Transportation’s Best Ideas for America’s “Best Idea”: The History of Alternative Transportation Funding in National Parks and Sustainable Funding Options for the Future

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"Frayed tempers, people hollering at each other, people double-and triple-parked, destroying the vegetation. We just decided that one of the criterion [sic] we wanted was to restore this place to peace and quiet."¹

- Zion spokesman Denny Davies after the park’s decision in 2000 to ban cars

“Tourists and outdoor enthusiasts beware, the heavy boots of environmentalists are about to stomp on your visitor rights in Yosemite National Park.”²

- Americans for Prosperity³ YouTube Video in response to Yosemite’s 2013 Merced River Plan, which included removing parking and other amenities.

You can’t have your cake and eat it, too.

- English idiom

The Parks’ Paradox

There was a lot of negative press following Yosemite’s release of an updated Merced River Plan last year. Critics latched on to the plans to remove popular amenities such as the swimming pool, the art center, the ice rink, and bicycle stands. But the intent was to protect the river shed, and the plans also proposed alternatives; a bike sharing station outside of the river corridor, a temporary ice rink for winter. The main strategy was to limit park visitors, including reducing the number of campsites and parking spaces. The visitors, however, were not pleased. Tom McClintock, the Republican representative of Yosemite’s district, called the plan “the most radical and nihilistic fringe of the environmental left.”⁴ Ultimately, the plan did not succeed, and instead parking and camping capacity within the park were increased. But if park planning continues in this way, Yosemite Valley could someday look less like a park, more like a parking garage. Critics argue that the alternative, an improved shuttle and regional transit system, is wildly expensive. And federal funding is

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³ Americans for Prosperity describe themselves as “a network of citizens that work on behalf of freedom for their communities” who “engage debate and ignite action because we believe that free markets make free and prosperous people.” See Americansforprosperity.org for more information.
spread as thin as ever. But what if there was a third way - a way that didn’t increase parking, but instead priced it? Could a more sustainable funding model lead to more sustainable transportation options in the park?

In 1916, President Woodrow Wilson signed the Organic Act, which created the National Park System and vowed “to conserve the scenery and the natural and historic objects and the wildlife therein and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations.” The NPS mission is twofold: to protect the natural environment, and to provide the public with access to our country’s natural treasures. Throughout much of the Park Service’s history, road building was the primary method to increase access to the park and accommodate visitor growth. Alternative forms of transportation, including shuttles, bicycle, and pedestrian trails, were de-prioritized in favor building and maintaining current road infrastructure. Today, parks are more popular than ever - 273.6 million people visited our national parks in 2013, compared with 190 million in 1970 - and congestion poses a real threat to the environment and the visitor experience. As protected lands, it is imperative that parks seek out the most environmentally sustainable transportation solutions for the long term life of the park.

Transportation policy, be it for a city, state, or national park, is largely articulated by where we devote our limited financial resources. The National Park Service’s transportation services today rely heavily on federal highway funding. This wasn’t always the case historically, nor is it the only option available today. Instead, the Park Service should expand and refine their successful recreation fee program in order to generate more revenue through a funding system that prices vehicle use. The money generated from these user-fees should be used to invest in public shuttles and other alternative modes, in order to reduce the impact of vehicles on park lands.

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9 Wachs, Martin. Lecture, April 31, 2014. UCLA.
The History of Transportation in Parks

Before the automobile, getting to and around parks wasn’t cheap. Early visitors reached parks by railroad, which could be prohibitively expensive. The railroad industry financed railroads to the parks and also operated lodges. In addition to the early train lines, visitors came to parks in horse drawn carriages and by bicycle. Open-topped motor coaches gave visitors guided tours. In Yosemite the earliest roads were built by companies that were granted exclusive franchises to build wagon trails. The Mann Brother’s Toll Trail was built in 1856 at a cost of $700. To access the trail, “foot travelers paid $1.00 and horseback riders $2.00 each way.” In 2014 prices, this would be equivalent to $28 and $55, respectively, over five times what a visitor pays to enter the park today. When Yosemite National Park was established by the federal government, the park offered to maintain the roads if the company promised not to charge a fee.

