



## Trends in US Infrastructure Policy

- Infrastructure investment lacks a national vision or champion
- Infrastructure spending decreasing relative to other countries
- State and local governments take an increasing role
- Signs of progress: MAP-21 and potential WRDA bill

## Recent focus on infrastructure



Courtesy of Flickr/Corey Leopold

## ASCE's Infrastructure Vision

WE CAN RAISE THE GRADES WITH THESE KEY SOLUTIONS

Bold Leadership and a Compelling Vision

- 1. INCREASE LEADERSHIP IN INFRASTRUCTURE RENEWAL
- 2. PROMOTE SUSTAINABILITY AND RESILIENCE
- 3. DEVELOP AND FUND PLANS TO MAINTAIN AND ENHANCE AMERICA'S INFRASTRUCTURE

Sustainability and Resilience

Prioritize, Plan, and Fund

Courtesy of Flickr/Corey Leopold

# What is the "Report Card"?

## 16 Categories

Aviation

**Bridges** 

Dams

**Drinking Water** 

Energy

**Hazardous Waste** 

**Inland Waterways** 

Levees

**Ports** 

**Public Parks and Recreation** 

Rail

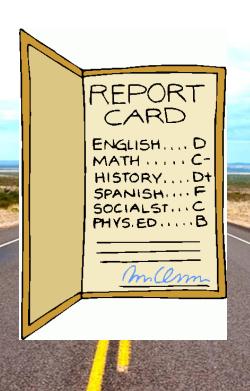
Roads

Schools

Solid Waste

Transit

Wastewater



## **Evaluation Criteria**

- Capacity and Condition
- Funding and Future Need
- Safety
- Resilience

## **Evaluators**

- Practitioners
- Academia
- Policy Experts

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## What are the Results?



## **NEGATIVE**

- Continued lack maintenance and investment.
- Backlog of projects keeps growing.
- Two categories received a grade of "D-": levees and inland waterways.

Courtesy of Flickr/Corey Leopold

## What are the Results?



## **POSITIVE**

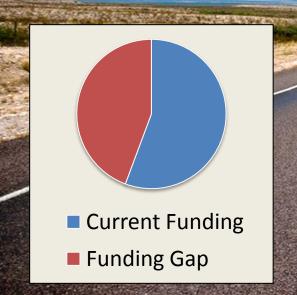
- Improvements in six sectors:
- Roads
- Bridges
- Solid waste
- Drinking Water
- Wastewater
- Railroads
  - Results of greater private investment and targeted efforts; ARRA funding.

Courtesy of Flickr/Corey Leopold

# Infrastructure Funding Needs by 2020

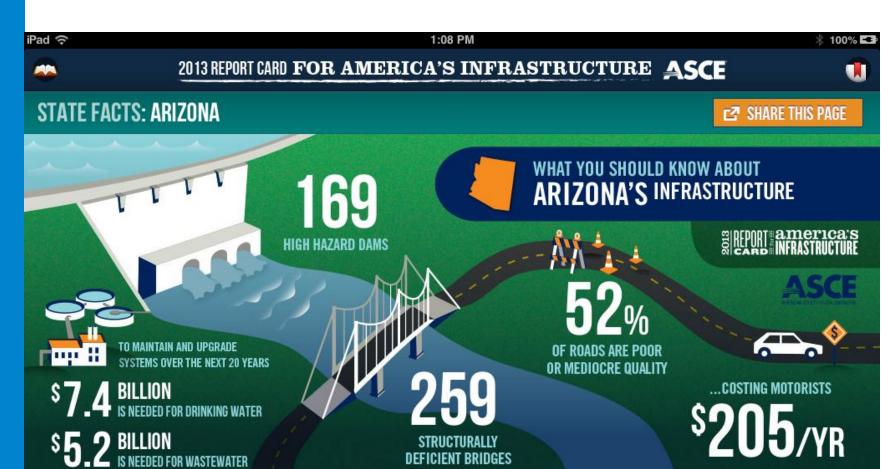
## **Funding Needs**

- ASCE's "Failure to Act" reports
- Industry Projections





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#### How is Arizona's infrastructure doing?

