



California Bicycle Coalition

How California's bike budget can triple bicycling by 2020 and why it's a great idea and how much it will cost

Executive Summary

A new federal transportation program has cut dedicated bike/ped funding by a third, but it maintained the program's flexibility. The California Transportation Agency has proposed using that flexibility to actually increase bike/ped funding. However, the increase of approximately 30% is part of a plan to eliminate a number of long standing bike/ped programs into a larger consolidated Active Transportation Program (ATP).

The California Bicycle Coalition supports the consolidation of existing programs into the ATP because it supports the single most important strategy to accomplish our goal of tripling bicycling by 2020: increasing the state's investment in bicycling infrastructure. As this report shows, the ATP's funding is a small fraction of the \$8 billion needed to build the necessary bicycle networks, but it is an incredibly cost-effective investment as this report also shows. The ATP is a good start, but its size should dramatically increase and its rules should leverage much more local funding and locally-controlled funding. These proposals will enable more Californians to bike and induce millions more bike trips every day.

Eight billion dollars over the next ten years, say, is a small fraction of the nearly \$300 billion expected to be spent on transportation in that time frame, and it will have sensational benefits. For every \$1 million invested in bicycle infrastructure there is a \$2.8 million dollar return on healthcare. Replacing short distance trips (2-mile trips account for 40% of all trips in California) with bike trips could change communities and help achieve our state's greenhouse gas emission reduction goals. In communities with safe biking networks bikers shop more frequently, closer to home, and spend more per capita, partially because 75% of every dollar spent on gas is dedicated to crude oil.

We propose a number of ways that the state can induce the increase in bicycling investment necessary to triple the amount of biking in California:

1. Establish an official goal of tripling biking, and require annual reporting.
2. Require transit capital projects to dedicate 1% of funding to strictly bicycle access.
3. Strengthen the complete streets requirement by requiring safe bike accommodations on every project or a set-aside 1% of the budget for bike safety.

4. Increase the ATP to at least \$300 million per year.

We also propose a number of ways the state's investment can leverage the greatest change on behalf of more bicycle-friendly communities:

1. Provide some very large grants, in the range of \$25-\$50 million, for communities that are prepared to develop whole networks that meet certain standards and who are willing to match state funding with a similar amount of local money.
2. Provide some relatively small grants to projects that are similar to the projects currently funded by the Safe Routes to School program and the Bicycle Transportation Account.
3. Require the adoption of strong complete streets policies to qualify for state funding.
4. Hire staff at the California Transportation Commission to ensure the success of the Active Transportation Program.
5. Require the incorporation of best practice in bikeway designs including the use of protected bikeways.

Introduction

The new federal program for funding transportation presents both threats and opportunities to our vision of tripling bicycling in California. *Moving Ahead for Progress in the 21st Century (MAP-21)* reduces the federal set-aside for bicycling and walking and broadens the range of projects that can compete for that set-aside. It makes much of that set-aside optional. It eliminates the Safe Routes to School Program. Yet it doubles the size of the Highway Safety Improvement Program (HSIP) and continues to provide tremendous flexibility in how state and local government can spend most major funding categories.

In California there is much more opportunity and we can use that flexibility. Our state's goals to reduce greenhouse gases are enforced with a law requiring regional planning organizations to produce transportation plans that will reduce vehicle miles traveled. Most regions have completed ambitious bicycle plans that illustrate the role of bicycling in their transportation systems. A history of support for bicycling means that California can increase funding for bicycling and make the state a world leader in bicycle use.

We are producing this report to show why and how California should take advantage of this opportunity to enable more people to bicycle. Tripling the number of trips by bike is possible, desirable, and the most affordable strategy to meet our state's goals. We can accomplish that by 2020 if the recommendations in this paper are followed.

Tripling the number of trips by bike is possible, desirable, and the most affordable strategy to meet our state's goals.

I. How will California benefit from a tripling of trips by bicycle?

Using the best available mix of data, we estimate that Californians made about 700 million bike

trips in 2011, accounting for 1 - 2 % of all trips.¹ To triple bike trips, then, means to induce an additional 1.4 billion trips per year, or 2.8 million each day. What happens to our state when we do that is nothing short of sensational.

More bicycling means more freedom of choice in transportation.

