

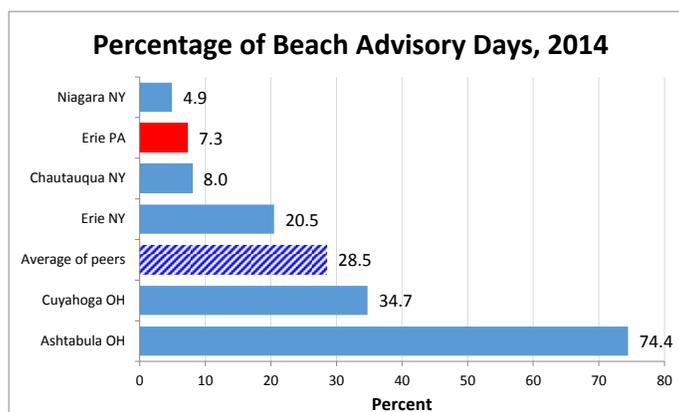
ENVIRONMENT INDICATORS

↑ Beach Advisory Days

Recent Performance

Erie's performance is strong compared to nearby neighbors.

In 2014, Erie beaches averaged just 7.3% beach closure days, compared to an average of over 28% for five of our neighbor counties on the Great Lakes. Erie's percentage has risen over the last few years from a low of 5.1%, but it continues to provide safe water for bathing at a higher rate than five nearby peers, with the exception of Niagara County NY in two of the last three years.



The Basics

This indicator reports the percentage of beach days in 2014 in which there were advisories for each county's beaches—days when the water may be risky for bathers due to the presences of unsafe levels of bacteria.

Why It's Important

Beach advisory days can serve as a proxy for water pollution off the coast of each county.

The Details

The variable is calculated as the number of beach days for which a beach had an advisory. The number of beach advisory days is added across all beaches in a county and calculated as a percentage of total days in the beach season.

All the Nitty-Gritty Details

The counties included have the following numbers of beaches: Erie PA: 13; Chautauqua NY: 6; Erie NY: 7; Niagara NY: 2; Ashtabula OH: 4; Cuyahoga NY: 19.

The Beaches Environmental Assessment and Coastal Health (BEACH) Act of 2000 authorizes EPA to provide grants to coastal and Great Lakes states, territories, and eligible tribes to monitor their coastal beaches for bacteria that indicate the possible presence of disease-causing pathogens and to notify the public when there is a potential risk to public health. The BEACH Act requires that recipients of those grants report their coastal beach monitoring and notification data to EPA. When monitoring results at swimming beaches show that levels of specific indicator bacteria in the water exceed applicable water quality standards, Pennsylvania officials issue a beach advisory, warning people of possible risks of swimming.

According to the EPA: “The number of beach days in the swimming season (based on swimming season length) is presented for each beach. If the beach had an action (1) the total number of action days and (2) the percentage of beach days the beach was under an action are also presented. Note: This report includes monitored and non-monitored beaches. An action can be based on a model or policy and not be a monitored beach. <http://ofmpub.epa.gov/apex/beacon2/f?p=133:13:0::::>”

A **swimming advisory** is posted if the E. coli concentration exceeds 235 cfu/100ml but is less than 1,000 cfu/100ml as an arithmetic average of 3 samples taken at a beach. Swimming is permitted and the public is advised of the potential risks. An advisory is lifted when the arithmetic average of 3 samples is less than 235 cfu/ml.

A **swimming restriction** is posted if the E. coli concentration equals or exceeds 1,000 cfu/100ml as an arithmetic average of 3 samples taken at a beach. Swimming is not allowed when a restriction is posted. A restriction is changed to an advisory when check samples result in an arithmetic average that is less than 1,000 cfu/100ml.

In 2014 ECDH, in cooperation with the Regional Science Consortium (RSC) at the Tom Ridge Environmental Center, Gannon University, Penn State Behrend and Presque Isle State Park, continued to develop a predictive model program specifically for Presque Isle. This program utilized historical data that included sample monitoring analysis results from 2008 – 2013, in addition to water quality data from three buoys deployed off of Presque Isle beaches. Also included was weather-related information, including wind direction and rainfall. The RSC also conducted qPCR analyses of the beaches waters. All these were used as beach management tools to make decisions on the appropriateness of **precautionary advisories**.