In the early 1900s, automobiles were banned in Yosemite. But as automobile ownership grew, driving quickly became the preferred way to visit parks. By 1917 a majority of visitors reached it by automobile. At the time many park patrons and administrators, saw driving as a nuisance. In what is now Acadia National Park in Maine, families like the Rockefellers opposed opening the roads to automobile traffic; they vacationed away from cities in order to avoid cars and preferred to travel by carriage when visiting. Autos in Mt. Rainier were required to obtain a permit from the park supervisor, and had to obey curfews. They also had to give right of way to wagon carriages. “When teams approach, automobiles will take position on the outer edge of the roadway,” wrote the 1908 regulations. But this soon changed. It was reasoned that opening the parks to automobiles would make it easier for more people to visit, and that this would be a small price to pay in order to increase the number of visitors, which in turn would justify...
protecting the land from commercial use and devoting it to recreation instead.\textsuperscript{18} Paradoxically, roads were built into parks to increase the number of humans in parks, in order to make the case for protecting parks from human exploitation. In order to expand a nationwide system of public parks the emphasis at the time was on increasing access, primarily for automobiles.

As a result, both driving and visiting parks became popular forms of recreation in the 1920s. Public parkways, scenic drives just beyond a city limit or a few hours away would become the precursor to the modern interstate system\textsuperscript{19}. Early national parks such as Shenandoah in Virginia, Glacier in Montana, and Smoky Mountains in Tennessee were christened with scenic roadways that served as a way to get to the park but also as the park's crown jewel. These roads were a way to “provide for the enjoyment of the parks,” even if they didn't provide for themselves financially. In 1924, a committee tasked with finding a site within a day’s drive from the growing city of Washington D.C. recommended what would become Skyline Drive in Shenandoah National Park. The committee, “recognizing the proliferation of the automobile, suggested that the “greatest single feature” of the proposed park should be a ‘sky-line drive along the mountain top’"\textsuperscript{20}. To this day, one fifth of the paved roads in NPS are designated parkways.\textsuperscript{21} Thus, not only did roads become the primary way to move throughout the parks, they became an integral part of the park experience. It explains why park administrators might be reluctant to charge visitors for driving on its roads - the roads have become attractions within the parks themselves.

\textbf{Sources of Federal Funding for Federal Lands Transportation Projects}

\textit{Early Federal Partnerships}

None of these park roads would have been built if funding hadn’t been made available. The first federal funding for roads in National Parks came with the passage of the

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\item\textsuperscript{19} Lecture, Brian Taylor, UCLA
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Federal Aid Road Act in 1916, coincident with the founding of the National Park system. Prior to this Act, there was no formal structure for funding projects on federal lands. Parks had roads constructed in a variety of ways.  

22 Yellowstone’s first roads were built by the Army Corps of Engineers. Other places partnered with the Civilian Conservation Corps to provide labor for constructing roads, trails, and bridges. Parks soon began to experience rising costs for maintaining these roads, and in order to generate revenue to cover the operation expenses, some early parks turned to entrance fees, a proxy for road use. “Entrance fees were charged, for example, at Mt. Rainier Park beginning in 1908 and at Yellowstone beginning in 1915. Fees at Mt. Rainier Park were initially $6 per car, while Yellowstone initially charged $10 per car” (Reason Foundation). In 2014 Mt. Rainier charges $15 dollars per vehicle, and Yellowstone $25. Over a hundred years have passed and these fees have barely budged relative to inflation. Today the majority of transportation funding for National Parks comes from a partnership between the FHWA and NPS. Roughly two-thirds of funding for transportation comes from the FHWA (also known as Title 23 funds, which references the FHWA’s section in the U.S. code), and one-third of funding comes from NPS (Title 16 funds).

The current relationship between NPS and FHWA can be traced back to 1926, with the Going to the Sun Highway, a project to build a road across the Continental Divide through Glacier National Park in Montana. This ongoing relationship between FHWA and NPS represents one of the longest inter-agency partnerships in United States history.