California's traffic congestion is among the worst in the country, with the San Francisco Bay Area and Los Angeles regions ranking in the top 3 for the most time lost during commute.² People are forced to sit in this miserable traffic -- making it worse in the process -- even though a large number of them would prefer to be on their bikes. Surveys show that nearly half of Californians would ride a bike for some of their trips if the streets were safer.³ Giving them that choice is a smart investment.

More bicycling makes us much healthier in many ways.

Anybody who rides a bike after a hiatus knows this fact: bicycling makes you happier. That's visceral proof of the well-documented health benefits of cycling.⁴ California residents average 4 minutes of walking or biking each day⁵ but need at least 22 minutes of daily exercise to be healthy, as recommended by the U.S. Surgeon General. Meanwhile Americans spend on

Anybody who rides a bike after a hiatus knows this fact: bicycling makes you happier.

average of 62 minutes per day on car trips⁶, half of which are less than 5 miles long! Enabling more people to choose a bicycle for some of these short trips is a public health priority. If half of the 1.5 to 5-mile long car trips taken by Bay Area residents were made by bike instead, 1 in 7 incidences of diabetes and heart disease would never materialize. That's 2,404 people who would avoid premature death from those diseases!⁷ Broadly, the benefits of increased physical activity of shifting from driving to bicycling (3 to 14 months gained) outweigh the effects of increased inhaled air pollution (0.8 to 40 days lost) and increased traffic accidents (5 to 9 days lost). Put into monetary terms, for every \$1 million invested in bike infrastructure returns in \$2.8 million in health care savings alone.⁸

More bicycling means a more sustainable environment.

¹ McGuckin, N. (2012). *Walking and Biking in California: Analysis of the CA-NHTS* (No. UCD-ITS-RR-12-13). Counting the current number of bike trips is very difficult. A variety of surveys including the Census and traffic counts exist, but they each do an inadequate job differently.

² Lomax, T., Turner, S., Eisele, B., Schrank, D., Geng, L., & Shollar, B. (2012). *Refining the Real-Timed Urban Mobility Report* (No. UTCM 11-06-73).

³ Thornton, A. (2010). *Climate Change and Travel Choices: Segmentation Study—Interim Report*.

⁴ Pucher, J. R., & Buehler, R. (2012). *City cycling*. MIT Press.

⁵ Maizlish, N. A., Woodcock, J. D., Co, S., Ostro, B., Fairley, D., & Fanai, A. (2011). *Health Co-Benefits and Transportation-Related Reductions in Greenhouse Gas Emissions in the Bay Area—Technical Report*.

⁶ NHTS 2009

⁷ *ibid*

⁸ Gotschi, T. (2011). Costs and benefits of bicycling investments in Portland, Oregon. *Journal of Physical Activity and Health*, 8(1), S49-S58.

Considering that 40% of all trips in California are under 2 miles⁹, shifting short trips from driving to biking will play a pivotal role in achieving the reductions required by SB 375. Approximately 25% of greenhouse gas emissions (GHG) from vehicles occur as the car is warming up.¹⁰ From an emissions standpoint, this means the savings from 10 people biking their 4-mile commute (round trip) instead of driving will reduce *four times as many GHG emissions* than if a single person switched one 40 mile commute to a bike.

More bicycling creates jobs and makes our communities richer.

Investing in bike infrastructure creates more jobs than investing in other kinds of transportation infrastructure. Nationally, 11.4 jobs are created for every \$1 million invested, compared to just 7.8 jobs created with that same investment in road-only projects.¹¹ Furthermore, with 75¢ of every dollar spent on gasoline dedicated to the cost of crude oil, a mostly imported resource;, expenses on gas do not benefit the local community. People who use less gasoline have more money to spend in their local economy. Shoppers who travel by bike spend more money per capita, shop closer to home, and visit stores more frequently than their driving and transit-riding counterparts.¹² Bike infrastructure increases sales on a street.¹³

II. How much funding do we need?

There are few government expenditures that provide such benefits in health, happiness, environment, and economy for such little cost. Yet California is spending less than a little, i.e. less than 1% of its transportation budget, on bikes. If the Secretary of California's Business, Transportation & Housing Agency Brian Kelly is sincere in his assertion that bike infrastructure "has to be central to our investment [in transportation]"¹⁴ for all the reasons cited above, how much *should* he choose to spend on bicycle infrastructure?

