

Given To
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in 1986 Jan

MANAGEMENT PLAN
GUADALUPE DUNES PRESERVE

The Nature Conservancy
California Field Office

Barbara Malloch
California Land Steward
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INTRODUCTION

The Guadalupe Dunes form the middle and largest portion of the Nipomo Dunes complex, a system of coastal sand dunes extending 12 miles along the San Luis Obispo County - Santa Barbara County coastline. The Nipomo Dunes have long been known as the largest and best example of central California sand dunes, scenically and ecologically. The dunes support over a dozen species of highly localized plants, which have evolved within the Nipomo Dunes and are essentially restricted to it. There also are several species of rare animals in the Nipomo Dunes which depend on coastal sand dunes for all or a portion of their habitat requirements.

*how many
actually*

For several decades, Union Oil has had a major oil extraction development in the Guadalupe Dunes, the Guadalupe Oil Field. Recently, as a permit condition for planned expansion and improvement of its facilities, Union was asked by the California Coastal Commission to dedicate about 300 acres of sand dunes in perpetual scenic and conservation easements (Figure 1). These easements have been offered to The Nature Conservancy, subject to Union approval of a management plan. This management plan, therefore, sets out the philosophy and actions to be taken by The Nature Conservancy during the first year of stewardship of the Guadalupe Dunes Preserve.

SIGNIFICANCE OF THE TRACT

The 300 acre Guadalupe Dunes Preserve contains examples of four rare plant communities and populations of five rare and endangered plant species. Rare plant communities are those communities designated as Priority 1 (limited in extent and not adequately protected by the California Natural Diversity Data Base (CNDDB). Rare and endangered plants include: those species so designated by the California Native Plant Society; those listed as either rare or endangered by the California Department of Fish and Game; and candidate species listed by the U.S. Fish and Wildlife Service. Specifically, the Guadalupe Dunes supports:

Plant Communities

- Central coastal foredunes
- Central coastal dune scrub
- Coastal dune slack
- Coastal brackish marsh

Rare and Endangered Plants

- Castilleja mollis
- Cirsium loncholepis
- Cirsium rhotophilum
- Dithyrea maritima
- Monardella crispa
- Monardella undulata var. frutescens
- Scrophularia atrata

CALIFORNIA
7.5 MINUTE SERIES (TOPOGRAPHIC)

NW/4 POINT SAL 15 QUADRANGLE

1856 11 56
OCEANO

40° 213

714

715

1 210 000 FEET

R. 36 W.

120° 37' 30"

35° 00'

