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## **INTRODUCTION**

In 1971 California's Off-Highway Motor Vehicle Recreation (OHV) program was created as a legislative response to increasing conflicts involving OHV use in the state. The Chappie-Z'berg Law created California's OHV program within the Department of Parks and Recreation. The OHV Division, the OHV Fund, and OHV Commission were created with 1982 revisions to the Chappie-Z'berg Law. The OHV Commission makes policies for the Division and has seven members; three appointed by the Governor, and two each by the Speaker of the Assembly and the Senate Rules Committee.

The legislation creating the OHV Division was supported by off-roaders, who saw an opportunity for recognition of their sport as a legitimate use, as well as a way to ensure public funding for it. The legislation was also supported by some environmentalists, who believed the law really would do what it claimed – direct OHV use toward lands that could best accommodate it, thus protecting unsuitable areas from OHVs, and providing for conservation and law enforcement on lands where such use did take place. Environmentalists have been disappointed, as it became clear over the years that the priority of those running the program was the promotion and expansion of OHV use, not the protection of resources.

Off-road vehicles include 4-wheel drive vehicles and motorcycles that are driven off-road, snowmobiles, three and four wheeled All-Terrain vehicles (ATVs) and four-wheeled vehicles such as dune buggies. Some of the vehicles used off-road are street licensed; others carry the special off-road "Green Sticker" registration described below. In California off-road vehicles are also referred to as Off-Highway Vehicles (OHVs).

The OHV statute has been renewed and amended several times since its inception, with some of the changes requiring greater environmental protection. However, the most important environmental requirements of the act have been systematically ignored by the OHV Division and federal grantees, or interpreted in such a way as to have little or no benefit to the environment. So despite revenues of nearly \$500 million since the program was initiated, and grants of more than \$145 million to the Forest Service and Bureau of Land Management, damage to public resources – especially watersheds and wildlife habitat – by off-road vehicles remains a contentious issue.<sup>1</sup>

## **“GREEN STICKER” PROGRAM**

The State’s OHV program is commonly referred to as the “Green Sticker” program. The name is derived from a green identification sticker issued by the Department of Motor Vehicles to legally registered, but non-street legal, OHVs. Riders pay \$20 for a two year registration. The OHV Division and users contend that these and other “user” fees finance the state OHV program. In fact, registration fees have contributed an insignificant amount of revenue – only 6.8% – to the program.<sup>2</sup> Most of the program is funded by the fuel tax transfer described below.

California Revenue and Taxation Code Sections 8352.6 and 8352.7 direct that a portion of the fuel taxes attributed to registered OHVs and street licensed highway vehicles engaged in OHV use in California be transferred by CalTrans to the Off Highway Motor Vehicle Trust Fund. Section 8352.8 requires that 33% of these taxes, and those attributable to unregistered OHVs, be transferred to a separate Conservation and Enforcement Service Account (CESA). CESA funds are to be used for conservation and enforcement activities for the prevention or reduction of soil loss, wildlife loss and habitat loss.

CalTrans, however, includes the fuel taxes attributable to unregistered OHVs in their transfers to the OHV Trust Fund, resulting in huge overpayments to the fund. In fiscal year 1997/98, 78.8% of the OHV Division’s total budget was from \$26.2 million in fuel tax transfers. Of this amount, \$14.2 million (54%) was from fuel attributed to unregistered OHVs.<sup>3</sup> Taxes collected on fuel attributed to off-road use of street-licensed vehicles is also transferred to the OHV Trust fund. In fiscal year 97/98 these transfers totaled \$9.6 million (36% of the transfers). Fuel attributable to “Green Sticker” registered OHVs contributed only \$2.47 million, or just 9% of fuel tax revenues.<sup>4</sup>

### **The Fuel Tax Study**

The amount of the fuel tax transfers was determined by a 1990 CalTrans-Department of Parks & Recreation study (“Fuel Tax Study”).<sup>5</sup> The Fuel Tax Study consisted of two components. First, it attempted to determine the number of vehicles used off-road on California public lands. Secondly, it estimated the total amounts of fuel used by vehicles for off-road recreation. The study was based on telephone surveys of

approximately 12,000 California households, in which respondents were asked about their off-road vehicle use, including numbers and types of vehicles, and amounts of fuel used. The study concludes that 14.7% of households surveyed included individuals who drove vehicles off road for recreation.

Surveyors then compared the names of those who claimed to own off-road vehicles with the California Department of Motor Vehicles (DMV) registration records. This comparison revealed that for every legally registered off-road motorcycle, 5.9 motorcycles were unregistered. The registration record for 4-wheeled vehicles such as dune buggies was worse, only one legally registered vehicle for every 7.6 illegal vehicles. The ratio of registered to unregistered snowmobiles was just one in seven, while the percentages of registered three- and four-wheeled All Terrain Vehicles is a little better, one legally registered for every two-and-a-half unregistered.<sup>6</sup>

### **Problems with the Fuel Tax Study**

The most questionable aspect of the Fuel Tax Study was the inclusion of unregistered OHVs in determining fuel tax transfers – unregistered OHV's yielded 56.2% of transfers.<sup>7</sup> There is the obvious incongruity of allowing illegal OHV use to subsidize the OHV program. Moreover, concurrently with accepting the millions of dollars attributable to unregistered OHVs, the Division has asserted a 90% registration compliance.<sup>8</sup> The American Motorcyclist Association (AMA) claims “Illegal riding has been virtually eliminated.”<sup>9</sup> Each year's OHV grant applications show existing law enforcement statistics for areas for which grants are being requested. If the information in these applications is to be believed, unregistered vehicles currently account for only 2.7% of snowmobile use, and 3.13% for other OHVs.<sup>10</sup>

In other words, while claiming near total compliance with registration requirements, the OHV Division continues to accept inflated fuel tax transfers that are based on the assumption of large numbers of unregistered off-road vehicles. Regardless of the actual number of unregistered OHVs running around in the state, it makes no sense – after 27 years of paying to provide OHV management and user education – that the state OHV program should continue to be subsidized by illegal vehicle use.

The Fuel Tax Study’s Request for Proposals (RFP) was also flawed in specifying that fuel taxes attributable to street-licensed regular passenger vehicles and station wagons and two-wheel-drive pickups, vans, and utility vehicles be included in the study.<sup>11</sup> These are highway vehicles for which the OHV program is specifically not intended.<sup>12</sup> Removing these vehicles from the transfer formula would greatly reduce the amount of the fuel tax transfer. See Table 1.<sup>13</sup>

	Aug. 1989-Dec. 1989 (From Fuel Tax Study)	July 1997-June 1998
Unregistered OHV	56.2%	54.1%
Street-licensed regular car, wagon	6.4%	4.4%
Street-licensed 2WD PU, van, SUV	15.6%	21.7%
<b>Total from ineligible vehicles</b>	<b>78.2%</b>	<b>80.2%</b>

The number of 4-wheel drive vehicles used off-road is another probable source of over-funding. According to the Fuel Tax Study, 36.11% of 4-wheel drive vehicles in California are used off-road.<sup>14</sup> This conflicts with industry findings. Michael Moore, a spokesperson for Chrysler, the company that developed the Jeep Cherokee line, says, “Our market research shows less than 5 percent of four-wheel drive purchasers ever take their cars off-road.”<sup>15</sup>

The Fuel Tax Study was also flawed in that it failed to comply with the RFP requirement to verify its data with data from independent sources.<sup>16</sup> The study attempted to verify the fuel use estimates using off-road manufacturers’ data, but found that the industry did not track such data.<sup>17</sup> However, the study made no attempt to confirm the numbers of vehicles actually used off-road, even though that data was readily available from those same industry sources.<sup>18</sup> These industry sources were used by

another state Agency, the California Air Resources Board (CARB) to estimate the amount of OHV use in the state, for purposes of regulating the emissions from this source. As described below, CARB's numbers were substantially lower than those concluded by the Fuel Tax Study.

