



Report Card
FOR MAINE'S
Infrastructure

Issued December 10, 2008

AREA		2008	Comments:
Contaminated Site Remediation		D+	Policies have been established in Maine to investigate, remediate, and redevelop sites where contamination poses a risk to the environment and human health, typically due to contamination of drinking water supplies. While programs are adequate, funding for state-led investigation and remediation of known contaminated sites is inadequate. More than \$41 million in additional funding is currently needed.
Dams		D+	Maine has over 1,000 registered dams of which 153 are classified as high or significant-hazard-potential. Almost half of Maine dams are the responsibility of private owners. Maine spends ¼ to ½ of what other Northern New England states spend per dam on inspection. Maine's Dam Safety Program is understaffed and has no enforcement division. Seventeen public high-hazard dams require over \$12 million in repairs.
Energy		C+	The overall health of the energy generation and transmission system in Maine is good, but reliability and security concerns are posed by the state's dependence on natural gas fueled generation, as well as weak links and interface limits in the transmission system. Diversification of energy supply and approximately \$2 billion of transmission system investment are needed to address these issues.
Municipal Drinking Water		C	More than two-thirds of Maine residents are served by 150 public community drinking water systems. Maine has a more than adequate water supply and water quality is addressed through mandatory testing of public water supplies. Approximately \$900 million in water projects will be needed over the next 20 years. Current funding, approximately \$15 million per year, only provides for one-third of needs.
Municipal Wastewater		D+	Maine's 2004 Clean Watersheds Needs Survey listed a wastewater infrastructure need of \$854 million. The primary source of funding for wastewater improvements is the State Revolving Fund (SRF), which has declined by 50% since 2004 and is scheduled to end entirely in 2011. Without adequate funding, waitlists will increase and improvements to treating wastewater and protecting the environment will be deferred.
Schools (K-12)		C-	Capital funding needs for Maine schools exceed what is currently allocated through the two primary state funding programs. The state forecasts that during the period of 2005 to 2026, needed funding from existing and new bonds is approximately \$1.6 billion. Current funding levels result in a projected 20-year gap of \$600 million. Less than half of priority health and safety project requests have been funded over the past 6 years.
Solid Waste		C	Progress has been made, but Maine's solid waste policies are outdated. Planning must be based on realistic projections of generation rates and capacity. Maine's solid waste plan must address high waste generation rates (51% more than national average in 2005), an unmet recycling goal of 50 percent, advances in public policy and technology, and the time and multi-million dollar investment required to develop new capacity.
State Parks		B-	State parks are a key component of tourism, Maine's number one industry. The condition of the infrastructure of Maine's 47 state park facilities is stable and safe; however, additional investment would help greatly in providing the optimum level of service and gaining greater economic impact. A recent \$7.5 million bond provided some funding, though a backlog of \$30 to 40 million in needs remain.
Transportation	Airports	B-	Overall, the condition of Maine's airport system is good. However airports face a funding challenge. The agencies continue to prioritize projects based on safety needs and then capacity enhancements. For 2007, just over \$25 million was allocated from federal funding. Based on today's funding levels, a minimum \$100 million shortfall will occur over the next 20 years for planned airport capital development needs.
	Bridges	D+	Thirty-four percent of Maine's bridges subject to federal inspection requirements are deficient, compared to a national average of 25 percent. Though the 2008 Legislature approved an additional \$160 million in funding over 4 years for MaineDOT bridges, it will not have any impact on other agency bridges. The 10-year need for MaineDOT bridges is \$1.3 billion, resulting in a \$440 million funding gap.
	Passenger Transportation	C-	Ridership on transit in Maine grew 113% from 2004 to 2006, but only 55% of transit vehicles are in good condition. Passenger rail continues to expand, but a sustainable funding source has yet to be identified. Ferry services provide primary transportation from the island communities and require \$12.5 million to replace two vessels. Funding levels for all modes need to grow in order to meet demands.
	Ports & Waterways	C-	Maine's industrial ports are in fair to good condition, but require an additional \$12 million in capital funding in the short-term to remain competitive, safe, and secure. Substantial long-term investments are also required to facilitate the projected surge in containerized cargo traffic. Maine should also continue to promote enhancements to ports and harbors serving its viable cruise, commercial fishing, and recreation industries.
	Railroads	C	There are 1,162 miles of active railroad in Maine. State funding for joint rail initiatives including customer rail sidings and interchange improvements has made the system more efficient and productive. Further investment in railroads will facilitate higher use and reduce trucks on roadways. The pulp and paper industry is the primary customer of rail. Maine ranks 48 th in nation in freight tonnage moved by rail.
	Roads	D	Poor pavement has increased from 2% of MaineDOT roads surveyed in 1996 to 26% in 2006. Roads rated good and fair dropped from 81% in 2005 to 73% in 2006. Due to conditions Maine motorists spend an average of \$285 per year in extra vehicle operating costs. Current funding for roads is not sufficient. The pavement preservation program for "built" roads is only funded to address half its needs.
Overall Grade		C-	The health, safety and welfare of our citizens are directly tied to the quality of our infrastructure. Maine's economy is built on its infrastructure. Current and forecasted funding is inadequate to meet the needs. If Maine is to grow economically, investment into infrastructure needs to be a higher priority.
A is exceptional where all aspects of the area are in great shape.		B is good where condition is safe and reliable; there are minimal capacity issues and minimal risks.	
C is mediocre; condition and capacity are adequate in general, though some risks and consequences of failure which need to be weighed when prioritizing funding. Maintenance is likely being deferred due to inadequate funding.		D is poor; condition and capacity are concerning with risk of failure high, condition and/or capacity will likely have a negative impact on economic activity.	

