INFRASTRUCTURE

The California Infrastructure Planning Act (Chapter 606, Statutes of 1999) requires the Governor to submit a five-year infrastructure plan to the Legislature for consideration with the annual budget bill. The 2018 Five-Year Infrastructure Plan (Plan) focuses limited available resources on core state responsibilities. This Chapter, along with other information on the Department of Finance website, meets the requirements of the Act.

HISTORY

When Governor Brown took office in 2011, the Plan had been published irregularly since the passage of the California Infrastructure Planning Act. Recognizing the importance of protecting state assets and planning for future infrastructure needs, the Governor renewed publication of the Plan beginning in 2014, providing vital information on the status of current infrastructure statewide, and a roadmap for future investments. The results of this continued commitment to infrastructure planning are noteworthy—for example, $942 million was provided in 2015 and 2016 for thousands of deferred maintenance projects statewide, including roof replacements, building system repairs and upgrades, and levee repairs. In addition, a significant long-term commitment was made to the renovation and replacement of state office buildings in the Sacramento region, including the State Capitol Annex, with the goal of improving and replacing aging infrastructure and minimizing the state’s need for more expensive leased space.

Significant investment of resources to address transportation deficiencies statewide are underway. The Road Repair and Accountability Act of 2017 (SB 1) was recently signed into law, reversing decades of decline in transportation funding by providing nearly $55 billion in
additional funding over ten years for repairs and maintenance of the state’s highway system, and to improve critical transportation routes and corridors. The Administration has made significant progress on the planning and development of the High-Speed Rail Project, which will eventually transport Californians from the Bay Area to Southern California at speeds capable of exceeding 200 miles per hour.

Additional resources have been provided to maintain and enhance the state’s natural resource infrastructure, including funding flood control projects that reduce flood risk and enhance system resiliency to address the impacts of climate change, as well as improving operations and maintenance of the flood management system. The Administration has also made an ongoing investment in state parks to improve access, and maintain clean water supplies, clean restrooms, trail systems, historic structures, and safe roads. If approved by voters in June 2018, the California Drought, Water, Parks, Climate, Coastal Protection, and Outdoor Access for All Act of 2018 (SB 5) will authorize $4 billion in general obligation bonds for California’s parks, water and flood control infrastructure, ocean and coastal protection, safe drinking water, groundwater management and climate preparedness and resiliency.

Successful strategies to more efficiently fund infrastructure projects for the University of California (UC) and the California State University (CSU) systems have been implemented. Legislation was enacted in 2014 and 2015 that provided both UC and CSU with the authority to fund capital projects and debt service from their annual support budgets. This provides the universities with the flexibility to prioritize funding sources for their entire operations, including infrastructure development.

Corresponding with the passage of the Kindergarten Through Community College Public Education Facilities Bond Act of 2016 (Proposition 51), the Administration has pursued measures to verify that taxpayers’ dollars are appropriately used to support projects funded under the School Facilities Program. To accomplish this, the State Allocation Board implemented the use of front-end grant agreements that define basic terms, conditions, and accountability measures for participants that request funding through the program. Also, the 2017 Budget included statutory changes requiring the inclusion of audit instructions for the expenditure of facility bonds in the annual K-12 Audit Guide.

Although the 2018 Plan highlights state-owned infrastructure planning efforts, the Administration has made significant infrastructure investments at the local level as well. Recognizing that groundwater is best managed locally, the Governor signed the Sustainable Groundwater Management Act of 2014—a package of groundwater management bills that directed cities, counties, and water districts to work together to prevent long-term over-pumping of groundwater basins. In addition, the Administration committed $30 million to construct water management infrastructure and habitat conservation and dust mitigation
projects at the Salton Sea. Additional information is included in the Natural Resources Chapter.

**Overview of the Plan**

The construction and maintenance of key physical infrastructure is a core function of state government. Infrastructure and capital assets allow for the delivery of public services and the movement of goods across the state, both of which are essential components in fostering continued economic growth in California. While there continue to be critical deficiencies in the state’s infrastructure, including a significant backlog of maintenance on existing facilities after years of underfunding, this Administration has demonstrated a renewed commitment to infrastructure investment and to the long-term needs of the state.