A new fuel tax study is long-overdue. California law requires CalTrans and the Department of Parks and Recreation prepare a report every two years setting forth the amount of taxes attributable to off-road use.<sup>19</sup> The 1990 Fuel Tax report itself recommended a maximum of five years for completion of a new study. Nearly ten years later, fuel tax transfers are still based on the highly suspect data of the 1990 study.

### **DIRT BIKES, ATVs AND AIR POLLUTION**

Off-road motorcycles and ATVs use two- and four-stroke gasoline engines. Two-stroke engines, in particular, are incredibly polluting, allowing up to thirty percent of fuel to pass unburned through the engine.<sup>20</sup> According to the California Air Resources Board, (CARB), off-road motorcycles and ATVs emit 118 times as much smog precursors as modern automobiles on a per-mile basis. A two-stroke engine emits 10 times as much smog precursors as a four-stroke engine for each mile traveled. These two-stroke engines are responsible for ninety percent of the thirty-four tons of smog precursors currently emitted each day in California by off-road motorcycles and ATVs.<sup>21</sup> According to the American Motorcyclists Association (AMA), two-stroke models comprise seventy percent of off-road motorcycle sales in California.<sup>22</sup>

A 1996 report by the California Public Interest Research Group (CalPIRG) examined the substantial differences in the number of OHVs determined by the OHV Division and CARB.<sup>23</sup> CARB's total estimate of all classes of OHVs for which they are charged with monitoring emissions is approximately 468,000 vehicles. The OHV Division claims that there are nearly 2 million OHVs. (Both these numbers exclude street licensed vehicles sometimes used off road.) When the CalPIRG report was released in 1996, CARB and the OHV Division each maintained that their own numbers were correct. To date, both agencies stand by their numbers though, clearly, one or both must be incorrect. If the CARB numbers are correct, the fuel tax transfers to the OHV Trust Fund are drastically excessive. If, however, the OHV Division's estimate is correct, then not

only is illegal OHV use rampant in the state, but CARB is severely underestimating the role OHV's play in air pollution.

### **“Red Sticker” Program**

The Forest Service and BLM have demonstrated their alliance with the off-roaders in disturbing ways. In an attempt to improve California air quality, California Air Resources Board (CARB) adopted regulations in 1994 that, for the first time, regulated emissions from off-road vehicles. These emission standards affected new off-road motorcycles and ATVs with engines greater than 90cc that are manufactured in or after 1997 and sold in California after January 1, 1997. It required these vehicles to meet maximum grams-per-kilometer emission standards of 1.2 hydrocarbons (HC) and 15.0 carbon monoxide. The industry maintained that it could not meet the deadline for lower emissions and sought regulatory relief.

In April 1997 CARB formed the Recreational OHV Working Committee, to address the concerns of user groups and dealers. The committee included representatives from the CARB, Department of Motor Vehicles, Department of Parks and Recreation, BLM, Forest Service, AMA, American Trials Association, California Motorcycle Dealers Association, California Off-Road Vehicle Association and Motorcycle Industry Council.

Various aftermarket and small-volume manufacturers were represented, as were American Honda Motor Company, American Suzuki Motor Corporation, Kawasaki Motors Corporation, and Yamaha Motor Corporation. Environmental interests were not represented on the committee. As a result of comments from the Working Committee, CARB, at its December 1998 meeting, revised those regulations, allowing non-complying OHVs to continue to be used during periods when ozone levels are low, mainly fall, winter and spring months. In many areas, year-round use is still permitted. These non-complying vehicles are issued a “Red Sticker.”

The presence of BLM and Forest Service representatives on this Committee to further off-road interests is another clear indication that they have moved from accommodator to advocate for off-road use. This advocacy for 2-stroke engines by BLM and the Forest Service is also disturbing in light of the controversy on federal lands regarding noise from

OHVs. Two-stroke motorcycles are considerably noisier than 4-strokes, and the Forest Service has maintained that 2-strokes are being phased out. By joining manufacturers and users in advocating the continued manufacture and use of non-conforming 2-stroke engines, federal agencies also perpetuated the noise conflict controversy.

### **OHVs ON PUBLIC LANDS**

The public lands used by off-roaders are primarily state and federal areas. The state off-road system consists of eight State Vehicular Recreation Areas (SVRAs), which are part of the state park system; essentially, state parks for off-road vehicles. These SVRAs consist of approximately 84,000 acres and about 450 miles of designated trails.<sup>24</sup> While it had been expected that the SVRA system would be the center of the OHV program, the state has experienced difficulties in acquiring land for additional SVRAs. The last two additions to the SVRA system were in 1989, when the state took over control of the Prairie City OHV area, and 1998, when it took control of Heber Dunes in Imperial County. The previous operator of Prairie City, Sacramento County, had closed the park in 1986 following an injury and lawsuit.<sup>25</sup> Heber Dunes had also been closed for some years prior to the state taking over its management.

Several other proposed additions to the SVRA system over the years have failed to overcome environmental concerns and the objections of nearby residents. As a result, federal agencies are encouraged by the state to “implement as much of the system as they can within their jurisdictions.”<sup>26</sup>

#### **Grants to Federal Agencies**

State law provides that up to 50% of the OHV Division’s annual budget can be awarded as grants to cities, counties and other agencies.<sup>27</sup> Historically, most of this grant pool has been awarded to the U.S. Forest Service and Bureau of Land Management (BLM). Since 1974, the state has given \$147.3 million to the two agencies, 81.63% of all grant funds.<sup>28</sup> For the fiscal year 1999/2000, grants to these two agencies total \$11.7 million out of a total grant program of \$12.75 million, or 92% of available grant money. Only \$1.04 million was awarded to cities, counties and other local agencies.<sup>29</sup> This disproportionate share of grants awarded to federal agencies has significant environmental ramifications.

The 19 National Forests in California offer 20 million acres and 4,200 miles of trails to off-roaders.<sup>30</sup> BLM lands provide millions of additional acres of riding. Purportedly, the state grants would enable federal grantees to better manage OHV use on their lands, thereby reducing environmental impacts. But there is substantial evidence that resources on federal lands continue to suffer severe environmental damage.<sup>31</sup> This is because criteria for obtaining state grants – which requires state funded areas and trails to remain open despite damage – conflicts with federal Executive Orders that require the closure of areas being damaged by OHV use.<sup>32</sup> With federal funding for recreation very limited, BLM and Forest Service land managers generally choose to maintain their access to state grants by allowing OHV use even when it damages resources or conflicts with other uses.

For example, the recent Rock Creek decision on the Eldorado allows winter OHV use on three-fourths of the winter range of the declining Pacific deer herd. Numerous studies document the impacts to deer and other wildlife from OHVs, especially in winter, when forage is scarce and animals must subsist primarily on calories stored as fat over the summer. In past years, the critical portion of this winter range had been closed in winter to protect wintering deer. In response to demands by dirt bikers, the Eldorado intends to re-open the northern half of the critical habitat, to “study” impacts to wintering deer from OHVs. The Forest Service’s own senior wildlife research biologist, Dr. John Kie of the Pacific Northwest Research Center has called the opening of the critical winter range “unwise” and the monitoring plan “useless.”<sup>33</sup> Documents in the Rock Creek project record indicate that Dr. Kie was pressured to retract his letter criticizing the decision to allow motorcycles on the critical winter range.

