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RECREATION AREA/ TEXAS



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GENERAL MANAGEMENT PLAN
DEVELOPMENT CONCEPT PLAN
ENVIRONMENTAL ASSESSMENT

AMISTAD RECREATION AREA
Val Verde County, Texas

Review Draft
February 1986



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SUMMARY

This document presents the National Park Service's proposed general management plan (GMP) and development concept plan (DCP) for Amistad Recreation Area, the United States' portion of a large reservoir on the international boundary between Texas and Mexico. The document also incorporates an environmental assessment that analyzes the impacts of the proposed plan and four alternative actions. A road system evaluation is also included.

The primary issues that this plan addresses are to determine what kinds of developments and accesses should be provided for visitor use--including from adjacent private lands--and where, how, and by whom they should be provided. Another major issue is protection of significant archeological resources. Additional concerns are improving management efficiency, ensuring water purity and clarity, administering grazing permits, and providing for or restricting utility crossings.

Visitor use and park resources at the recreation area are managed by the National Park Service under a 1965 agreement with the International Boundary and Water Commission, the agency that operates the dam and controls the water level in the reservoir. Current visitor use is stable at about 1.2 million visits per year; the emphasis is on fishing and boating.

The proposed plan involves maintaining the capacity of existing facilities, with some upgrading, and encouraging the private sector and local and state governments to provide road access and developments outside of the recreation area boundary, new or expanded day/overnight facilities, zoning for preservation of scenic values, game management monitoring, interpretive tours that include the recreation area's resources, and hunting safety programs within and adjacent to the recreation area. Hazards to safe visitor use will also be corrected at park developments.

Facility construction initiated at Pecos River, Diablo East, and Rough Canyon will be completed by the National Park Service. A major new public recreational facility funded by the private sector is proposed at Cow Creek in the upper central reservoir. Wind-protected launch ramps will be provided near the Air Force Marina and Diablo West on the central reservoir area. The streambank in the Lower Rio Grande area below the dam will be reopened for day use. The private sector will be allowed to fund facilities (launch ramps, walks) on NPS lands at points where public access is needed. Overnight sites that are below the maximum water elevation at Spur 277 North, Spur 277 South, and at San Pedro Flats/Spur 454 will be relocated to a new site at San Pedro to be developed above maximum water elevation. Camping will be discontinued at Evans Creek to avoid a flash-flood hazard.

The program for management of archeological resources will provide for identification and evaluation of sites, and establish priorities for preservation/protection funding requests. Uncontrollable threats to some significant sites may necessitate data recovery as a mitigative action.

Environmental impacts of the proposed action will be limited to existing developed sites in most areas. Impacts at the new San Pedro site will be offset by restoration of Spurs 277 North and South and San Pedro Flats/Spur 454. There will also be site disturbances at three new launch ramps and any other accesses funded by the private sector.

Other alternatives that were considered during planning included no action, completing existing developments, consolidating developments, and expansion. These alternatives also lack major environmental impacts. The alternative in the 1968/73 master plan that called for national recreation area designation has been dismissed because the proposal was considered but not enacted by the Congress.

CONTENTS

PURPOSE AND NEED FOR PLAN	1
INTRODUCTION	3
BRIEF DESCRIPTION AND SIGNIFICANCE	5
OPERATING AUTHORITY	6
PUBLIC INVOLVEMENT	9
PLANNING ISSUES	10
Development	10
Visitor Use	10
Management	11
Resource Management	11
MANAGEMENT OBJECTIVES	12
Visitor Use	12
Resource Management	12
Cooperation	12
PERMITS AND AGREEMENTS	14
THE PROPOSAL AND ALTERNATIVES ADDRESSING THE ISSUES	15
INTRODUCTION AND ALTERNATIVES	17
Alternative 1, No Action	18
Alternative 2, Complete Existing Developments	18
Alternative 3, Consolidating Developments	18
Alternative 4, Expansion	18
PROPOSAL	19
Land Use and Management	19
General Development and Visitor Use	20
Cultural Resource Management	38
Natural Resource Management	40
Cooperation	41
Plan Implementation	41
AFFECTED ENVIRONMENT	43
RESERVOIR OPERATION	45
Legal Factors	45
Water Level Fluctuations	45
VISITOR USE	48

EXISTING FACILITIES	58
Amistad Recreation Area Sites and Facilities	58
Adjacent Visitor Facilities and Services	65
CULTURAL RESOURCES	67
Significance of Archeological and Historical Resources	67
Distribution of Sites	67
Characteristics of Sites	70
Historic Sites	71
Threats to Cultural Resources	71
Current Preservation/Protection Methods	72
Compliance Requirements	72
NATURAL RESOURCES	73
LANDOWNERSHIP	76
REGIONAL LAND USE	77
Adjacent Uses	77
Regional Recreational Activities	78
Regional Socioeconomic Characteristics	79
ENVIRONMENTAL CONSEQUENCES OF THE PROPOSED ACTION AND ALTERNATIVES 83	
THE PROPOSAL AND ALTERNATIVES FOR VISITOR USE, DEVELOPMENT, AND CULTURAL RESOURCES MANAGEMENT	85
The Proposal	85
Alternative 1: No Action	85
Alternative 2: Complete Existing Developments	86
Alternative 3: Consolidating Developments	86
Alternative 4: Expansion	86
THE PROPOSAL AND ALTERNATIVES FOR OTHER ISSUES	103
ENVIRONMENTAL CONSEQUENCES	105
Impacts on Cultural Resources	105
Impacts on Natural Resources	106
Impacts on Visitor Use	107
Impacts on Socioeconomic Environment	109
Impacts on Park Management	110
APPENDIXES	113
A: Water Treaty, Legislation, and IBWC/NPS Agreement	115
B: Agreements/Permits/Concessions	118
C: Cost Comparison of Headquarters Locations	153
D: Road System Evaluation	157
BIBLIOGRAPHY	163
LIST OF PREPARERS	165

ILLUSTRATIONS

Region	4
Existing Conditions	7
Management Zoning	21
Proposal	23
Proposed Diablo West (East) DCP	27
Proposed Rough Canyon DCP	31
Proposed Diablo East, Governors Landing, Steam Plant Road DCP	33
Alternative 2	87
Alternative 3	89
Alternative 4	93
Road System Evaluation	161

TABLES

1. Important Water Levels	9
2. Amistad Reservoir Elevations	46
3. Water Level on June 1	49
4. Number of Visits	49
5. Number of Boats	49
6. Number of Campers	49
7. Amistad Recreation Area Visitation by Month 1979-1984	50
8. Visitation by Month, January 1979-December 1984	51
9. Boat Launchings by Month, January 1979-December 1984	52
10. Number of Campers by Month, January 1979-December 1984	52
11. Average Annual Visits by Developed Area 1980-1984	53
12. Boat Launching by Selected Development Areas	54
13. Average Number of Campers by Developed Area, 1981-1984	56
14. Amistad Recreation Area Visitor Facilities and Activities	64
15. National Register Sites/Districts	69
16. Other Sites Potentially Eligible for National Register of Historic Places	70
17. Water Quality Factors, 1978-1981	73
18. Area Communities and Distance from Amistad	80
19. Elements of Proposal and Alternatives with NPS Cost	95
20. Phasing of Proposed Development	100
21. Total Staffing Requirements of Proposal and Alternatives, Permanent and (Temporary)	101
22. Additional Equipment Needs for Proposal and Alternatives	101
23. Visitor Capacity of Developed Areas, (based on momentary use of limiting facility at developed site)	102
24. Cost Comparison of Headquarters Locations	153
25. Annual Operational Savings of Relocating Headquarters to Diablo East	156
26. Road System Evaluation	158