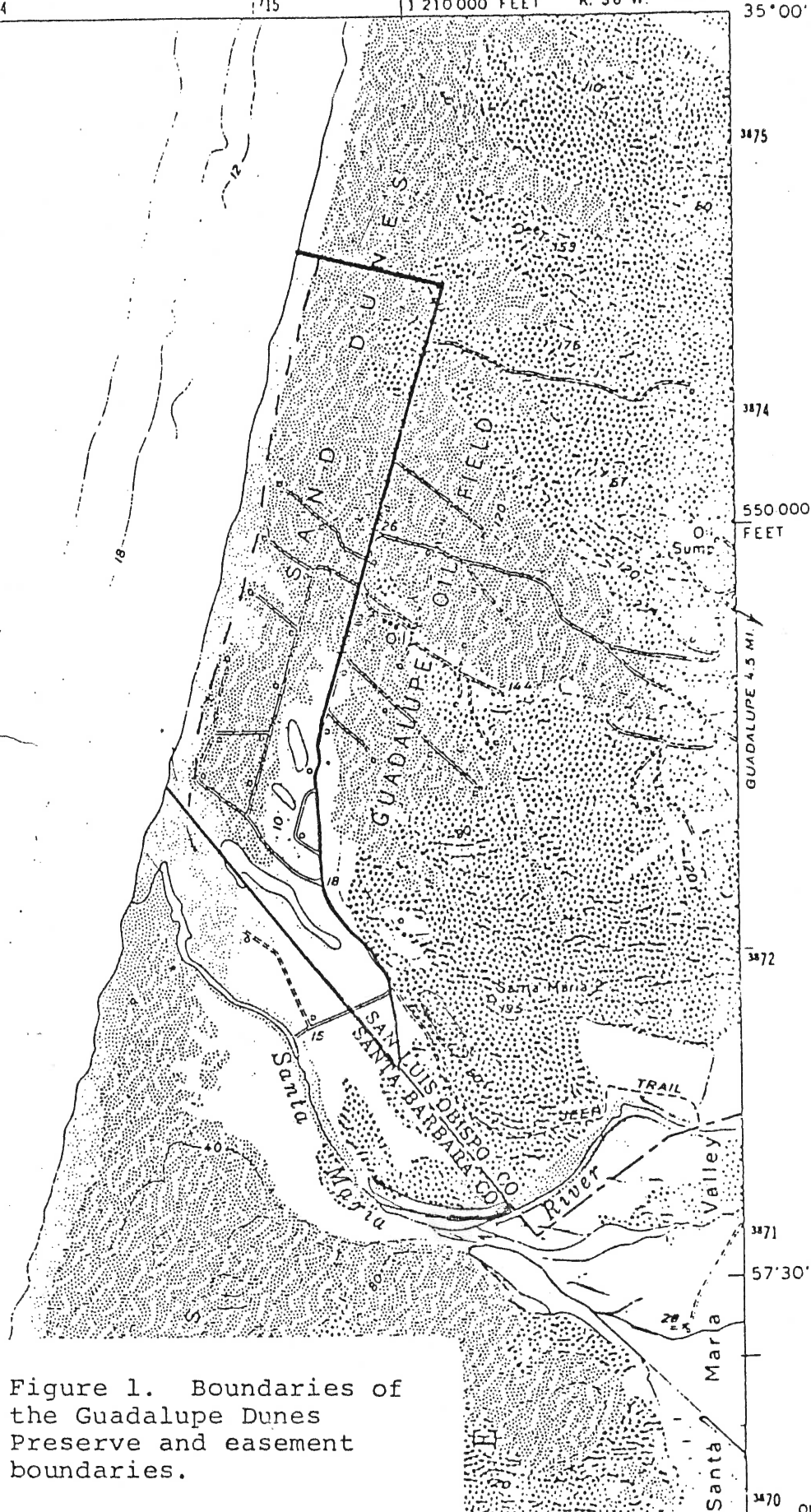


Figure 1. Boundaries of the Guadalupe Dunes Preserve and easement boundaries.

Inset: general location map



QUADRANGLE LOCATION

Figures 2 and 3 show the distribution of plant communities and the locations of rare plant colonies within the preserve.

The pattern of rare plant occurrence deserves mention. Rare plant occurrences typically consist of only one or a few plants, or larger numbers scattered over a large area. Thus, it is difficult to accurately portray rare plant distribution on a map of this scale. The map included here shows only those colonies mapped to date; more colonies exist throughout the preserve area.

About one-third of the preserve is open sand. Approximately half of the preserve consists of partially stabilized sand dunes. The freshwater marsh located at the southern end of the easement is the largest one south of the Dune Lakes complex. The dune scrub extends slightly to a small extent into the preserve; it is more extensive in the stabilized sand dunes further east.

Additionally, there are several rare animals known from the Nipomo Dunes area. They include:

- California least tern
- California brown pelican
- American peregrine falcon

There are no specific records of these animals using the Guadalupe Dunes Preserve as essential breeding habitat. However, the California least tern breeds nearby and feeds in the Santa Maria River mouth, partly on the preserve. The other two birds also are believed to feed on or near the preserve. In addition several other CNDDB-designated "special" animals (rare but not endangered, or not rare but of limited distribution) may occur on the site. Survey is needed to determine their presence on the site.

MANAGEMENT GOALS

The paramount goal of The Nature Conservancy is the preservation and protection of natural biological diversity. The Guadalupe Dunes Preserve helps further this goal by protecting several rare plant communities and rare and endangered species.

THE PRESERVE PLANNING PROCESS

Planning for preservation is a five-stage process for The Nature Conservancy. The first stage is the identification of rare and unprotected ecosystems; state-wide coastal sand dune ecosystems were identified as one of eleven top priority ecosystems. The second stage is the identification of general areas which contain the best examples of the critical ecosystems; the Guadalupe-Nipomo Dunes was the top priority sand dune area. Third, the preserve design for the Guadalupe Dunes described minimum and ideal preserve boundaries to assure the continued survival of the target elements (communities and species).

