



**STATUS REPORT:**  
**COVID-19's Impacts on America's Infrastructure**  
[INFRASTRUCTUREREPORTCARD.ORG/COVID\\_STATUS\\_REPORT](https://infrastructurereportcard.org/covid_status_report)



## INTRODUCTION

Infrastructure is the foundation that connects U.S. businesses and enables communities to thrive. Our roads, water systems, energy grid and more help drive the economy, support our quality of life, and ensure public health and safety. Unfortunately, we have been underinvesting in our infrastructure for decades. In 2019, the U.S. spent just 2.5% of our GDP on infrastructure, down from 4.2% in the 1930s. From 2016 to 2025, we'll underinvest in our infrastructure by \$2 trillion, according to the 2017 ASCE Infrastructure Report Card.

Unfortunately, the COVID-19 pandemic has made a difficult situation worse. A sizable portion of our existing infrastructure systems are supported with user-generated revenue streams. With the onset of the pandemic, commercial water use is down, commuters are staying off the roads and away from transit, and airports are virtually empty. Meanwhile, municipal and state budgets are buckling under unprecedented demands, meaning less support is available for parks, schools, and other publicly-owned infrastructure, precisely at the time we should be investing.

Congress should make infrastructure investment a centerpiece of its immediate response and long-term economic recovery strategy. Now is the time to renew, modernize, and invest in our infrastructure to maintain our international competitiveness.



# AIRPORTS



Infrastructure at airports is not keeping up with 21st century demands. **Aging terminals, old technology, and choke-points at hub airports impact the aviation system.** These challenges are exacerbated by a federally mandated cap on how much airports can charge passengers for facility improvements.

## THE LATEST IMPACTS:



At the height of the COVID-19 pandemic, domestic travel declined by over 95%, commercial flights on average carried 12 passengers, and demand for air cargo dropped 15%, leading to an estimated \$23.3 billion loss in airport revenue.

## SOLUTIONS:



While the Coronavirus Aid, Relief, and Economic Security (CARES) Act provided \$10 billion in relief for our airports to address these impacts in the aviation ecosystem, ASCE continues to urge Congress to provide an additional \$10 billion to mitigate growing pandemic industry impacts.

In the long-term, Congress should remove the federally-imposed cap on Passenger Facility Charges (PFCs) to allow airports a tool to invest in their own facilities. Modernizing and adding capacity to existing terminals will help our aviation system prepare for the eventual rebound and growth of passenger traffic.



# BRIDGES



**There are currently 46,100 structurally deficient bridges across our country, and at today's investment rates, it would take 50 years to fix them all. This is in large part due to the fact that the nation's bridges are supported by the federal gas tax, which has remained stagnant since 1993. The federal gas tax's purchasing power had severely declined before reduced road usage during the COVID-19 pandemic.**



## THE LATEST IMPACTS:

Estimates show that our nation's state Departments of Transportation (DOTs) will face an average revenue decline of 30% over the next 18 months. Meanwhile, the federal Highway Trust Fund posted a 49% decline of receipts in May 2020 when compared to May 2019. A sharp drop in available revenue for transportation projects puts the nation's bridges at risk for further decline.



## SOLUTIONS:

ASCE recommends Congress provide \$50 billion in short-term relief for the nation's state DOTs to ensure that our bridges remain safe, reliable, and ready for Americans to resume pre-pandemic routines. Additionally, ASCE urges Congress to pass a multi-year surface transportation reauthorization, that addresses the solvency of the Highway Trust Fund, before the authorization expires on September 30th, 2020.



# DAMS



Dams provide vital services and protection to our communities and the economy. However, our dams are aging – on average, **dams in America were 56 years old in 2017** – and these structures are increasingly tasked with protecting growing downstream populations. Due to the lack of funding for maintenance, the number of deficient high-hazard potential dams is climbing – in **2017, over 2,170 high-hazard potential dams were deficient**. State dam inspection programs are also underfunded – the average dam inspector oversees 190 number of dams per year, plus new construction projects.



## THE LATEST IMPACTS:

Record rainfall in May 2020 contributed to the catastrophic failure of two high hazard potential dams in Michigan. Thousands of residents were evacuated, and extensive property damage occurred.



## SOLUTIONS:

Infrastructure failure during this pandemic – or at any other time – is unacceptable. To ensure our nation's dams receive adequate maintenance and can continue to protect nearby communities and regional economies, ASCE recommends fully funding the High Hazard Potential Dam Rehabilitation (HHPDR) program at the authorized amount of \$60 million for FY21. Additionally, ASCE encourages Congress to pass the Dam Safety Improvement Act that makes technical changes to the HHPDR program to ensure more seamless implementation.



