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# California Statewide Local Streets and Roads Needs Assessment



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# California Statewide Local Streets and Roads Needs Assessment

**Submitted By:**



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In Collaboration With:





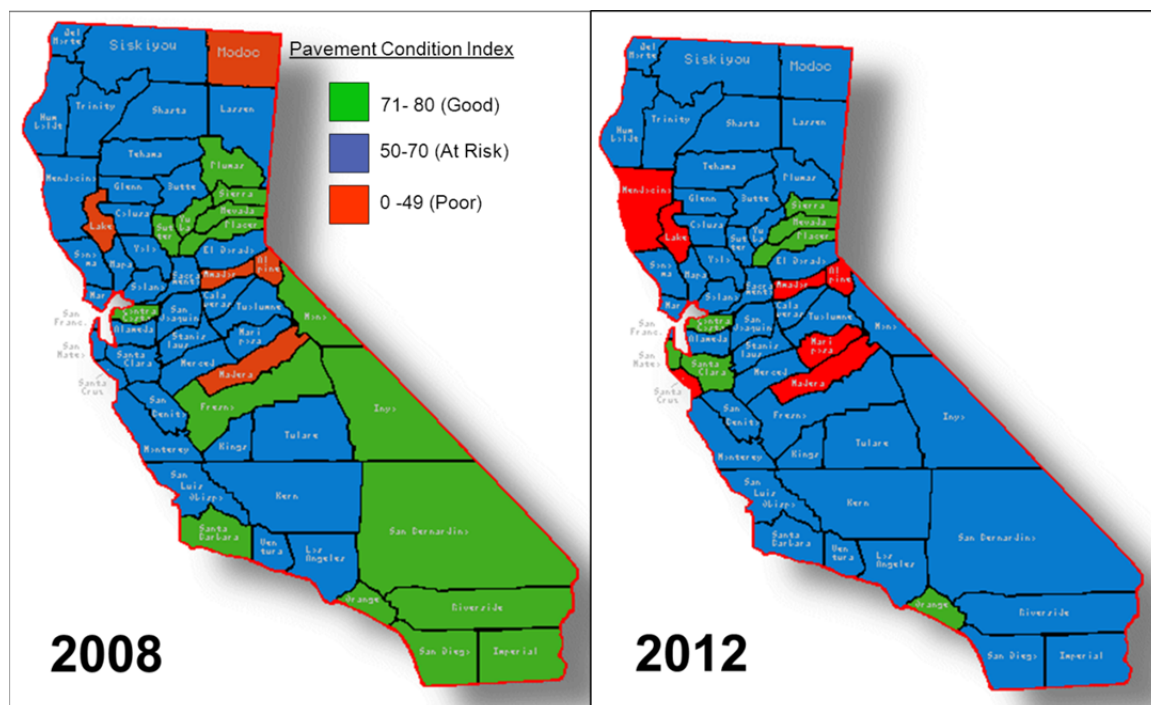
## Abstract

California's local streets and roads system is in crisis, driving state and local governments to a decision point: either pay now to update communities' deteriorating thoroughfares, or pay much more later to replace them.

Due to an aging infrastructure, rising construction costs and budget constraints, the state's local road network is falling into disrepair at an alarming rate. With heavier vehicles, increasing traffic and the need to accommodate alternative modes of transportation—including buses, bicyclists, pedestrians, the disabled and school children—the demands on California's streets and roads are growing. At the same time, a growing percentage of streets and roads are in poor condition and in need of repair.

Cities and counties own and maintain 81 percent of California's roads, and these byways are the underpinning of California's statewide transportation network. From the moment we open our front door in the morning to drive to work, bike to school, walk to the bus station, or buy groceries, we are dependent upon our local streets and roads. Emergency responders and law enforcement rely on the network to save lives and keep us safe. It's hard to think of a single aspect of daily life that doesn't involve a local road.

The results of the *2012 California Statewide Local Streets and Roads Needs Assessment* show that there has been a steady downward trend in the pavement condition since 2008. The majority of California's counties now have an average pavement condition rating that is considered "at risk" (see maps below). Projections indicate that In 10 years, 25 percent of California's streets and roads will be in the "failed" category.



The state system encompasses bridges and safety and traffic components such as traffic signals, traffic signs, storm drains, sidewalks, and curbs and gutters. Public safety concerns intensify the urgency for state and local decision makers to come up with answers – and funding - for maintenance and repair.

This report shows that there is a funding shortfall of more than \$82 billion over the next 10 years to bring the system up-to-date. The current funding level for the local system is \$2.5 billion a year. Just maintaining the status quo for pavements will require an investment of an additional \$1.9 billion a year. But that still doesn't resolve the issue that as California grows, its road system is aging and deteriorating rapidly.