Subcategories

None.

Peer areas

Three counties east of Erie County PA in New York state (Chautauqua, Erie, and Niagara) and two west of us in Ohio (Ashtabula and Cuyahoga.) All are on Lake Erie except Niagara NY, which is on Lake Ontario.

Frequency

Annual.

Source

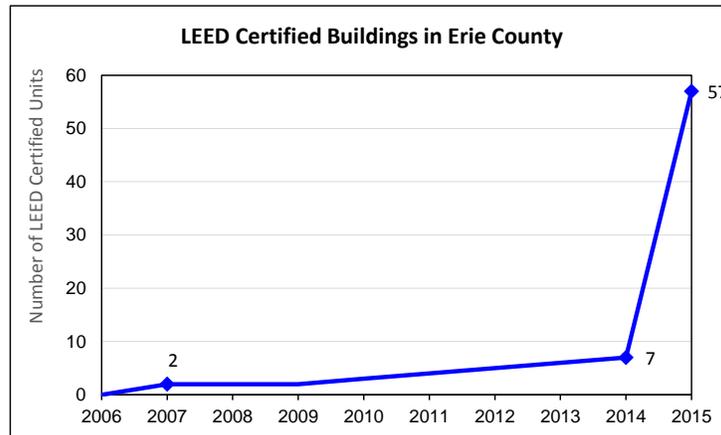
U.S. Environmental Protection Agency, *BEACON - Beach Advisory and Closing On-line Notification*:
<http://ofmpub.epa.gov/apex/beacon2/f?p=133:13:0::::>

Green Buildings

Recent Performance

This trend is better or improving.

Erie County had been slowly adding LEED certified units for the last few years. But in early 2015, all 50 units in the Arneman Place Apartment Complex became LEED certified, increasing Erie's numbers dramatically. And according to LEED records, another eight projects are currently in progress including projects by Erie Insurance, St. Vincent Health Center, Mercyhurst University, and the Palace Business Center.



The Basics

The U.S. Green Building Council (USGBC) developed the Leadership in Energy and Environmental Design (LEED) program. LEED is an internationally recognized green building certification system, providing third-party verification that a building or community was designed and built under specific environmental standards. This indicator shows the number of units (buildings, apartments...) that qualify for LEED certification at one of its levels.

Why It's Important

A community that pays attention to green issues in its construction practices will be one that reduces environmental problems over the long term, improving the local quality of life.

The Details

LEED is an internationally recognized green building certification system, providing third-party verification that a building was designed and built using strategies aimed at improving performance across all the metrics that matter most: energy savings, water efficiency, CO₂ emissions reduction, improved indoor environmental quality, and stewardship of resources and sensitivity to their impacts. Developed by the U.S. Green Building Council, LEED provides building owners and operators a concise framework for identifying and implementing practical and measurable green building design, construction, operations and maintenance solutions. And LEED certification can confer benefits and incentives such as tax rebates, increased asset value, decreased operating costs, and reduced environmental impact.

All the Nitty-Gritty Details

-LEED Overview: <http://www.usgbc.org/leed#overview>

-LEED rating system and criteria: <http://www.usgbc.org/leed#rating>

-LEED levels of certification: <http://www.usgbc.org/leed#certification>

Subcategories

According to the USGBC certification guide, "the LEED rating system offers four certification levels for new construction -- Certified, Silver, Gold and Platinum -- that correspond to the number of credits accrued in five green design categories: sustainable sites, water efficiency, energy and atmosphere, materials and resources and indoor environmental quality." To Learn about what each project needs to become a LEED certified project, go to <http://www.usgbc.org/cert-guide>.

LEED projects Erie County with higher certification levels:

- Erie Art Museum (2014): Gold
- PNC Bank Branch – Erie (2007): Silver
- PNC Bank Branch – Millcreek (2007): Silver
- Tom Ridge Environmental Center (2010): Silver
- Flagship City Apartments (2013): Silver

Frequency

Units are listed on the LEED rolls as they receive certification. EVS updates this indicator annually.