CALIFORNIA
7.5 MINUTE SERIES (TOPOGRAPHIC)

NW 1/4 POINT SAL 15' QUADRANGLE

185° 11' 50" (OCEANO)

40° 13'

714

715

11 210 000 FEET

R. 36 W.

120° 37' 30"

35° 00'



Active Coastal Dunes



Coastal Dune Scrub



Coastal Dune Slacks



Partially Stabilized Dunes



Freshwater Marsh

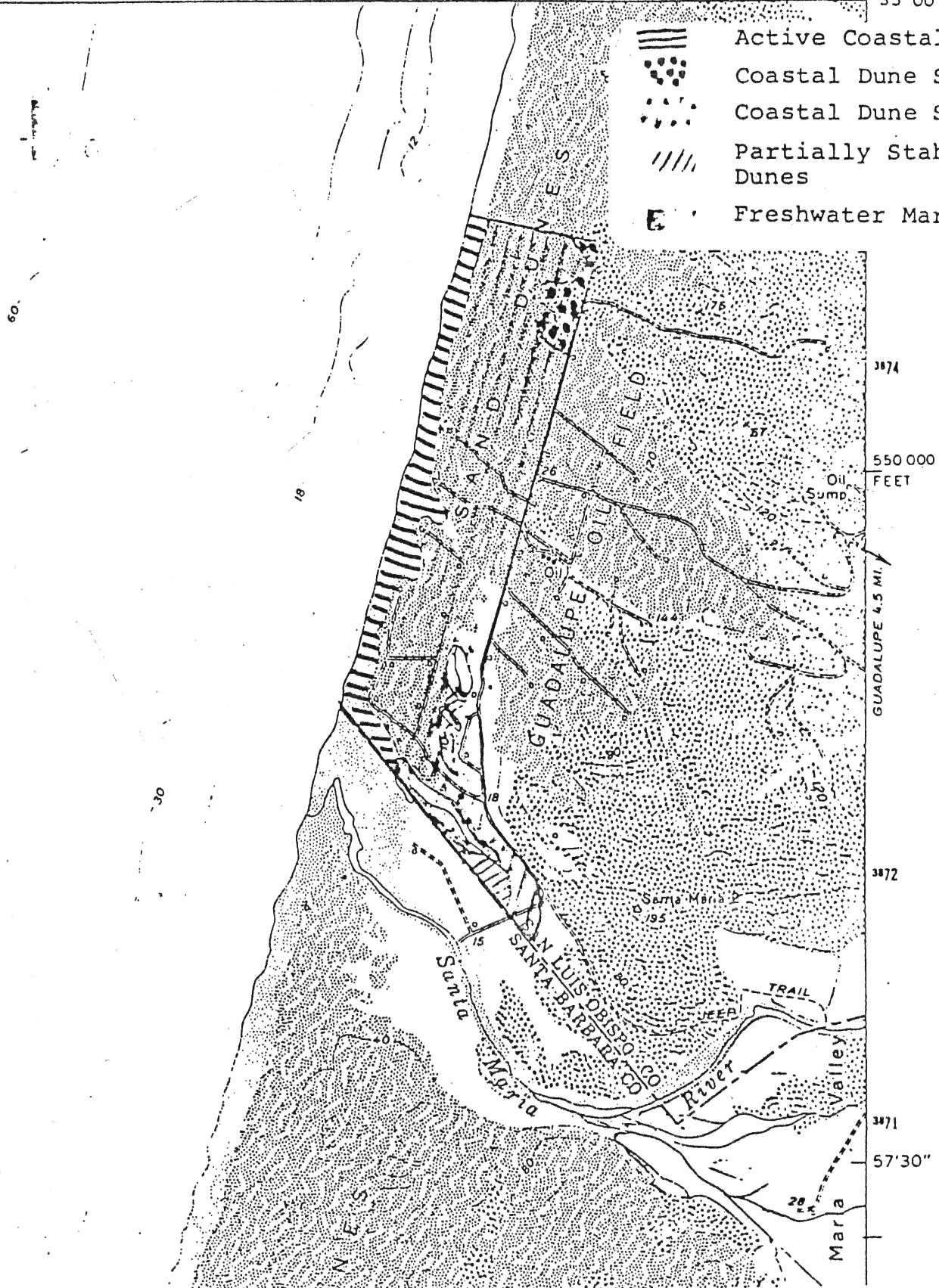


Figure 2. Plant communities of the Guadalupe Dunes Preserve

CALIFORNIA
7.5 MINUTE SERIES (TOPOGRAPHIC)

NW 1/4 POINT SAL 15' QUADRAngle

1834 11 5'
OCEANO

40° 13'