Lack of any investment will undoubtedly result in higher costs to all users of the state's transportation system. Cars, bikes, school buses, and utility and emergency vehicles will find it more and more challenging to arrive at their destinations safely and reliably. If bridges fail or are closed for safety reasons, communities will be affected by long detours and delays. Water quality standards will be compromised. The ability to meet clean air standards becomes more difficult as expensive rehabilitation and reconstruction treatments are required.

The 2012 Assessment focuses on the transportation needs, but solutions must come from state and local governments, the Legislature, and the people of California. There's no question that new sources of revenue must be found. The cost to make our local streets and roads safe and reliable should be shared by everyone who uses and benefits from them, whether from the north or south, urban, suburban, or rural areas. Given that new technologies (e.g. hybrids and electric vehicles) continue to improve the efficiency of many types of transportation methods, transportation users must be open to new alternative funding mechanisms.

The bottom line is, Californians will have to work together to secure sustainable revenues to prevent our local streets and roads system from collapse.

The conclusions from this study are inescapable. Given existing funding levels available to cities and counties for maintaining their local systems, the condition of California's local streets and roads will continue to decline in the next 10 years. Unless this crisis is addressed, costs to maintain the local system will only continue to grow, while the safety, quality and reliability of California's local transportation network deteriorates.

We cannot afford to delay action. By investing in the state's local street and road system now, we can avert disaster and strengthen California's transportation future.



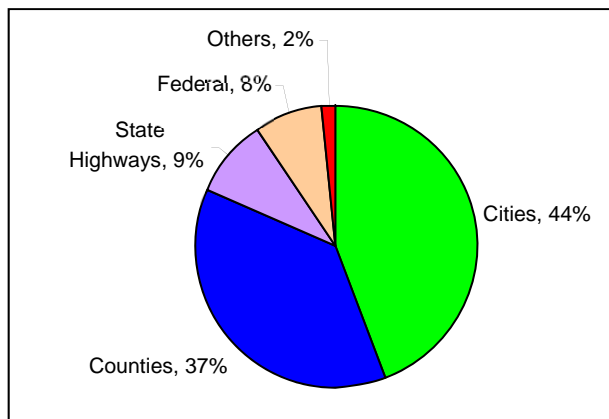
## Executive Summary

California's local street and road system continues to be in crisis.

Every trip begins on a city street or county road. Whether traveling by bicycle, bus, rail, truck or family automobile, Californians need a reliable and well-maintained local street and road system. However, these are challenging times on many levels. Funding is at risk, and there is a significant focus on climate change and building sustainable communities, and the need for multi-modal opportunities on the local system has never been more essential. Every component of California's transportation system is critical to provide a seamless, interconnected system that supports the traveling public and economic vitality throughout the state. Sustainable communities cannot function without a well-maintained local street and road system.

The first comprehensive statewide study of California's local street and road system in 2008 provided critical analysis and information on the local transportation network's condition and funding needs. This 2012 needs assessment provides another look at this vital component of the state's transportation system and finds further deterioration and a growing funding shortfall.

As before, the objectives were to report the condition of the local system and provide the overall funding picture for California's local street and road transportation network. We needed answers to some important questions. What are the current pavement conditions of local streets and roads? What will it cost to repair all streets and roads? What are the needs for the essential components to a functioning system? How much is the funding shortfall? What are the solutions?