Source

- Leadership in Energy and Environmental Design (LEED): <http://www.usgbc.org/leed>
- LEED Projects Directory: <http://www.usgbc.org/projects>

Other Related Information

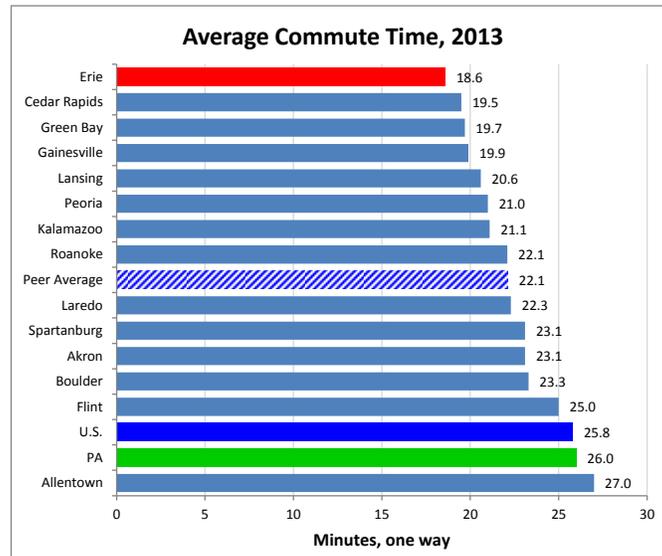
- LEED in Erie County: <http://www.greeneriepa.org/leed-certification.html>

Commute Time

Recent Performance

This pattern is good.

Erie County does quite well in terms of commuting times compared to all other benchmark areas. In 2013, the average one-way commute in Erie was 18.6 minutes, approximately 28% less than the 25.8 minutes nationwide, and the 26.0 minute average for Pennsylvania. It was even 16% less than the 22.1 minute average for the 13 peer areas. To put this in perspective, compared to the U.S. average, Erie commuters save about 14.2 minutes per day, or about 62.4 hours per year! That's the equivalent of a week and a half of extra vacation time.



The Basics

This indicator tells the average (mean) one-way commute time for all those in the area that work outside their home. A lower number is preferred.

Why It's Important

Shorter commute times imply a closer match-up between people's residences and their workplaces. From the environmental viewpoint, that means less need to use fuel, and fewer emissions.

The Details

These data come from the U.S. Census Bureau's American Community Survey. Their data are based on a sample and are subject to sampling variability. Mean travel time to work (in minutes) is the average travel time that workers usually took to get from home to work (one way), for workers 16 years old and over who did not work at home. The travel time includes time spent waiting for public transportation, picking up passengers and carpools, and time spent in other activities related to getting to work. Mean travel time is rounded to the nearest tenth of a minute.

All the Nitty-Gritty Details

American Community Survey documentation:

http://www.census.gov/acs/www/data_documentation/documentation_main/

American Community Survey Subject Definitions:

http://www.census.gov/acs/www/Downloads/data_documentation/SubjectDefinitions/2013_ACSSubjectDefinitions.pdf

Subcategories

None, but the ACS source presents data on the percents of commuters who spend various amounts of time commuting (less than 10 minutes, 10 to 14 minutes....60 minutes or more), and also the typical times they leave for work in the morning.

Frequency

Annual

Source

[American Community Survey](#) from the U.S. Census Bureau. One-year estimates. Table S0801: Commuting Characteristics by Sex.

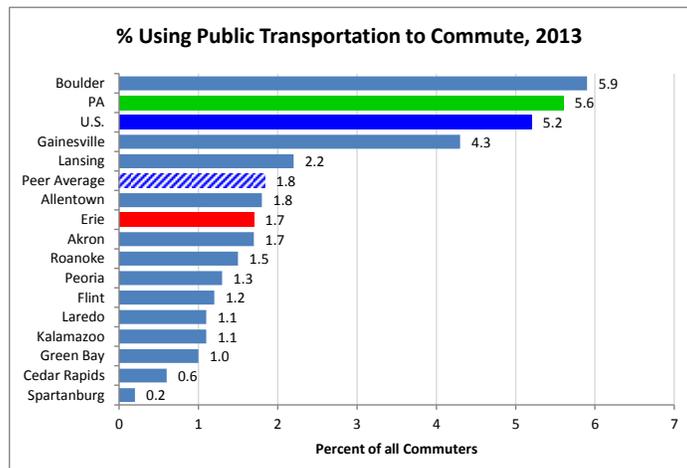


Percent of Commuters who use Public Transportation

Recent Performance

This pattern is negative or needs improvement.