The 2018 Plan evaluates the state’s infrastructure needs in the overall context of available funding sources. The vast majority of the funding proposed in the Plan is dedicated to the state’s transportation system—more than 93 percent. This reflects the sheer size of the system, the state’s commitment to building the first high-speed rail system in the United States, and a funding plan to enhance the maintenance of the state’s roads and highways as a result of new revenues that were authorized in SB 1. The Plan continues implementation of the Water Quality, Supply, and Infrastructure Improvement Act of 2014 (Proposition 1) to help address many goals of the Water Action Plan. In addition to transportation, the Plan specifically addresses the infrastructure challenges for the K-12 and higher education systems. There is increased investment in the state parks, and in facilities that support the state’s courts, the California Conservation Corps, and the California Department of Veterans Affairs, among others.

Budget challenges in the early 2000s resulted in a greater reliance on debt financing, rather than pay-as-you-go spending. From 1974 to 1999, California voters authorized $38.4 billion of general obligation bonds. From 2000 to 2010, voters expanded the types of programs funded by bonds and authorized approximately $111.9 billion of general obligation bonds. The Administration has greatly tempered the use of debt, supporting $24.1 billion of new general obligation bonds from 2011 to 2018—including $8 billion on the ballot for Natural Resources and Housing in 2018—and strengthening oversight of bond spending for educational facility bonds enacted through initiative. Of all previously approved infrastructure bonds, debt obligations of $73.4 billion in general obligation bonds and $9.3 billion in lease revenue bonds remain outstanding. Additionally, there are $36 billion of general obligation and lease revenue bonds ($31.3 billion and $4.7 billion, respectively) that are authorized but not yet issued, which represents a significant decrease from the 2011 reported total of $48 billion. The bonds will be issued when projects are approved and ready for construction. Additional information related to general obligation and lease revenue bond issues can be found on the Finance website.

When the state borrows to pay for infrastructure, roughly one out of every two dollars spent on
infrastructure investments pays interest costs, rather than construction costs. The amount of funds required to service the debt had increased steadily over past years, but that growth has slowed during this Administration. Annual expenditures on debt service grew from $2.9 billion in 2000-01 to $6.4 billion in 2010-11—an average annual growth of 9.2 percent. Since that time, debt service grew more slowly to $7.3 billion in 2017-18—an average annual growth rate of only 1.7 percent.

This Plan reflects the Governor’s proposal for investing $61 billion in state infrastructure over the next five years, including $8.6 billion proposed in the Budget. This includes $1 billion General Fund, $12 billion from various special funds, $4 billion from non-governmental cost funds (including lease revenue bond funds), $848 million from general obligation bond funds, $24.4 billion from federal funds, $3.6 billion from reimbursements and other governmental cost funds, and $15.5 billion from high-speed rail funds. The Plan does not reflect additional funds that will be available for infrastructure spending as required under Proposition 2 once the state Rainy Day Fund reaches its constitutional limit. Expenditures of those funds will be addressed in the future.

See Figure IFP-01 for a summary of the proposed funding by program area and Figure IFP-02 for a summary by year, department, and fund source. A detailed listing of the specific projects proposed to be funded can be found on the Finance website, which also identifies the anticipated cost of the projects and the phase of the project to be funded.

<table>
<thead>
<tr>
<th>Program Area</th>
<th>Capital Funding</th>
</tr>
</thead>
<tbody>
<tr>
<td>Judicial Branch</td>
<td>$1,347</td>
</tr>
<tr>
<td>Transportation / High Speed Rail Authority</td>
<td>$55,478</td>
</tr>
<tr>
<td>Natural Resources</td>
<td>$995</td>
</tr>
<tr>
<td>Health and Human Services</td>
<td>$150</td>
</tr>
<tr>
<td>Corrections and Rehabilitation</td>
<td>$520</td>
</tr>
<tr>
<td>Education</td>
<td>$576</td>
</tr>
<tr>
<td>General Government</td>
<td>$2,270</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$61,336</strong></td>
</tr>
</tbody>
</table>

**Integrating Climate Change and Resiliency into Planning and Investment**

In April 2015, Governor Brown signed Executive Order B-30-15, which directed state agencies to consider climate change in all planning and investment decisions. The order addresses several pillars of the Governor’s climate change strategy, including establishing a statewide...
greenhouse gas emissions reduction target of 40 percent below 1990 levels by 2030, which was adopted into law through Chapter 249, Statutes of 2016 (SB 32).