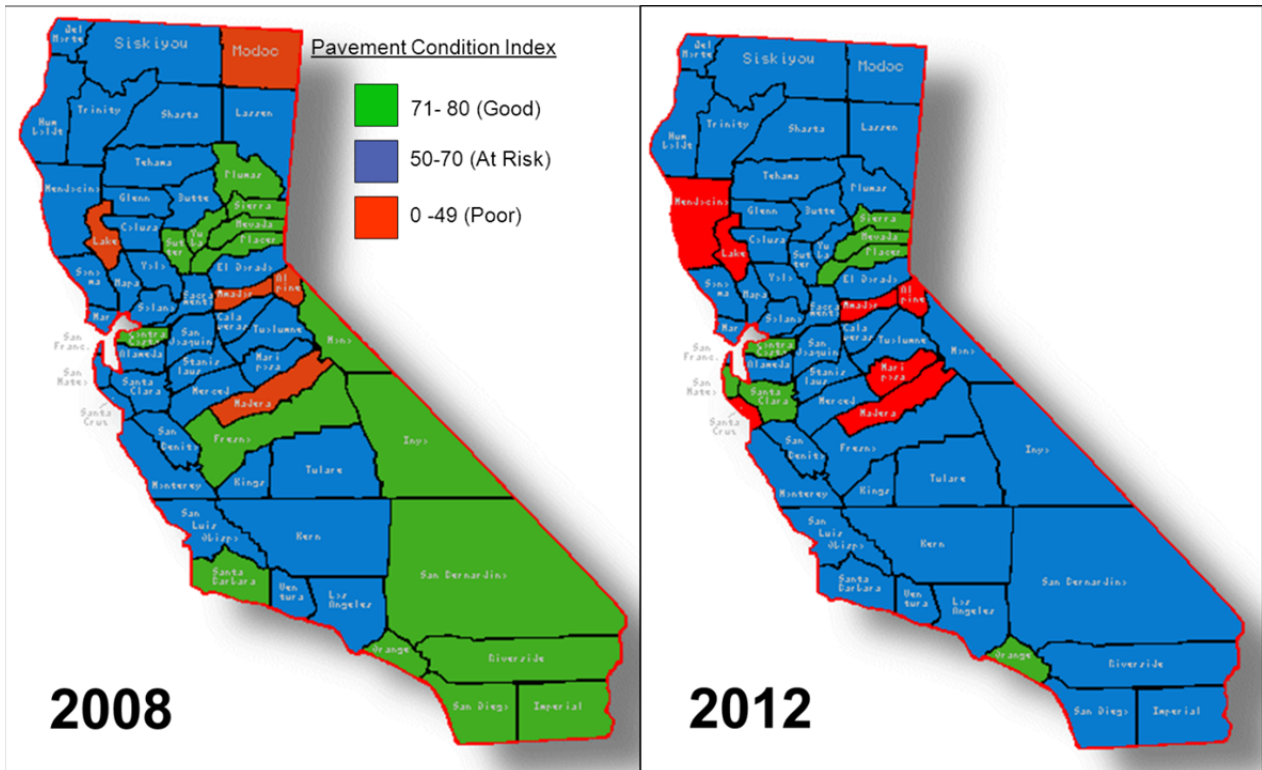
As owners of 81 percent of the state's roads, cities and counties found that the 2008 study was of critical importance for several reasons. While federal and state governments' regularly assess their system needs, no such data existed for the local component of the state's transportation network. Historically, statewide transportation funding investment decisions have been made without recognition of the particular requirements of the local system, and without local pavement condition data. Thus, this biennial assessment provides a critical piece in providing policy makers with a more complete picture of our transportation system funding needs.

The goal is to use the findings of this report to continue to educate policymakers at all levels of government about the infrastructure investments needed to provide California with a seamless, multi-modal transportation system. The findings of this study provide a credible and defensible analysis to support a dedicated, stable funding source for maintaining the local system at an optimum level. It also provides the rationale for the most effective and efficient investment of public funds, potentially saving taxpayers from paying significantly more to fix local streets and roads into the future.

This update surveyed all of California's 58 counties and 482 cities in 2012. The information collected captured data from more than 98 percent of the state's local streets and roads! This level of participation exemplifies the interest at the local level to provide comprehensive and defensible data in hopes of tackling this growing problem.

## Pavements

The results show that California's local streets and roads are moving ever closer to the edge of a cliff. On a scale of zero (failed) to 100 (excellent), the statewide average pavement condition index (PCI) has deteriorated from 68 in 2008 to 66 ("at risk" category) in 2012. If current funding remains the same, the statewide condition is projected to deteriorate to a PCI of 53 by 2022. Even more critical, the unfunded backlog will increase from \$40.4 billion to \$66 billion. The maps illustrate the pavement deterioration that has resulted in each county since 2008.



To spend the taxpayer's money cost-effectively, it makes more sense to preserve and maintain our roads in good condition than to let them deteriorate, since deteriorated roads are more expensive to repair in the future. Consistent with that approach, the costs developed in this study are based on achieving a roadway pavement condition of what the industry calls Best Management Practices (BMPs). This condition represents improving the pavement condition to a level where roads need preventative maintenance treatments (i.e., slurry seals, chip seals, thin overlays). These treatments have the least impact on the public's mobility and commerce, and are more environmentally friendly than the next level of construction that would be required (i.e., rehabilitation and reconstruction).

The importance of this approach is significant. As roadway pavement conditions deteriorate, the cost to repair them increases exponentially. For example, it costs twelve times less to maintain a BMP pavement compared to a pavement that is at the end of its service life. Even a modest resurfacing is four times more expensive than maintenance of a pavement in the BMP condition. At a time when counties and cities are on fixed budgets, employing maintenance practices consistent with BMP results in treating four to twelve times more road area. By bringing the roads to BMP conditions, cities and counties will be able to maintain streets and roads at the most cost-effective level. It is a goal that is not only optimal, but also necessary.

