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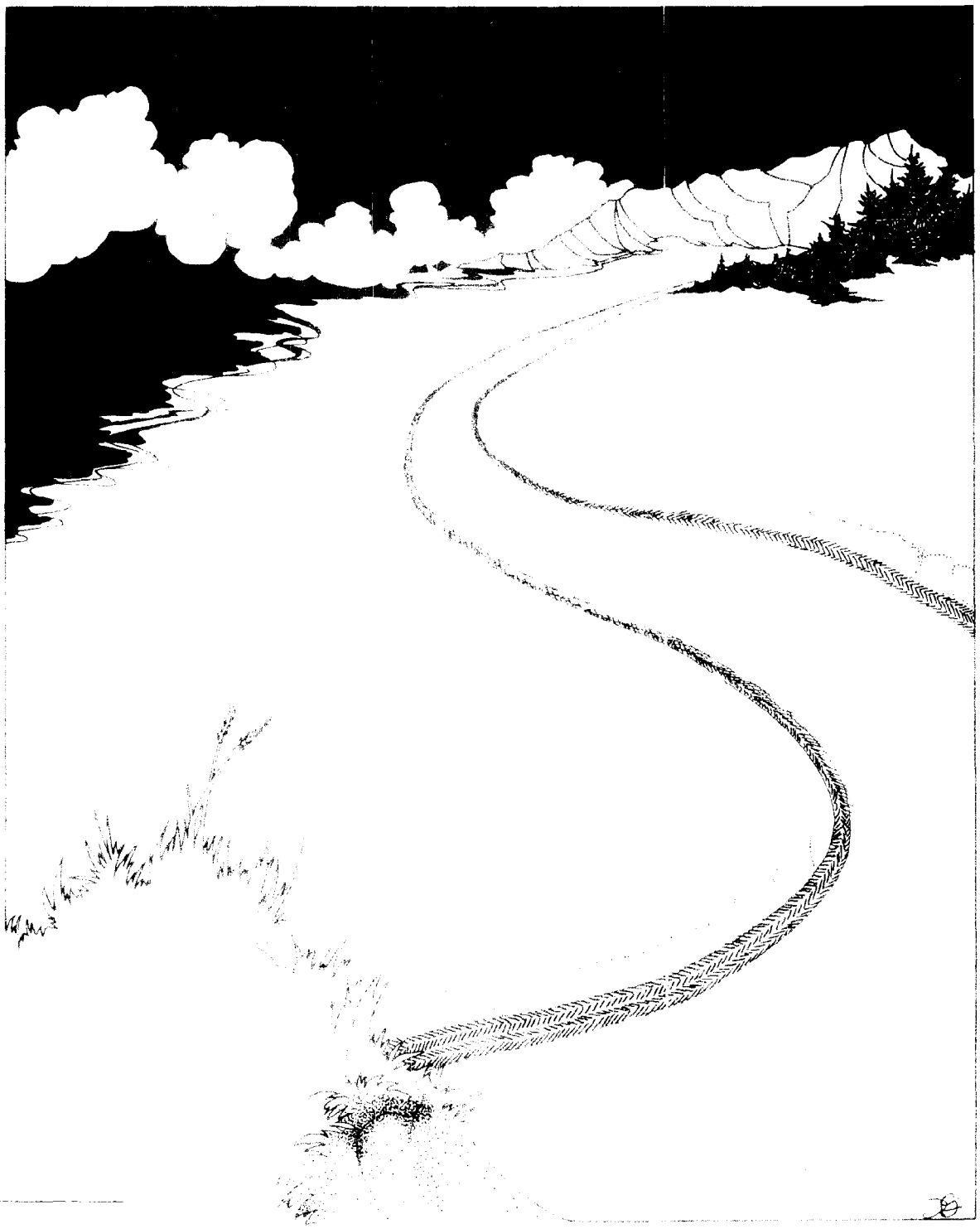

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Road Vehicle Planning & Management
The Oregon Coast

Oregon Coastal Zone Management Association, Inc.

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OFF-ROAD VEHICLE PLANNING AND MANAGEMENT ON THE OREGON COAST

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ABSTRACT

A framework to plan and manage off-road vehicle (ORV) use on the Oregon coast is developed. Federal and state ORV policies are compared and contrasted. Regulations applying to coastal ORV use are presented, which cover primarily equipment and noise limits. ORV environmental impacts are divided into inherent and behavioral types. Inherent impact is the minimum baseline level of impact for a recreational form, and behavioral impact is the impact, in addition to the baseline level, caused by human action. ORV inherent impact on natural terrain is greater than pedestrian impact. ORV behavioral impact is usually more significant than a pedestrian's. Coastal ORV use is divided into three activity designations for planning/management purposes: competitive events, vehicle play, and access corridors. Beach and dune areas are divided into ORV management units based on their identification and sensitivity to ORV impacts. A management unit's sensitivity is matched with an activity designation's impact to determine what type of ORV use may be suitable. Specific environmental impacts on sand, vegetation, and wildlife should be considered in planning an ORV area. They are outlined and discussed. Site criteria are provided for the activity designations. Management considerations are discussed, including posting, law enforcement, safety, user compatibility, environmental monitoring, and special permits. The Sand Lake ORV area is provided as a case study in planning and managing ORVs. Specific recommendations are offered to make ORV use at Sand Lake compatible. Also, policy recommendations are provided. Coastal areas of ORV use and potential suitability are mapped. Final recommendations are offered regarding the Oregon Dunes National Recreation Area, the north spit of the Coos River, and comprehensive State legislation.

PREFACE

The following report presents the results of an in-depth analysis of off-road vehicle use on Oregon's coastal beaches and dunes conducted by the Oregon Coastal Zone Management Association, Inc. This report constitutes one element of an overall analysis of planning for coastal beaches and dunes as required by Oregon's Beaches and Dunes Goal.

Funding for this study was provided by the Office of Coastal Zone Management, National Oceanic and Atmospheric Administration, under Section 306 of the Coastal Zone Management Act through the Oregon Department of Land Conservation and Development. Preparation of this report was made possible through the cooperation of the Western Interstate Commission for Higher Education, Boulder, Colorado.

This report was prepared by Timms Fowler, WICHE Intern, under the direction of Kathy Fitzpatrick, Project Administrator, with assistance from OCZMA's Beaches and Dunes Study Team composed of Carl Lindberg, Project Director, Christianna Crook, Project Associate, Wilbur Ternyik, Project Coordinator, Dr. Paul Komar, coastal geologist under contract, Bill Burley, coastal biologist under contract, and Ruby Edwards, secretary.

In addition, valuable review and comments were made by the Beaches and Dunes Steering Committee composed of:

R.A. Corthell, U.S. Soil Conservation Service
Steve Stevens, U.S. Army Corps of Engineers
Sam Allison, Oregon Department of Water Resources
Peter Bond and John Phillips, Oregon Department of Transportation, Parks and Recreation Division
Bob Cortwright, Oregon Department of Land Conservation and Development
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Throughout this endeavor, the OCZMA has received tremendous response and assistance from private individuals and groups, as well as local and state agencies. The Association deeply appreciates their enthusiasm and cooperation and would especially like to acknowledge the following individuals:

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Pacific Northwest Four-wheel Drive Association: Cliff Bales and Gerry Brown,

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Special thanks is due to Timms Fowler, WICHE Intern, who invested considerable time and effort in fastediously researching the ORV literature and conducted innumerable interviews towards the preparation of this report. This report, the culmination of three months work, is a tribute to Mr. Fowler's energetic manner and professional abilities.

Cover design by Denise A. Goulett, Toledo, Oregon.

Illustration (Figure 1) prepared by Lorraine Morgan, Newport, Oregon

This report was prepared as part of a larger document. If read singularly, the cross references to the critical habitat section should be disregarded.

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I. INTRODUCTION

A. Growth

The national growth of off-road vehicles (ORVs) and their use has been explosive in recent years (Stupay, 1971, pp. 14-18). Most ORV studies' introductions are laiden with statistics on growth; two statistics on vehicle use are provided here. The Motorcycle Industry Council (1978, p. 32) offers statistics for off-road motorcycle use in 1977. Thirty-five per cent or 4.5 billion miles of the total motorcycle mileage was off-highway use. In 1977, of the 142,700 motorcycles in Oregon, 105,700 were used off-highway at some time (p. 30). Oregon's coastal beaches and dunes are no exception to the growth and popularity of ORV recreation, however, ORV user counts are unavailable.

B. National Response

Initially, national planning and management of ORV recreation failed to keep pace with the rapid evolution of this sport; thus, its potential problems have become real problems. Gradually, since the early seventies research has helped identify the problems (McCool and Roggenbuck, 1974) and provided information on ORV user behavior, environmental impacts, and management techniques.

Baldwin and Stoddard (1973) summarize the concerns about ORV recreation, while Bury, Wendling, and McCool (1976) provide a literature review. Lodico (1973) reviews the early environmental effects of ORVs, and Rasor (1978) provides examples of viable ORV programs in five states. The State of Washington (1976) and California (1978) have well developed programs including legislation, registration, and a self-supporting funding system.

C. Federal Policy

Federal policy and planning for ORV use was initiated by Executive Order 11644 (Nixon, 1972) which requires that federal agencies develop plans to administer ORV use (Appendix A). Later it was modified by Executive Order 11989 (Carter, 1977) which enables federal land managers to close areas open to ORV use if such use is causing or will cause adverse environmental effects (Appendix A). Thus, federal agencies have developed or are developing their respective plans pursuant to the Executive Orders. The proposed Bureau of Land Management regulations provide an example and a background of national policy evolution (Appendix B).

The Forest Service policy and regulations are given in the Code of Federal Regulations 36CFR 295 -- Use of Off-Road Vehicles (Appendix C). A portion of those regulations (295.6 - 295.8) were revoked February 15, 1977, pending probable revision and are included for informative purposes (Appendix C). Finally, under the Code of Federal Regulations 36CFR 261.13 (prohibitions) certain rules apply to ORV use (Appendix C).

D. The Oregon Situation

1. Federal involvement

The United States Forest Service (Siuslaw National Forest) plays an active role in management of ORVs at Sand Lake, in Tillamook County, and at the Oregon Dunes National Recreation Area (NRA). The regulations adopted pursuant to Executive Order 11644 form the basis of their management plan (U.S. Department of Agriculture, 1976). Different areas can have differing regulations so an ORV recreationalist should check to make sure all regulations are understood. Oregon Department of Environmental Quality noise standards are enforced at the NRA and Sand Lake. The state ORV equipment requirements are only enforced at the NRA (Oregon Revised Statute (ORS) 483.833 - 483.847) (Appendix D); however, the Hebo Unit presently is working to resolve this inconsistency.

2. State involvement

Oregon, despite several legislative attempts, does not have a comprehensive plan to accomodate and manage ORV recreation. House Bill 2764 is a good example; it was rewritten three times during the 1975 Regular Session and at the session's close was left in committee. The basic issues considered were: registration, limitation of use to specified areas on public land, area development, application of the snowmobile law, a funding system, and an advisory council. Lacking sufficient political support, a comprehensive ORV program for Oregon, presently, does not exist.

Several state statutes apply to ORVs, which are defined as: "...any motorized vehicle designed or capable of cross-country travel on or immediately over land, water, sand, snow, ice, marsh, swampland or other natural terrain." (ORS 483.333) (Appendix D). The most extensive body of law deals with snowmobiles. It covers operator certification, operator conduct, accident reporting, law enforcement, and local provisions (ORS 473.710 - 483.755) (Appendix D). Cities and counties can regulate snowmobiles on public lands, waters, and other properties under its jurisdiction if such regulations are consistent with state law (ORS 483.755).

Another state statute establishes equipment requirements for ORVs operating only in the Oregon Dunes National Recreation Area and the ocean shore open to vehicular traffic within the NRA (ORS 483.833 - 483.847) (Appendix D).

Two noise standards for ORVs exist at the state level (Department of Environmental Quality (DEQ)). First, ORVs must meet in-use noise limits (decible limits) (ORS 467.030, Oregon Administrative Rule (OAR) 340-35-030(1)(b)) (Appendix E). Also, ORVs must not cause surrounding (ambient) noise levels to exceed standards near houses or other noise sensitive property. The vehicle operator and/or the property owner on which the vehicle is operated may be responsibile (ORS 467.030, OAR 340-35-030(1)(d)). Noise considerations are covered in the DEQ Handbook for Environmental Quality Elements of Oregon Local Comprehensive Land Use Plans (1978). Further information and assistance is available from DEQ. Enforcement of the noise standards by DEQ is on a complaint basis and is not an adequate management program for ORV areas. Apparently local law enforcement officers have the authority to enforce ORV noise standards but lack the equipment and direction to do so.

Other state involvement includes regulations of motor vehicles in certain zones on the ocean shore. The Oregon Department of Transportation may establish zones where vehicle use is restricted or prohibited through a specified procedure including public hearings and consultation with local government as provided for in ORS 390.688 (Appendix F). These zones are enforced by the Oregon State Police and local law enforcement agencies.

The ocean shore is defined by ORS 390.605 (Appendix F) as the area between extreme low tide and a survey line, based on the Oregon Coordinate System called the "vegetation line". It is not really the vegetation line but is a survey line defined by a series of points along the coast as described by ORS 390.770 (Appendix F). This line is often referred to as the "zone line". Also most of the wet sand area (the area between ordinary high tide and extreme low tide) is a state recreation area (ORS 390.615) (Appendix F). Many of the motor vehicle laws apply to the ocean shore except such areas within the Oregon Dunes National Recreation Area, which are addressed by the State ORV requirements.

3. ORV planning

Pertinent planning goals and guidelines administered by the Oregon Department of Land Conservation and Development are: (1) Beaches and Dunes: (2) Recreation; (3) Coastal Shorelands; (4) Estuarine Resources; (5) Open Spaces, Scenic and Historic Areas, and Natural Resources; and (6) Areas Subject to Natural Disasters and Hazards. Coordination between related goals is significant because of ORV use in beach areas as well as in upland areas. Sand Lake is a good example where the Estuarine, Coastal Shorelands, Beaches and Dunes, and Recreation Goals must be dovetailed.

The Recreation Goal does not specifically mention ORV use while in the beach and dunes guidelines, ORV recreational use is mentioned by name. One must assume ORV activities would be classified as: "...active or passive games and activities" in the Recreation Goal. Its guidelines (paragraph five) suggest that the State Comprehensive Outdoor Recreation Plan (SCORP) be used as a planning guide when developing recreation facilities. SCORP (1977) specifically considers ORV use, providing

standards to determine state and local needs, and should be used directly by the planners when providing for ORV recreation.

E. ORV Policy: Comparisons and Contrasts

The federal government recognizes ORV use as a legitimate recreational form, planning and managing it, while the State of Oregon only tactily recognizes ORV use without a plan or management scheme. The Department of Transportation's vehicle zones, SCORP (1977), and the Beach and Dune Guidelines are the only recognition of ORV use. ORV recreation is not mentioned by name in the Recreation Goal.

Many of the motor vehicle laws apply to vehicles operating on the beaches except within the NRA, where only the ORV equipment standards are required (ORS 483.837). Also, the Forest Service has no jurisdiction over the beaches, and the state or county cannot enforce federal regulations on federal land except through special agreements (under Public Law 92-82).

II. UNDERSTANDING ORV ENVIRONMENTAL IMPACT

A. Introduction

Plainly, whether a given impact[1] is "good" or "bad" is value dependent. When impacts are variable in degree, it becomes more difficult for people to agree on what is an acceptable level of impact for a given activity because of different personal values and different interpretations of the "facts".

To place ORV use in perspective with other types of recreation, it is useful to make a distinction between two types of environmental impacts. Specifically, it can be divided into two types: (1) inherent impact and (2) behavioral impact. The distinction is based on how much the impact's size can vary and the factors that determine the impact's size. Inherent impact is fixed in size while behavioral impact varies.

B. Inherent Impact

Inherent impact is the minimal impact on the environment for a given type of recreational activity. It is the least impact possible

---

[1]Whether written in the singular or plural form, impact shall be considered as the sum total of the effects for a given activity. One action rarely has a single effect on the environment.

(determined by common sense and scientific research) provided that a specific activity does, in fact, take place in a given environmental setting. Thus, it forms a baseline.

The inherent impact is determined by the nature of the activity and where the activity takes place. Specifically, ORV recreation is motorized and for the purposes of this study, takes place on the beach and dune areas of the coast. Thus, the inherent impact would be less than that for ORV activity in a desert or alpine tundra area. Typically, ORV inherent impact is greater than that for non-motorized recreational forms.

C. Behavioral Impact

Behavioral impact is the impact that exceeds the minimal baseline effects (inherent impact) as a result of human action(s). It can vary greatly in size depending on one's behavior, regardless of whether it is intentional or unintentional. Specifically, ORVs (primarily motorcycles and four-wheel drive vehicles) can be tools of destruction if used thoughtlessly; their power and weight are no match for soil, vegetation, and wildlife.

D. Illustration of Inherent and Behavioral Impacts

A simple example is the difference between a person driving a vehicle down a beach to go clamming and another person going clamming but deciding to play "hill climber" on the foredune (breaching it) and "trailblazer" through the deflation plain (destroying its vegetation). Clearly, going from one place to another for access and sightseeing has a minimal impact (inherent impact), while active vehicle play in unsuitable areas caused impact far beyond the baseline level. Vehicle play is acceptable only in specific areas; outside of those areas it is inappropriate and results in large behavioral impacts. Behavioral impact is important in ORV planning, management, and the recreation itself (see Figure 1).

E. Inherent and Behavioral Impacts: ORV Recreation Relative to Pedestrian Recreation

1. Motorization is the difference

The fundamental difference between ORV recreation and other recreational activities (particularly pedestrian) is the use of a motor vehicle to traverse areas typically unsuitable for a normal vehicle. This difference is the largely unique, attractive aspect of the recreation, but paradoxically, also is potentially a detriment to this recreational form. The problems with this motorized sport, as well as the

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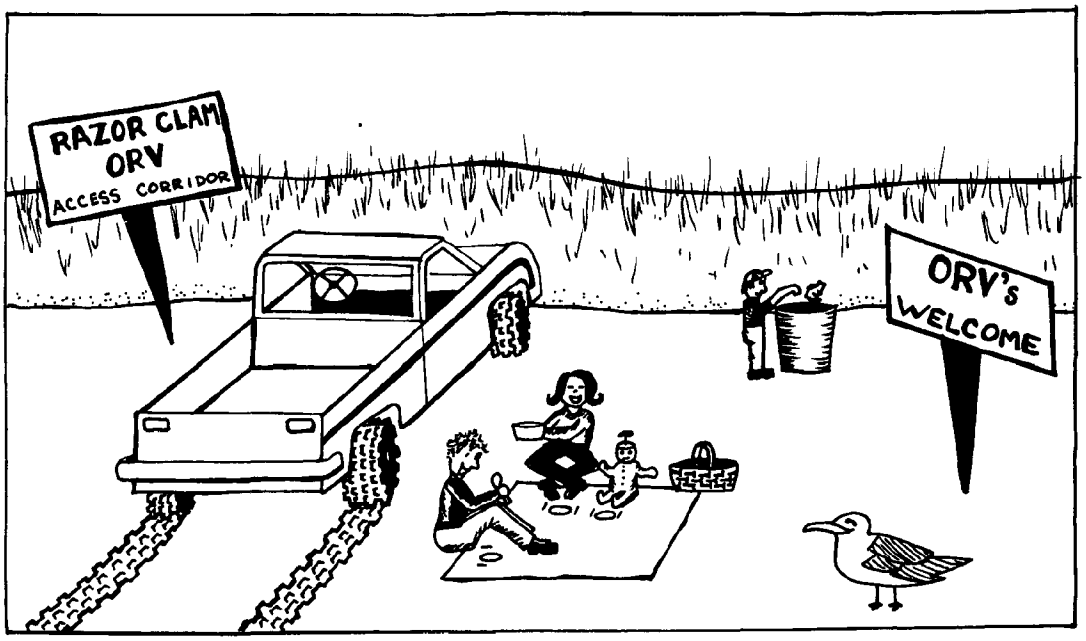
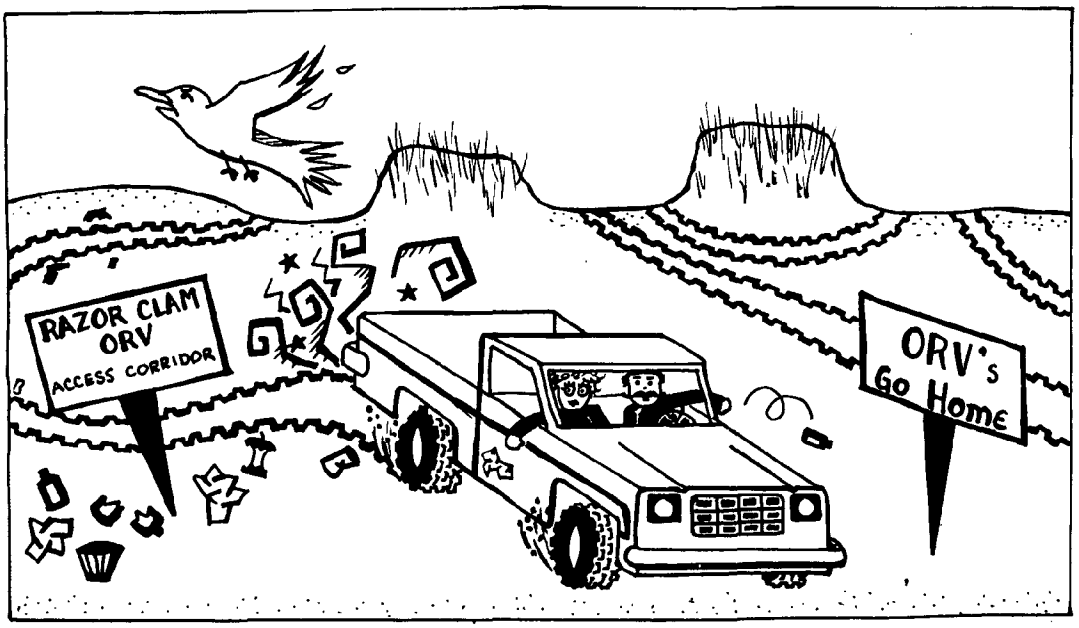


BUT DON'T ABUSE IT



OR YOU'LL LOSE IT

Figure 1. Behavioral impacts are important to consider when planning for and managing ORV areas. Caption is based on a phrase from the BLM'S Operation ORVAC, 1970.

positive aspects, must be recognized and understood by both participant and non-participant.

2. Inherent impact

The inherent impact is greater for ORV recreation than it is for pedestrian types on natural terrain. An analysis follows comparing a trail bike and a pedestrian which illustrates how motorization and degree of impact relate. Although ORV recreation also includes dune buggying, four-wheel driving and special events such as sand drag-races, they all take place on the Oregon coast and share the common motorized character.

ORV impact is larger because it is motorized. Three specific areas can be identifed showing how the motorization increases the inherent impact's size: (1) the specific area contacted by the recreationalist or the recreationalist's ORV (interface between the recreationalist and the environment), (2) the range or area covered by a recreationalist in a given amount of time (total area contacted or total interface area), and (3) the area of recognition based on sight or sound (area of recognition).

First, at the area of immediate contact between the recreationalist and the environment, the interface, the inherent impact is greater for the ORV (recreationalist) because its greater mass and power production is translated proportionally into environmental impact. "Generally, the greater the torque applied at the machine/environment interface, the greater the potential for impact." (Bury et al., 1976, p.41). Also Muntz, Deglow and Campbell comment generally, not quantitatively, on the relative erosional effects between a trail biker and a hiker (1972, p. 9):

> For example, in the case of trail bikes, erosion should be considered. It seems that the trail bike must be worse than the hiker since the trail bike and rider represent something like three times the mass of a hiker. In addition, feet intelligently guided are rather more efficient at gaining firm holds than wheels, thus allowing a hiker to gain or lose altitude and generally to accelerate or decelerate per unit mass with less displacement of trail surface material than a trail bike.

The behavior described above as "feet intelligently guided" is indicative of pedestrian behavior with minimal environmental impact, and suggests that even the most consciencious trail biker's inherent impact would be greater than that of the hiker, due merely to the use of a motorized vehicle.

Second, comparing the range or contact area covered in a given amount of time (total interface) for the ORV user versus the pedestrian

user, the total interface is much greater since the ORV user can traverse an area at a much higher speed. This is true and is widely expressed as a beneficial attribute. Nevertheless, because the total interface is larger, so is the inherent impact.

A panel convened by the Geological Society of America provides enlightening figures on the relationship between the range and the interface area (1977, p. 3):

> A motorcycle compacts soil, on the average, across a track about 5 inches wide. Thus, a single motorcycle compacts the soil of one acre in traveling 20 miles. Tracks made by four-wheel vehicles are typically 18 1/2 inches wide and, accordingly, disturb one acre in 6 miles of travel.

Not only is the range increased by motorization but so is the affected adjacent area.

Third, the area around a recreationalist in which one's presence can be recognized by sight or sound is the area of recognition. The area of recognition is greater for a motorized recreationalist than it is for a pedestrian. Muntz et al. (1972) quantified the range and area of recognition in a forest setting for a trail biker and a hiker. Their areas of recognition were based on audio and visual stimuli. The model applies to beach and dune areas, but a few differences must be considered.

The recognition area would probably be greater for both recreationalists due to the openness. However, the trail biker's area of recognition is still larger because in the coastal setting the ORV is noisier and would be more visible because of its larger size and its rapid movement against a background. Muntz et al. conclude (p. 11):

> The forest impact of an off-road vehicle was found to be enormous ...relative to that of a hiker. The reasons for the vastly greater impact of the vehicles and their greater range, speed, and recognition.

Although the recognition area is most significant in regard to another recreationalist's perceptions and desires for a particular type of outdoor experience, the noise may have a significant effect on whatever perceives it, whether it is another person or wildlife. In addition to noise, exhaust emissions are intrinsic to motorized recreation.[1]

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[1]These consist of carbon monoxide, nitrogen dioxide, etc. and are part of the ORV inherent impact; however, they are not unique since motor vehicles are used in some capacity for most recreation.

Thus, ORV recreation, because of its motorized character, has a greater inherent impact than other pedestrian recreational forms on natural terrain for three reasons: (1) the effects at the recreationalist/environment interface are more intense due to the greater weight and power, (2) the total area of the contact interface is multiplied due to the broader range, and (3) the area of recognition is amplified due to the sound emissions.

This does not mean pedestrian recreation is without inherent impacts. Pedestrian recreationalists have inherent impacts on the environment often resulting in erosion, soil compaction, and wildlife disturbance. It is not a question of which activities have environmental impacts because they all do. Rather, it is a matter of degree, and the motorized vehicular recreationalist has a greater inherent impact than a pedestrian recreationalist on the natural terrain.

Regarding the Oregon coastal areas, the operation of an ORV in open sand has minimal environmental impact. However, ORV use is not always limited to just open sand, thus the large inherent impact of an ORV is significant. Planning and management are required to deal with this problem.

3. Behavioral impact

Behavioral impact is the result of human action and may vary from its lower limit (inherent impact) to unlimited levels. At this point, some general values must be applied and are reflected in federal and state laws regulating and protecting natural resources. Of course, common sense may dictate what impacts are negative too.[1] In recreation literature, "bad" behavior is termed "depreciative behavior" and is defined simply as the human acts degrading the resource or interfering with the experience of other recreationalists. Depreciative behavior results in negative behavioral impacts.

In ORV recreation, as in most recreational types, there are individuals who exhibit depreciative behavior. These individuals fall into the same behavioral category, but their impacts are considerably different. The depreciative behavior of an individual operating an ORV is often more significant, because they are operating a powerized machine.

Two factors previously discussed regarding inherent impact have application here: (1) the intensity of the impact, at the recreationalist/environment interface, and (2) the range or mobile capacity of an ORV. First, if the power and weight of an ORV are used in a depreciative way, it can have a large impact. The motor vehicle becomes

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[1]Care must be exercised since most impacts take time to be recognized and are subtle. This is particularly true of some ecological impacts (Bennett, 1973, p. 13).

a tool of destruction far exceeding the potential harm done by a lone individual exhibiting such depreciative behavior. The mechanical advantage makes the operator's behavior the crucial determinant in controlling environmental impact (see Figures 2 and 3).

Second, the great range and ability to venture into remote areas with ORVs may be a positive attribute of ORV recreation. On the other hand, if ORVs serve as a vehicle to carry depreciative behavior into back country areas they are ruinous. ORVs remove many of the functional barriers (distance, elevation, etc.) that have limited access in the past.

Thus, when irresponsible behavior takes place involving an ORV, the damage is extraordinarily large and the ORV can serve to transport that damage to areas previously protected by limited access.

Bury *et al*. summarized these points (p. 20):

> While the proportion of individuals assuming depreciative behavior forms may be no larger than in other recreation activity groups (although research is needed to determine the proportion), the potential for impacts of this behavior may be considerably larger because of the mechanized nature of the activity. Mechanization not only allows individuals to cover more terrain than most other recreational pursuits, ... Stated perhaps more succinctly, the geography of depreciative behavior among ORV operators will be more dispersed than that caused by other recreational participants.

Due to the possibly large, negative behavioral impact and its wide geographical distribution, management becomes very difficult and expensive. Perhaps an effective means to deal with depreciative behavior is through peer influence. An ORV participant may respond more favorably to regulations by observing others' respect for them and following their encouragement to do likewise for the benefit of all ORV recreationalists. This can be promoted by user education programs. Also, planning can greatly reduce many user conflicts and management requirements regarding environmental impacts.

III. OFF-ROAD VEHICLE ACTIVITY DESIGNATIONS

A. User Types

ORV recreationalists are a diverse group of people and utilize various types of vehicles in different ways. However, three groups can be identified (Peine, 1973, pp. 9-10; State of California, pp. 9-10): (1) vehicle oriented, (2) activity oriented, and (3) land oriented. The first group see the vehicle as an end in itself enjoying the performance, skill of operation and maintenance. This group would include the most

Figure 2. A dune with its vegetation removed and relief changed by ORVs at Sand Lake in Tillamook County, Oregon.

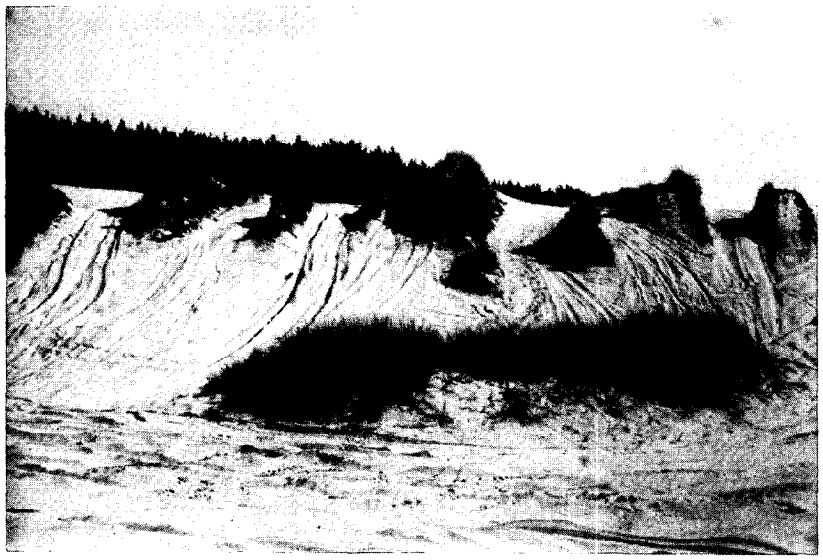


Figure 3. A long dune segmented by hill-climb activity at Sand Lake, Tillamook County, Oregon.

avid riders and competitors. The second group, activity oriented, are using their ORVs as a means to another end, transportation to areas in which to hunt, fish, clam, camp, etc. The last group, land oriented, seek to be out of doors and enjoy remote scenery and points of interest. These groups are useful in distinquishing some of the different user motivations but are limited in their application to planning and management because their respective impacts are not considered.

B. Activity Designations

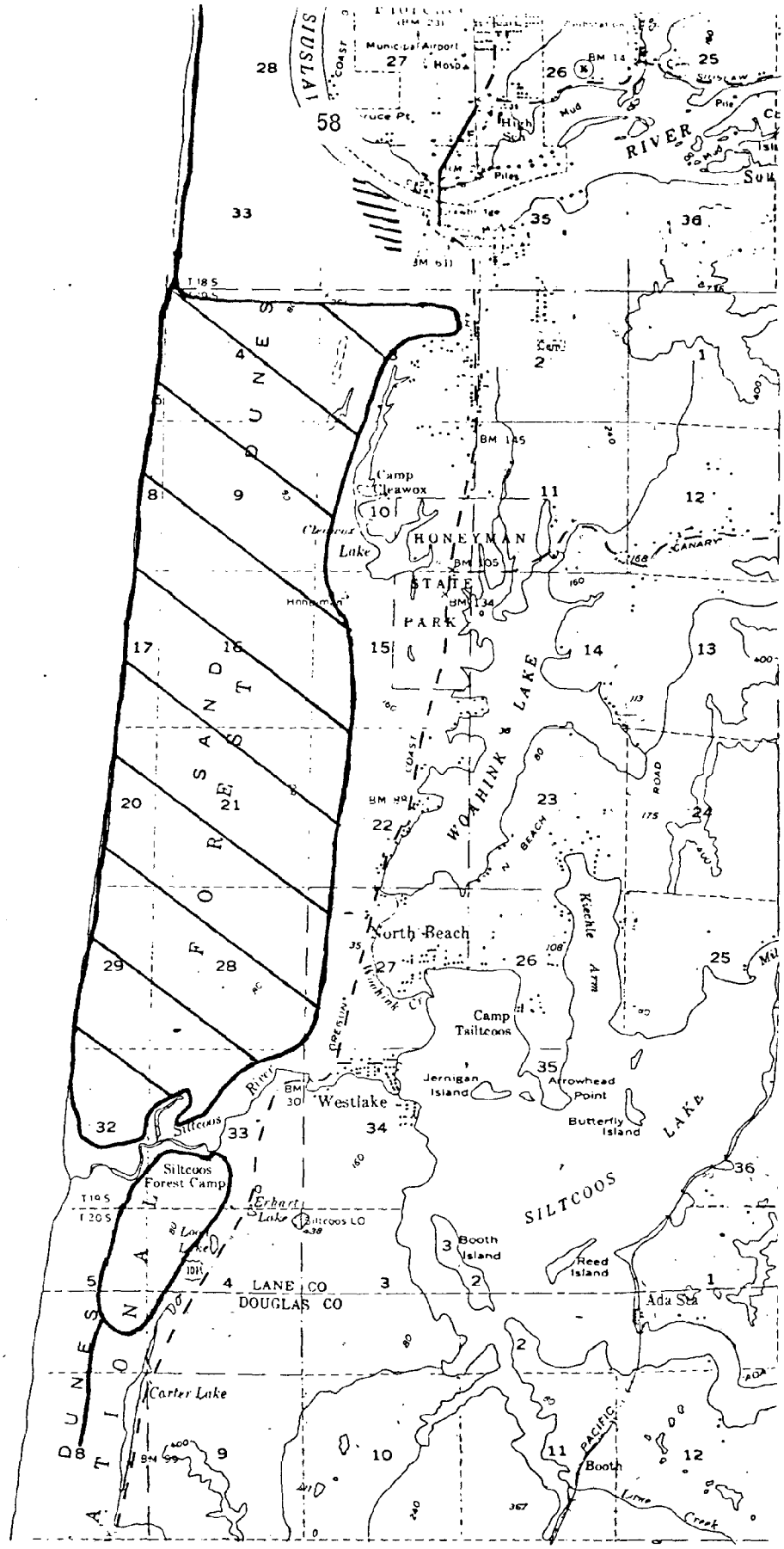
As previously discussed, different activities have different impacts, so based on their functional differences and related potential impacts, three ORV activity management designations can be made: competitive events, vehicle play, and access corridor.