### ***Grants Create Federal OHV Bureaucracy***

*On the ground benefits to wildlife and watersheds from OHV grants are debatable, but federal agencies have used the state’s grant money to create a new layer of bureaucrats. Both the Forest Service and BLM use the grants extensively for OHV administrators’ salaries. These same administrators influence off-road policies and decisions. The grants fund a variety of positions, from Statewide OHV coordinators for the two agencies, to forest and district level OHV managers, OHV technicians, etc. As agencies have become more and more dependent on the OHV grants to pay staff salaries, other recreationists and environmentalists are alarmed at the growing leverage over decision-makers the OHV community has commanded by such grants.*

## OHV BLACKMAIL

The support of OHV users is essential to a successful grant application. Therefore, grant applicants design their OHV management to keep off-roaders happy. The OHV Division appealed several Forest Service Land Management Plans because off-roaders were displeased with the way the plans dealt with off road use. On several forests where OHV management plans are still being developed, grant control language linking funding to the amount of OHV opportunity in the final plan is commonplace.<sup>34</sup> To environmentalists, this control language tying OHV grant money directly to the amount of OHV “opportunity” is thinly disguised blackmail by the OHV Division.

*Not all Forest Service and BLM land managers are enticed by the availability of state grants. Folsom Field Manager Deane Swickard, who refuses to accept the state OHV grants, says “We have to be careful about accepting funds that don’t advance good management.” According to Swickard, the grants are a lucrative source of funding in a time of tight budgets, but the incentives to accepting grants are “addictive.” “You know better - you don’t want to get started down that road,” says Swickard.<sup>37</sup>*

For example, on the Stanislaus National Forest, the signing of OHV routes became a heated issue: OHV users wanted roads and trails open unless signed closed; environmentalists and resource managers wanted a policy of closed unless designated open. Since vandalism of signs in OHV areas is an ongoing problem, “closed” signs simply don’t work. An inconvenienced rider could simply remove the offending sign and ride on. The Stanislaus plan also included seasonal closures to protect wintering deer, and a partial ban on cross-country snowmobile use. Off-roaders were unhappy with the new travel plan, and the OHV Division joined them in appealing the Stanislaus OHV plan.

The OHV Commission and Division also exerted financial pressure on the Forest Service. The fiscal year 1999/2000 summer grant recommendations noted that, “OHV opportunities suffered a big set back when the OHV plan was finalized.” Control language in the grant states that “The amount encumbered will be adjusted based on the extent and details of the OHV program at that (sic). The forest-wide OHV plan is under appeal, other plans are in progress, and the final outcomes are uncertain, so maintaining some flexibility is warranted.”<sup>35</sup>

**...while the law defines conservation as activities which sustain natural resources, the OHV grant guidelines define it as activities which sustain OHV use.**

The Stanislaus National Forest winter grant was less diplomatic; control language in this grant states flatly, “*Funding will be contingent on the Forest Service OSV (Over Snow Vehicle) areas remaining opened to OSV use unless signed closed.*”<sup>36</sup> The Forest Service bowed to off-roader pressures; the Stanislaus signing policy was changed, and

closures to protect wildlife can only be implemented following site-specific studies. Open OSV travel remains.

## **ILLEGAL OHV USE**

Use of state grants has resulted in the promotion of national forests and BLM lands as off-road playgrounds. Forests that develop OHV areas and trails report significantly increased use, with an accompanying increase in resource damage, user conflicts and violation of wilderness boundaries. Despite receiving millions of dollars for law enforcement over the years, a lack of law enforcement is still a major problem on and near federal OHV areas. On National Forest lands only Law Enforcement Officers (LEOs) and Forest Protection Officers (FPOs) can issue citations. On BLM lands, only LEOs can even issue warnings, and there are only about 60 LEOs statewide to patrol 17.2 million acres.<sup>38</sup> Law enforcement grants are largely spent for salaries of Recreation Technicians and other personnel who have no law enforcement authority.

Unauthorized off-road use can cause severe damage to meadows, streams, and riparian areas, but rarely are perpetrators caught. Federal land managers prefer to try to educate users through the use of signing and brochures, and the “Tread Lightly” program, which advocates responsible OHV use. Educational measures, however, are ineffective, countered by a plethora of industry advertising that glorify man’s triumph over nature. These ads routinely show dirt bikes and trucks bouncing across rivers and streams, mud flying off knobby tires. Despite the lip service the off-road industry gives the “Tread Lightly” program, ads for 4-wheel drives, motorcycles and ATVs blatantly encourage the off-roader mentality of rebellion, independence, and freedom from rules.

Illegal off-road activity is not a case of an occasional “bad apple,” as the OHV lobby would have the public believe. Such activity routinely involves leaders of the off-road community. In 1996, a California State Assemblyman (now a State Senator) showed his displeasure with the closure of a sensitive segment of Coyote Canyon in Anza Borrego State Park by taking a state 4-wheel drive vehicle around a gate, past closure signs, into Clark’s Dry Lake, a sensitive area where he and his buddies were caught by a Park Ranger doing donuts. The Assemblyman called the closure, “a representative example of a bureaucracy that believes it owns God’s green earth.”<sup>39</sup>

In 1993, a California Enduro Riders Association (CERA) work party was cited for illegally constructing a trail on the Eldorado National Forest. The following spring a representative of CERA and

nine other members of another enduro work party were cited for illegally riding in a winter deer range closure area. This intrusion was particularly egregious, since the CERA representative had met with Forest Service personnel the previous day, and agreed not to ride in that area prior to May 1.<sup>40</sup> CERA had been involved for years with the development of OHV management in that area of the Forest, so their illegal actions cannot be attributed to a lack of education.

### **Legal OHV use also damages resources**

Many OHV grant applications cite resource damage from OHV use. User created trails, riding in meadows, riding off designated trails, and outright vandalism are all reported in the grant applications. Watershed damage however is not just a result of illegal OHV use. Legal and responsible riders also contribute unwittingly to resource damage because areas and trails that are clearly unsuited for and vulnerable to OHV damage are designated for OHV use by land managers who should know better.

A difficulty on federal lands is that the trail systems were not designed for OHV use. Many are old hiking trails; some are old logging roads or skid trails; many are trails created without authorization by OHV users themselves. Land managers simply legitimize these ad hoc trails by adding them to their designated system. Many are steep, and many cut across delicate riparian areas and cross directly across streams. A steep approach to a stream crossing results in the dumping of sediment eroded from the trail directly into the stream.

More and more, OHV clubs use our National Forests for dirt bike enduros. Because the nature of such events, which involve several hundred riders, is to make good time under difficult riding conditions, the clubs oppose the closing of steep trails and water crossings. Even when environmental review determines such trails should not be part of an established trail system, the Forest Service may allow dirt bike enduros to use these trails “in order to provide more challenge and variety during events.”<sup>41</sup> In steep forested areas such as the Sierra Nevada, the damage from such misuse is apparent in the gullies that are ever-present in areas used by these vehicles. In the Rock Creek OHV area on the Eldorado National Forest, a Forest Service soil scientist in 1994 noted significant erosion on all trails she examined that exceed 0% grade.<sup>42</sup> The trails referred to had been “maintained” using state grants for the ten years prior to her inspection.

