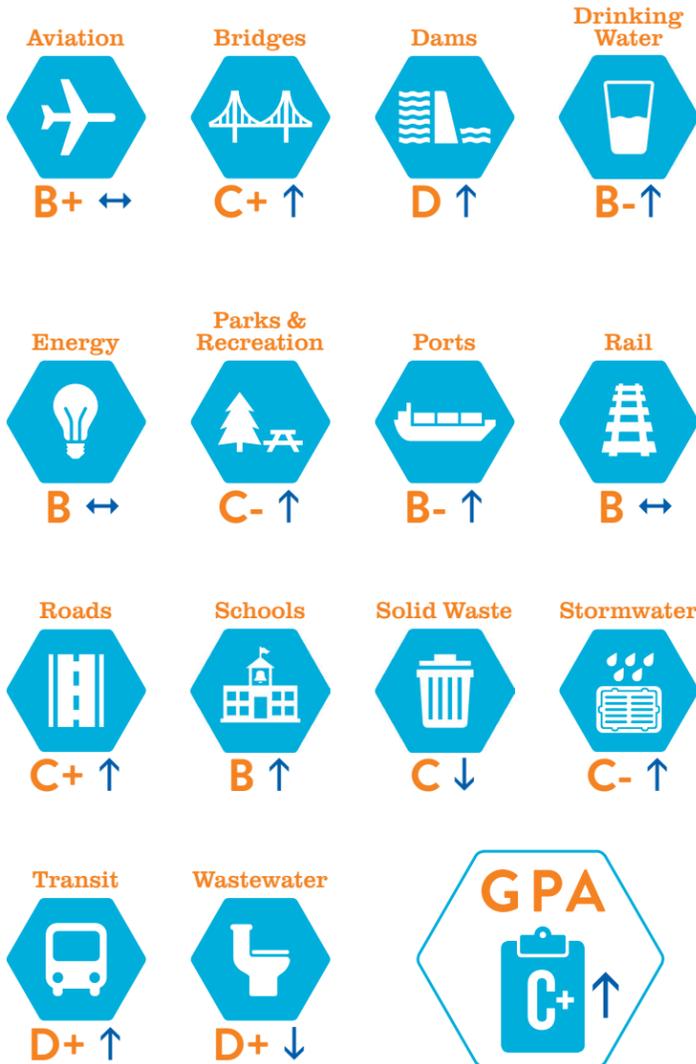


# GEORGIA GRADES



Arrows next to the grade indicate the trend compared to the 2014 Georgia Infrastructure Report Card.

## About the Grades

The 2019 Report Card for Georgia's Infrastructure was written by a committee of more than 50 civil engineers across Georgia 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:



## SOLUTIONS TO RAISE THE GRADE

- Recent passage of transit legislation created the ATL, a landmark event, and now the metro Atlanta region must focus on effectively implementing a regional transit system strategy that includes adequate, reliable funding, and an excellent user experience to provide competitive alternative commuter options.
- A significant number of our water-related utilities (drinking water, wastewater and stormwater) are consistently underfunded. The long-term viability of these utilities will require adequate user fees that cover the full cost of service.
- Since 2014, Georgia has more than doubled its dam safety staff and significantly increased the number of dams with emergency action plans. As more deficient dams are identified, the state should press for alternative funding options such as grant programs to ensure private dams are repaired in order to protect downstream lives and property.
- The ongoing Savannah Harbor Expansion Project remains a bright spot in Georgia's efforts to create deep water ports. The long-term viability of these ports will require improved rail and truck freight transportation networks to efficiently get goods to and from the port.
- Landfill owners should consider raising solid waste tipping fees for out-of-state waste. Georgia's per capita waste generation is skewed to almost double the national average due to our tipping fees being significantly less than bordering states.

## About ASCE-GEORGIA

The American Society of Civil Engineers (ASCE) is America's largest and oldest national engineering society. In Georgia, ASCE has over 2,000 members. By developing leadership, advancing technology, promoting the value of civil engineering, and advocating lifelong learning, ASCE enables its members, partners, and the public to improve our infrastructure and build a better quality of life.

