Ohio Grades

Aviation **C-**	Bridges **C+**	Dams **C-**	Drinking Water **D+**
Energy **C-**	Hazardous Waste **C-**	Inland Waterways **D**	Levees **C-**
Ports **C+**	Public Parks **C+**	Rail **B-**	Roads **D+**
Schools **C**	Solid Waste **B-**	Stormwater **D+**	Transit **C-**
Wastewater **C-**			

C **OVERALL GPA**

About the Grades

The 2025 Report Card for Ohio's Infrastructure was written by a committee of more than 50 civil engineers across Ohio who volunteered their time to collect and analyze data, prepare and review their findings and present their conclusions. The committee worked with staff from ASCE National and ASCE's Committee on America's Infrastructure to provide a snapshot of our state's infrastructure, as it relates to us locally and on a national level. The Report Card Sections are graded based on the following eight criteria: capacity, condition, funding, future need, operation and maintenance, public safety, resilience and innovation. ASCE defines these grades as follows:

A	B	C	D	F
Exceptional, Fit for the Future	Good, Adequate for Now	Mediocre, Requires Attention	Poor, At Risk	Failing/ Critical, Unfit for Purpose

Solutions to Raise the Grade

1 INVESTMENT

Increased investment is needed across all infrastructure sectors to address maintenance backlogs, modernize aging systems, and meet future demands. This includes expanding grant opportunities for systems such as **aviation** and **inland waterways**, and securing sustainable state and federal funding streams for **roads**, **bridges**, **rail**, and **transit**. Long-term funding commitments are also essential for community-serving assets like **public parks**. The examples provided reflect just a portion of the investments needed across the full range of infrastructure categories.

2 SAFETY

Ensuring safety is a fundamental priority across all infrastructure systems. This includes, for example, increasing inspection capacity for **dams** and **levees**, conducting statewide assessments to identify and prioritize **school** safety retrofits, and accelerating the replacement of lead service lines in **drinking water** systems. Adopting a Safe System Approach for **roadway** design and strengthening rail safety through at-grade crossing improvements and technology upgrades are additional actions that illustrate the need for a comprehensive, system-wide focus on safety.

3 RESILIENCE

Ohio must accelerate efforts to improve the resilience of its infrastructure to withstand climate-related threats and other hazards. This includes investing in grid modernization and expanding the use of flood modeling tools to inform the design and operation of systems such as **energy**, **stormwater**, **dams**, and **levees**. Resilience strategies should be integrated into planning and investment decisions across all categories.

4 TECHNOLOGY

Integrating new and emerging technologies across infrastructure sectors can enhance efficiency, safety, and environmental performance. This includes phasing in improved disposal technologies for **hazardous** and **solid waste**, deploying wayside detection systems for rail, and advancing intermodal logistics and cargo handling systems at **ports**. These examples highlight the broader need to support innovation across Ohio's infrastructure networks.

5 SYSTEM CAPACITY

Infrastructure systems across the state must be designed and upgraded to meet current and future demand, accommodate changing usage patterns, and support economic growth. This includes ensuring **roads** and bridges can handle evolving transportation needs and freight **movement** and expanding capacity at **wastewater** treatment facilities to maintain reliable service and meet regulatory requirements. These examples reflect the broader need to enhance system capacity across a wide range of infrastructure categories.

About ASCE-Ohio

The Ohio Council was organized in 1969 to focus statewide attention on issues of interest and concern to the approximately, 3,300 ASCE members in Ohio. There are six local Sections in Ohio – Akron-Canton, Central Ohio, Cincinnati, Dayton, and Toledo. Each has representation on the Ohio Council in proportion to its membership. Each Local Section has one delegate for each full one hundred assigned members, with a minimum of two delegates regardless of the number of members assigned. The Ohio Council meets twice annually, in spring and fall. The activities of the Ohio Council are financed by the Local Sections.