Executive Summary

Civil engineering is a broad field dealing with the planning, design, construction, maintenance and management of infrastructure networks and the safety of the public. Most civil engineering today includes power plants, bridges, roads, railways, runways, structures, retaining walls, foundations, water supply, irrigation, sewer, flood control, transportation and the protection of the natural environment.

The maintenance and improvement of Maine's infrastructure is vital to our economy, health, safety, security and to the environment. The Maine Section of the American Society of Civil Engineers (Maine Section ASCE) represents over 750 civil engineering professionals who live and work in the State of Maine. As a public service to the residents of Maine, led by 12 ASCE infrastructure leaders, a team of engineers and industry experts volunteered hundreds of hours to review public records and provide an overview of infrastructure in Maine.

The Maine Section ASCE analyzed the following fundamental components of each infrastructure area:

- Existing conditions,
- Capacity,
- Operations & maintenance or deferred maintenance,
- Public safety & security,
- Risk and consequences of failure, and
- Current and projected levels of funding.

With double-digit construction inflation and rising fuel costs over the past four years, all areas are susceptible to falling further behind if the public and our leaders do not carefully monitor conditions and make significant investments in our infrastructure. As an example, there are six areas under transportation that will compete for \$3 billion in funding over next ten years, with a \$6 billion need forecasted. Decisions about infrastructure, which we all pay for through user fees and taxes, as well as private investments, need to be made based on long-term comprehensive planning, with sustainable and reliable funding sources.

As with the national report cards produced by ASCE, the purpose of this state report card is to raise public awareness of the importance of a modern and well-maintained infrastructure. Our infrastructure cannot be taken for granted and requires daily maintenance and continuous planning. We believe discussion of the issues detailed in this report card will lead to a greater understanding of the current and future needs of our state, prompting decision makers in our communities, the state legislature, and our congressional delegation to formulate policies and provide the necessary funding to address our infrastructure needs. In five years, Maine ASCE will report on progress or decline. Please contact us at www.maineasce.org with any comments or questions.

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B is good- condition is safe and reliable; minimal capacity issues, there is minimal risks.

C is mediocre- condition and capacity are adequate; some risks and consequences of failure which need to be weighed; maintenance is being deferred due to lack of funding.

D is poor- conditions and capacity are concerning with risk and/or consequences of failure high. Condition/capacity has or will have a negative impact on economic activity.