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## 2019 REPORT CARD FOR GEORGIA'S INFRASTRUCTURE

## Infrastructure Matters

The U.S. Census report published in early January 2019 shows that Georgia's population has grown from 9.7 million in 2010 to 10.5 million in 2018. Georgia's growth begs many questions: How will all of these people move around? Will they have adequate drinking water and electricity? What types of facilities will be available for their recreation? How suitable are the school buildings? Every day, civil engineers focus on these types of infrastructure questions.

Because infrastructure impacts so many aspects of the lives of Georgia's citizens, every five years the Georgia Section of the American Society of Civil Engineers (ASCE) evaluates key aspects of our state's infrastructure. Citizens of Georgia benefit from an objective review undertaken by dozens of experts in their respective fields. The 2019 Georgia Infrastructure Report Card represents the fourth evaluation performed by the Georgia Section of ASCE and focuses on 14 categories of infrastructure.

In 2019, the overall grade for Georgia's infrastructure improved for the first time ever, rising to a cumulative grade of C+. While significant improvements headline this positive story, many challenges remain as addressed in our five Key Solutions to Raise the Grade.

How will further progress be made? The answer begins with engagement and we hope the 2019 Infrastructure Report card will help by increasing awareness of infrastructure needs in order start the conversation on how to continue to improve infrastructure to support Georgia's economy and quality of life.

## How You Can Get Involved

- Get the full story behind this Report Card at [www.infrastructurereportcard.org](http://www.infrastructurereportcard.org).
- Find out the condition of the infrastructure near you on the Save America's Infrastructure app available on the Apple App store and GooglePlay.
- Ask your elected leaders what they're doing to make sure your infrastructure is reliable for the future. Use your zip code to find your list of elected officials at [www.infrastructurereportcard.org/take-action](http://www.infrastructurereportcard.org/take-action).



# 2019 GEORGIA'S INFRASTRUCTURE REPORT CARD

The 2019 Report Card for Georgia's Infrastructure gave the state an overall GPA of C+. The good news is there are solutions to all of these challenges, and we can raise Georgia's infrastructure grades. By learning more today about the conditions of the infrastructure you use every day, you too can help raise the grade.

## AVIATION

There are 103 publicly-owned, public use airports in Georgia, including Hartsfield-Jackson Atlanta International Airport (ATL), the busiest airport in the world for passenger traffic. The state's aviation system continues to have excess capacity, and some of the more congested airspace has been helped with Federal Aviation Administration-mandated technology and process improvements, as well as increased efficiencies in aircraft operational movement. Additionally, the state's aviation system budget has grown significantly, from just under \$2 million in 2013 to just over \$13 million in 2016 and 2017. Also encouraging is that 98% of Georgia's primary runways meet the state's goal of maintaining a 70 or greater Pavement Condition Index. At ATL, a \$6 billion expansion plan has been underway since 2016 that will result in updated terminals, increased capacity, and other benefits for travelers.

## BRIDGES

The Transportation Funding Act of 2015 provided \$900 million in additional funding for Georgia's transportation system each year, including for the 14,863 bridges and culverts across the state. As a result, Georgia has decreased the percentage of structurally deficient bridges, from 8.6% in 2014 to 4.6% in 2017. In addition to replacing and rehabilitating structurally deficient bridges, the state has implemented asset management programs and focused on preventive maintenance. In 2014, the general condition of the bridge infrastructure was in decline, but today this trend has been reversed and the rate of improvement is increasing each year as new funding and programs mature. However, at the local level, municipalities and counties often lack the tools needed to strategically prioritize bridge maintenance and struggle to find funding to improve the condition of bridges. The Transportation Investment Act gave Georgia voters the ability to approve regional sales taxes for transportation infrastructure. However, these measures have not been approved by voters in all parts of the state, meaning some localities have better bridge funding than others.

## DAMS

Over the last five years, progress has been made toward addressing dam safety in Georgia. Staffing levels supporting the Georgia Safe Dams Program have more than doubled, from four to 10 full time employees (as of December 2018). Additionally, significant progress has been made in developing Emergency Action Plans (EAPs) to address dam safety; as of December 2018, 58% of high hazard potential dams had EAPs, up from 5% in 2014. Nevertheless, major challenges remain. With increased funding for inspection, 87 additional state regulated deficient dams have been identified and catalogued since 2014. In another challenge, most dams in Georgia are privately-owned, and the significant cost associated with dam operation and maintenance remains a challenge for many property owners.

