



Sierra Club

Protect America's Environment: For Our Families, For Our Future

4th Draft 9/17/91

A citizen handbook for off-road motor vehicle regulation.

Contents

OFF-ROAD MOTOR VEHICLE FACT SHEET

INTRODUCTION

FOREST SERVICE REGULATIONS

FOREST TRAVEL PLANS / OHV PLANS

NEPA PROCESS

SCOPING

- **Get a Timetable for Action**

- **Define the Terms**

- **Closed Unless Posted as "Open"**

- **Delegate Authority to District Rangers**

- **Soil**

- **Water**

- **Vegetation**

- **Fish & Wildlife**

- Forest Visitors / User Conflicts
- Cultural Resources
- Wilderness Resources (suitability vs. characteristics)
- Monitoring
- Enforcement
- Require a Full Environmental Impact Statement

COMMENTING ON THE DRAFT EIS

CLOSE AN AREA OR TRAIL

BIBLIOGRAPHY / REFERENCES

ATTACHMENTS (available hard copy only at present)

- CFRs
- NEPA process flow chart
- sample FOIA
- survey result graph

OFF-ROAD MOTOR VEHICLE FACT SHEET

RESOURCE DAMAGE

Off-road vehicle (ORV) damage to every type of ecosystem in the nation from the eastern coastal beaches to the mountain ranges, deserts, and beaches of the west has been documented. A 1980 Bureau of Land Management final environmental impact statement identified the following resources as being negatively affected by ORVs: air quality, soil, vegetation, wildlife, visual quality, cultural resources, Native American values, wilderness, recreation, and livestock grazing.

WILDLIFE: Arid areas closed to ORV use have more species of animals, more individuals, and more biomass. According to the Geological Society of America, where ORV use is heavy, virtually all existing life is ultimately destroyed.

WATER: As much as 90% of the surface soil moisture is lost along some ORV trails, and the loss even as deep as three feet has been found to be 14% at several sites.

PLANTS: ORVs often cause injury to plant roots by breakage and soil compaction, so that larger perennials eventually die, although perhaps appearing at first to be unharmed. A study of 16 desert sites revealed that "moderate" ORV use reduced shrub biomass by about 50% and heavy use reduced the biomass by 70%. Denuded areas, if not artificially reclaimed, may require many centuries for complete recovery, if in fact such recovery is even possible.

AIR: ORVs were exempted from EPA requirements established under the original Clean Air Act. In addition to emissions of greenhouse gasses, ORVs can emit quantities of lead into the environment. Dust storms originating in ORV use areas have been detected by satellite observation. The Barstow to Los Vegas ORV race in 1974 generated more than 600 tons of airborne particles by direct mechanical erosion.

SOIL: All data indicate that the natural stability of soils is damaged by vehicle use. Soil erosion becomes severe if the slope

exceeds 10 to 20%. A four-wheel ORV disturbs one acre of soil in every six miles of travel. A single track ORV compacts one acre of soil for every 20 miles traveled. A person on foot impacts one acre for every 40 miles traveled (and with less weight, and less torque, and with less depth of penetration). One heavily used ORV site in the Los Padres National Forest has a documented soil loss exceeding 54,000 tons per square mile.

NOISE: Under the best of conditions, as in a forest, the noise from the average motorcycle can be heard more than a half-mile away, and a loud one, over two miles away. A motorcyclist traveling 72 miles, audible for a mile on either side of the route of travel extends an audible presence into 130 square miles. ORV riding preempts and drives out the activities that are quieter, less consumptive and more contemplative. The same 130 square miles used by one dirt biker could have been enjoyed by 150 hikers, birders or photographers with few encounters or knowledge of another's proximal presence. Some of life's functions are dependent on quietness. Animals and birds depend on quietness to find their mates, and protect themselves from attack. It is known that the pileated woodpecker, the broad-winged hawk, Cooper's hawk, sharp shinned hawk, great horned owl, and barred owl are very sensitive to sound disturbances. The noise level generated by a single motorcycle is approximately 10,000,000 times greater than that experienced by a person in a quiet suburban residential area. The fact is that most ORV noise is unnecessary; even motorcycles can be muffled to a relatively unobjectionable noise level.

USER CONFLICTS

Most nonmotorized forms of outdoor recreation are disrupted or hurt by the operation of ORVs nearby. In a 1988 survey 75.1% of those surveyed wanted more protection of ecology. Fifty-three percent wanted less areas open for off-road vehicles (or to eliminate them entirely) while only 16.9% wanted more areas open for ORVs. Seventeen and seven-tenths percent wanted more roads for 4-wheel drive use, while 44.1% wanted less roads or to eliminate them. Fifty-eight and two-tenths percent wanted more wilderness. This statewide California survey has a margin of error of plus or minus 3.2%.