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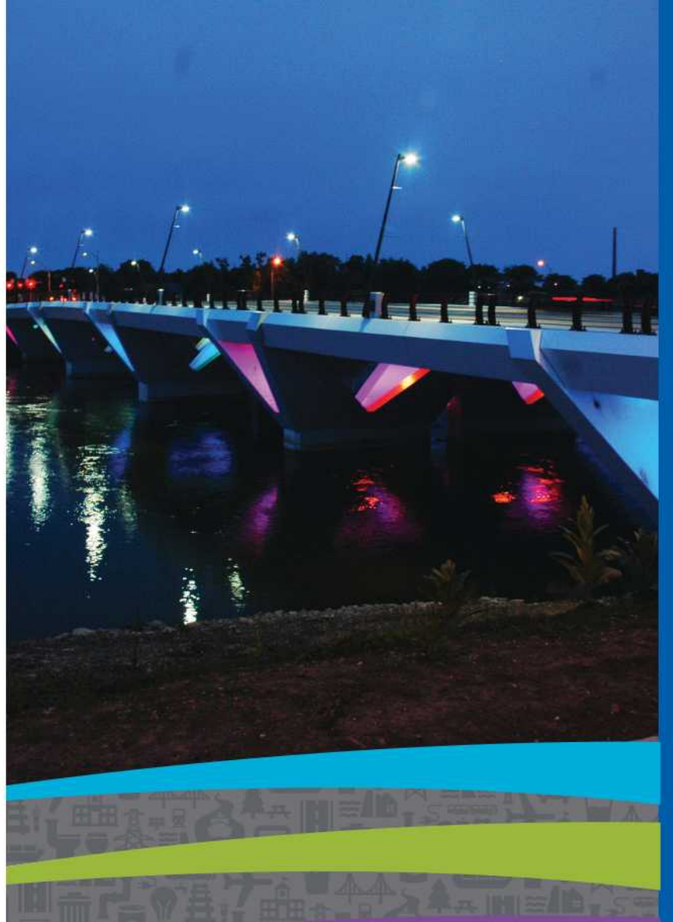
How You Can Get Involved

Get the full story behind this Report Card at www.infrastructurereportcard.org/Ohio.

Ask your elected leaders what they're doing to keep up with your neighborhood's infrastructure. Use your zip code to get your list of elected officials' at infrastructurereportcard.org/take-action.



2025

REPORT CARD FOR OHIO'S INFRASTRUCTURE

ASCE
AMERICAN SOCIETY OF CIVIL ENGINEERS

INFRASTRUCTURE MATTERS

The American Society of Civil Engineers (ASCE) Ohio Council of Local Sections has released its 2025 report card for Ohio's infrastructure, assessing seventeen infrastructure areas: Aviation, bridges, dams, drinking water, energy, hazardous waste, inland waterways, levees, parks, ports, rail, roads, schools, solid waste, stormwater, transit, and wastewater. Ohio's infrastructure earned an overall grade of C, indicating significant concerns across multiple sectors – particularly in condition and capacity, where systems are at an increased risk of failure.

Ohio's infrastructure is a driver of economic activity and quality of life and is critical for the state's public health and safety. Yet, much of the state's infrastructure is aging, underfunded, and at risk of not meeting future demand. In May 2025, Ohio voters approved a constitutional amendment to provide funding through the State Capital Improvement Program (SCIP) to allow the state government to issue $2.5 billion in general obligation bonds over ten years, with no more than $250 million a year, for use by local governments to pay for public infrastructure projects. SCIP typically goes to funding infrastructure projects like bridges, roads, water systems and waste facilities. This funding commitment demonstrates public recognition of the urgent need to invest in infrastructure.