## DRINKING WATER

In Georgia, treated water capacity generally meets current demands. The widespread use of new technologies and practices, such as smart pressure reducing valves, pressure data loggers, automated metering infrastructure, Computer Maintenance Management Systems, and "on condition" maintenance has improved the safety and reliability of drinking water service. Georgia is a nationwide leader in water loss control initiatives, and is shifting toward comprehensive water loss control programs. Drought protection has significantly improved over the past four years. Meanwhile, Georgia's relatively low incidence of health-based violations is reflective of these new innovations. Sustaining this performance will require utility rate structures to be continually re-examined to ensure adequate funding. The state will need approximately \$12.5 billion over the next 20 years to meet capital improvement demands.

## ENERGY

Energy in Georgia is primarily generated by natural gas, followed by nuclear and coal, and finally, renewables. In 2016, the state led the nation in the use of wood and wood-derived fuels for generation and in 2017, Georgia was ranked third in the amount of generation from all biomass resources. In recent years, Georgia has increased its electric power capacity by focusing on alternative resources, such as nuclear and solar. With 1556.33 MW of installed solar, Georgia moved up from 22nd to 10th for electricity generated by solar in 2017. The condition of the grid is aging and the commitment to add, maintain and/or replace infrastructure is vital in ensuring a safe and reliable system. Georgia Transmission Corp. plans to invest more than \$100 million annually in power line and substation construction and upgrades. Similarly, Georgia Power plans to invest \$3 billion on system upgrades in the near future. Storm-hardening of the system remains critical to ensuring reliability.

## PARKS & RECREATION

Georgians value parks and recreation and support investing in associated infrastructure, as demonstrated by a statewide survey published by the Georgia Department of Natural Resources. Fortunately, commensurate with the improving economy, state funding for parks has steadily increased in recent years; in FY 2017, \$9.2 million was provided for infrastructure repairs and upgrades, up from \$8.4 in FY 2008, just before the onset of the Great Recession. The future also looks bright. In November 2018, Georgia voted to direct 80% of revenue from the sales and use tax on outdoor recreation equipment to the Georgia Outdoor Stewardship Trust Fund. Meanwhile, Georgia uses federal Land and Water Conservation Fund grants primarily for maintaining and rehabilitating existing facilities, to effectively mitigate the impacts of age in parks across the state. While the additional funding is encouraging, most of Georgia's land is private, and access to parks, especially in the growing Atlanta region, can at times be insufficient. Atlanta was ranked 43rd by the Trust for Public Lands in 2018 in terms of how city parks are meeting citizen needs.

## PORTS

The capacity of Georgia's ports has increased over the past five years. Today, the Port of Savannah is the busiest export port in the U.S. and is competitive in a post Panama expansion global marketplace. The Georgia Ports Authority has embarked on a planned growth strategy that will require funding from the federal government as well as Georgia state funds. When finished, the Port of Savannah's Garden City Terminal will be home to the largest on-dock intermodal rail facility in North America. Meanwhile, the Savannah Harbor Expansion Project (SHEP) continues to be a major priority. When completed, SHEP will cost an estimated total of \$973 million. Critical to the success of Georgia's ports will be ensuring adequate capacity on roads, rail and inland waterways to carry goods to and from the ports.

## RAIL

Georgia boasts one of the most extensive freight rail systems in the U.S., with nearly 5,000 miles of track transporting more than 196 million tons of freight annually. The two Class I railroads operate 78% of the total track mileage in the state, while 25 Class III (also known as shortline) railroads operate the remaining 22%. Class I railroads are privately owned and generate sufficient revenue from their operations to maintain and modernize their infrastructure and equipment. Most of the Class III railroads in Georgia are privately owned as well, but these smaller operations struggle to generate the revenue needed to materially improve their rail infrastructure or upgrade their aging equipment. The Class III railroads owned by Georgia Department of Transportation fare somewhat better, but still lack sufficient funding to substantially improve their overall operations. Amtrak operates routes along two corridors in the state, providing service to nearly 154,000 passengers per year.