ORV use, if unregulated, becomes an infringement on other people's right to recreation.

SAFETY

Even in well-designed and managed ORV facilities, injuries occur. One study reported injuries at a rate of one for every 186 outings. The 1973 Barstow to Los Vegas race reported 47 medical incidents ranging from a severe stomach ache to death. The possibility of death must be considered. The California OHV Recreation Commission received a report that in the El Mirage Dry Lake area, deaths from ORV activity averaged one per week over a period of one year. Some members of the Commission were also particularly concerned over the frequency of maiming injuries to young children in the Pismo Beach State Vehicular Recreation Area.

ECONOMICS

Large numbers of ORVs are imported and therefore represent a negative factor in the United States' balance of payments. It is very difficult for the private entrepreneur to compete with a public agency which builds ORV facilities with tax money and charges minimal, if any, user fees. Private enterprise should be encouraged. The ORV user currently pays none of the costs resulting from conflicts with other recreational users, and none of the costs resulting from destruction of resources. All these costs are borne by innocent citizens.

CONCLUSION

It seems certain that many delicate interdependencies between organisms and their habitats, having been obliterated by ORVs, can never be restored. The scientific community, including the American Association for the Advancement of Science, the Environment and Public Policy committee of the Geological Society of America, and well over one hundred distinguished life and earth scientists, have found the Bureau of Land Management and Forest Service's management of public lands too lax in controlling ORV-caused damage to the environment. St. Francis of Assisi himself, while driving an ORV on wildland could not avoid diminishing the recreational experience of many non-ORVers in the same area. (Nor could he prevent much of the environmental degradation.)

Damage by ORVs in even the least vulnerable areas will require periods for recovery measured in centuries or millennia. Losses of soil and changes in the land surface will be long lasting, and certain natural life systems will never recover from the intensive ORV impacts already sustained. A demonstration that reclamation is possible for any of a number of specific habitats relating to ORV use of public lands cannot be found in any documents published by the U.S. Department of Agriculture. Scientists have found that for years after closing, the land used by ORVs continues to lose soil and plants grow slowly, if at all.

ORV use, even under the most stringent regulations, carefully and meticulously enforced, causes irreversible impacts on the nation's resources. The premise that local, state, or federal governments are obligated to provide public lands and the services of public employees for a use that is consumptive of resources and that conflicts with virtually every other use cannot be defended and sets a poor precedent.

RESPONSIBLE PLANNING: ORV use on public lands should only be permitted after a thorough, scientific review of lands and a determination that such lands are suitable for ORV use. The review process must include the opportunity for public participation. Trails which are found suitable should be posted as open, and only trails which are posted as open should be used by ORV users. The land management agency must systematically monitor open lands, enforce regulations which are in effect, and must immediately close trails which are suffering environmental damage until such time as the damage can be corrected. Funding for ORV facilities and trails must come from the users themselves, through a Pittman-Robertson kind of approach (a tax on the ORVs at the time of sale, and a license fee). Where areas are to be open for scramble-type recreation, such areas are best chosen from already damaged lands, such as the two million acres of mining-impacted lands in the nation. Designated scramble-type ORV recreation areas should be recognized as sacrifice areas.

INTRODUCTION

Why should we be concerned about off-road motor vehicle (ORMV) use? Resource damage inevitably results from their use.

This problem began in 1947, when Soichiro Honda removed a small motor from a war surplus field generator and strapped it to a bicycle.

Since that time, damage to soils, vegetation, watersheds, fisheries, and scenic and cultural resources has been often noted. A new threat has emerged in the 1990s. ORMVs degrade areas which would otherwise be our nation's finest Congressionally-designated additions to the National Wilderness Preservation System.

Great hopes were raised when Presidents Nixon and Carter issued Executive Orders 11644 and 11989. The Orders seemed to require immediate closure of areas or trails if ORMV use was causing damage, but, alas, they were fraught with two flaws.

First, the adverse effects had to be "considerable" before action was required. What is "considerable?" Thus far, there has been no clarification of this unscientific, unquantified term.

Second, the area or trail is to be closed by an agency authority "whenever he determines" that considerable adverse effects have been or will be caused by ORMVs. The court system has interpreted this as a discretionary action on the part of federal land managers -- not a requirement!

Environmentalists have worked long and tirelessly to regulate use of ORMVs. Unfortunately, the current legal interpretation remains that federal land managers have the discretion to determine what constitutes "considerable" environmental damage.

Federal land managers have consistently failed to protect the environment from damage. Their view of "considerable" is not the definition we can accept.