## WATERSHED DAMAGE

The Sierra Nevada Ecosystem Project (SNEP), a comprehensive \$7 million dollar inventory of ecological conditions in the Sierra Nevada, identified riparian areas and aquatic resources as the most damaged ecosystem in the Sierra. Excessive sediment yield into streams remains a widespread water quality problem.<sup>43</sup> According to SNEP, surface erosion and gulying related to road construction and use are the greatest contributors to sedimentation in the Sierra Nevada.<sup>44</sup> On the Eldorado National Forest, which has been a recipient of state OHV grants since the mid-1980's, SNEP finds the Eldorado National Forest's Camp Creek and Rock Creek are suffering from sedimentation and riparian damage as a result of heavy and uncontrolled OHV use.<sup>45</sup>

Roads and motorcycle trails in the 23,000 acre Rock Creek OHV area of the Eldorado National Forest produce in excess of 1,693 tons of sediment each year, with 435 tons per year deposited directly into streams.<sup>46</sup> This appalling riparian damage continued during the fourteen years this area has received state grants, while the Forest Service dragged its feet on the Environmental Impact Statement (EIS) ordered by a federal judge in 1989. The Final EIS, released May 21, 1999 claims a new management plan will reduce this, but still predicts 992 tons of sediment yield annually, 248 tons directly into Rock Creek and its tributaries.<sup>47</sup> This predicted reduction is questionable, since the new plan also eliminates a winter closure on several thousand acres of critical deer winter range, and reduces wet weather closures from 72 hours after a storm event to only 24 hours.

The OHV Division issues millions of dollars in grants each year to the Forest Service and BLM to maintain OHV trails. Due to the lack of design and maintenance standards however, the very act of maintaining these trails can increase the amount of erosion. For instance, each year, the OHV grants are used to purchase several trail machines, small bulldozers with 48" blades that are used for trail "maintenance." Standard Forest Service practice for repairing gullies is to fill them with soil taken from next to the trail. While this temporarily repairs the gully, the fill soil used is even less stable than the original soil, especially when subjected to knobby OHV tires. A repaired trail can revert to its original gullied condition in just one season of OHV use. The eroded trail is also much wider than it was

originally, because in stealing stable soil adjacent to the trail to fill the gully, the vegetation supported by that soil has been destroyed. If the trail leads into a stream, the result is a dramatic increase in sediment loading of the stream. In the past, such trail maintenance was done by trail crews using shovels. Funding for purchase and use of trail machines has served to accelerate the damage.

Howard Wilshire, retired USGS geologist, former OHV commissioner and author of Environmental Effects of Off-Road Vehicles, is world-renowned for his expertise on the effects of OHV's on soils.<sup>48</sup> According to Dr. Wilshire,

*“A point I have tried to make for years is that trail ‘grooming’ is NOT an environmental mitigation! After an initial disturbance, say creation of a trail, erosion rates are at their maximum; the rates decline rapidly until a quasi-equilibrium state is reached (often with development of gullies on steep trails), which persists indefinitely if left alone. The erosion rates after this equilibrium condition is reached are still greatly above natural rates, but much lower than the initial rates. When a trail that has reached equilibrium is “groomed,” this action pushes erosion rates back up toward the initial high rates. Hence, trail maintenance/grooming increases erosion rates and soil loss, along with water and air pollution.”<sup>49</sup>*

Trails also get wider because riders, attempting to avoid the gullies, ride off the trail to get around them. The layer of soil that can support vegetation is often quite thin, so the trail becomes permanently and consistently wider, and chronically gullied. When the trail becomes too wide to be considered a trail by riders wanting a “single track” experience, or the gullies are causing embarrassment to the land manager, the trail is re-routed, and the entire process begins anew.

## **Soil Standards**

Attempts have been made to address this problem of improperly designated or designed trails. In 1987 Senate Bill 877 amended the statute that created the state's OHV program by requiring all new areas and trails funded by the state to do wildlife surveys and monitoring, and to meet minimum soil and design standards. The soil standards were subsequently developed by a team that included Forest Service and BLM soil scientists and geologists, and adopted by the OHV Division in 1991.<sup>50</sup> These

standards include guidelines for trail design and construction, erosion control, and protection of riparian areas. Also included are criteria for monitoring and maintenance programs. The soil guidelines/standards are mandatory on the SVRAs, and on all new federal areas and trails constructed with grant money. It also “*is highly recommended that land managers utilize, where appropriate and to the extent possible, this resource management guide on existing trails and areas.*”<sup>51</sup> (Emphasis in original.)

The Soil Standards have been implemented with mixed success on the SVRA’s. But, disappointingly – and in violation of state law – on the millions of acres of federal land that are supported by the state funds, not a single project has been required to meet those standards in the nine years since adoption. Federal agencies have managed to avoid the soil standards in a variety of creative ways:

***The state continues to fund, at a cost of millions of dollars a year, a program intended to protect public lands and watersheds from OHV-related damage, only to exempt from such protection the vast majority of lands in the program.***

First, the OHV Division arbitrarily adopted a definition of “new” that is so narrow as to exclude most projects. Grant guidelines in use since adoption of SB877 define “new” as:

*“...any land acquisition, facility construction (e.g. Staging area) or development (e.g. trail construction) which will cause a significant soil, wildlife, or wildlife habitat disturbance by introducing the physical operation of OHVs 1) into an area not currently used, or 2) on a trail or route not currently in existence, or 3) with a resultant major increase in OHV visitation. The primary concern is with the physical operation of an OHV on a new trail, on a major reroute, in a new area, or in greatly increased numbers.”<sup>52</sup> (Emphasis in original.)*

This narrow definition of “new” by the grant guidelines results in exempting from the state soil and wildlife standards any area or trails where OHV use currently exists, without the scrutiny required to determine

whether that area is appropriate or environmentally suitable for OHV use. The most recent grant applications include requests by BLM to fund acquisition of a total of 16,689 acres of land for OHV use, at a total cost of \$6.25 million to California tax payers.<sup>53</sup> State acquisition of these lands as SVRAs would require environmental review and compliance with state soil standards and wildlife habitat monitoring. By instead providing the money to BLM for the purchases, the state evades responsibility for those requirements. BLM has requested \$636,000 to acquire lands near Ridgecrest for OHV use. According to the grant application, this project, even though an acquisition grant, is not subject to the state's soil and wildlife standards because: 1) OHVs will not be introduced into an area not currently used; and 2) Trails and routes through these areas already exist.<sup>54</sup> The grant does not reveal that the current OHV use is unauthorized and thus, the suitability of the area for OHVs has never been determined. This is a good example of how the underground regulations allow grantees to evade the environmental standards mandated by statute.

Grantees also avoid the soil and wildlife standards by using non-grant money for the initial development of a trail or area and later applying for state funds for maintenance. The Eldorado National Forest, for example, is requesting operation and maintenance money for the Airport Flat staging area, while evading the state's standards by using federal funds for the initial staging area development.<sup>55</sup> While these might be creative legal attempts to avoid compliance with the soil standards, they certainly evade the spirit of a law that was meant to ensure that projects in which the state was involved did not damage resources.

OHV staff contend they meet the requirements of the law by requiring applicants for acquisition projects to sign a statement promising to meet the requirements set forth in Section 5090.53 of the Public Resources Code. That section of the code, in fact, specifies that the wildlife and soil standards apply not only to acquisition projects, but also to trail, trailhead, and facility construction. The Division's assertion that funding for Operation and Maintenance is exempt from the soil and wildlife standards, even when that O&M includes trail, trailhead, or facility construction, has no legal basis.