Erie County commuters use public transportation to about the same degree as the rest of the peer areas—with the clear exception of Boulder Colorado. But Erie and 12 of the 13 peers use public transportation significantly less than the state of Pennsylvania or the nation. In fact, Erie and its peers (excluding Boulder) averaged only about 1.5% of their commuters using public transportation in 2013 compared to 5.2% nationwide. Of course, this partially reflects the fact that larger metro areas tend to have the greater population densities that better support public transportation infrastructure. Most of the peer areas are in the same boat as Erie in that regard. But Boulder manages to have a highly-used public transportation system, nevertheless.



The Basics

This indicator reports the percentage of workers over 16 years of age who work outside their homes who use public transportation as their primary means of commuting. A higher number is preferred.

Why It's Important

Greater use of public transportation may mean more people per vehicle on average and greater fuel efficiency, resulting in lower emissions per capita than use of individual private vehicles.

The Details

These data come from the U.S. Census Bureau's American Community Survey. Their data are based on a sample and are subject to sampling variability.

"Public transportation" includes bus or trolley bus, streetcar or trolley car, subway or elevated, railroad, or ferryboat. It excludes taxicabs.

All the Nitty-Gritty Details

American Community Survey documentation:

http://www.census.gov/acs/www/data_documentation/documentation_main/

American Community Survey Subject Definitions:

http://www.census.gov/acs/www/Downloads/data_documentation/SubjectDefinitions/2013_ACSSubjectDefinitions.pdf

Subcategories

None, but the ACS source presents data on the percents of commuters who use various other means of commuting including: drove alone, carpoled, walked, used a bicycle, took a taxicab, motorcycle, or other means.

Frequency

Annual

Source

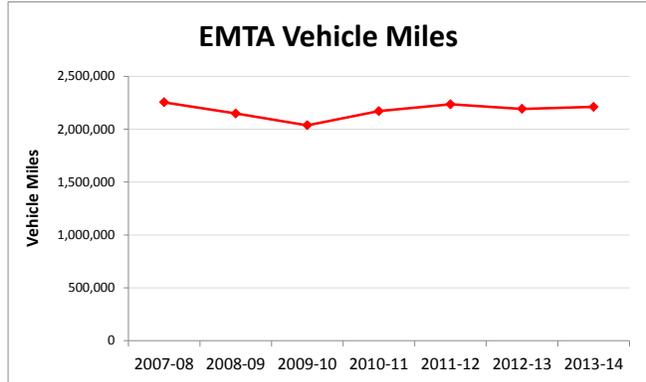
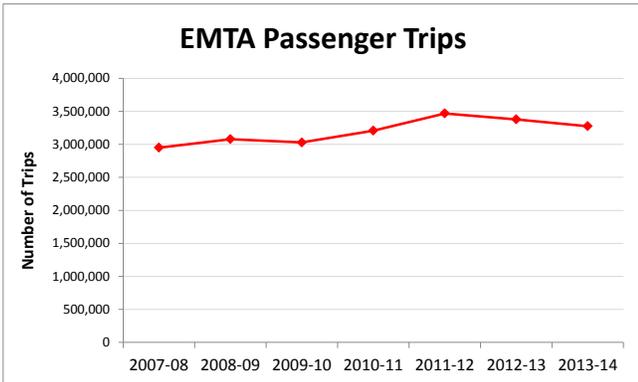
[American Community Survey](#) from the U.S. Census Bureau. One-year estimates. Table S0801: Commuting Characteristics by Sex.

Public Transit

Recent Performance

This trend is mixed or inconclusive.