This report card highlights mixed performance across sectors:

- Some of the state's privately owned infrastructure such as electric utilities and rail have benefited from increased investment.
- Public infrastructure, including roads, ports, inland waterways, airports, and many other types of public infrastructure continue to face substantial funding gaps, despite increased investments through the Infrastructure Investments and Jobs Act (IIJA).
- Many assets, including most of Ohio's bridges, dams, levees, drinking water distribution systems and ports, are approaching or have exceeded their design life. For example:
  - Ohio's high-hazard dams average 69 years in age and need approximately $1.06 billion for rehabilitating all of them at current cost.
  - Levee systems provide flood risk reduction for more than 165,000 people and $37 billion in property but are nearly 50 years old and in need of risk assessments.
  - Funding for operation and maintenance of park land is inadequate. For example, Cuyahoga Valley National Park has deferred maintenance and repairs totaling $162 million.
- Water quality remains a critical concern. Ohio relies heavily on surface water from Lake Erie and creeks and rivers. Protecting Ohio's water resources by managing stormwater runoff and improving water quality through ongoing investment in wastewater infrastructure is a high priority.
- Ohio roadways and bridges carry the third highest freight volume in the U.S. and accommodate the fifth highest volume of vehicular traffic. Surface transportation, rail, ports, and inland waterways are critical for safely and efficiently moving goods, particularly in sectors such as manufacturing, agriculture and mining. While currently meeting the needs within the state, continued investment is needed to meet future demand, expand the local economy and ensure equitable investment across regions and industries.
- Ohio's transit systems require immediate attention. Reliable transit connects people to jobs, schools, and services, and transit is critical for local businesses that rely on tourism and interstate connectivity.

Increased spending on Ohio's infrastructure will have both short-term and long-term benefits. In the short term, infrastructure will stimulate economic activity and create jobs within the state. In the long term, improvements in the state's infrastructure would benefit both businesses and consumers in the state by lowering the cost of materials, manufactured goods, and delivery of goods, reducing dependency on imports, improving the health of the workforce and enabling the movement of people within the state and strengthening the state's overall economy.

The 2025 Report Card on Ohio's Infrastructure

gave the state an overall G.P.A. of C. Ohio's civil engineers studied seventeen infrastructure categories. Of those sixteen, two infrastructure categories are in good condition, eleven are in mediocre condition, and four categories are in poor condition.

The good news is there are solutions to all these challenges, and we can raise the grades of Ohio's infrastructure. By learning more today about the conditions of the infrastructure you use every day, you too can help raise the grade.

Aviation
C-

As the birthplace of aviation, Ohio's airports are integral to the economy of the state and nation. The state's commercial-use airports generally provide sufficient airfield capacity and meet or exceed standards. The airfield pavements are generally in fair condition. Terminal and parking facilities have capacity or modernization issues, some of which are already being addressed or are in the planning stages. Pavement conditions are poor, and funding is inadequate to keep up with deferred maintenance. Ohio's numerous general aviation airports need attention and investment, and the availability and reliability of funding to provide this necessary investment is lacking. The grade for aviation in Ohio is a C-. Aviation was not graded in 2021.

Bridges
C+

Ohio is home to 45,234 bridges, with 59% in good condition, 35% fair, and 6% poor—earning a C+ grade. About 5% of bridges are posted for reduced loads, and 200 are closed. While counties can levy a $5 vehicle registration fee to fund local transportation improvements, adoption is inconsistent. A 2019 state gas tax increase provided a 30% revenue boost to local governments by FY2021, but growth has since flattened. Without changes, Ohio faces an annual shortfall of $877 million by 2040. Funding has not kept pace with inflation, limiting the ability of ODOT and local governments to make needed repairs and replacements. While a focus on preservation has slowed deterioration, it's not a long-term solution. Recent federal investment through the Infrastructure Investment and Jobs Act (IIJA) has spurred progress, but continued funding is essential to improve bridge conditions and keep pace with aging infrastructure.