One definition of the word "considerable" in the Oxford English Dictionary is: "capable of being considered or viewed." Of course, the federal land managers think the word means, "great in magnitude, extreme relative to the average." Our task today is to define, in legal terms, the level of resource damage which is "considerable."

Losses in the courts have proved costly in terms of time, money, resources, energy and spirit. The information in this handbook will reinspire citizens by providing the opportunity to reclaim and restore a healthy nonmotorized world.

FOREST SERVICE REGULATIONS

The best way to convey our concern to the Forest Service is to speak their own complex jargon. The Forest Service must comply with rules given in a set of handbooks, manuals and regulations which set forth the agency's current interpretation of legal requirements.

We will use the Code of Federal Regulations (CFRs) to explain our position to the Forest Service. Failure to comply with the CFRs is an invitation for an appeal or even legal action.

Regulation of the use of ORMVs is required under 36 CFR 295, and 36 CFR 261.13, and 36 CFR 219.21(g). The beginning number "36" refers to Volume 36 of the Code of Federal Regulations, and covers forestry regulations. As you may imagine, many land managers have little idea what the regulations require, until one of us points out the specific regulation we are invoking. Therefore, we have to use this quasi-legal reference jargon, so the Forest Service will be able to look up the appropriate information for themselves.

The regulations promulgated at 36 CFR 295.5 require that areas or trails suffering adverse effects from ORMVs be IMMEDIATELY closed until the adverse effects are eliminated and measures have been taken to prevent future recurrence. Forest Supervisors always have this immediate closure authority, and it may be delegated to District Rangers. Public input is expressly allowed as "monitoring" by this regulation, although we maintain that monitoring is the obligation of the Forest Service, not the general public.

At 36 CFR 219.21(g) we find the requirement that resources be protected by considering the potential effects of use of vehicles off roads. This consideration is to take place during "forest planning." This regulation points out that forest planning must incorporate studies of ORMV use, but the fact is that most forest plans DID NOT do the sort of thorough analysis required by previous court decisions and the procedural requirements of NEPA. The next section of this handbook, "Understanding NEPA," will make this clearer.

Most forests are instead producing new "travel plans," or "Off- Highway Vehicle (OHV) plans." Separation of the travel planning process from the forest planning process appears to be contrary to the written intent of 36 CFR 219.21(g). Although this suggests an area for further legal research, we should be reassured that ORMV review and planning is required, at some point.

At 36 CFR 261.13(h) the operation of vehicles off roads is prohibited if such operation "damages or unreasonably disturbs the land, wildlife, or vegetative resources."

The most helpful regulations are found at 36 CFR Part 295, an entire page and a half of regulations concerning use of motor vehicles off forest development roads. Part 295 mentions the need to distinguish between various types of ORMVs. The regulation specifically mentions "noise." It requires analysis of current and potential impacts on soil, water, vegetation, fish and wildlife, forest visitors and cultural and historic resources. Part 295 requires the areas and trails open to ORMVs be located to minimize resource damage, wildlife harassment, and user conflicts. The user conflict minimization requires consideration of existing or PROPOSED uses of the same or NEIGHBORING public lands.

Public participation is required, including sixty days advance notice for public review and input. Maps documenting the decision must be available to the public. Forest Supervisors must annually review the plan, and if revision is warranted, the public must be involved. The public can only be left out when an emergency exists, or when revision is needed to protect the resources and/or to provide for public safety.

The best part about a great couple of pages in the CFRs is 36 CFR 295.5, entitled "Monitoring effects of vehicle use off forest development roads." Monitoring is explicitly defined to include "public input." When monitoring (including public input) shows that "considerable adverse effects" have been or WILL BE caused by ORMV use, the area "will be

immediately closed to the responsible vehicle type or types." Creative use of this regulation will be encouraged in the section of this handbook titled "How to Close an Area or Trail Anytime."

FOREST TRAVEL PLANS / OHV PLANS

A Travel Plan, often called an OHV Plan, is a Forest Service document which specifies which trails, roads and areas will be open to off-road motor vehicles.

More specifically, the trail, road or area must be designated as "open, closed or restricted." Open or closed need no explanation, but restricted means many things. The restriction may be a seasonal closure. It may restrict vehicles by number of wheels (as in, restricted to 2-wheeled vehicles only). It may restrict vehicles by size (no vehicles with a tread width over 40 inches, for instance). The restriction may be a noise restriction (no vehicle which is louder than 80 decibels at 20 feet while traveling at a speed of 20 miles per hour, for example). Restriction could have to do with engine size (in horsepower or cubic centimeters), tire tread (no knobby tires), or anything else you can imagine.

