

LOUISIANA GRADE SUMMARY



About the Grades

Infrastructure is graded based on eight criteria: **capacity, condition, funding, future need, operation and maintenance, public safety, resilience, and innovation.** ASCE grades on the following scale and defines these grades as:



5 STEPS WE CAN TAKE

- 1 Become a Partner** - Adopt the principle that infrastructure development is the responsibility of all levels of government. No longer can we wait for Baton Rouge and Washington to provide all of the needed funds. Identify specific categories of deficient infrastructure as local responsibility and create incentives for investment by local government, and state and private sectors.
- 2 Fix the problem** - Plans for infrastructure improvement moving forward must be bold and aggressive as the problem is large and acute. Nibbling around the edges with an incremental increase in the infrastructure investment will not fix the problem and will erode public trust.
- 3 Put "Trust" in the Trust Fund** - Protect infrastructure related "Trust Funds" from being used as a general-purpose financial source by state and federal governments at times of budget crises. Honor the promises made to the public in allocating specific revenues that were generated in support of specific projects.
- 4 Prioritize Public Health and Safety** - Louisiana's overall traffic fatality rate of 1.51 fatalities per 100 million vehicle miles of travel in 2015 is the seventh highest in the nation and significantly higher than the national average of 1.13 (TRIP). Our drinking water systems are in desperate need of attention, and our wastewater systems continue to struggle to comply with Clean Water Standards, and Coastal Louisiana is disappearing at an alarming rate.
- 5 Public Engagement** - Strive to educate the public so that an understanding and appreciation of the importance of a healthy infrastructure system is achieved. This in turn will aid in increasing the priority of funds to address current issues. We need to prioritize public safety and invest in our systems to protect our way of life.

About ASCE-LOUISIANA

The Louisiana Section of the American Society of Civil Engineers was founded in 1914 and has since been in continuous operation. The Section consists of the entire state of Louisiana and it is divided into four branches that directly serve its almost 2000 members. They are the Acadiana Branch centered in Lafayette, the Baton Rouge Branch, the New Orleans Branch and the Shreveport Branch.

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REPORT CARD FOR LOUISIANA INFRASTRUCTURE

2017

Infrastructure Matters

In 2012, Louisiana Section of American Society of Civil Engineers' (ASCE) very first Report Card for Louisiana's Infrastructure started with the following statement:

Louisiana's infrastructure needs immediate attention.

Today, over five years later, this overarching conclusion remains more valid than ever.

Again, an expert team of more than 50 civil engineers was assembled to evaluate and study eleven major components of Louisiana's infrastructure for more than 18 months. Their results have been reviewed not only by independent experts locally but also have been scrutinized by ASCE's team of national experts.

The conclusion is not a surprise but more an alarm that over the course of the last five years the system has deteriorated further. Our infrastructure is poorly maintained, inadequately funded, and not designed to meet tomorrow's demands. As a consequence, **the state is disadvantaged and will continue to lose its economic competitiveness.**

As civil engineers, we understand the intricate details of infrastructure. We plan, design, build, maintain and operate roads and bridges, dams and levees, and we provide the public with safe and clean drinking water. With that responsibility, we also carry an obligation to tell the public the truth. **The truth is that our infrastructure is in poor shape and needs immediate attention.**

We present this report card as a fulfillment of our public duty as designers and builders of public facilities. Our infrastructure is of vital importance to all; it sustains our quality of life, keeps us safe and healthy, allows us to be mobile, and provides the framework for our global economy to function. We depend daily on our infrastructure, yet we take its condition for granted until a failure produces tragic results, such as a levee failure or a bridge collapse. **We produced this report card to inform the public and our elected officials about the status of the state's infrastructure. Our grades are nothing to be proud of.**

How You Can Get Involved

- 1** Get the full story behind this Report Card at www.infrastructurereportcard.org/louisiana.
- 2** Find out the condition of the infrastructure near you on the Save America's Infrastructure app available on iTunes and GooglePlay.
- 3** 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/get-involved.

2017 LOUISIANA'S INFRASTRUCTURE REPORT CARD

The 2017 Report Card on Louisiana's Infrastructure gave the state an overall G.P.A. of D+. Louisiana's civil engineers studied 11 infrastructure categories. Of those 11, six infrastructure categories are in mediocre condition, and five categories are in poor condition.

The good news is that there are solutions to all these challenges, and we can raise Louisiana'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



Louisiana's 69 publicly owned and publicly used airports connect Louisiana to the world, for business, tourism, and more. They contribute 58,853 jobs and \$6.7 billion to the economy. The aviation system performs well in Capacity, Condition, Operation & Maintenance, and Resilience.