#### WATER AND ENVIRONMENT

#### Dams

 Arizona's dam safety program has 5.5 Full-Time Employees that each oversee an average of 44.9 state regulated dams.

## What Happens Without Investment?



**2013 REPO** 

AMERICA'S INFRASTRUCTURE



#### **Highlights**

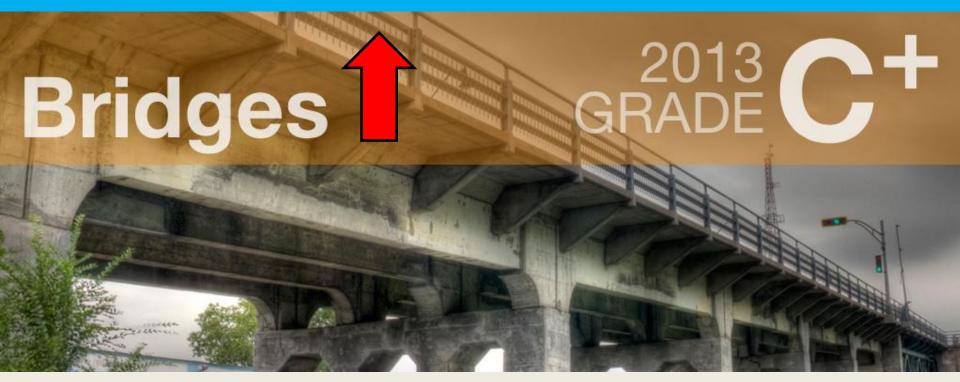
- •Roads improved slightly due to pavement condition improvements and significant reductions in highway fatalities.
- •Forty-two percent of America's major urban highways remain congested; costing the economy an estimated \$101 billion in wasted time and fuel annually.

•Current investment annually is still short of what is needed.

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- •Commercial flights were about 33 million higher in number in 2011 than in 2000.
- •The estimated cost of airport congestion and delays was about 22 billion in 2012.
- •Major projects like NextGen promise to modernize our airport system, but they require full funding.



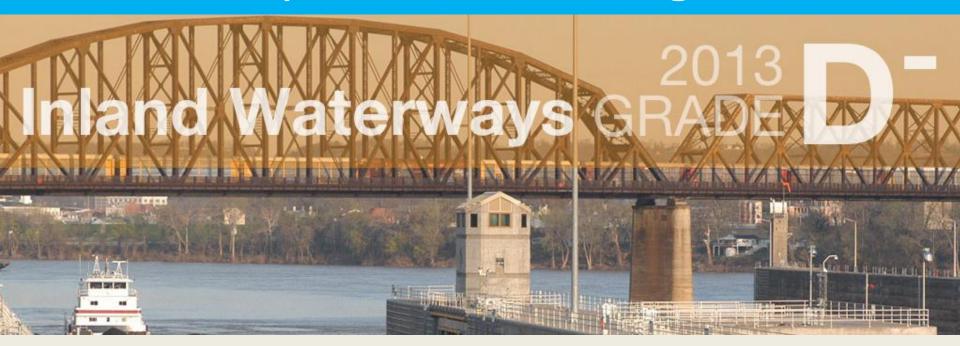
#### **Highlights**

- •In total, one in nine of the nation's bridges are rated as structurally deficient. However, the overall number of structurally deficient bridges continuing to trend downward; resulting in a grade improved to C+.
- •The number in urban areas, which tend to carry the most traffic, is on the rise.
- •Over two hundred million trips are taken daily across deficient bridges in the nation's 102 largest metropolitan regions.