Write to your National Forest to inquire about their current Travel Plan. If none is available (A Travel Plan map is required to be available free for the asking.) ask that your National Forest immediately begin their travel planning process, which is required by law. The next section of this handbook will familiarize you with the process a Forest must follow to produce the Travel Plan, and the section after that will give you ideas that you may wish to include in your written comment. National Forests must review their Travel Plans every year, and the public must be involved whenever a significant change is made.

As noted in 36 CFR 219.21(g) "Forest planning shall evaluate the potential effects of vehicle use off roads" Travel Plans are being "tiered" to the Forest Plans. The important thing to remember is that, at some point, site-specific analysis and a full Environmental Impact Statement must be provided. (Friends Aware of Wildlife Needs [FAWN] v. USDA, U.S. District Court, Eastern District of California, September, 1989.) In fact, the FAWN decision was site-specific, and linked to a particular location on a single Ranger District.

NEPA PROCESS

At the close of the 1960s, that decade of public outcry for citizen power, radical change, and environmental concern, Congress passed a law known as the National Environmental Policy Act (NEPA). The law so widely affects such a large segment of the American public, that the acronym NEPA is recognized by many. The law, however, is widely misunderstood. One often hears prominent attorneys, politicians and decision-makers refer to the National Environmental PROTECTION Act.

NEPA is policy. Protection is not guaranteed by NEPA, and it is not required by NEPA.

NEPA fosters decision-making based on sound, scientific understanding of environmental consequences of federal actions. Informed public participation prior to the implementation of federal actions or decisions is the requirement of NEPA which has brought the public face to face with federal land managers and agency decision-makers.

NEPA is the parent of the Environmental Impact Statement (EIS). Participatory democracy is institutionalized by NEPA. It works like this. Before (not during, not after) a federal entity (such as the Forest Service or Bureau of Land Management) makes a decision or takes an action which may have a significant effect on the environment they are required to follow a procedure set forth under NEPA. Note well that the purpose of NEPA is to reveal whether or not significant environmental impacts will occur; if they MAY occur, preparation of NEPA documentation is required of federal entities.

The process starts when an agency publicly announces its intent to implement a project (or sometimes, when the public cries out that some project is being considered or is already underway). The feds must then ask the public to provide "scoping comments." The public identifies issues and concerns which we would like the feds to examine in an Environmental Analysis (EA).

The public determines the "scope" of the EA. The EA is a written document which then informs the public, in an easily understood form, of potential environmental impacts.

The feds conclude the EA by declaring whether or not significant environmental impacts will occur as a result of the proposed action. If the feds claim that no significant (the definition of "significant" is the ongoing responsibility of the court system) impacts will occur, the NEPA process is terminated.

If the public disagrees, we may appeal the decision through a separate set of procedures, and if the appeal is unsuccessful, litigation may be the ultimate option. Recourse to an administrative proceeding called an "appeal," and after that, recourse to litigation may be the final steps of this process at any point from here onward.

If the feds conclude the EA by stating that significant environmental impacts MAY occur, they then proceed to do an EIS. In fact, because an EIS is more comprehensive than an EA, the feds may choose not to do an EA if they plan to do an EIS instead. Sometimes the feds call for a second round of scoping, other times they simply use the scoping from the EA to begin the EIS process.

The EIS is issued as a draft EIS, and the public is asked to comment on the draft. The public comments on both the information provided in the draft, as well as the procedure used. As an example, we might comment that a certain error of addition was noted on a certain page of the draft EIS; and we might also comment that one issue identified in the scoping process was unfairly omitted from examination in the draft EIS.

The final requirement is the circulation of a final EIS. The final EIS is a revised version of the draft EIS. It takes into account an examination of the public comments provided in response to the draft EIS. It should provide substantive response to the issues and concerns raised by the public. The final EIS is accompanied by a "decision document" which clearly sets forth the feds' stated intention to act in a certain manner.

That in a nutshell, is what NEPA requires. NEPA, the law, does not make it illegal to run a motocross race or clearcut a forest. What NEPA makes illegal is doing these environmentally destructive actions under a cloak of secrecy. NEPA requires openness in federal agency decision-making. It was the belief of the lawmakers who crafted NEPA that, by providing the public with a meaningful opportunity to comment upon (and assist with) federal agency decision-making, the result would be better decisions and better actions.

Proper compliance with NEPA provides citizens with the opportunity and forum to discuss environmental concerns in a "town meeting" format. We all are aware of the popular public hearing format, where everyone who desires to speak may have the ear of the citizenry for three or five minutes. By the act of going to the front of the room and speaking our mind, we are given a constructive opportunity to express our concerns. We are heard. And the sit-ins, protest rallies, and mass citizen demonstrations of the 1960s have disappeared.