The order requires agencies to incorporate climate change impacts into infrastructure planning, and sets forth a series of actions to increase the state’s resilience to climate change. The Governor’s Office of Planning and Research (OPR) led a Technical Advisory Group to develop guidance for how state agencies should integrate climate change into planning and investment. The OPR published Planning and Investing for a Resilient California: A Guidebook for State Agencies in November 2017. The guidance document provides a process for state
agencies to integrate climate change into planning and investment decisions.

Implementation of the guidance document is being coordinated with the Strategic Growth Council, the Government Operations Agency, and OPR’s Integrated Climate Adaptation and Resiliency Program. The program established a permanent Technical Advisory Council to coordinate resiliency efforts across state, local, and regional agencies, provide input on certain state grant programs, develop a framework for financing resiliency, and establish metrics for tracking progress.

**Maintenance of Existing Infrastructure**

Historically, due to budget reductions and other fiscal challenges, the state has not consistently funded either the cost of maintaining its new capital investments or the deferred maintenance on existing infrastructure. For example, although billions of dollars have been spent over the past decade to build state facilities, less attention has been paid to the availability of permanent funds to maintain these facilities.

Deferred maintenance is maintenance that has not been completed to keep state-owned facilities in an acceptable and operable condition, and that is intended to maintain or extend their useful life. Actions like replacing old equipment, repainting, reroofing, repairing wiring and plumbing, dredging river or stream beds to restore original flow capacity, and repairing roads are all examples of maintenance. In contrast, capital outlay is the creation of new buildings, additions to and modifications of existing buildings, and includes projects that generally expand the capacity or change the function of state-owned properties.

The 2015 and 2016 Budget Acts together allocated approximately $960 million ($942 million General Fund and $18 million Motor Vehicle Account) for deferred maintenance projects at levees and various state facilities to address the most critical statewide deferred maintenance projects. These funds made a modest down payment to address the backlog of deferred maintenance. At present, the reported statewide deferred maintenance need totals $67 billion, as shown in Figure IFP-03.

**Maintaining Transportation Infrastructure**

Transportation has long represented the highest deferred maintenance need. Much of the state highway system was built between the 1950s and early 1970s to serve a growing economy and population. The state’s population continued to grow significantly in recent decades, resulting in a corresponding increase in vehicle miles traveled and placing additional pressure on an aging state highway system. Similarly, increased international trade, coupled with the country’s dependence on the state’s port system, led to a substantial increase in trucking which imposed
an even greater burden on the state transportation system. As cars became more fuel efficient, revenues from taxes did not keep pace with the state’s increasing need for highway maintenance and repairs.

In an effort to address deteriorating road conditions, SB 1 was signed into law in April 2017. This Act provides increased funding to repair the roadways, both on and off the State Highway System to address congestion, improve trade corridors and promote active transportation.

SB 1 provides nearly $20 billion over ten years (about $2 billion per year) for the maintenance and repair of the State Highway System. This funding will be targeted toward pavement, bridge, and culvert repair while allowing the state to maintain current funding levels for safety, emergency and other transportation elements.

In addition to the maintenance and repair resources, SB 1 provides nearly $6 billion over ten years (about $600 million per year) to improve critical trade corridors, congested corridors and
create active transportation routes throughout the state. By focusing funding in these areas California can promote a long-term, sustainable transportation system with decreased travel times for both business and the traveling public.

**Affordability—Debt Management**

The state has long used debt financing as a tool for infrastructure investment, similar to the private sector. Since 2000, the state significantly increased its reliance on debt financing—as opposed to pay-as-you-go financing. In recent years, debt service was one of the fastest growing segments of the budget. The Administration has taken actions to reduce this growth—such as better management of projects’ cash needs and increased use of pay-as-you-go financing. As shown in Figure IFP-04, debt service on infrastructure bonds is expected to increase to $8.5 billion in 2021-22, assuming the Natural Resources and Housing general obligation bonds are approved by the voters in 2018 and only limited new lease revenue bonds are authorized. For more information on the state’s debt history, see the Finance website.