1. Competitive events

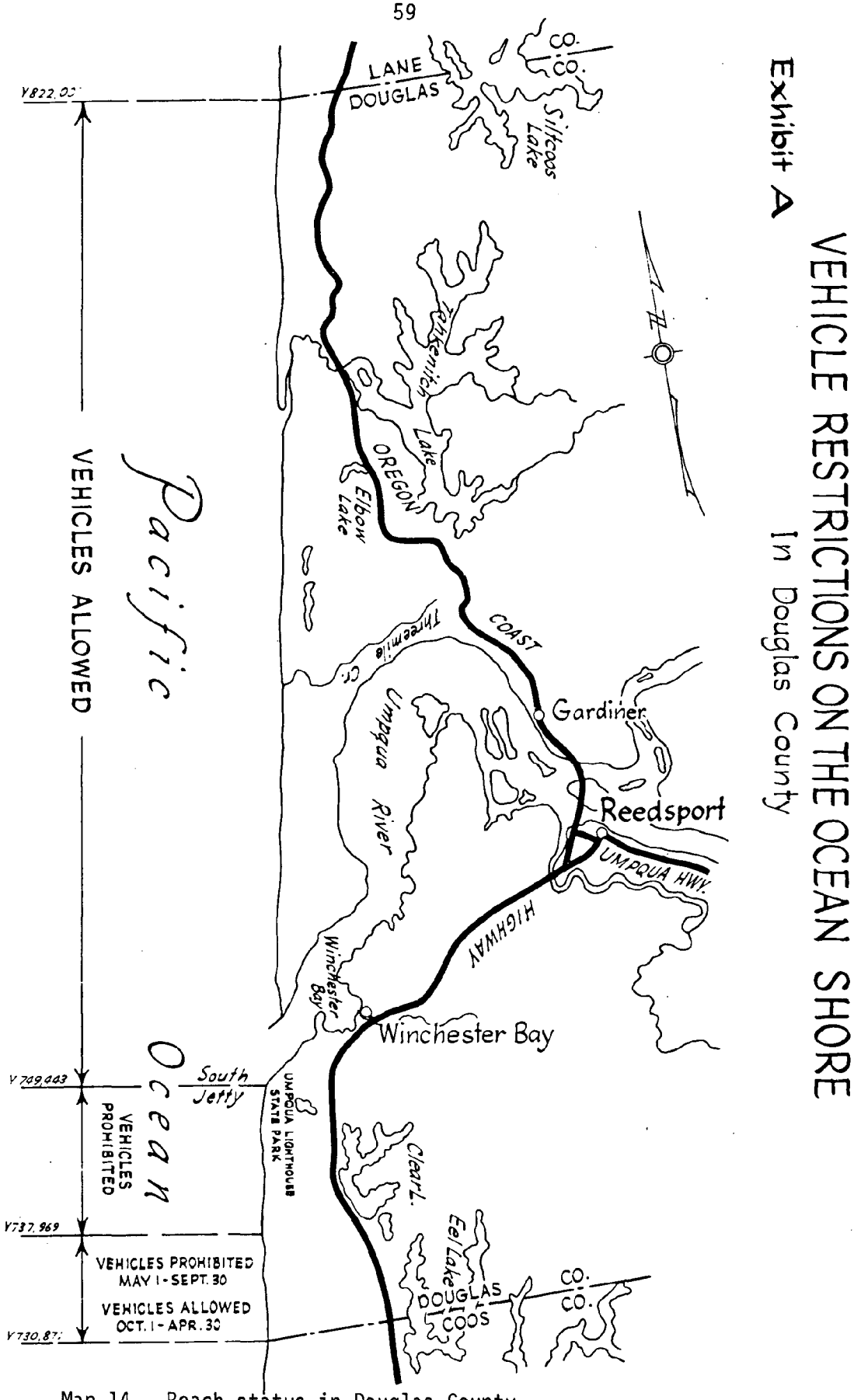
Organized competition can be planned in detail, managed and monitored very closely through special permits issued to an individual or a club that assumes the responsibility for the event. Thus, impacts and problems can be dealt with in advance. Events like sand drags, because of their organized structure, are quite manageable (see Table 1).

Table 1. The relative potential impacts and manageabilities for the three vehicle activity designations

Activity Designation	Impacts		Manageability
	Inherent	Behavioral	
Competitive Events	High	High	High
Vehicle Play	High	High	Low
Access Corridor	Low	High	Low



Map 13. Areas of ORV use and potential suitability in Lane County.



Map 14. Beach status in Douglas County.

Thus, their potentially large impacts (inherent and behavioral) can be mitigated, raising their compatibilities with adjacent lands.

2. Vehicle play

The distinction between vehicle play and vehicle access is dependent on the ORV users' behavior since their machines, especially in the case of four-wheel drive vehicles and motorcycles, have the dual capacity for play and access.

Vehicle play includes the active testing of one's machine and skill to negotiate steep hills, rough terrain, etc. Generally, it can consist of a mixture of activities such as touring an area, hill climbing, and informal racing with a friend. Vehicle play is basically vehicle oriented. Perhaps, it is best described as an activity resulting from the use of a powerized vehicle to freely traverse a variety of terrain (large dune bowls, small dunes, open sand straight-aways) at a variety of speeds.

Both the inherent and potential behavioral impacts are great because of the motorized, free, and relatively wide-open nature of the activity. Management must be sufficient to deal with these problems. However, management is difficult due to the range and mobility of an ORV. An overly enthusiastic driver may venture into areas not appropriate for such use; simple rules become difficult to enforce. Vehicle play is much harder to administer than competitive events and therefore, may be less compatible with adjacent areas (residential areas, important habitat areas, stabilized vegetation areas) (see Table 1).

3. Access corridor

Vehicle access, in theory, would include transit from one point to another on a single path or corridor, the vehicle serving as a means of transportation whether it be for fishing, clamming, or sightseeing. Thus, it functionally includes the activity and land oriented ORV user groups. Assuming normal driving habits (shortest distance routes, low speeds, etc.) and no thrill-seeking behavior, the inherent impact for an access corridor would be significantly smaller than that for vehicle play. This would likely increase the compatibility of this activity, facilitating its provision since it could be permitted in or near more areas. However, if individuals ranged over inappropriate terrain, outside the access areas as if it were a vehicle play area, this would constitute depreciative behavior and result in unacceptable behavioral impacts. Clearly, the ORV user's behavior in beach and dune areas determines, in reality, whether an access area can exist or not. The inherent impact would be less than that for vehicle play, but the potential for behavioral impact would still be large (see Table 1). This should be kept in mind while planning and working with the ORV groups.

IV. COASTAL ORV MANAGEMENT UNITS AND THEIR SUITABLE ACTIVITY DESIGNATIONS

A. Management Area

The management area is the largest land division having identifiable boundaries, natural (headlands, rivers, etc.) or man-made (highways, etc.). It includes all planning elements (house construction, recreational areas, wildlife habitats, etc.), stressing the interactions between all the elements. The aim of such a division is to promote the consideration of an activity's impact on the adjacent land or land uses both immediate and distant.

B. ORV Management Units

Subdivisions within the management area are management units. Specifically, ORV management units are readily identifiable contiguous landforms and/or plant communities sharing in part a common sensitivity to ORV traffic. The ORV management unit's sensitivity determines which activity designations are suitable. Within each ORV management unit, the significance of ORV impacts can vary and so the exact location of an ORV activity should be situated accordingly. Suitability of a given activity designation is not an absolute policy statement. Other factors must be considered, and suitability can change over the period of a year or more.

The environmental impacts of ORVs in coastal settings such as beaches, dunes, salt marshes, and tidal flats were studied at Cape Cod National Seashore between 1974 and 1977. The results are summarized by Godfrey, Leatherman, and Buckley in Coastal Zone '78 (1978, pp. 581-600). These studies conducted by the University of Massachusetts National Park Service Cooperative Research Unit, are used extensively in the following explanations of ORV impacts on habitat types.[1] The following ORV management units are defined by their sensitivity to ORV traffic and their easy identification.

1. Protected intertidal

The protected intertidal ORV management unit includes salt marshes, sand flats, and estuarine areas generally protected from direct ocean wave action. The sand flats within river outlets are not really protected and may be more appropriately considered in the beach foredune management unit as an intertidal "beach".

Of the areas studied, the protected intertidal unit is the most sensitive to vehicle traffic. "These are the salt marshes and sand flats which harbor a variety of marine and coastal organisms, as well as supply-

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[1]The author gratefully acknowledges the Unit's comprehensive research.

ing primary productivity to the estuarine and nearshore marine food webs," (Godfrey et al., p. 590). In salt marshes, very low levels of vehicle traffic can maintain bare areas indefinitely. In open intertidal sand flats, vehicle traffic may stop the natural development of marsh vegetation and may affect the survival of marine life such as worms, clams, and other mollusks (Godfrey et al., p. 592).

Typically, the protected intertidal ORV management unit is not suitable for any ORV activity designation. This is consistent with the estuarine and other related goals. However, in the case of emergencies, salvage operations, and special management needs, an access corridor might be a necessity.

2. Beach foredune

The beach foredune ORV management unit consists of the beach and the entire foredune and makes a naturally identifiable unit with regard to ORV use.

Within the beach foredune area, impact sensitivity varies. The intertidal beach (wet sand area between high and low tide) is probably the area most resistant to ORV impact, since it is so naturally variable (sand transport during tidal cycles and storm cycles, etc.). The natural changes are much greater than any vehicular effects. However, the high beach (berm) where only the highest tides reach can be heavily impacted. In this area, birds nest and drift accumulates. Where vehicles pass only a few times on driftlines, organic deposits can be broken up along with the destruction of pioneering plants and reduced bacterial counts (Godfrey et al., p. 586).

Although foredune vegetation is highly susceptable to destruction by ORVs, it is also an area of vigorous growth and recovery. (Note: there are special erosion hazards associated with destabilized foredunes, which are considered in the specific impacts section.)

Overall, the ORV impacts on the beach foredune unit are significantly less than in the protected intertidal areas. In light of the foredune sensitivity and associated wildlife habitat, an access corridor is the only suitable designation for the beach foredune management unit. User compatibility and other management factors should be considered in making such a designation (refer to those sections).

3. Vegetated dune

Vegetated dunes are susceptable to removal of their stabilizing vegetation causing erosion hazards and esthetic impacts. Access corridors are the only suitable designation for this ORV management unit. Some dune areas that were stabilized at public expense have been damaged by ORV use. Does recreation justify this destruction?

4. Vegetated deflation plain

Vegetated deflation plains are similar to vegetated dunes in that the vegetation can be destroyed by vehicles. The impact is significant regarding wildlife habitat and its associated flora. Vegetated deflation plains constitute an ORV management unit that is potentially suitable only for a carefully planned and monitored ORV access corridor designation.

5. Open sand

Open sand areas and open sand dunes constitute ORV management units which apparently are ideal for all ORV activities. Clearly, open sand areas (excluding beach areas) are most suitable for ORV use with little lasting inherent impact. Wildlife distrubance is probably minimal, however, open sand deflation plains can serve as resting areas for migrating birds. During those periods, such areas are not suitable for any ORV activity. Also where dunes are encroaching on valuable land, ORV activity is inappropriate because it might accelerate dune migration (through down slope sand transport and wind transport).

V. SPECIFIC ENVIRONMENTAL IMPACT CONSIDERATIONS

Consider the inherent ORV impacts on sand, vegetation, and wildlife. Some impacts on these resources are certain to occur and require special attention. The general topics concerning ORV impacts for each subject are listed. Only those pertinent and previously documented in the literature are reviewed. Some management recommendations are offered to reduce the impacts, however, a more complete analysis of management techniques is discussed in Chapter VII.

In the planning process, the ultimate determination is whether the probable ORV recreational impact is consistent with LCDC's land use goals and a community's values (recreational and environmental). Regarding environmental impacts, goal number five concerning natural resources is the most applicable: to conserve open space and protect natural and scenic resources which would include fish and wildlife areas and habitat, as well as ecologically and scientifically significant natural areas.

A. ORV Effects on Sand

1. Downslope sand transport and compaction (geomorphological effects)
2. Wind erosion (wind transport)
3. Water erosion (beach, creeks)

Niedoroda studied the effects of ORVs on the beaches and dunes of Cape Cod (1974). Although the Oregon oblique dunes are very different from other dune forms (Cooper, 1958), the process of sand transport, compaction, etc., due to vehicles, would be similar in nature.

1. Sand transport and compaction

Niedoroda's work indicates sand transport downslope was a significant effect, changing the dune relief locally. This appeared not to threaten the overall relief of the dunes given the level of ORV use. The major factors in sand transport were the slope of the hill and tire pressure; compaction was minimal (pp. 76-78).

The study raises the question of whether ORV activity on the oblique dunes of Oregon have significant effects on their relief. Apparently these effects depend on the natural process of sand movement. If the natural sand transport (dune building) is greater than the effects of sand movement from ORVs, then there is probably no observable net effect. Conversely, if the ORV activity moves more sand than the opposing natural processes, the dunes' relief may be changed.

Any quantitative answer is impossible to provide, although general observation may be useful. It appears the oblique dunes are much larger than those studied by Niedoroda. Therefore, the ORV impact might be less significant. However, this question should be considered further.

2. Wind erosion

Regarding wind erosion in open sand, Niedoroda's work indicated ORV disturbance of the sand surface had no effect (pp. 84-85). However, this is not definitive. On some dune ridges, tracks accelerate wind transport. Tracks either increase or retard wind erosion depending on their orientation to the prevailing wind. (The winter wind from the southwest is the most significant wind.) If the tracks parallel the wind direction, erosion is accelerated; tracks oriented at some angle to the wind direction retard erosion, (Ternyik, 1978).

3. Water erosion

Water erosion appears to be pertinent only in regard to ORV activity on the beach. Here, Niedoroda indicates that for eroding beaches, the natural sand loss exceeds any possible effects from ORVs (p. 39). However, on accreting beach areas ORV activity has a detrimental effect on the newly forming (thinly vegetated) dunes. A local example of such an area would be the prograding area of South Beach in Lincoln County.

B. ORV Effects on Vegetation

1. Loss of vegetation and wind erosion
2. Loss of vegetation and water erosion
3. Fire hazards during dry periods
4. Destruction of rare species (cross reference to critical habitat section)

The open sand areas have no vegetation so there is no opportunity for mechanical destruction. It is highly suitable for ORV activity.

However, ORVs are often not restricted merely to open sand areas; when this occurs the vegetation damage is significant and can have potentially disastrous effects on nearby land uses and habitat.

1. Vegetation loss and wind erosion

Unfortunately, the likelihood of vegetation damage from ORVs is high, since few vehicle passes are needed to remove beach and dune vegetation. Once removed, other ORV users feel the open area is a "legitimate" trail, and vegetation removal progresses.

Wind erosion resulting from the destruction of stabilizing vegetation is of vital concern. Removal of European beachgrass (Ammophila arenaria) and other species that help bind the sand and reduce wind speeds (causing deposition), allow the sand to blow and possibly inundate adjacent areas. Careful site investigations must be conducted before such destabilization occurs to protect nearby land uses (homes, recreational facilities, etc.) and natural resources (habitat). Liability is an important issue here.

Generally, areas sensitive to wind erosion after ORVs remove the stabilizing vegetation include any temporarily stabilized dune area that has, at most, a thin soil layer underlain by loose sand. The degree of vegetation loss which would result in wind erosion varies depending on factors such as orientation to the prevailing wind, sand consolidation, adjacent land forms, water table depth, etc.

The effects of ORVs were studied on American beachgrass (Ammophila breviligulata), and reported by Godfrey et al. (pp. 587-590). Different areas showed somewhat different impacts. On the seaward edge of the foredune, where the beach grass advances, less than one hundred vehicle passes reduced the vegetation to low levels. Recovery of the beachgrass was dependent on its location relative to a new sand source (high in nutrients). Given three growing seasons without ORV use, the affected areas almost recovered to the pre-impact levels. However, in back dune areas, further away from the sand source, recovery was much slower. Thus, the ORV impact lasts longer in areas receiving less new sand. These observations are applicable to the Pacific oast (Ternyik, 1978). The general impact process and idea of a carrying capacity is discussed (Godfrey et al., p. 587):

> The first 175 vehicle passes over beach grass inflict maximum damage; after that, incremental damage is less because most of the harm is already done. A "minimum number" or a "carrying capacity" of dune vegetation for vehicles is really quite low, since any track can require several years to return to pre-impact conditions.

Generally, more dynamic (storms, wind, salt spray, etc.) areas have more resistant vegetation relative to stable areas, although it varies for different plant species and habitats (p. 589).

The ORV impacts on American beachgrass and European beachgrass are similar although the recovery rate of European beachgrass would be faster since it is a heartier species (Ternyik, 1978). ORV activity unquestionably removes significant amounts of beachgrass as evidenced by the Godfrey et al. study and casual observations at Sand Lake in Tillamook County. The problems with vegetation loss and wind erosion can be avoided by operating ORVs strictly on open sand, or allowing ORVs to remove vegetation only where increased wind erosion would not threaten valuable adjacent land.

2. Vegetation loss and water erosion

Water erosion of foredunes may be increased by ORV related vegetation loss. Foredunes serve as protection during winter storms. If there is destruction of the stabilizing vegetation, the foredune is more susceptible to winter storm-wave erosion (Ternyik, 1978). This means the foredune will suffer more damage and provide less protection until it redevelops. Breaching the foredune can also result in a blowout, leading to wave intrusion and salt deposition.

These considerations are important where protection from winter storms is needed. For example, houses immediately behind the foredune would need such protection. Typically, foredunes should not be designated as vehicle play areas and access should be provided to the appropriate beach areas on specified access corridors which minimize destabilization and erosion. ORV access corridors should be located in areas where protection is not vital.

3. Fire hazards

During periods when the fire hazard is high, ORV activity may need to be temporarily curtailed. Actual vehicle fires and emission sparks constitute the likely ignition sources from the vehicles. Careless campfire use would be a behavioral impact source (from any recreationalist). Generally, carrying a fire extinquisher as required in the NRA would reduce the hazard. Also, fire resistant plant species could be planted.

4. Rare plant species

There are relatively few plant species in the beach and dune areas as a whole, and only a few of those are considered rare. Thus, implementation of the natural resources goal and its guidelines would not be difficult. Reference should be made to the critical habitat section and at the time of planning or site investigation, the Oregon Natural Heritage Program or other programs monitoring the state's flora and fauna should be contacted. ORV participants have an interest in such protection, thus demonstrating their legitimacy and compatibility as a recreational form on the Oregon Coast.

C. ORV Effects on Wildlife

The evidence with regard to ORV impact on wildlife is far from complete. Basic concerns about negative effects from ORV disturbance are widespread, but there is little scientific evidence available to indicate definitely what the effects are.

Obviously, chasing or harassing game will have an adverse effect on them, but less intense disturbance is a different problem. Bury et al. state (p. 43): "Changes in daily routine plus additional stress are probably the major effects of ORVs, rather than direct mortality."

Research has focused primarily on snowmobiles, but the problems of noise and visual disturbance probably have some application to ORVs in general. The literature reviewed by Bury et al. indicates whitetail deer are not as disturbed by snowmobiles as resource managers suspected. Elk may be more sensitive. Impact from snowmobiles, on medium sized mammals is not generally clear (pp. 43-46). Thus, some evidence indicates snowmobile activity may not be as negative as at first thought, however, this is neither conclusive nor directly applicable to all ORVs.

While planning and managing any of the ORV activity designations, special attention must be paid to the following considerations for birds, mammals, marine life, and their sustaining environments:

1. Birds

a. Rare species (cross reference to critical habitat section)
b. Nesting areas
c. Resting areas for migratory species
d. General disturbance

The most visable forms of wildlife within beach and dune areas are birds. Many different species are seen providing recreation and amusement for people.

In regard to rare species, it appears there is only one in the beach and dune areas; it is the snowy plover (Charadius alexandrinus nivosus). When planning and managing ORV areas, the critical habitat section of this report should be reviewed and the Oregon Natural Heritage Program contacted.

A full background on the snowy plover may be obtained by reading the critical habitat section.[1] Only the points relevant to ORV recreation

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[1]This is a significant issue regarding ORV activity since a relatively complete knowledge of the situation may promote ORV recreation compatibility.

are considered here. The snowy plover nests along the foredune areas, often, but not exclusively, in the driftwood areas. Occasionally, they nest on open sand areas and into the foredune area for some distance. The nesting period is the most critical time of year for the plover and ranges from April into June. Snowy plovers' nest selection seems to vary in geography. During the nesting period, pedestrian and ORV disturbance could result in negative effects on snowy plover nesting success. Although in a study on Least Terns (Sterna albifrons), that was not the case (Blodget, 1978, p. 60). Any direct application of the Blodget study would not be reasonable, but it is a consideration. A low and declining population within Oregon justifies a conservative approach to protecting the snowy plover, which is consistent with goal number five.

It is significant that the disturbance can result from pedestrians as well as ORVs. In the case of the Least Terns, this was certainly true (Blodget, p. 61). Dogs are also a threat to them. In remote beach areas (where access points are widely dispersed), the only likely disturbance is from ORV recreationalists (and their dogs) due to their extensive range relative to pedestrians.

In addition to the plover, other shorebirds forage on the beaches and the effects of general disturbance are not specifically known. Resting or wintering areas for migratory species should not be areas of ORV activity.

To specifically reduce nesting disruption of the snowy plover, land managing agencies should implement a short closure period in the more remote (few access points) beach areas during April through June. Also research on the effects of vehicle and pedestrian traffic on plover nesting success is needed.

2. Mammals

a. Rare species (cross reference to the critical habitat section)
b. Breeding areas
c. Calving areas
d. General disturbance

Generally, ORV effects on mammals are unclear. ORV noise may have detrimental effects on mammals, however, research is needed to confirm this. The points listed above should be considered, especially as more data becomes available.

Within beach and dune areas, probably the most immediate consideration is the occurrence of a rare species, the white footed vole

(Phenacomys albipes). Details are noted in the section on critical habitat. The Oregon Natural Heritage Program should be contacted for any new data. Typically, areas of importance for rare species should not be designated for any vehicle activity. In instances where an important species has been identified a buffer or other appropriate management techniques should be employed for protection.

3. Fish

Siltation of streams from either direct stream crossings or erosion can be avoided if vehicles remain in open sand areas away from lakes and streams.

4. Marine life

ORV activity may have a significant effect on clams and other marine life (Godfrey et al., p. 592). The degree of impact is related to the characteristics of a given species so it is advisable to consult marine biologists prior to making ORV designations in estuarine or beach areas.

VI. SITE CRITERIA

A. User Interests

1. Vehicle play

Most vehicle play participants seek a variety of challenging terrain. The large oblique dunes (e.g. Umpqua Lighthouse State Park) and associated bowls are favorite areas. These areas offer steep hills for climbing and wide, open land to traverse freely. The parabola dune at Sand Lake is a good hill climb area, while transverse dunes are less suitable being small and rough, and sometimes quicksand occurs between them in the winter. Despite some shifts in use due to closures, concentrated ORV use generally helps to identify the favored areas. The most reliable and effective way to determine specific needs and areas for site designation is to work with the ORV recreationalists -- organized clubs provide a readily identifiable group. Selecting an ORV site in concert with the potential users ensures it will be a positive experience for them and reduces management concerns.

2. Access corridor

Regarding vehicle access corridors, the same approach is applicable.

3. Competitive events

The specific club or individuals sponsoring an event will probably have an idea where they would like to locate it. The location should be

jointly worked out between the sponsors, the land holding party, and the adjacent land owners.

B. Size

1. Vehicle play

The sizes of general use ORV areas vary for minibikes, motorcycles, four-wheel drive vehicles, and dune buggies or a mixture of such vehicles, on a local level from ten acres (State of California, 1978, p. 92) to several thousand acres on the state level (p. 60). Pismo Dunes State Vehicular Recreation Area was 810 acres and was expanded to 2,000 acres (State of California, 1975, p. 7; State of California, 1978, p. 60). Turkey Bay ORV area (located in Kentucky and Tennessee) is 2,350 acres in size (McEwen, 1978, p. V). The size determination of an open sand vehicle play area is dependent on the prefered topography, management strategy, and available land. It is difficult to provide a figure for the minimal size of a vehicle play area because its viability is linked with an overall management strategy (total area open coastwide to ORVs, potentially different areas for different vehicle types, management compatibilities, etc.).

A rough estimate to guide a major development for multi-vehicle (motorcycles, dune buggies, four-wheel drive) play areas might be 500-1,000 acres. Smaller sizes may be feasible. The only practical solution is to work with the ORV recreationalists within the constraints of land availability.

2. Access corridor

The length depends on the location of the point of interest relative to a conventional access point (parking lot, pull out for cars, etc.).

3. Competitive events

The sponsors will, or should, have clear specifications as to the area needed for the event itself, parking, spectators, concessions, buffer zones, etc. The planning and actual size determination must be determined well in advance with technical assistance when necessary (e.g. noise buffers).

C. Access Control

1. Vehicle play

There must be access to vehicle play areas, however, <u>it must be controllable</u>. This point cannot be over emphasized. In dune areas lacking abundant natural barriers, the mobility and range of ORVs are important considerations.

First, the number of roads that provide conventional access to an area should be small to facilitate complete control. Any more than one

or two access points make management extremely difficult. In the planning of Turkey Bay, access control was very important, and it was limited to one road (McEwen, p. 6). Also, the implementation of temporary contact stations (check booths on access routes) at Pismo Beach helped reduce management problems such as uncontrolled over-crowding and law enforcement (State of California, 1975, p. 48). In area selection, access must be controllable although it may only have to be monitored at certain peak-use periods.

Second, the freedom to traverse a given area is what many ORV recreationalists seek and should be provided for. In beach and dune areas with few functional barriers, this is done best by providing areas rather than trail systems. However, vehicle play should be strictly contained in specified vehicle play areas to limit environmental impacts and incompatibility (regarding noise and esthetics).

The level of management (law enforcement) necessary to patrol a trail system's perimeter as a means of containment is extremely high compared to that for a designated play area. Regarding a vehicle play designation, keeping people on a set of trails is difficult. Thus, the area used for recreational play should be maximized and the management boundary minimized (the area to boundary ratio should be large). This will reduce the management responsibilities and still provide the ORV experience people seek (McEwen, p. 6).

Using natural boundaries that are easily recognized and that functionally limit access further reduce management responsibilities. The ideal boundary is a creek like Ten Mile within the NRA, while the type of boundary to be avoided is a posted line through open sand like the Coos-Douglas County line. In selection of an ORV play area, viable boundaries should be used in conjunction with controlled road access to greatly reduce management responsibilities.

The capacity to control access is important to (1) limit the total number of people into an area at peak-use periods for reasons of safety, public health, resource damage, and law enforcement (i.e. if needed, implement an optimum carrying capacity), (2) obtain accurate user counts, and (3) facilitate distribution of important information (rules, maps, etc.).

2. Access corridor

An access corridor, in reality, constitutes a trail system within beach and dune areas, and thus constitutes a large management boundary that is difficult to maintain. The behavior of the users is critical to keep an access corridor from becoming a play area.

The impact of only a few vehicles disobeying the designation can be great. Thus management may need to be intensive to eliminate depreciative behavior. Vehicle play areas provide for free-sport driving, while access corridors should provide for transportation resulting in minimal environmental impact.

3. Competitive events

Access control is very important at these events to manage crowds in a safe and orderly manner. A clear plan of crowd and access control in an events area is necessary and should be worked out prior to approval of such an event.

D. Staging Area

1. Vehicle play

For a vehicle play area, a simple staging area is necessary. A parking area for conventional two-wheel drive vehicles with ORV trailers is needed, along with adequate litter barrels, a bulletin board to post all needed information (maps, rules, etc.), drinking water and perhaps sanitary facilities. Other facilities such as camping areas are often enjoyed along with the use of an ORV and could be developed as funds permit. Campsites are usually near the staging areas, since they are a natural focal point of activity. Backcountry ORV camping requires policing and maintenance of designated sites, and limitations on the number of campers to avoid land use conflicts (State of California, 1975, p. 53).

2. Access corridor

The only requirements would probably be adequate litter barrels and a bulletin board to post necessary information.

3. Competitive events

Staging areas for a competitive event would refer to the pit area, but the entire layout should be planned with parking, spectator areas, crowd control, etc.

E. Jurisdictional Considerations

The selection of an area for any of the three ORV designations should include analysis of the political and legal responsibilities of the land holding party or parties. In general, fewer agencies simplify management and planning, however, through the management area concept a joint management plan may be developed. Since various agencies have different legal authorities and skills, they may serve to compliment each other, particularly regarding law enforcement and environmental concerns. (For an example see Appendix G). Due to the large impact of ORVs and their potentially damaging effects, management must be in proportion to these problems. Regardless of the number of land holding parties involved, at least one must have the managerial capacity to post, regulate, monitor impacts, and render aid within the area.

F. Adjacent Land Compatibility

Compatibility of all three designations (vehicle play, access, and

competition) to adjacent lands must be considered while planning. Practical concerns are wind and water erosion hazards to nearby land uses or valuable habitat. Perhaps a more common problem is the compatibility of ORV noise to adjacent noise sensitive areas, primarily private residences. Use of ORVs in de facto vehicle play areas results in complaints that affect the public's attitude toward ORV use. Some sand dunes on the coast are privately owned and should be respected. DEQ ambient noise standards for residential areas (noise sensitive property) would apply here (see Appendix E), as would the in-use noise emission standards.

The technical determination of buffer type and size to adequately limit noise from disturbing other areas depends on the topography and on other factors. Therefore, in the planning of any ORV designation, especially a vehicular play area and a competitive events area, DEQ should be consulted for specific technical assistance to ensure that a proper buffer zone is established.

To provide a rough estimate of how far ORV noise can be heard, the following is taken from Harrison's "Off-Road Vehicle Noise Measurements and Effects" (In Chubb, 1973, p. 138). The measurements were made at fifty feet with the vehicle accelerating, using practices proposed or established by the Society of Automotive Engineers (SAE).

> The range of sound levels measured at 50 feet was from 74 dbA [decibles on the A scale] for the quietest all-terrain vehicle (ATV) to 100 dbA for the loudest dune buggy. The real question here, however, is how far will these vehicles be audible above a normal forest background. Using the method developed by Fidel, Piersons, and Bennett of Bolt, Beranek & Newman, we determined that the quietest ATV can be heard from 1,500 feet, while the noisiest dune buggy will be audible for 21,000 feet.
>
> Table I embodies many assumptions, one of which is that the background is approximately 45 dbA. Background levels as low as 11dbA have been measured near Lolo Pass, Montana, a popular snowmobiling area. Low backgrounds, downwind propagation, absence of intervening mountains and trees, etc., all could considerably expand the distances shown. Calculating the detectability distance of a vehicle under forest conditions is very difficult, and involves making assumptions which are justified only some of the time. However, these numbers are generally conservative, and probably represent distances which would not be exceeded in more than 25% of the cases.

TABLE I

	Detectability Distance, ft.		
	Quiet	Average	Loud
Dune buggy	3,200	12,000	21,000
ATV	1,500	4,600	6,200
Snowmobile	4,000	8,000	15,200
Motorcycle	4,000	7,000	11,500

The differences in distance show how important noise standards (mufflers) can be in increasing an ORV's compatibility with adjacent areas. How the ratings: quiet, average, and loud relate to the DEQ standards is not easily determined because different tests are used. DEQ uses the twenty-inch test and Harrison used the fifty-foot test. Assuming DEQ standards are not any quieter than the "quiet" rating, a minimum buffer distance might be, roughly, one mile. To determine buffer size, many factors must be considered; the only reliable way is to seek technical assistance.

VII. MANAGEMENT CONSIDERATIONS

A. User Education

User education is both an immediate and long term solution to most of the problems regarding ORV recreation. An informed user should understand the rules, why they exist, how they relate to the individual, and their costs and their benefits to the individual and to ORV recreation as a whole. Special programs could be developed to promote this understanding and responsible ORV use.

B. Posting ORV Designations

If management plans are to succeed they must be understood by the people they affect. All rules and ORV designations must be readily available in written form, posted, and publicized (this is not directly applicable to competitive events areas). Posting should take place on all key access routes to designated ORV areas (play and access), and within the ORV area as well. At an ORV play area posting should take place at the staging areas or other appropriate focal points. At vehicle access corridors, posting should occur where the corridor begins and at various locations along the way.

The distributed written information should include:

1. The type of area one is entering (ORV play area, ORV access corridor, ORV competitive area).
   a. An explanation of what the designation means and what is expected from the ORV recreationalist in such an area.
   b. Why there is such a designation.
2. A simple map indicating where the designated area is and its boundaries.
3. A list of regulations that apply to the area.
   a. Equipment
   b. Conduct
4. Who enforces the regulations and that violators will be subject to prosecution.

Uniform graphic signs should be used to mark each ORV designation

and all boundaries. These should be developed with the users and all agencies managing ORVs on the Oregon coast (state and national uniformity in this regard would be very useful).

1. Vehicle play

Regarding the nature of a vehicle play area the following must be understood by all recreationalists:

1. This area has been specifically designated as an ORV PLAY AREA for vehicular recreation.
2. An ORV PLAY AREA is a place where you are free to ride anywhere you wish as long as you stay within the area's boundaries and off any vegetation.
3. This area is provided for hill climbs and other active vehicle uses.
4. In some vehicle play areas, pedestrian use may be prohibited; violators could be prosecuted.

2. Access corridor

Regarding an ORV access corridor the following must be understood:

1. This area has been specifically designated as an ORV ACCESS CORRIDOR.
2. An ORV ACCESS CORRIDOR is a designated path through or to areas of interest (to relax, fish, clam, walk, etc.). Vehicle traffic of any kind is allowed only on specifically identified routes.