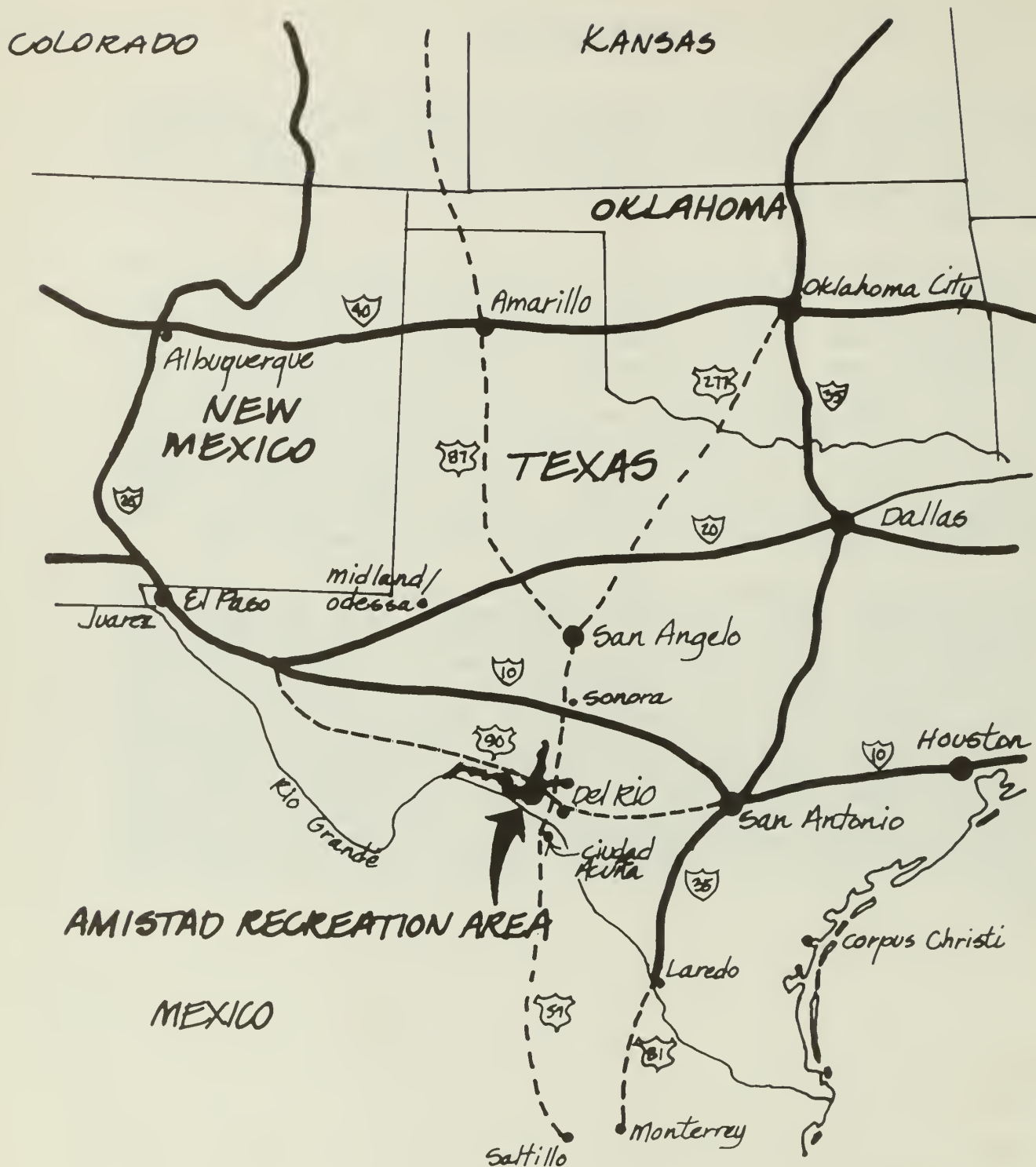
PURPOSE AND NEED FOR PLAN

INTRODUCTION

This document describes and analyzes a proposed general management plan/development concept plan (GMP/DCP) for Amistad Recreation Area. The plan will guide future management, use, and development of the recreation area and will be the basis for future more detailed planning and design documents.

This GMP/DCP updates the master plan that was prepared in 1968 and revised in 1973. Although much of the master plan is still relevant, it does not adequately address current use patterns, facility conditions, and development needs. That plan selected 10 sites for recreational facilities. Developments have since been partially completed at Pecos River, Diablo East, and Rough Canyon. (The Air Force has also developed a site near the dam.) Most of the remaining seven sites have never been funded and are now considered too ambitious. Instead, several minor sites have been established, many east of Diablo East (often where existing roadbeds could be used for launch ramps). Many nearby private tourist developments (motels, boat rental and storage, restaurants, dive shop, gas stations, campgrounds) have also been established along US 90.

This GMP/DCP addresses a wide range of concerns--park land use, research needs, visitor activities, interpretation, park operations, and development; it also provides a comprehensive list of management proposals and covers numerous legal requirements, including provisions of the General Authorities Act, the National Historic Preservation Act, and other applicable laws, regulations, and policies. An environmental assessment, which compares and evaluates the environmental consequences of the proposed action and four alternatives, is included for compliance with regulations implementing the National Environmental Policy Act. Following review of the draft plan/assessment, NPS managers will consider comments from the public, modify the proposal as appropriate, determine whether to prepare an environmental statement, and then approve the plan.



———— Interstate Highways
 - - - - - Other major Highways

REGION

UNITED STATES DEPARTMENT OF THE INTERIOR
 NATIONAL PARK SERVICE



621 | 20019A
 DSC | AUGUST 1985

BRIEF DESCRIPTION AND SIGNIFICANCE

Amistad Recreation Area is an immense reservoir area on the Texas-Mexico border near the town of Del Rio in Val Verde County, Texas. The primary natural resource of this recreation area is the pure, clear blue water of Lake Amistad, which was formed by the buiding of Amistad Dam in 1968-1972. The reservoir is fed by the Rio Grande, Pecos, and Devils rivers. Most of the regional recreational needs for fishing, scuba diving, boating, swimming, picnicking, camping, and hunting are met by Amistad Recreation Area. Tourists from distant areas are also attracted by these opportunities, thereby augmenting the local economy. The recreation area totals 57,292 acres, with some 54,830 acres below the 1,144.3-foot level, which forms the recreation area boundary in most areas, (which may be flooded), and 2,500 acres above that level, where development sites are available. At normal lake level, 1,117 feet, the recreation area has 540 miles of shoreline and 43,250 acres of water.

Scenic rock formations in upstream canyons and the semidesert plants and animals are other natural resources that attract visitors.

Four National Register districts and one National Register site are within or adjacent to the recreation area. These primarily contain archeological sites and feature rock art paintings. Midden deposits may also contain a prehistoric record of as long as 10,000 years. There are many similar sites potentially eligible for listing on the National Register of Historic Places.

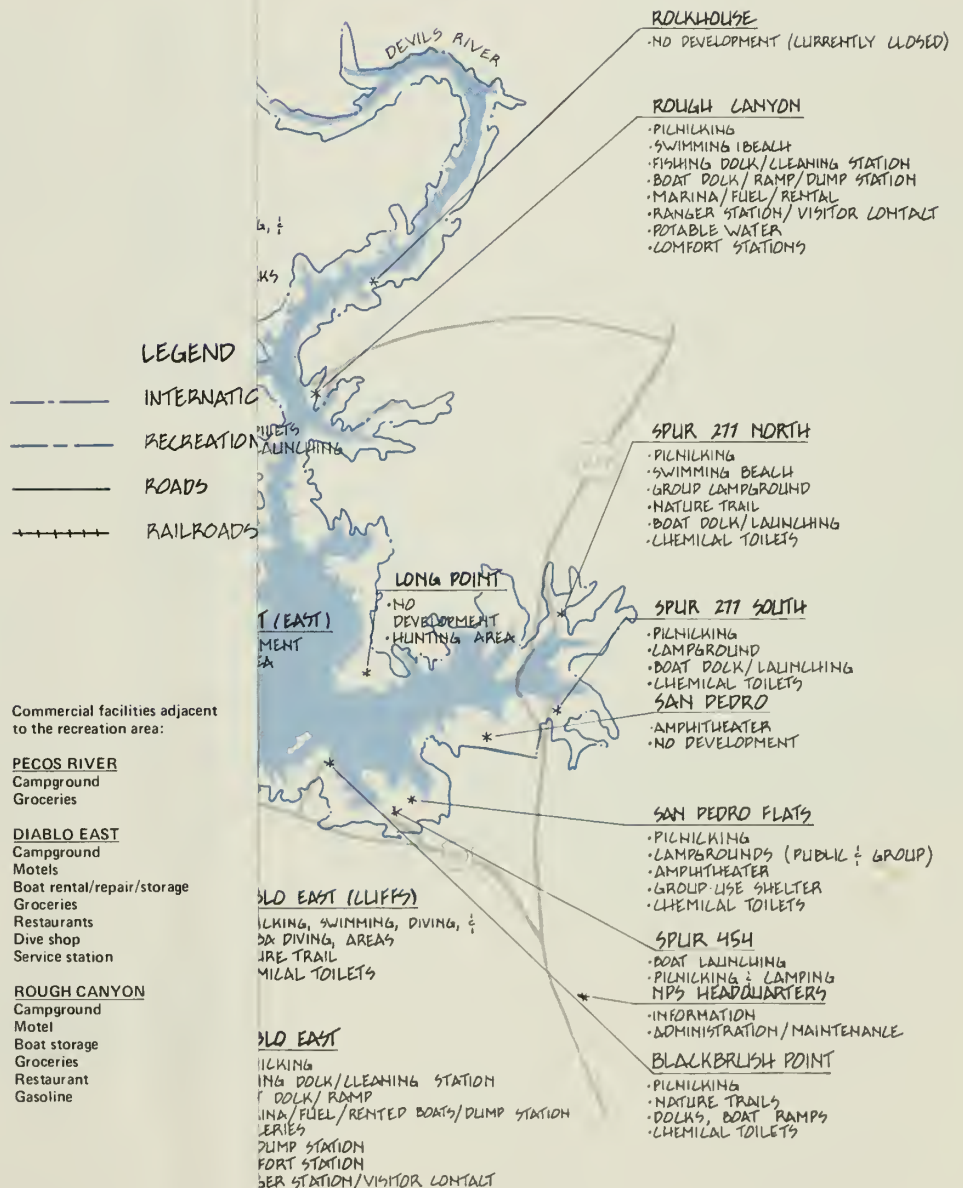
Amistad Recreation Area is not listed in either part of the National Park System Plan (NPS 1972). Neither has it been designated as a national recreation area.

OPERATING AUTHORITY

There is no specific legislation dealing with Amistad Recreation Area. The National Park Service has administered the area under its general legal authorities since the 1965 agreement with the International Boundary and Water Commission (IBWC), United States Section. The Park Service manages the federal lands and the water surface, including natural and cultural resources, provides recreational facilities, and supervises use.

The IBWC retains control of the dam and--pursuant to determinations by Texas and the Mexican state of Coahuila--of the water level to control floods, to store water for irrigation release, to generate hydroelectricity incidental to other releases, and--at the lowest priority--to serve the function of recreation. The Park Service and the IBWC review each others' plans. The NPS/IBWC agreement can be revised or terminated only by mutual consent of the parties, by the secretaries of interior and state, or by legislation. NPS authority to enter the agreement stems from an act of 1946 (see appendix A).

