City, which has the largest share of people who take public transportation: 54.6 percent, or some 1.9 million people.

However, the vast majority of Americans still drive to work. Overall, the private vehicle share of all national commuting is 87.7 percent (nearly nine out of ten workers chose to drive their personal vehicles to work in 2005). And the ACS also found that 77 percent of those commuters (more than 102 million people) did so alone.

Driving alone continues to increase. Private vehicle shares were over 80 percent for 23 states with Michigan rated highest at over 84 percent. There were 22 states between 70 percent and 80 percent, including Pennsylvania which ranked 32nd with 77.3 percent, slightly above the national average. New York is in a class by itself at 55.4 percent.

Ever wonder what American cities have the most commuter walkers, bikers, carpoolers and users of public transportation?
How about the best places to work from home?

Car pooling, at 10.7 percent nationally, runs a distant second to commuting in single-occupant personal vehicles. Mesa, Arizona has a higher percentage of workers who carpool than any other city in the nation. Approximately, 16.7 percent of Mesa commuters – nearly one in six – ride to work with someone else. Phoenix placed second at 16.2 percent nationwide, with Sacramento, California ranked third with 15.7 percent. With ten percent of its workers carpooling, Philadelphia ranked 38th in the nation.

Only 4.7 percent of commuters used public transportation as an alternative means of travel in 2005. About half the nation's public transportation commuters can be found in ten of the nation's 50 cities: Baltimore, Boston, Chicago, Houston, Los Angeles, New York, Philadelphia, San Francisco, Seattle and Washington, D.C. These cities accounted for 2.9 million of the nation's 6.2 million users of public transportation.

Public transportation is most prevalent in cities with rapid transit. After New York City's 54.6 percent, Washington, D.C. ranked second in bus and subway users, with 38 percent (94,199 residents), followed by San Francisco, 33 percent (124,888 residents) and Boston, 32 percent (80,264 residents).

In Los Angeles, the nation's second biggest city, only 171,210 workers, or 10.3 percent, commuted by bus or rail. Still, that beat out such older industrial cities as Milwaukee (7.6 percent), Detroit (7.1 percent) and Indianapolis (1.8 percent). Long-established West Coast cities such as San Francisco (33 percent), Seattle (17 percent) and Portland (13.3 percent) scored highly. The cities with the lowest percentage of workers using public transportation were Arlington, Texas (0.4 percent), Wichita, Kansas (0.5 percent), Virginia Beach, Virginia (0.5 percent), and Oklahoma City and Tulsa, Oklahoma (both one percent).

The third most popular option was working from home. Approximately 3.6 percent of workers work from home and therefore make no demands on the transportation system as part of their work travel. San Francisco ranks first in that category, with 6.3 percent. Other large cities with high rates of home-based workers included Portland, Oregon (5.3 percent), Seattle (5.1 percent), Austin, Texas (five percent) and Colorado Springs, Colorado (4.9 percent). About 2.6 percent of Philadelphia's workers earn a living without leaving their houses (43rd in the nation).

More people walk to work in Boston than in any other big city. Thirteen percent of its residents commute by walking, well above the 2.5 percent national average. Other cities with a large percentage walking to work include Washington, San Francisco, New York City and Philadelphia. The fewest did so in Arlington and Fort Worth, Texas, Oklahoma City and Louisville, Kentucky.

Portland, Oregon has the distinction among large cities as having the highest percentage of bicycle riders going to work. Approximately 3.5 percent of Portland's workers pedal to work, about eight times the national average of 0.4 percent. Other cities with high percentages of biking commuters include Minneapolis, Seattle, Tucson, Arizona and San Francisco. Philadelphia ranks 14th in the nation with 0.9 percent of its workforce pedaling to work. Kansas City, Missouri, Memphis, Indianapolis, Wichita, and Omaha, Nebraska had the fewest bikers.

The figures are based on 2005 data and compiled in the ACS, an ongoing research tool that the Census Bureau uses to track "transportation methods to work"

trends between the official Census that is taken every 10 years. The 2005 ACS estimates are based on an annual, nationwide household sample of about 250,000 addresses per month.

Additional information and data profiles for the nation, states and cities can be accessed at the U.S. Census Bureau's American Community Survey website: http://www.census.gov/acs/www/index.html.

Recycling Consumer Electronics in the U.S.

– Craig D. Brooks, Executive Director

A new study from the Environmental Protection Agency estimates that the United States recycles between 15 and 20 percent of the televisions, computers, cell phones and other consumer electronic products disposed of each year. Although there has been an increase in the tonnage of recycled items each year, the percentage of recycled products has stayed about the same because of the ever-increasing quantity of electronics that are now available. The purpose of the study was to establish a baseline regarding the future management of end-of-life electronic products.

According to the study, in 1998, approximately 20 million computers became obsolete in one year. In 2005, the study suggests that as many as 130,000 computers were discarded in a single day. Along with computers, TVs, VCRs, cell phones and monitors, an estimated 304 million electronic devices were removed from U.S. households in 2005, with about two-thirds of those still in working order. Although EPA has established a series of voluntary programs and partnerships to address the issue, seven states ban the landfilling of certain electronics and four states - California, Maine, Maryland and Washington - have programs that institute statewide recovery programs for used electronics. Currently, many other states are looking to establish similar programs.

Americans recycle between 15-20 percent of consumer electronics products each year...
Where do the rest go?