   These routes must be indicated on a map and be identifiable in the field. The path would not be an official road since in time it would return to a natural state (revegetate). Vehicles would be restricted only to the predetermined and identified routes; no traffic would be allowed on other routes.

3. Any vehicle off a designed route would be subject to a boundary violation and prosecution.

3. Competitive events

Competitive events areas can be managed according to the event and location. Posting should reflect the sponsors plans and regulations.

C. Law Enforcement

Along with education and posting, an active law enforcement program is necessary to make the management plan work. Safety and resource protection are promoted by some regulations and they must be enforced. Management and enforcement should be in proportion to the real and potential problems of a recreational type; enforcement of ORV regulations should be thorough.

Law enforcement would likely come from a federal agency if on federal land or a sheriff's deputy as support, under Public Law 92-82 (see Appendix G). On county or state land the sheriff and state police

would have jurisdiction. The beach is state land and no federal agencies have law enforcement jurisdiction over it, thus, the sheriff or state patrol will need to be included in the law enforcement plan. Basically, the enforcement program would include:

1. Boundary violations
2. Equipment violations
3. Noise violations
4. Operator violations
5. Criminal acts

Law enforcement is expensive but essential in ORV management, because of its extraordinary impact, potential damage of adjacent land, and incompatibility with noise sensitive areas. Planning can effectively reduce the level of management needed but it cannot replace it. Patrolling ORV area boundaries is a big job; self-policing by organized clubs may fulfill a large part of the management requirements.

Self-policing is not law enforcement, but would serve as a monitoring system over ORV activities. ORV clubs could plan and schedule interested people to monitor specific areas on weekends or other peak-use periods. Their function would be, primarily, one of observation and communication. They could encourage compliance with regulations and watch for and report boundary violations. No actual law enforcement would be necessary, but they could serve as a witness and testify as to the violation. Self-policing procedures could be developed and implemented. For example, the volunteer patrols could be linked to sheriff's deputies through citizen band (CB) communications, and if actual enforcement or help of any kind was needed, they could quickly contact the appropriate authorities. This capacity has been demonstrated by ORV recreationalists in search and rescue missions within the dunes. Many of the "rigs" have CB's. Potentially, such volunteer patrols could work in coordination with law enforcement personnel directly or indirectly providing observations and communications. The experience may be positive for the individuals involved, as well as for ORV recreation in general. Since management is necessary and costly, this may provide a substantial part of that management at minimal cost allowing more areas to be open for ORV designation. In special cases, ORV clubs could provide joint assistance in protecting critical habitat areas too. They have the potential to play an active, positive role in recreation management. Their efforts in picking up litter from the back dune areas is a good example.

D. Safety

1. Equipment

To promote public safety, uniform ORV equipment requirements should be adopted and uniformly enforced on all public lands throughout Oregon (better still, nationally). At present, there are state equipment requirements for ORVs only in the NRA (ORS 483.837-483-847) (Appendix D). Those requirements serve as a basis for the following suggestions and specifications:

a. Muffler

A muffler should be required which meets in-use noise emission standards (decible limits) and visual inspection standards. There are already DEQ standards for ORVs in the State (see Appendix E).

Enforcement of DEQ standards will reduce the potential for operator hearing loss. There is considerable literature demonstrating how noise can have an effect on hearing. Evidence indicates hearing loss can result from the operation of an ORV (snowmobile) (Bess, 1973, p. 147). Vehicles participating in competition are usually exempt from noise restrictions, but the spectators should be aware of a potential hazard from long exposure to noise. Noise limits may also help increase the compatibility of an ORV area to adjacent land.

b. Flags

All vehicles operating in vehicle play designations should have a flag, especially small vehicles such as three wheelers and motorcycles. This is to increase visibility around blind corners that are everywhere in the dunes. Increased visibility should reduce the likelihood of collisions in heavily used areas. These blind corners and hills are dangerous even when extreme caution is used. The flag must be red and at least eight inches wide on one side and twelve inches long to the other. It should be displayed at least nine feet from the ground level.

c. Brakes

Brakes must be hydraulic, except for motorcycles, and must effectively control at least two rear wheels on three or four wheeled vehicles, and the rear wheel of a two wheeled vehicle. Motorcycle brakes may be mechanical or hydraulic.

d. Seat Belts

All vehicles, except motorcycles, must be equipped with seat belts for each occupant. Seat belts must be of the quick release type and must be securely fastened to a frame member.

e. Roll bar

All vehicles, except motorcycles, must have installed a roll bar or other enclosure that will support the vehicle's weight, and must protect the occupant's head when the vehicle is resting on the roll bar or enclosure.

f. Lights

Every vehicle operating from one-half hour after sunset to one-half hour before sunrise shall be equipped with and display headlights and taillights. Definite specifications should be adopted.

g. Seats

All seats must be securely mounted.

h. Fire extinquisher

All vehicles, except motorcycles, must be equipped with a functional, dry chemical-type fire extinquisher of at least two pounds. Fire extinquishers must be approved by Underwriters Laboratories or another acceptable testing agency.

i. Chain guide

Any vehicle equipped with a chain shall have a guard designed so that in the event of failure, the chain will remain under the vehicle.

j. Floor pan

All vehicles, except motorcycles, must be equipped with floor pans. Motorcycles must be equipped with foot pegs or the equivalent. Floor pans and foot pegs must be designed so they will keep the driver's and any passenger's feet within the frame or from beneath the vehicle.

k. Fuel tank

All fuel tanks shall be securely mounted and connections kept secure and tight.

l. Windshield wipers

Any vehicle, except motorcycles, equipped with a windshield must have a windshield wiper.

2. Rules of operation

In addition to equipment requirements, operating restrictions should be developed and enforced:

a. Prohibit the operation of an ORV while under the influence of any drugs and include an open container law.
b. Prohibit the harassment of any wildlife or livestock with an ORV.
c. Prohibit boundary violations.
d. In access corridors, establish a maximum speed limit of 15 mph whenever a pedestrian is present and 25 mph when they are not present; the speeds should be lower if the conditions warrant it. This is consistent with the concept of an access corridor and will provide vehicle access, greater compatibility, and safety for all recreationalists. This is especially important on beaches where both vehicles and pedestrians are allowed.
3. A junior operator's education and certification program could be developed similar to the hunter safety program and snowmobile program.

3. ORV designation

Understanding the ORV designation system should promote safety. Both pedestrians and vehicle operators should know what to expect while in a given area.

Typically in planning ORV play areas, high pedestrian use areas should be avoided. However, if an ORV play area experiences high levels of use and overlaps with a pedestrian area, pedestrian use should be prohibited and the pedestrian closure enforced.

Generally if pedestrians enter an ORV play area they should be aware vehicles will be present, and it is potentially hazardous. However, ORV operators should always proceed carefully over dunes because either a pedestrian or a vehicle could be hidden on the other side.

In access corridors, pedestrians and ORV users should expect to encounter each other. People should not camp in access corridors such as beaches. If everyone knows where vehicles will be operating accidents will be prevented.

E. Compatibility

1. Adjacent land uses

The compatibility with adjacent land uses is primarily a concern in the planning of an ORV designation (ensuring critical habitats were avoided, erosion hazards were considered, noise buffers were established, etc.). Thus, management can only be an extension of the overall plan ensuring ORVs stay in the appropriate areas. Enforcement of the boundaries and noise limits are the most practical follow-ups to ensure an ORV designation is compatible.

2. User compatibility

The compatibility of different user groups, primarily motorized and non-motorized, is a concern. Differences in esthetic values and the types of recreational experiences sought result in what is often called user conflict. The only practical solution to this problem is to provide some areas that meet specific recreational needs. Heavy use in ORV play areas functionally exclude other types of recreation. Sand Lake in Tillamook County is an example. The area's heavy traffic, high speeds, and noise make it primarily suitable for ORV activities. Specific play areas should be designated and maintained for such recreation. On the other hand, areas without any ORVs should be established to offer an environment free from the noise and the reminders of machines. Thus, separation and clear posting of the designations will inform people what to expect in a given area. This will reduce disappointment for those who seek specific recreational experiences.

If people wish to test their vehicles and drive actively, then they should go to a designated ORV play area. Likewise, if people seek a quiet natural setting free from machines, then they should go to such an area. Separation will work, but what proportions will be allotted to various groups? Allottment may be based on: (1) the area needed for the given recreational experience, (2) the relative numbers

of individuals seeking the given recreational experience, (3) the overall environmental impact of the activity, and (4) the availability of land (which is finite).

Also, some unique recreation areas probably cannot be divided so specific interests may have to give way to more general interests. For instance, an ORV play area would be typically unsuitable for an area used for many other activities, while an access corridor may be suitable. However, multiple use of all land is not feasible since it does not provide the specific experiences sought by motorized and non-motorized recreationalists.

F. Environmental Monitoring Plan

Since ORV recreation is mechanized, it must be carefully monitored to determine what environmental impacts are taking place. This could be done in detail with scientific studies starting with baseline data from a thorough inventory or perhaps a simple and less expensive approach could be used.

The most basic concerns would be shifts in wildlife populations and changes in vegetation. True baseline data for areas already ORV impacted are difficult to obtain, but data from present inventories and academic research should be of some use. Monitoring census statistics and distribution is a big job but an effective effort must be made.

To monitor changes in vegetation destruction and dune migration, yearly comparisons of aerial photographs would be easy and effective. It would illustrate major changes in vegetation patterns and the resulting erosion. This would also show if boundaries were being observed, particularly in access corridors. Sources of aerial photos could include the Oregon Department of Transportation and the Environmental Remote Sensing Applications Laboratory (ERSAL) at Oregon State University.

Based on aerial photos and field observations effective changes in management strategy and boundaries could be made, as well as an overall assessment of management effectiveness. Development of such a monitoring program is necessary prior to the designation of an ORV area. In this regard, a joint management plan could prove useful to obtain biological expertise from one of the agencies involved. By Executive Order (Nixon, 1972) all federal agencies, including the U.S. Forest Service, must monitor the effects of ORVs on lands within their jurisdiction.

G. Special Events Permits

Special events permits for organized ORV events such as sand drag-races on public property usually address the issues of liability, performance, and planning. This discussion only suggests what some permits include--legal counsel and persons knowledgeable about insurance should be contacted if a permit is to be issued. (See Appendix G for an example).

1. Liability

The land holding party should be indemnified against all damages (to property and life). This could include naming the land holding party as a co-insured party. The land holding party should require sufficient insurance be held by the event's sponsor to cover any damages resulting from the event.

2. Performance

A performance guarantee should be obtained from the event's sponsor perhaps as a bond or security deposit. If the sponsor fails to carry out the tasks agreed to, then the land holding party would use the deposit to carry out the tasks neglected. Trash removal, restoration of stabilizing vegetation, etc., can be expensive.

3. Adjacent land

If an event is to occur, the adjacent land uses should be given consideration. Specifically, private land and residences must be protected from trespass and nuisance acts.

4. Events plan

A complete plan for the event should be required. It should describe in detail provisions for access control, parking, crowd control, sanitation, security, cleanup, distribution of regulations and other information, fire prevention, and a mapped site plan.

5. Requirement deadlines

Planning should be done well in advance, prior to the granting of formal approval. The land holding party should allow ample time to review the sponsor's plan and suggest additions or deletions to it.

VIII. SAND LAKE

A. Background and Analysis

Sand Lake is a small undeveloped estuary twelve miles southwest of Tillamook, Oregon. There exists an open sand area of roughly 1.5 square miles and most of it is heavily used as an ORV play area. The use has grown rapidly in the past few years, however, user counts are not available from the Unites States Forest Service. The Forest Service administers the campground and adjoining federal land.

Numerous problems have developed which reach crisis proportions on major three-day weekends. How these problems relate to the comprehensive planning process and to ORV management in general make Sand Lake an excellent example on which to focus.

Sand Lake exhibits the classic problems: (1) extreme over use, (2) significant environmental impact, (3) multi-jurisdictional area, (4) incompatibility with adjacent lands, and (5) requirements to comply with LCDC's goals. These problems can be categorized as either a management problem or a legal policy problem, although the two are related.

The management problem consists of the first four topics listed above. However, the most fundamental issue is simply -- severe over use. User demand far exceeds the limited open sand area because of Sand Lake's proximity to Portland and other major urban centers. It is the only recognized ORV area on the northern half of the coast, so use in this region is focused at Sand Lake.

In such over-crowded conditions, impact can be expected to be extraordinarily great. Vehicles are not limited to the truly open sand areas. ORV use has destroyed large areas of vegetation and cut deeply in the foredune and dune hummocks, reducing the latter to small barren sand mounds that will erode leaving just sand (see Figures 4 and 5). Perhaps the two bowls and other open sand areas are insufficient in size and topography to satisfy the users. A balance must be reached when demand reaches the limit of the resource or when user satisfaction declines. Satisfaction for some users has declined at Sand Lake as evidenced by ORV club members speaking of it as a "no man's land" filled with the "crazies" on three-day weekends.

If it is a no man's land, where are the land agencies and an enforcement program? They are outnumbered and doing what is possible within the limits of human safety to enforce the regulations. Typically, this is Forest Service personnel supported by the Tillamook County Sheriff's Department under a special agreement (see Appendix G).

There are really two sets of jurisdictions at Sand Lake--the land holding agencies and the users. The land holding agencies are the Forest Service, the State of Oregon and Tillamook County (see Figure 6). The county land lies between the State beach on the west and the Forest Service's campground on the east and extends north across Galloway Road for some distance. ORVs freely traverse all three lands.

Regarding the users, there is the public using the general facilities and there is the Northwest Trail and Dune Association. The Association is highly organized and has a special use license to hold up to seven drag races (sand drags) between April 1 and October 15 through 1983. The agreement was entered into by the Commissioners of Tillamook County in March of 1978 (see Appendix H).

In addition there are private residences along the eastern perimeter that report trespass and various types of abuse from some ORV users (see Appendix I) and feel the vegetation destruction is a threat to their property. Much of the stabilizing vegetation in the

Figure 4. Dune hummock cut on all sides by ORVs at Sand Lake, Tillamook County, Oregon.

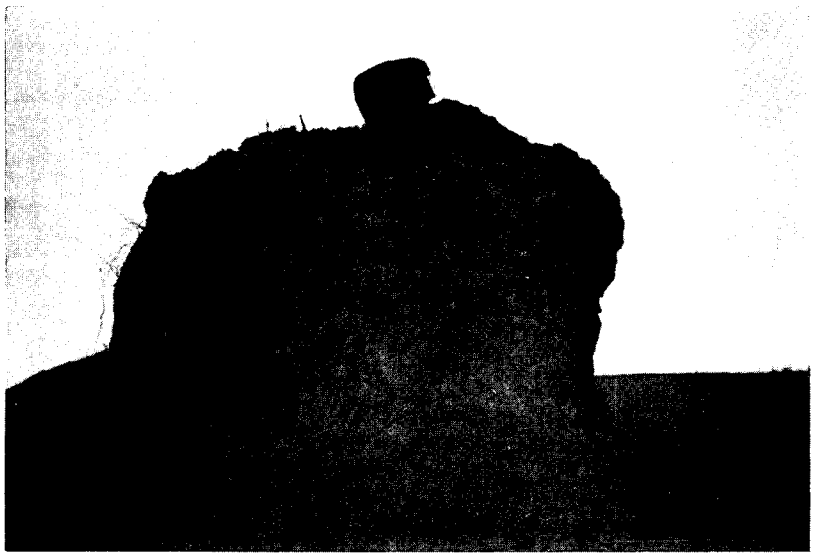


Figure 5. A barren sand mound cut by ORVs at Sand Lake. The black object is a 135 mm camera case.

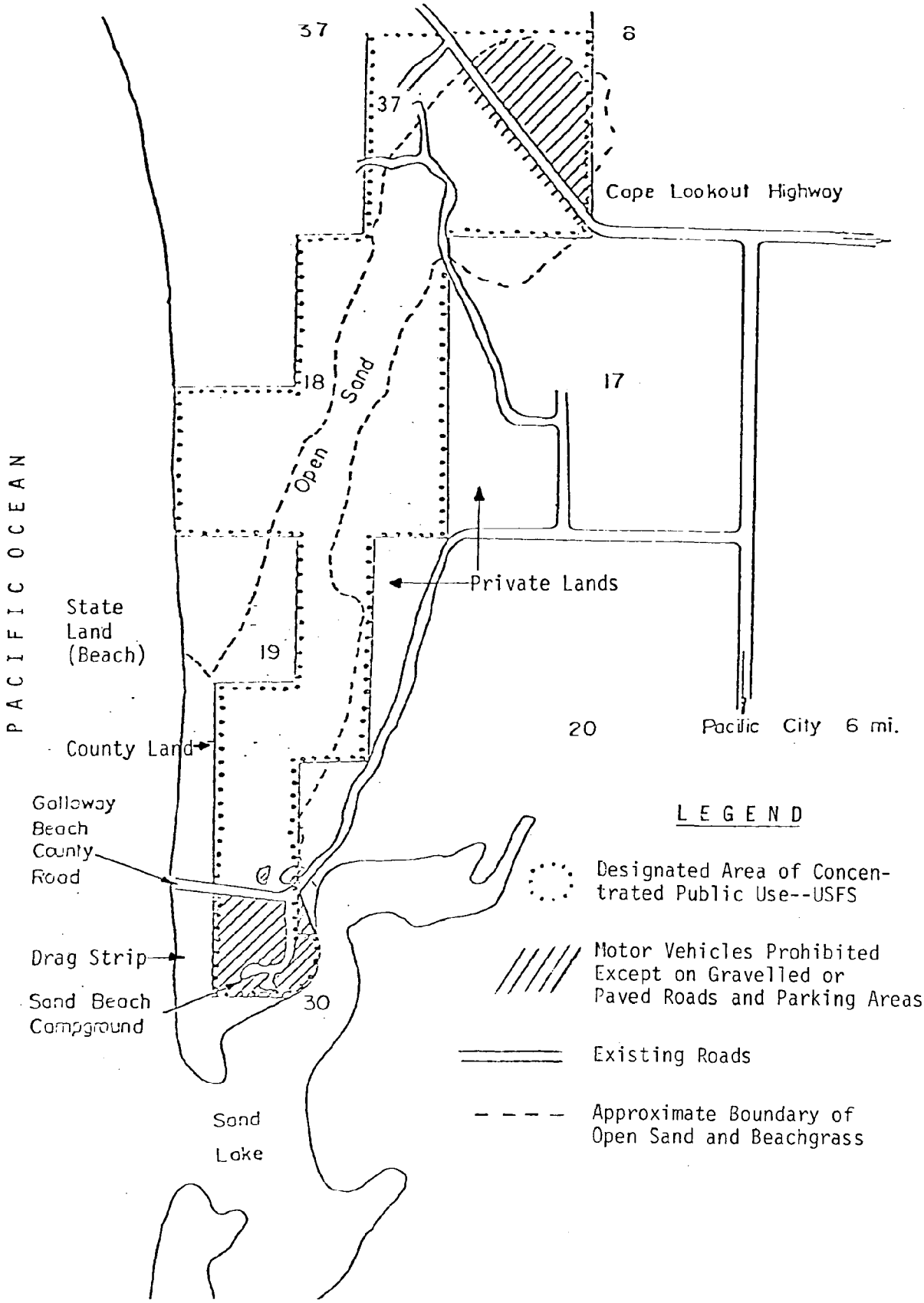


Figure 6. A map of the Sand Lake Dunes Area illustrating areas of concentrated public use, and areas of regulated cross country motor vehicle travel. Map also illustrates the various land holding agencies in the Dunes Area--U. S. Forest Service, the State of Oregon, Tillamook County and private land owners.
Source - U.S. Forest Service

area, planted at considerable public expense during the 1930's, has been allowed to be destroyed by sanctioned ORV use (Ternyik, 1978). Fire associated with ORV dune camping and vehicle operation is a potential threat to the security of these private lands.

Also, there is a question of dune migration onto these private lands. A soils report by the Forest Service (Bush, 1976) indicates vegetation will continue to take over the open sand, and the effect of ORVs is merely to alter the vegetation's appearance, not significantly changing its rate of encroachment. The active sand migration is not mentioned as a threat to the nearby private land. Ternyik (1978) indicates sand migration may be a threat to these lands.

In addition to all the parties involved (federal, state, county, private land owners, a private club, and the general public) is the issue of compliance with LCDC's land use goals. The Beaches and Dunes, Estuarine, Coastal Shorelands, and Recreation Goals directly apply. They must be dovetailed to produce a viable plan.

Sand Lake is classified as a natural estuary by LCDC; it is one of five in the state. Such a classification determines what activities will be allowed within the estuary. Since it is classified as a natural estuary, only natural management units can be established within it. In establishing these natural management units, the following must be considered: (1) adjacent upland characteristics and existing land uses, and (2) compatibility with adjacent uses, according to the Estuarine Goal. Therefore, an assessment of the upland ORV activities' compatibilities relative to the estuary is necessary.

The uses of a natural estuary are very specific (Administrative Rule Classifying Oregon Estuaries):

> Natural estuaries shall only be used for undeveloped, low intensity, water-dependent recreation; and navigation aids such as beacons and buoys; protection of habitat, nutrient, fish and wildlife and aesthetic resources;

In light of these considerations, the compatibility of the ORV use should be determined. To analyze this problem, two separate criteria may be used: (1) the impact of ORV activities on the ecological processes of the estuary, and (2) the impacts on the natural esthetic resources of the estuary and upland area. It is reasonable to consider only the ecological impacts actually on the estuary which would include upland impacts if they affect the estuary. The ORV impact on the upland area would be a separate issue if it does not directly affect the estuary. The esthetic consideration must be broader including the upland area, since the esthetic perception is impacted by what is seen and heard in the entire area.

ORV activity at Sand Lake is not a single phenomenon. In a compatibility assessment it may be separated into two activities: the

club's drag strip, and the general public's ORV use. The estuarine compatibilities of both are conditional with regard to the ecological impacts, and subjective with regard to the esthetic impacts.

First, consider the drag strip activity and its facilities. The drag strip is located close to the estuary's edge (estimated less than 1,000 feet). There are permanent structures erected--two steel guard rails and a tower. The strip was leveled removing the vegetation and a gravel parking area established. The boundary along Galloway Road has a log barrier built by the club. Many thousands of dollars are invested in the facility. Their races are nationally sanctioned "drags". When the drag strip is not in use, its ecological compatibility is high since there is probably minimal impact on the estuary. The drift log barrier serves to limit ORV access south of Galloway Road toward the estuary. However, the beach provides access onto the foredune, north spit area, and estuary.

On race-weekends the drag strip area is filled with several thousand people. Control of the crowd and their vehicle activities is the condition of compatibility. If ORVs are not operated in or on the shore of the estuary, then there will probably be little direct impact on the estuary. The unrestricted noise and heavy general disturbance of the area would likely add to the disruption of the adjacent nesting snowy plover located on the north spit area during the months of April through June.

Esthetic compatibility on non-event weekends is low due to the presence of the permanent structures and the conspicuous man-made open sand area. The tower is colored with earth-tones making it less conspicuous.

On the race wekends, the esthetic compatibility is extremely low relative to the natural esthetic resources criterion. A drag strip with its hundreds of vehicles and noise are not consistent with a natural setting.

In summary, if the drag races are strictly controlled and occur only at certain times of the year, it may be compatible ecologically but esthetically it is incompatible.

Similar to the club's compatibility is that for the general ORV use. The direct effects on the estuary are potentially less because most of the vehicle activity appears to be north of Galloway Road. However, there is significant ORV use on the foredune south of Galloway Road, on the north spit (may effect the nesting plovers), and sometimes in the estuary. Again, the compatibility is conditional on the restricted use of ORVs in or immediately adjacent to the estuary, which at present is low.

Vehicles, their tracks, and their noise diminish the natural esthetics of the estuary. Also, the upland use of ORVs has resulted

in the highly visable vegetation damage and background noise which are not compatible esthetically.

In conclusion, the drag strip is more compatible than the general ORV area because it better meets the condition of use (no operation of ORVs in or immediately adjacent to the estuary). Presently, the general ORV activity is not a compatible upland use ecologically. During the plover nesting period, both activities are incompatible with the natural estuarine classification which specifically protects all wildlife. Esthetically, both the drag strip and general ORV use are not compatible adjacent land uses.

B. Policy Recommendations: Goal Compliance

To meet the criterion for ecological compatibility, no estuarine impacts should result from ORV use, regardless of the location. It appears this condition can be met if ORV use is limited to the area north of Galloway Road. The drag strip is located on the south side of the road but may be ecologically compatible provided no vehicles (competitive or recreational) operate near the estuary, the crowd is controlled, and no races are held April through June. These suggestions are probably viable means to make each activity ecologically compatible with adjacent land uses.

Esthetically a compatible land use should reflect the same natural esthetic resources of the estuary itself. Both ORV activities fail to do this and are not compatible adjacent land uses.

The intent of the Recreation Goal and the Beaches and Dune Guidelines is to provide for ORV recreation in an "appropriate" location. Sand Lake, in light of the estuarine designation, its implications, and the other problems discussed, is not the best location. However, on the northern half of the coast it provides the only open sand area for ORV recreation. Thus, Sand Lake, in spite of its multitude of problems, is fulfilling a recreational need.

Sand Lake provides a regionally unique recreational and ecological experience within Oregon. If the ORV area is brought into compliance as a compatible adjacent land use ecologically and no permanent land committment is made to ORV recreation, Sand Lake should remain open as a designated ORV area (including the appropriate vehicle play areas and access corridors) for an interim period of several years. This does not reconcile the non-compliance on the basis of esthetic compatibility. The value ecologically and esthetically of Sand Lake will increase dramatically as the number of natural areas diminish in the future. Therefore, over the interim period, an alternate site for a major ORV park should be developed near the major metropolitan areas. Ultimately, ORV use at Sand Lake should be phased out.

Regarding the Northwest Trail and Dune Association's drag strip, it is in reality a regular drag strip and is sanctioned as one. A

specialized use on unique public land which is inconsistent esthetically with a specific land use goal may be inappropriate. The Association has a very good reputation for managing its events and this should be given consideration. However, the nature of the event cannot be changed. It appears reasonable during the interim period to seek a location more suitable for a drag strip nearer a large metropolitan area.

C. Management Recommendations

1. Develop a joint management plan

Develop a joint management plan for the entire area giving consideration to the estuary, federal land, state land (the beaches), county land, and private land. The ORV activities affect all these lands in some way and so the planning and management should encompass the entire area affected. The parties involved in such planning should include the Forest Service, the State, the County, the Northwest Trail and Dune Association, and the local residents. Formation of an advisory council may promote communication and help to provide information during the planning stage.

2. Control all access

Access control during peak-use periods can be used to limit the total number of people in the management area. This will reduce health, safety, environmental impact, compatibility, and law enforcement problems. Derrick Road should be closed as an access route for recreation and the road off the Cape Lookout highway should be closed or at least controlled.

3. Establish a total capacity for the area

Set a total capacity for the management area including federal, state, and county land. A special use permit system could be used to implement it. Permits for peak-use periods would be obtained in advance to secure entry into the area. A fee may or may not be needed. Distribution of permits and other details should be jointly worked out and well publicized in advance.

A set capacity for the general use area and the drag strip area would have to be determined respectively, and their sum would be the total capacity for the area at a given time. If races were not held on major weekends, then the drag strip's capacity could be larger and the total capacity would not be exceeded.

4. County responsibility

The county should be responsible for the provision of water and trash removal for activities it sanctions.

5. Back dune camping restrictions

The number and location of campers should be restricted to prevent damage to vegetation, trespass on adjacent private land, and other problems. Camping should be allowed only in designated areas. It could be located in the "county strip" along the deflation plain and should not be anywhere

on the north and east sides of the open sand areas near private land. Such restrictions will provide for camping and reduce trash and resource damage problems. Another alternative would be to close the area to overnight camping altogether.

6. Law enforcement

A law enforcement plan should be an integral part of the overall management plan. All lands should be covered through a joint enforcement plan and patrol. The beach and estuary are areas requiring special attention. To manage the resource effectively, a high level of enforcement is necessary. This would include a high enforcement profile on the part of the Forest Service.

7. Beach status

The short stretch of beach from Galloway Road south to the estuary outlet should be closed year around to ORVs and enforced. This will provide a beach area for pedestrian recreationalists to enjoy without vehicles passing immediately by them. The majority of the Sand Lake area is open to ORVs so a small closure for another recreational pursuit seems reasonable. It may promote safety and reduce user conflict.

This closure would protect the estuary from ORV traffic which is a necessary condition for upland ORV use. Regarding erosion, it is advisable to keep vehicles away from the outlet area (Komar, 1978). Also, the snowy plover nests on the spit area and should be protected from disturbance during that period (April through June). Pedestrian disturbance should be discouraged by posting it as a nesting area.

It is a viable closure since the area is readily identifiable (where Galloway Road intersects the beach south to the outlet). It could be posted and enforced. Also, the adjacent foredune should be enforced as a closure forming a viable buffer between the general ORV activity and the estuary.

The protection of the estuary and its wildlife, public safety, and increased user compatibility all warrant this closure. Simply, if this buffer is not established and enforced, ORV activities will continue in and around the estuary which is a violation of the Estuarine Goal.

8. Residential protection

On peak-use weekends a peace officer with the power of arrest should be assigned solely to patrol Galloway and Derrick Roads offering protection to private property against trespass and harassment.

9. ORV practice area

An ORV practice area for children or others learning to operate an ORV should be established. The deflation plain and the small dunes nearby (north Galloway Road and between the foredune and gravel parking area) may be suitable. It is relatively flat, but offers some small

dunes to learn on and is close to the campground so parents can check on their children. This concept is to promote fun for the children, peace of mind for the parents and relative quiet in the campground. Few people enjoy hearing someone drive endlessly through a campground.

10. Environmental monitoring program

A program should be developed that monitors changes in vegetation and sand movement. Aerial photography may be a useful technique. Also the snowy plovers status could be monitored.

IX. COASTAL ORV AREAS

The vast majority of ORV use on the Oregon coast occurs on or within the Oregon Dunes National Recreation Area, Sand Lake in Tillamook County, the north spit of the Coos River and the beaches open to vehicles. The areas described and mapped (by county) are typically those of heavy use and large size. Small, lightly used areas are not generally included, however, they may be significant in regard to erosion (see Maps 1-25).

The areas mapped were identified by one or more methods: aerial photography (from ODOT and ERSAL), a flight from Newport to Brookings, field observations (from vehicles and on foot), and interviews with various ORV clubs.

The topographic maps indicate generally the locations of areas used by ORVs, not necessarily the actual boundaries of such use. The various beach zones are not indicated on the topographic maps. To determine the vehicle status of a beach area refer to the Oregon State Highway Commission's maps. If a beach is open, one can assume it will be used by ORVs to some degree.

Finally, identification of areas suitable for ORV use should be done carefully on a case by case basis including coastal and statewide coordination to balance regional supply with demand. Coastal ORV use should not be totally separated from that of the rest of the state. Presently, there seems to be a need for a major non-coastal ORV area near the large metropolitan areas (Portland area).

Coastal areas that are potentially suitable for an ORV designation, are crosshatched on the topographic maps. The areas identified are already in use with one exception. The mapped areas are not the only open sand areas potentially suitable for an ORV designation. The mapping and determination of ORV access corridors should be done on an individual basis so they are not mapped. The final determinations of ORV designations require careful planning and management decisions locally and regionally that are beyond the scope of this work.