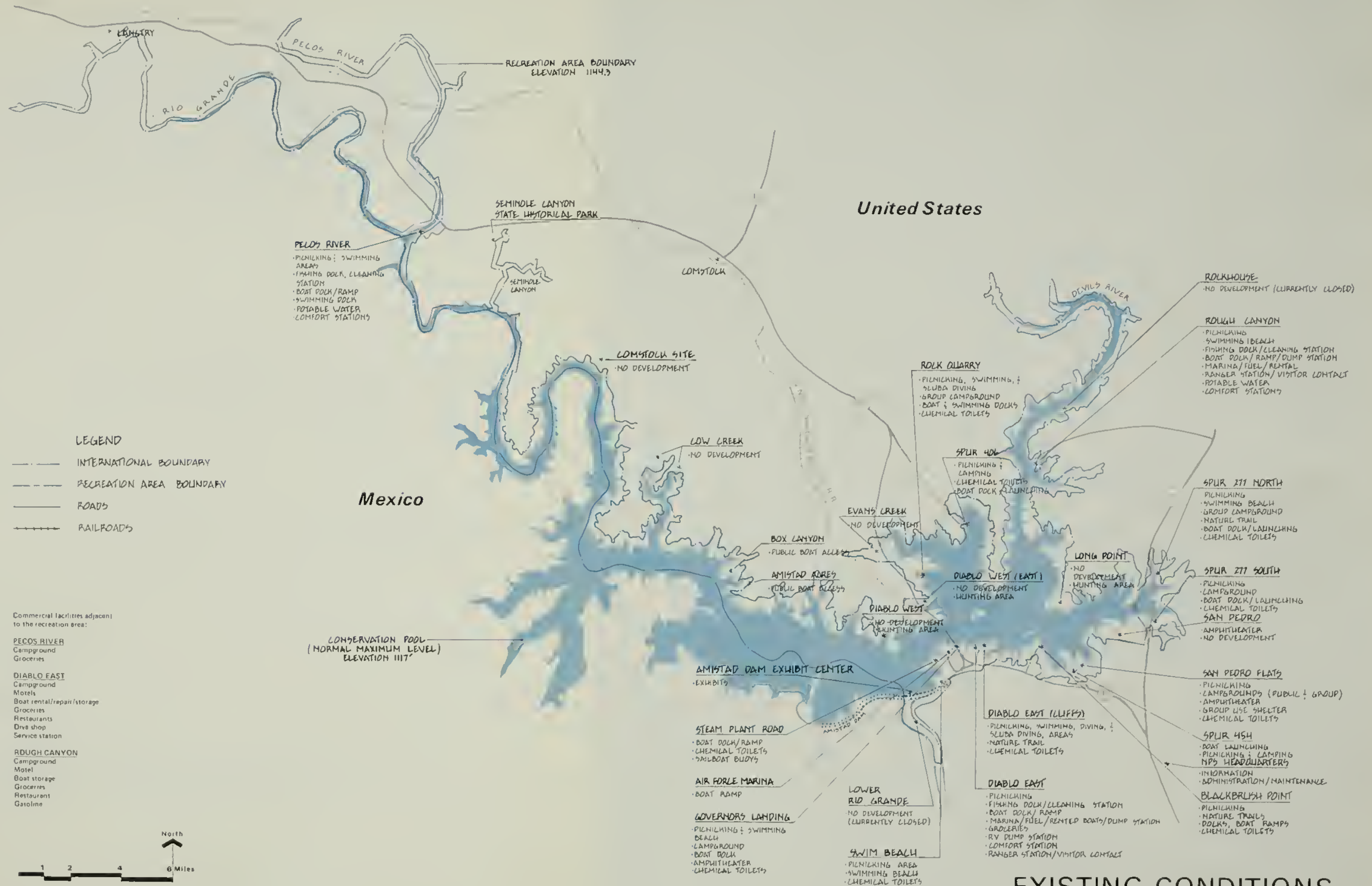
Except for certain areas where only a flowage easement was purchased, all the lands within the recreation area are federal, acquired by the commission in anticipation of creating the reservoir. Important water levels are shown in table 1 because of their relevance to planning.



EXISTING CONDITIONS DIABLO EAST RECREATION AREA

621 | 20018C

DSC | FEBRUARY 1995 | DEPARTMENT OF THE INTERIOR / NATIONAL PARK SERVICE



PUBLIC INVOLVEMENT

In the fall of 1984, a Planning Workbook was sent out for public review and a planning meeting was held in Del Rio, Texas. About 60 responses to the workbook were received, and about 80 people attended the meeting to make and hear comments on the document. Principal concerns were preservation of important archeological resources, more convenient access to the reservoir from adjacent private properties, preservation of water quality, a safe trail to the main scuba-diving area, better and safer access to upper reservoir areas, and improved swimming beaches. In addition, there was a general desire for other development improvements.

Table 1: Important Water Levels

critical action floodplain*	1,152.3'	Top of dam
	1,145.1'	Level of 500-year floodplain
	1,144.3'	Maximum water level--general recreation area boundary. Major developed sites--existing and future--lie above this level in designated tracts. There are 54,830 acres of lake in the recreation area up to this level.
	1,140.4'	Level of 100-year floodplain (assuming a starting flood level of 1,117').
base floodplain*	1,135.7'	Greatest flood to date, in 1974
	1,117'	Conservation pool (when water level stands above, releases are made to this level). There are 43,250 acres of lake in the recreation area up to this level.
	1,100'	Approximate level in 1983-85
	1,095'	Lowest level since initial filling
	1,020'	Minimum design level for launch ramps of 1968/73 master plan
	930.0'	Lowest water outlet

*Referenced from Floodplain Management Guidelines, National Resources Council, February 10, 1978 (43 FR 6030) for implementing Executive Order 11988.

PLANNING ISSUES

DEVELOPMENT

One of the primary issues at Amistad Recreation Area is where developments should be located to most consistently provide lake access, taking into consideration the fluctuating water levels and weather conditions. When the lake stands at levels much below 1,117 feet, launch ramps at several minor sites do not reach down to the water. At these sites shoreline slopes are gentle, and picnic areas and campgrounds--placed to serve the 1,117-foot level--are at these times far from the water. Boat launchings do not decline then but shift to four sites where ramps extend deep into the lake at appropriate grades--Pecos River, Air Force Marina, Diablo East, and Rough Canyon. This pattern indicates that launch sites at minor, higher-water-only sites are not needed to sustain present use and that the recreation area is operating more facilities than are necessary except for occasional peak times; however, convenience, safety, and tradition may warrant continuing some.

All developments below maximum water level (1,144.3 feet) are in the floodplain, creating potential hazard and inconvenience to visitors and complicating design. The 100-year flood level, for instance, is 1,140.4 feet; the flood of 1974 reached 1,135.7 feet, rising over 6 feet in one day, and then stood above 1,125 feet through the end of the year. Prior plans have specified that developments placed within the reservoir area would need to withstand "temporary flooding." Because of this design constraint, no permanent structures other than campgrounds, picnic areas, roads, parking areas, and boat ramps were located below 1,144.3 feet. Most campgrounds and picnic areas lack domestic water and comfort stations, and roads are unpaved and rough.

Before expending corrective funds to solve any of the above problems, however, an overall concept is needed to determine whether facilities should continue in their present locations and/or which facilities should be relocated to more suitable sites. Additionally, guidelines from Executive Orders 11988 "Floodplain Management" and 11990 "Protection of Wetlands" will be used in implementing design concepts.

VISITOR USE

Access to the reservoir waters from the land varies from adequate to nearly absent. East of the US 90 bridge, access is good. West of the bridge, suitable public launch ramps and public gasoline are not available on the water for a distance of 44 miles.

The Lower Rio Grande area below the dam is closed to the public because of safety and security concerns, but significant public interest exists in reopening it.

Private landowners and developers of subdivisions that are adjacent to the recreation area ask for more and better access to the water, including walkways, launch ramps, and docks on recreation area lands and waters. Allowing such access without controls would alter the uncluttered shoreline and could lead to conflicts between public and private users.

Visitor information/orientation/interpretation services are limited. The principal visitor contact point is 8 miles from the principal use area. Information materials are also lacking, resulting in some visitors being unaware of hazards, activities, park values, or rules.

MANAGEMENT

Users and others who benefit from the recreation area do not share in costs except through general taxation, as there are no entrance or use fees. A park gift catalog has produced initial results in securing donations.

Park headquarters is 5 miles from the recreation area, and 8 miles from the principal site within the recreation area at Diablo East--an inconvenient distance for park staff and a situation which adds to operating costs.

The waters of Amistad Reservoir are shared with Mexico. At the 1,117-foot conservation pool level, there are 21,750 acres in Mexico of the 67,000-acre total. Cooperation with Mexico is necessary to ensure that the reservoir--or part of it--is not overdeveloped for use. There is no international agreement for visitor use and protection on the waters to alleviate uncertainties in ranger activities relating to visitor emergencies.

Boundaries are irregular and generally not fenced or marked, creating possibilities for unintentional trespass.

Permits are sought for corridors to cross the park lands with utility lines, which would impair the land and the visual scene.

RESOURCE MANAGEMENT

Numerous cultural resource sites, including prehistoric rock paintings of national significance, have been made accessible by the filling of the reservoir and its development for public recreational use. These sites are being used increasingly, and their resources are being degraded. Many sites are subject to submersion by reservoir waters during floods.

The reservoir's water may be affected by contamination such as sewage, fuel, or other chemicals. Natural processes may also change the clarity, oxygen, or nutrient levels, which would affect swimming and diving as well as fish and general biotic growth. Benchmark data are not available to measure changes.

Grazing occurs under permit, reducing the recreation resource value on these lands.

MANAGEMENT OBJECTIVES

Each area administered by the National Park Service is managed under objectives developed from congressional mandates and broad national policies as well as from the unit's particular values and opportunities. For Amistad Recreation Area, proposed management objectives (which are being considered during the present planning process), follow.

