

CHAPTER 2
THE IMPACT OF ORV USE AT ANTHONY CHABOT REGIONAL PARK

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Use of off-road vehicles (ORVs) is an increasingly popular sport in this country. In 1972 there were about 5 million off-road vehicles in the U.S., including motorcycles, four-wheel-drive vehicles and snowmobiles. As of 1977 there were estimated to be 12 million.² But the problems regarding impacts on land and water were much apparent even before 1972. And in that year the President issued an Executive Order "requiring agencies charged with management of public lands-one third of the United States-to adopt specific policies on ORVs."²

The problems caused by ORVs include soil structure disruption (compaction, reduced water-holding capacity, destruction of crust) as well as increased difference between day and night soil temperatures. Erosion is also a problem, both by direct abrasion by the vehicle and by accelerated removal of soil by wind and water. The soil damage results in greater runoff. Finally, ORVs destroy much plant life directly and destroy habitats of many other plants and animals.

The growing number of ORVs and users are putting tremendous pressure on public lands available for ORV use, and there is much unrestricted and unsanctioned use of public land by ORVs. This problem is growing also in terms of areas of impact. Previously, California was the site of most ORV use, primarily on wild, public lands. In the last few years, however, the problem has spread to all states, and recently there have been incidents of illegal ORV use on farm lands.

Since California has the longest history of ORV use and also has some of the lands most badly damaged by ORV use, any possible management or reclamation efforts will probably have to be developed here. One of the oldest ORV sites in this state is at Anthony Chabot Regional Park. We will examine the existing condition of the land and possible management problems.

The motorcycle facility is located on a narrow coastal brushland-covered ridge just above Redwood Road in the northern part of Chabot Regional Park (Figure 1). The 4000 acre park is located in the hills above East Oakland and San Leandro. The facility was opened about 20 years ago specifically as an ORV site. In recent years EBRPD has disclaimed knowledge of, or responsibility for, the area. In fact, in the December 4, 1973, Master Plan, under the heading "Regional Vehicular Recreation Areas - Existing," the Chabot ORV site is not listed. However, there is a sign on the site identifying it as "East Bay Regional Parks Motorcycle Facility." According to ORV users using the area at the time the report was published, there were up to 200 bikes per day on a sunny weekend at the site.

There have been some past attempts by the Park District to manage the Chabot ORV site. One method apparently used was the closing off of through trails with large logs or small fences at trail openings

on the roadway. But these barriers have been dismantled, probably by bikers and, except for one area, use of the land is unrestricted except for geological and vegetative barriers. The area with man-made boundaries will be discussed further on.

The only other apparent attempt to manage the site was the use of blading (bulldozing) to keep the trails open. Geologists and bikers using the site believe that this blading is responsible for much of the erosion and especially for some of the severe gullying.¹ The blading disrupts some of the soil compacted by the ORVs. When the developed hardpack was broken up, water and the shearing effect of motorcycles on the soft soil caused widespread gullying.

Aside from some limited fencing, there appears to be little management of the Chabot site at the present time. One of the problems that may cause the park district to monitor the site more actively is the increased siltation into Upper San Leandro Reservoir, which is a water supply for the area. With the aid of recent good quality air photographs of the park, Wilshire was able to determine that the area as a whole is eroding at a rate substantially greater than 11,500 tons/km²/yr.¹ The significance of this figure is clear when compared to the 380 tons/km²/yr rate the U.S. Department of the Interior considers to represent the onset of serious problem erosion. The Chabot facility is eroding 30 times faster than this figure. Wilshire also determined that the large areas of exposed bedrock at the Chabot site were once covered by a 65cm. thick soil mantle.¹