The OHV Division does not ask for evidence of compliance, even for acquisition projects. An environmental audit of the program by the Department of Parks and Recreation audit department in 1997 found that

none of the audited grant contracts with BLM and Forest Service contained any language referring to the soil or wildlife standards mandated by statute.<sup>56</sup> In addition, the OHV grant guidelines require development projects under \$5,000 to be included in an O&M grant.<sup>57</sup> O&M grants are routinely exempted from the standards, as well as National Environmental Policy Act (NEPA) and California Environmental Quality Act (CEQA) compliance.

Even those projects that meet the OHV Division's own narrow definition of new, and result in a "major" increase in OHV use, have not been required to meet the wildlife or soil standards. Language in many grant applications refer to greatly increased OHV use after the development of trails, staging areas, parking areas, etc. Despite these documented increases in use, the grantees have not been required to meet the requirements for soil and wildlife monitoring. Mammoth Bar OHV Area near Auburn reports that use has increased from 5,000 visitors in 1992 to 25,000 visitors in 1999, following a series of State-funded development projects, all of which claimed to be CEQA exempt.

Another problematic translation of the statute involves the OHV Division's interpretation of "Conservation." According to the Grant Guidelines,

*"Conservation is intended to prevent or reduce soil, wildlife, or habitat loss, to the extent possible, while still providing for OHV recreation. Conservation does not include OHV use area or route closures unless the closure is temporary. Conservation is intended to sustain long-term OHV use and prevent permanent closure and/or restoration closure."<sup>58</sup> (Emphasis in original.)*

This interpretation is contrary to the mandate in PRC 5090.35(d) and (e) that requires that areas and trails unable to meet the soil standards and habitat protection plans must be closed.<sup>59</sup> For federal grant recipients this is a distinction without a difference, since none have been required to adopt the protective standards. However, the standards do apply to SVRAs, where a 1997 state environmental audit found the required closures of damaged areas were sometimes ignored. In two of the seven units, managers were not aware of the required closures. Other reasons for non-closure included: (1) the detrimental effect to ridership if a popular area is

closed off; (2) closure of an area would create alternative volunteer routes that would cause more damage; and (3) lack of an alternate route.<sup>60</sup>

The OHV Division committed to bringing 450 miles of trail in the SVRAs into compliance with the soil standards within four years, 25% of the trails in each unit per year.<sup>61</sup> In focusing attention on a particular selection of trails, however, SVRA staff sometimes ignored trails that were in even worse condition. In addition, staff does not consider trails created by illegal use subject to the standards because they are not considered part of the system. Auditors also found that the wildlife plots established in the SVRAs were not being monitored on an annual basis, due to a shortage of ecologists.

Ten years after the state legislature adopted the language of SB877, use of trails unable to withstand OHV use continues. The state continues to fund, at a cost of millions of dollars a year, a program intended to protect public lands and watersheds from OHV-related damage, only to exempt from such protection the vast majority of lands in the program.

### **CONSERVATION AND ENFORCEMENT SERVICES ACCOUNT (CESA)**

Within the OHV Trust fund there exists a Conservation and Enforcement Services sub-account (CESA), into which one-third of fuel tax transfer funds are deposited. Section 5090.10 of the Public Resources Code defines “conservation” as “*activities, practices, and programs that sustain soils, plants, wildlife, and their habitats in accordance with standards established by the department.*” Aside from the point made earlier in this report that none of the federal grantees have been required to meet those statutory standards, conservation funds are frequently used by grantees for activities that are of questionable benefit or even harmful to resources. This is because, as explained above, while the law defines conservation as activities which sustain natural resources, the OHV grant guidelines define it as activities which sustain OHV use.

Some of the activities for which conservation funds are commonly requested include erosion control, trail maintenance, brushing, signing, brochures and toilets. The account is also used to pay the salaries of OHV Coordinators, OHV Technicians and to purchase motorcycles and ATVs.

While erosion control is an appropriate use of conservation money, the absence of standards or monitoring make it impossible to determine whether such work on a specific trail in fact reduces erosion. In many cases, the funds simply makes it possible, by filling in ruts, to extend the use of user-created or badly designed trails that should be closed or re-routed. Trail brushing funded by conservation funds does nothing to protect resources. It simply enhances and encourages OHV use. Trail maintenance, including purchase of trail dozers, in many cases actually increases erosion and sedimentation rates, as explained above by Dr. Wilshire.

### **Law Enforcement**

By law, enforcement activities consist of “employing, equipping, and supervising peace officers for the purpose of conserving natural resources and enforcing laws regulating the use of off highway vehicles.”<sup>62</sup> Enforcement of such laws on federal lands is woefully inadequate. Often, law enforcement is dependent on recreation technicians with no citing authority. Forest Service offices are generally closed on weekends during the popular fall through spring riding season, making it impossible to report violations. (The Eldorado National Forest advises those wishing to report violators to call 911.) Even when violations are reported by other forest visitors or residents, the Forest Service routinely fails to respond.

The few citations issued on federal lands usually involve registration, helmet or spark arrester violations. Rarely are citations issued for resource damage, although almost all grant applications cite damage from illegal OHV use, intrusions into Wilderness areas and illegal user-created trails. Rural residents near OHV areas commonly complain of off-roaders trespassing on private land, yet Forest Service and BLM grantees maintain these violations are outside their jurisdiction. As a result, those very violations that the OHV program was supposed to address not only remain, but have increased with the size of the program.

Audits of federal grants have shown grantees unable to account for Conservation and Enforcement Services Account (CESA) funds. The Eldorado National Forest failed to account for over \$99,400 in (CESA) money in a recently audited 1994 grant, and over \$31,500 was unaccounted for in a 1992 grant. While the audit findings noted that failure to provide the expenditure information could result in disallowance and request for refund, the Eldorado was not required to repay the money.<sup>63</sup> In the

December 1998 grant guidelines grantees are actually instructed, in a box labeled “Important Notice,” that Conservation and Enforcement sub-activity cost estimates are “not” a required component of the application. (Emphasis in original.) Grant reporting requirements pertaining to wildlife and soils have also been deleted.

### **GAO Report**

An August 1995 report by the United States General Accounting Office (GAO) examined off-road management at eight BLM Districts and National Forests, including two in California. At the eight case-study locations, GAO examined the agencies’ compliance with Federal Executive Order requirements that they (1) designate federal lands for OHV use, (2) monitor OHV use to identify adverse effects and any needed corrective action, and (3) address or correct adverse effects caused by OHV use.

The GAO report found that lands for OHVs had been designated at all locations, but that at all locations off-road use was being monitored casually rather than systematically. Adverse effects were seldom being documented, and needed corrective actions were not prioritized.<sup>64</sup>

The California areas audited by the GAO scored no better than those in other parts of the country, despite receiving millions of state OHV dollars. The Mt. Pinos Ranger District on California’s Los Padres National Forest has no systematic monitoring program to identify and document the adverse effects of OHV use. Monitoring stipulations in the 1976 OHV plan did not include standards for measuring changes to resources caused by OHV use.<sup>65</sup> Between 1979 and 1999, the Los Padres National Forest was awarded \$6,782,685.00 in state OHV grants.

The GAO report noted that the Upper Lake Ranger District on the Mendocino National Forest does not systematically monitor OHV use to identify and document OHV damage, except with regard to four yearly motorcycle events. According to staff, the monitoring is not done because of limited staffing.<sup>66</sup> Since 1982, the Mendocino National Forest has received almost \$3 million in state grant support.<sup>67</sup> The Mendocino National Forest Monitoring and Evaluation Reports for fiscal years 1996 and 1997 show there is still no monitoring of the effects of off-road vehicles.