# DRINKING WATER



Many drinking water pipes in the U.S. were laid from 1900 to 1950. Today, **aging pipelines contribute to the estimated 240,000 water main breaks per year in the U.S.**, wasting over two trillion gallons of treated drinking water. Additionally, lead pipes and fixtures, which were commonly installed through the mid-20th century, are still in service in some cities. Replacement programs exist, but funding competes with other utility needs.



## THE LATEST IMPACTS:

As the nation grapples with the increasingly devastating effects of COVID-19, water utilities continue working tirelessly to ensure their aging infrastructure is still providing customers safe and reliable water services. With the drinking water sector estimated to lose nearly \$14 billion — approximately 17% — in annualized revenue as a result of the current pandemic, including more than \$5 billion in losses related to suspending water service disconnections and increased customer delinquencies, our nation's drinking water infrastructure faces continued decline.



## SOLUTIONS:

ASCE urges Congress to include federal drinking water and wastewater assistance for ratepayers, as well as provide water utilities with federal economic relief to combat revenue losses resulting from the pandemic. Congress should allocate an additional \$300 million a year in grants for the Drinking Water State Revolving Fund. Additionally, we recommend federal assistance for lead testing and replacement of lead pipes. Finally, ASCE asks Congress to restore parity between private and public sector employers regarding eligibility for payroll tax credits to alleviate the costs of paid leave during the coronavirus pandemic.



# ENERGY



**Much of the U.S. electric energy grid is well beyond its 50 year life expectancy.**

The 2019 Paradise Fire – California’s extremely destructive wildfire that destroyed nearly 14,000 homes and killed 85 people – was due to a hardware failure on a line that was over 100 years old, or a quarter-century past what PG&E considers its “useful life.” Fortunately, our energy infrastructure across the country is undergoing increased investment to assist in long-term resiliency, but such investment is not keeping up with the deterioration of the existing electric grid.



## THE LATEST IMPACTS:

The COVID-19 pandemic has further exacerbated existing challenges, delayed some investments in energy infrastructure in the short term, and cost nearly half a million Americans working in renewable energy their jobs.



## SOLUTIONS:

To modernize the energy grid, ASCE recommends a streamlined and timely project permitting process, particularly to connect new sources of renewable energy to the grid. Specifically, we support the provisions of mandatory concurrent reviews, a single administrative processing / permitting agency to shorten and improve the approval process, and improve interagency collaboration, and time limits for decisions on infrastructure projects.



# INLAND WATERWAYS



The U.S.' 25,000 miles of inland waterways and 239 locks form the freight network's "water highway." **Most locks and dams on the system are antiquated and in need of maintenance, and nearly half of vessels experience delays as a result of malfunctioning locks and dams.** Investment in the waterways system has increased in recent years, but upgrades to the system still will take decades to complete.



## THE LATEST IMPACTS:

The inland waterways are especially crucial for our agricultural industry, which relies on waterways to cost-effectively move wheat, soybeans, and other goods to domestic and international markets. Waterways are ideally suited to be part of a COVID-19 related relief package – there are currently 18 projects valued at just over \$8 billion that are authorized for construction or currently under construction.



## SOLUTIONS:

ASCE recommends that Congress provide funding to authorized inland waterway projects through the Energy and Water Development Appropriations Act. Robust funding to repair and replace locks and dams will provide nearly immediate value to the economy and ultimately support the U.S. agricultural sector and other industries that rely on the waterways to get goods to market.



## PARKS



Parks and outdoor spaces are growing in popularity. According to the U.S. Department of the Interior, visitor spending in gateway communities near national parks supported 340,500 jobs and contributed \$41.7 billion to the national economy. Unfortunately, state and local park budgets were cut during the Great Recession and in many places have not recovered. Meanwhile, **the National Park Service reports nearly \$12 billion in deferred maintenance.**



### THE LATEST IMPACTS:

In the initial weeks following the COVID-19 pandemic, the nation's trails saw a 200% increase in use from the same time the previous year. However, 45% of park and recreation departments have been asked to reduce operations spending from either the current fiscal year or the next fiscal year's budget, while still keeping parks and trails open.



### SOLUTIONS:

ASCE applauds the Senate's passage of the Great American Outdoors Act, which provides funding for the deferred maintenance backlog and permanent funding for the Land and Water Conservation Fund. We urge the House to pass this bill next. Additionally, ASCE supports an increase in funding for the Outdoor Recreation Legacy Partnership program in the next economic stimulus package.



# PORTS



**Ports are responsible for \$4.6 trillion in economic activity — roughly 26% of the U.S. economy.**

**As reported in the 2017 Infrastructure Report Card, the movement of goods through ports supports 23.1 million jobs, and provides \$321.1 billion in tax revenue to federal, state, and local governments.**



## THE LATEST IMPACTS:

Americans can follow public health officials' instructions to social distance in no small part due to the continued functioning of our nation's supply chains. Seaports provide gateways to receive medical equipment, food, and other critical goods and services. However, the economic downturn stands to cause significant damage to ports overall volumes, to the tune of an estimated decline of 20 to 30% in total annual receipts. Additionally, tourism at ports has all but ceased.