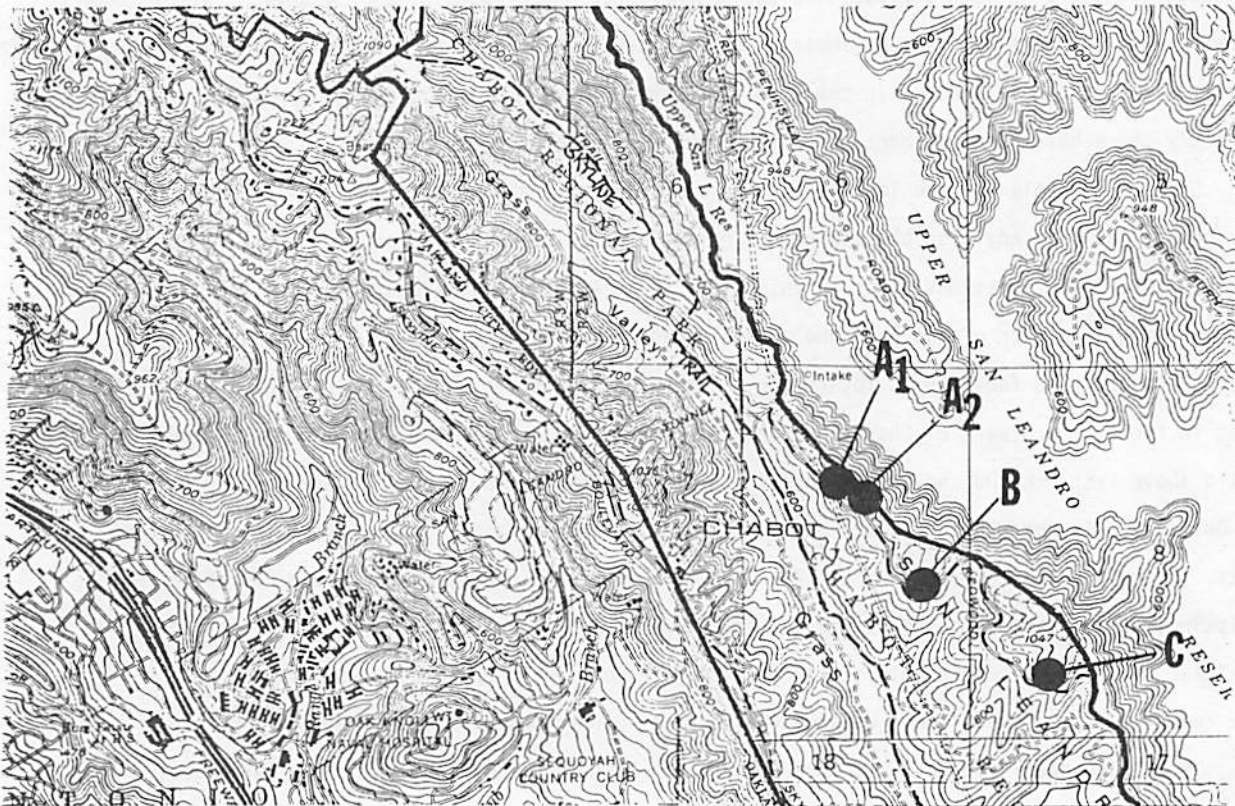


Figure 1. Site Locations in Chabot Regional Park
Source: Base Map from EBRPD

Site Description

Data for this report were collected over several weekends in late winter and early spring of 1978. Field work consisted primarily of measuring gullies, determining soil condition and determining amount and type of plant cover of the impacted areas and immediately adjacent areas. These data are summarized in Table 1, "Impact of ORVs at Selected Sites in Chabot Regional Park." Much of the data is subjective evaluation. The table shows that although the visual impact is severe in most areas, the soil quality and chances for re-vegetation are variable.

Area A (Figure 1) appears to be the area of earliest use. It is the area first approached when driving east on Redwood Road and has a sign identifying this as an ORV facility. The southeast facing slope, A₁, does have a fair chance for revegetation, although it has sustained severe impact. There has been colonization by some clumps of grass, and there is evidence that these grasses are holding soil and stabilizing some small gullies. The severe gullies, though, appear to be getting deeper.