The next sections of this handbook will walk through the NEPA process. To better understand the procedure, order a copy of the Council on Environmental Quality regulations (see bibliography).

SCOPING

- Get a Timetable for Action

- Define the Terms

- Closed Unless Posted as "Open"

- Delegate Authority to District Rangers

- Soil

- Water

- Vegetation

- Fish & Wildlife

- Forest Visitors / User Conflicts

- Cultural Resources

- Wilderness Resources (suitability vs. characteristics)

- Monitoring

- Enforcement

- Require a Full Environmental Impact Statement

Scoping is the first step in the NEPA process. Here are some things we want examined in NEPA documents which pertain to ORMV use of our public lands.

GET A TIMETABLE FOR ACTION

Every citizen has the right to ask the Forest Service to set reasonable deadlines for complying with NEPA requirements. Cite 40 CFR 1501.8(c). During the scoping process, ask that the Forest Service put that timetable in writing. Tell them we want to know what will happen if factors unforeseen delay timely compliance with the deadlines the Forest Service sets.

DEFINE THE TERMS

The CFRs note that there are many types of ORMVs. We must require the Forest Service to be very specific about what they mean by ORV or ORMV. Because they have not done a very good job of specifying what they mean, we will have to help them out. Here is a set of definitions you may wish to use as a starting point.

OHV - Off Highway Vehicle. This term is to be avoided as too vague. It means ALL the vehicles listed below, as well as pickup trucks, etc. - anything which is driven off a PAVED highway. Some even include the family station wagon, when driven on dirt roads on a picnic outing! The Forest Service should not use this term.

ORV - Off-Road Vehicle. Any vehicle capable of being operated off a dirt road. All the vehicles listed below fall into this category.

ORMV - Off-Road Motor Vehicle. Excluding mountain bicycles, which are mechanized but not motorized, this qualification is a slightly more restricted category than ORV.

Vehicle licensed for highway use - Any vehicle licensed by an appropriate state agency, for travel upon highways. One of these vehicles may travel off paved highways (on dirt roads) or it may not.

4-wheel drive - This would be an example of an ORMV licensed for highway use. Also called a 4x4.

ATV - All Terrain Vehicle. Used for light-duty utility or recreation, these vehicles MUST have a tread width of 40" or less. Those with a large tread width can only be operated on roads, and are prohibited on trails. In fact, it is our position that ATVs are not "trail machines" because of their large size. They should only operate on two-track "ATV Roads."

4-wheel ATV - These are legal to sell in the USA.

3-wheel ATV - These have been banned, as illegal for sale in the USA, because they are inherently unstable and thus pose a safety hazard to the operator.

Dirt bike - A motorcycle-type ORMV, of 100cc or greater in engine displacement. A dirt bike is used for a motocross racing type of recreational experience.

Trail bike - A motorcycle-type ORMV, of less than 100cc in engine displacement. This vehicle is used by children and families for a motorized recreational experience.

Mini-bike - A motorcycle-type ORMV, of less than 45cc in engine displacement. This vehicle is primarily used by children.

Bicycle - A human powered conveyance which is mechanized, but not motorized, thus an ORV which is not an ORMV. Bicycles, including the "mountain bicycles" are prohibited from entering Congressionally-designated Wilderness by agency regulations.

Snowmobile - A vehicle used for transport over the surface of the snow. This is a type of ORMV. However, it is generally known that the direct physical effects to the environment are quite different than non-snowmobile ORMV effects, therefore some explanation may be necessary to explain sweeping generalizations about ORMVs when snowmobiles are included in the category.

Tracked vehicle - These include a military halftrack or tank, a bulldozer, or other similar types of heavy equipment.

Other specialized vehicles - Airboats come to mind. There are others.

CLOSED UNLESS POSTED AS OPEN

The time of wholesale destruction of our environment is behind us. Unless a trail has been scientifically studied and found to be suitable for ORMV recreation, then that trail should not be opened to destructive ORMV use in the first place. Leaving vast areas of land open to indiscriminate cross-country route-pioneering and hill climbing is unacceptable. Certain

areas, described as "open areas" or "mechanical compounds" may be designated for off-trail use only when the environment can withstand the damaging effects, or when the financial resources are available to fully restore the area when such use is discontinued.

Simply guessing that no endangered species, archaeological sites or other valuable and fragile natural features are present simply is an unprofessional way to manage a finite resource. The Forest Service must produce maps showing open trails on public lands, so that anyone operating a vehicle anywhere else is clearly in violation of existing regulations.

