Renewing California

In January 1848, gold was discovered at Sutter's Mill in the Sierra Nevada foothills about 40 miles east of Sacramento beginning the California Gold Rush, which had the most extensive impact on population growth in the state from any era. The Gold Rush brought the world to California. California was given official statehood by Congress on September 9, 1850, as part of the Compromise of 1850. By 1855, some 300,000 "Forty-Niners" had arrived from every continent. California has continued to grow and thrive into the 21st Century making it the most populous state in the Union. California's infrastructure like the state itself is showing its age.

Over 38 million people rely upon these systems every day and their dependability and quality are silent, but significant contributors to our economic prosperity and quality of life. The Citizen's Guide is designed first to engage California's leaders and then the citizenry at large in a call to action for continued, strong investment in our state's infrastructure. Never in our state's history has this been more important: California stands poised on the brink of tremendous growth. Now is the time to protect our past investments and to plan for our infrastructure future. This guide will help us identify the most pressing needs facing our state's infrastructure systems. We invite you to join a growing list of concerned citizens making the case for renewing California.

Grading Our Public Works

The CAIRC working groups and their Expert Advisory Groups (EAG) assigned letter grades to the eight main categories of California public infrastructure reviewed this year. The average grade is "C." The Report Card, on pages 8 and 9, shows how California's roads, bridges, water and sewer systems measure up.

ASCE California Infrastructure Report Card 2012
www.ascecareportcard.org

	2006	2012
Aviation	C-	C+
Levees/Flood Control	F	D
Ports	C+	B-
Solid Waste	B	B
Transportation	D+	C-
Urban Runoff	D+	D+
Wastewater	C+	C+
Water	C+	C
California's Infrastructure GPA	C-	C
Annual Investment Needs (Billions)	$37	$65

C+ Aviation

The State of California is experiencing massive growth with a projected population in excess of 54,000,000 by the year 2040. Significant actions must be taken to meet the anticipated population demand requirements for air transportation, particularly commercial, foreign and domestic travel, and air cargo and to maintain the significant economic development provided by this industry. This demand is a result of consistent growth within the state as well as limited capacity and increasing restrictions on aviation infrastructure growth within regions. California must ensure efficient air travel and cargo transport by expanding airports and building regional airports to distribute the influx of passengers and cargo or risk losing its competitive edge. Estimated annual capital investment needed to move to a "B" grade is $300 million per year over the next ten years.

D Levees/Flood Control

The backbone flood control and drainage systems serving California cities including channels, levees, retarding basins, dams and pump stations vary widely in condition and capacity to prevent flooding from major storms. In California's Central Valley, there is a real potential for catastrophic disaster to life and property from the failure of fragile levee systems. These levees protect thousands of homes, businesses and critical community infrastructure. Current flood control funding shortfalls across the state, based upon available budget estimates for regional flood control facilities alone are in excess, of $2.8 billion per year over the next 10 years.

B- Ports

The California sea ports provide a vital link for goods movement from ship to shore, and connection to the National Highway System and the transcontinental railroad network. With the cooperation of city, county, state, and federal agencies, the California sea ports own and operate an extensive infrastructure system that facilitates the movement of cargo from ship to shore and vice-versa. The California sea ports consist of eleven large to moderate-sized maritime facilities. There are more than 20 other smaller craft harbors and navigable landings, but they are not included in this assessment. . The report card includes an infrastructure assessment using existing records and documents. The overall grade for the California sea ports based on a weighted factor is "B-" with total investments of $1.7 billion per year for the next 10 years for a total investment of $10.7 billion.

B Solid Waste

Solid waste management systems in California are operated by a combination of private and public facilities, which include collection, processing, and sanitary landfills. Nearly 65 percent of solid waste generated is diverted from landfills due to recycling and diversion programs. Current statewide landfill capacity is 25 years, giving California sufficient capacity through the year 2037. The California Solid Waste Management infrastructure is assigned a "B" grade based on a thorough review of its facilities' condition, capacity, operations and security. Solid waste management systems require continued current annual funding levels of $8 billion per year for the next 10 years to maintain the current grade.

C- Transportation

California's transportation infrastructure, consisting of streets, highways, bridges, rail systems and transit operations, is suffering from a lack of sufficient investment for the operations and maintenance of existing facilities and dedicated funding sources for new improvements to the system. The economy and growth of California have long been associated with an advanced transportation system, and continued public investment is needed. The overall grade for transportation infrastructure in California has been determined to be a low "C-" due to existing conditions and the lack of adequate funding. There is a need for $10 billion per year more to be spent for ongoing maintenance of existing facilities and an investment of $36.5 billion in order to raise Transportation to a "B" grade.