Ridership in the Erie Metropolitan Transit Authority (EMTA) vehicles has fallen a bit in the last two years, although vehicle miles traveled has stayed relatively flat. Total ridership is up about 11% over 2007 numbers.



The Basics

These indicators measure the number of one-way passenger trips taken on the Erie Metropolitan Transit Authority (EMTA) vehicles, and the total number of “revenue vehicle miles”—the miles travelled by EMTA vehicles when they are available for passenger service. This includes both buses and paratransit vehicles (the LIFT and Bayliner Trolley). Higher numbers indicate more use of public transit, of course.

Why It’s Important

Public transit has the potential to reduce fuel usage and emissions per passenger mile or per passenger trip. That clearly benefits the local—and global—environment. So long as public transit trips substitute for trips in personal motor vehicles, they should be a benefit to the environment.

The Details

Revenue Vehicle Miles: the total amount of distance calculated in miles during which vehicles are in service and available for public use in fixed-route public transportation service and paratransit service. The term does not include deadhead miles.

Total Passengers: the total of all originating passengers plus transfer passengers carried on fixed-route public transportation service and paratransit service.

Subcategories

None.

Frequency

Annual.

Source

Pennsylvania Department of Transportation, *Pennsylvania Public Transportation Performance Report – Fiscal Year 2013-14*. April 30, 2015.

<ftp://ftp.dot.state.pa.us/public/Bureaus/PublicTransportation/GeneralInformation/BPTARWEB.pdf>

Additional Studies and Research

-Erie Metropolitan Transit Authority (EMTA) Transit Performance Review, pages 38-44 of *Pennsylvania Public Transportation Performance Report – Fiscal Year 2013-14*.

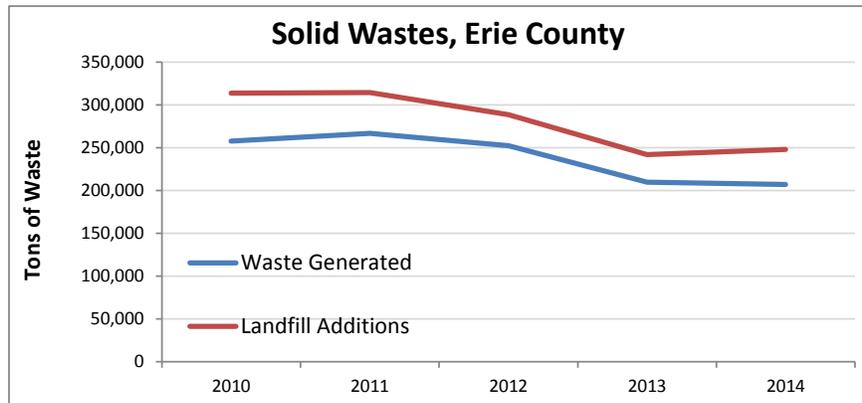
<ftp://ftp.dot.state.pa.us/public/Bureaus/PublicTransportation/GeneralInformation/BPTARWEB.pdf>

Solid Wastes

Recent Performance

This trend is better or improving.

Erie County has been generating less solid waste in recent years. Most of our garbage stays in the county, and the county's landfill (Lake View Landfill) actually accepts more solid waste each year than is generated locally. Erie County wastes, in total, amount to about 82%-87% of additions to the landfill in recent years, with most of the imported trash coming from Crawford and Mercer counties.



The Basics

This indicator reports the amount of solid waste generated by Erie County residents and organizations, as well as the amount of additions to the Erie County Landfill from both Erie County and outside sources. Smaller amounts of waste generated and accepted are better for Erie's environment, of course.

Why It's Important

Would we rather live with more or less waste in our backyard? One way to improve our quality of life would be to generate less garbage that we need to store in our environment.

The Details

These data do not include wastes shipped outside Pennsylvania, and they do not include wastes that were recycled. For the latter, see the EVS indicator "Recyclables per Capita."

Subcategories

Waste generated

The DEP's database includes data for the following categories: municipal, residual, sewage sludge, infectious, construction, ash residual, and asbestos, although the Erie Vital Signs doesn't include those details.