Once an area or trail has been studied and determined to be suitable for ORMV use, then that area should be posted with signs as "open." Only areas posted as "open" should be used by ORMV operators. This avoids a number of confusions which frequently arise. Severe resource damage has been documented on private lands - the dirt bikers said they thought they were on public lands. Also, vandals frequently destroy "closed" signs, and prosecution of individuals who say, "I didn't see the sign" then becomes difficult. Requiring individuals to verify their privilege to operate a motor vehicle on public lands is not unreasonable, and solves these dilemmas. Also, ORMV operation in unsafe areas is avoided, and liability issues become much less complicated.

At any time that both administrative and physical closures prove to be ineffective, then we should immediately demand that the forest adopt a "closed unless posted as open" policy forestwide.

DELEGATE AUTHORITY TO DISTRICT RANGERS

From personal experience, it should be noted that dealing with District Rangers is often easier and more productive than dealing with Forest Supervisors. If you share this belief, you will want to ask your Forest Supervisor to delegate immediate closure authority to the District Rangers. During scoping, ask that this be put in writing in the decision document.

SOIL

Howard G. Wilshire once commented on the use of the word "considerable" in a letter to a Sierra Club Legal Defense Fund attorney: "'Considerable,' 'minimal,' and 'excessive' are not criteria for damage. Criteria are, for example, centimeters of soil lost relative to the amount of soil originally present; productivity of residual soils compared to a specific standard (such as U.S.D.A.'s T values); centimeters of soil lost relative to soil regeneration rates; physical and chemical changes in the soil relative to accelerated erosion rates and altered water quality." Objective, scientific criteria are needed.

Soil has three "horizons." The "A Horizon" in most soils is the organic layer or material which is on top. Soils in wide areas of the mid-continent contain loess (wind-blown "rock flour") derived from ancient glacial outwash deposits. The loess is an important mulching agent for which there is no modern source, so once lost it cannot be replaced. Soils of Pleistocene age or older are common in the Western arid lands. These soils formed under climatic conditions that no longer exist, so once destroyed these too cannot be restored. In the arid West, this layer may be very thin, perhaps only a couple of inches. In the Midwest it can take 10,000 years for nature to create an inch of organic soil.

The second layer is called the "B Horizon." The B Horizon is sandy or gravelly broken inorganic material. A talus slope has no A Horizon, and is the exposed B Horizon.

The "C Horizon" is the unaltered bedrock.

Given this brief lesson in soil science, we can begin to visualize the way nature provides opportunities for life to colonize this planet. We must compare erosion rates caused by different uses, and the side effects of such erosion. ORMVs accelerate the erosion or destruction of the fragile organic layer of soil, upon which life depends.

In some parts of the country, this destruction would be an "irretrievable commitment of resources." If we are talking about destroying an area in a decade, and the geological processes will take 10,000 years to replace that productive soil, then this must be stopped.

Soils are displaced by physical erosion from ORMV tires, kicked up into the air by the ton as dust, left susceptible to

erosion by water when vegetation is killed, and compacted into a lifeless state. Soil erosion by wind is also accelerated when vegetative cover is destroyed.

WATER

Disrupting soils and vegetation in turn disrupts the hydrological balance. The Forest Service is charged by law with the responsibility for caring for our watersheds. Municipal water supplies can be endangered by careless planning.

ORMV use can break down stream banks, and cause siltation in streams and rivers. Ask the Forest Service to discuss the applicability of the Clean Water Act to their decisions. Muddy runoff from trails is called "nonpoint source pollution."

Refer the Forest Service to the Clean Water Act, Sections 208, 303, 313, and 319. Funding for water quality monitoring is required under Executive Order 12088.

VEGETATION

Vegetation is killed by direct contact. It is also killed when hydrologic balances are upset, or when soil erosion and compaction renders habitat barren.

In fragile alpine areas, or on arctic tundra, a single pass by an ORMV may cause permanent damage.

Sacrificing additional areas once one area has been destroyed is unwise, so arid environments are not suitable for restoration. The Forest Service must put forth a reasonable allocation for rehabilitation, and must prohibit motorized use in a damaged area. We deplore the creation of "sacrifice areas" on public lands because they represent an "irretrievable commitment of resources." In addition, once one part of a natural system is damaged, effects ripple throughout the entire system.

FISH & WILDLIFE

Fish and wildlife suffer increased predation by humans who increase their success rate of hunting and fishing by using ORMVs to access otherwise remote and protected areas. Only a sportsperson who cannot see the finite habitat available for game would fail to understand the need for wild habitat for viable populations of trophy fish and game.