Although the two agencies would work together on road building projects in parks, for much of the early NPS history up until 1983, the majority of park transportation projects were paid for by National Park construction money. This meant that road projects competed with other essential park service construction projects such as sewage plants or bridges. Demands on all park infrastructure grew as the number of visitors to parks increased dramatically in the latter part of the 20th century, and the single pot of money

could not keep pace with the demands for new construction and maintenance. Under this funding stream, transportation systems in national parks deteriorated.25

1983 Partnership Agreement

In order to address the deteriorating transportation infrastructure in National Parks, the FHWA and NPS made their partnership official under the Surface Transportation Assistance Act (STAA) of 1982. One provision of the act was to establish a Park Roads and Parkways (PRP) funding category which would be jointly administered by the NPS and FHWA, under the newly created Federal Lands Highway Program (FLHP).26 PRP came out of money from the Highway Trust Fund, which is financed by gasoline taxes. The NPS was responsible for setting priorities for projects and remaining committed to protecting the parks, and the FHWA provided the engineering wherewithal, program oversight, and acted as the partnership’s voice to Congress.”28 The Park Roads and Parkways program provided National Parks with a dedicated source of transportation money for the first time. No longer did transportation projects have to compete alongside other vital NPS infrastructure projects. One of the provisions of the 1983 agreement was to provide design guidelines for park roads. The guidelines emphasized roads that were a part of the scenery, rather than apart from the scenery, and that enhanced the visitor’s experience by offering drives that were “fundamentally designed to maintain an overall continuing sense of intimacy with the countryside of area through which is passes.”29 They also advised against projects that would ruin the natural vista. “When the Service is faced with the choice between creating a severe road scar to bring visitors to a destination point, or requiring visitors to walk a considerable distance or to utilize an alternate transportation system -- the decision should be against the scar”30. (Emphasis mine)” This is important because when discussing transportation in parks, we must err on the side opposing “the scar.”

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30 Ibid.
Although the partnership provided the Park Service with a reliable source of funding, federal funding cuts in the late 1980s, and obligation limits placed on FHWA funds in the late 1990s led to park road infrastructure projects being chronically underfunded. As it now stands, the Park Service has been able to slow the growth of the maintenance backlog, but has fallen short of bringing park transportation systems up to full standard\textsuperscript{31}.

\begin{quote}
\textbf{A Bit on the Maintenance Backlog}

This would be a good point to provide a clearer picture of just how insurmountable the maintenance backlog is. In an article written by the National Park Conservation Association (NPCA) called \textit{On the Road to Ruin}, it was estimated that the Park Service would need to increase its annual transportation budget three-fold just to keep up with the existing maintenance projects. "90 percent of the 9,450 miles of park roads are in poor or fair condition. By comparison, 14\% of roadways classified as rural major collectors in the Federal-Aid Highways System are rated less than good or acceptable.\textsuperscript{32}\"

Park advocates argue that federal funding policy has only worsened the backlog. Most federal project money is dedicated to large capital projects, creating a financial incentive to let transportation infrastructure deteriorate to the point of requiring expensive capital overhauls and improvements, rather than spending comparatively less annually on routine maintenance. Secondly, the NPS does not have the authority to tax, nor, as a federal agency, can it easily come up with the requisite state or local funding matches in order to qualify for FHWA’s High Priority Project money for even the direst circumstances.

The backlog is a serious issue not only for the depth of its deficit, but also for the safety issues that arise from letting facilities fall into disrepair, or failing to keep up with engineering safety standards. The NPCA reports that one person is killed or injured on a park road every 4.5 hours, which would rank the Park Service 13th among states among road fatalities and injuries.

All this serves to explain why, with such a backlog, investing in alternative transportation has been moved to the back burner. The backlog poses real and immediate concerns and it is prudent for the Park Service to prioritize these projects.

The Beginning of the Alternative Transportation in National Parks

“No more cars in national parks. Let the people walk. Or ride horses, bicycles, mules, wild pigs—anything—[…] We have agreed not to drive our automobiles into cathedrals, […] we should treat our national parks with the same deference, for they, too, are holy places.”