There are a number of ways to estimate how much funding is necessary to triple biking by 2020. One way is to consider the rate at which bike infrastructure actually generates bike trips. We have three examples where the increase in bike trips was measured relative to the level of investment: Portland, OR; San Francisco, CA; and the four cities in the Non-Motorized Transportation Pilot Program.

⁹ NPTS 2009

¹⁰ http://www.fhwa.dot.gov/environment/air_quality/publications/fact_book/page15.cfm; using 4 miles per day

¹¹ Garrett-Peltier, H. (2011). Pedestrian and Bicycle Infrastructure: A National Study of Employment Impacts. *Amherst, MA: Political Economy Research Institute*. Local figures vary from the national average but tend to confirm the ratio of jobs created by bike infrastructure compared to car infrastructure. A study in Santa Cruz showed 8.5 jobs created per million dollars invested in bike infrastructure compared to 5.1 jobs for roads alone, and a study in Baltimore showed 14.3 jobs created by the construction of bike infrastructure.

¹² Transportation Alternatives. (2012) East Village Shopping Survey: A Snapshot of Travel and Spending Patterns of Residents and Visitors in the East Village.; Clifton, K. J., Morrissey, S., & Ritter, C. (2012). Exploring the Relationship Between Consumer Behavior and Mode Choice. *TR News*, (280).

¹³ NYC DOT found that protected bikeways had a significant positive impact on local business strength. After the construction of a protected bicycle lane on 9th Avenue, local businesses saw a 49% increase in retail sales. In comparison, local businesses throughout Manhattan only saw a 3% increase in retail sales. A Toronto study and a San Francisco study found separately that customers arriving to a shopping district by bike spend more in a month (although less per trip) than customers arriving by car.

¹⁴ Brian Kelly speaking to stakeholders in a California Assembly hearing room, April 2013.

For every \$1 million of state and federal funding invested in bike infrastructure between 1995 and 2010, Portland increased bike commute share by 98 trips per day.¹⁵ San Francisco estimates that it needs to spend \$200 million to (roughly) triple its bicycle mode share from 3% to 10%.¹⁶ Extrapolated to California, that equates to a \$9 billion requirement. Finally, the 2007 pilot program for non-motorized transportation funded four regions to experiment with bike and pedestrian infrastructure. On average, they increased total biking after just 3 years by 101 trips per day per \$1 million invested in bicycling programs.¹⁷ Extrapolated and translated to California, these examples indicate that we would need to spend from \$7 billion to \$9 billion to achieve a tripling in bicycle use.

Another way to estimate the need is to examine the existing plans for building complete bicycle networks.¹⁸ Building out the bike networks in the nine larger metropolitan regions in the state that collectively account for half of the state's population would cost about \$4.6 billion. Doubling that to cover the whole state yields an estimate of \$9.2 billion.

Remarkably, these different methods of estimating the cost yield similar results ranging from \$7 billion to \$9.2 billion. Therefore, with reasonable confidence, we estimate that the cost of tripling bicycling in California is about \$8 billion, or about \$1 billion per year through FY 20-21.

III. Where do we get \$1 billion/year?

With an annual expenditure on transportation of \$27 billion every year, there is no shortage of funds to make California bicycle-friendly. It's just a matter of priority. A hodgepodge of sources funds transportation in California: gas taxes, sales taxes, transit fares, and general fund revenues are the most prominent. About half¹⁹ of those funds come from the state (including federal funds); the other half are generated locally.

If you believe that change starts at the local level and percolates up, then the future is very good for bicycling.

While bicycle infrastructure funding comes mostly from state and federal sources, that is poised to change. Local elected officials see the benefits in their shopping districts and hear from their constituents about how a bike path to a school changed their life. Local sales taxes routinely dedicate as much as 10% of their budgets to walking and bicycling improvements. Development rules can require contributions to bicycle-friendly

¹⁵ See <http://blog.bikeleague.org/content/cost-effectiveness-active-transportation-investments>. In Portland's case, by the way, bike infrastructure is *15 times more effective* than investments in public transit at encouraging people to switch from driving. Only 6.2 transit trips per day and 8.7 car trips per day were generated per million dollars of spending on transit and auto infrastructure, respectively.