AREA	VISUAL IMPACT	EROSION	SOIL QUALITY	CHANCES FOR RE-VEGETATION	PLANT COVER	STILL IN USE
A ₁	Severe	Severe up to 1m in places	Mostly poor, but some fair soil lower slopes	Fair	3-5% very small clumps grass, some <i>Baccharis</i>	Rarely
A ₂	Severe	Severe predominately exposed bed-rock	Very poor (bedrock)	Poor	Less than 1%	Rarely
B	Moderate	Severe in places up to 1 1/2m on trail	Mostly good	Fair-good	On slope 60% on trails 5%	Now increase in use
C	Severe	Severe up to 2m in places	Some areas still good, mostly fair, some poor	Fair	No veg. on trails; islands of brush	Yes

Table 1. Impact of ORVs at Selected Sites in Chabot Regional Park

The top area of the slope is mostly bare sandstone now while the bottom area does have some soil (Figure 2). There are small *Baccharis* bushes on the lower slopes and sides. It appears that in this area of the facility, *Baccharis* is very likely to become the dominant plant. The slope still has only about 5% plant cover, but is not used much by bikers, due to the severe gullies. In the last few months the amount of plant cover has increased, probably due to this winter's heavy rains. As long as there is no increased use of this slope by cyclists, the chances for revegetation are only fair, due to the existing soil condition and the continued erosion.

Area A₂, which is a southwest facing slope, is separated from A₁ by a trail that leads to other trails in the site. Because of the condition of the two slopes and the proximity of a trail through to other trails, there is not much use of A₁ or A₂ by motorcycles. Area A₂ is now predominately bare sandstone (Figure 3). Even though A₂ is less steep than A₁, the erosional damage is more severe. There are very few grass clumps on the slope. There are *Baccharis* bushes very near A₂, but there does not seem to be much colonization of the slope by *Baccharis*. It appears that the chances for revegetation here are poor due to lack of soil in many places and the continued effects of erosion.

On the top of the ridge above area A, across the larger trails on the northern facing slopes, are clumps of trees, mostly oak. Motorcycle use in this area has compacted the soil and many of the trees appear to be dying. This does not seem to be the case of all oak areas on the north facing slopes, so there appears to be some relation to the ORV facility. The land on the northern side of the ridge actually belongs to the East Bay Municipal Utility District, and some of the responsibility of monitoring the ORVs rests with them.

Area B is a slope that had a large fenced-off area where grasses were allowed to re-colonize for several years and there was nearly 100% revegetation. The visual impact from the roadway was slight, due to the fact that the trails are hidden from sight by land between the trails and road. The only severe erosional impact remaining in this area is on the trails that give access to other trails in



Figure 2. Slope A₁



Figure 3. Slope A₂

the facility. On the trails there are gullies over 1 meter deep, though most of the gullies are about one-third meter deep. There is still much soil on the trails, although some bedrock is exposed.

When data collection for this report was finished in mid-March of this year, the fenced-off area served as an example of what could be done to set aside and reclaim damaged areas. Unfortunately, by mid-April the wire fence had been cut through and over 40% of the once-green area had been denuded. The previously stabilized soil now exposed will probably be washed away very quickly.

Area C appears to be the most recent site of ORV damage. There is gullying up to 2 meters deep, and bedrock is exposed in many places. The visual impact from the roadway is severe. Although much soil remains, all trails appear actively used. There are no large vegetative or natural barriers, aside from one rock outcrop to deter further trail expansion, or to aid in closing off small areas. If ORV activity could be stopped in this area, chances for revegetation are fair. This is another area where *Baccharis* expansion would be expected, due to its proximity and its apparent advantage over grasses in ORV-disturbed areas.

The Park District's actions regarding the site do not appear to be part of a larger plan for management. Blading, as previously mentioned, seems to have very little benefit, yet is contributing to the problems of erosion (Wilshire et al., 1977). The barriers that have been placed at the site (fences, logs) have mostly proved useless, at least in the long run, as with the fenced-off portion of area B. This passive treatment has accomplished the task of reducing the number of ORVs using the site, but at what environmental cost?