VISITOR USE

Provide the opportunity for safe and enjoyable visits.

Encourage visitor respect for private lands adjacent to the area.

Encourage visitors to protect the lake and other natural values and to keep the area free of debris and human pollution.

Stress the implications of the international aspects of the area for visitors.

Emphasize visitor safety and the protection and appreciation of archeological, historical, and natural features as well as enjoyment of recreational opportunities.

Provide for public access at sites that are convenient for users, suited to development, and efficient to operate. Where feasible, provide access for handicapped persons.

Encourage appropriate visitor support services by private enterprise outside Amistad Recreation Area.

Provide services through concessioners that cannot otherwise be provided by private enterprise or the National Park Service.

RESOURCE MANAGEMENT

Protect the quality of water in the lake from internal and external pollution threats.

Maintain a high quality fishery.

Protect cultural resources.

COOPERATION

Encourage private sector assistance in programs and developments within the park.

Have users share in operational costs, if feasible.

Integrate activities with other agencies sharing responsibility for reservoir and/or recreation area management.

Continue liaison and cooperation with the government of Mexico.

Incorporate the concerns of the local community into decision making.

PERMITS AND AGREEMENTS

The Park Service has several agreements with other parties in the management of the recreation area. Besides the IBWC agreement described earlier, there is an agreement with Laughlin Air Force Base for use of lands for military and retired military personnel and their dependents. Facilities include boat launch ramp, dock, marina, swimming beach, campground, and lodging. Also, a separate permit covers joint use of sewage treatment facilities. (Water access facilities and shoreline remain open to public use).

There are also agreements with the Texas Parks and Wildlife Department that cover cooperative management of fish and wildlife resources and protection of archeological sites and an agreement with the U.S. Coast Guard, 8th District, for providing navigational aids needed for safe boat operation. Grazing permits for 11 permittees (covering 5,131 acres) are in effect, as are permits for boat ramps, access, utility lines, fishing and scuba guides, marina concessions (Diablo East and Rough Canyon), and sailboard instruction. These permits and agreements are described in detail in appendix B.

THE PROPOSAL AND ALTERNATIVES ADDRESSING THE ISSUES

INTRODUCTION AND ALTERNATIVES

Visitor use and resource management concepts for Amistad Recreation Area divide naturally into zones of use because of the differing character of the resources. Upper reaches of the Rio Grande, Pecos, and Devils rivers are remote and present attractive canyon scenery and the best pictograph and shelter sites; they thus best support a use that is lower density and more traditional of park uses, such as slower-speed boating, fishing, boat-in camping, photography, and interpreting resource values.

The Cow Creek vicinity is characterized by slopes intermediate between the steep-walled canyons of the upper reservoir areas and the more gently sloping terrain of the central reservoir area described below. It is best capable of supporting a kind of use that is intermediate between recreational and traditional park uses.

In the central reservoir area (from the vicinity of Cow Creek to the reservoir arms east of Diablo East), the canyon walls become much less vertical and the water expanse widens, encouraging activities such as pleasure boating, boating competitions, and waterskiing. However, there are also protected coves here that shelter fishing and swimming. A cliff area near Diablo East, which has a steep underwater drop-off and convenient access, affords the most suitable area for cliff diving and scuba diving; it is marked to exclude speedboating. Higher density use is appropriate and occurs throughout this central area. Here also are the more level expanses, several of which are designated as hunting areas.

The Lower Rio Grande area below the dam provides streambank terrain for low density fishing and nature study use, but the river is too hazardous for water-contact activities.

The proposal and alternatives would each continue these use concepts.

Central to the present planning effort are questions relating to the probable future visitation to the recreation area and the likely water level. All alternatives for development accordingly took these two factors into consideration.

From the four alternatives considered, a synthesis was made for the National Park Service's proposal (preferred alternative). The proposal is basically a proposal to relocate some existing development to a site above the maximum water level and add new lake accesses, and it is the "minimum requirements alternative," combining the most efficient and most cost-effective ideas from all the alternatives. It moderately increases visitor capacity. It would also enhance protection of significant archeological resources. It does provide for potential cooperation with the private sector to develop an access facility at Cow Creek, which would allow better access to this scenic section.

ALTERNATIVE 1, NO ACTION

In this alternative, present development and operations would continue. It is assumed that water levels would stay near 1,117 feet and that present visitation patterns would continue. When water levels were lower, some facilities would be unusable. There would be no opportunity to cooperate with the private sector to develop an access facility at Cow Creek. Archeological resources would lack substantial protection.

ALTERNATIVE 2, COMPLETE EXISTING DEVELOPMENTS

In this alternative, existing facilities would be upgraded, and limited new parking, picnicking, and camping sites would be added. This alternative would work best at water levels near 1,117 feet and would allow for slight growth in visitor use. When water levels were lower, some facilities would be unusable. Because most present development sites are below the maximum water level and subject to flooding, this alternative would not allow substantial improvements. There would be no opportunity to cooperate with the private sector to develop an access facility at Cow Creek. Archeological resources would be protected as in the proposal except that all archeological sites would be closed to camping.

ALTERNATIVE 3, CONSOLIDATING DEVELOPMENTS

In this alternative, present developments below the maximum water level would be relocated to available sites outside the basin. This would allow better experiences because visitor use areas would be more suitable over a wider range of water levels. This alternative would shift some functions, consolidate sites (with some closures), and result in a decrease in capacity. Use would generally continue in the eastern reservoir, and there would be no opportunity to cooperate with the private sector to develop an access facility at Cow Creek. Archeological resources would be protected as in alternative 2.

ALTERNATIVE 4, EXPANSION

In this alternative, existing sites below the maximum water level would be expanded and new sites above the maximum water level would be added. There would be an increase in facilities, programs, and activities, as well as better dispersion of visitors throughout the reservoir. Substantial new growth could be accommodated and more versatile sites would be developed, basically combining the aspects of alternatives 2 and 3 while expanding facilities. The Cow Creek site could be developed with interest from the private sector. All National Register sites would be preserved without a prioritized list.

A table in the "Environmental Consequences" section facilitates comparison of the proposal and alternatives for the development and cultural resources management issues. Alternatives for other issues are also presented in that section.

PROPOSAL

The proposal will provide improved visitor experiences and enhanced safety while holding federal expenditures down--by consolidating and relocating several facilities to a site above the maximum water level. The following subsections detail how this NPS proposal will accomplish this.

LAND USE AND MANAGEMENT

Areas administered by the National Park Service are classified into management zones, to which specific policies apply. Land and water at Amistad will be classified as follows in the proposal:

Special Use Zone

Areas in this zone will be under cooperative agreements in which interests of the Park Service are secondary to those of another agency.

Reservoir Subzone. This subzone will include all of the recreation area--except development zones--below the maximum water level of 1,144.3 feet. In the subzone, the IBWC controls the water level. Cultural features within this zone will be identified and managed according to NPS policies. In some areas, grazing will occur under NPS permit.

Transportation Subzone. This subzone will include principal highways and railroads.

Utilities Subzone. This subzone will include utility crossings serving nonpark operations.

Park Development Zone

This zone will encompass areas of substantial park development such as buildings, campgrounds, launch ramps and associated roads, and access/circulation roads. It will support visitor access and use, maintenance, and operations. Within this zone all significant developments except boat launching ramps will be above 1,144.3 feet. Minor developments for visitor use provided below 1,140 feet--such as unpaved roads, picnic areas, swim beaches, and primitive campgrounds--will be designed to withstand occasional temporary flooding. Movable marinas and docks may be located here. When new sites (Cow Creek or Comstock site) are developed, appropriate areas of land in these locations will be rezoned as part of the development zone.

Historic Zone

This zone will include cultural resource sites that are recommended by actions of this plan for preservation management. (These sites are not

on the Management Zoning map because of potential looting. The site locations are available to qualified professionals by contacting the park superintendent. Sites may be added or deleted following surveys and evaluations specified in the proposal.)

Natural Zone

Designated areas above 1,144.3 feet that are not developed for recreational use will be included in this zone. Hunting is permitted in several of these areas, and they may be managed as comparative grazing exclosures. Manipulation of some species to enhance hunting success is allowed. This zone also includes the Lower Rio Grande area.

GENERAL DEVELOPMENT AND VISITOR USE

Activities and Capacities

Under the proposal the recreation area will continue to provide for present uses (boating, fishing, swimming, camping, picnicking, scuba diving, and hunting) and will accommodate new recreational activities when they are compatible with existing uses and are within staff capabilities--including volunteers--to manage effectively.

In the foreseeable future, visitor use is not anticipated to exceed the capacity of the recreation area. Occasional special events, such as boat races, will be scheduled (as now) at times and in areas where conflicts with other users are minimized. Also as now, park management will set aside areas that are specially adapted for certain uses including scuba diving, archeological preservation, cliff diving, and boat-in camping. Scenic upstream canyons will be settings for lower-density use that is oriented more to scenic appreciation and a degree of solitude.

When the lake falls to extremely low water levels and less lake surface is available to handle visitation, the Park Service will manage use more intensively, resolving conflicts and possibly suspending some activities temporarily in order to accommodate the greatest number of users. Public opinion will be sought when making these management decisions. At such times, it is expected that visitation will decrease. However, there is no history upon which to base such a prediction (i.e., the water level has not been at extremely low levels).