¹⁶ In San Francisco's case, the 150,000 new daily bike trips facilitated by the bike network are 40 times more cost-effective than an ongoing investment of nearly \$2 billion in a subway that will generate 35,000 new daily transit trips!.

¹⁷ This figure is based on an educated approximation that 60% of the relatively undifferentiated expenditures were for bicycling infrastructure, and it includes expenditures in outreach and planning in addition to infrastructure costs.

¹⁸ We disregard the current assessment of the California Transportation Commission because it relied on old Regional Transportation Plans developed before SB375's requirement. That assessment showed a \$4.5 billion need over the next ten years (or \$3.15 billion through 2020). Looking at newer plans, the Safe Routes to School Network found that the bicycle and pedestrian infrastructure need over the next ten years is closer to \$18 billion.

¹⁹ 53% according to the CTC

streetscape improvements. Local bonds and other general fund contributions can fund bicycle safety improvements. There are prospective revenue sources, too, including vehicle license fee increases or even local gas tax increases. If you believe that change starts at the local level and percolates up, then the future is very good for bicycling.

Still, the state's role is crucial. California creates accounts set aside for bicycling and the rules for flexible funds could make bicycle infrastructure more or less eligible for those funds. Local officials prioritize those projects whose funding is matched by state contributions, even in communities whose support for bicycling is strong. Other communities rely exclusively on state funding. Without substantial state funding set aside for bicycling improvements, we cannot expect local governments to spend what is necessary to triple bicycling and meet the state's goals for climate, health, transportation, and the economy. Furthermore, the state itself owns a number of roads that require investment to make them truly safe for bicycling.

This section of the report recommends two sets of measures: proposals to improve the eligibility of bicycle projects for flexible funds, and proposals to increase the amount of funding dedicated specifically to bicycling. Together, these proposals will amount to the provision of about \$1 billion per year for bicycling infrastructure, and Californians will reap the benefits of a tripling in bike use.

Proposals to improve the use of flexible funds

1. *Establish an official goal of tripling bicycle mode share by a specific date, and require the Governor to report annually on progress toward the goal.* This will encourage Caltrans to take seriously the goal of increasing cycling and propose measures, including increased funding, if progress toward the goal is behind schedule.
2. *Dedicate portions of transit capital projects to bicycle and pedestrian access to the stations.* At least 1% of transit capital projects should be dedicated to bicycling access to transit (not including 1% that also ought to be set aside for pedestrian access). The budget includes \$1.06 billion for "mass transportation" and \$100 million for "blended system projects" (regional components of the high-speed train system). Setting aside 1% of those funds for bicycling access would provide \$11.6 million.
3. *Strengthen the Complete Streets requirement by requiring a contribution to bicycle safety if bicycle safety cannot be accommodated in a streets project.* Caltrans Complete Streets policy already requires all project developers to consider accommodating safe travel by road users on bicycles and those walking. However, Caltrans does not provide guidance on when that consideration must result in accommodations or when providing for safe bicycle travel is too expensive in any particular case. To provide clearer guidance, Caltrans should require that projects that do not provide for safe bicycling accommodations must set aside 1% of the project budget for bicycle safety. This is the next logical step in Complete Streets funding, first set in-motion by Caltrans Deputy Directive 64-R1.
4. *Increase the Active Transportation Program funding to at least \$300 million per year.*

The governor's proposed 2013-2014 budget sets aside \$134 million for "active transportation" in a new account for which broad categories of projects are eligible: bicycling, walking, Safe Routes to School, Recreational Trails, and more. This is not a "bicycle" set-aside, per se, but at least half of these funds are likely to support safe bicycling networks. Later in this report we discuss ways in which the ATP can be programmed to most effectively promote the kinds of infrastructure improvements that will triple the amount of bicycling in California. Where will this additional \$170+ million come from?