Monitoring can help determine the effectiveness of trail design, construction methods, and mitigation measures. For example, consultants hired by the Eldorado National Forest to complete a Critical Site Inventory at Rock Creek reported the ineffectiveness of rubber water bars and the reasons for their failure to mitigate erosion on trails. Years earlier, environmentalists monitoring the Rock Creek trails met with the staff person writing the Rock Creek EIS, who concurred with them that the rubber water bars were ineffective. But because the Forest Service resists implementing protocols for documenting or responding to such observations, the agency continues to use, and the state continues to fund, rubber water bars.

Monitoring is also important because it is the only way one can know whether an area or trail is in fact suitable for OHV use. The need for constant repair is an indication that a trail is poorly designed. With the high turnover of trail maintenance staff within the Forest Service and BLM, a trail could require and receive extensive work every year without any documentation. Monitoring would not only help prevent resource damage, but would save the state millions of dollars now spent annually to repair trails by identifying trails that should be closed because they are poorly designed, thus needing reconstruction on a regular basis.

**STATE AND FEDERAL**  
**ENVIRONMENTAL REVIEW DEFICIENCIES**

PRC 5090.55(b) requires all cooperative agreements funded by the program to comply fully with the California Environmental Quality Act (CEQA), but according to the OHV Division's grant guidelines, Operation & Maintenance (O&M) grants are exempt from compliance with environmental laws.<sup>68</sup> The Forest Service and OHV Division know this is not necessarily the case. In 1988 Federal Judge Lawrence Karlton ordered the Eldorado National Forest to do an Environmental Impact Statement (EIS) for the Rock Creek OHV area. The Forest Service and OHV Division had maintained this project was exempt from environmental analysis, and undertook such analysis only when forced by local residents and environmentalists.<sup>69</sup>

Today, the OHV Division continues to maintain that environmental review is not a requirement for funding O&M grants. In the few cases not considered exempt, the OHV Division often does not enforce the requirement that environmental documents be included with the grant application. In some cases, such as Rock Creek, federal grantees have received grants for years without providing the required environmental documentation.

At this writing, the OHV Division's organizational chart shows that the staff position for environmental compliance is vacant, and had been since at least November of 1998.<sup>70</sup> When asked how long the position had been vacant, OHV Division staff could not say if the position had, in fact, ever been filled.

## CONFLICTS WITH OTHER RECREATIONISTS

Conflicts between OHVs and other users of public lands are rampant and growing, and cited in many grant applications. Although input from non-OHV interests is requested in grant applications, few grants include such input, and in many instances, non-users become aware of proposed OHV projects only after grants are received and project implementation begins. OHV grants also influence the Forest Service's attitude toward other forms of recreation. The Council on Environmental Quality reports

*“ORVs...impair other people's enjoyment or understanding of the outdoors on public land. In terms of public policy, this is a problem equal in importance to ORV damage of the environment.”*<sup>71</sup>

Other recreationists are frustrated when the state and federal grantees brush aside their concerns and simply insist the trails can be used by anyone, ignoring the fact that OHVs inevitably become a single use by default.<sup>72</sup> Other users blame the grant program for growing OHV bias in federal agencies who see their own recreation funds dwindling.

A recreation conflict in the town of Mammoth Lakes exemplifies this conflict. In 1993, the Forest Service completed an Environmental Assessment (EA) on the Mammoth Lakes Trail System (MLTS). The trail is classified as a Class 1 Bikepath which exclusively serves bicycles and pedestrians. The EA specifically states:

*“The trail system should provide non-vehicular access to various commercial, residential, and recreational areas in the Town [of Mammoth Lakes] for both commuting and recreational purposes”* and *“The trail system should be designed for wintertime cross-country ski use as well as summertime uses.”*

Some of the trail system is complete, but a large amount remains undeveloped. Approximately \$980,000 in federal ISTEA (Intermodal Surface Transportation Efficiency Act of 1991) grants have been obtained for the construction of additional segments and a tunnel under Highway 203, that divides the town in half. These funds are very specific in that they can only be used for non-motorized projects. Recently, the Forest Service, the town of Mammoth Lakes and the Off-Highway Vehicle Commission

entered into an agreement whereby \$22,000 of OHV funds that are left over from previous projects and currently held by the Forest Service would be turned over to the town to be used for the tunnel construction. Since Green Sticker funds can only be used for OHV projects, the Forest Service and town are now trying to include snowmobile use in the tunnel and trail system so that they can use the \$22,000. Cross-country skiers and conservation groups strongly oppose the conversion of the MLTS from non-motorized to motorized use.

### **Snowmobiles versus Skiers**

By all accounts, conflicts between cross-country skiers and snowmobilers are increasing. Two recent articles in the Mammoth Times report the devastation in the Devil's Postpile/Red's Meadow area.<sup>73</sup> These articles describe environmental damage and the conflicts with skiers caused by increasing snowmobile access further into the backcountry. Groomed trails and new, more powerful machines are allowing snowmobile access to the backcountry, where law enforcement is negligible. Use of the backcountry by snowmobiles creates the defacto motorization of the Mammoth-to-June corridor, a threat to the area's "roadless" designation. Yet the Inyo National Forest contends, and the OHV Division accepts, that this program is exempt from environmental review.

Groomed snowmobile trails are easier to ride than ungroomed trails. They attract more riders, requiring additional law enforcement. The Amador Ranger District on the Eldorado National Forest reports that illegal incursion of snowmobiles into designated Wilderness areas is increasing.<sup>74</sup> The OHV Commission not only denied this District's request for increased law enforcement funding to address their increasing problems with wilderness trespass but, in fact, even reduced their funding.<sup>75</sup>

## UNPROTECTED WILDERNESS AREAS

Off-road vehicles have a dramatic effect on the wilderness character of California's last remaining wildlands. According to a comprehensive survey completed in 1998 by the California Wilderness Coalition, 675,449 acres of proposed wilderness have been degraded in the past two decades alone.<sup>76</sup> Legal and illegal off-road vehicle routes impacted hundreds of thousands of acres of these lands, and ranked second only to logging as a cause of decline of wild forest ecosystems.

The National Forest in California that was found to have lost the most potential wilderness – over 120,000 acres – was the Los Padres, located along the central California coast. This forest has an extremely modest logging program, cutting only a few trees per year. However, off-road vehicle use is extremely popular on certain portions of the forest. In the Los Padres, this vehicle use was responsible for the degradation of nine separate unprotected wilderness areas. Through the construction of off-road vehicle routes, and ORV use, each of these areas completely lost their wilderness character. Unprotected wilderness areas in the Inyo, Mendocino, and other national forests have been similarly degraded.

Unfortunately, off-road vehicle use continues to threaten unprotected wilderness areas throughout the state. Buoyed by the availability of state funding, new off-road vehicle routes are currently being proposed for seven separate unprotected wilderness areas. These routes would cause serious impacts to the ecological integrity of these important areas and would seriously compromise the wilderness character of these special places.