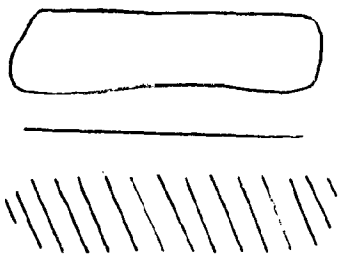
MAPS 1-25

Vehicle Status of the Ocean Shore,

Areas of Present ORV Use, and

Areas Potentially Suitable for ORV Designation by County

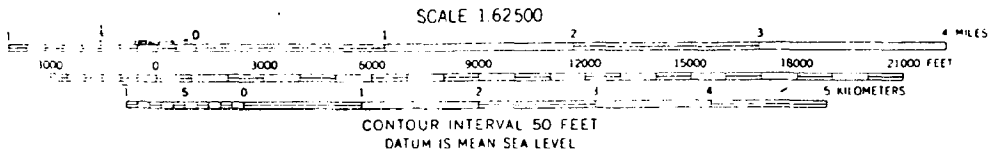
K E Y*



Enclosed areas indicate general ORV use

A single line indicates an ORV trail

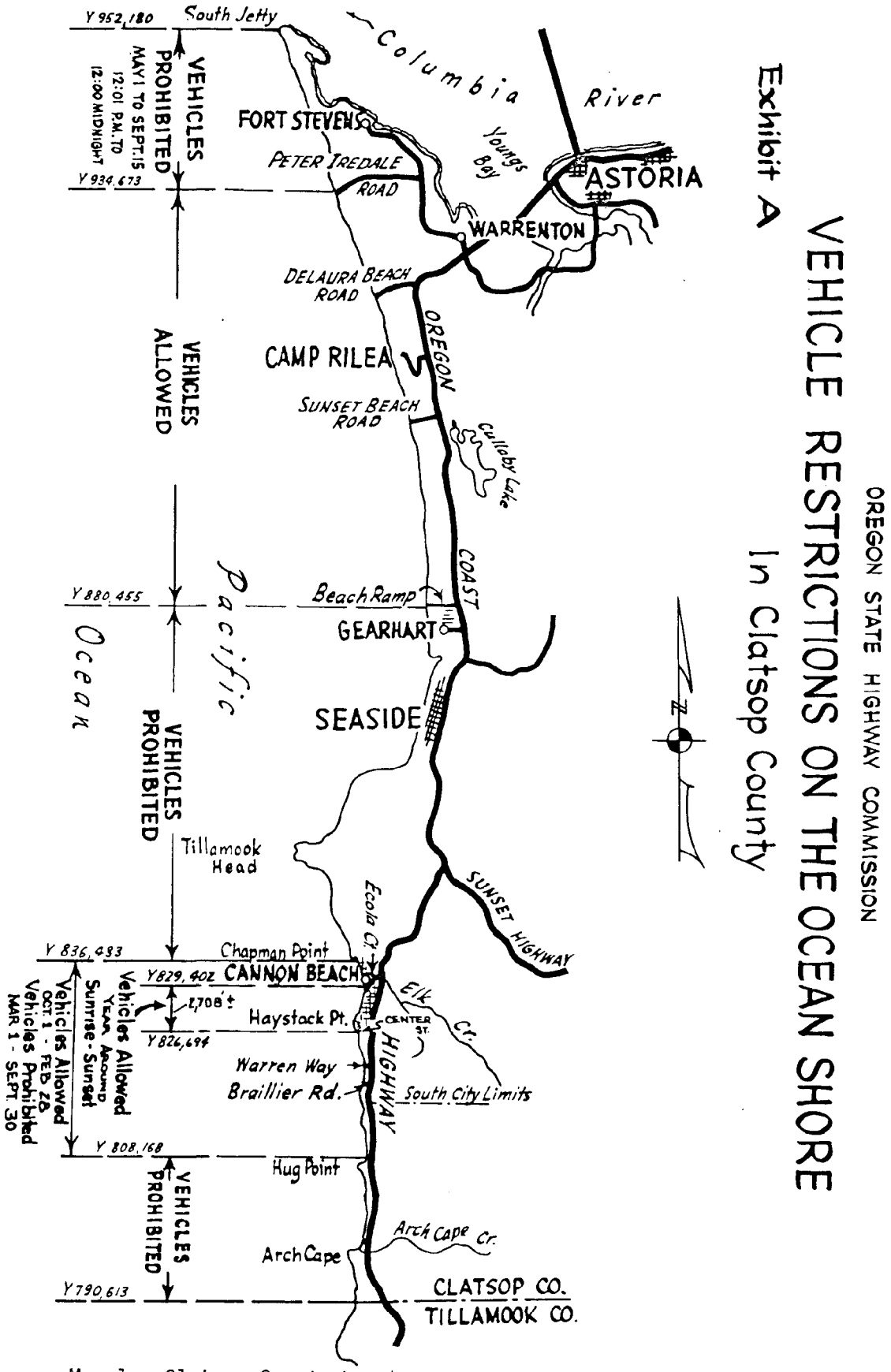
Crosshatching indicates areas potentially suitable for an ORV designation



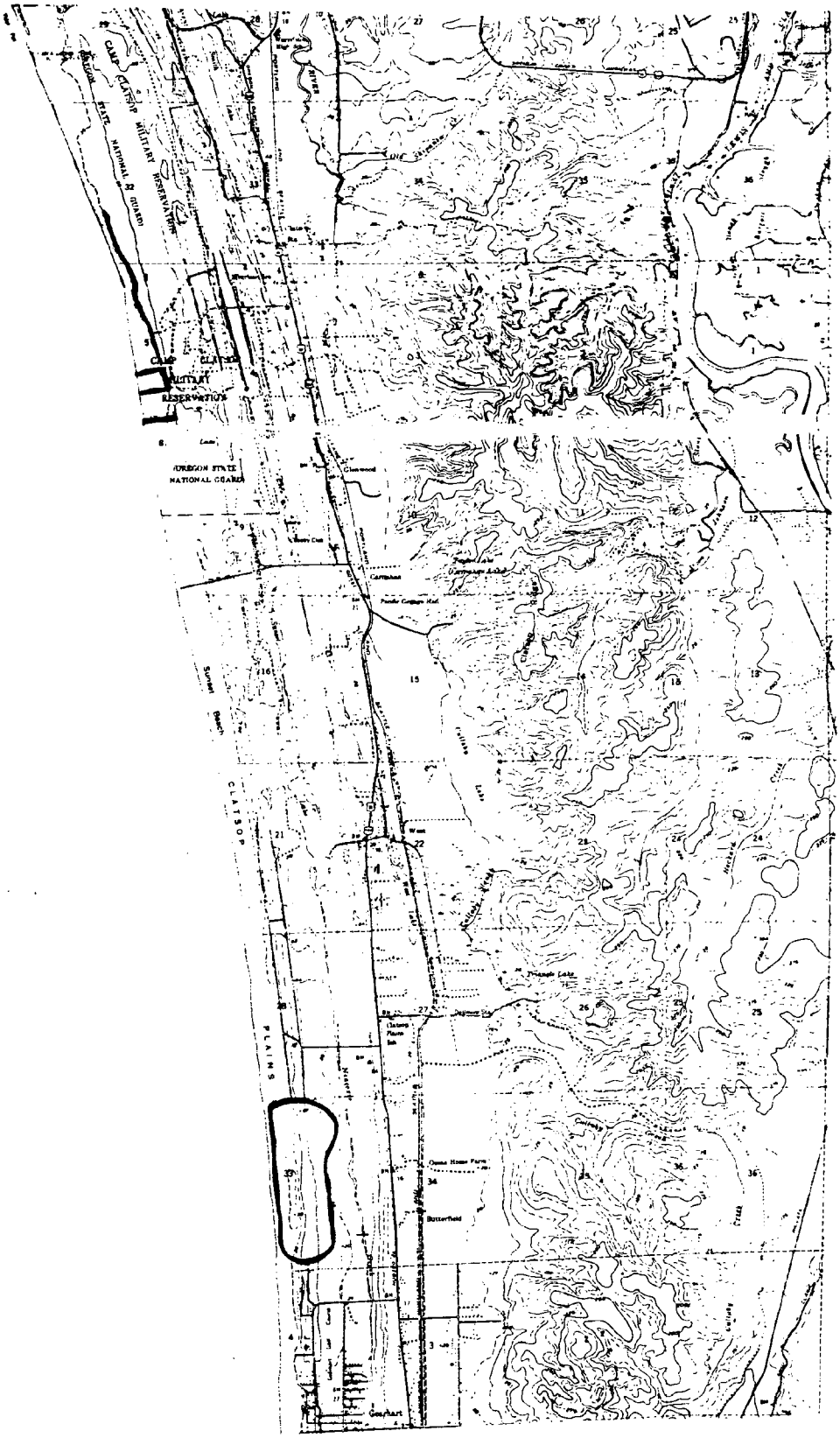
Scale in Miles

*The key and scale in miles applies to the topographic maps.

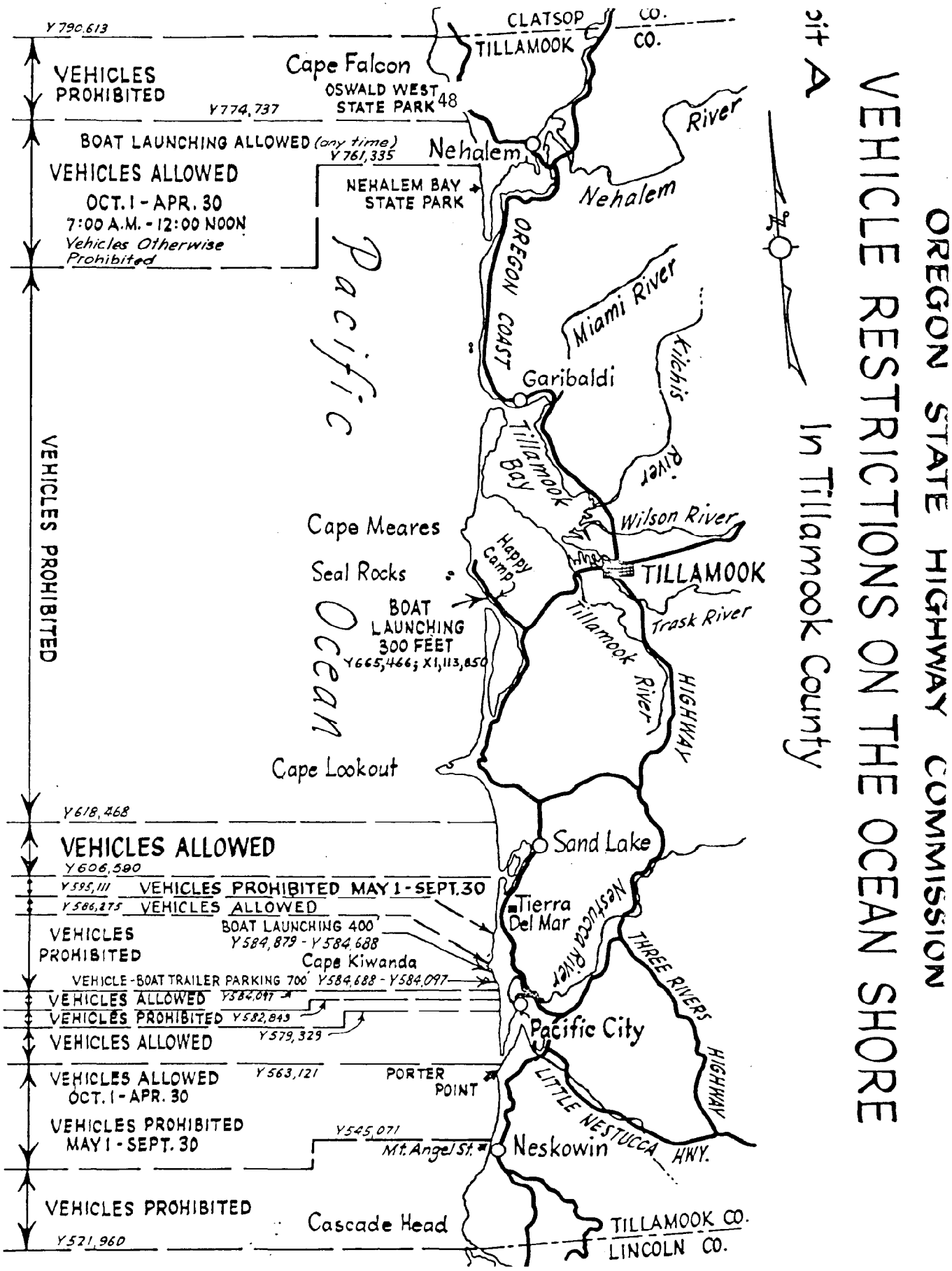
Map Sources: Oregon Coastal Conservation & Development Commission
Oregon State Highway Commission



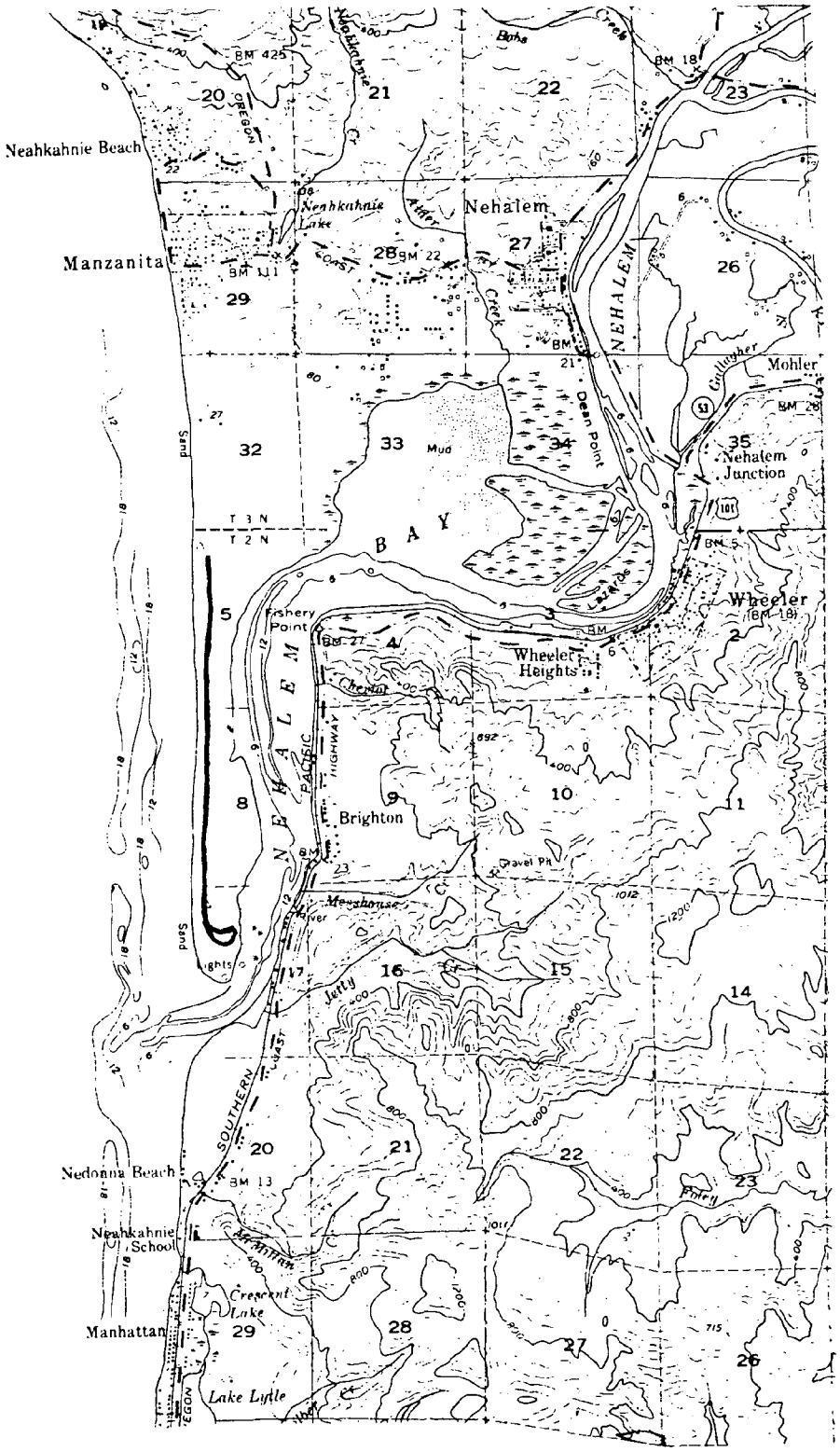
Map 1. Clatsop County beach status.



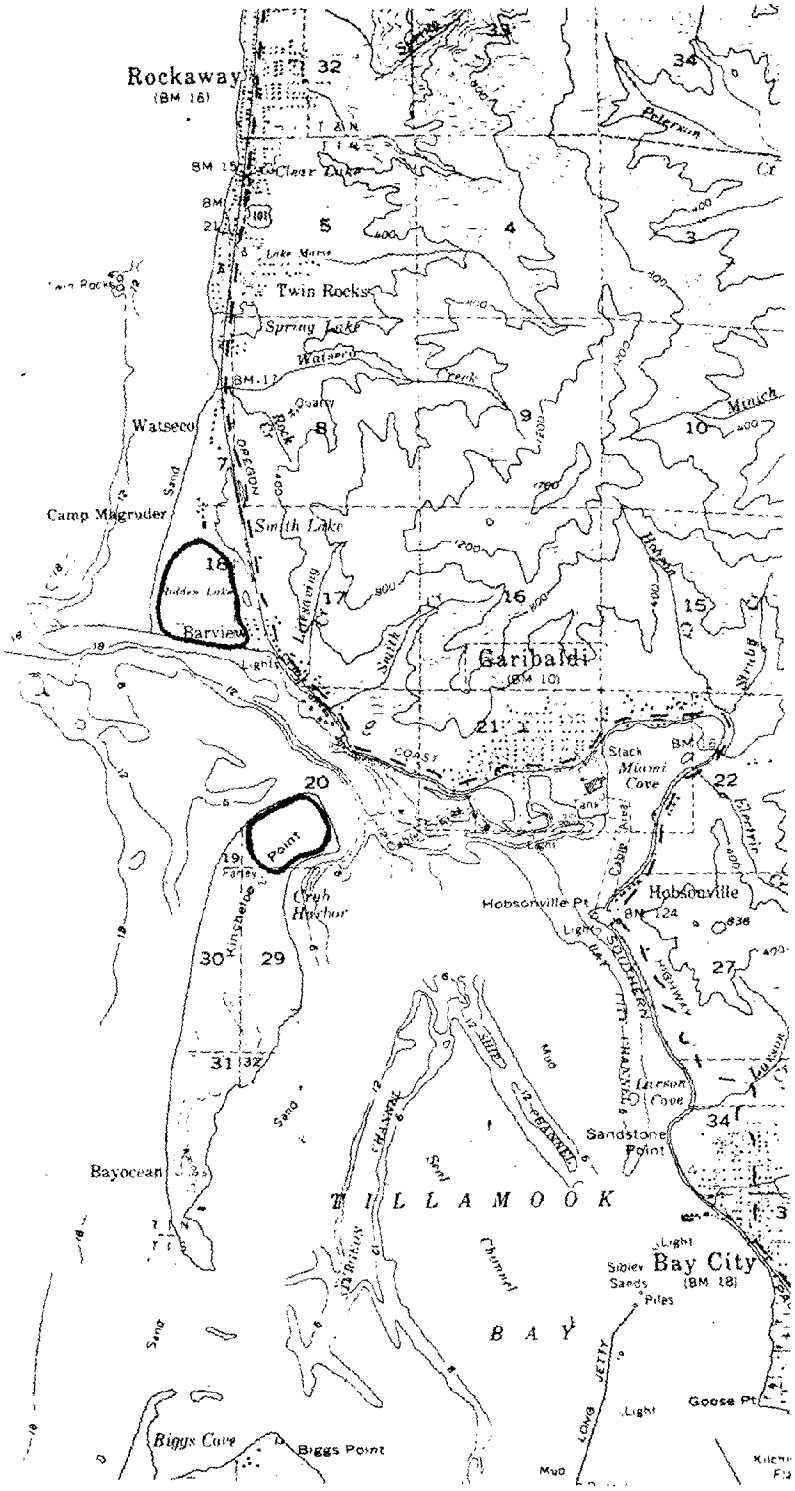
Map 2. ORV use in Clatsop County.



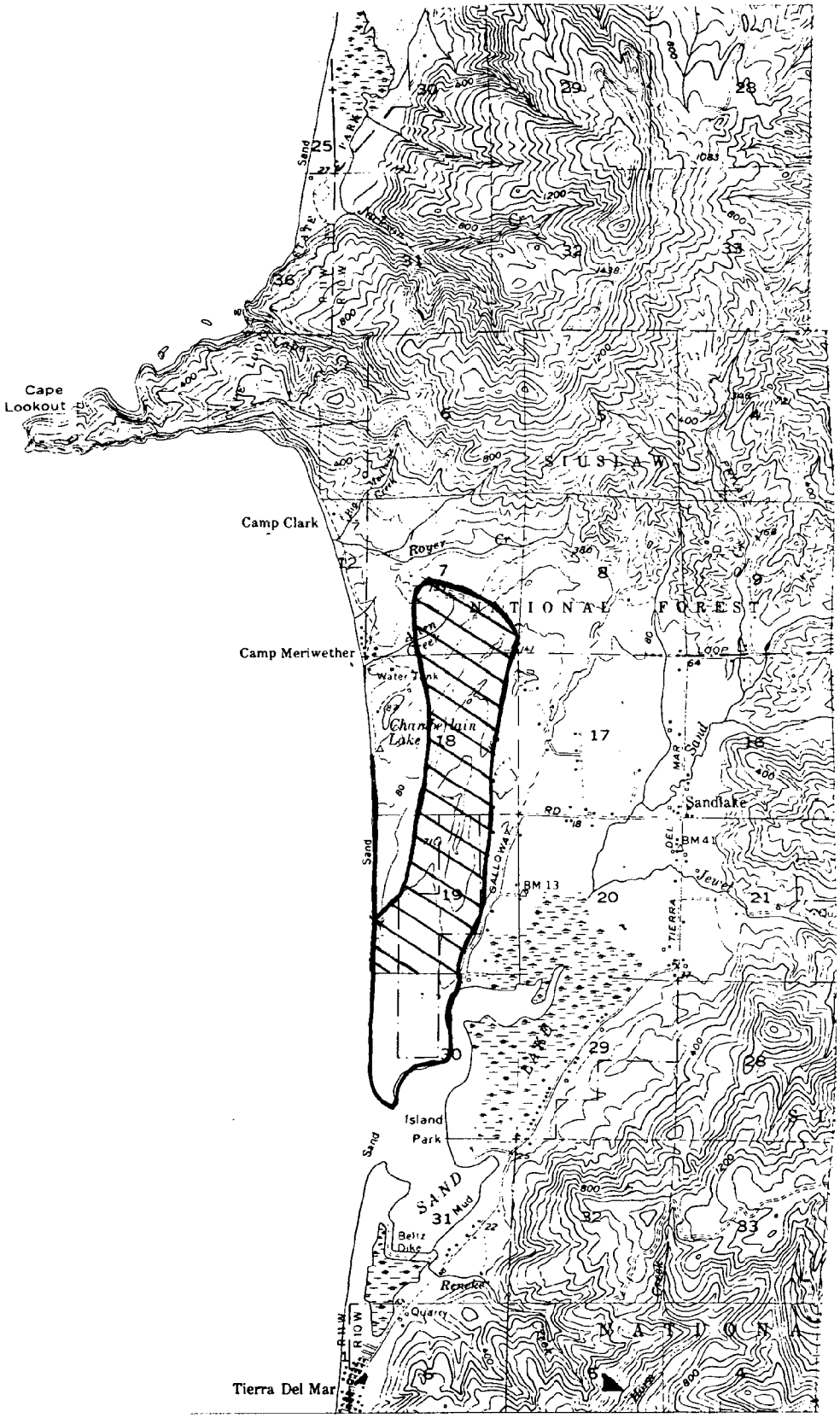
Map 3. Tillamook County beach status.



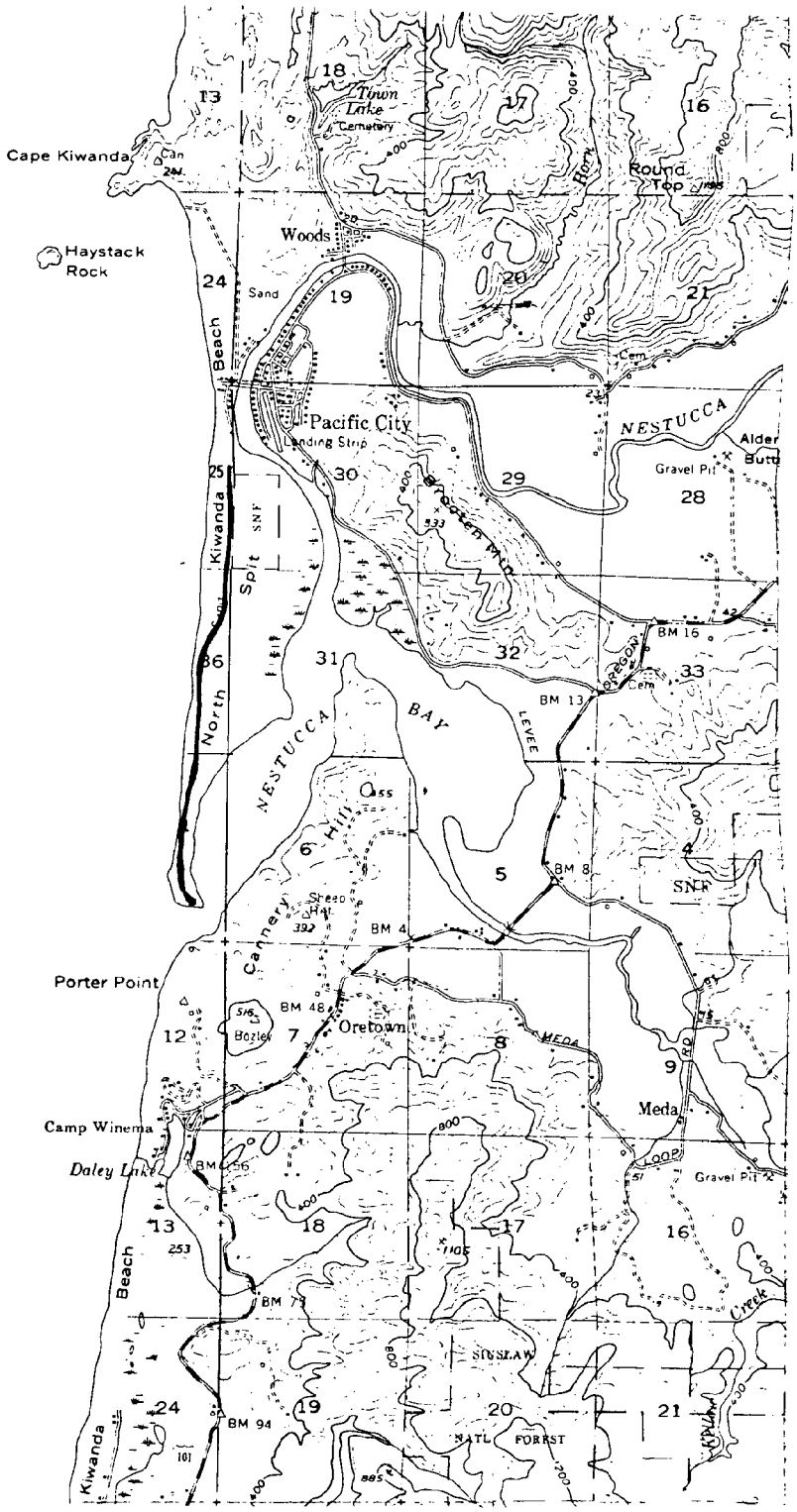
Map 4. ORV use in Tillamook County.



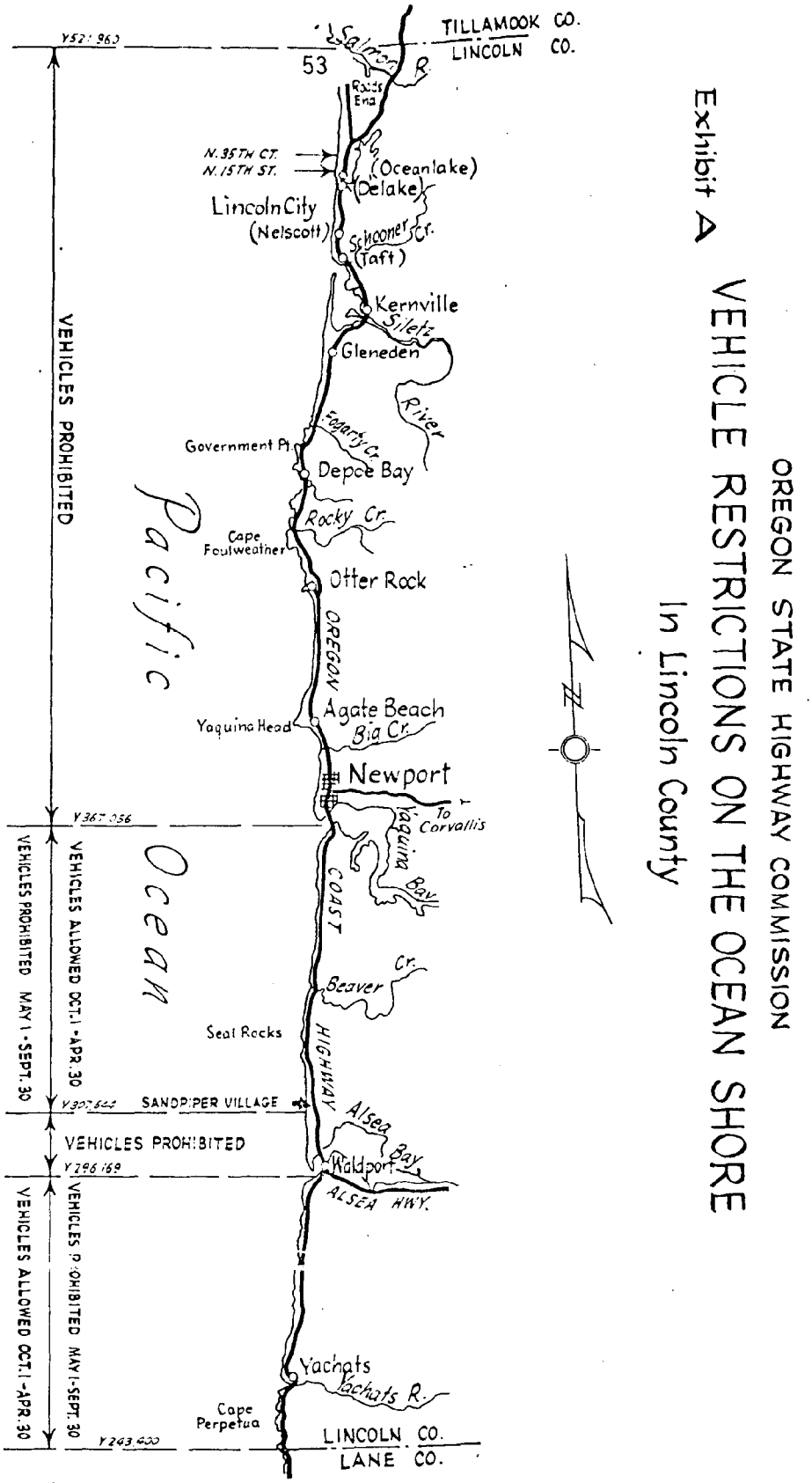
Map 5. ORV use in Tillamook County.



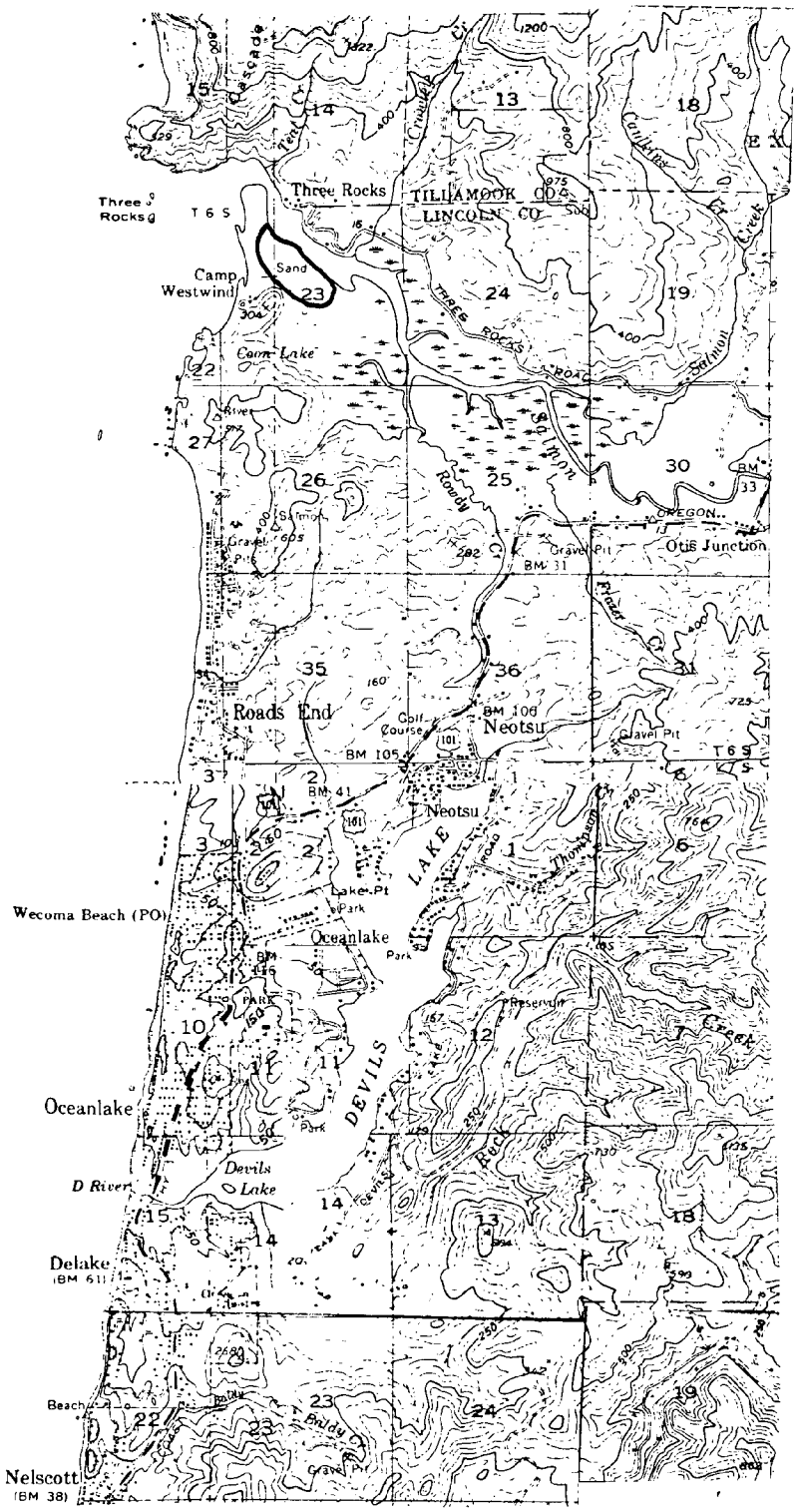
Map 6. ORV areas of use and potential suitability in Tillamook County.



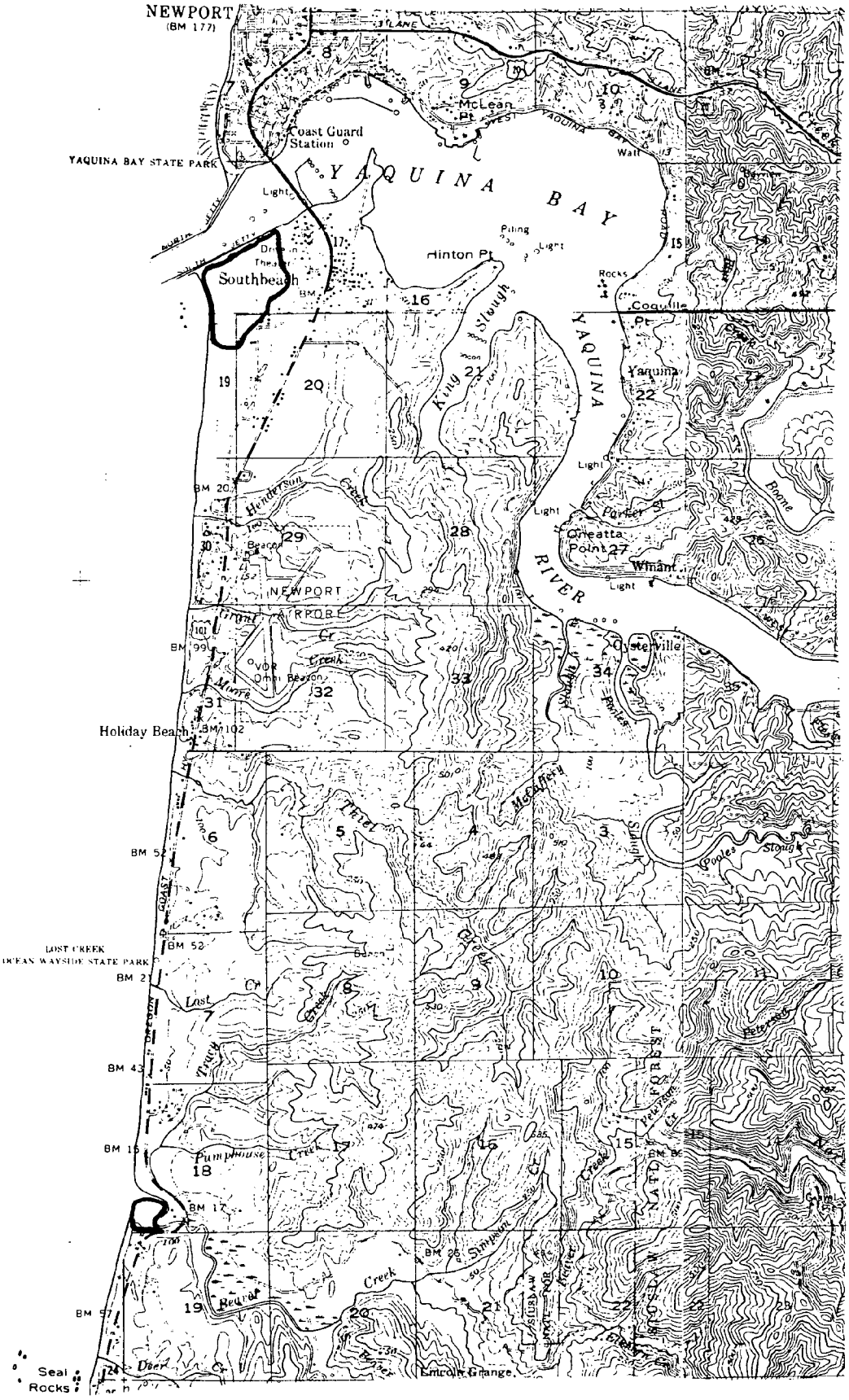
Map 7. ORV use in Tillamook County.