Areas that could use improvement include Public Safety, and Backlog of Funding. Since the 2012 Report Card, the Louisiana Department of Transportation and Development's Aviation section (LADOTD) has developed the Louisiana Aviation System Plan (LASP), providing a wealth of information on infrastructure and recommended improvements. Additionally, LADOTD has commissioned a Pavement Condition Study Update to inspect, classify, and evaluate the pavements at each of the publicly owned and used airports in the state. Both of these efforts will contribute to identifying and evaluating Louisiana's aviation needs.

BRIDGES



With 12,915 bridges and 16,387,706 square feet of bridge deck, Louisiana ranks 4th in the nation in total bridge area. 13.5% of bridges (1,739) in Louisiana are structurally deficient (structural deficiencies that require attention); however, we are 2nd in the nation in number of structurally deficient bridges based on bridge area. 44% of bridges are functionally obsolete, which means a bridge does not have adequate capacity or shoulders to meet current safety standards.

Transportation funding to address our capacity and operations and maintenance needs is stagnant and in decline due to inflation. Roughly 1 in 4 bridges in Louisiana is fracture critical, meaning failure of a single component would probably cause a portion or the entire bridge to collapse.

Over the past 5 years, Louisiana bridges have maintained a grade of D+. However, without a significant increase in transportation funding, the number of deficient bridges will increase and resources will be unable to address capacity projects.

COASTAL



During the 20th century, coastal Louisiana experienced more than 1,800 square miles of land loss, a reduction of nearly 25% within the coastal zone.

In 2005, Louisiana's legislature began mandating a comprehensive master plan of coastal restoration and protection projects to be updated every 5 years. This mandate resulted in a systematic research and planning exercise, which will be continually updated with the most up-to-date available science and engineering, resulting in the construction of coastal restoration projects. For the first time, the 2017 Louisiana ASCE Report Card evaluated this work, recognizing the large strides the state has made in implementing its plan. Coastal protection received an average grade of D+ which primarily reflects the uncertainty of future funding. The grade comes with a recommendation that the Federal Government provide significant funding to assist Louisiana in restoring and protecting a working coast, with national economic and environmental significance.

DAMS



The State of Louisiana has a total of 557 dams in the National Inventory of Dams, of which 442 are privately owned and maintained. 494 of the dams are monitored by the Louisiana Department of Transportation and Development (LADOTD) and 16 of the dams are monitored by the United States Army Corps of Engineers (USACE). A total of 43 dams are considered high-hazard potential; they are inspected annually and have an Emergency Action Plan in place. Many owners of privately-owned dams do not have resources to adequately maintain and repair their assets. Analysis of the key criteria used to develop a grade shows that the overall health of Dams infrastructure has decreased since the 2012 Louisiana ASCE Report Card was published. Identification of potential funding sources for operation and maintenance and rehabilitation should be made a priority so that potential dam repair, reconstruction, and renovation can be identified and prioritized.

DRINKING WATER



Approximately 17.5% of Louisiana is covered by water, and 11 aquifers and aquifer systems are situated under the state.

In spite of this, some areas struggle to meet potable water demands due to aging and deteriorating water systems, as well as threats to water quality. According to census and water system data, as much as 20% of parishes may not consistently meet capacity needs. This can be greatly exacerbated by natural disasters, particularly where backup power and other system redundancy is lacking. Approximately 58% of water systems in Louisiana are over 50 years old, creating potential for more frequent system breakdowns and need for repair and replacement of components. In serious cases, deteriorating systems can result in public safety issues such as those in the rural town of St. Joseph, LA. It's critical for the state of Louisiana to increase funding and raise the grade of its drinking water infrastructure.

INLAND WATERWAYS



Louisiana has almost 5,000 miles of navigable rivers and man-made canals. The largest of these is the Mississippi River.

There are numerous navigation canals and ship channels linking many of Louisiana's ports to the inland waterway system. The largest of these is the Gulf Intracoastal Water Way (GIWW), which is the Gulf Coast portion of the Intracoastal Waterway extending from Massachusetts to Texas. Such an extensive network in Louisiana requires 20 locks, dams, and control structures to manage water levels for navigation and flood control. The most critical infrastructure on the GIWW is the Inner Harbor Navigation Canal (IHNC) lock in New Orleans. Built in 1926, this lock was first authorized for replacement in 1956. Numerous studies by the USACE have justified the needs and benefits of a replacement lock. The estimated project cost is now nearly \$1 billion. Innovation and investment is needed to fund, design, and construct this long-overdue lock replacement project to reduce cost and expedite completion.