Flooding

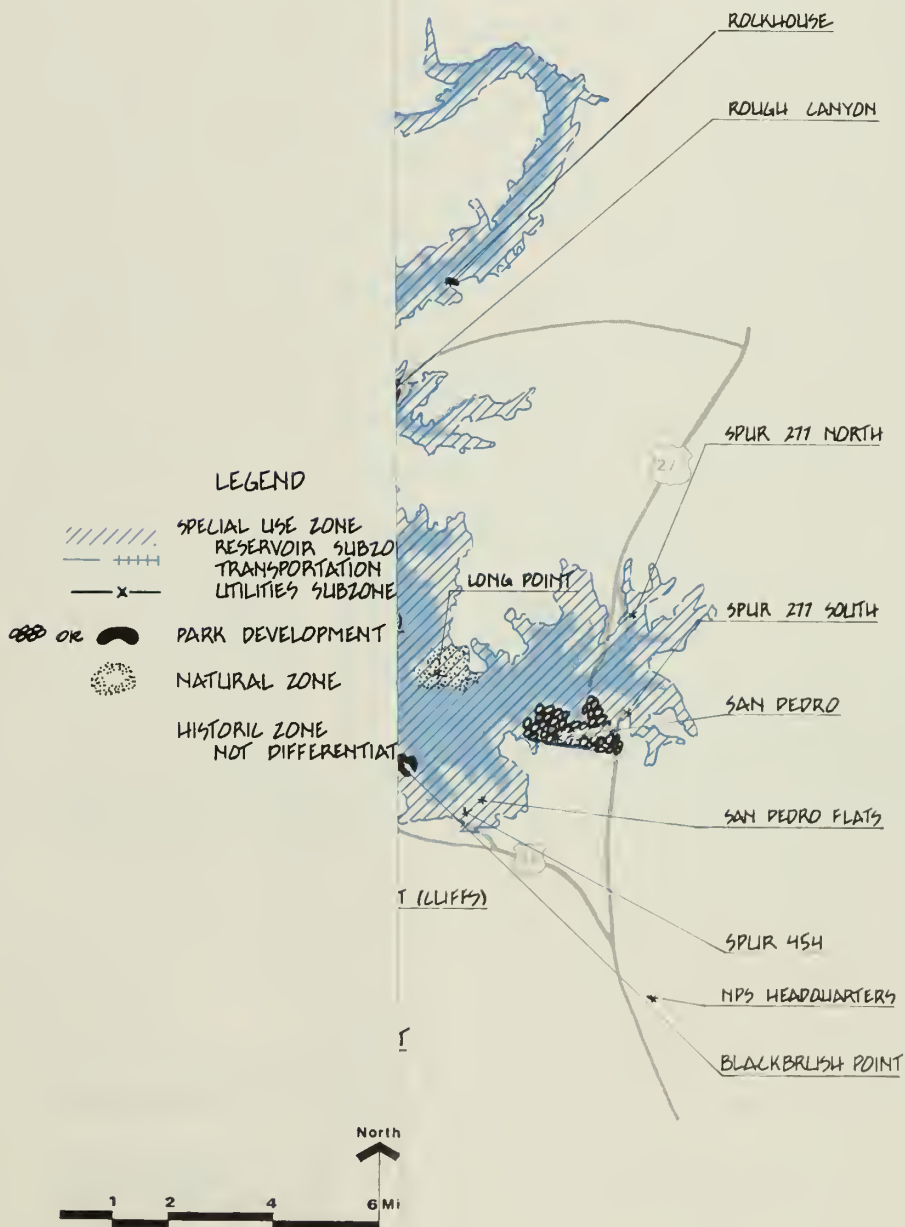
During times of rising water, especially during flood events, the park's emergency operations plan will include measures to ensure visitor safety (including evacuation procedures). Developments placed below the 100-year flood level of 1,140 feet will be designed to withstand occasional flooding. Similar considerations will also apply to areas of potential flash floods along river and wash channels.



MANAGEMENT ZONING SAND RECREATION AREA

THE INTERIOR NATIONAL PARK SERVICE

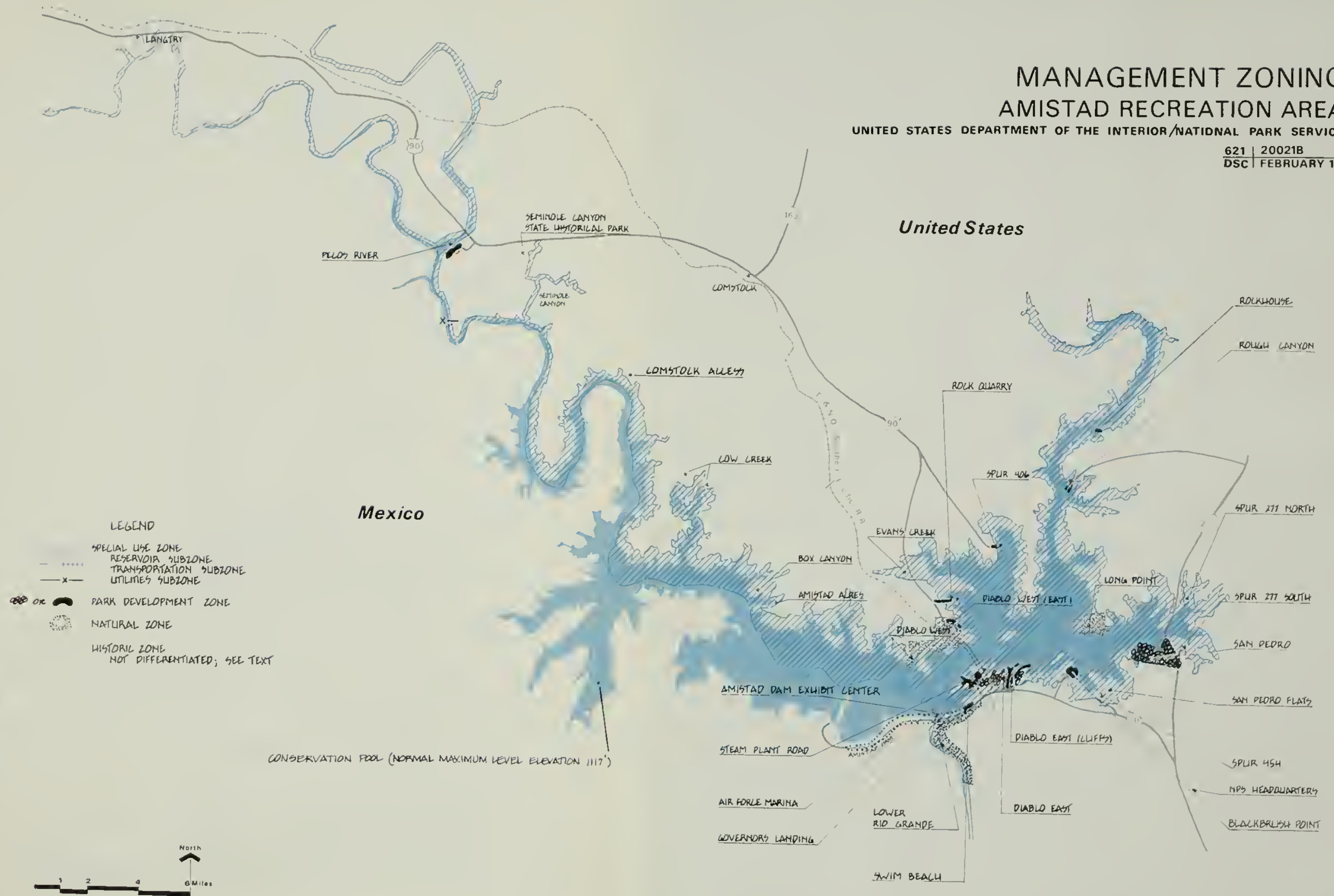
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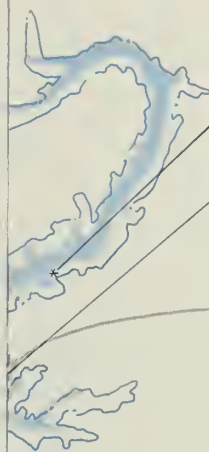


MANAGEMENT ZONING AMISTAD RECREATION AREA

UNITED STATES DEPARTMENT OF THE INTERIOR/NATIONAL PARK SERVICE

621 | 20021B
DSC | FEBRUARY 1986





ROCKHOUSE

- STABILIZE
- ADD BOAT DOCK
- ADD PICNIC TABLES

ROUGH CANYON

- UPGRADE INTERP. DISPLAYS & INFORMATION
- MAKE CONTACT STATION SELF-SERVICE
- EXPAND PARKING
- EXPAND & UPGRADE MARINA PICNIC AREA
- PROVIDE FLOATING BREAKWATER



SPUR 277 NORTH

- CLOSE WHEN SAN PEDRO DEVELOPED

SPUR 277 SOUTH

- CLOSE WHEN SAN PEDRO DEVELOPED
- OBLITERATE CAMPOSITES

SAN PEDRO

- LONG TRAIL LAUNCH RAMP, CAMPGROUND, PICNIC AREA, & SWIM BEACH
- CLOSE TO HUNTING

SAN PEDRO FLATS

- CLOSE WHEN SAN PEDRO DEVELOPED

T (CLIFFS)

