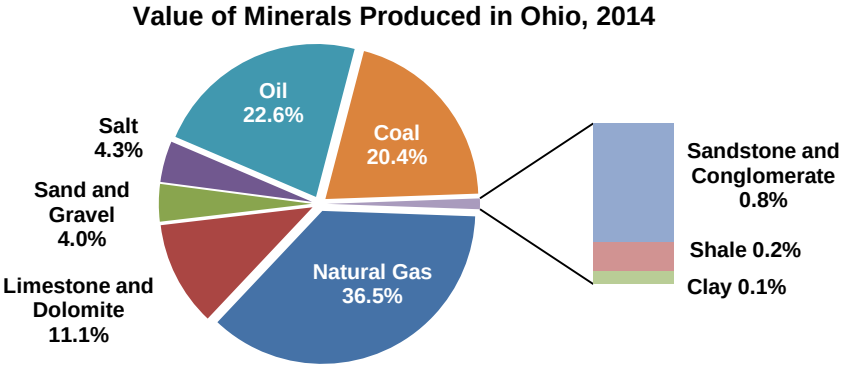
Natural Gas and Oil Surpassed Coal as Ohio's Most Valuable Mineral Resources in 2014

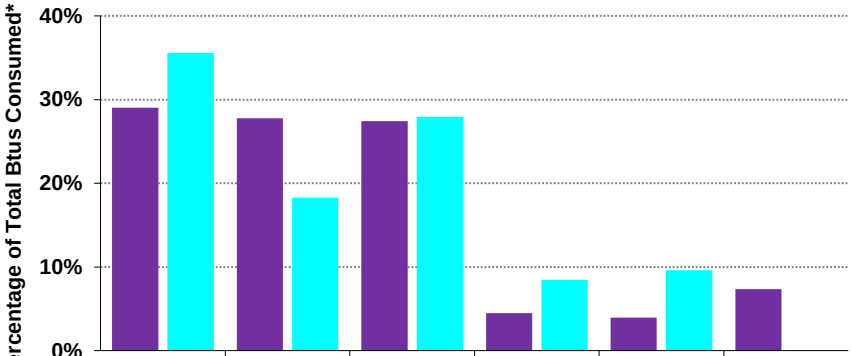


Source: Ohio Department of Natural Resources

- In 2014, natural gas and oil surpassed coal as Ohio's most valuable mineral resources for the first time since 2009. Of the $5.32 billion in total mineral value for 2014, natural gas provided the largest share at $1.94 billion (36.5%), followed by oil ($1.20 billion, 22.6%) and coal ($1.08 billion, 20.4%). Limestone and dolomite ranked 4th at $590.0 million (11.1%). In 2009, Ohio's three most valuable mineral resources were coal ($1.10 billion, 42.2% of the 2009 total), limestone and dolomite ($391.4 million, 14.9%) and natural gas ($387.2 million, 14.8%). Oil ranked 4th ($278.3 million, 10.6%).
- The total value of mineral resources extracted in Ohio more than doubled between 2009 ($2.62 billion) and 2014 ($5.32 billion) due primarily to growth in natural gas and oil production.
- Carroll County was the top oil and gas producing county in Ohio in 2014, accounting for 161.8 million mcf of natural gas (31.6% of the state's total) and 4.14 million barrels of oil (27.5% of the state's total). Altogether, gas production occurred in a total of 45 counties and oil production in 55 counties. Almost all of these counties are located above the Marcellus and Utica shale formations in the eastern half of the state.
- In total, 14 counties across the state produced coal in 2014, of which five produced more than 1 million tons. Belmont County was the top coal producing county, accounting for more than 53% (11.7 million tons) of the state's total production of nearly 22.0 million tons.
- For industrial minerals, Wyandot County had the most sales of limestone and dolomite in 2014 (6.1 million tons), while Portage County led in sales of sand and gravel (3.5 million tons). Geauga County led in sales of sandstone and conglomerate, Greene County led in sales of clay, and Cuyahoga County led in sales of both shale and salt.