Dams
C-

Ohio has approximately 1,442 state-regulated dams, including 417 classified as high-hazard, meaning failure could result in loss of life or major property damage. The Ohio Department of Natural Resources (ODNR) Dam Safety Program oversees dam regulation. Recent federal grants have helped fund engineering studies and construction for high-hazard dams, but eligibility requires an approved Emergency Action Plan (EAP). While many dam owners have created or updated EAPs, 24% of high-hazard dams still lack one. With an average age of 69 years, many dams need upgrades to meet modern standards. The estimated cost to rehabilitate all regulated dams in Ohio is $3.47 billion, including $1.06 billion for high-hazard dams. The Dam Safety Program also needs at least two additional engineers to carry out its responsibilities. Continued and increased funding, including through FEMA's National Dam Safety Program Assistance Grant, is essential to maintain and upgrade Ohio's aging dam infrastructure and improve public safety.

Drinking Water
D+

Recent assessments reveal that Ohio's water distribution systems have seen minimal progress since 2021. Despite investments from state and federal sources aimed at rectifying infrastructure shortcomings, the deterioration of these systems continues to outpace improvements. The persistent gaps in upgrading and maintaining water infrastructure are reflected in a stagnated overall score, and overall score remained the same compared to the last evaluation. This situation highlights the ongoing difficulties in implementing necessary upgrades to guarantee residents a reliable and safe water supply. Effective management of water systems in Ohio requires collaboration among local governments, utilities and authorities, emphasizing asset management, proactive maintenance and workforce challenges. Investments in training, technology and infrastructure enhancements are vital to overcoming these obstacles and ensuring sustainable, reliable water services for communities statewide.

Energy
C-

Ohio's energy infrastructure is diverse, with electricity primarily generated from natural gas and coal. The state is home to major oil refineries that produce gasoline, diesel, and jet fuel, supporting regional energy needs. Shale gas production has driven a 13-fold increase in natural gas output since 2013, now accounting for 97% of withdrawals. Ohio is also the seventh-largest ethanol producer in the U.S. While coal use is declining, it remains significant, and natural gas has become the leading fuel for electricity generation. Energy demand is driven by Ohio's large population, industrial base, and logistics sector. The industrial sector accounts for one-third of energy use, with transportation close behind due to Ohio's status as a freight hub. The residential sector also consumes about a quarter of energy. Growth in data centers—especially around Dayton and Akron—is increasing electricity demand and could strain the grid. Continued energy diversification and efficiency will be key to meeting future needs.

Hazardous Waste
C-

The Ohio Environmental Protection Agency (Ohio EPA) manages environmental programs across the state, with the Division of Environmental Response and Revitalization (DERR) overseeing hazardous waste site cleanup, permitting, and brownfield revitalization. Ohio participates in federal programs like Superfund, the Resource Conservation and Recovery Act (RCRA), and brownfields. The state also runs an underground storage tank program. Ohio has 53 sites on the U.S. EPA's Superfund National Priorities List and ranks fourth in hazardous waste generators under RCRA. A 2020 state law granting legal immunity for brownfield projects has helped advance cleanup efforts. To date, $636 million has supported 626 projects in 86 counties. With over 9,000 former industrial and commercial sites, brownfield remediation offers economic and environmental benefits. However, Ohio's hazardous waste infrastructure remains underfunded, causing delays in site cleanup and increased long-term costs. Additional funding and resources are needed to address contamination and accelerate redevelopment across the state.

Inland Waterways
D

Ohio's inland waterway system includes 541 miles of the Ohio River and nine navigation locks and dams. In 2022, over 61 million tons of cargo valued at $15.7 billion moved through these locks. Many structures are beyond their original design life and require prioritized rehabilitation to ensure continued reliability. The 981-mile Ohio River begins in Pittsburgh and joins the Mississippi River in Illinois. Navigation improvements date back to 1824, with 51 locks and dams enabling year-round shipping by 1929. By 2018, the system was modernized into 19 locks and dams. The U.S. Army Corps of Engineers (USACE) oversees this infrastructure, ensuring safe, efficient, and sustainable waterborne transportation. As one of USACE's oldest Civil Works missions, maintaining the Ohio River system remains critical to supporting commerce, national security, and recreation across the region.