At the present time there are very few cyclists using the Chabot facility, only about 25 cyclists per day on a sunny weekend, and probably fewer than 10 per day during the week. This is down from an estimated high of over 200 cyclists per day on weekends a few years ago. These figures were obtained from two sources. The figures for the present time are numbers actually recorded. The figure for number of users in 1973 was obtained by interviewing several users. This is admittedly an approximate estimation, but all users interviewed expressed the belief that use had decreased sharply. When cyclists were asked the reason for the present low turnout, most cited the poor condition of the site. Most of the riders appeared to be pre-high school boys brought out for short periods by their fathers. Some of these fathers said that the serious adult riders now go elsewhere.

The Park District appears to believe that there are a large number of cyclists currently using the site. They also feel that any attempt to close the facility would meet with large, organized opposition. Their belief is apparently based on the fact that at previous public planning meetings the ORV contingent was always present and always vocal. One effective way to deal with this opposition would be actually to record the number of users at the facility for a given time period. This, of course, would have to be done quietly and without announcement to get an accurate measure. If the number of users is as low as interviews for this report suggest, it would show that the demand for the area does

not warrant the continued environmental degradation. Collecting data would move the discussion of closing the facility out of the political rhetoric where it has so far remained, with the squeaky wheel getting the grease--in this case, the continued operation of the site.

The ideal environmental solution, to close the site completely (probably by fencing the entire site off), would require police sporadically to cite violators. The fines should be stiff if this process is to be an immediate and strong deterrent.

If for some reason the Park District feels that closing the site would be impossible, other less ideal and more expensive (both in terms of money and the environment) solutions could be tried. One simple and fairly inexpensive alternative would be to fence off the parking areas, or large segments of them. This would make using the facility more trouble and therefore less desirable. If the bikers are to remain, at least the critical areas should be fenced off and possibly re-seeded for revegetation. The drawback to this approach, as mentioned previously, is that fences can and will be cut if the land again becomes desirable.

Since one of the problems about ORV use is that it precludes all other types of recreational use on that land, effort should be made to minimize the visual impact at least. The high impact areas right off the roadway were characterized by not being on through trails, and therefore some system of containment and revegetation might be feasible.

It appears, then, that some type of police monitoring (to make sure fences were not cut, or if they were, promptly repaired) would be necessary even if the facility were not closed. Under these conditions, closing the site seems the simplest and most sensible idea.

In the East Bay Regional Parks Master Plan there are some proposed ORV-use lands. It is unlikely that any of these will be developed in the near future. But if the park district does decide to go ahead with development, several things should be considered. First, even if EBRPD could afford to monitor the site actively, which is doubtful, the history of highly monitored ORV sites is not reassuring. Even with on-site supervision at an ORV facility at Metcalf Road in Santa Clara county new trails could not be prevented.¹ Secondly, the interest group in favor of ORV facilities in East Bay Regional Park lands comprises a small minority of the population of the district. It does not appear that turning over lands for permanent damage to a small minority is a responsible or environmentally sound management position.

Although this report has found fault with EBRPD in their management practices and has placed responsibility for control of ORV use with the Park District, the ultimate responsibility is with everyone in the district.

"Each of us must learn to recognize the damage caused by ORVs, evaluate the management practices of the responsible units of government, and exercise influence on governments that hold our public lands in trust. The responsibility is not only to protect the land from further degradation but to enhance the benefits these lands provide to the nation."²

It is our responsibility to become vocal and organized in opposition to indiscriminate ORV use. It is our duty to create the political climate in the district where a "no" to this type of use is the only possible answer.

References Cited

1. The Geological Society of America, 1977, Report of the Committee on Environment and Public Policy: Impacts and Management of Off-Road Vehicles, Boulder, Colorado.
2. Wilshire, H.G., J.K. Nakata, S. Shipley, and K. Prestegaard, 1977, Vehicle Impacts on Natural Terrain at Seven Sites in the San Francisco Bay Area (in press).