Landfill Receipts

The DEP's database includes data on the geographic source of waste coming into PA landfills by county (of PA) or state (if from outside PA), although the Erie Vital Signs doesn't include those details.

Frequency

Annual, although the DEP also provides quarterly data for landfill receipts.

Source

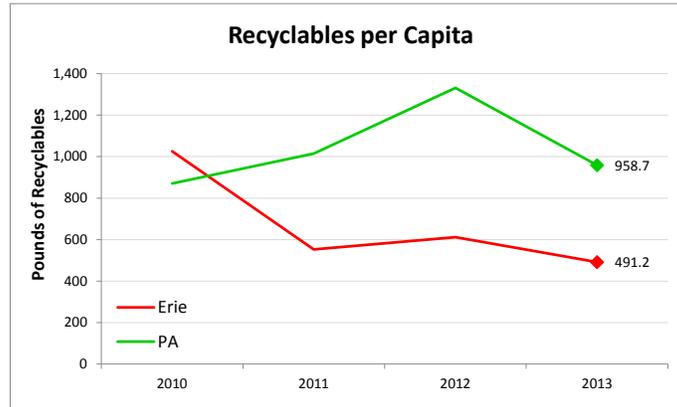
PA Department of Environmental Protection, *Municipal Waste Disposal Information for: a) County of Generation, and b) Pennsylvania Municipal Waste Disposal Facility*,
<http://www.portal.state.pa.us/portal/server.pt?open=514&objID=589667&mode=2>

Recyclables per Capita

Recent Performance

This trend is negative or needs improvement.

After a strong showing in 2010, recyclables in Erie County have fallen to a level near 500 pounds per year, not much more than half the Pennsylvania average.



The Basics

This indicator reports the amount of recyclables per capita, in pounds. A higher number is better.

Why It's Important

Recovering usable material from trash, which would otherwise simply add to landfills, is clearly a planet-friendly activity. A larger amount of recyclables per capita is a good thing, presuming that it means a lower amount going into landfills and not just an increase in the total amount of refuse.

The Details

Statewide recycling in Pennsylvania began in 1988 with the Municipal Waste Planning Recycling and Waste Reduction Act ([Act 101](#)) that requires larger municipalities to recycle. The Act established a \$2-per-ton fee on all waste disposed at municipal waste landfills and waste-to-energy facilities established grants for local collection programs, public education, materials processing and composting facilities, equipment and technical training. Act 101 also requires each county to develop county plans to manage its own wastes and assure a minimum of ten years disposal capacity. Each year, the counties report countywide municipal waste generation and recycling data to the Pennsylvania Department of Environmental Protection (DEP) for use in compiling a statewide analysis of recycling and its benefits. Counties are required to submit plan revisions to DEP by the time their remaining disposal capacity is reduced to three years. All plans are submitted to DEP for approval.

This indicator uses the tonnage data from the DEP reports, divided by population data from the U.S. Bureau of Economic Analysis to get recyclables per capita. Per capita numbers are used to allow comparison between Erie and the much-larger state of PA.

Subcategories

None, although the underlying DEP database provides information on 60 separate categories of recyclables.

Frequency

Annual

Source

Recyclables: Pennsylvania Department of Environmental Protection, *County Recycling Data*.

<http://www.portal.state.pa.us/portal/server.pt?open=512&objID=14060&PageID=589559&mode=2>

Population: U.S. Bureau of Economic Analysis, Table SA1, SA1 - Personal Income Summary: Personal Income, Population, Per Capita Personal Income

<http://www.bea.gov/iTable/iTable.cfm?reqid=70&step=1&isuri=1&acrdn=4#reqid=70&step=29&isuri=1&7022=21&7023=0&7024=non-industry&7001=421&7090=70>

Other Related Data

Pennsylvania Department of Environmental Protection, *County and Municipal Programs Act 101 Reporting*:

http://www.portal.state.pa.us/portal/server.pt/community/recycling/14060/county_and_municipal_programs_act_101_reporting/589556

Pennsylvania Department of Environmental Protection, Benefits of Recycling:

http://www.portal.state.pa.us/portal/server.pt/community/benefits_of_recycling/14061