The debt service ratio is a measure of relative indebtedness. It expresses the state’s debt service level as a percentage of its General Fund revenues. The debt service ratio is projected to decline slightly through 2021-22—mainly because of higher projected revenues—to 4.02 percent, assuming no significant additional General Fund-supported general obligation or lease revenue bond debt.

Both the bond market and bond rating agencies consider a number of factors when evaluating a state’s debt position. Two measures commonly used to determine a state’s debt position are debt as a percent of state personal income and debt per capita.

<table>
<thead>
<tr>
<th>Fiscal Year</th>
<th>General Fund Revenues</th>
<th>Debt Service</th>
<th>Debt Service Ratio</th>
<th>Debt Service</th>
<th>Debt Service Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>2016-17</td>
<td>$118,685</td>
<td>$7,669</td>
<td>6.46%</td>
<td>$5,303</td>
<td>4.47%</td>
</tr>
<tr>
<td>2017-18*</td>
<td>$127,823</td>
<td>$7,332</td>
<td>5.74%</td>
<td>$5,369</td>
<td>4.20%</td>
</tr>
<tr>
<td>2018-19*</td>
<td>$131,708</td>
<td>$8,145</td>
<td>6.18%</td>
<td>$5,494</td>
<td>4.17%</td>
</tr>
<tr>
<td>2019-20*</td>
<td>$136,112</td>
<td>$7,998</td>
<td>5.88%</td>
<td>$5,310</td>
<td>3.90%</td>
</tr>
<tr>
<td>2020-21*</td>
<td>$140,470</td>
<td>$8,040</td>
<td>5.72%</td>
<td>$5,191</td>
<td>3.70%</td>
</tr>
<tr>
<td>2021-22*</td>
<td>$144,740</td>
<td>$8,529</td>
<td>5.89%</td>
<td>$6,094</td>
<td>4.21%</td>
</tr>
</tbody>
</table>

* The debt service ratio expresses the state’s debt service costs as a percentage of its General Fund revenues.
* Estimated
The ratio of a state’s debt to personal income is a reflection of the state’s debt compared to the state’s wealth. According to the 2017 State Debt Medians Report by Moody’s Investors Service, California’s total outstanding debt as a percentage of personal income is 4.2 percent. While this is well above the national average of 3.0 percent (only two of the ten most populous states—New York and Illinois—have more debt as a percentage of personal income), it is a significant decrease from the total of 6.0 percent reported in 2011 (see Figure IFP-05).

<table>
<thead>
<tr>
<th>State</th>
<th>Percent of Personal Income</th>
</tr>
</thead>
<tbody>
<tr>
<td>National Average</td>
<td>3.5  3.4  3.2  3.1  3.0  3.0</td>
</tr>
<tr>
<td>California</td>
<td>6.0  6.0  5.8  5.4  5.1  4.7  4.2</td>
</tr>
<tr>
<td>(50 state rank)</td>
<td>(9th) (8th) (9th) (10th) (10th) (11th) (13th)</td>
</tr>
<tr>
<td>Texas</td>
<td>1.6  1.5  1.5  1.0  0.9  0.8</td>
</tr>
<tr>
<td>Michigan</td>
<td>2.2  2.2  2.2  2.1  1.9  1.8  1.6</td>
</tr>
<tr>
<td>Pennsylvania</td>
<td>2.7  2.8  2.8  2.6  2.4  2.5  2.7</td>
</tr>
<tr>
<td>Georgia</td>
<td>3.3  3.1  3.0  2.9  2.8  2.7  2.5</td>
</tr>
<tr>
<td>Ohio</td>
<td>2.8  2.8  2.8  2.7  2.7  2.6  2.5</td>
</tr>
<tr>
<td>Illinois</td>
<td>5.7  6.0  5.7  5.6  5.7  5.2  5.1</td>
</tr>
<tr>
<td>Florida</td>
<td>3.0  3.0  2.8  2.5  2.4  2.5  2.2</td>
</tr>
<tr>
<td>North Carolina</td>
<td>2.3  2.3  2.4  2.1  1.9  1.8  1.6</td>
</tr>
<tr>
<td>New York</td>
<td>6.8  6.6  6.3  6.0  5.7  5.4  5.3</td>
</tr>
</tbody>
</table>


Debt per capita measures each state resident’s share of the total debt outstanding. Last year, California’s per capita debt was estimated to be $2,217, well above the national average of $1,473 as reported by Moody’s. California was ninth among the states in 2016 in terms of overall debt per capita, and only two of the ten most populous states—New York and Illinois—had higher debt per capita. Similar to the debt as a percent of state personal income, the debt per capita has decreased from the total of $2,542 reported in 2011, while the national average rose over the same period (see Figure IFP-06).