In 1971 Yosemite closed the eastern section of Yosemite Valley and began a free shuttle program, one of the first of the parks to do so. The Everglades and Grand Canyon added shuttles in the 70s and 80s. \(^{33}\) While there was ongoing concern within the Parks administration about the increasing number of automobile in parks, Congress did not become serious about the issue until 1999 with the Transportation Equity Act for the 21st Century (TEA-21). TEA-21, section 3039\(^{34}\) required that the US Department of Transportation (DOT) in conjunction with U.S. Department of the Interior (DOI) undertake an alternative transportation needs assessment. In response to these requirements the Park Service established the Alternative Transportation Program (ATP)\(^{35}\). ATP primarily provided money to parks to develop proposals for alternative transportation systems but had no implementation money of its own\(^{36}\). The program only granted $8 million dollars annually from 1999 to 2003,\(^{37}\) a tiny fraction of the total $165 million dollar budget that the Federal Lands Highway Program had allocated to the NPS.

The resulting 2001 Federal Lands Alternative Transportation Systems Study\(^{38}\) found that most federal lands sites could benefit from a modest seasonal transit service, and

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\(^{34}\) “National Park Service Accomplishments in Alternative Transportation.” (n.d.): n.


\(^{36}\) “Interview with Amy Van Doren.” Telephone interview. 17 Apr. 2014.

\(^{37}\) “National Park Service Accomplishments in Alternative Transportation.” (n.d.): n.

many more from a more comprehensive system. Fares could recoup some of the operational costs. The study estimated the costs to support transit in parks at $1.71 billion in 2001 dollars, with just over half of this going to capital costs. The study also concluded that, while a full federal subsidy program would be desirable, it was not likely, and instead it would be necessary for parks to establish partnerships with private entities, states and local governments, and other third party organizations. Despite the report’s pessimism, the federal government moved to approve a program dedicated to subsidizing transit projects in parks, the TRIP Program. However the report was correct in predicting that the program would be far from comprehensive.

**Paul Sarbanes TRIP Program**

First introduced in 2001 and again 2003, the Transit in Parks Act finally prevailed in 2005 as part of discretionary funding in SAFETEA-LU (Safe, Accountable, Flexible, and Efficient Transportation Equity Act: A Legacy for Users). The Transit in Parks Act, spearheaded by Senator Paul Sarbanes of Maryland established the Alternative Transportation in Parks and Public Lands (ATPPL) Program, also known as the Paul S. Sarbanes Transit in Parks (TRIP) program. The TRIP Program was a dedicated funding source for alternative transportation projects within and surrounding federal lands. TRIP’s grants were restricted to capital and planning projects, but did not require matching funds. Eligible recipients included Federal Land Management Agencies (FLMA), governments with jurisdiction over land in the vicinity, or governments and NGOs in partnership with the FLMA. From 2006 through 2012 the TRIP program provided funding for over 291 projects, and over $156 million dollars. The majority of projects (66%) were sponsored by the Park Service, but partnerships with local governments and agencies were also successful at securing money.

A sample of the TRIP program’s accomplishments include 4.7 million to purchase rail vehicles for Chugach National Forest in Alaska, providing buses for the Acadia Island Explorer in Maine, trolleys for Gettysburg, PA, and a bicycle and pedestrian trail in Chincoteague National Wildlife in Virginia.

TRIP Project by Category

While the TRIP program expanded alternative transportation in parks, it was cut in 2012 with the passage of the current surface transportation bill, MAP-21 (Moving Ahead for Progress in the 21st Century).

Current Status of Alternative Transportation Funding

The most recent transportation spending bill, MAP-21, passed in 2012, cut the Park Roads and Parkways and created a new Federal Lands Transportation Program (FLTP). The TRIP program was also cut, and the Federal Lands Access Program set up to fill the void. The overall amount of Title 23 (FHWA) funding to NPS was reduced by 30 percent. Sequestration also led to an 8% reduction in NPS appropriated funds (Title 16 non-fee). “The net effect is a reduction of nearly $9 million per year, a 28 percent decline in total transit funding for NPS.”\(^\text{40}\) The current funding programs available to NPS alternative transportation programs are as follows:

Federal Lands Transportation Program

The Federal Lands Transportation Program is a grant program that allocates money directly to the NPS. Even though FLTP is federal money, MAP-21 permits FLTP funds to be used as the non-federal matching funds for other federal grants in lieu of local or state dollars. This provides NPS with the power to leverage additional funds. Although this is a dedicated revenue source for NPS, it mostly goes towards alleviating the maintenance

backlog. This money is not directly allocated to alternative transportation, but can be used on all transportation assets

**Federal Lands Access Program**

Although MAP-21 eliminated the TRIP Program, multi-modal transportation funding for public lands is available through the new Federal Lands Access Program (FLAP) program. Unfortunately, this money is allocated to states, not park units, and is based on the following formula:

- 30% based on the State's share of total recreational visitation in all States.
- 5% based on the State's share of total Federal land area in all States.
- 55% based on the State's share of total Federal public road miles in all States.
- 10% based on the State's share of total number of Federal public bridges in all States.41

This formula is based mostly on road miles (55%), indicating that FLAP is more concerned with road projects than transit or other alternative forms of transportation. FLAP is also a poor supplement for TRIP because it allows for, but does not require that these monies go to alternative transportation projects, and it is only available to state and local governments, not to individual NPS units. In the last cycle of funding in California, for instance, all of the FLTP money was issued to road projects42. While touted as a replacement to TRIP, the FLAP has demonstrated little obligation to transit projects.

**Transportation Alternatives Program**

This is money for state and local governments to invest in alternative transportation. It was created by merging former grant program including Safes Routes to School and Recreational Trail, and Transportation Enhancements. In order to gain access to these funds, NPS sites must be a designated sub-recipient by states and Metropolitan Planning Organizations (MPO).

**Federal Transit Administration (FTA) Funding**

A Volpe National Transportation Systems Center report issued this year suggests that NPS agencies take advantage of FTA formula grants that are available to rural and

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42 “Interview with Amy Van Doren.” Telephone interview. 17 Apr. 2014.
urbanized areas. Some 316 park units and 146 units are estimated to be eligible for rural area (5311) and urbanized area (5307) grants, respectively. The FTA has also approved the use of urbanized area formula grants for projects that were formerly funded under TRIP. In order to access these funds, NPS must either partner with state or local governments to implement transit services, or be a designated sub recipient of the funding from state and local governments in order to use the money directly. These grants are available to those transit systems that are owned by NPS or contracted out to operators via service contracts or cooperative agreements.

The federal funding stream for transit in parks is complicated, often requiring that the Park Service partner with regional transportation providers, state and local governments, or private entities just to qualify for money. If the Park Service is serious about improving their transportation infrastructure, including investing in alternative transportation, they must look at their own means of raising revenue, rather than waiting for the federal funding climate to improve.

The Other Slice of the Pie: National Parks Recreation Fees

While two-thirds of transportation funding in parks come through FHWA money, the other one-third comes from NPS issued fees. Between 1965 and 1997 these fees, such as entrance fees, were sent directly to the U.S. Treasury and apportioned to the NPS. In this way, the fee revenues were just like ordinary appropriations, except they did not have a set “spend-by” date.43

It wasn’t until 1997 that Congress created the Recreation Fee Demonstration Program, also known as Fee Demo. Fee Demo allowed 50 NPS units to establish their own fee program in order to generate revenue. Some 80% of this revenue was required to be spent at the park location where it was collected. The remaining 20% was used by NPS as discretionary spending. “The main purpose of Fee Demo was to determine whether NPS could become financially more self-sustaining to allow the Secretary [of the Interior]}

greater flexibility in setting the fee amount, and to try to reduce the maintenance backlog."44

In 1998 the Omnibus Management Act allowed the Park Service to charge an additional fee to cover costs for park-provided transportation systems, a transportation fee.45 Many parks chose to embed their transportation fees as part of their entrance fees, which, if the entrance fee itself was not raised, resulted in an overall decrease in entrance fee revenue.

In 2005 the Fee Demo program expired and was replaced by the Federal Lands Recreation Enhancement Act (REA).46 Currently, fees pay for a small portion of park services, but the revenue is growing. Roughly one third of national park system units charge entrance fees and fee revenue makes up 10% of NPS’s total budget.