While the concern for wintering herds of game ungulates has received much attention, scientific opinion only notes that elk generally prefer to have a 1/2 mile buffer zone between themselves and areas of any human activity. The disruption of game animals is primarily predation by hunters. If ORMVs and roads are prohibited, the bull to cow ratio increases, as does the number and percentage of trophy-size animals.

Ask the Forest Service to address the habitat needs of game animals during the travel planning process. The Forest Service should prohibit ORMVs from key habitat - areas where winter survival, mating, or calving takes place.

Fish can also suffer from sedimentation of their habitat, including spawning beds. The sedimentation may also kill the organisms upon which they would feed.

Many species, such as wolverine, have habitat needs which require vast areas of roadless land. Wolverine need about 50 square miles per adult male.

Always ask the Forest Service to document the impact on threatened or endangered, candidate and sensitive species from ORMVs. Of course, nongame species are no less deserving of mention and study in the environmental document. Many species of animals require a quiet environment to find mates or synchronize biological activity. Creatures are killed by direct impact of ORMVs ... they get run over like animals in the roadway.

FOREST VISITORS / USER CONFLICTS

Motorized and non-motorized recreation does not mix. The noisy motorized recreation preempts and drives out the quieter, more contemplative forms of recreation. See the survey results attached to this handbook.

CULTURAL RESOURCES

Cultural resources (archaeological sites) are protected by numerous federal laws: Antiquities Act, P.L. 59-209, 16 USC 431- 433, requires protection of historic, prehistoric monuments, or objects of antiquity on federal lands; Executive Order 11593 requires protection and enhancement of the cultural environment and expands on federal agency responsibilities with respect to the National Historic Preservation Act (NHPA) and specifies a relationship between NHPA and NEPA; National Historic Preservation Act requires that the agency allow the Advisory Council on Historic Preservation to comment on actions affecting significant cultural resources, 36 CFR 800, Section 106 compliance; American Indian Religious Freedom Act of 1978, 36 CFR 60.4, federal agencies actions must not, insofar as possible, adversely affect sites of Native American religious and cultural values; Archaeological Resource Protection Act, P.L. 96-95, 16 USC 470a, permit is required for collection from and excavation of archaeological sites on federal lands; National Trails System Act, P.L. 90-543, 16 USC 1241-1249, protects segments of historic trails.

It is a crime for federal land managers to allow themselves to be implicated in allowing damage, vandalism or destruction of archaeological resources. All areas must be stated to be free of sites vulnerable to such destruction prior to ORMVs being allowed into the area. If such sites exist, the federal agency must have a suitable monitoring program to ensure that this fragile, unique, and finite resource will be fully protected.

WILDERNESS RESOURCES (SUITABILITY V. CHARACTERISTICS)

The Wilderness Management Handbook of the USDA Forest Service states "Wilderness is a resource." It is depicted as a fragile, unique and rare resource. The Forest Service in the Intermountain Region has published forest plans which state that the "wilderness characteristics" of roadless areas will be protected. Now, as the travel plans are being released, the travel plans are stating that the "wilderness suitability" will be protected.

While wilderness characteristics are shattered by the sound of a motor, nothing really destroys "wilderness suitability." Will the Forest Service actually do restoration work on any land which has lost its "wilderness characteristics?" We must get promises in writing.

The "characteristics" of wilderness can be found by reading the Wilderness Act of 1964: an outstanding opportunity for solitude or a primitive and unconfined type of recreation. In Forest Service lingo, motorized recreation is "semi-primitive motorized," as opposed to "primitive" or "semi-primitive non- motorized." (See ROS Users Guide, listed in the bibliography.)

Areas awaiting Wilderness designation need to have their characteristics preserved, or at the very least, the Forest Service will have to post a bond for restoration if they wish to convince a skeptic public that they will indeed protect an area's wilderness attributes. Areas proposed for Wilderness designation must be off limits to ORVs.

We have attempted to set forth the difference between "characteristics" of wilderness (like peace and quiet) and "suitability" of an area for designation as Wilderness by Congress. The Forest Service must be required to protect an area which has been proposed for designation as Wilderness by protecting the attributes and "characteristics" which make it "suitable" and these attributes include absence of resource damage caused by ORMVs, peace and quiet, and an outstanding opportunity for a primitive or unconfined type of recreation.

MONITORING

Monitoring is the duty of the Forest Service. Monitoring is not casual observation. Get the Forest Service monitoring plans in writing. Demand the most effective monitoring plans imaginable. Be sure to get budget plans for implementing the monitoring. Tie monitoring results to action plans which are triggered when monitoring indicates problems.