• NO ACTION

• NO ACTION

T

• VISITOR CONTACT/RANGER AND COMFORT STATION & BREAKWATER

SPUR 454

- CLOSE WHEN SAN PEDRO DEVELOPED

NPS HEADQUARTERS

- NO ACTION

BLACKBRUSH POINT

- PAVE ROADS IN PICNIC AREA
- ENLARGE PARKING

LEGEND

- INTERNATIONAL BO
- RECREATION AREA
- ROADS
- ++++ RAILROADS

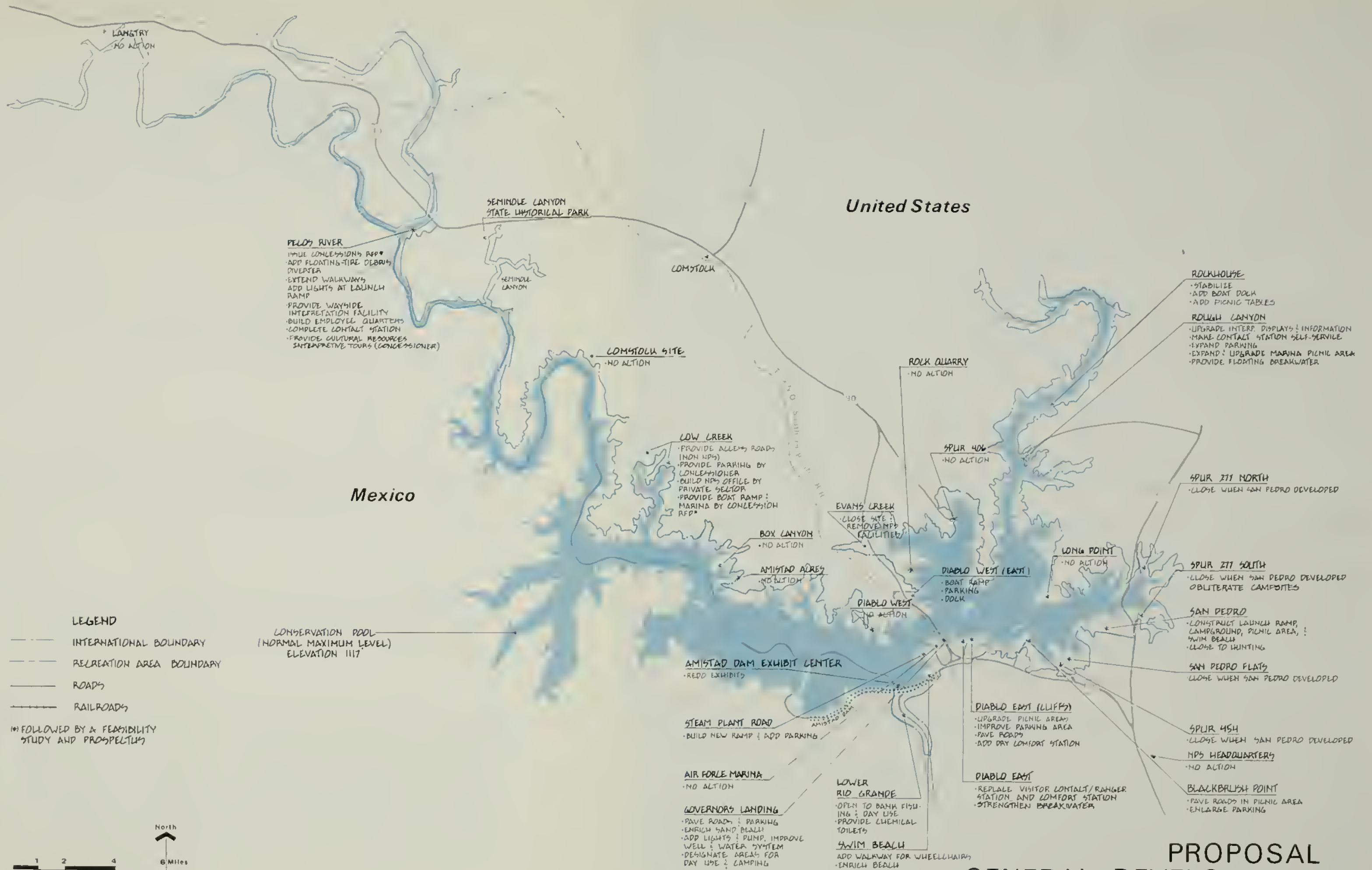
(*) FOLLOWED BY A FEASIBILITY STUDY AND PROSPECTUS

North



PROPOSAL GENERAL DEVELOPMENT TAD RECREATION AREA

ARTMENT OF THE INTERIOR / NATIONAL PARK SERVICE



PROPOSAL GENERAL DEVELOPMENT AMISTAD RECREATION AREA

UNITED STATES DEPARTMENT OF THE INTERIOR / NATIONAL PARK SERVICE

Fees

There are too many entrances to make collecting entrance fees practical, and NPS regulations preclude charging for launch ramp use (without special equipment or services) or for nongroup primitive camping (the kind provided at most Amistad Recreation Area campgrounds). Fees are being considered for special events such as tournaments and boat races and for group camping. When feasible and permissible, charges will be instituted. Opportunities for the public or state or local governments to donate time, materials, and money to enhance facilities and services consistent with this general management plan will continue.

Development Concepts

Present and predicted visitation does not appear to warrant significant expansion of facilities; therefore, development will focus on

- upgrading existing developments where feasible, including delineation of campsites to improve camping experiences and reduce resource damage

- improving boater safety

- providing effective access to the remote upper central reservoir area

- favoring development sites that are above the maximum water level of 1,144.3 feet--or at least above the estimated 100-year flood level of 1,140.4 feet--but that are capable of serving water levels well below 1,100 feet

- responding to the need for cost-effective management and development

- assuming that the private sector will expand accommodations and services in nearby areas and that state and local governments will provide any needed roads to the Amistad Recreation Area boundary.

Proposals for individual sites are described in the following sections.

Langtry. No action.

Pecos River. The 1975 DCP for this site is being implemented. Completed elements include the boat launch ramp (to be repaired because of earlier damage), parking area, interpretive shelter, and comfort station. Yet to be completed are a visitor contact/ranger station (required to provide an interface point between the National Park Service and park users and neighbors in this remote locality) and employee quarters (required because of distance from services and need for visitor and facility protection). Concession facilities were also proposed and a request for proposals will be issued to determine private sector interest in providing boat launching, fuel service, and interpretive tours

featuring cultural resources. If such interest is demonstrated, an economic feasibility study will be conducted to determine viability before issuance of a prospectus. Further improvements will include installation of a debris diverter above the launch ramp (which accesses a flooded stream that still develops a current, during higher flow volumes, causing logs and brush to collect in the eddy caused by the launch ramp), extension of walkways (to provide a safe route over boulders to low water), installation of lights at the launch ramp (to make night entry/exit into/from the water more feasible), and a presentation about cultural resources at the launch ramp including a wayside interpretive facility (to enhance awareness of the importance of these cultural resources as well as the need to preserve them). Interpretive tours may be provided by a concessioner. All facilities except the launch ramp and docks will be above the maximum water level of 1,144.3 feet.

Comstock Site. No proposal is made for development here. If, however, the Cow Creek site is not developed (see below), those facilities will be developed at Comstock Site, if there is private sector interest.

Cow Creek. If private capital is provided, Cow Creek will be developed to provide access to this isolated section of the reservoir and to reduce the safety hazard during hazardous winds for boaters who would otherwise have to travel back to Diablo East. A 7-mile access road from US 90 will be required, as well as parking, a boat launch ramp, NPS office space, and on-water refueling service. A request for proposals will be issued to determine interest in providing the above facilities and overall scope, which could also include marina and boater services as well as a campground, lodge, and/or restaurant. If such interest is demonstrated, an economic feasibility study will be conducted to determine viability before issuance of a prospectus. Except for on-water and launch ramp facilities, federal land is not available for development here. Road access might be provided by state or local government.

Diablo West. The portion of this large tract that lies west of US 90 will remain undeveloped, retained for future development if visitation warrants. Until then it will continue as a hunting and open space area.

Diablo West (East). Here a boat launch ramp and dock will be constructed east of US 90 with parking above 1,144.3 feet. The ramp will potentially be extended to elevation 950 as the water level permits. This site will provide an alternative launch area when weather conditions at Diablo East are hazardous and will also make the northern side of the reservoir more accessible. In this vicinity no improvements are proposed for the Rock Quarry site, which serves as a day use picnicking, swimming/diving/fishing area.

Evans Creek. To reduce the number of small NPS-maintained sites at Amistad (to more efficiently utilize funds), this site will be abandoned, and facilities, including trash cans and fence walkover, will be removed. Use here is light, the site is susceptible to flash-flood hazards, and its location under a highway bridge is unsightly.

PARKING - 20 CARS W/ TRAILER



PROPOSED DEVELOPMENT CONCEPT
DIABLO WEST (EAST)
AMISTAD RECREATION AREA

UNITED STATES DEPARTMENT OF THE INTERIOR / NATIONAL PARK SERVICE



621 | 20027B
DSC | AUGUST 1985

Spur 406. No action.

Rockhouse. This abandoned rock building shell stands above the Devils River arm upriver from Rough Canyon. To provide a land exploration site and observation point for boaters, it will be stabilized for safety, and picnic tables will be provided within. A boat dock will be installed. Improvements will be funded by the private sector or the National Park Service. All facilities except the dock will be placed above 1,140.4 feet, the 100-year flood level.

Rough Canyon. Most of the 1976 DCP for this site has been implemented. A floating breakwater will be added to protect the high-water ramp and marina from storm waves. Interpretive displays and information will be upgraded and the visitor contact/ranger station will be made usable whether it is staffed or not. To better provide for peak use periods, the present rough-graded parking area will be expanded to provide parking for 35-40 additional cars with trailers, and the marina picnic area will be expanded and upgraded. Staff housing will be maintained at this remote site, where resident personnel are required to protect visitors, park resources, and NPS and concessioner facilities. The marina and marina picnic area will be in the 100-year flood zone; all other facilities will be above it.

Long Point. This tract will remain undeveloped, retained for future use if visitation warrants. Until then it will continue as a hunting and open space area.

Spur 277 North. This site will be closed when San Pedro is developed as the San Pedro site is above the maximum water level and can be developed more effectively and managed more efficiently.

Spur 277 South. This site will be closed and campsites obliterated when San Pedro is developed nearby, providing a better and more effectively managed visitor experience.

