

Brought to you by:



25 North 11th Street  
Reading, PA 19601  
Phone 610-372-4992  
Fax 610-372-2917

info@berks-conservancy.org  
www.berks-conservancy.org

#### BERKS CONSERVANCY STAFF

Kim R. Lewis  
Lawrence E. Lloyd  
Kimberly J. Murphy  
Katherine Z. Seyler  
Tami J. Shimp

#### STATE OF THE ENVIRONMENT STEERING COMMITTEE

Gavin Biebuyck  
*Liberty Environmental, Inc.*  
Eric Grindrod  
*SSM Group, Inc.*  
Ron Long  
*Met-Ed, A First Energy Company*  
Jane Meeks  
*Berks County Solid Waste Authority*  
Tracy (Perry) Ciesnolewicz  
*UGI Utilities, Inc.*  
Shannon Rossman  
*Berks County Planning Commission*  
Kurt Schneidmiller  
*Retired Community Leader*  
Jesse Tyahla  
*UGI Energy Services, Inc.*

## Our Environment in Berks: A 5-Year Report Card

With the philosophy of “what gets measured, gets done” in mind, the Berks Conservancy, along with a team of environmental experts, published the first comprehensive State of the Environment in Berks report in 2009. This report and associated programs evaluated specific data and trends in five environmental categories: Air, Energy, Land, Waste & Water. Measureable, actionable data was pursued and monitored that has encouraged individuals, corporations, and organizations to make changes that have positive effects on our local environment.

Our team of environmental experts has continued to monitor all of this quantitative data on an annual basis. We knew when we embarked on this project that the data supporting each of our indicators would not change significantly in any given year and that we would issue updates in 5-year increments. This report card serves as the first 5-year update to the original State of the Environment report. We have revisited each of the 25 indicators and clearly mark if the data is moving in a positive direction.

While we have many success stories to celebrate, we also have a lot more work to do to protect our natural resources in Berks. Nature is essential to our quality of life. Please examine this report card and pledge to help protect nature in Berks County. Future generations depend on it.

- Kim Murphy  
President, Berks Conservancy

### About the Berks Conservancy

**Nature is essential to our quality of life.** The Berks Conservancy demonstrates this through conservation, protection, partnerships, leadership, and education. We connect people to nature through water and land protection, trail creation, community gardens, and educational activities for children and adults. We are your local, nonprofit organization dedicated to protecting nature. Please learn more, get involved, and support our local efforts through a tax-deductible donation.

Visit [berks-conservancy.org](http://berks-conservancy.org) and click “Donate”.

## State of the Environment Indicators At A Glance

### WATER

**GROUNDWATER ELEVATIONS** - The water stored below the ground surface which is tapped for drinking water by individual and community wells, and also feeds the surface streams and rivers by seeps and springs.  
**IMPAIRED STREAMS** - Many factors impair our local waterways, such as impervious surfaces and stormwater. Agricultural effects on surface waters are the principal reason for classification as impaired waters.  
**SOURCE WATER PROTECTION PLANS** - Plans to develop protective management strategies that minimize threats to public health by keeping harmful contaminants out of drinking water in the event of an emergency.  
**ACT 537 SEWAGE FACILITY PLANS** - All municipalities must develop and implement an official sewage plan that addresses current and future sewage disposal needs.  
**AQUATIC LIFE IN STREAMS** - One important measure of stream health is whether a waterbody supports a diverse community of plants and animals.

### ENERGY

**VEHICLE-MILES TRAVELED PER YEAR** - The number of miles traveled indicates whether Berks County residents live in close proximity to their jobs, schools, recreational activities, shopping and service areas.  
**RESIDENTS USING PUBLIC TRANSPORTATION** - In addition to studying the mileage of individual Berks County residents, fossil fuel consumption is affected by the number of people utilizing public transportation.  
**ELECTRICITY GENERATION & USE** - For each type of energy generation such as coal, gas, and nuclear, you can calculate the amount of CO<sub>2</sub> released into the atmosphere.  
**HOUSEHOLD ENERGY USE** - Many factors affect household energy use, such as efficiency of appliances, insulation and weatherization, energy consumption habits and source of energy.  
**NEW CONSTRUCTION WITH GREEN CERTIFICATION** - Green certification encourages projects that re-use existing building sites and incorporate energy efficient technology and sustainable design practices.