Multiple funding scenarios were investigated to determine the impacts different funding levels would have on the condition of the roads. Five different scenarios were analyzed to determine the level of improvements achieved in ten years. The funding scenarios were as follows:

1. Existing funding levels of \$1.33 billion/year – this is the current funding level available to cities and counties.
2. Additional \$1 billion/year – this assumes an additional \$1 billion is available through a yet to be determined revenue source.
3. Funding to maintain existing conditions (\$3.23 billion/year) – this is the funding level required to maintain the pavement conditions at its current PCI of 66.
4. Efficiency measures to add \$882 million/year – this assumes that new technologies to repair pavements may be implemented and which is estimated to save \$882 million/year.
5. Funding required to achieve best management practices (\$7.23 billion/year) – the optimal scenario is to bring all pavements into a state of good repair so that best management practices can prevail. After this, it will only require \$2.4 billion a year to maintain the pavements at that level.

Three key performance measures were used to evaluate the impacts of each scenario and the results are summarized in the table below:

1. Pavement condition index
2. Percent of pavements in both good and failed condition
3. Cost savings achieved by not deferring repairs to a later date

| Scenarios               | Annual Budget (\$B) | PCI in 2022 | Condition Category | % Pavements in Failed Condition | % Pavements in Good Condition | Cost Savings* (\$B) |
|-------------------------|---------------------|-------------|--------------------|---------------------------------|-------------------------------|---------------------|
| 1. Existing Funding     | \$1.33              | 53          | At Risk            | 25%                             | 46%                           | -                   |
| 2A. No bond             | \$2.33              | 60          | At Risk            | 23%                             | 68%                           | \$26                |
| 2B. Bond                | \$4.23/\$1.33       | 63          | At Risk            | 21%                             | 71%                           | \$34                |
| 3. Maintain PCI = 66    | \$3.23              | 66          | At Risk            | 20%                             | 78%                           | \$44                |
| 4. Efficiency Savings   | \$4.11              | 71          | Good               | 16%                             | 83%                           | \$59                |
| 5. Best Mgmt. Practices | \$7.23              | 84          | Excellent          | 0%                              | 100%                          | \$108               |

\* Cost savings are compared to Scenario 1.

### Essential Components

The transportation network also includes essential safety and traffic components such as curb ramps, sidewalks, storm drains, streetlights and signals. These components require \$30.5 billion over the next 10 years, and an estimated shortfall of \$21.8 billion.

### Bridges

Local bridges are also an integral part of the local streets and roads infrastructure. There are 11,863 local bridges, and approximately \$4.3 billion is needed to replace or rehabilitate them. There is an estimated shortfall of \$1.3 billion.



## Total Funding Shortfall

The table below shows the total funding shortfall of \$82.2 billion over the next 10 years. For comparison, the 2008 and 2010 results are also included.

Summary of 10 Year Needs and Shortfall for 2008 through 2012(\$Billion)

| Transportation Asset | Needs (\$B) |         | 2012    |         |           |
|----------------------|-------------|---------|---------|---------|-----------|
|                      | 2008        | 2010    | Needs   | Funding | Shortfall |
| Pavement             | \$67.6      | \$70.5  | \$72.4  | \$13.3  | \$(59.1)  |
| Essential Components | \$32.1      | \$29.0  | \$30.5  | \$8.7   | \$(21.8)  |
| Bridges              | N/A         | \$3.3   | \$4.3   | \$3.0   | \$(1.3)   |
| Totals               | \$99.7      | \$102.8 | \$107.2 | \$25.1  | \$(82.2)  |

## What are the Solutions?

To bring the state's local street and road system to a best management practice level where the taxpayer's money can be spent cost effectively; we will need approximately \$59.1 billion of additional funding for pavements alone and a total of \$82.2 billion for a functioning transportation system over the next 10 years. The sooner this is accomplished, the less funding will be required in the future (only \$2.4 billion/year will be needed to maintain the pavements after that).

If cities and counties do not get additional funding, the results will be disastrous for local streets and roads, and ultimately the entire transportation network, as all modes are interrelated. The fact that more than twice the current funding level is needed just to maintain the current conditions is alarming.

To bring the local system back into a cost-effective condition, thereby preserving the public's \$189 billion pavement investment and stopping further costly deterioration, \$8.2 billion annually in new funds are needed to stop the further decline and deterioration of the local street and road system. This is equivalent to a 56-cent per gallon gas tax increase.

The conclusions from this study are inescapable. Given existing funding levels available to cities and counties for maintaining the local system, California's local streets and roads will continue to deteriorate rapidly within the next 10 years. Unless this condition is addressed, costs to maintain the local system will only continue to grow, while the quality of California's local transportation network deteriorates.

It is imperative that cities and counties receive a stable and dedicated revenue stream for cost effective maintenance of the local system to avoid this crisis.