San Pedro. This tract will be developed as a major use area. It is above the maximum water level on federal land and will replace four sites that are mainly below the level of the 100-year flood. Much of the 610-acre site is near slopes of appropriate gradient so the shoreline will remain near the development at a variety of water levels. A major state access highway is at the site's edge. New facilities will include launch ramps (potentially able to reach the 1,080-foot level), campground, and picnic area, swim beach, plus roads and utilities. All will be handicapped accessible. The scale of the site will be adequate to handle the combined capacity of sites closed at Spurs 277 North and South and San Pedro Flats/Spur 454.

San Pedro Flats. Because this area is in the 100-year flood zone, functions here will be relocated to new facilities to be built at the future San Pedro site, which is above the maximum water level.

Blackbrush Point. To provide for a traditional use that is convenient to visitor facilities nearby along US 90, launching will continue on existing ramps, which have been extended to their limit at 1,103 feet. Roads in the picnic area will be paved to eliminate dust and rut formation. Parking will be enlarged by 10 spaces to provide added capacity. All facilities here are in the 100-year flood zone.

Park Headquarters/Maintenance Facility. The main operational facility will remain at the present site. Although relocation to Diablo East would improve management efficiency, the capital required for the relocation is not presently available.

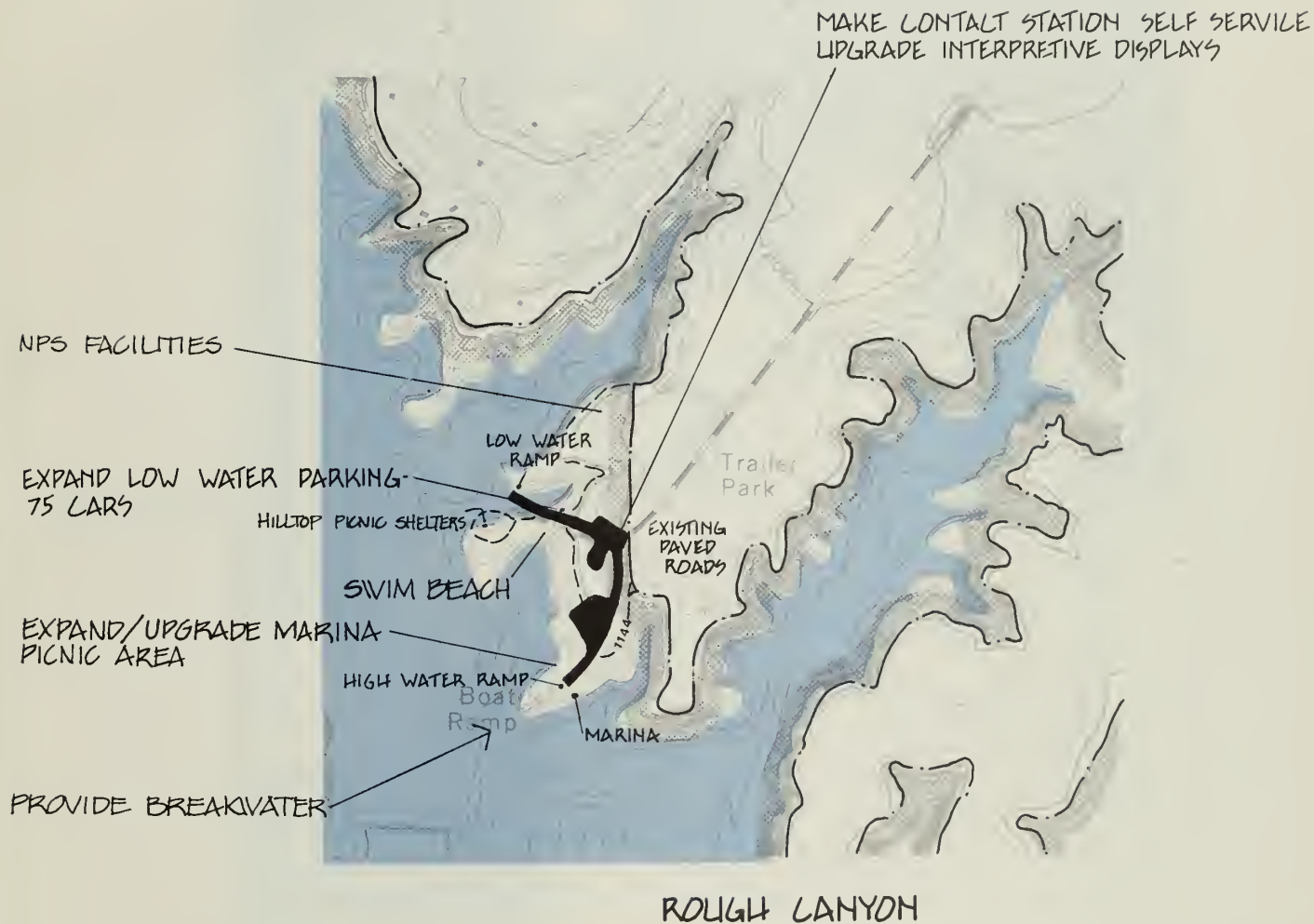
Diablo East. A final environmental impact statement for a DCP for this site was approved in 1973; most facilities proposed therein have been installed. Developments proposed in this plan are those required to effectively operate the site under present visitation levels, which are less than earlier projected. These developments include a handicapped-accessible permanent visitor contact/ranger station with a comfort station (to replace two trailers), and a floating breakwater (installed, but possibly in need of strengthening) to protect the marina. Expansion of the marina will be undertaken as needed by the concessioner and approved by the National Park Service, and adjacent private operations will fill visitor needs for restaurants, accommodations, service stations, boat storage, out-of-water boat repair, and camping. All facilities except launch ramp and docks will be above the maximum water level.

Diablo East (Cliffs). There will be an upgrading of the popular and scenic cliffs area, which includes paving access roads, picnic area road loops, and parking area; and installing a dry comfort station. This will reduce dust, better confine vehicles to roadways, eliminate rut formation in roads, and improve the appearance of the site.

Swim Beach. A handicapped-accessible walkway will be installed from the parking area to the water to provide a convenient area at Amistad Recreation Area for swimming by this visitor group. The swim beach will be enriched with sand. This area is almost entirely below 1,140 feet. Toilets will also be handicapped-accessible.

Lower Rio Grande. The shore area along the river below the dam will be opened to limited public use for bank fishing or nature study. The public has requested this and the area's features provide a natural setting not otherwise available at Amistad Recreation Area. Water contact will not be permitted as a weir dam and water management in this area are serious safety concerns. Chemical toilets will be provided.

Governors Landing. A major expansion of this popular camping/picnicking/swimming area is not possible. The developable land here has already been developed, the adjacent highway bridge is an aesthetic intrusion, and wave erosion of beach sand precludes significant improvement of the beach. If this area's popularity continues to increase and expansion is required, day use will remain (as that accounts for 80



PROPOSED DEVELOPMENT CONCEPT ROUGH CANYON AMISTAD RECREATION AREA

UNITED STATES DEPARTMENT OF THE INTERIOR / NATIONAL PARK SERVICE



621 | 20026C
DSC | AUGUST 1985

IMPROVE SWIM BE

- DEFINE PARKING
- ADD LIGHTS

UBA DIVING
PARKING AREA
PORT STATION

IMPROVE PIMIL/LA

- PAVE LODP ROADS
- IMPROVE WELL & WATER

GOVER

ADE PIMIL AREA

BLACK BRUSH
POINT

PAVE
ROADS

ENLARGE
PARKING

BUILD RAMP &
ADD PARKING

STEAM PLANT

SWIM BE

- PARKING
- CHEMICAL TO
- ADD SAND
- BUILD HANDW
ACCESSWAY

DEVELOPMENT CONCEPT DIABLO EAST VICINITY AMISTAD RECREATION AREA

DEPARTMENT OF THE INTERIOR / NATIONAL PARK SERVICE



621 | 20025B
DSC | AUGUST 1985

IMPROVE SWIM BEACH
• DEFINE PARKING
• ADD LIGHTS

IMPROVE PICNIC/LANDING AREA
• PAVE LOOP ROAD
• IMPROVE WELL WATER SYSTEM

IMPROVE VISITOR CONTACT/RANGER STATION
• ADD PERMANENT COMFORT STATION

TRAIL TO SCUBA DIVING
IMPROVE PARKING AREA
• NEW PERMANENT COMFORT STATION

GOVERNORS LANDING

MARINA

LAUNCH RAMP

CONCESSION BUILDING

UPGRADED PICNIC AREA

BLACKBURN POINT

BUILD RAMP & ADD PARKING

RAIL
POLICE
RESTROOM AREA

EXISTING PAVED ROAD

PAVED ROAD

Picnic Area

DIABLO EAST

PAVE ROAD

PAVED ROAD

STEAM PLANT ROAD

EXISTING ROAD

EXISTING PAVED ROAD

WT

Amistad Village

Substa

SWIM BEACH

• PARKING
• BUILD HANDICAPPED ACCESSWAY

PROPOSED DEVELOPMENT CONCEPT
DIABLO EAST VICINITY
AMISTAD RECREATION AREA

UNITED STATES DEPARTMENT OF THE INTERIOR / NATIONAL PARK SERVICE



621 | 200258
DSC | AUGUST 1985

percent of the visits here), but because part of the site is below the 100-year flood level, an alternate location will be found for camping. In the interim Governors Landing will be upgraded, recognizing the traditional use and making provisions for it. Road loops will be paved, camping and picnic facilities (19 units) will be improved, the swim beach will be enriched with sand, and parking will be defined. Utilities will be improved and lights installed for safety and convenience, and the well and water distribution system will be improved.