D+ Urban Runoff

Funding for urban stormwater infrastructure has failed to keep pace with the requirements of state and federal regulation for surface water, and surface water pollution persists over 20 years after regulation has been in force. Improvements to urban runoff programs and infrastructure have been substantial over the past decade, but these improvements have been overshadowed and outpaced by additional regulatory requirements in NPDES permits and by obligations placed on permit holders under the total maximum daily loads (TMDL) program. Simply put, urban runoff stormwater programs are underfunded. Improving the urban runoff infrastructure grade from "D+" will take a substantial new investment, estimated at $6.7 billion per year for the next 10 years. Investment in key program areas include infrastructure, regulation, and the control of sources of pollutants in our environment.

C+ Wastewater

Significant wastewater infrastructure investments are needed to address renewal and replacement, maintenance, security and reliability funding. These investments would increase the reliability and sustainability of infrastructure and protect our coastal and inland water resources into the future. The annual investment needed to raise our Wastewater infrastructure grade from a "C+" to a "B" is $4.5 billion annually for the next 10 years. California's 100,000 miles of sewers and over 900 wastewater treatment plants generally perform adequately to protect the water resources of the state by managing the approximately 4 billion gallons of wastewater generated every day by California's citizens and businesses. Nevertheless, the condition and performance of California wastewater infrastructure (sewers, treatment plants and effluent disposal) vary significantly across the state and from agency to agency. The wastewater collection systems continue to require significant investments to be in compliance with the state-wide Waste Discharge Requirements adopted in 2006.

C Water

California's water infrastructure is vital to the economic well-being, environmental integrity, and overall quality of life of all Californians. Water received a grade of "C", which is a reduction from the 2006 grade of "C+". The ability to meet the water needs of existing and future Californians is not only dependent on our available supplies, but also on the condition of the numerous facilities required to collect, store, treat, and deliver that water to customers. Significant investments are still needed to address renewal and replacement, maintenance, security and reliability for the State's water infrastructure. These investments will move water supply and related infrastructure closer to a path of sustainability. The annual investment needed for the next 10 years is estimated to be $4.6 billion.

Understanding Infrastructure Issues

Now that you have seen California's infrastructure report card, you may be asking how you can help improve our state's infrastructure. Our suggestions are the same as given in the ASCE National Report Card:

Infrastructure is a complex network of public works, which includes roads, bridges, airports, dams, school facilities, and utilities. The rules governing its planning, financing, construction, and upkeep are equally complex. Whether your goal is to shorten your daily commute, attract new business to your community, or protect the environment for your children, gaining a better understanding of these issues is the first step toward becoming an advocate for infrastructure renewal in your community.

As you read through this Citizen's Guide, think about the following:

Be an informed citizen.
In order to educate public officials about infrastructure needs in your community, you must understand what those needs are through this Infrastructure Report Card. How does your community measure up? Demand increased federal and state leadership to address areas where your community's infrastructure is not making the grade.

Demand continuous and timely maintenance.
If transportation, water, and other infrastructure facilities are not kept in sound condition, they cannot support the level of service they are designed to handle. Regular maintenance prolongs use and minimizes the need for costly repairs. The money saved can be used to fund other community priorities. Unfortunately, policies often encourage new construction at the expense of maintenance. Demand that lifecycle and ongoing maintenance costs are taken into account to meet the needs of current and future users.

Think long-term.
Renewing America's infrastructure is an ambitious goal. It cannot be achieved overnight. Furthermore, the roads, bridges, water treatment plants and other facilities built today must serve for decades to come. Comprehensive planning and long-term investment are key to sound decisions about infrastructure. Demand that national, state and regional infrastructure plans be developed that complement a national and local vision and focus on system-wide results. Demand increased and improved infrastructure investment from all stakeholders.

Consider all the factors influencing infrastructure decisions.

Building a new highway has implications beyond the immediate highway corridor. For example, concern that a new highway may displace wetlands must be balanced against the reduction in air pollution that will result from decreased traffic congestion.

Do more with less.

Clearly, money alone will not solve our infrastructure problems. Solutions to urban problems such as traffic congestion and contaminated water require new technologies and approaches. Research can help identify more efficient designs and longer lasting, maintenance-free materials. And, we can change our behavior-through recycling, telecommuting, or using mass transit, for example-to reduce the demand on our infrastructure.

Preserve the environment.

To use the nation's resources most effectively, we must balance environmental and economic goals. Land use and transportation patterns designed to foster economic growth and personal mobility can be developed in harmony with environmental benefits. Promote sustainability and resilience in infrastructure to protect the natural environment and withstand natural and man-made hazards.

Look at the big picture.

Remember that beyond the immediate, individual benefits you gain from infrastructure improvements, there are broader community benefits. For example, even though you may not use the new mass transit system, its construction will reduce traffic congestion on local roads and increase nearby property values.