<table>
<thead>
<tr>
<th>Total Revenue from Different Fee Sources:</th>
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<tbody>
<tr>
<td>Entrance ---------- $ 221 million</td>
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<tr>
<td>Camping ----------- $25 million</td>
</tr>
<tr>
<td>Transportation------ $15 million</td>
</tr>
<tr>
<td>Concession --------- $60 million</td>
</tr>
<tr>
<td>Commercial Vehicle- $15 million</td>
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<tr>
<td>Photo/Film---------- $1 million</td>
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Fee demo money has provided necessary support funding to transportation services within the Parks. In 2009 the shuttle program in Zion National Park received $1.03 million to purchase propane powered buses. A parking lot was built for $340,000 in Kennesaw Mountain National Battlefield in Georgia in 2004.47

The Golden Gate National Recreation Area used Fee demo money to support half of the costs of operating the Muir Woods Shuttle after public lands discretionary funds ran out.48 Thus, Fee demo money is already being used to plug the holes in spending on alternative transportation. In order to accommodate future growth, the NPS must

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44 Ibid.  
48 “Interview with Amy Van Doren.” Telephone interview. 17 Apr. 2014.
emphasize other forms of transportation beyond private automobiles. To do this, the NPS should expand the fee demo program by charging private automobiles fees, and use this money to invest in alternative transportation.

**The Road Ahead is Not a Road**

In many ways, the way towards a more sustainable funding mechanism for transportation in National Parks might require a look backwards. Early partnerships between parks and railroads and the use of market-priced user-fees to fund park roads in the early 20th century can provide a blueprint for future funding models. While the Park Service first built roads to bring visitors to parks, now a surplus of visitors is driving the need for better and more sustainable transportation systems. Over the tenure of the FHWA/NPS partnership, federal funding has not kept pace with the maintenance needs, let alone given the Park Service room to expand its transit options. The TRIP program, the closest the Park Service had to a steady funding stream for alternative transportation, lasted only seven years.

This year, MAP-21 will expire and the REA will sunset, which makes this moment a pivotal time for transportation funding and finance in National Parks. In the past year NPS has issued two white papers on the topic, and the National Parks Conservation Association and Hospitality Association have weighed in as well\(^49\). NPS Director, Jonathan Jarvis has also made statements about the severity of the NPS maintenance backlog, and the need for additional funding.

Some of the suggestions in the white papers and in Jarvis’s statements\(^50\) are less about major “innovations” to financing and more about under-utilized strategies for leveraging funds - not new revenue generators themselves, but tactics such as grants management techniques, partnering with private foundations, or gaining the authority to issue bonds. Other ideas include raising the gas tax by a penny as part of a “penny for parks” program, or establishing a National Parks Endowment with non-federal resources.


However, none of these strategies increase the self-sufficiency of the Park Service more than the proposal to increase fee revenue. While the NPS is focused on short-term ways to reduce the backlog, they should instead be focused on increasing park revenue through user fees, and re-committing themselves to more sustainable modes of transportation.

**A New-Old Model: Charge Cars, Pay for Shuttles**

“There’s just too many people here,” said Mr. Chytraus, a resident of Carlsbad, Calif. “It’s a beautiful place, but we have to be conscious of our footsteps. But the bikes have no emissions. I have more problems with the number of cars coming in. If they bused people in and added biking, that would be the way to go.”

- Visitor on Yosemite’s plans to curtail human activity in the park

The National Park Service understands that transit and alternative forms of transportation are fundamental to its mission of protecting the parks. They must now adjust their priorities accordingly. What frequently derails plans for transit projects in parks is cost. A newspaper article on Yosemite’s 2000 public transit plan explains that it “ran into trouble when a study by transportation consultants estimated that it would require a fleet of 348 buses and cost $217.6 million to start and $17.7 million a year to operate.”

While the aforementioned plan did eventually increase public transit access to Yosemite, Yosemite Restoration Trust President Janet Cobb warned about the perils of under-pricing cars. “I’m worried about the voluntary aspect (of car travel),” she said. "Right now, you can drive into Yosemite for $20, but it costs $34 to take a (private) bus." In order to make transit work, NPS must make the case that cars need to be priced more highly. Cars, the primary users of park roads, impose a great cost to road infrastructure, pollute, and create congestion. These days, cars are “the scar” in parks; they should be priced at a rate that matches their impact. Some parks are already beginning to do this.

