

TRANSPORTATION

IMPACTS

POTENTIAL TRANSPORTATION IMPACTS OF EPA OZONE REGULATIONS

SOUTHERN CALIFORNIA REGION



What is Ozone?

Ozone is a gas comprised of oxygen molecules that occurs naturally in the atmosphere and is formed after combustion in sources such as vehicle engines, manufacturing and industrial activities. Since 1980, the United States has cut ozone related emissions in half. In 2008, EPA tightened ozone standards from 80 to 75 parts per billion (ppb)-a level that some areas of the country (including Los Angeles) have yet to meet.

What's on the Table Now, and What Does It Mean?

In October 2015, the Obama Administration finalized a new rule tightening the standard to 70 ppb. As a result, well over 200 counties nationwide are expected to be in violation of the new regulation. These areas will face red tape and regulatory restrictions that cripple business investment and job growth. Southern California officials and businesses have warned that the rule will force investment capital and the jobs that come with it elsewhere, effectively forming "No Growth Zones" throughout the state.

Can't These Areas Find Ways to Comply?

It will be very difficult to meet the new standards. Cost-effective solutions to achieve compliance have largely been exhausted, and in many cases the technology simply doesn't exist to meet the new standards. EPA itself admits that in order to comply with a 70 ppb standard, 23 percent of reductions must come from "unknown controls" that don't currently exist.

EPA's final standard is so stringent that many rural areas far from population centers and economic activity will violate the new regulation. In fact, nine different national parks-including Joshua Tree, Sequoia, and Yosemite-measured ozone levels in 2015 that exceed EPA's tightened standard.

"Attainment in the South Coast Air Basin is at a critical juncture. As the Basin gets closer to background ozone concentrations (estimated by SCAQMD at 48 ppb), the path to attainment will require adoption of technologies and fleet turnover rates that are acknowledged by many as not feasible within the current timelines. We need to push forward on air quality improvements, but at a rate that our local economy and industry can absorb, based on technologies that can be cost-effectively incorporated into the marketplace."

– Raymond Wolfe, San Bernadino Associated Governments

What Happens if A Region Cannot Comply?

The federal government will impose penalties. In addition to harsh regulatory restrictions that serve as a handcuff on economic development, the Clean Air Act authorizes EPA to withhold transportation funding for projects of all types-from highways to mass transit. Since metropolitan regions are reliant on federal funding for many critical projects, numerous improvements would be at risk. Locally-funded projects could be impacted as well, because EPA's penalties can include a freeze on all federal permits and approvals necessary for projects to proceed.

Adding insult to injury, construction delays resulting from withheld transportation funding will only worsen traffic congestion, thereby increasing ozone-forming emissions. State and local governments, which already devote scarce resources to prepare plans that comply with regulations, have expressed serious concerns about the additional burdens imposed by this new ozone rule.

Regional Snapshot and Current Ozone Compliance Challenges

Population and economy: The greater Los Angeles region is the second-most populous in the United States, second only to New York City. The Los Angeles metropolitan area's 18 million residents comprise 50 percent of the population of California and almost 8 percent of the entire U.S. population. While population growth and the economy has slowed in recent years, the region is projected to grow to 22 million people by 2035, further increasing strains on the region's transportation system and exacerbating ozone compliance challenges.

Transportation: Southern California traffic is famously congested. Because population and vehicle traffic have increased at rates that greatly exceed growth in highway capacity, stifling congestion has burdened the region's economy and quality of life for its residents. Local officials estimate that every 10 percent decrease in Los Angeles-area congestion will create 132,000 jobs. To address these challenges, the region's long-term transportation plans call for more than \$100 billion of investments in transit as well as more than \$80 billion in highway improvements (not including operations and maintenance). Federal funding and permitting of these projects will be placed at risk if the region is unable to demonstrate that they will not contribute to violations of EPA's tightened standard.