- a. *Take a 'green scissors' approach to highway expansion projects and flex the savings into active transportation.* The bypass of Willits costs more than \$197 million while meeting none of the state's transportation goals. While the project shouldn't be built at all, value engineering could still save millions. Finding savings amounting to just 2% of the state's \$9.6 billion budget for highways and local assistance would generate \$192 million per year, practically the entire amount needed.
- b. *Dedicate 10% of overall Cap and Trade revenues to bicycling projects (see below), and 50% of transportation-related cap-and-trade revenues.* Cap and Trade, the carbon trading market inaugurated this year, will provide a robust source of funding in future years to combat climate change. Increasing bicycling trips reduces greenhouse gas emissions directly and indirectly, by enabling potentially huge numbers of people in relatively urban areas to shed car ownership. Furthermore, investments that provide "co-benefits" in addition to greenhouse gas emission reductions are supposed to have priority, and no other investment provides as many additional benefits! Ten percent of revenues in 2013-2014 amounts to \$50 million. In two years, California should invest \$100 million each year from cap-and-trade revenues.
- c. *Increase the portion of HSIP funding flexed to the ATP.* The Federal Highway Safety Improvement Program (HSIP) asks states to identify safety hazards and projects that will mitigate those hazards. In MAP-21, Congress doubled HSIP. With twice the funds, Caltrans can set aside a portion of HSIP funds for bicycle safety, and request proposals dedicated specifically for mitigating safety hazards posed to bicycle riders.

IV. How should it be spent?

California's "Bicycle Transportation Account" (BTA) is one of the few funding sources in the country exclusively for the "functional commuting needs and physical safety of all bicyclists." Even more important than the funding it has provided for bicycle improvements throughout California, its requirement that local agencies must have complete bicycle plans to be eligible for its funding prompted local agencies to plan how bicycling could be an integral part of their transportation systems. The BTA is a success story. Yet its promise was offset by the reality of its paltry funding level. A mere \$7.2 million per year (about one-twentieth of one percent of the state's transportation budget) was not enough to make bicycling a practical option for most

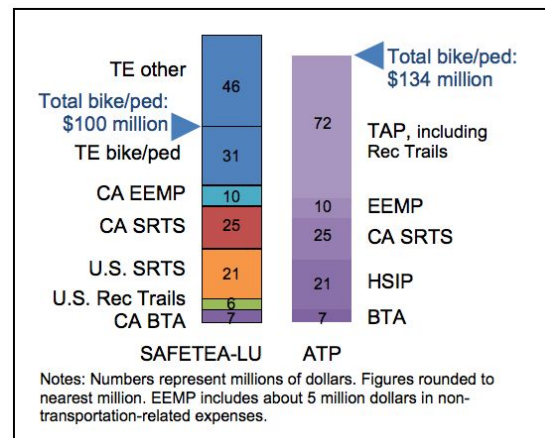
Californians. A good strategy to meet our goal of tripling bicycling will be to dramatically increase funding in the Bicycle Transportation Account.

However, Governor Brown’s 2013-2014 budget proposes eliminating the Bicycle Transportation Account as part of a consolidation of it and other small bike/ped funding sources into a much larger fund called the Active Transportation Program. The ATP combines the BTA with the federal and state Safe Routes to School programs, the Recreational Trails Program, the federal Transportation Alternatives Program (the TAP replaces Transportation Enhancements from SAFETEA-LU), and the Environmental Enhancement and Mitigation program.

This consolidation is a painful challenge to the status quo of funding bicycle and pedestrian projects. By eliminating Safe Routes to School, for example, we could lose the “social infrastructure” built up around efforts to make school zones safer. Thousands of Californians have been brought into our movement as they have learned about active transportation and safety. The BTA’s funding, though miniscule, means a great deal to small communities where a single bike lane can spark renewed interest in bicycle safety and lead to much greater things in the future. The Recreational Trails Program brings parks advocates to the table. These are elements of the existing programs that should not be lost. The existing proposal for the ATP does not explain how these needs would be met without these programs and is therefore difficult to support.

On the other hand, the consolidation of these programs has some positive impacts, too, mostly because it creates a sizable fund:

1. As indicated in the chart below, the sum total dedicated to bike/ped funding is increased by about 34%. This is achieved mostly by the transfer of 100% of the federal Transportation Alternatives Program (TAP) into the ATP. Its predecessor, Transportation Enhancements, provided only about 40% of its funding for bike/ped projects.
2. The fund’s larger size creates a bigger political profile. Policy makers are more likely to pay attention to a \$134 million ATP than they are a \$7.2 million BTA. For example, a campaign to increase the size of the ATP by 50%, if victorious, will win \$67 million more for bike/ped safety, while a campaign to increase the BTA by an equivalent margin will just win \$3.6 million.
3. Its larger size means we are no longer restricted to funding small projects here and there. We can fund large projects that will transform communities. The consolidation gives us the chance to “start from scratch” and completely revise how we invest in bicycle infrastructure.