Levees
B+

Ohio has over 172 miles of levees, primarily along the Ohio, Scioto, and Great Miami Rivers. Levees are critical in reducing damage to communities from seasonal flooding caused by heavy rainfall, snowmelt and storms. Ohio's network of levees reduces flood damage risk for more than 165,000 people and $37 billion in property. Many of these levees were constructed in the early 1900s using outdated design standards. The components of these older systems are deteriorating, requiring costly maintenance or replacement. Most levee systems in Ohio have not had risk assessments, and inspection standards are inconsistent across the state. When levees fail, the consequences can be catastrophic, leading to widespread property damage, displacement of residents and economic losses. As extreme weather events become more frequent, the reliability of Ohio's levees will be increasingly tested. Upgrading and maintaining these structures and improving floodplain management are critical to mitigating future flood risks in the state.

Ports
C+

Ohio's ports are vital economic drivers, located along Lake Erie and the Ohio River. Larger ports are on Lake Erie, while smaller, mostly private terminals supporting bulk cargo and intermodal transfers are found along the Ohio River in designated Port Statistical Areas. Despite strategic locations and excess capacity, many ports face aging infrastructure, inconsistent asset management, and limited funding. While federal and state grants have helped modernize some facilities, Ohio ports still lag national peers in efficiency, resilience, and decarbonization. In 2022, Ohio ranked 11th in the U.S. for annual tonnage, moving 61.7 million tons, with Cleveland and Toledo among the top 50 ports by volume. The state has 730 miles of navigable waterways, including three of the nation's top Port Statistical Areas. However, evolving cargo needs, undercapitalization, and rising maintenance costs challenge the state's ability to modernize its ports and prepare for future demands. Sustained investment is needed to close the gap.

Public Parks
C-

Ohio's park infrastructure is in fair to good condition. Parks are resilient, safe and innovative, developing new uses of technology to seek funding and connect people. Overall, the needs and funding of Ohio parks are uneven, varying throughout the state and among those managed by federal, state and local entities. The majority of residents of Ohio urban centers live within 10 minutes of a park. However, the total area of parkland and amenities provided is still insufficient for Ohioans, not to mention that usage has increased since the COVID pandemic. Funding shortfalls lead to inadequate maintenance of parks and structures. One-time investments from the American Rescue Plan Act (ARPA) and the Infrastructure Investment and Jobs Act (IIJA) made a significant positive impact, but are due to expire in the coming years.

Rail
B-

Ohio's extensive rail network plays a vital role in the state's economy, with 40 freight railroads—four Class I, one Class II, and 34 Class III—moving about 100 million tons of freight annually across more than 5,000 miles of track. Railroads serve 86 of Ohio's 88 counties and connect to 13 intermodal terminals, over 100 transload facilities, and maritime ports on Lake Erie and the Ohio River. While freight railroads fund most of their own capital and operating expenses, Class II and III railroads depend more heavily on public support. Amtrak provides long-distance passenger service on three routes, though all pass through Ohio at night. To enhance safety and efficiency, Ohio should continue investing in rail crossing improvements and expanding wayside detection systems, particularly in light of the East Palestine derailment. Long-term, sustainable funding is needed to support rail infrastructure upgrades that deliver public benefits and attract private investment.

Roads
D+

Ohio has one of the most extensive and heavily traveled roadway networks in the nation, with 60% of the U.S. and Canadian populations within a one-day drive. Recent increases in state and federal funding—such as the 2019 state gas tax and the 2021 Infrastructure Investment and Jobs Act (IIJA)—have improved road conditions, with 69% of major roads rated fair or better in 2022, up from 65% in 2018. However, inflation and workforce shortages challenge ongoing maintenance. Deferred maintenance costs Ohioans over $14.4 billion annually due to vehicle damage, congestion, and crash-related expenses. While the state's overall fatality rate is below the national average, rural areas face higher risks. To meet the goals of Ohio's long-range transportation plan, Access Ohio 2045, the state must sustain investment, address rising costs, and develop long-term funding solutions to improve safety, maintain infrastructure, and support efficient movement of people and goods.