**Significant Infrastructure Proposals**

Description of the infrastructure for entities included in the Plan are located on the Finance website.

**Judicial Branch**

The Trial Court Facilities Act of 2002 (SB 1732), transferred responsibility and ownership of court facilities from counties to the state in addition to providing a mechanism and fee increases for funding the construction, maintenance, and repairs of these facilities. In addition, Chapter 311, Statutes of 2008 (SB 1407), was enacted to increase various fees, penalties, and assessments
to support the construction, renovation, and operation of court facilities. However, the revenues
that were anticipated as a result of SB 1732 and SB 1407, have not materialized in the amounts
needed to renew and restore the state’s court facilities. Consequently, in 2012, the Judicial
Council was forced to halt 17 court construction projects.

Consistent with the transfer of responsibility for court facilities to the state, the Budget includes
$32.2 million from the Immediate and Critical Needs Account to complete the design of three
courthouse projects in Riverside/Mid-County, Sonoma and Stanislaus. The Budget also
commits to completing construction for the next ten courthouse projects ready to proceed to
construction from lease revenue bonds in the next two years, namely, projects in Imperial,
Riverside/Indio, Shasta, Siskiyou, and Tuolumne in 2018-19 and projects in Glenn,
Riverside/Mid-County, Sacramento, Sonoma, and Stanislaus in 2019-20.

**Housing**

The Veterans and Affordable Housing Bond Act of 2018 proposes a $4 billion bond on the
November 2018 ballot. The first $3 billion of the bond will support various existing housing
programs, including affordable multifamily housing, farmworker, transit-oriented development,
infill infrastructure, and homeownership programs, as well as matching grants for Local Housing
Trust Funds. These funds are anticipated to be awarded over five years. The remaining $1 billion
will be available to support home ownership for veterans, with downpayment assistance,
reduced fees and closing costs, and competitive interest rates.

The Budget includes $277 million local assistance for the Multifamily Housing Program,
assuming passage of the Veterans and Affordable Housing Bond Act of 2018. The Multifamily
Housing Program assists with new construction, rehabilitation and preservation of permanent
and transitional rental housing for lower income households.
Natural Resources

If approved by voters in June 2018, the California Drought, Water, Parks, Climate, Coastal Protection, and Outdoor Access for All Act of 2018 (SB 5) would authorize $4 billion in general obligation bonds for California’s parks, water and flood control infrastructure, ocean and coastal protection, safe drinking water, groundwater management and climate preparedness and resiliency. The Budget proposes $1.02 billion to begin the first year of implementation should the voters approve the bond measure. Funding in 2018-19 will be prioritized to support existing programs, shovel-ready projects, and a phased-in approach for newly established programs. For additional information, please see the Natural Resources Chapter.

California Conservation Corps

The California Conservation Corps (CCC) operates 8 residential and 18 non-residential facilities in both urban and rural areas. These facilities provide employment, training, and educational opportunities to young men and women, and assist federal, state, and local agencies, and nonprofit entities with the conservation of California’s natural resources.

The Budget includes $14.1 million General Fund to initiate four new residential center projects in Auberry, Los Pinos, Greenwood, and Yountville, and to rehabilitate two existing centers in Ukiah and Fortuna. Together, the four new residential centers are expected to add capacity for approximately 390 additional corpsmembers.

Department of Corrections and Rehabilitation

The Department of Corrections and Rehabilitation (CDCR) operates 37 youth and adult correctional facilities and 44 youth and adult camps. CDCR’s aging infrastructure and changing population drive significant infrastructure needs.