## ROADS

Georgia has significantly improved funding for the state's transportation system with the Georgia General Assembly's passing of the Transportation Funding Act of 2015 (House Bill 170 or TFA). The legislation is expected to provide an additional \$900 million per year for transportation. The proceeds from TFA have allowed the Georgia Department of Transportation (GDOT) to increase the miles of roads resurfaced annually by more than two and a half times and implement major congestion relief projects. GDOT has begun using innovative materials, design and delivery methods to decrease construction time and cost and reduce inconvenience to drivers. However, there is still a need for additional funding to improve the state's current pavement condition and relieve congestion, particularly with three of the nation's top twenty interstate bottlenecks located on I-285, Atlanta's perimeter interstate.

## SCHOOLS

The capacity and condition of Georgia's public schools have improved over the past five years. A number of new schools have been built. More recently, the Governor and state legislature have fully funded the Quality Basic Education (QBE) formula which benefits school facilities. More than \$1.14 billion in funding has been restored to the school system since 2015. Additionally, attention has been placed upon the future needs of schools, setting money aside for the inevitable growth to come. Georgia is slightly above the national average in terms of school construction capital outlays. The state spends \$19,502 per student on school construction, whereas the national average is \$19,454. This spending average stands to grow as the Georgia legislature voted to significantly increase available funding for school facilities and students on the FY 2019 appropriations bill.

## SOLID WASTE

Georgia's solid waste issues center around an ever-increasing population, the rising life-cycle cost of materials, the citizenry's resistance to the opening of new landfills, and the impact of transporting increasing volumes of solid waste on public roads. From 2013 to 2017, the population of the state has grown by approximately 4.5%. Meanwhile, during that same period, waste disposal rates have increased by 35%. Cheap disposal rates in Georgia bring out-of-state waste and are a major factor in the overall waste picture. The availability of disposal capacity at competitive rates provides little incentive to reduce waste generation, prohibit importing waste, or increase recycling. The lack of funding for future solid waste handling facilities, minimal efforts to promote alternatives for waste management disposal options, and little advancement in the development of conservation and recycle markets all compound solid waste issues in Georgia.

## STORMWATER

Georgia's stormwater infrastructure – drains, manholes, pipes, ditches and more – has improved over the past five years. More localities are creating designated stormwater funding sources, as evidenced by the 44% growth in stormwater utilities since 2014. This increase in funding, a shift to integrated water planning, and the addition of volume reduction requirements in recent MS4 permits are the major factors in the slight grade increase. While this progress is significant, substantial funding needs remain. A limited stormwater program survey indicated a median of \$6 per capita per year is spent on new or renovated stormwater infrastructure, much less than the \$85 per capita need projected by the Environmental Protection Agency. Looking forward, Georgia's growing population is likely to continue to stress its stormwater management infrastructure and additional action will be needed to protect water quality in streams, rivers and lakes.

## TRANSIT

Funding for public transit infrastructure has increased significantly over the past five years. New state funding has been augmented by local sales tax initiatives, including Clayton County's one-cent sales tax in 2015 and the City of Atlanta's "More MARTA" half-cent sales tax increase in 2016. "More MARTA" is expected to raise \$2.5 billion over 40 years. Additionally, the Georgia General Assembly designated the Atlanta Transit Link (ATL) as the umbrella organization for regional coordination of transit systems and funding. While these recent developments are encouraging, the state is still heavily car centric. In 2016, 90% of trips in Georgia were made using automobiles, while only 2% were made by transit. In 2016, Atlanta ranked 32nd in the nation in transit access. Meanwhile, Atlanta is the eighth most congested city in the world. More funding and collaboration between systems is needed to continue to maintain existing systems, improve access for all citizens, and make transit a more attractive option.

## WASTEWATER

Georgia's wastewater infrastructure continues to age, and wastewater agencies struggle to upgrade wastewater treatment systems to meet changing water quality standards. While progress has been made in dealing with the threats of overflows from combined sewer systems, slow progress in addressing overflows from sanitary sewer systems, aging wastewater infrastructure and the demands of a growing population have resulted in lowering of the grade. In 2017, the Georgia Water & Wastewater Report found that 45% of the 373 local government water or wastewater agencies in Georgia did not generate enough revenue to cover their operations and maintenance costs and account for future capital costs. Systems need to be properly maintained and expanded for future growth. Nearly half of all Georgians do not have access to public sewers, many relying on septic systems.