*The Big Rocks Roadless Area in the southern Los Padres National Forest is a spectacular and rugged mountain area located just south of the San Rafael Wilderness. The area is characterized by rolling hills, steep canyons, and large, rocky outcrops. Peregrine falcons commonly use the area for foraging, as do a variety of wildlife. Big Rocks is also popular among hunters.*

*In 1979, the U.S. Forest Service identified the area in a statewide survey as one of the few remaining unprotected wilderness areas in the state. Although suitable as wilderness, the agency failed to protect the wild character of the area. Since 1979, over twelve miles of off-road vehicle routes have been constructed throughout the Big Rocks. As a result, no portions of the area remain as suitable wilderness.*

## **RECOMMENDATIONS**

If the off-road program is to continue, we recommend that the OHV Division implement serious reforms. Many of the necessary changes can and should be realized under the existing statutes. These include:

- The OHV Division should adopt regulations in accordance with the Administrative Procedures Act that truly implement the statutes. Emphasis should not be on streamlining the application procedures, but on ensuring that grants comply with environmental laws, including the National Environmental Policy Act and California Environmental Quality Act. The regulations should assure that all grants fully conform to the state's soil standards and wildlife habitat and monitoring standards. Those grants should contain control language which a) requires strict monitoring; b) requires strict accounting of CESA funds; c) closes environmentally sensitive lands; d) imposes penalties for non-compliance.
- A new Fuel Tax Study should be done to determine the portion of fuel taxes attributable to off-road use. A new study should not include unregistered OHVs in its formula for determining transfers to the OHV fund. Realistic numbers for street legal vehicles used off road should be determined. Fuel taxes attributable to four-wheel drive vehicles used to access state park areas should not be diverted to the OHV Fund, but should be directed to the Department of Parks and Recreation for much needed repair of state park roads. Fuel attributed to regular passenger cars and 2-wheel drive vehicles should be deleted from the transfers.
- New acquisition and development should cease until all OHV Lands currently financed by the program are in full compliance with all applicable statutes and standards. Moreover, BLM and Forest Service should not be given state grant money for acquisition of land for OHV use. State taxpayers should not be buying land for federal agencies.

- Compliance with NEPA/CEQA should be completed and independently confirmed prior to approval of any grant.
- All the state's OHV areas and trails, including those on federal land, should be subject to annual, systematic and objective monitoring, using the state's soil and wildlife standards. Monitoring reports should be made available to the public and interested agencies.
- Federal agencies receiving grants should be held to all the same environmental standards that apply to state lands. These standards should apply to all existing as well as new OHV areas and trails. It is pointless to have standards, and then exempt from those standards most of the lands in the system.
- Grants to federal agencies should not include funding for OHV Coordinators or OHV technicians. State funds should not be spent to encourage a federal OHV bureaucracy.
- New regulations should include minimum law enforcement requirements that ensure sufficient law enforcement presence to enforce all laws relating to OHVs. These regulations should include either fines high enough to deter illegal use, or sufficient law enforcement presence to make the likelihood of being caught a deterrent.
- State grants should not be used to fund new trails in identified roadless areas on federal lands.
- Grants to federal agencies should ensure that rural residents are protected from noise impacts and trespass by requiring adequate noise buffers and sufficient law enforcement.

## CONCLUSION

Twenty-eight years after California first passed legislation intended to control off-road vehicle use and minimize its impacts to the environment, the use of off-road vehicles continues to cause considerable damage on California's public lands. Severe erosion, damage to streams and riparian areas, degradation of wildlife habitats, and polluted air are all impacts that are well-documented in and around the state's off road vehicle areas.

The majority (61%) of California's water originates in Sierra Nevada watersheds. Healthy watersheds are critical to California's future water needs and damage to these primary sources of the state's drinking water – in order to provide off-road play areas – is unacceptable. Yet watershed damage is increasing as sediment from dirt roads and OHV trails fills enters riparian areas, streams and creeks.

Other recreationists, such as hikers, horse riders, Nordic skiers, birders and wildflower lovers are being displaced by the incompatible vehicular activity. Federal roadless areas are being degraded by the proliferation of legal and illegal ORV trails, threatening their potential for future Wilderness designation.

The damage and the conflicts are being exacerbated, rather than mitigated, by the state and federal agencies that are charged with controlling OHV use. The OHV Division, which is responsible for managing the state's off-road program, has been so heavily influenced by the off-road lobby that it has been unable and/or unwilling to implement policies to control the damage of off-road use. The U. S. Forest Service and Bureau of Land Management, on whose lands most OHV use occurs, have a poor record of managing this activity, despite many millions of state fuel tax dollars given to these agencies each year for such management. Indeed, the state grants appear to serve as an incentive to federal land managers to promote rather than control OHV use.

As a result of this mismanagement, forest, coastal, and desert lands within the state continue to suffer severe damage. Moreover, users who seek a more traditional, peaceful experience are finding that more and more of their favorite places have become noisy, dangerous and damaged,

resembling extensions of the urban freeways and parking lots from which they seek refuge. The new state administration should adopt policies to improve the state's management of OHVs. This should include a new Fuel Tax Study to remove unregistered OHVs from the fuel tax transfers to the program. The OHV Division should adopt regulations to implement existing statutes, including ensuring that grantees meet the state's environmental and accounting requirements.

Most importantly, the federal lands on which most of the state's off-road activity occurs, and where the bulk of state OHV grant money is spent, should receive the same environmental protections as non-federal lands. The financial incentives that reward federal land managers for ignoring environmental destruction and coddling those responsible for the damage must be ended.

## ENDNOTES

<sup>1</sup> OHV Division, January 14, 1999 letter to OHV Commissioners. Appendix A lists total revenue from FY 72/73 to 99/00 as \$497,327,000, and Appendix D as \$485,375,000.

<sup>2</sup> OHV Division, "Special 25 Year Commemorative Report," p. 8.

<sup>3</sup> Department of Transportation memorandum to William G. Ashby, State Controller's Office, May 20, 1998. Attachment 1.

<sup>4</sup> Ibid.

<sup>5</sup> Tyler and Associates, for the California Department of Transportation. *A Study to Determine Fuel Tax Attributable to Off-Highway and Street Licensed Vehicles Used for Recreation Off-Highway*. November 1990. Hereinafter called "Fuel Tax Study."

<sup>6</sup> Fuel Tax Study, pp. 23-24.

<sup>7</sup> Fuel Tax Study, p. viii

<sup>8</sup> State of California, Off Highway Motor Vehicle Recreation Commission, *Biennial Report on the Status of OHV Recreation in California 1989-90 and 1990-91*, March 1992, p.19.

<sup>9</sup> District 36 Legislative Action Office, American Motorcyclist Association. *Rationale for Regulation Modification: California Air Resources Board Emission Regulation for Off-Road Motorcycles and ATVs* (undated), p. 11.

<sup>10</sup> Calculated from enforcement statistics in 1999/2000 Grant applications.

<sup>11</sup> Fuel Tax Study, p.4-5.

<sup>12</sup> Public Resources Code 5090.44.

<sup>13</sup> Fuel Tax Study, p. 56 and CalTrans memo to state Controller's Office, dated 5/20/98.

<sup>14</sup> Fuel tax study, Table 2, p. 21.

<sup>15</sup> Moore, Merry Ann, "Off the Road and Out of Bounds," E Magazine, May/June 1995, p. 26.

<sup>16</sup> Fuel Tax Study. p. 4.

<sup>17</sup> Ibid, p. 59.

<sup>18</sup> Even had the study confirmed its per-vehicle fuel consumption data, failure to verify the actual number of vehicles used off road would make that data meaningless.

<sup>19</sup> California Revenue and Taxation Code Section 8352.6 and Section 8352.7 (c).

<sup>20</sup> California Air Resources Board Fact Sheet, "Changes to standards for off-highway motorcycles," January 1999.

<sup>21</sup> California Air Resources Board, *Program Update for Off-Highway Motorcycles and ATVs*, 5/1/96.

<sup>22</sup> District 36 Legislative Action Office, American Motorcyclist Association, *Rationale for Regulation Modification: California Air Resources Board Emission Regulations for Off-Road Motorcycles and ATVs*, (undated), p. 1.

<sup>23</sup> Kasnitz, Melissa and Ed Masche, California Public Interest Research Group, *Back Country Giveaways: How Bureaucratic Confusion Subsidizes Off-Highway Vehicle Harm*, 1996, pp. 1,6.