California experienced record levels of rainfall in the past year, and severe storms caused significant damage to prison roofs. Failing prison roofs have resulted in damage to electrical systems and housing units; interruptions in rehabilitation programs, education programs and mental health treatment; and the development of mold. In continuation of the roof funding provided in the 2017 Budget Act, the Budget includes $60.7 million General Fund to replace roofs at the California Substance Abuse Treatment Facility, Salinas Valley State Prison, and Ventura Youth Correctional Facility and $20 million General Fund for mold remediation efforts at various facilities in 2018-19. This continues a multi-year strategy to address failing roofs, with Calipatria State Prison and California State Prison, Corcoran being the next priorities.

The Budget also includes $35.9 million General Fund for projects that address a variety of
infrastructure needs to support CDCR’s programs, including mental health crisis beds, statewide medication distribution, and cognitive behavioral treatment classrooms.

**K-12 Education**

Since enactment of the Smaller Classes, Safer Schools, and Financial Accountability Act (Proposition 39 in 2002), local communities have increasingly funded a greater share of school construction through passage of local bonds. Over the past two years, voters have approved approximately 208 local bond measures authorizing more than $28 billion for school construction and modernization. Voters also approved the Kindergarten through Community College Public Education Facilities Bond Act of 2016, which provides approximately $7 billion of state general obligation bonds to support the existing K-12 School Facilities Program. Bond sales to support the program are based upon the approval of projects by the State Allocation Board and the associated cash need reported by local educational agencies with approved projects.

The Budget proposes approximately $640 million in bond authority for 2018-19 to fund new construction, modernization, career technical education, and charter facility projects. Additional detail regarding K-12 School Facilities is discussed in the K-12 Education Chapter.

**Higher Education**

Each year, millions of Californians pursue postsecondary degrees and certificates, enroll in courses, or participate in other kinds of education and training. The three public segments include the University of California (UC), the California State University (CSU), and the California Community Colleges. The UC and CSU currently fund capital projects from their annual support budget. This provides the universities with the flexibility to prioritize funding sources for their entire operation, including infrastructure development. For this reason, neither UC nor CSU are included in the Plan. However, in accordance with statute, both submit annual capital outlay proposals for legislative review and Department of Finance approval.

The CSU submitted capital proposals totaling $1.4 billion ($1.2 billion Statewide Revenue Bonds and $189 million campus funds). CSU continues to prioritize and refine this project list. The UC submitted 2018-19 capital outlay proposals totaling $266 million ($156 million General Fund-supported financing and $110 million non-state resources). Final approved project lists for both CSU and UC will be submitted to the Legislature no earlier than April 1, 2018.

In 2016, voters approved the Kindergarten through Community College Public Education Facilities Bond Act of 2016, which provides approximately $2 billion of state general obligation bonds to support the improvement and construction of community college facilities.
The community colleges report $21.5 billion of capital needs over the next five years. The state’s investments must be focused on the most critical of these needs. The 2018 Plan provides $576 million for the California Community Colleges for 21 capital outlay projects that address critical fire and life safety issues.

**Department of General Services**

The Department of General Services manages approximately 34.3 million square feet of space that supports a variety of state programs and functions.

The Budget includes $30.4 million General Fund for the continuation of the State Printing Plant Demolition project ($815,000), and to initiate three new projects in Sacramento: the Gregory Bateson Building renovation ($5.2 million), the Jesse Unruh Building renovation ($6.3 million), and a new office complex project on Richards Boulevard ($18.1 million). These projects represent a continuation of the DGS Ten Year Sequencing Plan, which provides a strategy for the renovation or replacement of state office buildings in the Sacramento region.

**Department of Veterans Affairs**

The Department of Veterans Affairs (CalVet) operates eight veterans homes and three state veterans cemeteries.

The Budget includes $15.7 million General Fund for the preliminary plans phase of a new Skilled Nursing Facility at the Veterans Home of California, Yountville. The project represents CalVet’s top priority—to address the changing nature of long-term care with a particular emphasis on providing skilled nursing and memory care services in a non-institutional, homelike environment. The Budget also includes $571,000 from the California Central Coast State Veterans’ Cemetery at Fort Ord Operations Fund for the working drawings phase for the continuation of the California Central Coast Veterans Cemetery project in the City of Seaside.