## SOLUTIONS:

To stem losses in the maritime industry and the ripple effect those losses have on the rest of the supply chain, ASCE recommends Congress provide \$1.5 billion to support operations and capital costs at our nation's seaports. Longer-term, Congress should appropriate \$4.5 billion for the Corps of Engineers coastal navigation program and \$1 billion in supplemental funding for the Port and Intermodal Improvement Program.



# ROADS



America's roads are frequently in poor condition, chronically underfunded, and are becoming more dangerous. **One out of every five miles of highway pavement is in poor condition and the backlog of rehabilitation needs is growing**, even as many states have acted to increase revenue for surface transportation projects.



## THE LATEST IMPACTS:

As Americans have stayed at home, state budgets and transportation revenues have seen serious declines in gas tax receipts. Revenue from the federal Highway Trust fund dropped 49 percent in May 2020 when compared to May 2019, while state Departments of Transportation (DOTs) are projecting, on average, a 30% revenue decline over the next 18 months. To address immediate shortfalls, state DOTs have requested \$50 billion in federal relief.



## SOLUTIONS:

ASCE strongly urges Congress to address this immediate \$50 billion need in the next COVID-19 relief package in order to ensure that state DOTs will be able to continue to operate. Furthermore, Congress must also find a long-term revenue solution for the Highway Trust Fund and reauthorize federal highway and transit programs before they expire on September 30th.



# SCHOOLS



The nation is underinvesting in school facilities, leaving an estimated \$38 billion annual gap. As a result, **24% of public school buildings were rated as being in fair or poor condition in 2016.**



## THE LATEST IMPACTS:

While the COVID-19 pandemic has had wide-reaching impacts on our nation's education system, there is no single budget resource for the nation's 8,000 school districts.



## SOLUTIONS:

In order to combat the impacts of COVID-19 in the nation's schools, ASCE supports the inclusion of the Rebuild America's School Infrastructure Act in any economic relief package. The legislation would create a \$70 billion grant program and a \$30 billion tax credit bond program targeted at schools in economically disadvantaged communities with facilities that pose health and safety risks to students and staff. The legislation would also develop a comprehensive national database on the condition of the nation's public schools and would expand access to high-speed broadband to ensure that public schools have the reliable and high-speed internet access necessary for digital learning.



# TRANSIT



Transit systems in both urban and rural communities provide a critical lifeline for many Americans to employment centers, schools, and healthcare facilities. Unfortunately, **decades of underinvestment have led to service cuts, aging fleets and infrastructure, and a \$90 billion transit maintenance backlog nationally.**



## THE LATEST IMPACTS:

Transit agencies across the nation are currently experiencing unique challenges as a result of COVID-19. The Port Authority of New York and New Jersey has reported a 75% ridership decrease on the PATH commuter rail system; the Washington Metropolitan Area Transit Authority (WMATA) has experienced an 85% reduction in ridership and a minimum projected \$52 million in revenue loss; Dallas Area Rapid Transit (DART) has reported a \$600,000 per week loss in revenue; and the Los Angeles County Metropolitan Transportation Authority (LA Metro) has experienced a 55% decrease in ridership and an estimated \$35 million needed in additional labor and material costs.



## SOLUTIONS:

While the CARES Act provided \$25 billion in transit agency relief, industry stakeholders have requested an additional \$23.8 billion to ensure our transit systems can continue to provide service. ASCE supports requests for further short-term relief for the nation's transit agencies to ensure they can continue to meet service expectations and recommends that Congress ensures long-term, sustainable funding through the federal Highways Trust Fund.



# WASTEWATER



The nation's 14,748 wastewater treatment plants protect public health and the environment. **It is expected that more than 56 million new users will be connected to centralized treatment systems over the next two decades, and an estimated \$271 billion is needed to meet current and future demands.**



## THE LATEST IMPACTS:

Unfortunately, the COVID-19 pandemic has resulted in a \$12.5 billion shortfall for the nation's wastewater utilities — or about 20% average loss of revenue — due to declines in usage from commercial and industrial users, restoration of service to delinquent ratepayers who cannot afford their bills, and a temporary halt on shutoffs due to nonpayment.



## SOLUTIONS:

ASCE urges Congress to provide federal wastewater ratepayer assistance, as well as federal economic relief to wastewater utilities to combat revenue losses resulting from the pandemic. Additionally, Congress should allocate \$4 billion a year in grants for the Clean Water State Revolving Fund to help communities with much-needed wastewater infrastructure projects. Finally, ASCE recommends Congress restore parity between private and public sector employers regarding eligibility for payroll tax credits to alleviate the costs of paid leave during the coronavirus pandemic.