714

715

1210000 FEET

R. 36 W.

120° 37' 30"

35° 00'

1. *Castilleja mollis*
2. *Cirsium loncholepis*
3. *Cirsium rhotophilum*
4. *Dithyrea maritima*
5. *Monardella crispata*

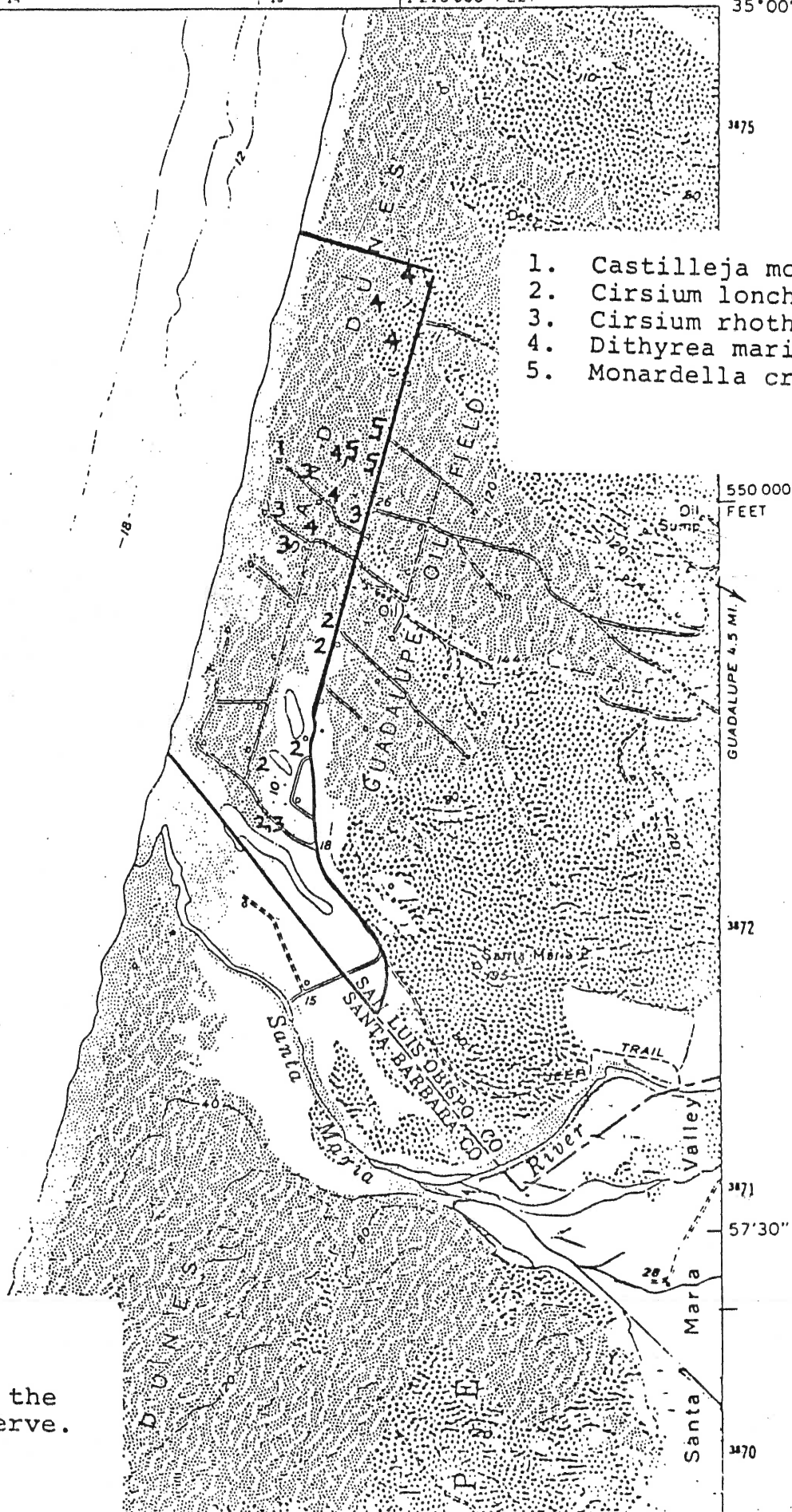


Figure 3. Rare and endangered plants of the Guadalupe Dunes Preserve.