LEVEES



The safety of nearly all of Louisiana's residents, more than 19,000 square miles of land, and the entire state economy, depends on the performance of more than 2800 miles of levees.

Local taxes and state appropriations are currently insufficient to pay for the Operation, Maintenance, Repair, Rehabilitation and Replacement (OMRR&R) of the newly constructed Hurricane and Storm Damage Risk Reduction System (HSDRRS) features or costs for future levee lifts. The Water Resources Reform and Development Act stipulates that the Corps of Engineers should contribute funding, but Congress has yet to appropriate the needed support.

Levee protection levels range from high flood levels of 0.1% to 0.2% annual chance of occurrence (1000-year to 500-year flood respectively) on segments that are a part of the Mississippi River to 1.0% or higher annual chance of occurrence for federally funded hurricane protection levees; the latter is judged to be insufficient.

We recommend that the federal government provide adequate funding to assess the protection levels of 1.0% annual chance of occurrence and provide federal funding for the design and construction of levees, as well as funding for OMRR&R.

PORTS



The Louisiana public ports system is comprised of 38 public port authorities. These public ports regulate, plan, design, develop, operate and manage port facilities, and related infrastructure.

Generally, the ports of Louisiana are categorized into the following interest groups: deep-draft, coastal, inland, and emerging/developing ports. The six deep draft ports focus on freight movements with national and international connections. The nine coastal ports concentrate on the oil and gas service industries, shipbuilding and fabrication. The inland ports service local markets for cargo movement, manufacturing and related service industries.

Louisiana's ports are vital to the local, state and national economies. In 2012, a comprehensive economic study indicated that the combined economic impact of Louisiana ports, providers of port and vessel services, businesses operating within the ports and cruise ship operations are almost 73,000 jobs, \$3.961 billion in personal earnings, and state and local tax collections amounting to \$517 million annually. Port activity creates and directly supports about 4% of the jobs in Louisiana.

ROADS



Louisiana drivers travel 48 billion annual vehicle miles on 61,300 miles of public roads.

Travel has increased more than 5% from 2010 to 2014 and congestion costs range from \$623 million to \$1 billion in some of the major urban areas throughout the state. Delays in these urban areas are having a tremendous negative economic impact on the traveling public, businesses, refineries and chemical plants. The Louisiana Department of Transportation and Development (LADOTD) maintains 18,359 miles of interstate and other roadways, and the amount of fair to poor highways shows that maintenance has to continue to be a priority. The condition of the roadways has slightly improved; however, current and future funding needs (as is) are inadequate to match federal funds and improve and/or maintain the roadway system. The gasoline and diesel tax has remained unchanged for over 20 years and inflation has reduced the buying power by over 50%.

SOLID WASTE



Solid waste disposal is a vital and necessary local government public health function, and municipalities and parishes need to be aware of the capacity of local landfills to continue to serve as the repository of solid waste.

The long lead time, high cost, and political will needed to develop new solid waste disposal facilities, places a premium on extending the life of existing landfills.

Louisiana's solid waste landfills have the capacity to receive an additional 246 million tons of solid waste, which provides capacity for the next 41 years at current disposal rates. Similarly, Construction & Demolition (C&D) landfills have sufficient capacity to provide for the next 50 years of C&D debris disposal statewide.

USEPA reports that 34% of waste is diverted from landfills nationwide. In Louisiana, recycling only diverts 3% of the waste. Increasing the rate of diversion to 25%, just approaching the national average, could extend current landfill capacity by 10 years.

WASTE WATER



The funding for current wastewater collection and treatment systems is steady and varies based upon system.

New systems may require state grants as seed money for startup. Existing systems with revenue history can qualify for state loans. The latest state finance reports indicate the long program has adequate funding provided that local entities have revenues to repay the loans. The greater challenge for the State is the rapidly growing Parishes where individual private systems are continuing to be installed without adequate monitoring of standards for effluent quality and system maintenance. The State will need to address the need for centralized systems in these impact areas and propose new funding mechanisms to gather public support for their installation.

The State of Louisiana periodic report on the quality of stream segments within the state has served as the current and past guide for the health of the Louisiana wastewater systems. While the goal of achieving clean streams is a good one, its relationship to the wastewater infrastructure needs is not that direct. Less than 5% of stream quality issues are related to municipal wastewater discharges.