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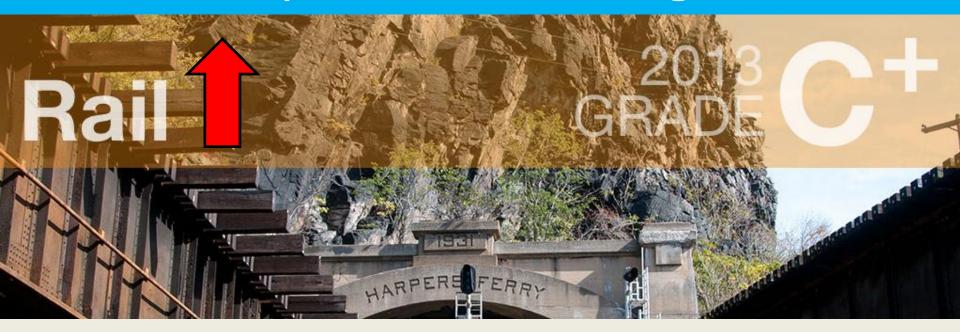
- •Forty-five percent of Americans still lack access to transit.
- •Americans increased their ridership 9.1% in the past decade, and that trend is expected to continue.
- •Deficient and deteriorating transit systems cost the U.S. economy \$90 billion in 2010.



- •Our nation's inland waterways and rivers carry the equivalent of about 51 million truck trips each year.
- •There are an average of 52 service interruptions a day throughout the system.
- There is a backlog of major projects to repair and replace aging locks and dredge channels with estimated schedules stretching out to the year 2090 under current funding levels.



- •The evaluation focused on the landside and water connections rather than terminal facilities.
- •The U.S. Army Corps of Engineers estimates that more than 95% (by volume) of overseas trade produced or consumed by the United States moves through our ports.
- •While port authorities and their private sector partners have planned over \$46 billion in capital improvements from now until 2016, federal funding has declined for dredging and landside connections.



- •In 2012, Amtrak recorded its highest year of ridership with 31.2 million passengers, almost doubling ridership since 2000.
- •Both freight and passenger rail have been investing heavily in their tracks, bridges, and tunnels
- estimated at about \$75 billion since 2009.
- •In 2010 alone, freight railroads renewed the rails on more than 3,100 miles of railroad track, equivalent to going coast to coast.



#### **Highlights**

- •The average age of the 84,000 dams in the country is 52 years old.
- •The overall number of high-hazard dams continues to increase, to nearly 14,000 in 2012.
- •It is estimated an investment of \$21 billion is needed to repair these aging, critical, high-hazard

dams.



- •The nation's estimated 100,000 miles of levees can be found in all 50 states and DC.
- •While the federal government has begun an inventory of levee conditions, it is not yet complete.
- •Nearly 85 percent of levees are locally owned and operated, making data collection difficult.
- •There is no National Levee Safety Program.



- Pipes represent the largest capital need, comprising three quarters of total needs.
- Capital investment needs are estimated to total \$298 billion over the next 20 years.
- It is estimated that aging pipes and inadequate capacity result in the discharge of about 900 billion gallons of untreated sewage per year.



#### **Highlights**

- There are about 240,000 water main breaks per year in the US.
- While the quality of drinking water remains high, the pipes and mains are frequently more than 100 years old and in need of replacement.
- The annual replacement rate of pipes is expected to reach up to 20,000 miles of pipe per year by 2035 we replace about 5,000 miles of pipe per year now.
- Investment needs will likely double from \$13 billion a year today to almost \$30 billion by 2040.

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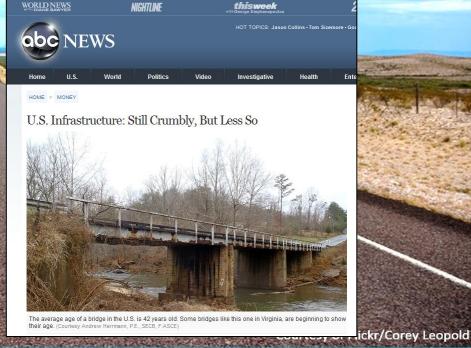
- America relies on an aging electrical grid and pipeline distribution systems, some of which originated in the 1880s.
- Investment in power transmission has increased since 2005; ongoing permitting delays, weather events, and limited maintenance contribute to an increasing number of failures and power interruptions.
- While demand for electricity has remained level, the availability of energy will become a greater challenge after 2020 as the population increases.

## Advocacy and Outreach Metrics









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# REPORT A STRUCTURE INFRASTRUCTURE

- 16 graded categories
- 50 state profiles
- 100+ infrastructure success stories
- Infrastructure news
- Category videos



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