### AIR

**NUMBER OF “BAD AIR DAYS”** - Consists of four primary air pollutants - Ozone, Fine Particles (PM2.5), Nitrogen Dioxide (NO<sub>2</sub>) and Sulfur Dioxide (SO<sub>2</sub>).  
**LEAD AIR QUALITY** - Lead in general comes from metal industries like smelters and battery manufacturers. Lead paint in older homes is a significant hazard that can result in lead poisoning, especially for young children.  
**AIR TOXICS** - These pollutants include metals like cadmium, chromium, and manganese; organic compounds like benzene, trichloroethylene, and formaldehyde; and acid gases like hydrochloric acid and hydrogen fluoride.  
**REGIONAL AND NATIONAL AIR POLLUTION** - More than half of our PM2.5 pollution levels are caused by secondary sulfate and nitrate aerosol pollution largely caused by coal-fired power plants located outside Berks County in western PA and along the Ohio River valley in Ohio, West Virginia, and Kentucky.  
**LOCALIZED AIR POLLUTION** - Because pollution from cars contributes significantly to air quality problems, it is important to consider the impacts on traffic congestion associated with land development decisions.

### WASTE

**WASTE GENERATION** - From the “garbage” that we generate in our homes to construction debris to medical waste, the waste generated in Berks County is decreasing yearly.  
**WASTE DISPOSAL** - Waste disposed of in Berks County that are actually generated in the County remain relatively low, and waste from other Pennsylvania Counties and other states dominate the overall tonnage.  
**ELECTRONIC RECYCLING RATE** - From computers to cell phones, electronics need to be recycled and dismantled properly in Berks County.  
**SPECIAL WASTE COLLECTIONS** - The Berks County Solid Waste Authority has been effective in collecting hazardous wastes, used tires and pharmaceuticals from residents and businesses.  
**RECYCLING RATE** - Recycling plastics, glass and paper are regulated and measured by the Berks County Solid Waste Authority.

### LAND

**PROTECTED LAND** - Thousands of acres of land in Berks County are protected through a combination of institutional ownership and land protection programs that permanently protect its conservation values.  
**TREE COVER** - Forested land supports substantial populations of mature deciduous (broadleaf) and coniferous (evergreen) trees in Berks County.  
**IMPERVIOUS COVER** - Impervious surfaces are roadways, driveways, parking lots, buildings, and other areas where natural movement of rainwater into the soil is partially or completely blocked.  
**MULTI-MUNICIPAL COOPERATION** - Municipal master plans, zoning, and sensitive area plans are used to establish classification systems, regulations, and criteria for land development within a particular municipality.  
**OUTDOOR RECREATION AREAS** - Open space/recreational opportunities should be comprised of a number of different park types including mini-parks, neighborhood parks and community parks.

### Comments:

*Nature is essential to our quality of life. As a result of this State of the Environment in Berks program, our community will have the data and support necessary to protect and enhance our natural resources, and ultimately our Quality of Life. Most importantly, Berks County residents have the tools and information needed to advocate for changes in policy and to change their behaviors - as a result, future generations will benefit.*

*Stay involved. Become a member. Visit [berks-conservancy.org](http://berks-conservancy.org).*

I have examined this report card and pledge to help protect nature in Berks County.

Signature: \_\_\_\_\_

5 YEAR  
REPORT CARD

## STATE OF THE ENVIRONMENT

• BERKS COUNTY, PA •

## REPORT CARD

Report Year: 2013

Name: Our Environment

Address: Berks County, Pennsylvania

To the Citizens of Berks County:

This report card is to inform you of the health of Berks County in relationship to Air, Energy, Land, Waste and Water. It is designed to educate and inspire you to help make a difference. After reviewing the report card, register online at [www.berks-conservancy.org](http://www.berks-conservancy.org) to stay involved.



25 North 11th Street  
Reading, PA 19601  
Phone 610-372-4992  
Fax 610-372-2917  
info@berks-conservancy.org  
www.berks-conservancy.org

Download a copy of this report at  
[www.greenberks.com](http://www.greenberks.com)



Brought to you by the Berks Conservancy  
Your local non-profit conservation organization.