Schools
C

Ohio's school infrastructure is facing several challenges, including aging facilities, insufficient funding and a lack of comprehensive emergency preparedness. Many facilities over 50 years old require significant structural upgrades to meet modern safety and educational standards. While the state has invested over $10 billion since 1997, a large funding gap remains, with many schools relying heavily on local property taxes, which perpetuates disparities between affluent and less affluent districts. To address these issues, the Fair School Funding Plan (FSFP) was signed into law in 2021 to provide equitable funding, but full implementation is still needed. In addition, improving the resilience of school facilities through sustainability practices and structural upgrades –such as earthquake-resistant designs and tornado shelters – is essential for enhancing safety. Engaging communities and developing robust asset management plans are also critical to ensuring long-term infrastructure effectiveness.

Solid Waste
B-

Ohio's solid waste management system offers options for waste recovery, recycling, and disposal, with most landfills funded by collection and disposal fees averaging $44.50 per ton. In 2022, Ohio operated 37 licensed municipal solid waste landfills with over 823 million tons of remaining capacity—enough for about 32 years. Landfills remain the state's primary disposal method. That year, Ohioans generated more than 15.7 million tons of residential and commercial waste, or 7.27 pounds per person per day—well above the 2018 national average of 4.9 pounds. The state earned a B- for solid waste infrastructure, reflecting reliable landfill operations, adequate capacity, and strong oversight. However, improvements are needed in waste diversion and reducing per capita waste generation to align more closely with national sustainability goals.

Stormwater
B-

With a population of nearly 12 million, Ohio has an extensive aging stormwater infrastructure to manage and protect. Ohio has approximately 137 stormwater utilities (the 6th most in the US). While Ohio stormwater utility rates increased by 9% from2020 to 2024, the Engineer News Re cord (ENR) Cleveland Building Cost Index (BCI)and Construction Cost index (CCI) from March 2020 to March 2024 increased by over37-percent and 16-percent, respectively. Ohio currently spends between $500M to$900M per year on its stormwater infrastructure but needs up to $900M in additional annual funding to meet future needs.

Transit
C-

Transit is in mediocre to poor condition, with a grade of C-, improving from a D in 2021.Ohio has 26 urban and 40 rural transit systems serving 83 of the state's 88 counties. These systems provided 70.3 million rides in 2023, a 45% decrease over the last 16 years. In 2023, 501 of 3,707 (13.5%) revenue vehicles exceeded their useful lives, a significant improvement since 2018, when 636 of 3,559 (17.9%) revenue vehicles exceeded their useful lives. However, this still lags behind the 12% figure in 2007. This trend coincides with the reversal of a long-term lack of state funding for transit, which decreased from$42.3 million in 2000 to $7.3 million in 2013 and to $6.5 million in 2018 and 2019.State funding then increased to $70 million in 2020 and 2021 and dropped to $37million in 2022. In 2022, this amounted to just $3.15 per person, ranking Ohio 31st in per capita funding – 25 times less than the average state at $76.67 per capita.

Wastewater
C-

About 81% of Ohio's 11.8 million residents rely on municipal wastewater systems. According to the 2022 Clean Watersheds Needs Survey, the state requires nearly $16 billion in improvements to meet Clean Water Act goals. That same year, 65% of wastewater utilities reported rate increases—a trend likely to continue as communities work to reduce Combined and Sanitary Sewer Overflows (CSO and SSOs). Since 2017, infrastructure investments have led to a 14% reduction in permitted CSO outfalls and lower overflow volumes. Ohio received about $675 million in wastewater funding through the Infrastructure Investment and Jobs Act (IIJA), though only some communities qualified for principal forgiveness loans. Most still rely on traditional loans and only address aging infrastructure when failures occur. Utility rate structures typically focus on operations and maintenance rather than proactive upgrades. To ensure long-term water quality, Ohio must adopt a "one-water" approach, integrating wastewater, drinking water, and stormwater solutions to address interconnected and costly challenges.

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