Because increasing spending on bicycle infrastructure is paramount to the success of our goal, CalBike supports the consolidation of funds into the ATP, contingent upon the development of funding guidelines for the ATP that take advantage of this historic opportunity. CalBike makes the following recommendations for programming the ATP, currently projected to be \$134 million, with 50% kept by the state, 40% going to MPOs in major metropolitan areas and 10% set aside for rural areas.

Now is the time to reiterate an earlier recommendation: increase the fund to at least \$300 million.

For the portion of funds provided to MPOs, impose the following requirements.

1. In MPOs with many smaller municipalities, score higher joint applications by multiple cities. Encourage cooperation and network connections across city boundaries.
2. MPOs and cities applying must have suitable Complete Streets policies to be eligible for funding. These policies must require a robust consideration of Complete Streets with a transparent and public process for opting out and (as noted) a requirement that funds equal to 2% of a project's total funds be deposited into the region's fund for improving bicycle and pedestrian safety. For MPOs who have not yet completed their SCS or have not adopted a Complete Streets policy, the state will administer their ATP funds until it is adopted.

For the portion of funds kept by the state, adopt the following recommendations.

1. The California Transportation Commission should establish a new, high-level staff position to manage the Active Transportation Program so that it has the best chance to meet its goals.
2. Narrow the eligibilities in the ATP to just walking and bicycling improvements. Eliminate landscaping from eligibility. This may require removing funding intended to support the Environmental Enhancement & Mitigation Program from the ATP reducing its size by 10%. We support that. This would reduce the state portion of the funding to \$62 million.
3. Create new formulas for evaluating whole bicycling networks regarding their safety, convenience, and accessibility to disadvantaged communities.
4. Funding guidelines should include updated bicycle plan requirements to call for specific outcomes in bicycle safety, accommodation and mode share. Current rules merely require that certain issues be addressed.
5. Ensure the adoption of updated designs including protected bikeways whenever necessary.
6. Convene high-level meetings of nongovernmental stakeholders -- including but not limited to the California Bicycle Coalition, the Safe Routes to School National Partnership, the Rails to Trails Conservancy, and California Walks -- with the goal of developing new ways of funding bicycling and walking infrastructure using the funding provided by the ATP. The specific goals will be to preserve the elements of existing

programs we want to keep and institute new programs that lead to dramatic increases in bicycling and walking in California communities. Specifically, we recommend that this committee address the following questions:

- a. How can the ATP preserve the non-infrastructure school-based education and outreach that has proven so successful in changing mode share of children?
- b. What is the best way for the ATP to fund infrastructure to improve traffic safety around schools?
- c. What is the potential for expending very large grants of \$25-\$50 million on complete community-wide bicycle networks emphasizing gap closures and levels of safety and low-stress convenience that will attract significant numbers of people to bicycling?

V. Summary

The key “positions” that we hold to in our discussions and advocacy are as follows:

1. Ensure the ATP is fully funded to \$124 million (without the EEMP) and that its eligibilities are narrowed to active transportation projects;
2. Figure out how to have a call for projects right away because the delay is badly hurting our communities' ability to build safe infrastructure;
3. Figure out how to preserve the benefits of the Safe Routes to School Program (especially the non-infrastructure portion), the Recreational Trails Program, and the Bicycle Transportation Account (small projects for small communities)
4. Implement the program well, with a dedicated staff person at the CTC and a stakeholder-led process to develop new guidelines for the ATP;
5. Increase the size of the ATP every year by 10-50%.

These proposals will enable more Californians to bike and entice millions more bike trips every day. The benefits are tremendous: better health, a cleaner environment, and prosperous communities. To realize these benefits, we must provide a serious level of funding -- about \$1 billion per year from all sources -- instead of the paltry token funding currently provided. There are plenty of sources for that funding among the existing \$27 billion currently expended on transportation and from new sources. Funding should continue to be spent on existing small projects like single bike paths and lanes and safe routes to school projects, and this funding should be supplemented with major grants to communities to build whole networks. Early investments in bicycle infrastructure in the range of \$25-\$100 million will illustrate the benefits and spark a renaissance in bicycling accommodation in California.