Los Angeles Traffic By the Numbers¹

80	Average commuter hours lost each year due to traffic congestion
25	Average gallons of fuel wasted in traffic delays per consumer
\$1,711	Annual congestion costs per commuter in wasted fuel and time
1st	National Rank, Commuter Stress Index
59%	Percent of major Los Angeles-area roads that are regularly congested

Ozone levels: Despite major challenges presented by high levels of background ozone and steady growth in population and economic activity in recent decades, state and local air quality officials have successfully achieved gradual declines in ozone levels in Los Angeles and the surrounding area. Current ozone design values (i.e. levels used for regulatory decision-making) in Los Angeles are 92 parts per billion (ppb), which exceed the 2008 standard of 75 ppb as well as EPA's new standard of 70 ppb. As a result, EPA has declared the region to be in "extreme nonattainment" with the current standard, a designation that triggers significant restrictions on existing and potential new sources of emissions.

Even prior to EPA's latest proposal, Los Angeles officials were working to put the city on a "road diet"—meeting federal emissions budgets by replacing vehicle lanes with bus-only and bike-only lanes. Under the tightened standard, state and local officials have indicated that achieving compliance will be extremely difficult if not impossible for certain locations in Southern California, triggering harsh restrictions on economic development and potentially blocking critical transportation projects.

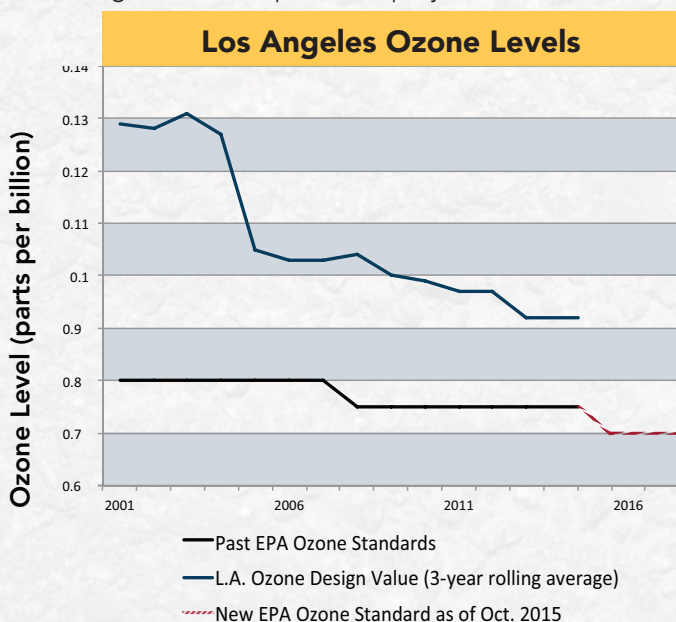
Potentially Impacted Transportation Project: Riverside County Mid-County Parkway

The Southern California Association of Governments, (SCAG) which facilitates region-wide transportation planning in the Los Angeles area, estimates that inability to meet tightened ozone standards could trigger a conformity lapse in the region that would impact 299 projects with over \$32 billion in total funding. Those projects identified by SCAG staff as likely to be impacted include several major billion dollar efforts, such as (1) widening I-405 from SR-73 to I-605 in Orange County; (2) replacement and widening of the Gerald Desmond Bridge in Los Angeles County; (3) widening of SR-79 in Riverside County; and (4) the Mid-County Parkway in Riverside County.



Image: Riverside County Transportation Commission

To illustrate the potential impacts of a conformity lapse in Southern California, we explore the Mid-County Parkway project in more detail. Riverside is about 70 miles away from Los Angeles, this \$1.7 billion project would construct a new 16 mile east-west parkway with six through lanes (three in each direction).²



"It will be a considerable challenge for the Los Angeles region to demonstrate conformity under a tightened ozone standard, and multiple billion-dollar highway projects could be impacted as a result. We have been able to meet transportation conformity requirements in the past due to new engine technologies and fuels; meeting the conformity requirements under a tighter standard may require expensive and perhaps even unrealistic options including transition of the entire motor vehicle fleet to electric vehicles. We have few other options available to us in order to meet these requirements."