In this, the current 300 acre preserve area was an important step in assuring the protection of an example of the sand dune system. Fourth, when land protection is imminent, a management plan is prepared to outline the first year's management actions. Fifth, a brief annual plan is prepared as part of the budgeting and planning cycle each year thereafter.

Focusing specifically on the management plan, three broad categories must be addressed:

1. Stewardship - scientific research and inventory, management actions needed to maintain the health of critical elements, and plans for public education and awareness;
2. Organization and administration - structures, equipment and personnel necessary to manage the land;
3. Budget

Within each category, the plan includes an outline of project objectives, a description of the current situation on the preserve, and specific strategies to accomplish the objectives with a parenthetical reference to who is responsible for completing the action. Each strategy has a target date for completion.

MANAGEMENT PRIORITIES

Management priorities for the Guadalupe Dunes Preserve will focus on those programs which will: a) maintain or enhance the natural quality of the resources, particularly critical elements; and b) yield scientific information necessary to guide preservation and restoration programs. First-year management priorities fall primarily in the area of biological inventory and the evaluation of management alternatives.

The Conservancy's efforts in the first year will concentrate in the following:

- 1) Developing a thorough biological inventory of the preserve, including a floral inventory, a map and population estimate of rare plants, and detailed surveys to assess the possible existence of rare animal species on the preserve.
- 2) Forming a small preserve committee whose primary function is to advise and act on technical aspects of ecological monitoring and management.
- 3) Evaluating, through the use of small exclosures, the effects of grazing animals on the sand dunes and marsh ecosystems, particularly the rare plants.

- 4) Posting signs at the preserve boundaries.
- 5) Establishing a limited public awareness program for the preserve.
- 6) Working closely with Union Oil to maintain compatible use of the preserve and the oil field.

II. STEWARDSHIP

A. Preservation and Restoration

1. 1982-83 Preservation and Restoration Program Objectives

- a. Fence and post where necessary.
- b. Cooperate with Union in limiting trespass.
- c. Negotiate exclosures in the marsh area and monitor the interaction of grazing animals and plants, and assess ecological needs of rare plants.

2. The Current Situation

Coastal sand dune vegetation, while well adapted to the rigors of a nutrient-poor and shifting substrate, generally consists of slow-growing perennials, and therefore is sensitive to repeated disturbances. One-time surface disturbances such as road and pipeline construction can be seen to slowly revegetate according to a typical sequence of species.

The most serious problem in the Nipomo Dunes is the repeated disturbance caused by off-road vehicles. Sand dune destabilization has been well-documented in the Nipomo Dunes State Vehicular Recreation Area further north. There, sand dune vegetation has been entirely removed in the areas of heaviest use, and has been disrupted over hundreds of acres.

ORV trespass has been kept to a minimum in the Guadalupe Oil Field because of restricted access from the east, and by the vigilance of Union's employees. It is reasonable to assume that this condition will continue to prevail.

Given this situation, the Conservancy plans not to add fencing unless new information suggests that ORV trespass is too great. It will, however, post the perimeter of the preserve with signs notifying the public of the area's special status. In addition, Conservancy representatives will ask ORV trespassers to leave the Preserve.

Exclosures. The Guadalupe Oil Field has free-ranging cattle. Some questions have been raised about the effects of grazing animals on rare plant reproduction, particularly the Cirsium species. A common technique for investigating plant-animal interactions is to place exclosures around the plant colonies and observe the effect on plant reproduction.

On the Preserve, cattle grazing rights are leased to the Moretti and Minetti Cattle Company. Before exclosures could be established, an arrangement would need be made with the landowner and the cattle company, possibly involving compensation for reduced grazing land. A maximum of two to three acres might be requested for exclosures.

3. Strategies for Accomplishing Program Objectives

1. By December, 1982, post preserve boundaries (CLS, Preserve Committee).

2. By June, 1983, evaluate trespass on preserve and work with Union to develop strategies to limit it, if needed. (CLS, PC).

3. By November, 1982, pursue an agreement with Le Roy, the cattle company and Union to build exclosures around rare plant colonies in the marsh area; and build them. (CLS, PC).

B. Scientific Research and Inventory

1. Program Objectives

- a. Complete a thorough baseline inventory of plants and animals on the preserve.
- b. Produce information for protection and restoration of species and habitats.
- c. Initiate long-term biological monitoring.
- d. Survey for rare and endangered animals on the preserve.