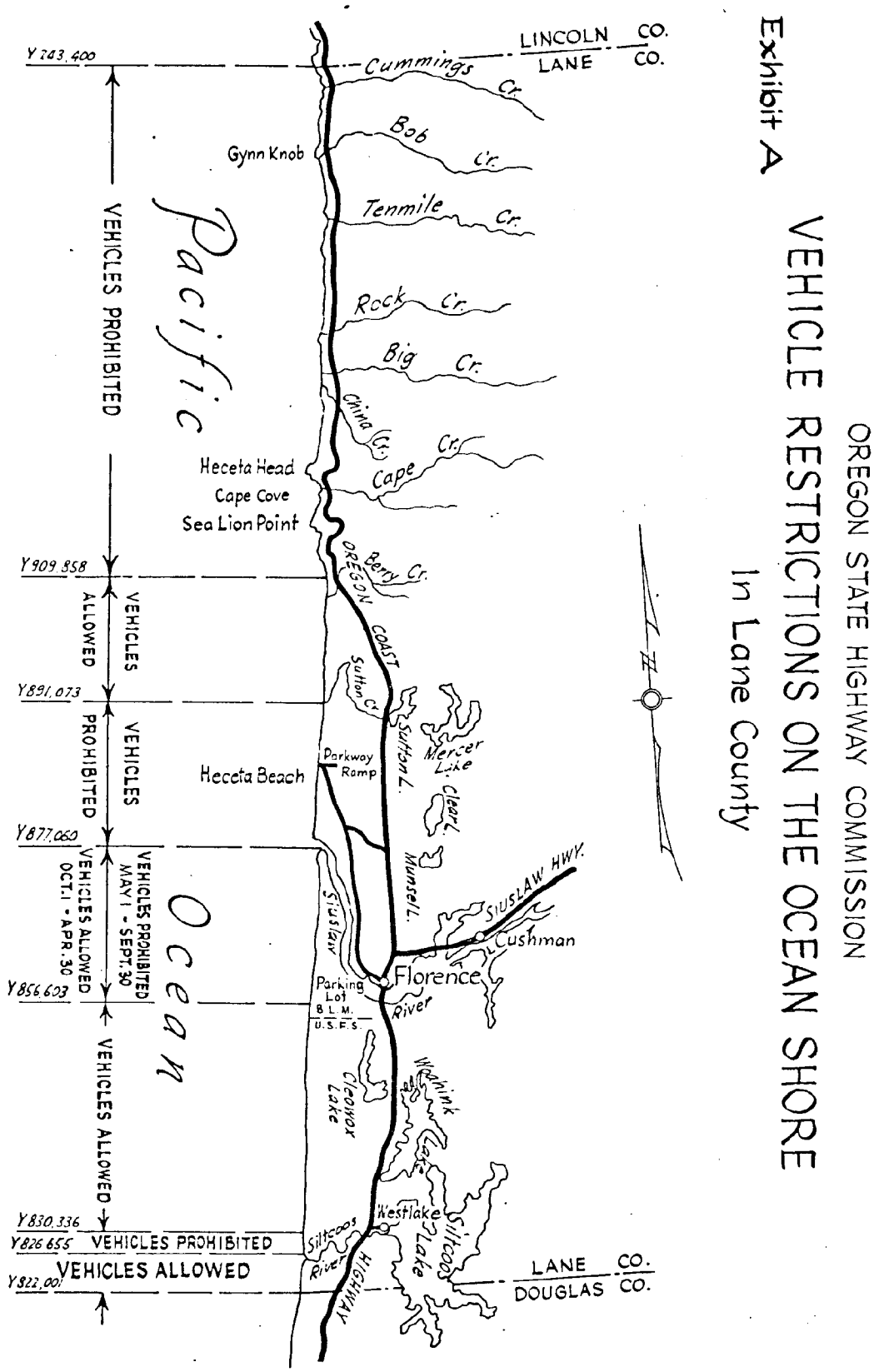
Map 8. Lincoln County beach status.



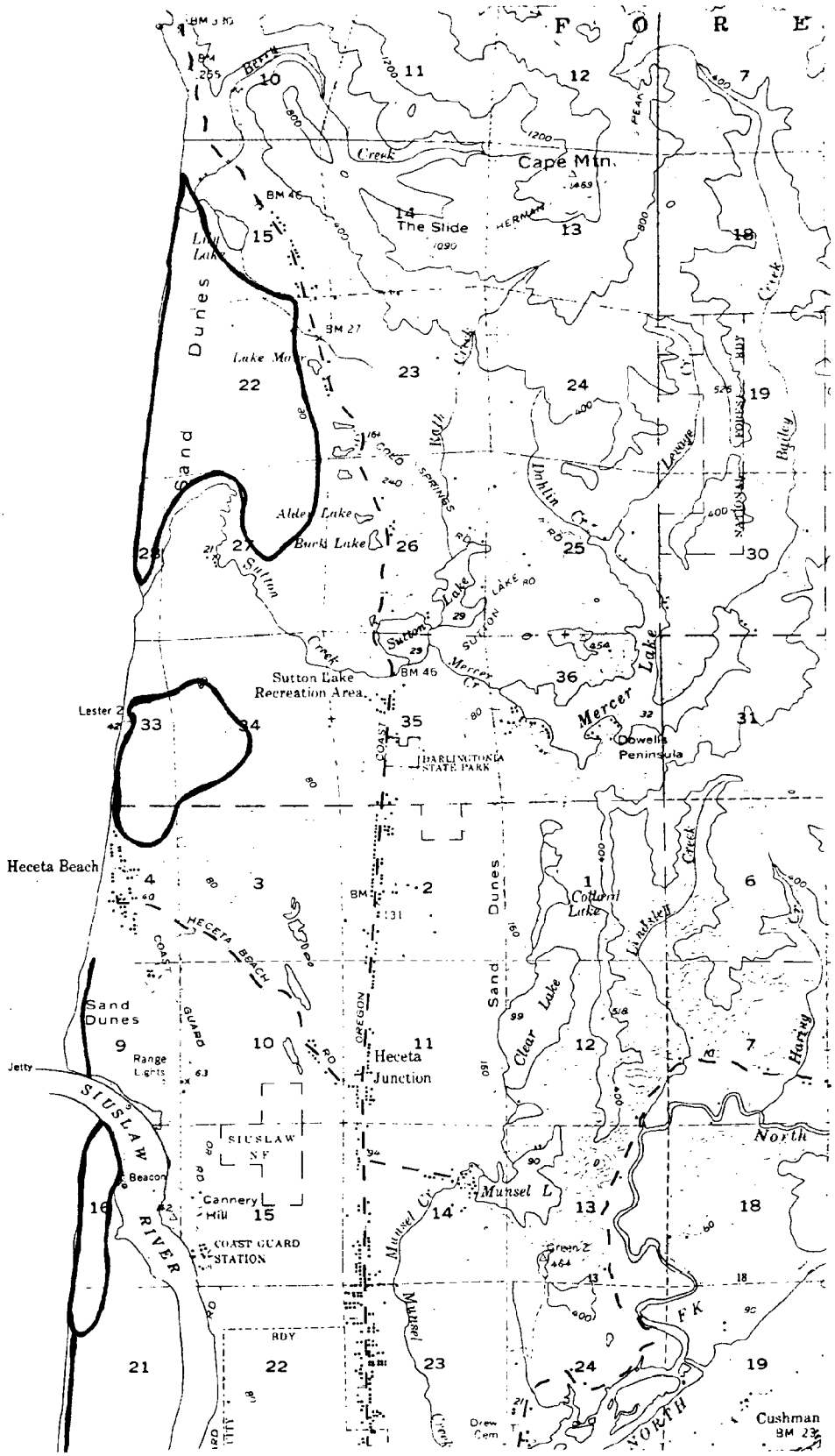
Map 9. ORV use in Lincoln County.



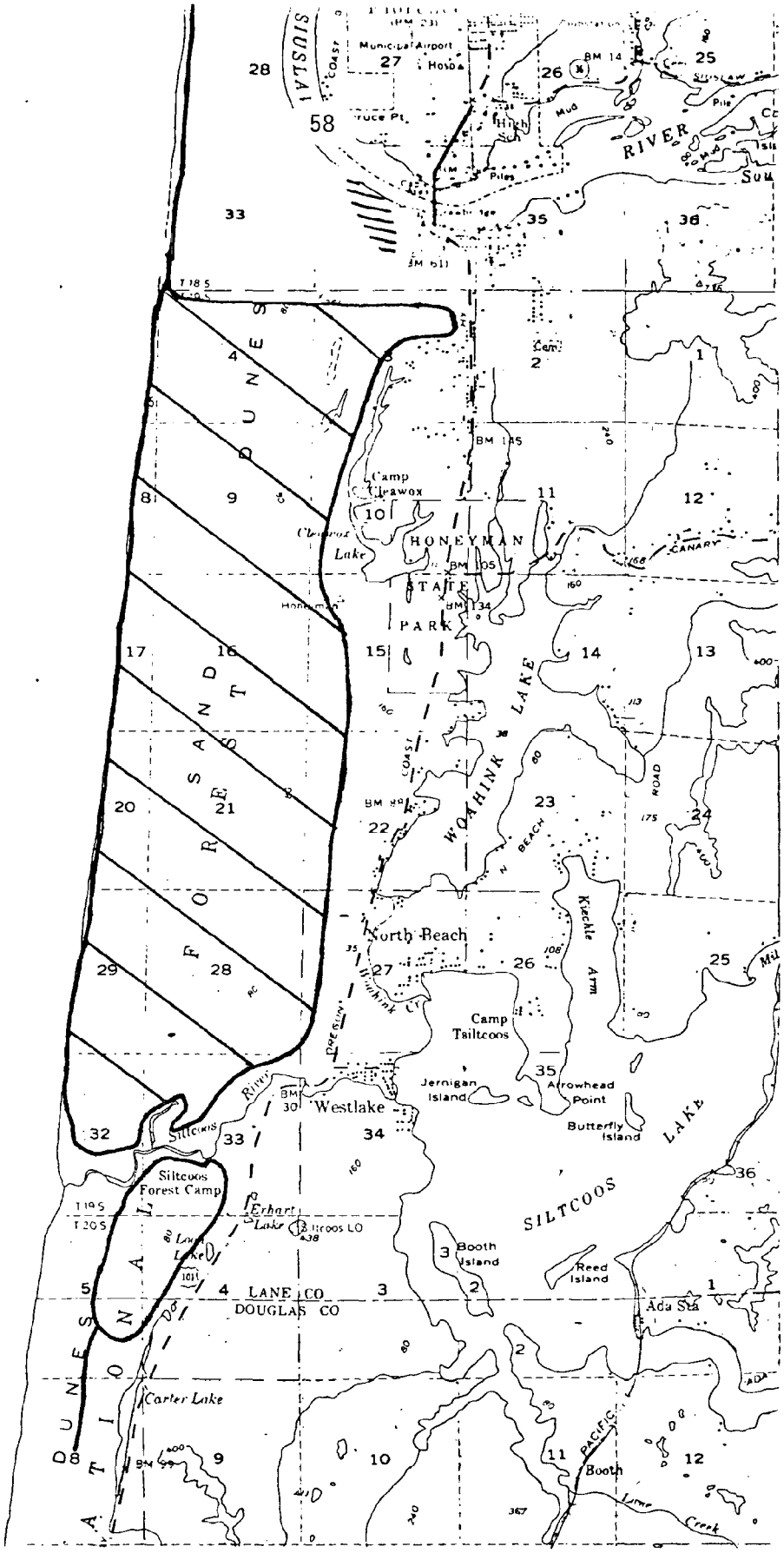
Map 10. ORV use in Lincoln County.



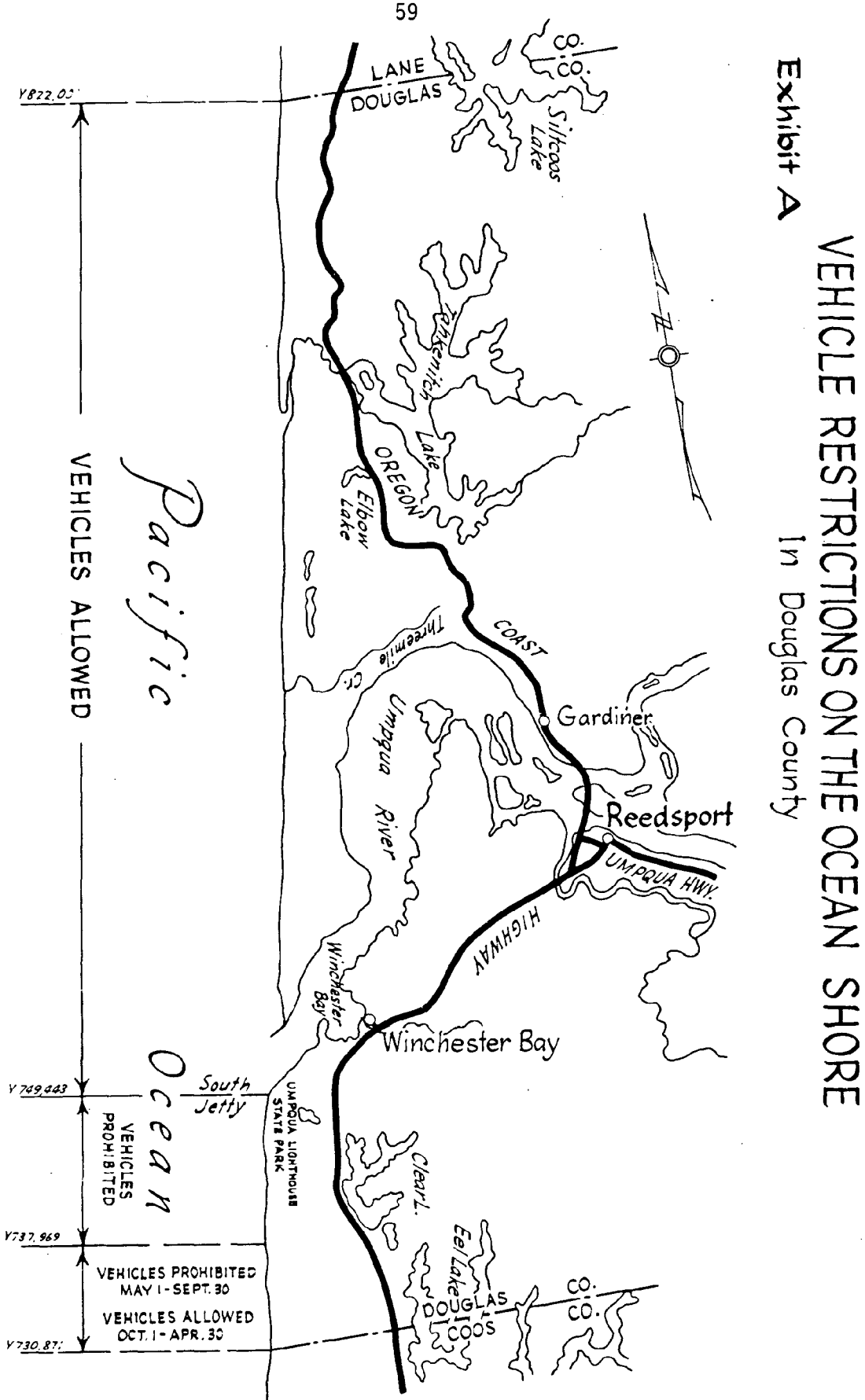
Map 11. Lane County beach status.



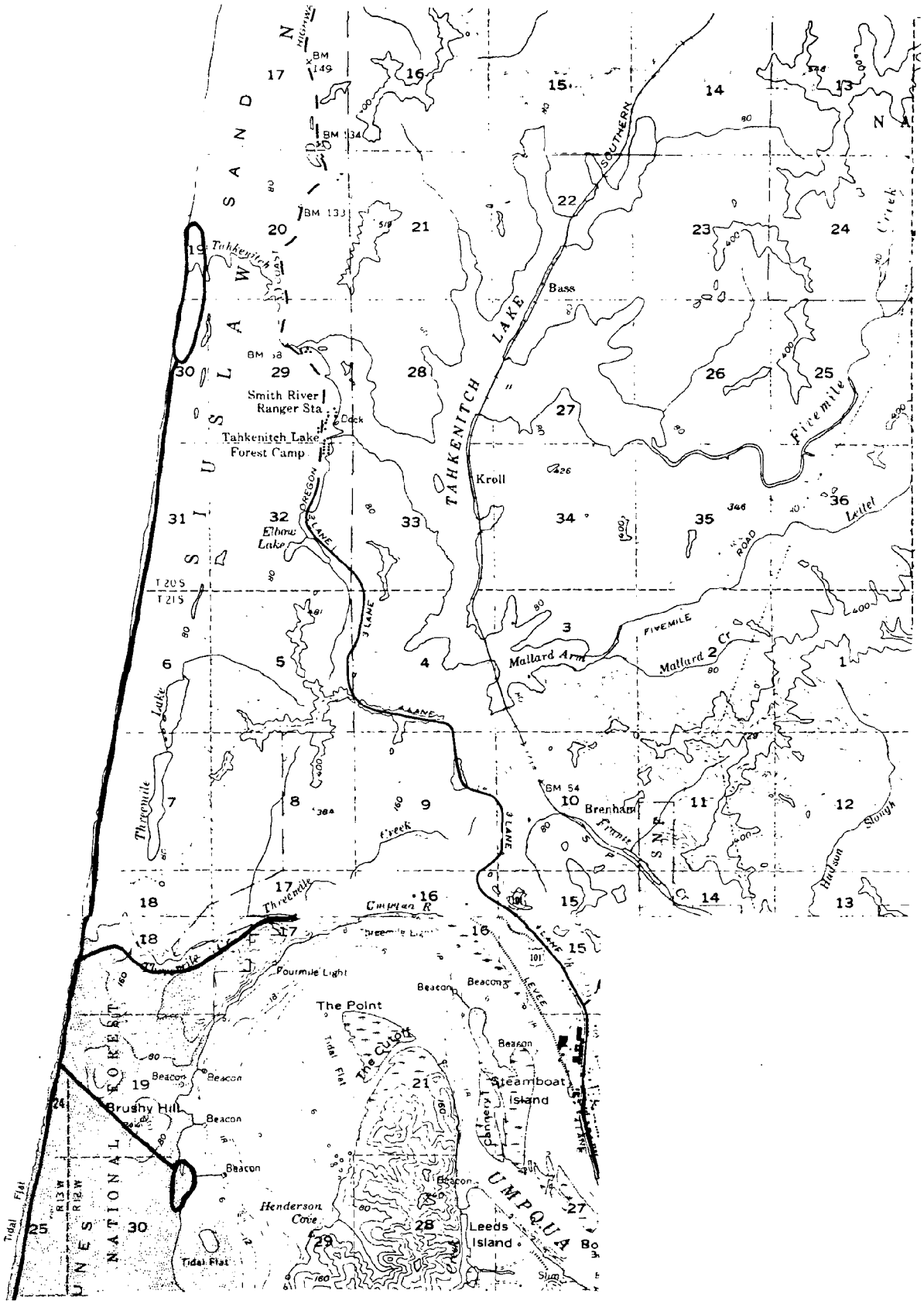
Map 12. ORV use in Lane County.



Map 13. Areas of ORV use and potential suitability in Lane County.



Map 14. Beach status in Douglas County.



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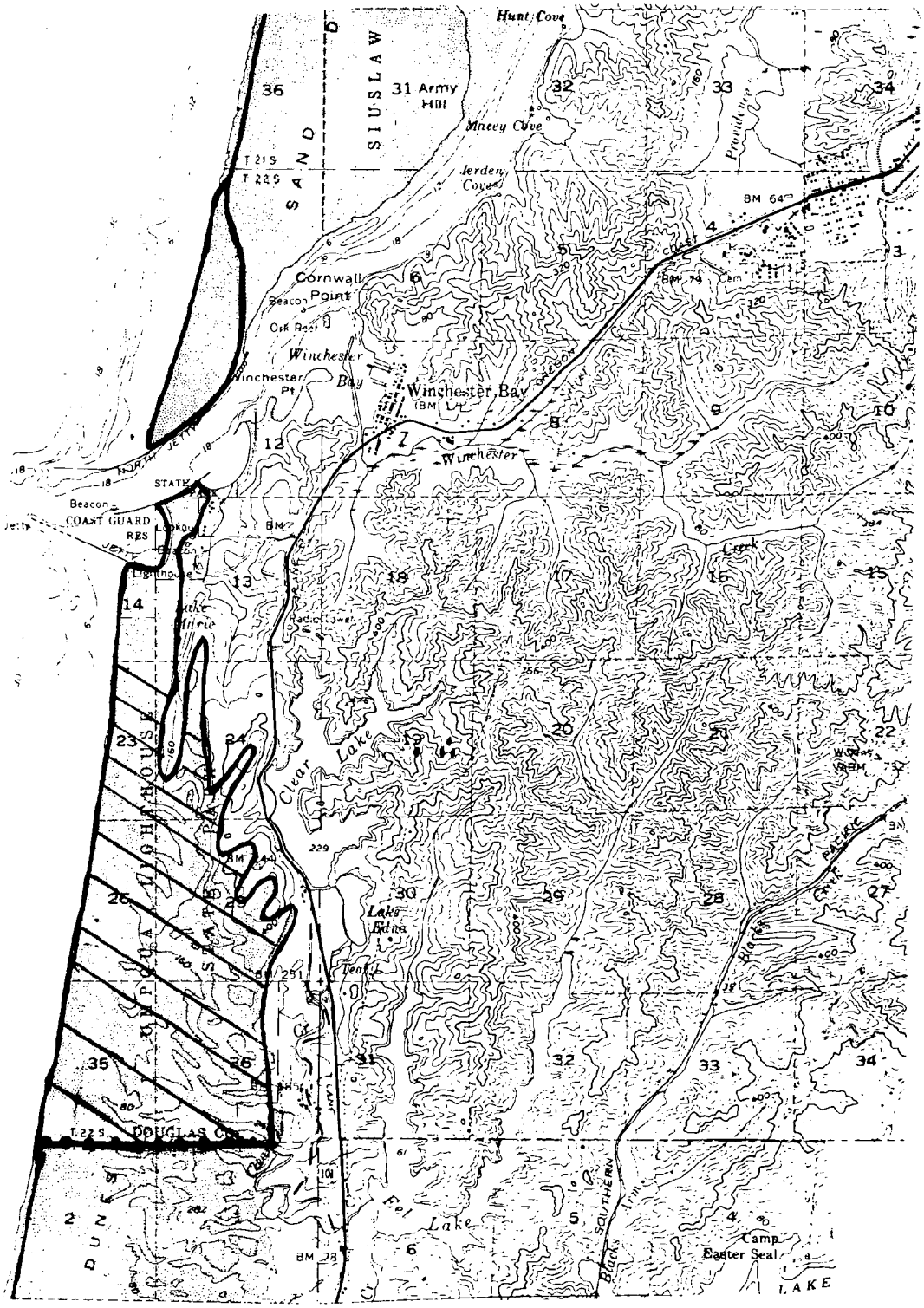
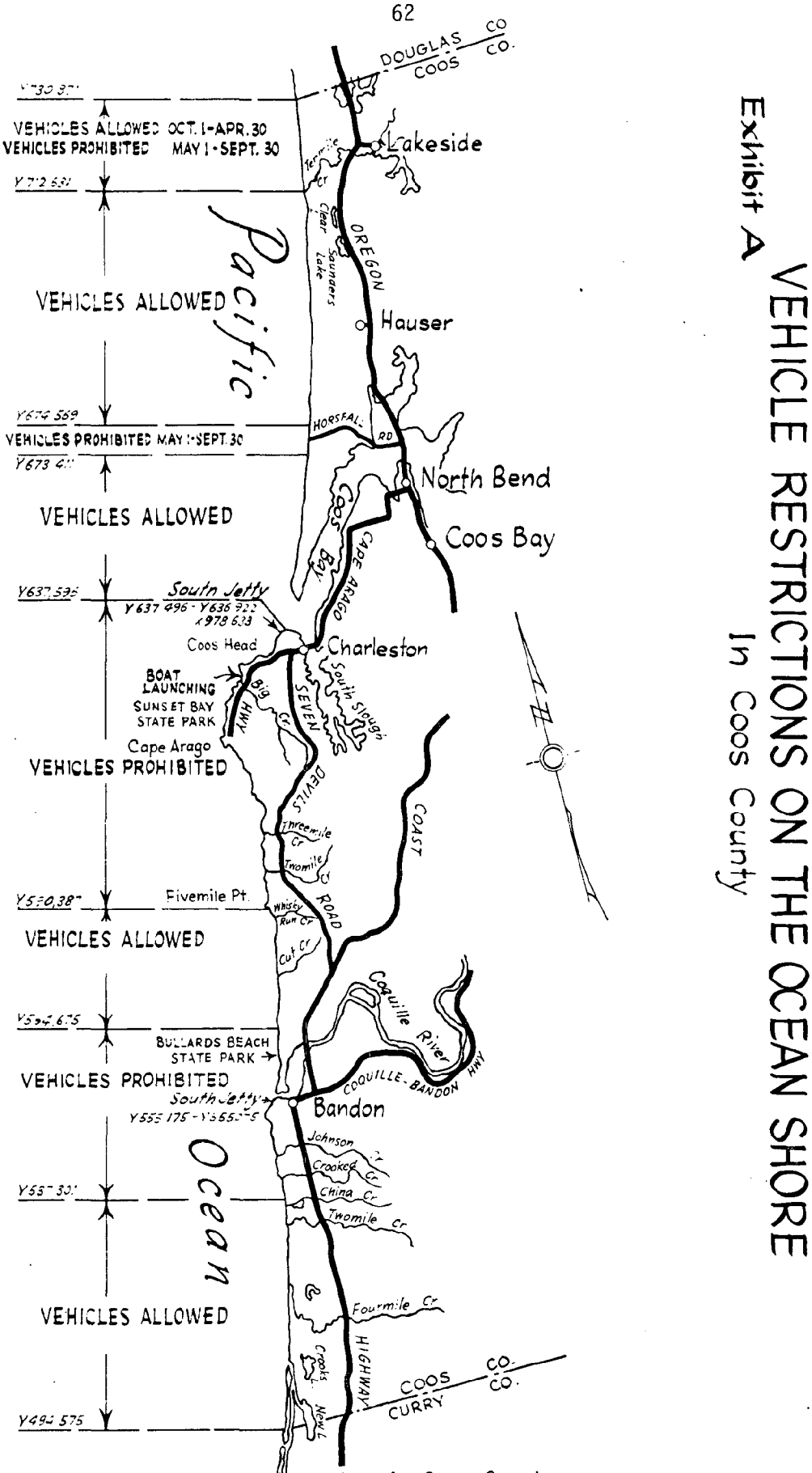
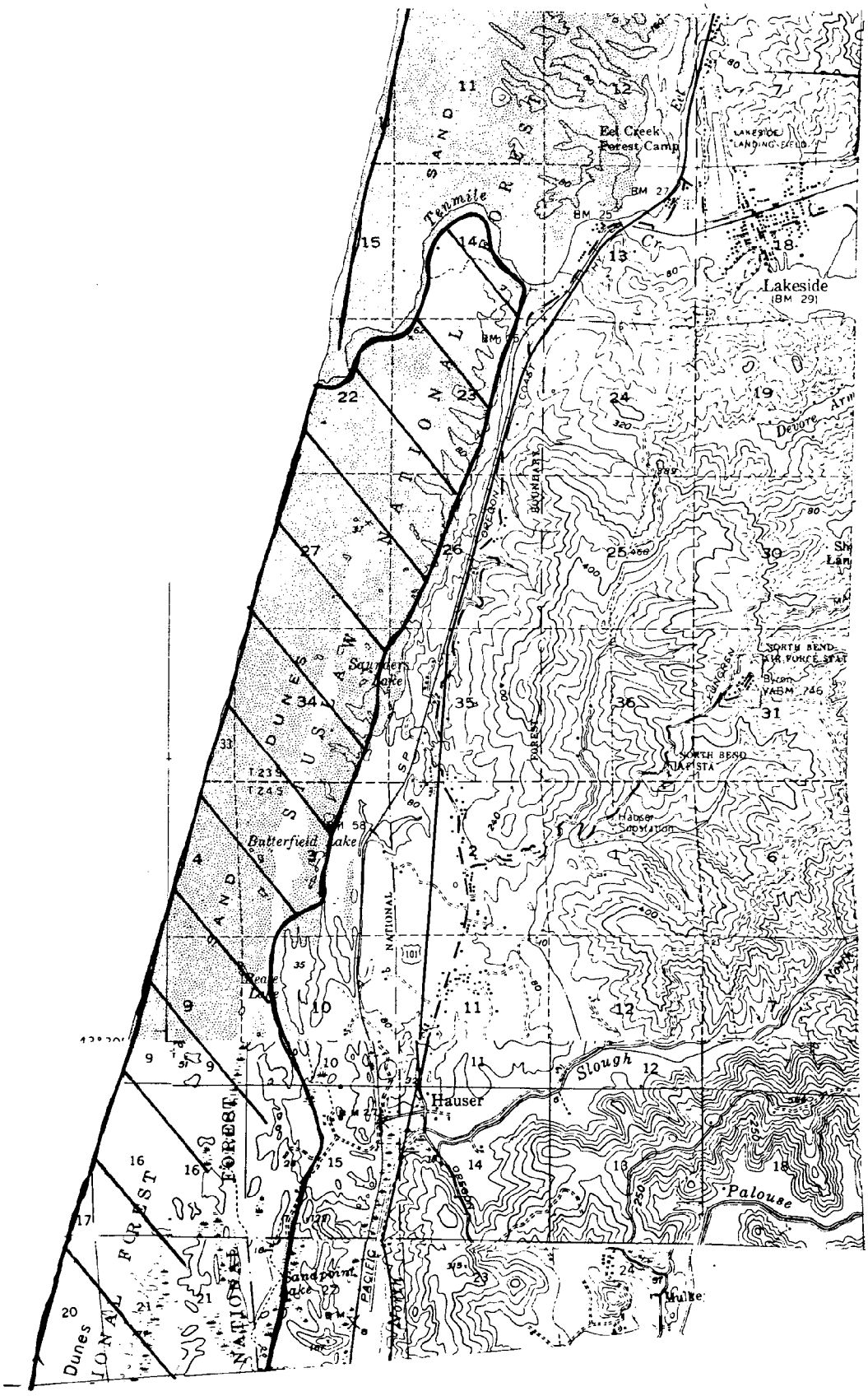


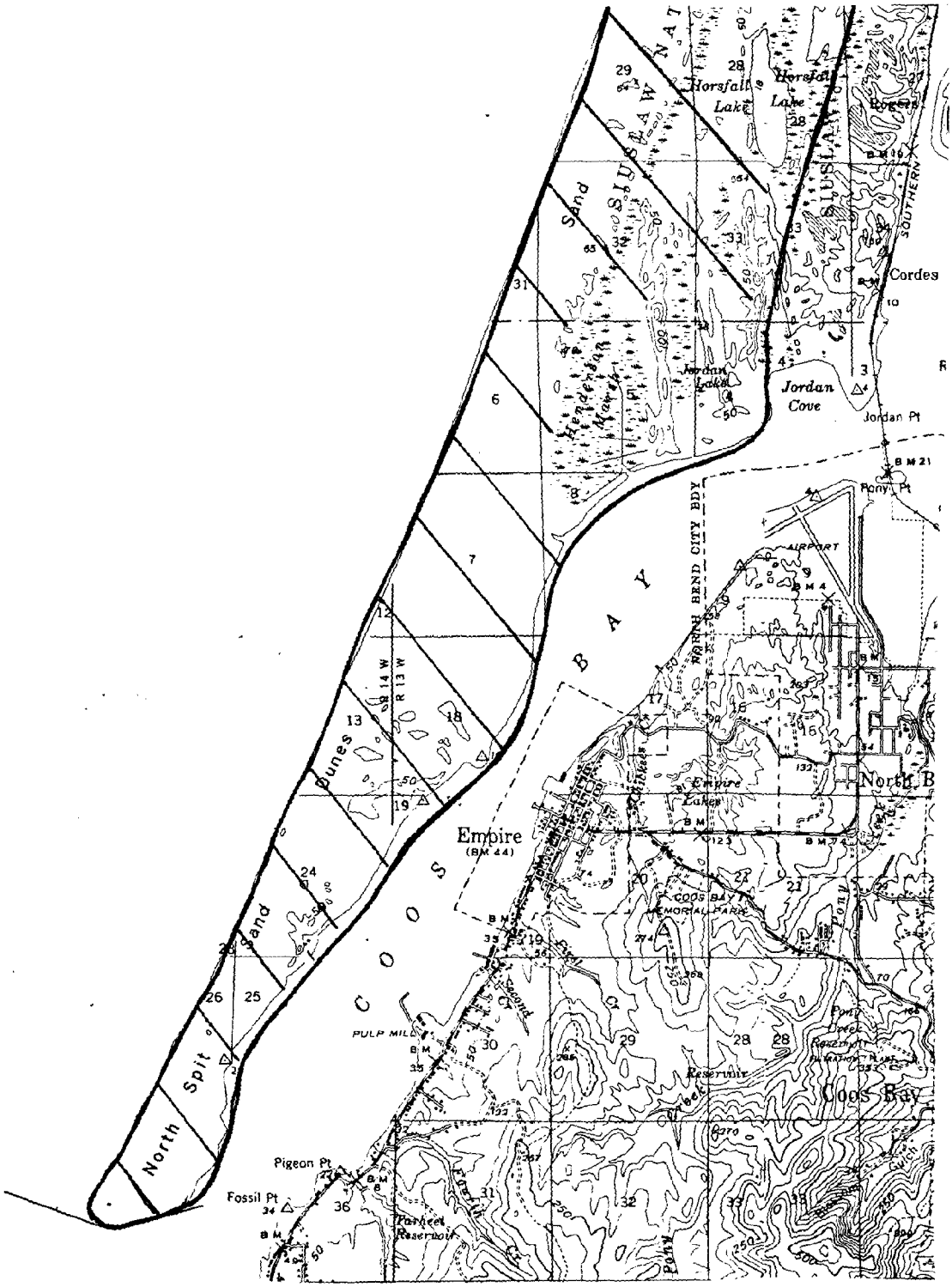
Map 16. Areas of ORV use and potential suitability in Douglas County.