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Pinnacles National Monument is considering a program to double the entrance fee to $20 and invest the money in a shuttle program. Not only are some parks interested, but many members of the public support reducing car use in parks. Referring to the 2000 Yosemite plan, Cobb said, "The National Park Service has blinked (by not promoting a car ban) [...] The public is ahead of the park service on this. In a recent American Automobile Association poll, 60 percent of the respondents said they wanted to get out of their cars while in Yosemite." However, rather than ban cars outright, the Park Service can expand the range of transportation choices available, and make sure that they are competitive with the automobile through pricing and increased services.

Because the NPS’s decades long partnership with FHWA has mostly left them at the mercy of federal spending cuts, the Park Service must take matters back into its own hands.

The National Park Service could start by creating a mobility department, responsible for financing, designing, and managing transportation projects within the Park Service. The shuttle programs in parks are much more comprehensive than they were 30 years ago, and the administrative structure of the Park Service should reflect this. While the Park Service has many landscape architects, and the FHWA has brought engineering expertise, the Park Service has comparatively few transportation planners.

The first order of business for this department would be to restructure the recreation fees. Most entrance fees charge by the vehicle. While this might serve to encourage people to carpool into parks, fees should be tied directly to specific uses. If the fee provides entrance into the park, the charge should be based on the number of people, rather than the number of vehicles, that enter the park. While the NPS refers to the fee paid at the gate as an “entrance fee,” the signage often reads “Private Family Auto.” This misleads the user to believe that they are paying for the price of their car entering the park rather than for admission to the park itself.

56 “Interview with Amy Van Doren.” Telephone interview. 17 Apr. 2014.
In Yosemite, for instance, a vehicle pays $20, but a person walking into the park or coming in by bike has to pay $10. Five people walking into the park pay two and a half times more than five people entering via car.

Once the entrance fee is charged per person, with discounts for seniors or children, parks can charge for vehicles at a different point in the visit. The primary way to establish a fee for cars would be through parking. Parking should be charged by the day, with multi-day passes an option. At certain popular trailheads, parking should be by the hour, giving people the choice to pay less if they are only going for a half day hike.

Last year Yosemite had 3,996,017 visitors. Based on surveys, we can estimate that 96% of them entered the park by car\textsuperscript{57}, for a total of 3,836,176 million. The average car carried 2.9 passengers. Since currently charges are $20 per vehicle, if the average car were to be charged per person rather than per auto, Yosemite could bring in an additional $10 per car, or 38 million dollars a year. If the park also started charging vehicles via parking fees, those 1.2 million vehicles\textsuperscript{58} would result in revenue of $6 million, and that’s only assuming a meager $5 charge for parking. Transportation fees, or the fees for shuttle service, are already a part of the recreation fee schedule, and so the shuttles should also be charged under this authority. A small fare of $1 might be a place to start. If collecting fare on a shuttle is a hassle, then the fee should be clearly listed at the entrance gate.

The $38 million may be a drop in the bucket compared to the capital costs estimates, but this back of the napkin math is just the beginnings of thinking about the financial implications of charging vehicle fees. If this pricing reduced the number of people driving into the parks by 50%, which is highly unlikely, the remaining 17 million would still cover annual operating costs.

If it seems unrealistic that people will find alternative ways of entering the park, we need only look back to 1980, another point in time when Yosemite was considering expanding transit options. An article in the SF Chronicle wrote, “Requiring visitors to park their cars at distant lots and ride buses or some other form of transit into the valley, as suggested by the 1980 plan, is not realistic in the foreseeable future, the report said. It


\textsuperscript{58} (3.8 million)/(average of 3 people per car)
would cost too much and there are problems of logistics.”59 Despite this, the Yosemite Area Regional Transportation System, YARTs, a regional partnership was founded in 1992. Today YARTS provides transit service from gateway communities to the park along three different lines.