Monitoring does not consist of simply going out for a periodic look or photograph, but rather requires establishment of procedures for quantitative measurement of soil, vegetation, wildlife loss, habitat loss, etc. and comparison with natural (or

ambient "baseline") conditions in the area. It also requires measurement of off-site effects such as accelerated erosion, and the direct and indirect impacts on other forest users. However, no amount of monitoring is worth anything unless it is attached to policies for action when the monitoring indicates problems.

ENFORCEMENT

Enforcement of ORMV regulations on our public lands is not yet at a level suitable for the level of development of ORMV trails. Development must cease until enforcement is consistent with monitoring results.

To announce enforcement schemes which are not doable under the current fiscal and personnel situation merely gives the illusion of control!

Demand fiscal responsibility. We want to see the budget in writing, and we want contingency plans in the event that the budget is not met due to unforeseen circumstances.

Where the issue is enforcement of closure orders, we want effective physical barriers emplaced at the first signal that administrative closure is not enforceable.

REQUIRE A FULL ENVIRONMENTAL IMPACT STATEMENT

In a court case in California, cited as FAWN v. USDA, the Forest Service lost, and the judge determined that a full EIS was required by law. The area had high rainfall, heavy ORMV use including commercial enduro races, and a sensitive population of deer which had key range in the area. Ask the Forest Service to do an EIS on its travel plan.

COMMENTING ON THE DRAFT EIS

Examine the draft EIS carefully. Dispute any factual errors. Make sure the Forest Service has covered to your satisfaction all the points covered in this handbook. Use the categories listed in this handbook's table of contents under "Scoping" as a checklist, to verify that the EIS covers all our points.

Take your friends to the hearing (if there is one -- and if you want one, be sure to ask during the scoping process). Mail out alerts, write letters to the editor, phonebank, put articles in your newsletter.

CLOSE AN AREA OR TRAIL

The Forest Service is required to close trails or areas to destructive use of off-road motor vehicles when considerable resource damage has been shown to occur.

By using the information given in this section, we will be successful without having to go to court. Environmentalists are not suit-happy. We earnestly desire that conflicts be resolved in an amicable way. But we will not stand idle while the environment is harmed.

Go forth with your camera. Snap a photo of the ugly hill- climb scars, the eroding streambanks, the crushed alpine tundra, and the wheel-rut mazes through moist meadows. Send a copy of the photo with a letter which details the location of the resource damage and uses the phrase, "Please immediately close this area to ORMVs as required under 36 CFR 295.5." Send the letter to the Forest Supervisor and the District Ranger in charge.

The CFRs give citizens the right to "monitor" and their input can and will "indicate that considerable adverse effects are occurring." Remember, one adverse effect is "user conflict." We are advising a wonderful, legal tactic. Next time you're on a hike and a dirt bike roars by, get 40 friends to all call or write to the Forest Supervisor and say, "We demand immediate closure of the trail to dirt bikes because user conflicts indicate that considerable adverse effects are occurring." The effect is to publicize the "user conflict" aspect of ORMV use on public lands, which the regulations stipulate shall trigger action from the managing agency.

We must restrain ourselves, choose our most threatened and most cherished areas, and save them first. Good luck! Have some quiet fun.

BIBLIOGRAPHY / REFERENCES / ATTACHMENTS

The inspiration and factual documentation for the material presented in this handbook and the accompanying fact sheet was derived primarily from the following sources. Read them, study them, and the preponderance of factual evidence will carry your effort to create a quiet National Forest system quite far.

"Regulations For Implementing The Procedural Provisions Of The National Environmental Policy Act" a Reprint of 40 CFR Parts 1500-1508. You can buy a copy from: Superintendent of Documents, Congressional Sales Office, U.S. Government Printing Office, Washington, D.C. 20402.

Off-Road Vehicles on Public Lands. David Sheridan. Council on Environmental Quality. U.S. Government Printing Office. 1979.

Environmental Effects of Off-Road Vehicles. R.H. Webb, H.G. Wilshire, eds. Springer-Verlag, New York. 1983. (ISBN 0-387- 90737-8).

Chrome on the Range: Off-Road Vehicles on Public Lands. Jeffrey L. Bleich. Ecology Law Quarterly. Vol 15:159. 1988.

Forest Service Regulations, Handbooks and Manuals

36 CFR 219.21

36 CFR 261.10 and 261.12-13 and 261.55-57

36 CFR 295

Forest Service Handbook 2309.18

Forest Service Manual 1533.1 and 2350

Executive Orders 11644 and 11989.

ROS Users Guide, United States Department of Agriculture, Forest Service.

Visitor Impact Management: A Review of Research. Kuss, Fred R., Graefe and Vaske. National Parks & Conservation Assn. Washington, DC. ISBN 0-940091-31-3. Libr. of Cong. 90-61819.