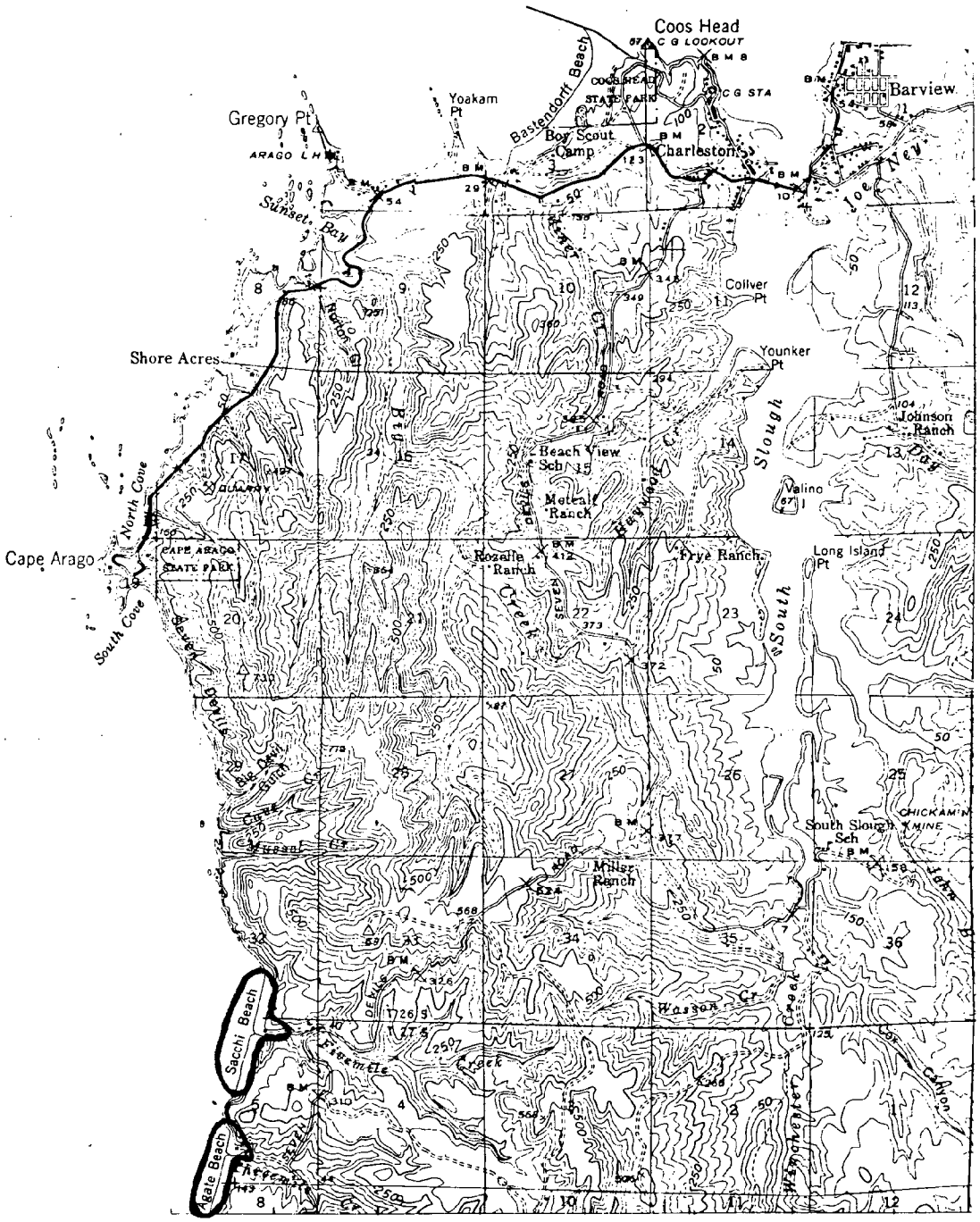
Map 17. Beach status in Coos County.



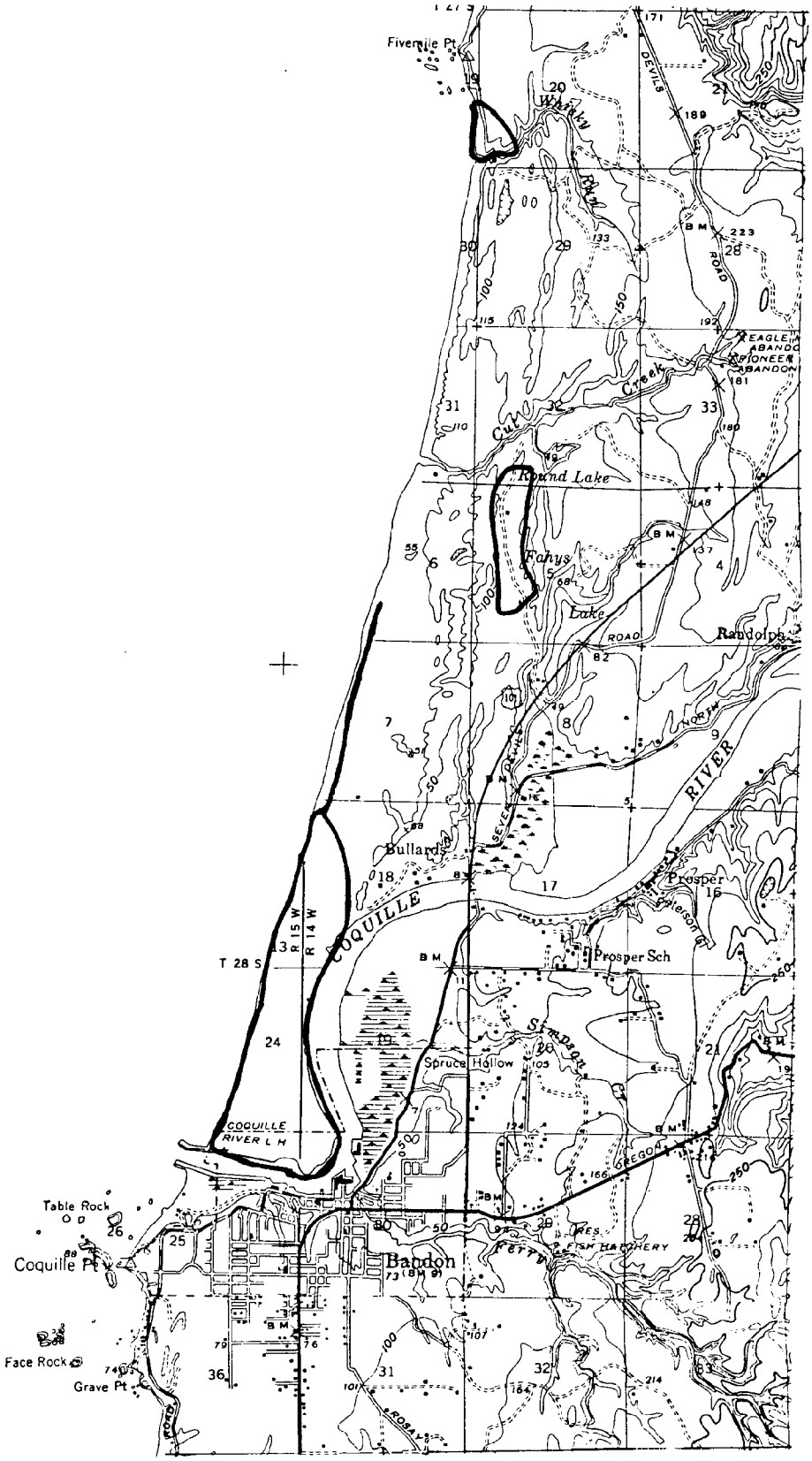
Map 18. Areas of ORV use and potential suitability in Coos County.



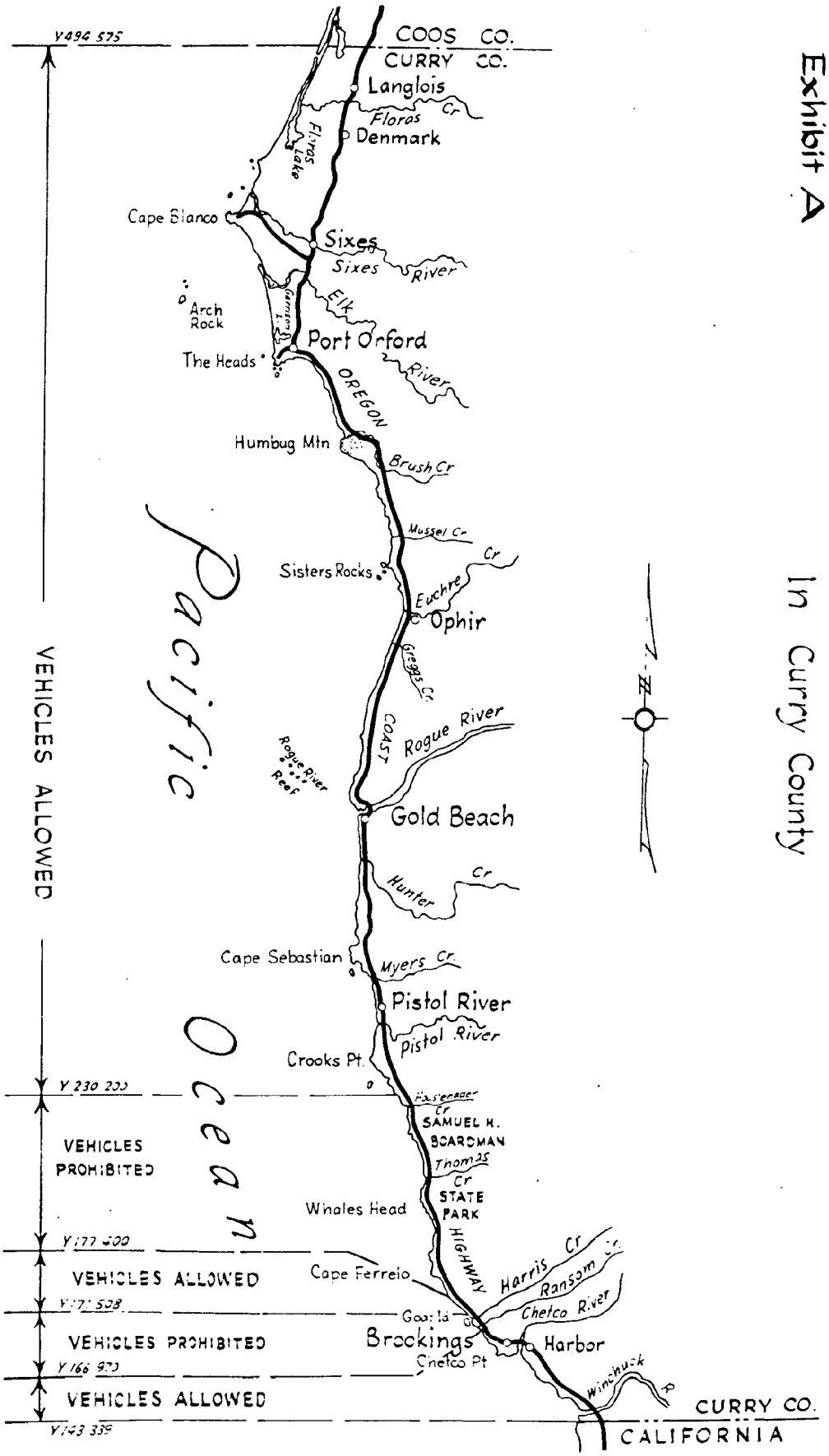
Map 19. Areas of ORV use and potential suitability in Coos County.



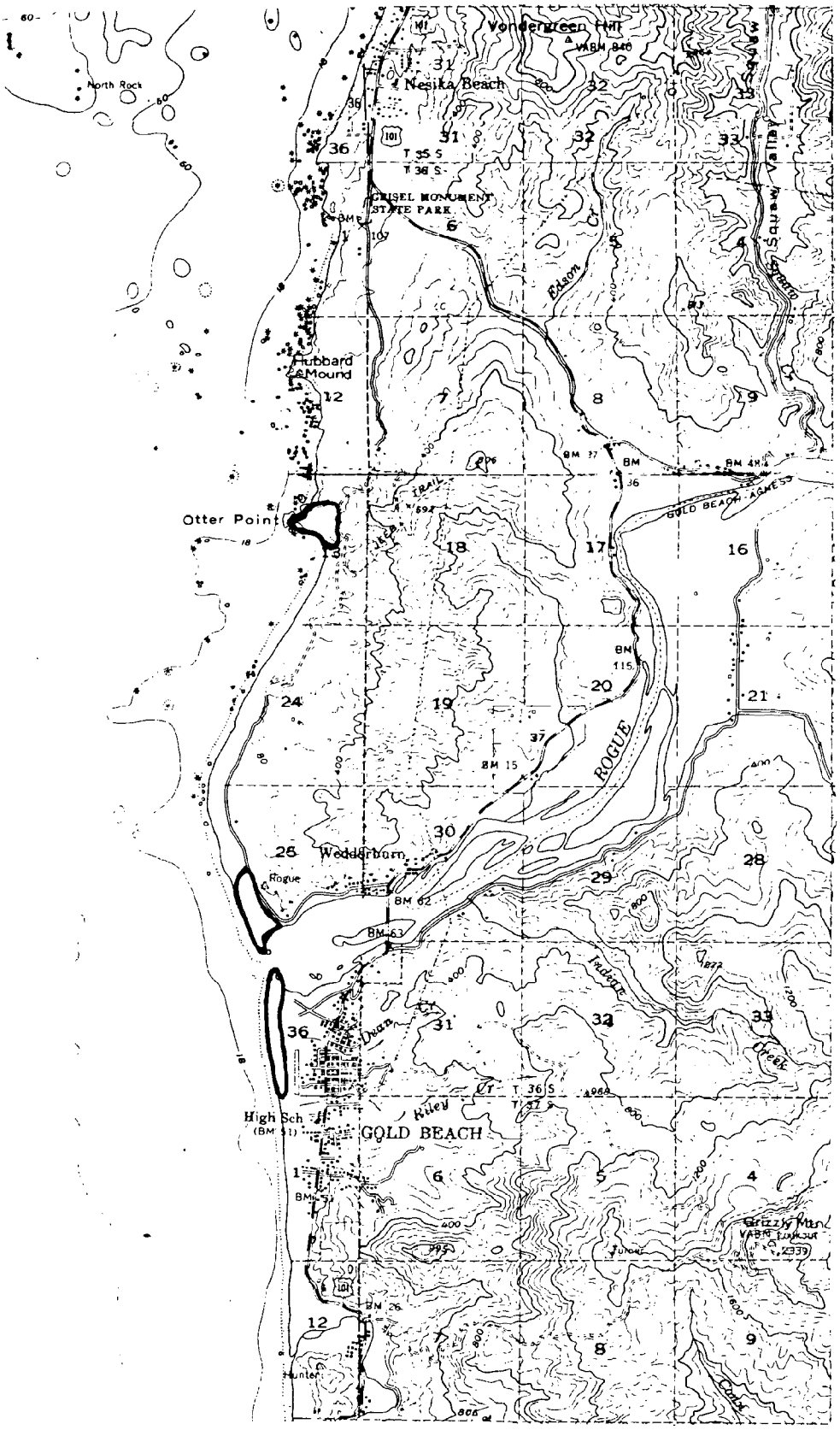
Map 20. ORV use in Coos County.



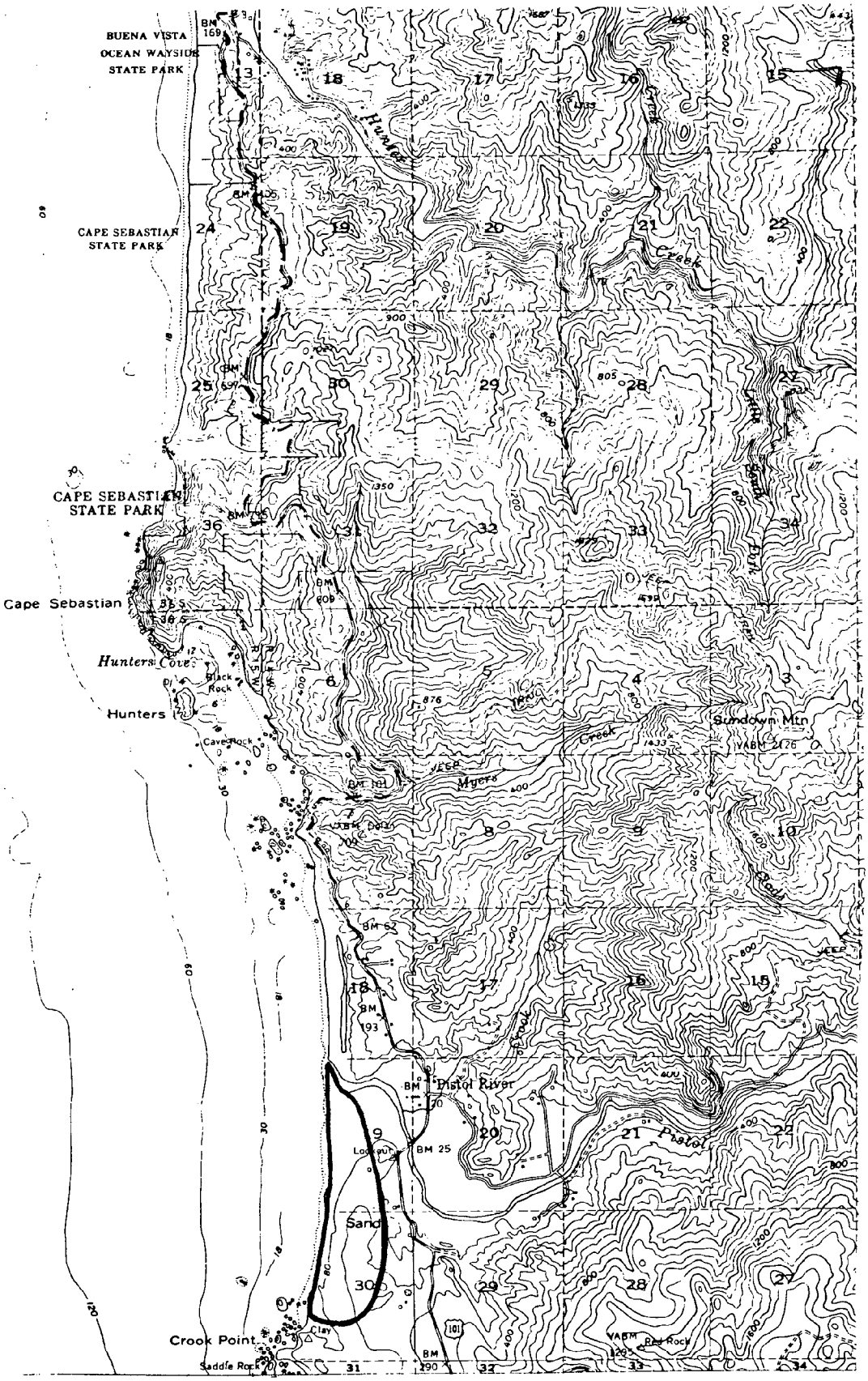
Map 21. ORV use in Coos County.



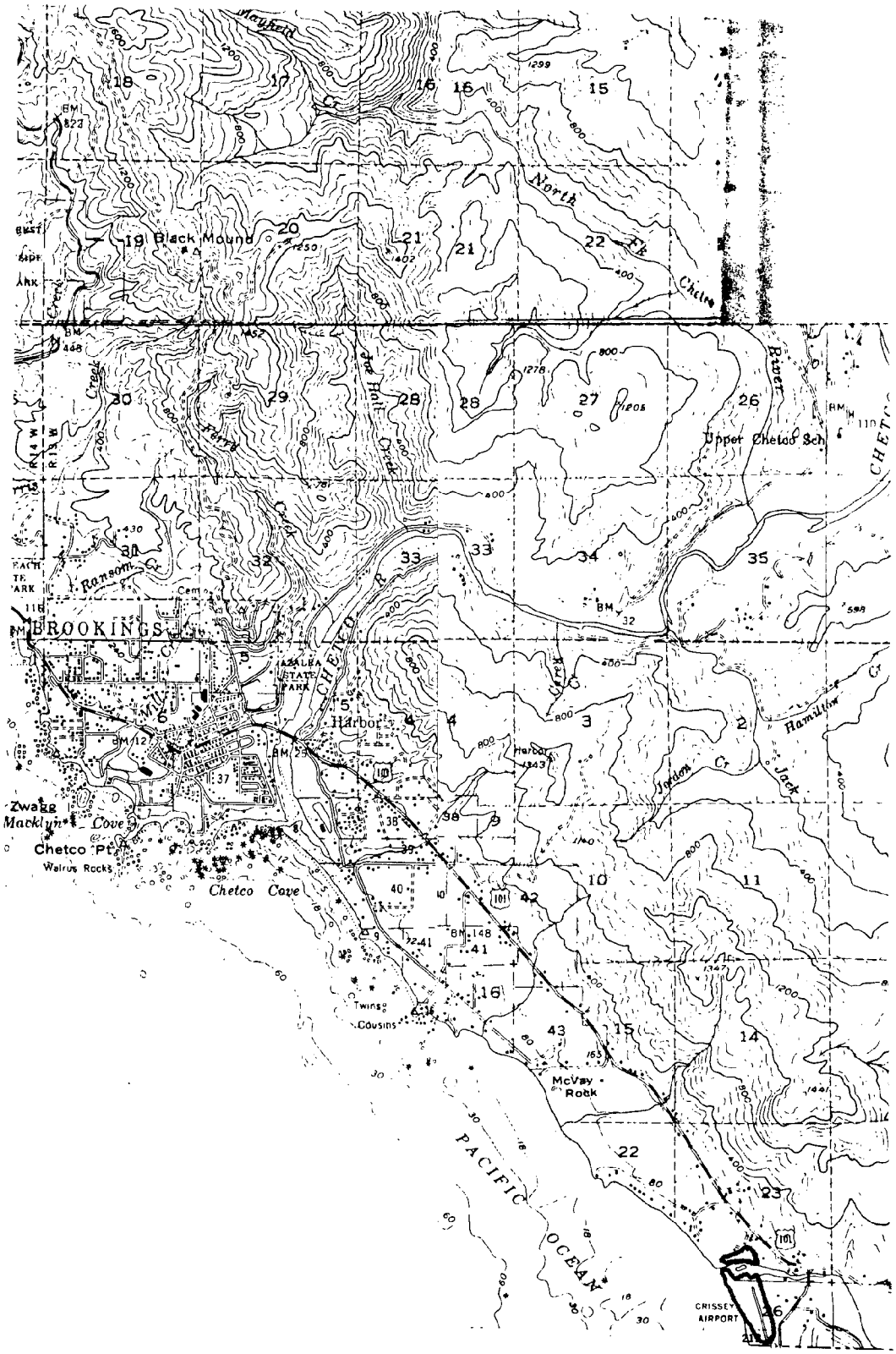
Map 22. Beach status in Curry County.



Map 23. ORV use in Curry County.



Map 24. ORV use in Curry County.



Map 25. ORV use in Curry County.

X. RECOMMENDATIONS AND RATIONALES

A. General

1. Off-Road Vehicle Advisory Councils should be established including ORV club representatives and individual participants, land managers, interested representatives from environmental groups, and park and recreation personnel on both a local and state level.	Such bodies would provide realistic and informed advice to develop and implement legislation. It could serve a similar function on a local level.
2. State legislation should be adopted which would comprehensively provide for and manage ORV recreation within Oregon. The legislation should:	It would provide for and manage an activity that presently exists.
a. Recognize ORV use as a legitimate form of recreation;	Acceptance of legitimate ORV use will promote more effective management of ORV activities.
b. Provide for ORV area development that would meet the needs of the ORV participant (such areas should be located in close proximity to the majority of the participants);	This would provide for ORV recreation and not necessarily reduce the areas open to ORVs. The benefits of limiting ORV use to designated areas would be to bring the multitude of management and environmental problems into a more reasonable realm. User conflict will be reduced. Hidden environmental impacts would be less likely to occur, and the impact that would occur in a designated area could be monitored and dealt with. Nuisance use would be minimized. Law enforcement would be facilitated since there would be no question whether an area was open or closed to ORV use. The need for management could be focused at a given area. De facto use would be reduced, for instance at South Beach and on Yaquina Head (hill-climbing on the slope east of the lighthouse by motorcycles and four-wheel drive vehicles). Providing good facilities for ORV recreation and stopping random use would increase the quality
c. Restrict the use of ORVs to maintained roads and trails and areas designated for the various types of ORV activities;	
d. Require establishment of environmental monitoring plans that suit an area's needs and the impacts of the ORV activity;	

	of the ORV experience, increase its compatibility, and reduce its environmental impacts.
e. Register vehicles used off-roads that are not otherwise registered; (1) this should include a fee which should be held accountable in a special ORV fund; (2) the gas taxes from vehicle use off-road should be determined and placed in the ORV fund; (3) the ORV funds should be expended for: (a) provision of ORV areas and facilities, (b) management and enforcement of ORV areas, (c) environmental monitoring programs, (d) ORV related research (environmental impacts, user needs, etc.), (e) user education programs (which would be developed by ORV participants, land managers, etc. and include nature interpretation). (f) local grants to develop ORV areas;	Registration would provide vital information on the number of ORVs and ORV users to better assess their needs. It would raise money specifically to provide ORV recreation.
f. Registration should require visible vehicle identification in some form;	Such markings would facilitate law enforcement. The mobility and anonymity of ORVs make enforcement difficult.
g. Give state ORV planning responsibilities to the Park and Recreation Branch;	Recognize ORVs as legitimate recreational activity.
h. Provide specific operating conditions regulating conduct and equipment;	Safety and resource protection would be promoted.
i. Provide that all law enforcement personnel from different agencies (federal, state, and	A broad approach is necessary to cover multi-jurisdictional areas and ORV mobility. Uniform

local) have the power to enforce ORV regulations which should be coordinated and uniform.	regulations would be easier for people to comply with.

B. Specific

1. South Jetty Hill (within the NRA) should be closed to pedestrians by posting it as a vehicle play area. People should be informed and discouraged from entering such a hazardous area.	This would promote public safety. People unfamiliar with ORV use in the area should be informed of the potential hazard from vehicles.
2. A pedestrian corridor should be created from Cleawox Lake to the beach, and pedestrians should be warned they are entering a vehicle play area and to stay within the corridor. Vehicles should only be allowed to cross the pedestrian corridor in open sand areas of high visibility (east of the Goose Pasture).	Promotion of public safety.
3. ORV planning between the Oregon Dunes National Recreation Area, State, and local agencies should be coordinated.	Although the NRA is federal land, it can have a very direct effect on adjacent land. Any significant change in vehicle status within the NRA would have an impact on other areas.
4. To provide for ORV use on open sand, no additional substantial ORV closures should be implemented within the Oregon Dunes National Recreation Area.	The vast majority of open sand dunes on the Oregon coast are located within the Oregon Dunes National Recreation Area. Further closure of those areas open to ORVs would shift the use to smaller dune areas typically less suitable. Closures could result in the curtailment of some ORV use.
5. The north spit of the Coos River may be suitable for vehicle access corridor designations and perhaps a vehicle play designation. One access corridor might run down the beach or foredune with one or two crossovers to the bay side in the most appropriate places	The need for ORV areas in addition to the forty-seven per cent of the NRA is not considered here. Such a determination should be made by a community and the appropriate land holding agencies. There is no management available from the Corps of Engineers so an alternate

(considering critical habitat and user interests). Vehicle play may be potentially suitable on the open sand dunes. These uses should be conditional upon: (1) development of a management plan including enforcement of the access corridor designations and the vehicle play area's boundaries, and (2) the performance of users and the effectiveness of the management plan. The latter conditions can be monitored by field observations and aerial photography. If the conditions are not met, then the vehicle designation would be inappropriate. A local ORV advisory council should be formed to develop a complete ORV plan including the South Coast Beach and Dune Recreationalists, the Corps of Engineers, the County, the private landholders involved, and any other appropriate parties.

source must be found if the area is to be suitable. The county and the ORV clubs may fill the management need. This could be a realistic chance for ORV recreationalists to demonstrate their capabilities of self-management.

6. A major ORV facility should be developed near the Portland area. The use of dredge spoils may facilitate this. Perhaps hills and other challenging topography could be formed. Potentially ORV funds could be used to help develop such a project.

This would provide for ORV recreation and increase the viability of restricted ORV use. It should relieve the user pressure at Sand Lake and allow for its eventual phase out regarding ORV use.

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APPENDIX A

Executive Orders 11644 and 11989

EXECUTIVE ORDER 11644 February 8, 1972

USE OF OFF-ROAD VEHICLES ON THE PUBLIC LANDS

An estimated 5 million off-road recreational vehicles--motorcycles, minibikes, trail bikes, snowmobiles, dune-buggies, all-terrain vehicles, and others--are in use in the United States today, and their popularity continues to increase rapidly. The widespread use of such vehicles on the public lands--often for legitimate purposes but also in frequent conflict with wise land and resource management practices, environmental values, and other types of recreational activity--has demonstrated the need for a unified Federal policy toward the use of such vehicles on the public lands.

NOW, THEREFORE, by virtue of the authority vested in me as President of the United States by the Constitution of the United States and in furtherance of the purpose and policy of the National Environmental Policy Act of 1969 (42 U.S.C. 4321), it is hereby ordered as follows:

Section 1. Purpose. It is the purpose of this order to establish policies and provide for procedures that will ensure that the use of off-road vehicles on public lands will be controlled and directed so as to protect the resources of those lands, to promote the safety of all users of those lands, and to minimize conflicts among the various uses of those lands.

Sec. 2. Definitions. As used in this order, the term:

(1) "public lands" means (A) all lands under the custody and control of the Secretary of the Interior and the Secretary of Agriculture, except Indian lands, (B) lands under the custody and control of the Tennessee Valley Authority that are situated in western Kentucky and Tennessee and are designated as "Land Between the Lakes", and (C) lands under the custody and control of the Secretary of Defense;

(2) "respective agency head" means the Secretary of the Interior, the Secretary of Defense, the Secretary of Agriculture, and the Board of Directors of the Tennessee Valley Authority, with respect to public lands under the custody and control of each;

(3) "off-road vehicle" means any motorized vehicle designed for or capable of cross-country travel on or immediately over land, water, sand, snow, ice, marsh, swampland, or other natural terrain; except that such term excludes (A) any registered motorboat, (B) any military, fire, emergency, or law enforcement vehicle when used for emergency purposes, and (C) any vehicle whose use i expressly authorized by the respective agency head under a permit, lease, license, or contract; and

(4) "official use" means use by an employee, agent, or designated representative of the Federal Government or one of its contractors in the course of his employment, agency, or representation.

Sec. 3. Zones of Use. (a) Each respective agency head shall develop and issue regulations and administrative instructions, within six months of the date of this order, to provide for administrative designation of the specific areas and trails on public lands on which the use of off-road vehicles may be permitted, and areas in which the use of off-road vehicles may not be permitted, and set a date by which such designation of all public lands shall be completed. Those regulations shall direct that the designation

of such areas and trails will be based upon the protection of the resources of the public lands, promotion of the safety of all users of those lands, and minimization of conflicts among the various uses of those lands. The regulations shall further require that the designation of such areas and trails shall be in accordance with the following--

(1) Areas and trails shall be located to minimize damage to soil, watershed, vegetation, or other resources of the public lands.

(2) Areas and trails shall be located to minimize harassment of wildlife or significant disruption of wildlife habitats.

(3) Areas and trails shall be located to minimize conflicts between off-road vehicle use and other existing or proposed recreational uses of the same or neighboring public lands, and to ensure the compatibility of such uses with existing conditions in populated areas, taking into account noise and other factors.

(4) Areas and trails shall not be located in officially designated Wilderness Areas or Primitive Areas. Areas and trails shall be located in areas of the National Park system, Natural Areas, or National Wildlife Refuges and Game Ranges only if the respective agency head determines that off-road vehicle use in such locations will not adversely affect their natural, aesthetic, or scenic values.

(b) The respcetive agency head shall ensure adequate opportunity for public participation in the promulgation of such regulations and in the designation of areas and trails under this section.

(c) The limitations on off-road vehicle use imposed under this section shall not apply to official use.

Sec. 4. Operating Conditions. Each respective agency head shall develop and publish, within one year of the date of this order, regulations prescribing operating conditions for off-road vehicles on the public lands. These regulations shall be directed at protecting resource values, preserving public health, safety, and welfare, and minimizing use conflicts.

Sec. 5. Public Information. The respective agency head shall ensure that areas and trails where off-road vehicle use is permitted are well marked and shall provide for the publication and distribution of information, including maps, describing such areas and trails and explaining the conditions on vehicle use. He shall seek cooperation of relevant State agencies in the dissemination of this information.

Sec. 6. Enforcement. The respective agency head shall, where authorized by law, prescribe appropriate penalties for violation of regulations adopted pursuant to this order, and shall establish procedures for the enforcement of those regulations. To the extent permitted by law, he may enter into agreements with State or local governmental agencies for cooperative enforcement of laws and regulations relating to off-road vehicle use.

Sec. 7. Consultation. Before issuing the regulations or administrative instructions required by this order or designating areas or trails as required by this order and those regulations and administrative instructions, the Secretary of the Interior shall, as appropriate, consult with the Atomic Energy Commission.

Sec. 8. Monitoring of Effects and Review. (a) The respective agency head shall monitor the effects of use of off-road vehicles on lands under their jurisdictions. On the basis of the information gathered, they shall from time to time amend or rescind designations of areas or other actions taken pursuant to this order as necessary to further the policy of this order.

(b) The Council on Environmental Quality shall maintain a continuing review of the implementation of this order.

RICHARD NIXON

The White House,
February 8, 1972.

EXECUTIVE ORDER 11989 May 24, 1977

OFF-ROAD VEHICLES ON PUBLIC LANDS

By virtue of the authority vested in me by the Constitution and statutes of the United States of America, and as President of the United States of America, in order to clarify agency authority to define zones of use by off-road vehicles on public lands, in furtherance of the National Environmental Policy Act of 1969, as amended (42 U.S.C. 4321 et seq.), Executive Order No. 11644 of February 8, 1972, is hereby amended as follows:

Section 1. Clause (B) of Section 2(3) of Executive Order No. 11644, setting forth an exclusion from the definition of off-road vehicles, is amended to read "(B) any fire, military, emergency or law enforcement vehicle when used for emergency purposes, and any combat or combat support vehicle when used for national defense purposes, and".