Free copies of the **State of the Environment in Berks** series of reports can be downloaded at [greenberks.com](http://greenberks.com).



## Summary of Indicators

Each indicator is divided into three categories: Green means keep up the good work! Good things are happening in Berks County. Yellow means that there is an improvement, but more work needs to be done and Red means that Berks County needs to work harder!

**THUMBS UP** This is generally encouraging; keep up the good work!  
**THUMBS DOWN** This is not tracking the way we want to see it; hard work to do.  
**THUMBS NEUTRAL** We'll need to track this a while longer to see what happens.

WATER				
<p>2009 → 2013</p> <p><b>1. Groundwater Elevations</b> Groundwater levels have improved modestly over the past 5 years.</p>	<p>2009 → 2013</p> <p><b>2. Miles of Impaired Streams</b> Projects are having an impact on water quality, but many miles of streams are still "impaired".</p>	<p>2009 → 2013</p> <p><b>3. Source Water Protection Plans</b> 72% of the Berks County population is covered by a source water protection plan.</p>	<p>2009 → 2013</p> <p><b>4. Act 537 Sewage Facility Plans</b> A large number of Act 537 plans are over 20 years old, but a small number have been updated.</p>	<p>2009 → 2013</p> <p><b>5. Aquatic Life in Streams</b> Water quality has improved, but more watershed restoration activities are needed.</p>
ENERGY				
<p>2009 → 2013</p> <p><b>1. Vehicle Miles Traveled Per Year</b> Berks residents travel more than PA average. The trend in PA is going down except for Berks.</p>	<p>2009 → 2013</p> <p><b>2. Use of Public Transportation</b> BARTA ridership has increased, however Berks County's numbers are still less than average in PA.</p>	<p>2009 → 2013</p> <p><b>3. Energy Generation &amp; Use</b> Less electricity is generated with coal and oil while gas, renewables and nuclear are rising.</p>	<p>2009 → 2013</p> <p><b>4. Household Energy Use</b> Many residents are starting to rely on natural gas. Coal is about the same and electric has increased.</p>	<p>2009 → 2013</p> <p><b>5. "Green" Construction</b> Since 2009, at least eight new building projects that have been LEED-registered.</p>
AIR				
<p>2009 → 2013</p> <p><b>1. Number of "Bad" Air Days</b> Fine particle pollution has improved but is still a challenge in the summer months.</p>	<p>2009 → 2013</p> <p><b>2. Lead Air Quality</b> Ambient air levels at our two monitoring stations are well below the EPA's lead standards.</p>	<p>2009 → 2013</p> <p><b>3. Air Toxics</b> Air toxic levels in Berks remain well below EPA guidelines.</p>	<p>2009 → 2013</p> <p><b>4. Regional Air Pollution</b> Air quality is should improve because coal power plants are being replaced with cleaner gas plants.</p>	<p>2009 → 2013</p> <p><b>5. Localized Air Pollution</b> Continuing work needs to be done to address air pollution on the local level.</p>
WASTE				
<p>2009 → 2013</p> <p><b>1. Waste Generation</b> Waste generation is down approximately 60,000 tons compared to five years ago.</p>	<p>2009 → 2013</p> <p><b>2. Waste Disposal</b> Tonnage of wastes disposed of in Berks declined significantly in recent years.</p>	<p>2009 → 2013</p> <p><b>3. Electronic Recycling Rate</b> Participation in electronic recycling increased over 200% since 2008.</p>	<p>2009 → 2013</p> <p><b>4. Special Waste Collections</b> Hazardous waste collection has increased. Medication Drop Boxes have been implemented.</p>	<p>2009 → 2013</p> <p><b>5. Recycling Rate</b> Compared to 2008, tons of recyclables collected decreased 15%.</p>
LAND				
<p>2009 → 2013</p> <p><b>1. Protected Land</b> About 13.5 percent of Berks' lands are permanently protected, up 2.5 percent from five years ago.</p>	<p>2009 → 2013</p> <p><b>2. Tree Cover</b> Forested lands still make up the largest land-cover category in Berks County.</p>	<p>2009 → 2013</p> <p><b>3. Impervious Cover</b> Impervious cover has remained the same but municipalities have started to fix stormwater issues.</p>	<p>2009 → 2013</p> <p><b>4. Multi-Municipal Cooperation</b> Multi-municipal cooperation and planning is on the rise.</p>	<p>2009 → 2013</p> <p><b>5. Outdoor Recreation Areas</b> Outdoor recreation areas have increased slightly, but more opportunities exist for municipalities.</p>