In 2005, according to the study, used or unwanted electronics amounted to approximately 1.9 million to 2.2 million tons. Of that amount, about 1.5 million to 1.9 million tons were primarily discarded in landfills, and only 345,000 to 379,000 tons were recycled. Although the amount recycled in 2005 is more than double the amount recycled in 1999, the percentage of unwanted electronics again corresponds with the increase in electronics available and therefore stays the same.

Here are some key findings of the study as of 2005:

Electronic Products Lifecycle

- ✗ Of all the products sold between 1980 and 2004, almost half or 976 million units are still in use or reuse.
- ✗ Of the products sold between 1980 and 2004, about 42 percent or 842 million have been disposed of or recycled.

Storage

- ✗ Nine percent or 180 million units sold between 1980 and 2004 are still in storage.
- ✗ In 2005 alone, approximately 460 million products were put into storage and/or reuse.
- ✗ TVs account for between 34 and 52 percent (by weight) of the units in storage.
- ✗ Desktop PCs account for approximately 24 percent (by weight) of stored units.

Recycling versus Disposal

- ✗ About 15 to 20 percent of electronics were collected for recycling between 1999 and 2005.
- ✗ Disposal (largely in landfills) accounted for 80 to 85 percent of the electronics collected in the same time period.

End Markets

- ✗ In 2005, approximately 61 percent or 107,500 tons of CRT monitors and TVs were collected for recycling and exported for remanufacture or refurbishment.

The report, *"Management of Electronics Waste in the United States"*, is available at http://www.epa.gov/epaoswer/hazwaste/recycle/ecycling/manage.htm.

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.

Printed on Recycled Paper

On the Horizon . . .

A LOOK AT UPCOMING EVENTS

✔ **Wednesday, September 12 and Thursday, September 13, Radisson Hotel and Conference Center, Camp Hill, PA – 2007 Keep Pennsylvania Beautiful Summit: "Clean Up and Pretty Up"**

✔ **Thursday, October 4, 9 a.m. – 12 noon, Room 8E-A, Capitol East Wing, Harrisburg, PA - Public hearing on E-waste recycling**

✔ **Thursday, October 25, 10 a.m., Penn Stater Conference Center Hotel, Executive Conference Room 2, State College, PA – Sewage Task Force meeting**

Committee Chronicles . . .

REVIEW OF SOME MEMORABLE COMMITTEE EVENTS

In June, the Committee held a very informative Environmental Issues Forum regarding the future of the use of carbon sequestration in Pennsylvania.

The guest speaker (photo at right) was John Quigley, Director of Legislation and Strategic Initiatives for the Pennsylvania Department of Conservation and Natural Resources (DCNR). Quigley also told the large audience (photo below) about DCNR's potential role in the process.

Later, Quigley and Committee Chairman Rep. Scott Hutchinson (photo at left) discussed the topic in greater detail.

Looking at the above instructions in more detail, the first thing homeowners should do is identify all sources of standing water on their property and then eliminate these sources. (If you're wondering what constitutes standing water, according to DEP mosquitoes will breed in any puddle that lasts for more than four days.) To eliminate sources of standing water, dump and dispose of cans, plastic containers, ceramic pots and similar water-holding containers that may have collected around the property. Don't forget containers that may have become overgrown with aquatic vegetation.

Another common spot for mosquitoes to breed is in discarded tires that have collected water. Very often, we may have set aside old tires or seasonal tires outside without thinking. Even if there is only one or two tires, once water accumulates in them, it's like inviting mosquitoes to breed. Dump the water, dry out the tires and store them where they will stay dry.

Many homeowners may have recycling containers that they leave outdoors. Make sure you drill holes on the bottoms of such containers so that they drain. Containers that have holes only on the sides can collect enough water so that mosquitoes can breed.

There are several other places that can become fertile sites for mosquito breeding. Have you ever filled a plastic wading pool, used it for a day or two and then left it sit with water in it for days at a time? If not used on a regular basis and allowed to stagnate, a plastic pool becomes a potential breeding site. Full sized pools should be kept clean and chlorinated. And don't allow water to collect and sit on pool covers.

To learn more about West Nile virus, visit the website www.westnile.state.pa.us or call 1-877-PA-HEALTH

A container easily forgotten about is a birdbath. Change the water often and do not allow it to stagnate. When you put the wheelbarrow or gardening cart away after using it, do you store it upright so it accumulates water? Turn it upside down when not in use.

An increasingly popular feature in many backyards is an ornamental pool, pond or water garden. While many are aerated or stocked with fish, which help prevent mosquito infestation, be careful not to allow those that do not have such features to stagnate. If they do, they can be major mosquito breeding grounds.

Here's some spots you may not ever think about. If roof gutters become clogged, water can accumulate and stagnate, providing a hard-to-spot and convenient site for mosquitoes to breed. Clean the gutters periodically, especially if leaves from surrounding trees tend to block drains and downspouts. Also, make sure that all of the doors and windows in your home have screens, and that all the screens are in good repair.

In addition to "mosquito-proofing" their backyards and homes, citizens who wish to help stop West Nile virus can do so in another way. Because mosquitoes acquire the virus from dead birds, keep an eye out for dead crows, blue jays and hawks and report them to the local county West Nile virus control coordinator. If you wish to have the bird tested, preferably allow the coordinator to handle the bird. But, if you are going to collect the bird for testing, exercise care in doing so. Either use rubber gloves or insert your hand in a plastic bag before grasping the bird with the bag, inverting the bag over the bird and then tying the bag closed and placing it inside a second bag. Be sure to wash your hands thoroughly with soap and water.

By following these close-to-home steps, we can all help to minimize the occurrence and impact of West Nile virus.

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