Sec. 2. Add the following new Section to Executive Order No. 11644:

"Sec. 9. Special Protection of the Public Lands. (a) Notwithstanding the provisions of Section 3 of this Order, the respective agency head shall, whenever he determines that the use of off-road vehicles will cause or is causing considerable adverse effects on the soil, vegetation, wildlife, wildlife habitat or cultural or historic resources of particular areas or trails of the public lands, immediately close such areas or trails to the type of off-road vehicle causing such effects, until such time as he determines that such adverse effects have been eliminated and that measures have been implemented to prevent future recurrence.

"(b) Each respective agency head is authorized to adopt the policy that portions of the public lands within his jurisdiction shall be closed to use by off-road vehicles except those areas or trails which are suitable and specifically designated as open to such use pursuant to Section 3 of this Order.".

JIMMY CARTER

The White House
May 24, 1977.

APPENDIX B

Proposed Bureau of Land
Management Regulations

[4310-84]

DEPARTMENT OF THE INTERIOR

Bureau of Land Management

[43 CFR Part 6290]

OFF-ROAD VEHICLES

Use of Public Lands

AGENCY: Bureau of Land Management, Interior.

ACTION: Proposed rulemaking.

SUMMARY: This proposed rulemaking is developed to provide for management and control of off-road vehicle recreation on public lands. Concentrated off-road vehicle recreation on public lands has, in some areas, caused excessive damage to natural resources and disrupted more passive land uses. Management of off-road vehicle activities will provide for continuation of off-road vehicle recreation under conditions that will protect natural resources and other resource users and promote public safety.

DATE: Comments by September 5, 1978.

ADDRESS: Send comments to: Director (210), Bureau of Land Management, 1800 C Street NW., Washington, D.C. 20246. Comments will be available for public review in Room 5555 at the above address from 7:45 a.m.-4:15 p.m. on regular working days.

FOR FURTER INFORMATION CONTACT:

Larry Young, 202-343-9353.

SUPPLEMENTARY INFORMATION: On April 15, 1974, final rulemaking was published in the FEDERAL REGISTER (FR 13613) establishing regulations to control and direct the use of ORV's on public lands. By decision and order issued by the U.S. District Court for the District of Columbia on May 2, 1975, these regulations were declared to be in violation of Executive Order 11644 and to have been promulgated without adequate consideration of alternatives as required by the National Enviromental Policy Act. The court further ordered that after adequate consideration of alternatives, as required by the National Environmental Policy Act, regulations be issued which did meet the requirements of Executive Order 11644. Under the direction of the Bureau of Outdoor Recreation, the Off-Road Vehicle Environmental Impact Statement was revised to expand the alternatives as ordered by the court. A draft statement was made available to the public on July 19, 1976, and open to public comment until October 7, 1976. On July 28, 1976, proposed Off-Road Vehicle regulations were published in the FEDERAL REGISTER (FR 31518) and the public was given until October 7, 1976, to submit comments on this proposal. More than 1,300 comments were received on the proposed rulemaking and 140 comments were received on the draft environmental impact statement. Based on careful consideration of the comments received a final Environmental Impact Statement has been prepared by the Heritage Conservation and Recreation Service, formerly the Bureau of Outdoor Recreation.

Of the more than 1,300 comments received on the proposed rulemaking approximately 830 were mailgrams and letters addressed to the President, later referred to the Bureau, asking that Executive Order 11644 be amended or rescinded. The Bureau does not have the authority to amend or rescind the Executive order but is in fact under order by the courts to issue regulations that will conform to the Executive order. However, the President has recently amended Executive Order 11644, and the regulations have been amended as appropriate to include provisions under the amended Executive order.

Of the remaining comments received, totalling more than 470, many commentors were generally opposed to the entire proposal and offered few, if any, suggested amendments. In addition to changes to include provisions of the amendments to Executive Order 11644, changes have been made in the proposed rulemaking in response to public comments received on the July 28, 1976, publication of proposed rulemaking. Public comments and suggestions are invited regarding the amended proposed rulemaking.

Final regulations will reflect any additional comments received on the amended proposed rules.

DISCUSSION OF MAJOR COMMENTS RECEIVED ON THE PROPOSED RULEMAKING OF JULY 28, 1976

PUBLIC PARTICIPATION AND INFORMATION

The need for improved public participation and dissemination of information was of major concern to many commentors. They felt the Bureau had not done an adequate job of informing the public and obtaining public input in the planning and management of the ORV program. Request was made to amend the proposed rules to insure that the public would be involved in the planning system and in the designation procedures. It was also suggested that designation notices be available in local Bureau Offices at all times and that maps and other information informing the public of designations and other conditions of use be readily available and widely distributed.

It has been the procedure of the Bureau to obtain public participation in its planning process. Guidelines for planning, which reflect the Bureau's planning process, have been signed into law with the passage of the Federal Land Policy and Management Act of 1976 (43 U.S.C. 1701 et seq.). The rulemaking has been amended to strengthen the provision for public participation. Comments also stressed the need for the Bureau to improve its public distribution of maps, brochures and other information concerning the location of public lands and ORV land use designations. The Bureau agrees with these suggestions and will strive to improve communication with the public during the land use planning phase as well as the use phase of the management cycle for a particular administrative unit.

PERMITS

The majority of the comments addressing the provisions for issuing permits requested that the 25 vehicle limit be eliminated or substantially increased, that family-type, non-commercial, and non-competitive events be exempt from permit requirements, and that the term "organized events" be deleted or amended to be less inclusive. A few commentors wanted permits for all ORV use. A permit system is felt to be necessary for management and control of ORV's. The permit provisions have been amended, removed from this part, and placed in part 6260 of this chapter. The provisions require permits for (1) commercial events (2) competitive events for which participants register, and (3) events involving 50 or more ORV's. The amendment also requires that applications for permits be submitted on forms approved by the Director and be made no less than 120 calendar days in advance of the intended use unless a shorter time is authorized by the authorized officer. The lead time is required for preparing the necessary environmental reports, statements and conditions of use, and to provide that the applicant receive an approved permit 30 days in advance of the use date.

CONDITIONS OF USE

Interest in the provisions relating to conditions governing use centered on the licensing and supervision provisions. Commentors asked that the requirement be deleted or modified. This provision has been amended to provide an exemption from the licensing and supervisions requirement for an individual who has been certified by an agency of State government as competent to drive an ORV as a result of successfully completing a State endorsed operators training program. The licensing and supervision requirement is also waived for areas in Alaska designated by the State Director for Alaska. Executive Order 11644 requires that the ORV regulations provide for safety provisions. Because many of the deaths and injuries associated with ORV use have occurred to

younger drivers, the training, licensing and supervision provisions required for individuals under 18 years of age should provide for greater safety to users of the public lands.

Commentors also suggested that ORV use should be in harmony with other authorized uses of the public lands. The proposal has been amended to provide that ORV use be managed to minimize conflicts with other authorized uses of the public lands.

Comments suggested that the terms "reckless," "careless," and "negligent" were too broad and could be the basis of arbitrary decisions. These are terms that are commonly used in State vehicle operating requirements. They have been retained in the proposal. The terms have been used extensively enough that vehicle users have a general understanding as to what the terms mean and can use them as a guide in the operation of their vehicles.

Suggestion was made to improve the safety provisions relating to the use of headlights and taillights. A change was made in the proposal to require lighted headlights and taillights when operating during night hours from sunset to sunrise. This will reduce the possibility of an ORV operating in the dark without lights when coming to or going from an ORV use area.

DEFINITIONS

The definition section of the proposal prompted many comments. Of major interest was the definition of an "ORV." It was suggested that there be separate definitions for the different types of ORV's (snowmobiles, two-wheel, four-wheel, etc.). As the Department is under court order to conform its regulations to Executive Order 11644, the definition of ORV was amended only slightly. The changes made are the insertion of the word "motorized," the deletion of the words "deriving motive power from any source other than muscle," and deletion of the exception provision exempting as an ORV a vehicle operating under a special recreation permit issued in accordance with Part 6260 of 43 CFR. It was not the intent of this rulemaking to exclude, as an ORV, motorized vehicles permitted under the provisions thereof.

The term "authorized officer" was deleted because it is already defined in 43 CFR Part 1810. Several commentors expressed concern over the broad authorities of the authorized officer and wanted to know who he is and to whom he is subject. Bureau Order No. 701 is the official delegation document for the Bureau. Under section 3.9 of this Order all ORV actions have been delegated to the District Manager. Under section 3.1 of the Order the District Manager may redelegate his authority to Area Managers or the Chief, Division of Administration after first obtaining approval of such delegation from the State Director and after publicizing the delegation in the FEDERAL REGISTER.

As suggested in a comment, the word "designated" has been added to clarify the definitions of open, limited and closed areas and trails.

DESIGNATION—CRITERIA AND PROCEDURES

A great diversity of public concern was demonstrated in the comments dealing with designation. Many commentors were opposed to any designation while others wanted all lands closed to ORV use until designated. Some commentors wanted immediate closures not only on "wilderness" and "primitive" areas but also on "natural" areas, special cultural areas, and other areas having fragile or scenic values. Other commentors suggested keeping open to ORV use only those areas presently being used. Some commentors expressed strong disagreement with the designation deadline date of 1987. This date was felt to be too distant and allowed an unwarranted period of time to bring ORV use under adequate control and management.

The status of the public lands prior to designation in conformance with Executive Order 11644, under the terms of the District Court Order of May 5, 1975, is simply undesignated. This means that those areas which have previously been open, closed, or limited shall generally remain so until designated under E.O. 11644 or 11989. However, this does not preclude the use of other existing authorities to open, close, or limit areas as needed for reasons other than ORV use. Closures or limitations might be because of withdrawals for habitat preservation, public safety, resource protection, etc. Wilderness areas, big-game wintering areas, critical watersheds, etc., can be protected even though the Executive Order 11644 designations have not been made.

To correlate the management of the several resources uses of the public lands, the Bureau of Land Management uses a coordinated multiple use planning system approach. The designation of ORV areas must be accomplished in harmony with this planning system. Action necessary to make designations is beginning immediately. All areas will be designated by 1987. It is estimated that 40 percent of the total designation process will be accomplished by 1981. This 40 percent will cover 60 percent of the major ORV use areas. For example, the Federal Land Policy and Management Act of 1976 designated the California Desert Conservation Area and directed that a comprehensive management plan be completed and implemented by September 30, 1980. This Conservation Area presently sustains about half of the total ORV use occurring on the public lands administered by the Bureau. Other major ORV use areas are also receiving timely planning and management attention.

Executive Order 11644 directed that officially designated wilderness and primitive areas be closed to ORV use and need not be designated under the three ORV designations defined in this part. Additional closures may be justified through the Bureau planning system. The Federal Land Policy and Management Act of 1976 has directed that by October 21, 1991, the Secretary shall review those roadless areas of 5,000 acres or more and roadless islands of the public lands identified during the inventory required by the Federal Land Policy and Management Act as having wilderness characteristics as described in the Wilderness Act (16 U.S.C. 1131 et seq.). Once identified, these areas having wilderness characteristics shall continue to be managed during the review period so as not to impair the suitability of such areas for preservation as wilderness, subject, however, "to the continuation of existing mining and grazing uses and mineral leasing in the manner and degree in which the same was being conducted on the date of approval" of the Federal Land Policy and Management Act. The ORV designations of lands identified as potential wilderness areas are being made consistent with these provisions of the Federal Land Policy and Management Act.

Request was made to clarify the status of current ORV designations. Designations made to date under 43 CFR Part 6290 are null and void. United States District Court, District of Columbia Court Order 74-1215, dated May 2, 1975, declared 43 CFR Part 6290 in violation of Executive Order 11644. Therefore, any designations made under those regulations also were in violation of the Executive Order. ORV closures and conditions of uses made under subpart 6221—Primitive Areas, § 6010.4—Closure of lands and subpart 6261—Rules for Visitor Use of Developed Recreation Sites, remain valid and in effect.

As suggested in the comments, the provision for monitoring ORV use has been clarified by stating that the authorized officer or his delegate shall monitor the effects of ORV use. The types of temporary designation changes have been expanded by adding that temporary designations may also "open" areas previously closed. The paragraph dealing with withdrawals has been deleted since the withdrawal procedures referred to do not comply with the provisions of the Federal Land Policy and Management Act of 1976.

VEHICLE STANDARDS

Commentors suggested reducing the required level of vehicle operating

standards as required in the proposal, feeling that the standards were excessive. Snowmobile interests as well as other ORV groups wanted the spark arrester requirement removed. Request was made to delete the requirements for having brakes in good working condition as no one would operate an ORV without good brakes. The provision of the proposal covering noise standards appeared to some commentors as excessive since the Environmental Protection Agency did not have established noise standards. Some commentors read the proposal as saying that all ORV's required lights. Some commentors suggested that state standards be followed in lieu of Federal standards. The provision requiring minimum vehicle standards was retained because it is felt that basic vehicle standards are necessary. Even though states may have vehicle standards there is a lack of consistency of standards among states. The broad standards in the regulations are the minimum standards and will prevail where State law and regulations do not exist or are less stringent.

The proposal requires that an ORV have a spark arrester only when the authorized officer requires it. The proposal has been amended to waive the spark arrester requirement where three or more inches of snow are on the ground. The provision on noise standards has been amended to require compliance with Environmental Protection Agency standards when they are established and become available to the public. The requirement for lights on ORV's was apparently misunderstood. It requires ORV's operating during night hours from sunset to sunrise to be equipped with and use lights. Vehicles operated only during daylight hours are not required to have lights.

OTHER COMMENTS

The law enforcement provision drew several comments that the Bureau lacked both personnel and the authority to conduct law enforcement activities. The proposal used as the authority the act of September 15, 1960, as amended (16 U.S.C. 670 et seq.), sometimes referred to as the Sikes Act. This act provides authority to enforce the regulations issued to control ORV use on those specific designated areas of public land within a State on which conservation and rehabilitation programs are to be implemented. The other authority on which the law enforcement provisions was based was the Land and Water Conservation Fund Act (16 U.S.C. 460 1-6a) which provides for enforcing the collection of fees and permit requirements.

After this proposed rulemaking was printed in the FEDERAL REGISTER on July 28, 1976, the Federal Land Policy and Management Act of 1976 was enacted. This law provides the Bureau of Land Management with broad law enforcement authority. Not only may BLM personnel be given law enforcement responsibilities, but the act provides for the use of local law enforcement personnel through compensation by the Bureau.

A few commentors wanted limits established for temporary designations. Generally, such designations would be for a season—for deviation from normal wildlife use patterns, climatic conditions, public safety, etc., which most often would not exceed a year in duration.

Some commentors expressed concern that the proposed regulations would hinder access to isolated tracts of State or private lands within large blocks of public lands. The Bureau does not intend to hinder lawful and proper ingress and egress to such lands. Owners of such lands who desire access to their lands may work with local Bureau officials to arrive at solutions to their access needs. A number of commentors, including many who have mineral interests and holders of rights of way permits, suggested the proposed regulations be amended to specifically allow for the use of motorized vehicles in exploring and prospecting for minerals and for inspection and maintenance of rights-of-way. The definition of an "off-road vehicle" specifically excludes vehicles expressly authorized by the authorized officer or otherwise officially approved. Examples of situations where authorized and approved use of motorized vehicles would be excluded from the definition of an ORV are: the specific conditions of motorized vehicle use contained in a right-of-way permit, an approved plan of operation as described in the proposed regulations dealing with the surface management of public lands under the U.S. mining laws as published in the FEDERAL REGISTER on December 9, 1976, or a condition of use in a grazing license.

PRINCIPAL AUTHOR

Larry Young of the Bureau of Land Management, Washington Office, Division of Recreation Management.

INFLATION IMPACT STATEMENT

The Department of the Interior has determined that this document does not contain a major proposal requiring preparation of an Economic Impact Analysis under Executive Order 11821 and OMB Circular A-107.

It is proposed to amend 43 CFR Part 6290 as set forth below.

Dated: June 28, 1978.

GUY R. MARTIN,
Assistant Secretary of the Interior.

1. Part 6290 is revised to read as follows:

PART 6290—OFF-ROAD VEHICLES

Subpart 6290—General

Sec.
6290.0-1 Purpose.
6290.0-2 Objectives.
6290.0-3 Authority.
6290.0-5 Definitons.
6290.0-7 Enforcement.
6290.0-8 Applicability.

Subpart 6291—Conditions of Use of Public Lands

6291.1 Regulations governing use.
6291.2 Special rules.

Subpart 6292—Areas and Trails Designation

6292.1 Designation criteria.
6292.2 Designation procedures.
6292.3 Designation changes.

Subpart 6293—Vehicle Operation

6293.1 Standards.

Subpart 6294—Permits

6294.1 Permit requirements.

AUTHORITY: 43 U.S.C. 1201, National Environmental Policy Act of 1969, 42 U.S.C. 4321; 43 U.S.C. 2, 1201; and Executive Order 11644 (37 FR 2877); Executive Order 11989 (42 FR 26959) (43 U.S.C. 1701 et. seq.)

Subpart 6290—General

§ 6290.0-1 Purpose.

The purpose of this part is to establish criteria for designating public lands as open, limited or closed to the use of off-road vehicles and for establishing controls governing the use and operation of off-road vehicles in such areas.

§ 6290.0-2 Objectives.

The objectives of these regulations are to protect the resources of the public lands, to promote the safety of all users of those lands, and to minimize conflicts among the various uses of those lands.

§ 6290.0-3 Authority.

The provisions of this part are issued under the Federal Land Policy and Management Act of 1976 (90 Stat. 2743; 43 U.S.C. 1701 et seq.); the Taylor Grazing Act (43 U.S.C. 315a); the National Environmental Policy Act (42 U.S.C. 4321 et seq.); the Endangered Species Act (16 U.S.C. 1531 et seq.); the Wild and Scenic Rivers Act (16 U.S.C. 1281c); the act of September 15, 1960, as amended (16 U.S.C. 670 et seq.); the Land and Water Conservation Fund Act (16 U.S.C. 460 1-6a); the National Trails System Act (16 U.S.C. 1241 et seq.) and E.O. 11644 (Use of Off-Road Vehicles on the Public Lands), 37 FR 2877, 3 CFR 74, 332, as amended by E.O. 11989 42 FR 26959 (May 25, 1977).

§ 6290.0-5 Definitions.

As used in this part:

(a) "Off-Road Vehicle" means any motorized vehicle capable of, or de-

their natural, esthetic, or scenic values.

§ 6292.2 Designation procedures.

(a) *Public participation.* The authorized officer shall, to the extent practical, designate and redesignate areas and trails in conjunction with the Bureau planning system for the formulation of multiple-use management plans. Plans shall consider current and potential impacts of specific vehicle types on all resources and users in the region of the area under consideration. Prior to making designations or redesignations, the authorized officer shall consult with interested user groups, Federal, State, county, and local agencies, local landowners, and other parties in a manner that provides an opportunity for the public to express itself and have those views taken into account.

(b) *Identification of designated areas and trails.* The authorized officer shall take action by posting and other appropriate measures to identify designated areas and trails so that the public will be aware of locations and limitations applicable thereto. Public notice of designations or redesignations shall be given at the time of designation or redesignation through publication in the FEDERAL REGISTER and local news media. Copies of such notices shall be available to the public in local Bureau offices. The authorized officer will make available to the public other information material as may be appropriate.

§ 6292.3 Designation changes.

(a) *Monitoring use.* The authorized officer shall monitor effects of the use of off-road vehicles. On the basis of information so obtained, and whenever the authorized officer deems it necessary to carry out the objectives of the part, designations may be amended, revised, revoked, or other actions taken pursuant to the regulations in this part.

(b) *Temporary action.* The authorized officer may temporarily open, close, or limit public use and travel in accordance with the provisions of § 6010.4 of this chapter as to public lands which have been designated or redesignated in accordance with this subpart, and as to public lands which have not been designated.

Subpart 6293—Vehicle Operations

§ 6293.1 Standards.

(a) No off-road vehicle may be operated on public lands unless equipped with brakes in good working condition.

(b) No off-road vehicle equipped with a muffler cutout, bypass, or similar device, or producing excessive noise exceeding Environmental Protection Agency standards, when established, may be operated on public lands.

(c) The authorized officer may, by posting appropriate signs or by marking a map which shall be available for public inspection at local Bureau offices, indicate those public lands upon which no off-road vehicle may be operated unless equipped with a properly installed spark arrester that meets and is qualified to either the U.S. Department of Agriculture—Forest Service Standard 5100-1a, or the 80-percent efficiency level when determined by the appropriate Society of Automotive Engineers (SAE) Recommended Practices J335 or J350, which standards include the requirement that such spark arrester shall have an efficiency to retain or destroy at least 80 percent of carbon particles for all flow rates, and which includes a requirement that such spark arrestor has been warranted by its manufacturer as meeting such requirement for at least 1,000 hours subject to normal use, with maintenance and mounting in accordance with the manufacturer's recommendation. A spark arrester is not required when an off-road vehicle is being operated in an area which has 3 or more inches of snow on the ground.

(d) Vehicles operating during the time specified in § 6291.1(g)(5) shall comply with the following: (1) Headlights shall be of sufficient power to illuminate an object at 300 feet at night under normal, clear atmospheric conditions. Two- or three-wheeled vehicles or single-tracked vehicles will have a minimum of one headlight. Vehicles having four or more wheels or more than a single track will have a minimum of two headlights, except double tracked snowmachines with a maximum capacity of two people may have only one headlight. (2) Red taillights, capable of being seen at a distance of 500 feet from the rear at night under normal, clear atmospheric conditions, are required on vehicles in the same numbers as headlights.

Subpart 6294—Permits

§ 6294.1 Permit requirements.

Permits are required for certain types of ORV use and shall be issued in accordance with the special recreation permit procedures under part 6260 of this chapter.

[FR Doc. 78-18478 Filed 7-6-78; 8:45 am]

APPENDIX C

Applicable (36 CFR 295);
(36 CFR 261.13) and revoked
(36 CFR 295.6-295.8) Forest
Service regulations.

PART 295—USE OF OFF-ROAD VEHICLES

Sec.
295.1 Applicability.
295.2 Definitions.
295.3 Planning designation of areas and trails.
295.4 Public participation.
295.5 Public information.
295.6—295.8 [Reserved]
295.9 Monitoring effects of off-road vehicle use.

AUTHORITY: 30 Stat. 35, as amended; 16 U.S.C. 551; 50 Stat. 525, as amended; 7 U.S.C. 1011; 83 Stat. 852; E.O. 11644.

SOURCE: 38 FR 26723, Sept. 25, 1973, unless otherwise noted.

§ 295.1 Applicability.

The regulations in this part pertain to administrative designation of specific areas and trails of National Forest System lands on which the use of off-road vehicles shall be allowed, restricted, or prohibited and establishing controls governing the use of off-road vehicles on such areas. The use of off-road vehicles in National Forest Wilderness and Primitive Areas is governed by §§ 293.1 through 293.17 of this Title.

§ 295.2 Definitions.

(a) "Off-road vehicles" means any motorized vehicles designed for or capable of cross country travel on or immediately over land, water, sand, snow, ice, marsh, swampland, or other terrain which would include, but not be limited to, such vehicles as four wheel drive, motorcycle, snowmobile, amphibious, and air cushion vehicles; except that such term excludes (1) any registered motorboat, (2) any military, fire, emergency or law enforcement vehicle when used for official or emergency purposes, and (3) any vehicle whose use is expressly authorized by the Chief, Forest Service, under a permit, lease, license, or contract.

(b) "National Forest System lands" means National Forests, National Grasslands, and other lands and interests in land administered by the Forest Service.

(c) "Official use" means an employee, agent, or designated representative of the Federal Government or one of its contractors in the course of his employment, agency, or representation.

(d) "Trail" means a designated path or way of varying width which is commonly used by and maintained for hikers, horsemen, snow travelers, bicyclists or for motorized vehicles with a total width of 40 inches or less.

§ 295.3 Planning designation of areas and trails.

On National Forest System lands the continuing resource planning process will provide for designation of specific areas and trails for off-road vehicle use, use restrictions, and closures to any or all types of such use. This process will include coordination with appropriate Federal, State, and local agencies. The planning process will analyze and evaluate alternatives to enable decisions which best provide for the protection of the natural and historic resources, promotion of safety for all users, minimization of use conflicts, and accomplishment of all of the other resource objectives for National Forest System lands. Analysis and evaluation of off-road vehicles uses will take into consideration factors such as noise, safety, quality of the various recreational experiences provided, protential impacts on soil, watershed, vegetation, fish, wildlife, fish and wildlife habitat, and existing or proposed recreational uses of the same or neighboring lands. Regional Foresters and Forest Supervisors are authorized to designate areas and trails for off-road vehicles use, use restrictions, and closures to any or all types of such use.

[38 FR 26723, Sept. 25, 1973, as amended at 39 FR 10431, Mar. 20, 1974]

§ 295.4 Public participation.

The public shall be provided an opportunity to participate in the designation of areas and trails relating to off-road vehicle use. Advance notice will be given to allow review by the public of proposed designations or revisions of designations of any areas or trails for off-road vehicle use, for restrictions, or for closures to such use. Adequate time will be allowed for public response prior to any designations or revisions. In emergency situations, designation or revision of designation may be made without public participation to protect natural resources and to provide for public safety.

§ 295.5 Public information.

Areas and trails may be marked with appropriate signs to control off-road vehicle use. All notices issued concerning the regulation of off-road vehicles shall be posted so as to reasonably bring them to the attention of the public, and a copy of the notice shall be kept available to the public in the offices of the District Rangers and Forest Supervisors. Information and maps will be published and distributed describing the conditions of use and the time periods when areas and trails are: (a) Open to off-road vehicle use, (b) restricted to certain types of off-road vehicle use, (c) closed to off-road vehicle use.

§§ 295.6—295.8 [Reserved]

§ 295.9 Monitoring effects of off-road vehicle use.

The effects of off-road vehicle use on National Forest System lands will be monitored by the Forest Service. Designation, use restrictions, and operating conditions will be revised as needed to meet changing conditions.

PARTS 296–299 [RESERVED]

295.6 Operating conditions.

The following acts are prohibited when off-road vehicles are operated on areas or trails of National Forest System lands:

(a) Operation without a valid operator's license or learner's permit if required by the laws of the State in which the vehicle is being operated for that particular type of off-road vehicle;

(b) Operation by an unlicensed person under 18 years of age unless accompanied by or within the sight of a responsible adult who has a valid operators license if a license is required by the State for the type of vehicle being operated;

(c) Operation in a manner disregarding the rights and safety of others, or so as to endanger, or be likely to endanger, any person or property;

(d) Operation in excess of established speed limits;

(e) Operation while the operator is under the influence of alcohol or drugs;

(f) Operation in a manner creating excessive damage or disturbance of the land, wildlife, or vegetative resources;

(g) Operation not in conformance with applicable State laws and regulation requirements established for off-road vehicles;

(h) Operation when an internal combustion engine is not equipped with a properly installed muffler in good working condition;

(i) Operation when an internal or external conbustion engine is not equipped with a properly installed spark arrester, provided that such equipment is specified when an area or trail is designated for use by off-road vehicles. Such spark arrester shall meet and be qualified to either the Department of Agriculture, Forest Service Standard 5100-1a, or the 80 percent efficiency level when determined in accordance with the appropriate Society of Automotive Engineers (SAE) Recommended Practices J335 or J350. Qualification or spark arresters to either the Forest Service Standard of SAE Recommended Practices shall be determined by the Forest Service;

(j) Operation without an operable braking system;

(k) Operation from one-half hour after sunset to one-half hour before sunrise without working headlights and taillight;

(l) Operation which does not comply with:

(1) Any applicable noise emission standard established by the Administrator, Environmental Protection Agency, under authority of section 6 of the Noise Control Act of 1972 (PL 92-574);

(2) Any applicable U. S. Department of Agriculture or State standards for permissible levels of environmental noise. In case of overlapping standards, the most stringent standards will govern.

[39 FR 10431, Mar. 20, 1974]

295.7 Restricted and prohibited use.

Except as provided in 295.8, and except for use in connection with mining activities under the provisions of the General Mining Act of 1872, the use of off-road vehicles is prohibited in areas and trails on National Forest System lands during any period when such areas and trails have been closed to vehicles or certain types of vehicles pursuant to these regulations.

295.8 Off-road vehicle permits.

Use of off-road vehicles on National Forest System lands where the use of off-road vehicles is prohibited may be allowed for official use or with prior authorization by means of an Off-Road Vehicle permit. Off-Road Vehicle permits may be issued by the Chief or authorized official of the Forest Service, and such permits shall be revocable for violation of the rules and regulations governing the National Forests.

PART 261—PROHIBITIONS

Subpart A—General Prohibitions

Sec.
261.1 Scope.
261.2 Definitions.
261.3 Interfering with forest officers prohibited.
261.4 Disorderly conduct.
261.5 Fire.
261.6 Timber and other forest products.
261.7 Livestock.
261.8 Fish and wildlife.
261.9 Property.
261.10 Occupancy and use.
261.11 Sanitation.
261.12 Forest development roads and trails.
261.13 Use of vehicles off roads.
261.14 Developed recreation sites.
261.15 Admission, recreation use and special recreation permit fees.
261.16 National Forest wilderness.
261.17 Boundary Waters Canoe Area, Superior National Forest.
261.18 Pacific Crest National Scenic Trail.
261.19 National Forest primitive areas.
261.20 Unauthorized use of "Smokey Bear" and "Woodsy Owl" symbol.

§ 261.13 Use of vehicles off roads.

It is prohibited to operate any vehicle off Forest Development, State or County roads:

(a) Without a valid license as required by State law.

(b) Without an operable braking system.

(c) From one-half hour after sunset to one-half hour before sunrise unless equipped with working head and tail lights.

(d) In violation of any applicable noise emission standard established by any Federal or State agency.

(e) While under the influence of alcohol or other drug;

(f) Creating excessive or unusual smoke;

(g) Carelessly, recklessly, or without regard for the safety of any person, or in a manner that endangers, or is likely to endanger, any person or property.

APPENDIX D

Oregon Revised Statutes that apply to off-road vehicles and snowmobiles.

OFF-ROAD VEHICLES

483.833 Definitions for ORS 483.833 to 483.847. As used in ORS 483.833 to 483.847, "off-road vehicle" means any motorized vehicle designed for or capable of cross-country travel on or immediately over land, water, sand, snow, ice, marsh, swampland or other natural terrain.
[1975 c.89 §2]

483.835 [1973 c.580 §5; 1975 c.287 §6; renumbered 487.755]

483.837 Equipment requirements when operated on certain public lands. Except as provided in ORS 483.847, an off-road vehicle is not in violation of laws governing equipment on motor vehicles if the off-road vehicle complies with the requirements of ORS 483.839 and 483.843 and is operated within the Oregon Dunes National Recreational Area on:

(1) Lands and roads under the custody and control of the Secretary of the United States Department of Agriculture; or

(2) That portion of the ocean shore open to vehicular traffic.
[1975 c.89 §3]

483.839 Required equipment. (1) Every off-road vehicle operating in an area specified in ORS 483.837 shall be equipped with:

(a) A muffler which permits the vehicle to meet standards for noise emissions adopted by the Environmental Quality Commission.

(b) Brakes of a type specified by the Administrator of the Motor Vehicles Division.

(c) A windshield wiper if the off-road vehicle is equipped with a windshield.

(d) A flag of a type specified by the administrator of the division when the off-road vehicle is operated on sand.

(e) Such other safety equipment as is required by rule adopted by the administrator.

(2) Paragraphs (c) and (d) of subsection (1) of this section shall not apply to motorcycles.
[1975 c.89 §4]

483.840 [1973 c.580 §6; repealed by 1975 c.451 §291]

483.843 Headlight and taillight requirements. Every off-road vehicle operating in an area specified in ORS 483.837 at any time from one-half hour after sunset to one-half hour after sunrise shall be equipped with and display headlights and taillights.
[1975 c.89 §5]

483.845 [1973 c.580 §7; repealed by 1975 c.451 §291]

483.847 Operation without required equipment. Operation of an off-road vehicle in an area specified in ORS 483.837 in violation of ORS 483.839 or 483.843 or any rule adopted pursuant to ORS 483.839 is a Class C misdemeanor.
[1975 c.89 §6]

483.850 [1973 c.580 §8; repealed by 1975 c.451 §291]

483.855 [1973 c.580 §9; repealed by 1975 c.451 §291]

483.860 [1973 c.580 §10; 1975 c.287 §8; repealed by 1975 c.451 §291]

483.865 [1973 c.580 §11; 1975 c.451 §127; renumbered 487.775]

483.870 [1973 c.580 §12; 1975 c.451 §129; renumbered 487.785]

SNOWMOBILES

483.705 [1969 c.598 §9; repealed by 1971 c.618 §28]

483.710 Operation of snowmobile to hunt; while under the influence of liquor or drugs; "dangerous drugs" defined. (1) No person shall operate a snowmobile in a manner so as to run down, harass, chase or annoy any game animals or birds or domestic animals. No person shall hunt from a snowmobile. This subsection does not apply to officers of the State Fish and Wildlife Commission, to persons under contract to the commission in the performance of their official duties or to individuals who have secured a permit from the commission for purposes of research and study.

(2) No owner or other person having charge or control of a snowmobile shall knowingly authorize or permit any person to operate the snowmobile across a highway who is incapable by reason of age, physical or mental disability or who is under the influence of intoxicating liquor or controlled substances.

(3) As used in ORS 483.730, "dangerous drugs" means any drug designated a controlled substance by the Committee on Controlled Substances.
[1969 c.598 §§10, 13; 1971 c.618 §23; 1977 c.745 §50]

Note: The amendments to 483.710 by section 50, chapter 745, Oregon Laws 1977, take effect July 1, 1978. See section 56, chapter 745, Oregon Laws 1977.

483.715 [1969 c.598 §11; repealed by 1971 c.618 §28]

483.725 Operator's license or certification required; age limit for operators; snowmobile safety education courses. (1) No person shall operate a snowmobile unless:

(a) He has an operator's license issued under ORS chapter 482 or has been certified, as provided by subsection (3) of this section, as qualified to operate a snowmobile; and

(b) He has on his person at the time he is operating the snowmobile his license or evidence of such certification.

(2) No person under 12 years of age shall operate a snowmobile on or across a highway or a railroad right of way.

(3) A person who does not have an operator's license issued under ORS chapter 482 may operate a snowmobile if he has taken a snowmobile safety education course and been certified as qualified to operate a snowmobile. The course shall be one given by an instructor designated by the division as qualified to conduct such a course and issue such a certificate. The division shall adopt regulations to provide for the designation of instructors and the issuance of certificates. The division shall by regulation prescribe reasonable fees to be collected in the administration of the program. Notwithstanding subsection (1) of this section, a person may operate a snowmobile while taking such a course from an instructor.
[1971 c.618 §18]

483.730 Prohibited acts. It shall be unlawful for any person to operate any snowmobile:

(1) At a rate of speed greater than reasonable and proper under the existing conditions.