<sup>24</sup> California Department of Parks and Recreation, *Biennial Report on the Status of OHV Recreation in California: Fiscal Years 1995/96 and 1996/97*, January 1999, p. 4. According to the Environmental Audit, however, there are many miles of illegal, user-created routes in addition to these designated routes.

<sup>25</sup> OHV Division, *Biennial Report:1987/88 and 88/89*, p. 33.

<sup>26</sup> Ibid. p. 29.

<sup>27</sup> Public Resources Code Section 5090.61(a).

<sup>28</sup> OHV Division, Letter to OHV Commissioners, January 14, 1999, appendix C.

<sup>29</sup> OHV Division, *1999/2000 F.Y. Grants: Off-Highway Vehicle Grant Program, Statewide Priority*, July 17, 1998.

<sup>30</sup> OHV Division, *A Special 25 year Commemorative Report*,” p. 32.

<sup>31</sup> Numerous grant applications cite on-going resource damage, conflicts with users, and illegal intrusion into wilderness areas. In addition, many Forest Service environmental documents for other projects, such as timber sales, cite OHV damage to meadows and riparian areas.

<sup>32</sup> Executive Orders 11644 and 11989. See Appendix.

<sup>33</sup> U.S. Forest Service, Pacific Northwest Research Center. Letter of John Kie, Ph.D. to Georgetown District Ranger Raymond LaBoa. April 25, 1997.

<sup>34</sup> Includes 1999/00 OHV grant applications from Toiyabe National Forest, Eldorado National Forest, Stanislaus National Forest, BLM Bishop Field Office, BLM Hollister Field Office.

<sup>35</sup> 1999/2000 FY OHMVR Grant Evaluation Form. Stanislaus National Forest OHV O&M.

<sup>36</sup> 1999/2000 FY OHMVR Grant Evaluation Form. Stanislaus National Forest OSV O&M.

<sup>37</sup> Telephone conversation with Deane Swickard, BLM Folsom Field Manager, June 11, 1999.

<sup>38</sup> Moore, Merry Ann, *Off the Road and Out of Bounds*,” E Magazine, May/June 1995, p. 26.

<sup>39</sup> Friends of California Parks, Issues Updates: May/June 1996.

<sup>40</sup> United States Forest Service, letter from District Ranger Raymond LaBoa to Tom Guidice, CERA Enduro Coordinator, March 29, 1994.

<sup>41</sup> USFS, Eldorado National Forest, *Rock Creek Revised Draft EIS*,”

October 1997, p. S-8.

<sup>42</sup> USFS, Eldorado National Forest, Sue Farley memo to Chuck Mitchell, April 18, 1995.

<sup>43</sup> Davis: University of California, Centers for Water and Wildland Resources, *Sierra Nevada Ecosystem Project, Final Report to Congress, Vol. I.* 1996, p. 124.

<sup>44</sup> Ibid, p. 89.

<sup>45</sup> Davis: University of California, Centers for Water and Wildland Resources, *Sierra Nevada Ecosystem Project, Final Report to Congress, Vol. I.* 1996. P. 129.

<sup>46</sup> Eldorado National Forest, "Rock Creek Recreational Trails Revised Draft Environmental Impact Statement," October 1997. P. 4-13 and 4-31. This number is conservative, since the DEIS assumes all trails with slopes of 15% or greater will erode at the same rate. Since erosion rate is related to trail steepness, a trail with a 30% or 60% grade will produce a greater amount of sediment than a trail with a 15% slope. The Forest Service used an untested model, with no established protocols.

<sup>47</sup> Ibid, p. 4-13.

<sup>48</sup> R.H. Webb and H.G. Wilshire (editors), 1983, *Environmental Effects of Off-Road Vehicles*, New York, Springer-Verlag, 534 pp.

<sup>49</sup> H.G. Wilshire, Personal communication, email, March 26, 1999..

<sup>50</sup> OHV Division, "*Soil Conservation Guidelines/Standards for Off-Highway Vehicle Recreation Management*," 1991, hereafter called Soil Standards.

<sup>51</sup> Soil Standards, p. 6.

<sup>52</sup> OHV Division. "Application Procedures: Off-Highway Motor Vehicle Recreation Act of 1988, Off-Highway Vehicle Grants Program. January 1998. Page 24. Hereafter called 1/98 Grant Guidelines. This definition is omitted from the December 1998 Grant Guidelines, as is all reference to the wildlife and soil conservation requirements of SB877.

<sup>53</sup> 2000/2001 OHV Grant Applications by BLM for El Mirage, Ridgecrest, Onyx Ranch, Fort Sage, and Garvin Ranch.

<sup>54</sup> 2000/2001 OHV Grant Application by BLM for Ridgecrest Acquisition.

<sup>55</sup> 2000/2001 OHV O & M Grant Application by Eldorado National Forest.

<sup>56</sup> Department of Parks and Recreation, "Environmental Audit: OHV Division," November 30, 1997, p.11.

<sup>57</sup> December 1998 Grant Guidelines, p. 15.

<sup>58</sup> 1/98 Grant Guidelines. Page 33.

<sup>59</sup> PRC 5090.35(d) states: Upon a determination that the soil loss standard and habitat protection plans are not being met in any area of the system, the department shall direct the division to close temporarily and repair, to prevent

accelerated erosion, that area, or portion thereof funded by the Off-Highway Vehicle Fund, until the soil loss standard and habitat protection plans are capable of being met.

PRC 5090.35(e) states: Upon a determination that the soil loss standard and habitat protection plans cannot be met in any area of the system, the department shall direct the division to close that area, or any portion thereof funded from the Off-Highway Vehicle Fund, and to reclaim and rehabilitate the area.

<sup>60</sup> California State Parks, “*Environmental Audit. Off-Highway Motor Vehicle Division: Final Audit Report,*” November 30, 1997, p. 7.

<sup>61</sup> The state soil standards provide a rating system, by which trails are rated red, yellow, or green, depending on their condition. Green trails are in compliance with the standards.

<sup>62</sup> PRC 5090.64.(2)

<sup>63</sup> Department of Parks & Recreation, *Audit Report*, July 22, 1998.

<sup>64</sup> General Accounting Office, “Off-Highway Vehicle Use on Federal Lands,” August 1995, p. 2.

<sup>65</sup> *Ibid*, p. 61.

<sup>66</sup> *Ibid*, p.73.

<sup>67</sup> OHV Division, Mendocino NF 1995/96 grant application.

<sup>68</sup> OHV Division, Grant Guidelines.

<sup>69</sup> *FAWN v. USFS*, 1989.

<sup>70</sup> OHV Division, Organizational flowchart, November 1998.

<sup>71</sup> Council on Environmental Quality, David Sheridan. “*Off-Road Vehicles on Public Land,*” 1979, p. 30.

<sup>72</sup> *Ibid*, p. 30-34.

<sup>73</sup> Mammoth Times, “Backcountry Nightmare,” Feb. 4, 1999, and “Mind Over Mammoth: Solving the Snowmobile Problem,” March 11, 1999.

<sup>74</sup> OHV Division. U.S.F.S. Amador Ranger District. 1999/00 Grant Application.

<sup>75</sup> The Amador Ranger District received \$8,810 for law enforcement in fiscal year 98/99, but only \$5,320 for 99/00.

<sup>76</sup> Spitler, Paul, et. al., *California’s Vanishing Forests: Two Decades of Destruction*; California Wilderness Coalition, 1998, 311pp.

## APPENDICES