Petroleum Is Ohio's Largest Energy Source, but Ohio Remains Strongly Reliant on Coal

Ohio and U.S. Energy Consumption by Source, 2014



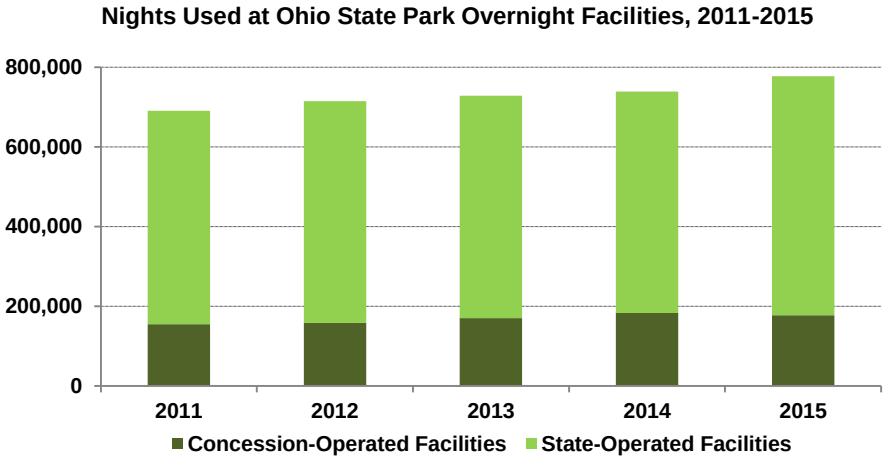
	Petroleum	Coal	Natural gas	Nuclear	Renewable Energy	Interstate Flow
Ohio	29.0%	27.8%	27.4%	4.5%	4.0%	7.3%
U.S.	35.6%	18.3%	27.9%	8.5%	9.6%	0.0%

*A Btu (British thermal unit) is a heat unit with which energy consumption is measured. One Btu will raise the temperature of one pound of water by one degree Fahrenheit.

Source: United States Energy Information Administration

- In 2014, petroleum was the largest source of energy consumed in Ohio (29.0%) and in the U.S. (35.6%). Petroleum gained its top ranking in Ohio in 2012 for the first time since the U.S. Energy Information Administration began recordkeeping in 1960. Prior to 2012, coal was the primary source of energy in Ohio.
- Ohio coal consumption declined by 28.6% from 2005 to 2014 but it remained as the 2nd largest energy source, accounting for 27.8% of Ohio's total energy consumption in 2014. It also remained significantly higher than the national average of 18.3% for that year.
- Natural gas ranked as a close 3rd among the energy sources consumed in Ohio in 2014, at 27.4%. It was the 2nd largest source in the U.S., at 27.9% of consumption. Renewable sources made up 4.0% of energy consumed in Ohio in 2014; nationally, these sources made up 9.6%. The remaining 7.3% of Ohio's energy consumption came from sources in other U.S. states.
- Ohio was the 7th largest energy user among the 50 states in 2014, due primarily to Ohio's relatively large population. On a per capita basis, Ohio ranked 21st in the nation in energy consumption.
- Ohio's industrial base requires significant energy resources. Overall energy usage by Ohio's industrial customers tied for 6th among states in 2014, and ranked 3rd in electricity usage behind Texas and California.

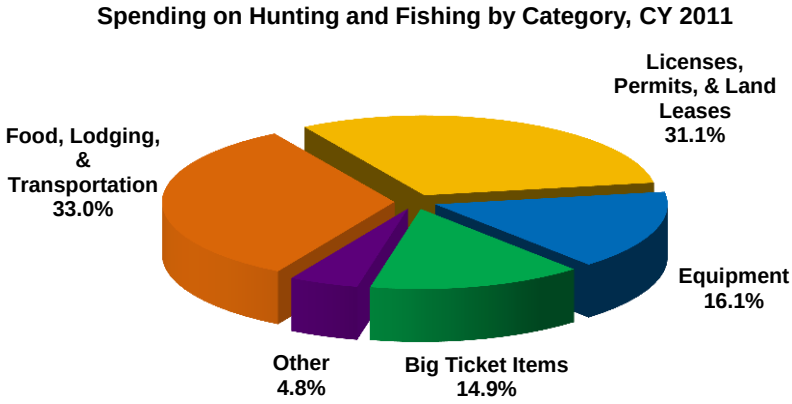
Overnight Visits to Ohio State Parks Increase Four Years in a Row