## KEEP UP THE GOOD WORK!

### 72% of Berks is Covered by a Source Water Protection Plan

In 2009, 38% of the county on public water systems were covered by a Source Water Protection Plan. Safe drinking water starts at the source. Before you can protect your drinking water, you need to know where it comes from. The first step in developing a source water protection plan is identifying the source area for the water supply. Local organizations work closely with the water supplier and community representatives to identify ways of protecting these areas. By identifying potential sources of contamination, developing protective management strategies, and planning for emergencies, the plan minimizes threats to public health by keeping harmful contaminants out of the water supply.

### Electronic Recycling has Increased

Because of technological advances that have turned every household into an electronics haven, many people are asking how they can recycle or properly dispose of their old or unusable electronic devices. Many consumer electronic products contain heavy metals such as lead, cadmium and mercury as well as other materials that are better kept out of the environment. The Solid Waste Authority has an Electronic Recycling Center where you can drop off your electronics for free or a small fee. Since opening in July 2010, 20,200 residents dropped off 2,134,000 pounds of electronic waste. Visit [www.countyofberks.com/swa](http://www.countyofberks.com/swa) for hours of operation.

- Air toxic levels measured at Reading Airport and at Kutztown continue to be within EPA and PA DEP guidelines and are consistent with levels measured elsewhere in PA. Inhalation cancer and non-cancer risks remain below EPA "action levels". The announced shutdown of the Exide lead smelter and the Titus Station coal power plant are expected to further improve ambient air toxic levels in Berks.
- Less electricity is generated with coal and oil while gas, renewables and nuclear are rising.



"When I clean my house, all of the products I use are eco-friendly - from the dish detergent to the all-purpose cleaner. I feel that it is healthier for me and my family."  
- Susan F. from Reading

You Can....

### HELP IMPROVE OUR GRADE

- **WATER**  
Practice environmentally friendly lawn and garden care. Commit to ONLY using organic fertilizers and avoid pesticides.
- **ENERGY**  
Unplug! Make a routine of unplugging TVs, computers and other appliances when you are not using them. You'll soon see a difference in your electric bill.
- **WASTE**  
Utilize the Berks County Solid Waste Authority special waste collections and electronics recycling center for your waste such as medications, hazardous materials and electronics.
- **LAND**  
If your property includes forested areas, try to keep some or all of those areas intact; if your property lacks trees, plant trees!
- **AIR**  
Modify your transportation and use of gas powered tools like lawn mowers. Your car is a significant source of air pollution, so switching to a more gas-efficient vehicle will be a big help.

## NEEDS MORE WORK!

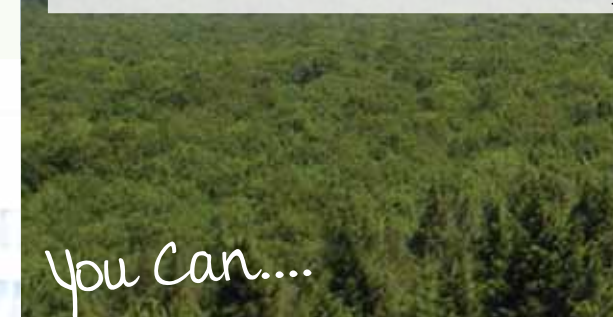
### Water Quality in Berks has Improved

The Berks Conservancy and many partners have worked hard to improve water quality in Berks County. By installing Best Management Practices, such as planting trees along streams and installing fences on farms to prevent cows from entering, the streams in Berks County have improved. Water suppliers are also providing resources to aid in restoring the quality of the county's streams and rivers. It is these partnerships and the efforts of individuals around their homes that will help to improve Berks County's impaired streams. A good way to get involved is to volunteer for special tree planting events and river cleanup days. With 1,366 miles of streams in Berks County, these restoration projects are important for the future health of our water.