2. The Current Situation

Because of recent environmental reviews for permit applications, some fairly complete biological inventories exist for the Guadalupe Dunes. In a brief survey of the Preserve by Vanderweir (1981) rare plant colonies were mapped more precisely. Developing a Preserve-specific botanical inventory, therefore, will be a matter of refining existing knowledge and applying it to the preserve itself.

In addition to the inventory, a map and population estimate of rare plants will be done as a first step in the biological monitoring program. A Preserve monitoring program is intended to establish a baseline condition for rare species, in particular, and to determine whether population changes over time are significant. TNC has is establishing such monitoring programs on all its preserves.

Little is known about the life histories and ecological requirements of the rare plants; likewise, much is unknown about the natural dynamics of the sand dune communities in response to disturbance. Research on these subjects will provide insight into future management for important ecological elements.

Several rare animals have been reported as possibly occurring on the preserve. They are the Belding's savannah sparrow (Passerculus sandwichensis beldingi), California clapper rail (Rallus longirostris obsoletus), Light-footed clapper rail (R.l. levipes) and banded dune snail (Helminthoglypta walkeriana). Specific surveys are needed to determine their presence or absence on the preserve.

3. Strategies for Accomplishing Program Objectives

- a. By August, 1983, conduct botanical inventory of preserve (CLS, PC).
- b. By August, 1983, map and estimate population sizes for rare plants on preserve (CLS, PC).
- c. By June 1983, conduct specific surveys for rare animals on the preserve (CLS, PC).
- d. By December, 1982 conduct life history studies on rare species, and community dynamics descriptions for the sand dune communities (CLS, PC).

C. Public Awareness

Public use of Conservancy lands does not mean unrestricted use. The Conservancy makes every effort to plan and carefully organize group visits to its preserves. For safety and liability reasons as well as for ecological protection, it is especially important that visitation be carefully controlled in the Guadalupe Dunes Preserve. The Conservancy would work closely with Union in developing a preserve use plan.

1. 1982-83 Public Awareness Objectives

- a. In cooperation with Union Oil increase public awareness of importance of Coastal Dunes and protection of natural communities.
- b. Prepare an informational brochure for the Preserve.

Current Situation. Sand dune ecosystem protection has been of interest among conservationists for many years in the Nipomo Dunes area. Conservationists probably view the dedication of the Guadalupe Dunes Preserve as an important step toward ensuring that a portion of the Nipomo Dunes is assured of protection. A limited public use program would help convince interested people that industry and land protection indeed can be compatible.

The Nature Conservancy often permits guided visits to its preserves as an educational activity intended to generate increased awareness of the natural environment. For tours of the Guadalupe Dunes Preserve, the Conservancy would work closely with Union to ensure that such visits do not disrupt Union's normal activities in the oil field.

C. Strategies for Accomplishing Program Objectives

- a. By October, 1983, develop a preserve use plan for the following year, in cooperation with Union Oil (CLS, PC).
- b. By January, 1983, prepare an informational brochure on the Preserve (CLS).

III. ORGANIZATION AND ADMINISTRATION

A. 1982-83 Objectives

1. Establish a preserve advisory committee.

B. Current Situation

Nature Conservancy preserves typically have an associated small group of members who form a preserve committee. The group may consist only one or a few individuals, often ecologists with particular familiarity with the area. They assist with management, guide visits to the preserve, and advise on technical matters. As a new preserve, the Guadalupe Dunes Preserve needs such a group to serve on preserve-related matters. Several local TNC members and ecologists have expressed interest in serving on such a committee.

Strategies to Achieve Program Objectives

By August, 1982, establish a preserve advisory committee (CLS).

BUDGET

Protection

Preservation and Restoration

- | | |
|-----------------------------------|--------|
| 1. Post boundaries of preserve | \$1000 |
| 2. Monitor trespass on preserve | 0 |
| 3. Build exclosures in marsh area | 3000 |

Scientific Research and Inventory

- | | |
|---|------|
| 1. Botanical inventory | 1000 |
| 2. Map and estimate of rare plant populations | 500 |
| 3. Survey for possibly occurring rare animals | 1500 |

Public Awareness

- | | |
|---|-----|
| 1. Develop a limited preserve use program | 800 |
| 2. Prepare an informational brochure for the preserve | 200 |

Organization and Administration

- | | |
|-----------------------------------|-------------|
| 1. Establish a preserve committee | <u>1000</u> |
|-----------------------------------|-------------|

TOTAL	\$9000
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