Source: Ohio Department of Natural Resources

- The number of uses of overnight facilities in Ohio's state parks has increased in each of the past four years. Overall, it increased 12.6% from 690,581 nights in calendar year (CY) 2011 to 777,575 nights in CY 2015. The largest annual increase during this period occurred in CY 2015, when overnight uses increased 44,398 nights (5.2%).
- Of the total nights used in 2015, 600,212 (77.2%) were in state-operated campgrounds, cabins, getaway rentals, or group lodges, while 177,363 (22.8%) were in concession-operated lodges and cabins.
- Camping remained the most popular form of overnight stay in Ohio's state parks in 2015, comprising 70.4% of all nights used. Lodges made up 18.4% of nights used, cabins comprised 9.6%, and getaway rentals comprised 1.6%.
- The number of overnight stays in state park lodges has increased the most since 2011 (16.7%). The number of overnight stays at state park campgrounds had the second highest increase over that period (13.1%).
- In FY 2016, $56.3 million was spent on state park operations. Of this amount, 53.5% was funded by the GRF and the remainder was funded by fees, charges, and other sources.
- In FY 2016, state parks generated $27.8 million in revenue, a 2.8% increase over FY 2015. The largest source of revenue was camping fees (42.5%), followed by self-operated retail (13.2%), cottage and cabin rentals (12.1%), dock permits (9.1%), and concession fees (5.1%).

Spending on Hunting and Fishing in Ohio Totaled $2.77 Billion in 2011



Source: U.S. Fish and Wildlife Service

- Hunters and anglers spent $2.77 billion in 2011 pursuing wild game and sport fish in Ohio. Of this amount, the largest portion was spent on trip costs including food, lodging, and transportation. In all, trip costs totaled $915.3 million (33.0%).
- Licenses, permits, and land leases accounted for $862.6 million (31.1%) of the total spent on fishing and hunting in 2011. This was followed by $445.9 million (16.1%) spent on equipment, and $413.7 million (14.9%) spent on big ticket items such as boats, trucks, and campers. Miscellaneous spending on auxiliary equipment, books, or other related items amounted to $134.4 million (4.8%).
- Spending on items, services, and trip costs primarily related to fishing accounted for 64.6% ($1.79 billion) of the total. Primarily hunting-related items, services, and trip costs accounted for 27.2% ($753.0 million). The remaining 8.2% ($227.0 million) was spent on items, services, or other costs related to both hunting and fishing.
- A total of 1.56 million people aged 16 or older participated in hunting and fishing in Ohio in 2011. Ohio residents accounted for 1.44 million (92.3%), while nonresident hunters and anglers totaled about 122,000 (7.7%).
- Anglers spent 16.2 million days fishing in Ohio in 2011. About 14 million of these days (86.4%) were spent fishing in inland lakes, ponds, rivers, and streams and about 2.2 million days (13.6%) were spent fishing on Lake Erie. Hunter days in the field totaled approximately 9.0 million, the majority of which were spent hunting deer.

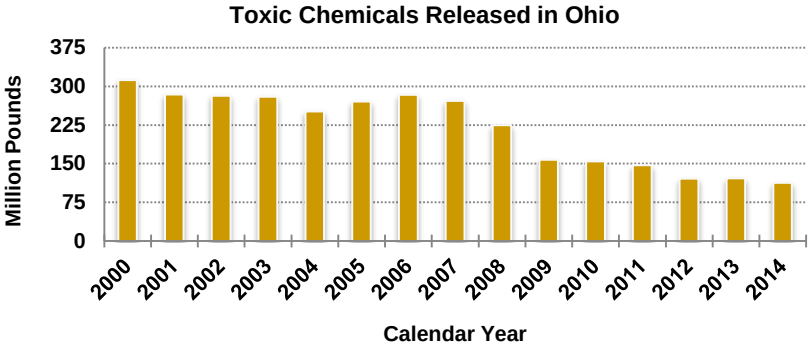
Ohio's 4,894 Public Water Systems Serve 11 Million People Daily