### Helping to Reduce the Impact of Impervious Cover

Stormwater runoff is generated when precipitation from rain and snowmelt flows over land or impervious surfaces (paved streets, parking lots, and building rooftops) and does not percolate into the ground. As the runoff travels, it accumulates debris, chemicals, sediment and other pollutants that adversely affect water quality. Stormwater runoff can be controlled through the use of best management practices (BMPs). Several new and innovative partnerships have developed to help address stormwater issues. The Berks County MS4 (Municipal Separate Storm Sewer Systems) Cooperative Education Program and the Berks County Water & Sewer Authority educate citizens, municipalities, and related authorities on effective and sustainable stormwater BMPs for our community.

- Although Berks County has two "lead nonattainment" areas (Lyons area around East Penn Mfg./Deka lead smelter and Laureldale area around Exide lead smelter) the ambient lead levels at the Reading Airport and at Kutztown University are well below the lead standard. In addition, lead levels measured in Lyons have been below the lead standard. Although lead levels in Laureldale have been above the standard, the recent shutdown of the Exide lead smelter should improve lead levels there.
- In the past five years in Berks, eight new commercial construction projects are considered "green construction" including schools, and nonprofit organizations - for a total of eighteen!



"There are so many opportunities in Berks County for outdoor recreation, such as hiking and biking. You don't need to travel far to enjoy nature and get outside with the kids!"  
- Frank S. from Spring Township

You Can....

### HELP IMPROVE OUR GRADE

- **WATER**  
Protect riparian buffers (streambank plantings). Don't mow to the edge of streambanks. Allow native vegetation to grow freely in at least a 10-foot strip along the bank to reduce erosion and filter out pollutants.
- **ENERGY**  
Making your home more energy efficient - such as installing insulation, replacing appliances with energy-star and planting trees around the home.
- **WASTE**  
Compost. It is a natural process that breaks down organic material into a organic fertilizer. By composting, you can reduce the amount of garbage you send to the landfill.
- **LAND**  
Get involved in your local government. Advocate for more environmentally friendly practices regarding land use, like creating parks and trails.
- **AIR**  
Talk to your legislators. Many of our current governmental regulations are not strong enough to address our air pollution problems. Citizens need to ask for better policies.

## C'MON BERKS, WORK HARDER!

### Berks Residents Travel More than Pennsylvania Average

Commuting to work is a common practice for most Americans and Berks County residents are no exception. Consumption of fossil fuel remains one of the easiest energy conservation items we can self regulate. We can control the amount of miles we travel on a daily, weekly or monthly basis in addition to the efficiency of the vehicles we drive. Since 2008, the PA average has steadily decreased, but for Berks County residents, the amount of travel has remained relatively the same. This effects the quality of air as well.

### Recycling Rate Decreased

Compared to 2008, tons of recyclables collected decreased 15%. Keep in mind that total waste generation was down also, but only 41% was recycled in 2012 compared to 56% in 2008. Make sure you know what items can be recycled, set up containers in your house or business for storage of recyclables, and know the municipal schedule for pick-ups (if that system is in place) or the location of other recycling centers throughout the County. Information on recycling can be found at [www.co.berks.pa.us/swa](http://www.co.berks.pa.us/swa). If your local trash collector doesn't provide recycling, change trash collectors.



"Recycling is a big part of our family, actually spearheaded from my children. They are the ones who remind me to recycle. It's part of who they are, learned from school and others."  
- Brenda T. from Exeter

You Can....

### HELP IMPROVE OUR GRADE

- **WATER**  
Never dump anything into storm drain inlets. Everything that enters the storm drain inlets ends up in the water. Don't dump oil, trash, leaves, pet waste or any other material into the inlets.
- **ENERGY**  
Green your commute to work or school. Start a carpool at work. Make several errands in one trip. Utilize the school bus for your children.
- **WASTE**  
Reduce waste you generate by reducing the number of disposable (i.e., throw-away) items you buy and use, and by recycling those materials that are accepted in your recycling program.
- **LAND**  
Advocate for and support the creation of more trails and bike lanes in Berks County so people have a safe and alternate mode of transportation.