– Hasan Ikhtrata, Executive Director of the Southern California Association of Governments

¹ Texas Transportation Institute

² <http://midcountyparkway.org>

The east-west Parkway would connect the north-south corridors of I-215 in Perris and Route 79 in San Jacinto, and serve multimodal bus and rail facilities planned as part of the Perris Valley Metrolink service that will connect Perris and Riverside. The project is expected to be paid for by a half cent county sales tax as well as state and federal funding.

Traffic in the area of the proposed Parkway is projected to double in some segments and increase as much as three times in others. As a result, travel time between I-215 and SR-79 is expected to take more than 45 minutes in 2040. With the Parkway complete, those travel times will be just 15 minutes, reducing traffic congestion and ozone-forming emissions.

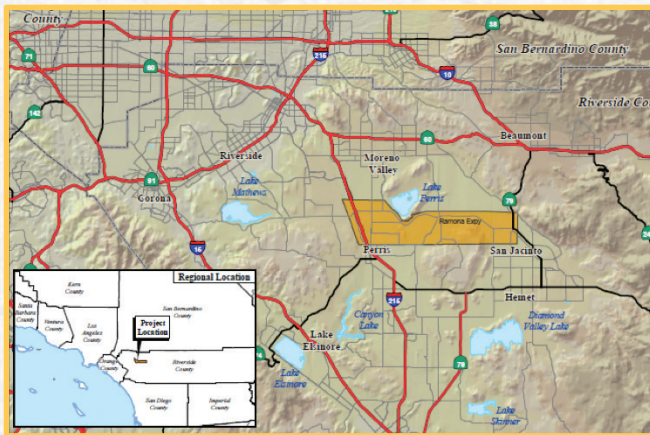


Image: Mid-County Parkway Location

Status and Outlook

In August 2015, the U.S. Department of Transportation approved the project's environmental impact statement, allowing it to proceed to the right of way acquisition, design, and construction phases. However, because project construction is scheduled to occur in the same timeframe as new transportation conformity requirements under the tightened standard, the project is very likely to be impacted by a conformity lapse, which could result in extensive delays and place its ultimate fate in doubt.

As a result, if the Los Angeles region is unable to demonstrate "transportation conformity" compliance with EPA's tightened ozone standard, the Mid-County Parkway and numerous other area highway and transit projects would face potential EPA noncompliance penalties. Such penalties could have a ripple effect, as delays and inflation result in increased project costs, and state and local governments divert resources to avoid and address potential violations.




In order to avoid or resolve a lapse, transportation planners have few options. Advanced vehicle and fuel technologies have been the only way the region has been able to demonstrate compliance to date, but those avenues have largely been exhausted. Even if the region were to redirect all highway capacity expansion funds to non-highway projects, it may still not be able to meet the stringent transportation conformity requirements. Therefore, compliance measures necessary to avoid conformity lapse penalties could result in more stringent requirements on stationary sources of emissions, such as industrial facilities or power plants.

"This proposal will unnecessarily burden the economy at a time when the country and California, in particular, are finally starting to recover from the recession...In order to meet the new EPA requirements, states will impose costs on all entities, large and small, and limit permits for construction and manufacturing. Small companies will suffer from higher costs and the reduction in business activity from the large firms that will be displaced. Companies building new facilities or performing major modifications to existing facilities in or near a nonattainment area will be required to install the most effective emission reduction technology, regardless of cost. Most will undoubtedly pick another state or country to locate their jobs."

– Mike Rogge, California Manufacturers and Technology Association

Where Can I Learn More?

A complete description of compliance challenges and threats to transportation funding presented by EPA ozone regulations are available at www.energyxxi.org/grindingtoahalt

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