Ohio's Public Water Systems by Category, 2016				
Category	Surface Water	Ground Water	Total Systems	Population Served Daily
Community	297	947	1,244	10,418,601
Nontransient Noncommunity	10	718	728	209,917
Transient Noncommunity	11	2,911	2,922	405,885
Total	**318**	**4,576**	**4,894**	**11,034,403**

Source: Ohio Environmental Protection Agency

- Ohio's 4,894 public water systems (PWS) provide drinking water to a total of 11 million people daily. Approximately 30% of that population is served by Cleveland, Columbus, and Cincinnati PWS. PWS are regulated by the Ohio Environmental Protection Agency (Ohio EPA).
- There are three types of PWS in Ohio:
  - *Community*: Serves at least 15 water connections used by year-round residents or regularly serves at least 25 year-round residents. Examples include cities, mobile home parks, and nursing homes.
  - *Nontransient noncommunity*: Serves at least 25 of the same persons over six months per year. Examples include schools, businesses, and factories.
  - *Transient noncommunity*: Serves at least 25 different persons over 60 days per year. Examples include parks, highway rest stops, and gas stations.
- Of the 4,894 PWS in Ohio, 4,576 (93.5%) use ground water (wells) which serve 31% of the population and the remaining 318 (6.5%) use surface water (lakes or rivers) which serve 69% of the population.
- In 2015, 4,128 (84.3%) PWS were in compliance with applicable federal Safe Drinking Water requirements. The remaining 766 (15.7%) recorded one or more compliance violations for a total of 1,467 violations of the following:
  - *Monitoring*: Failure to monitor, verify, or report contaminant levels (924/62.9%).
  - *Maximum Contaminant Level*: Failure to notify public, monitor, and correct contaminant problems (395/26.9%).
  - *Consumer Notification*: Failure to provide consumers required annual water quality report (126/8.6%).
  - *Treatment Techniques*: Failure to use established techniques to control unacceptable levels of certain contaminants (22/1.5%).

Ohio's Toxic Chemical Releases Decreased by 63.7% Over Past 15 Years



Source: U.S. Environmental Protection Agency

- The amount of toxic chemicals released or disposed of in Ohio, as reported in the Toxic Release Inventory (TRI), declined from 311.9 million pounds in 2000 to 113.3 million pounds in 2014, a decline of 63.7% during this period.
- Three industries – electric utilities (33.8 million pounds), chemicals (28.9 million pounds), and primary metals (24.3 million pounds) – were responsible for 76.7% of Ohio's total releases in 2014.
- Three chemicals – zinc compounds (15.3 million pounds), sulfuric acid (12.3 million pounds), and hydrochloric acid (10.4 million pounds) – were responsible for 33.6% of Ohio's total releases in 2014.
- Ohio ranked 8th nationally in total releases in 2014. Alaska released the largest amount of toxic chemicals (1.2 billion pounds) while Vermont released the least (0.3 million pounds). As seen in the table below, Ohio ranked above all neighboring states except Indiana.
- Through TRI, a database to which facilities are required to report the release of toxic chemicals, the U.S. Environmental Protection Agency tracks the release of more than 650 specific toxic chemicals to air, water, and land. In 2014, 1,373 Ohio facilities reported toxic chemical releases.

Toxic Chemical Release Rankings for Ohio and Neighboring States, 2014

State	National Rank	Toxic Releases (Pounds)
Indiana	5	157,944,886
Ohio	**8**	**113,296,460**
Pennsylvania	11	84,927,802
Kentucky	13	71,169,665
Michigan	19	61,201,621
West Virginia	26	36,208,292