(2) While under the influence of intoxicating liquor, dangerous drugs or narcotic drugs.

(3) In a negligent manner so as to endanger the person or property of another, or to cause injury or damage to either.

(4) Without a lighted headlight and taillight.

(5) Without an adequate braking device which may be operated either by hand or foot.

(6) Without an adequate and operating muffling device which shall effectively blend the exhaust and motor noise in such a manner so as to preclude excessive or unusual noise and, on snowmobiles manufactured after January 4, 1973, which shall effectively maintain such noise at a level of 82 decibels or below on the "A" scale at 100 feet under testing procedures established by the Department of State Police; however, snowmobiles used in organized racing events in an area designated for that purpose may use a bypass or cutout device.

(7) Upon the paved portion or upon the shoulder or inside bank or slope of any highway, or upon the median of any divided highway or upon any portion of a highway right of way under construction, except as provided in ORS 483.735 and 483.740.

(8) On or across a railroad right of way, except as provided by ORS 483.735 and 483.740; however, this subsection does not apply to snowmobiles being operated by officers or employes or authorized contractors or agents of a railroad in the course of their employment.

(9) In any area or in such a manner so as to expose the underlying soil or vegetation, or to injure, damage or destroy trees or growing crops.

(10) With a firearm in his possession, unless the firearm is unloaded, or with a bow, unless the bow is unstrung.

(11) A person who violates subsection (1) or subsections (3) to (10) of this section commits a Class B traffic infraction.

(12) A person who violates subsection (2) of this section commits a Class A traffic infraction.
[1971 c.618 §15; 1977 c.882 §26]

483.735 Crossing two or three lane highways. It shall be lawful to drive or operate a snowmobile across a two or three lane highway or a railroad right of way when:

(1) The crossing is made at an angle of approximately 90 degrees to the direction of the highway or railroad right of way and at a place where no obstruction prevents a quick and safe crossing;

(2) The snowmobile is brought to a complete stop before entering the highway or railroad right of way;

(3) The operator of the snowmobile yields the right of way to vehicles using the highway or equipment using the railroad tracks; and

(4) The crossing is made at an established public railroad crossing or at a place that is greater than 100 feet from any highway intersection.

(5) A person who violates this section commits a Class C traffic infraction.
[1971 c.618 §16; 1977 c.882 §27]

483.740 Operation of snowmobile upon highway or railroad right of way. (1) Notwithstanding subsection (2) of ORS 483.725 and ORS 483.735, it shall be lawful to operate a snowmobile upon a highway:

(a) Where the highway is completely covered with snow or ice and has been closed to motor vehicle traffic during the winter months;

(b) For the purpose of loading or unloading when such operation is performed with safety and without causing a hazard to vehicular traffic approaching from either direction on the highway;

(c) Where the highway is posted to permit snowmobiles;

(d) In an emergency during the period of time when and at locations where snow upon the highway renders travel by automobile impractical; or

(e) When traveling along a designated snowmobile trail.

(2) Notwithstanding subsection (2) of ORS 483.725 and ORS 483.735, it shall be lawful to operate a snowmobile upon a railroad right of way:

(a) Where the right of way is posted to permit snowmobiles; or

(b) In an emergency.

(3) A person who violates this section commits a Class C traffic infraction.
[1971 c.618 §17; 1977 c.882 §28]

483.745 Accident reports required. The operator of a snowmobile involved in any accident resulting in injury to or death of any person, or property damage in the estimated amount of $200 or more, or a person acting for the operator or the owner of the snowmobile having knowledge of the accident, should the operator of the snowmobile be unknown, shall submit such reports as are required under ORS 483.602 to 483.614, and ORS 483.602 to 483.612 are applicable to such reports when submitted.
[1971 c.618 §19; 1975 c.451 §269d]

483.750 Enforcement of ORS 483.725 to 483.740. ORS 483.725 to 483.740 shall be enforced by all police officers, game wardens and all other state law enforcement officers within their respective jurisdictions.
[1971 c.618 §20]

483.755 Regulation of snowmobiles by cities, counties, political subdivisions and state agencies. Notwithstanding any of the provisions of ORS 483.725 to 483.740 and subsection (3) of 483.991, any city, county or other political subdivision, or any state agency, may regulate the operation of snowmobiles on public lands, waters and other properties under its jurisdiction, and on streets or highways within its boundaries by adopting regulations or ordinances of its governing body, if such regulations are not inconsistent with ORS 483.725 to 483.740 and subsection (3) of 483.991.
[1971 c.618 §22; 1977 c.475 §6]

APPENDIX E

Oregon Revised Statutes and administrative rules relating to ORV noise.

467.010 Legislative findings and policy. The Legislative Assembly finds that the increasing incidence of noise emissions in this state at unreasonable levels is as much a threat to the environmental quality of life in this state and the health, safety and welfare of the people of this state as is pollution of the air and waters of this state. To provide protection of the health, safety and welfare of Oregon citizens from the hazards and deterioration of the quality of life imposed by excessive noise emissions, it is hereby declared that the State of Oregon has an interest in the control of such pollution, and that a program of protection should be initiated. To carry out this purpose, it is desirable to centralize in the Environmental Quality Commission the authority to adopt reasonable state-wide standards for noise emissions permitted within this state and to implement and enforce compliance with such standards.
[1971 c.452 §1]

467.020 Emission of noise in excess of prescribed levels prohibited. No person may emit, cause the emission of, or permit the emission of noise in excess of the levels fixed therefor by the Environmental Quality Commission purusant to ORS 467.030.
[1971 c.452 §3]

467.030 Adoption of noise control rules, levels and standards. (1) In accordance with the applicable provisions of ORS chapter 183, the Environmental Quality Commission shall adopt rules relating to the control of levels of noise emitted into the environment of this state and including the following:

(a) Categories of noise emission sources, including the categories of motor vehicles and aircraft.

(b) Requirements and specifications for equipment to be used in the monitoring of noise emissions.

(c) Procedures for the collection, reporting, interpretations and use of data obtained from noise monitoring activities.

(2) The Environmental Quality Commission shall investigate and, after appropriate public notice and hearing, shall establish maximum permissible levels of noise emission for each category established, as well as the method of measurement of the levels of noise emission.

(3) The Environmental Quality Commission shall adopt, after appropriate public notice and hearing, standards for the control of noise emissions which shall be enforceable by order of the commission.
[1971 c.452 §2; 1973 c.107 §1; 1973 c.835 §159]

467.100 Local regulation of noise sources. (1) Pursuant to this chapter, in order to protect the health, safety and welfare of its citizens, a city or county may adopt and enforce noise ordinances or noise standards otherwise permitted by law. A city or county may also adopt such standards for a class of activity exempted by the commission or noise emission sources not regulated by the commission.

(2) The commission may by rule withdraw from enforcement any or all of its rules or standards adopted pursuant to this chapter within the boundaries of any city or county, if the commission finds such city or county:

(a) Has adopted noise standards that are at least as stringent as and no less protective than those standards adopted by the state; and

(b) Has a program of active enforcement of such standards which, in the commission's view, is at least as protective of the public health, safety and welfare as would be the enforcement provided by the department.

(3) The commission may modify or repeal such a rule as is made in accordance with subsection (2) of this section with regard to any particular city or county if it finds material change in any of the circumstances relied upon by the commission in making such rule. Such rulemaking shall be in conformance with the provisions of ORS chapter 183.

(4) Nothing in this section is intended to preclude contractual arrangements between a city or county and a state agency for services provided for the enforcement of state or local noise emission control standards.
[1977 c.511 §4]

467.990 Penalties. Violation of any provision of this chapter or rules or orders made under the provisions of this chapter is a Class B misdemeanor. Each day of violation shall be considered a separate offense.
[1971 c.452 §6; 1973 c.835 §161]

Department of Environmental Quality

Chapter 340, Oregon Administrative Rules

Division 35

Noise Control Regulations

Amended March 1, 1978

General

35-005 POLICY. In the interest of public health and welfare, and in accordance with ORS 467.010, it is declared to be the public policy of the State of Oregon:

(1) to provide a coordinated state-wide program of noise control to protect the health, safety, and welfare of Oregon citizens from the hazards and deterioration of the quality of life imposed by excessive noise emissions;

(2) to facilitate cooperation among units of state and local governments in establishing and supporting noise control programs consistent with the State program and to encourage the enforcement of viable local noise control regulations by the appropriate local jurisdiction;

(3) to develop a program for the control of excessive noise sources which shall be undertaken in a progressive manner, and each of its objectives shall be accomplished by cooperation among all parties concerned.

.....

35-015 DEFINITIONS. As used in this Division:

(1) "Ambient Noise" means the all-encompassing noise associated with a given environment, being usually a composite of sounds from many sources near and far.

.....

(11) "In-Use Motor Vehicle" means any Motor Vehicle which is not a New Motor Vehicle.

.....

(14) "Motorcycle" means any Motor Vehicle, except Farm Tractors, designed to travel on not more than three wheels which are in contact with the ground.

(15) "Motor Vehicle" means any vehicle which is, or is designed to be self-propelled or is designed or used for transporting persons or property. This definition excludes, airplanes, but includes water craft.

.....

(18) "Noise Level" means weighted Sound Pressure Level measured by use of a metering characteristic with an "A" frequency weighting network and reporting as dBA.

(19) "Noise Sensitive Property" means real property on, or in, which people normally sleep, or on which exist facilities normally used by people as schools, churches, or public libraries. Property used in industrial or agricultural activities is not defined to be Noise Sensitive Property unless it meets the above criteria in more than an incidental manner.

.....

(21) "Off-Road Recreational Vehicle" means any Motor Vehicle, including water craft, used off Public Roads for recreational purposes. When a Road Vehicle is operated off-road, the vehicle shall be considered an Off-Road Recreational Vehicle if it is being operated for recreational purposes.

.....

(26) "Propulsion Noise" means that noise created in the propulsion of a Motor Vehicle. This includes, but is not limited to, exhaust system noise, induction system noise, tire noise, cooling system noise, aerodynamic noise and, where appropriate in the test procedure, braking system noise. This does not include noise created by Road Vehicle Auxiliary Equipment such as power take-offs and compressors.

(27) "Public Roads" means any street, alley, road, highway, freeway, thoroughfare, or section thereof in this state used by the public or dedicated or appropriated to public use.

(28) "Quiet Area" means any land or facility designated by the Commission as an appropriate area where the qualities of serenity, tranquility, and quiet are of extraordinary significance and serve an important public need, such as, without being limited to, a wilderness area, national park, state park, game reserve, wildlife breeding area or amphitheater. The Department shall submit areas suggested by the public as Quiet Areas, to the Commission, with the Department's recommendation.

(29) "Racing Events" means any competition using Motor Vehicles, conducted under a permit issued by the governmental authority having jurisdiction or, if such permit is not required, under the auspices of a recognized sanctioning body. This definition includes, but is not limited to, events on the surface of land and water.

(30) "Racing Vehicle" means any Motor Vehicle that is designed to be used exclusively in Racing Events.

(31) "Road Vehicle" means any Motor Vehicle registered for use on Public Roads, including any attached trailing vehicles.

.....

(33) "Sound Pressure Level" (SPL) means 20 times the logarithm to the base 10 of the ratio of the root-mean-square pressure of the sound to the reference pressure. SPL is given in decibels (dB). The reference pressure is 20 micropascals (20 micronewtons per square meter).

.....

35-030 NOISE CONTROL REGULATIONS FOR IN-USE MOTOR VEHICLES

(1) Standards and Regulations:

.....

(b) Off-Road Recreational Vehicles.

(A) No person shall operate any off-road recreational vehicle which exceeds the noise level limits specified in Table D.

(B) No person shall operate an off-road recreational vehicle with any of the following defects:

(i) no muffler

(ii) leaks in the exhaust system

(iii) pinched outlet pipe

.....

(d) Ambient Noise Limits

(A) No person shall cause, allow, permit, or fail to control the operation of motor vehicles, including motorcycles, on property which he owns or controls, nor shall any person operate any such motor vehicle if the operation thereof increases the ambient noise level such that the appropriate noise level specified in Table E is exceeded as measured from either of the following points, if located within 1000 feet (305 meters) of the motor vehicle:

(i) noise sensitive property, or

(ii) the boundary of a quiet area.

(B) Exempt from the requirements of this subsection shall be:

(i) motor vehicles operating in racing events;

(ii) motor vehicles initially entering or leaving property which is more than 1000 feet (305 meters) from the nearest noise sensitive property or boundary of a quiet area.

(iii) motor vehicles operating on public roads; and

(iv) Motor vehicles operating off-road for non-recreational purposes.

.....

TABLE D

Off-Road Recreational Vehicle Standards

Allowable Noise Limits

Vehicle Type	Model Year	Maximum Noise Level (dBA) and Distance from Vehicle to Measurement Point: Stationary Test 20 Inches (1/2 Meter)	Moving Test at 50 Feet (15.2 Meters)
Motorcycles	1975 and Before	102	
	After 1975	99	
Snowmobiles	1971 and Before		86
	1972-1975		84
	1976-1978		80
	After 1978		77
Boats			
Underwater Exhaust	All		84
Atmosphere Exhaust	All	100	84
All Others			
Front Engine	All	95	
Mid and Rear Engines	All	97	

TABLE E

Ambient Standards for Vehicles Operated Near Noise Sensitive Property

Allowable Noise Limits

Time	Maximum Noise Level, dBA
7 a.m. - 10 p.m.	60
10 p.m. - 7 a.m.	55

APPENDIX F

Oregon Revised Statutes relating to vehicle zones on the ocean shore.

390.605 "Improvement," "ocean shore," and "state recreation area" defined. As used in ORS 390.610, 390.620 to 390.660, 390.680, 390.690, and 390.705 to 390.770, unless the context requires otherwise:

(1) An "improvement" includes a structure, appurtenance or other addition, modification or alteration constructed, placed or made on or to the land.

(2) "Ocean shore" means the land lying between extreme low tide of the Pacific Ocean and the line of vegetation as established and described by ORS 390.770.

(3) "State recreation area" means a land or water area, or combination thereof, under the jurisdiction of the Department of Transportation, pursuant to subsection (3) of ORS 366.205, used by the public for recreational purposes.
[Formerly 274.065 and then 390.710]

390.610 Policy. (1) The Legislative Assembly hereby declares it is the public policy of the State of Oregon to forever preserve and maintain the sovereignty of the state heretofore legally existing over the ocean shore of the state from the Columbia River on the north to the Oregon-California line on the south so that the public may have the free and uninterrupted use thereof.

(2) The Legislative Assembly recognizes that over the years the public has made frequent and uninterrupted use of the ocean shore and recognizes, further, that where such use has been legally sufficient to create rights or easements in the public through dedication, prescription, grant or otherwise, that it is in the public interest to protect and preserve such public rights or easements as a permanent part of Oregon's recreational resources.

(3) Accordingly, the Legislative Assembly hereby declares that all public rights or easements legally acquired in those lands described in subsection (2) of this section are confirmed and declared vested exclusively in the State of Oregon and shall be held and administered as state recreation areas.

(4) The Legislative Assembly further declares that it is in the public interest to do whatever is necessary to preserve and protect scenic and recreational use of Oregon's ocean shore.
[1967 c.601 §§1, 2(1), (2), (3); 1969 c.601 §4]

390.615 Ownership of Pacific shore; declaration as state recreation area. Ownership of the shore of the Pacific Ocean between ordinary high tide and extreme low tide, and from the Oregon and Washington state line on the north to the Oregon and California state line on the south, excepting such portions as may have been disposed of by the state prior to July 5, 1947, is vested in the State of Oregon, and is declared to be a state recreation area. No portion of such ocean shore shall be alienated by any of the agencies of the state except as provided by law.
[Formerly 274.070 and then 390.720]

390.668 Motor vehicles and aircraft use regulated in certain zones; zone markers; proceedings to establish zones. (1) The Department of Transportation may establish zones on the ocean shore where travel by motor vehicles or landing of any aircraft except for an emergency shall be restricted or prohibited. After the establishment of a zone and the erection of signs or markers thereon, no such use shall be made of such areas except in conformity with the rules of the department.

(2) Proceedings to establish a zone:

(a) May be initiated by the department on its own motion; or

(b) Shall be initiated upon the request of 20 or more landowners or residents or upon request of the governing body of a county or city contiguous to the proposed zone.

(3) A zone shall not be established unless the department first holds a public hearing in the vicinity of the proposed zone. The department shall cause notice of the hearing to be given by publication, not less than seven days prior to the hearing, by at least one insertion in a newspaper of general circulation in the vicinity of the zone.

(4) Before establishing a zone, the department shall seek the approval of the local government whose lands are adjacent or contiguous to the proposed zone.
[Formerly 274.090 and then 390.730]

390.670 [1967 c.601 §8; 1969 c.601 §13; repealed by 1971 c.780 §7]

390.680 [1967 c.601 §9; 1969 c.601 §17; repealed by 1973 c.732 §5]

390.770 Vegetation line described. Except for the areas described by ORS 390.760, ORS 390.640 applies to all the land located along the Pacific Ocean between the Columbia River and the Oregon-California boundary between extreme low tide and the lines of vegetation as established and described according to the Oregon Coordinate System, as defined by ORS 93.330, as follows:

Description given in statute.

APPENDIX G

Cooperative agreement between Tillamook County and the U. S. Forest Service.

COOPERATIVE AGREEMENT

BETWEEN

TILLAMOOK COUNTY SHERIFF'S DEPARTMENT
TILLAMOOK, OREGON

AND

FOREST SERVICE
U.S. DEPARTMENT OF AGRICULTURE
SIUSLAW NATIONAL FOREST
P. O. BOX 1148
CORVALLIS, OREGON

Under the Act of August 10, 1971 (P. L. 92-82).

Whereas, the Forest Service, hereinafter referred to as the Service, has the responsibility for the enforcement of the Federal laws and regulations relative to the National Forest System, and other lands administered by the Forest Service, and,

Whereas, the Service recognizes that public use of such lands, which are usually located in remote or sparsely populated areas, are attracting large numbers of visitors, and,

Whereas, the Tillamook County Sheriff's Department, hereafter referred to as the Cooperator, has the authority to enforce the State and local laws for Tillamook County on such lands, and,

Whereas, the Siuslaw National Forest is partially located in Tillamook County for which the cooperator has the responsibility of enforcement of State and local laws, and,

Whereas, the cooperator is limited by level of financing as to the amount of protection, patrol and investigation that can be provided at the more remote areas within Tillamook County,

Now therefore, the parties hereby mutually agree that it is desirable to cooperate in better utilizing the resources of both agencies while providing for more adequate protection of persons and property as follows:

A. The Tillamook County Sheriff's Department agrees:

1. To continue to enforce the civil and criminal laws of the State and/or county on lands within or a part of any unit of the National Forest System within the normal scope of its duty without reimbursement by the Service.

2. Upon specific request of the Service, to provide special services beyond those provided under Clause A-1 for the enforcement of State or local laws relating to the protection of persons and their property in accordance with the operating and financial plan.

3. To furnish the Service at intervals mutually agreed upon itemized statements of expenditures incurred.

4. To maintain accounting and performance records of the reimburseable expenses in a manner that will facilitate an examination by officials of the Service or other Federal officials who may be required to examine such records. Such records will be retained for a period of three years following the year the expenditures were incurred, unless disposition is otherwise agreed to in writing.

5. That all officers assigned to fulfill the services under this agreement will meet the same standards of training required of other officers in his jurisdiction or where State Peace Officer Standards of Training (P.O.S.T.) exist, will meet those standards.

6. When Forest Service radio frequencies are utilized, acquire Federal Communication Commission licenses.

B. The Service agrees, within availability of funds and established Service regulations and policies:

1. To enforce the Federal laws and regulations relating to the National Forest System.

2. To provide support and cooperation to the Tillamook County Sheriff's Department in enforcement of State and local laws on lands within or a part of any unit of the National Forest System.

3. To reimburse the Tillamook County Sheriff's Department for the special or support services provided under Clause A-1 and A-2 at the rates established in Clause B-2.

4. Obtain required licenses for operating radio on cooperator frequencies.

C. The parties mutually agree:

1. To provide the maximum cooperation possible, within the availability of funds and established laws, regulations, and policies governing the respective agencies that will assure the protection of persons and their property on land within or a part of any unit of the National Forest System.

2. To prepare and/or update annually an Operating and Financial Plan specifying the cooperation on behalf of both parties and the terms for reimbursement for the services referred to. This plan when signed by both parties is attached to and made a part of this agreement. Each party will designate in the plan a specific individual and alternate(s) to make or receive requests for special services under this agreement.

3. That officers of the Tillamook County Sheriff's Department performing services under this agreement in enforcing State and local laws are, and will remain under the supervision, authority, and responsibility of the Tillamook County Sheriff. Such services provided by the cooperator and its employees shall not be considered as coming within the scope of Federal employment and none of the benefits of Federal employment will be conferred under this agreement.

4. In connection with the performance of work under this agreement, the provisions of Form AD-369, Equal Opportunity, attached, are hereby included as a part of this agreement. On Form AD-369, "Contractor" means "Cooperator." "Contracting Officer" and "Contracting Agency" mean "Forest Service."

5. No member of, or delegate to, Congress, or Resident Commissioner, shall be admitted to any share or part of this agreement or to any benefit that may arise therefrom; but this provision shall not be construed to extend to this agreement if made with a corporation for its general benefit.

6. The period of this agreement shall be from the date of execution until terminated by mutual agreement, or on 30 days' written notice from either party to the other.

7. Any changes in the provisions of this agreement which are necessary and proper will be made by formal amendment.

COOPERATOR

Chas D Bailey 3/29/78

Chairman, Board of Commissioners
Tillamook County

Date

FOREST SERVICE
U.S. DEPARTMENT OF AGRICULTURE

[illegible] 4/5/78

Forest Supervisor
Siuslaw national Forest

Date

Approved Dani O Wilson
Sheriff, Tillamook County

3-30-78
Date

APPENDIX H

Agreement between Tillamook County and Northwest Trail and Dune Association.

BEFORE THE BOARD OF COUNTY COMMISSIONERS

FOR TILLAMOOK COUNTY, OREGON

SPECIAL USE LICENSE

Permission is hereby granted to NORTHWEST TRAIL AND DUNE ASSOCIATION of 1150 Iris Lane N.W., Salem, Oregon 97304, hereinafter called the Licensee, to use the property shown on the attached map marked "Exhibit A" and made a part hereof to the same extent as if set forth in full. This license is issued for the purpose of allowing the Licensee to stage seven (7) drag races only between April 1 and October 15 each year for the duration of the license, and is subject to and contingent upon compliance with the conditions set forth below.

1. In consideration for this use, the Licensee shall pay to Tillamook County, Oregon the sum of One thosuand dollars ($1,000.) per year for the duration of this license, said first year sum payable upon execution of this agreement. Subsequent yearly payments shall be payable on or before the 31st day of March each year.

2. Development Plans: layout or construction plans for this area must be approved in advance and in writing by the Chairman of the Board of County Commissioners or his designee. Trees, shrubs, and other plants may be planted in such manner and in such places about the premises as may be approved by the Chairman of the Board of County Commissioners or his designee.

3. The Licensee shall maintain the improvements and premises to Tillamook County standards of repair, orderliness, neatness, sanitation, and safety acceptable to the Chairman of the Board of County Commissioners or his designee.

4. The Licensee shall provide necessary fencing in accordance with and under the direction of Siuslaw National Forest and including the licensed area of Tillamook County.

5. The Licensee, in exercising the privileges granted by this license, shall comply with the regulations of the Department of Agriculture and all Federal, State, county, and municipal laws, ordinances, or regulations which are applicable to the area or operations covered by this license.

6. The Licensee shall take all reasonable precautions to prevent and suppress forest fires. No material shall be disposed of by burning in open fires during the closed season established by law or regulation without a written permit from the Chairman of the Board of County Commissioners or his designee.

7. The Licensee shall exercise diligence in protecting from damage the land and property of Tillamook County covered by and used in connection with this license, and shall pay Tillamook County for any damage resulting from negligence or from the violation of the terms of this license, or of any law or regulation applicable to County lands by the Licensee, or by any agents or employe's of the Licensee acting within the scope of their agency or employment.

8. The Licensee shall fully repair all damage, other than ordinary wear and tear, to roads and trails caused by the Licensee in the exercise of the privilege granted by this license.

9. Upon abandonment, termination, revocation, or cancellation of this license, the Licensee shall remove within a reasonable time all stuctures or improvements, and shall restore the site, unless otherwise agreed upon in writing or in this license. If the Licensee fails to remove all such structures or improvements within a reasonable period, they shall become the property of Tillamook County, but that will not relieve the Licensee of liability for the cost of their removal and restoration of the site.

10. This license is not transferable. If the Licensee through voluntary sale or transfer, or through enforcement of contract, foreclosure, tax sale, or other valid legal proceeding shall cease to be the owner of the physical improvements other than those owned by Tillamook County situated on the land described in this license and is unable to furnish adequate proof of ability to redeem or otherwise reestablish title to said improvements, this license shall be subject to cancellation. But if the person to whom title to said improvements shall have been transferred in either manner provided is qualified as a Licensee and is willing that his future occupancy of the premises shall be subject to such new conditions and stipulations as existing or prospective circumstances may warrant, his continued occupancy or the premises may be authorized by license to him if, in the opinion of the issuing officer or his successor, issuance of a license is desirable and in the public interest.

11. In case of change of address, the Licensee shall immediately notify the Board of County Commissioners of Tillamook County, Oregon.

12. This license may be terminated upon breach of any of the conditions herein or at the discretion of the Board of County Commissioners, Tillamook County, Oregon.

13. In the event of any conflict between any of the preceding printed clauses or any provisions thereof and any of the following clauses or any provisions thereof, the following clauses will control.

14. The Licensee shall protect the scenic aesthetic values of the area under this license, and the adjacent land, as far as possible with the authorized use, during construction, operation and maintenance of the improvements.

15. This license is issued with the understanding and on the condition that, unless sooner terminated or revoked for cause, it will expire on October 15, 1983 and all structures and improvements, except those owned by Tillamook County, shall be moved in accordance with Clause 9 of this license. For the purpose of this license, two months after termination of the license will be considered a reasonable period in which to remove the structure and improvements. This termination date shall not be extended.

No additional improvements shall be constructed without prior written approval of the Board of County Commissioners of Tillamook County, Oregon.

This is strictly a license for the period hereinbefore designated only.

16. Licensee shall not cause, permit, or allow alcoholic beverages or illegal drugs to be sold, used or kept on the premises.

17. During the term of this license, the Licensee agrees:

a. In connection with the performance of work under this license, including maintenance and operation of the facility, the Licensee shall not discriminate against any employee or applicant for employment because of race, color, religion, sex or national origin.

b. The Licensee and his employe's shall not discriminate by segregation or otherwise against any person on the basis of race, color, religion, sex or national origin by curtailing or refusing to furnish accomodation, facilities, services, or use privileges offered to the public generally.

c. The Licensee shall include and require compliance with the above non-discrimination provisions in any subcontract made with respect to the operations under this license.

d. Signs setting forth this policy of non-discrimination will be conspicuously displayed at the public entrance to the premises.

18. The Licensee shall have in force public liability insurance covering: (1) property damage in the amount of Five thousand dollars ($5,000.), and (2) damage to persons in the minimum amount of One hundred thousand dollars ($100,000.) in the event of death or injury to more than one individual. The coverage shall extend to property damage, bodily injury, or death arising out of the Licensee's activities under the license including, but not limited to, the occupancy or use of the land and the construction, maintenance, and operation of the structures, facilities, or equipment authorized by this license. Such insurance shall also name the County of Tillamook as a co-insured and provide for specific coverage of the Licensee's contractually assumed obligation to indemnify the County of Tillamook. The Licensee shall require the insurance company to send an authenticated copy of its insurance policy to Tillamook County immediately upon issuance of the policy. The policy shall also contain a specific provision or rider to the effect that the policy will not be cancelled or its provisions changed or deleted before thirty (30) days written notice to the County Clerk of Tillamook County, Oregon.

19. The operation and maintenance of all sanitation, food service, and water-supply methods, systems and facilities shall comply with the standards of the local department of health and the United States Public Health Service.

The Licensee shall dispose of all garbage and refuse in a place outside of the Sand Beach area.

20. The Licensee agrees to take all reasonable precaution to avoid damage to property and resources of Tillamook County, and diligently to undertake suppression action in the event of fire resulting from the exercise of the privileges herein granted.

21. No fireworks or explosives of any kind or nature shall be stored or used on the land covered by this license, or in the stuctures thereon.

22. The Licensee shall restrict all parking to areas approved by the Tillamook County Board of Commissioners, and comply with the traffic control requirements on National Forest land as outlined in the Forest Service Special Use Permit.

23. No signs or advertising devices, except as required by paragraph 17, item D, shall be erected on the area covered by this license, or highways leading thereto, without prior approval by the Tillamook County Board of Commissioners as to location, design, size, color and message. Erected signs shall be maintained or renewed as

as necessary to neat and presentable standards.

24. The Licensee or designated representative shall be present on the premises at all times when the facilities are open to the public. The Licensee will notify Tillamook County Board of Commissioners in writing who the representative will be.

25. To provide for public safety, resource protection, orderliness, neatness, and sanitation acceptable to Tillamook County, the following plan is hereby made a part of the License:

PUBLIC SAFETY AND ORDERLINESS

a. RACE COURSES: Staging area (pits) will be staked and delineated by rope or other like substance and flagged to warn spectators and to keep them out. Size of area to be staked shall be based upon 200 square feet for each vehicle registered for competition.

b. DRAG STRIP: The entire racing area including starting line, finish line, and deceleration area will be roped off so as to restrict access by those vehicles not racing. A return route to the pits will be marked by flags or some like means.

c. MUFFLERS: Vehicles must have adequate mufflers installed unless they are operating in the pit area, of the race course.

d. PUBLIC INFORMATION: By use of the public address system or other suitable means, the Licensee shall, at least every two hours, inform the public and participants of the following:

1. Vehicle travel is restricted to open sand areas.

2. Fire danger is high in beach grass. Be careful with fire.

3. Mufflers are required for all non-contest vehicles.

4. Deposit litter in bags and cans.

e. COURSE POLICING: The Licensee will take steps to assure that straying vehicles or people are not on the race course while a competitor is racing. This will include barring non-racing traffic from the course for periods of time, up to 1/2 hour.

f. All events will be held in open sand areas. No clearing of vegetation is permitted except in areas designated and approved by the Board of County Commissioners.

g. The construction of permanent structures will not be permitted.

h. SANITATION:

1. At least four (4) chemical toilets shall be available for public use adjacent to the spectators or other locations deemed more feasible by the Chairman of the Board of Commissioners of Tillamook County, Oregon.

2. Large plastic bags shall be well distributed in the spectator and pit areas for the purpose of collecting litter, and other garbage and rubbish. The Licensee shall also pick up all remaining litter, garbage, and refuse following the close of each day's events within the permit area.

i. PARKING FOR DAY USE: Licensee shall furnish security for the parking lot and control entry to race vehicles or participants. Control can be accomplished by use of barricades or like devices. Signs informing the general public that the area is under license to the NORTHWEST TRAIL AND DUNE ASSOCIATION will be displayed on the barricades.

j. TRAFFIC CONTROL: Traffic control will be the responsibility of the Licensee who will supply a man at the road junction of the campground and beach road on Sundays, one (1) hour before the race until 4:00 p.m. If additional time is needed, it will be on a request basis by the Chairman of the Board of County Commissioners of Tillamook County.

26. Tillamook County designates the Chairman of the Board of County Commissioners of Tillamook County as supervisor and contact person pertaining to all matters under this License, whose address is P.O. Box 152, Tillamook, Oregon 97141.

DATED this 31st day of March, 1978.

LICENSEE:

Myke L. Holmes
President
Northwest Trail and Dunes Association

BOARD OF COUNTY COMMISSIONERS
FOR TILLAMOOK COUNTY, OREGON

Chas D Bailey
Chairman, Chas. D. Bailey

F.E. Knight
F.E. Knight

Granville Simmons
Granville Simmons

EXHIBIT I

Grievances associated with off-road vehicle use in the Sand Lake area, Tillamook County, Oregon.

May 31, 1976

This memorandum is being submitted so that there will be a documentation on file in your records of the property owners' complaints..

The Forest Service has created a monster on the sand dunes at Sand Lake that is a menace to the property and possibly the lives of those who live in this area.

The following list of complaints indicates the seriousness of the problem.

Tearing up of pasture land.
Pulling up fence posts.
Cutting trees and stealing wood.
Dumping sanitary bags and garbage on property.
Using private property for bathrooms.
Urinating in front of homes..
Tearing down "No Trespassing" signs.
Building fires in private woods, thus putting forests and homes in jeopard
Camping on private property.
Threatening personal injury and property damage when asked to get off of property.
All-night running without mufflers.
Exceeding the speed limit on county roads.
Creating sanitary hazards to private water systems.
Tearing up the sand stabilizing cover.
Endangering a child's life.
Threatening future damage to person and property.
No Forest Service or police patrol on the Derrick Road during the 3-day holiday.

What the property owners want to know is this: Does the Forest Service plan to take action to protect the property and lives of the residents of this area?

Signed by eleven local residents on the front of this page and eight on the back of it.

This list of grievances was submitted to the author December 15, 1978, with a cover letter dated December 9, 1978, reiterating their concerns. The letter was signed by eleven area residents and is on file at the OCZMA office in Newport, Oregon.

This intern report was read and accepted by a staff member at:

Agency: Oregon Coastal Zone Management Association, Inc.

Address: 132 West Olive
Newport, Oregon 97365

This report was completed by a WICHE intern. This intern's project was part of the Resources Development Internship Program administered by the Western Interstate Commission for Higher Education (WICHE).

The purpose of the internship program is to bring organizations involved in community and economic development, environmental problems and their students in the West for the benefit of all.

For these organizations, the intern program provides the problem-solving talents of student manpower while making the resources of universities and colleges more available. For institutions of higher education, the program provides relevant field education for their students while building their capacity for problem-solving.

WICHE is an organization in the West uniquely suited for sponsoring such a program. It is an interstate agency formed by the thirteen western states for the specific purpose of relating the resources of higher education to the needs of western citizens. WICHE has been concerned with a broad range of community needs in the West for some time, insofar as they bear directly on the well-being of western peoples and the future of higher education in the West. WICHE feels that the internship program is one method for meeting its obligations within the thirteen western states. In its efforts to achieve these objectives, WICHE appreciates having received the generous support and assistance of the National Endowment for the Humanities, the Economic Development Administration and by more than one hundred and fifty community agencies throughout the West.

For further information, write Resources Development Internship Program, WICHE, P. O. Drawer 'P', Boulder, Colorado 80302 or call (303) 443-6144.

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