**What about the Maintenance Backlog?**

But what will become of the immense backlog? Since we can’t summon money to cover decades delayed maintenance, road maintenance projects will have to be prioritized with the hope that increased fee revenue can slow the backlog accumulation. Safety should be a number one concern when considering which projects to prioritize, but the Park Service should also conduct a comprehensive inventory of their roads and determine roads that might be able to be returned to gravel or dirt.


**Does this road really need to be fixed?**

The Park Service should return some roads to their natural state. The Texas legislature briefly floated the idea of replacing paved roads with gravel when facing their state deficit. If this can pass for state level transportation policy, perhaps the National Park Service - keeper of wild lands rather than civilized ones - could lower the priority of repaving projects and re-focus energies on alternative transportation options in the places where congestion is the most severe.

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Are the Alternatives any Better?

It’s important to note that there is no one funding mechanism or transportation mode that will solve the Park Service’s transportation woes and eliminate all human impact on the environment. Yosemite’s original Merced River Plan sought to ban bicycles from the river corridor. Even at the National Mall in DC where there isn’t a fragile ecosystem to protect, NPS officials prevented bike sharing stations from being installed60. While tour buses are popular and take cars off the road, they contribute far more to road deterioration than single-occupancy vehicles.61 Humans walking on trails do plenty of damage with their own two feet. Thus the proper pricing of vehicles is not intended to unfairly penalize cars, but to have their fees match costs.

Why We Need Transit in Parks

But what of the charges of the “heavy boots of environmentalism?” bearing down on Americans to restrict their access to the land that is their birthright? Does charging more for cars infringe on our right to use public land? In fact, it might be the opposite. Charging more for vehicles on park lands doesn’t restrict people’s access, it expands transportation options within the park. More importantly, it guarantees future access by being more environmentally sustainable and protecting parks for the people in perpetuity. Charging higher fees to vehicles entering the parks would allow those people who value their time highly to pay extra for the convenience of having a car in the park. Those that can afford to spend more time getting around can take the low cost shuttle service. Some people believe that the shuttle system would be too slow, but since most people visiting national parks are on vacation, shuttles can have banners that read “relax, you’re on vacation, let us be your driver.” The Park Service could also consider expanded bicycle rental or bike sharing services at sites where it is appropriate. A bicycle would be an appropriate mode of transportation for certain users, and could enhance the recreational experience.

For the people who enjoy driving for driving’s sake, still one of the most popular ways to visit parks, they are free to drive on roads; they will only be charged once they

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leave their car in a parking spot. Scenic Byways, many of which currently charge entrance fees should consider transitioning to tolls so as to reflect the impact of driving on the road.

When instituting this enhanced user-based funding model, NPS could look to the original Fee Demonstration program for inspiration and plan to pilot the model before adopting the policy system-wide. Certain parks could act as demonstration sites for innovative, user-based pricing models based on increased entrance and parking fees. Through a combination of paring down the list of maintenance projects and more efficiently pricing vehicle use, the NPS can aim to swap the share of Title 16 and Title 23 funds that go into their transportation budget every year. In the future, two-thirds should come from NPS’s own revenue, and one-third from the FHWA Federal Lands Highway Program.

While there is some concern over whether charging more to enter parks would disproportionately affect poor people, in reality camping and other forms of vacationing in national parks is still one of the cheapest forms of vacations. Including parking, a family of four can enjoy the park for $45, which is one-tenth the cost of that same family to gain entrance to Disneyland\textsuperscript{62}.

It is also good to remember that when considering transit in parks, context is important. Yosemite is miles away for the nearest metropolitan area, but much of Golden Gate National Recreation Area is just across the Golden Gate from San Francisco. Parks, National Monuments, and National Historic sites that are in more urbanized areas should tap into the preexisting transportation network. Yet even rural sites can look at how the existing regional transit networks can provide access to nearby parks.

There is a future for alternative transportation in parks, but first our visitor fees must reflect our values. Perhaps Senator Sarbanes said it best, “I believe that we have a clear choice before us: we can turn paradise into a parking lot—or we can invest in alternatives\textsuperscript{63}.”

source: http://lah.org/nps-design-tradition-21st-century/

“The Great Outdoors”
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