Air Force Marina. The Air Force will continue to develop and operate this site under its permit. Except for launch-related and marina facilities, developments here are above the 100-year flood level.

Steam Plant Road. The ramp here will be retained for use at water levels above 1,109 feet. To provide for use at lower water levels, a new ramp and parking for 20-25 cars with trailers will be located on the west side of the adjacent point. This new site will potentially serve water levels down to 1,040 feet, will be protected from winds by the dam and a ridge, and will improve access to the sailboat moorings in the nearby cove. This action will also provide an alternate launch ramp to the Air Force Marina at times when weather patterns render that facility hazardous. Facilities will be within the 100-year flood zone.

Roads

Minor improvements are recommended for the roads of Amistad Recreation Area based on a classification and evaluation of their condition. The classifications and table that depict existing road condition, functional classification, and prescribed design criteria are in appendix D.

In addition to the design criteria presented in appendix D other factors will be considered during road design and reconstruction to ensure an aesthetically pleasing road system. Roads will be designed to lie lightly upon the land, natural support will be used wherever possible, and heavy cuts and fills will be avoided. Retaining walls may be used to reduce the height and extent of cut-and-fill slopes and they will be constructed using native stone. Roads will blend into the surrounding environment. Cut-and-fill slopes will be rounded and warped at the ends for transition, and properly seeded, fertilized, and mulched for quick recovery and erosion control. Shoulders on public use roads will be turfed.

Any new borrow pits in the park will be hidden or in washes or other places where natural processes will eradicate the scar. If a road is realigned, materials from the old roadbed may be used--providing the old roadbed is revegetated and restored to natural appearance.

Guiderails, guidewalls, or guideposts will be used sparingly, and guideposts will be used only to warn of nonobvious roadside hazards or to prevent driving off the road in visitor use areas. Traffic conditions at Amistad are low speed and relatively low volume.

Whether regulatory, informational, or interpretive, road signs will enhance, not detract from, the visitor experience. Information conveyed will be unambiguous. Signs will be well-placed, conform to the "National Park Service Sign System Plan", and be designed for visual comprehension from moving vehicles.

Additional Public Access

The park will work cooperatively with owners and developers of adjacent private lands to provide public access at additional points. This will improve convenience, reduce trespass over private lands, and where such accesses are currently located on steep slopes, enhance safety.

General criteria for launch ramps, pedestrian accesses, and docks:

Any pedestrian or boat access facilities permitted under these provisions will be constructed and maintained, both as to physical repair and cleanliness, without government expense.

Such facilities will be allowed only where NPS investigation shows that no historic, archeologic, or natural resources will be harmed.

No facility will be approved that in any way prevents access opportunities for the general public.

The Park Service will determine the location and design of the facility as well as its construction specifications. Design and maintenance standards will be established to ensure quality facilities, protect the visual quality of the area, and protect the health and safety of the visitors.

All construction at or below the 1,144.3-foot contour will become the property of the United States, with no vested interest reserved by the builders or users.

Use of such facilities will be open to the general public and signed accordingly, although those that are close to residences and well removed from areas of usual interest or activities of the general public need not be signed or advertised as such. All decisions on such exceptions will be made by the National Park Service.

The approach to the access and the access itself will be open to all who wish to use it. Where the route crosses private land the Park Service will require a binding statement of the public's right of passage from the owner. Signs directing visitors to the accesses will be provided.

Additional criteria for launch ramps include the following:

Permission to build a ramp will be granted when the residents of at least 25 housing units agree to the above-stated conditions.

The proposed ramp must be located at least 5 road miles from the nearest existing ramp.

In those settings where there is no space available for parking on park land, or where the Park Service determines there will be no parking on park land, the requisite space will be provided on private land.

The general public will have the right to use the access roads and streets, whether public or private, in order to reach the ramp.

Additional criteria for pedestrian accesses are as follows:

Permission to construct a walk or stairway will normally be granted only where the topography between the private property and the lakeshore is so steep or broken as to be unsafe to walkers, including those with slight mobility impairments.

Pedestrian access will normally be permitted only for the benefit of a cluster of residences and will be located so as to serve them all. There will only be one access per cluster, unless the number of residences, their distance from one another, or the topography makes that impractical. An isolated residence will also be eligible for consideration.

Where possible, the walk or stairway and its approach will be plainly visible from the public sidewalk or street.

Additional criteria for docks are as follows:

Docks will not normally be permitted unless in association with a launch ramp for temporary use in loading just-launched boats.

Information and Interpretation

Overall, the interpretive program will present the following themes, treating only those aspects of each that are pertinent to the recreation area, in the following priority order:

- safety
- significance and protection of cultural resources
- area information
- dam function/international aspects
- natural resource protection
- respect for private and public lands
- environmental pollution--litter, etc.

Interpretation at Seminole Canyon State Historical Park will not be substantially duplicated at Amistad.

Private sector efforts to develop boat tours will be encouraged, to give visitors who do not own boats or are not able to operate rental ones an opportunity to experience the recreation area by water. If feasible, the tours will be handicapped-accessible. These tours will include some of the archeological sites.

Nature trails, which are drawing little interest and involve resources of marginal significance, will be discontinued.

Personal-service programs will continue to be provided on-site and off-site, recognizing that regional groups and the National Park Service benefit from such interaction and that many visitors are best met at overnight locations outside the park.

Additional signing will be provided in the park, including bulletin boards with updated area maps, to better inform visitors of activities and procedures.

The park's "Interpretive Prospectus" will be rewritten to reflect proposals in this general management plan.

Consideration will be given to providing information and interpretation services in Spanish as well as English.

Amistad Dam Exhibit Center. The U.S. Section, IBWC and the National Park Service will cooperatively refurbish the visitor center to interpret the dam's construction and function, the international cooperation leading to the project, and recreational use of the area. It is a major contact point for motoring visitors in the region who would otherwise miss any opportunity to understand Amistad Recreation Area. Park personnel will continue to intermittently staff the facility until the visitor contact station at Diablo East is completed.

CULTURAL RESOURCE MANAGEMENT

A "Resources Management Plan and Environmental Assessment," approved in December 1982, contains details of projects to protect and preserve the cultural resources of the park and the necessary funding and staffing needed to accomplish the work or research. The cultural resource projects are as follows:

Protection of Archeological Sites--This project recognizes the need for additional protection boat patrols.

Preservation of Archeological Artifacts and Human Skeletal Remains--This project describes the problem of human skeletal remains and/or artifacts being exposed by wave action along the edge of the lake.

Preservation of Rock Art--This project outlines the problem of rock art deterioration.

Preservation of Historic Resources--This project identifies the need for archeological and historic resource studies and reports for interpretive and preservation purposes.

A cultural resources management program for Amistad was initiated in 1973, with the archeological survey of most of the areas proposed for development. In 1974 an archeological assessment for the park was completed that summarized the archeological work that had been accomplished, provided information on the surveys of development areas, and made recommendations for additional studies. A more comprehensive archeological survey of the recreation areas is needed; however, funding for the survey may not be available for several years. In the interim, archeological surveys will be conducted in advance of construction to ensure that significant archeological resources are not impacted.

An interpretive shelter, the intent of which is to inform the visiting public about the significance of the archeological resources, was constructed in 1985 at the Pecos River development area with funds donated by the Texas Archeological Foundation. An informational brochure, to inform visitors about protecting archeological sites, was also developed by the park staff. The information sheet on backcountry camping contains a statement explaining why campers should not dig holes for campfires or burying garbage, which may curb inadvertent damage to archeological sites by campers.

Signs will be placed at appropriate places throughout the park to inform the visiting public about the significance of the archeological resources. These signs will also inform visitors of the laws and regulations, fines, and penalties applicable to disturbing, removing, or collecting archeological materials on federal land.

Funding will be sought for a cultural resource management specialist with a background in archeology. This employee would assist the interpretive staff in program design, develop barrier designs, implement site protection methods, and conduct small-scale surveys and evaluations. The cultural resource management specialist would also identify known National Register significant sites (see table 15 in "Affected Environment" section) that are being impacted by visitors or by periodic inundation by the reservoir. In addition to monitoring impacts on these sites, various protection methods such as fencing, electronic surveillance, and closing access to areas will be used.

In order to improve staff capabilities to protect archeological sites, park rangers will receive training in enforcement of the Archeological Resources Protection Act. Such courses are given once or twice annually by the Federal Law Enforcement Training Center. NPS training courses in cultural resource management and the archeological steward program sponsored by the state of Texas will also be used.

When funds are received to conduct the comprehensive survey of archeological resources, the work will be accomplished probably by contract. This survey would locate, identify, and evaluate all sites within the boundaries of the recreation area. The end product will

consist of a base map, National Register nomination forms for all qualifying sites or districts, and a final report that would provide information for prioritizing projects in a preservation program. The Servicewide Cultural Resources Preservation program will be the source of funding for these projects unless another funding source is available.

NATURAL RESOURCE MANAGEMENT

This section largely summarizes proposals from the approved "Resources Management Plan" (NPS 1982) for Amistad Recreation Area. Because the reservoir water is the primary "natural" resource of the recreation area, its protection is crucial. However, because the Park Service has limited authority over factors affecting the water in the lake, Park Service will continue to rely on the IBWC and Texas to monitor water quality. NPS employees will watch for potential pollution threats during routine patrols.

A backcountry management plan will address boat-in camping issues. This will include monitoring heavily used campsites to assess impacts on area resources. Sanitation, archeological site degradation, vegetation destruction, and localized water quality will be addressed. Camper registration, campsite designation, sanitation facilities, area closures and related proposals will be considered.

The current policy of permitting limited grazing on recreation area lands by adjacent landowners' stock for fees will be continued under written agreement.

In cooperation with the state of Texas, the Park Service will increase its efforts to monitor the hunt areas. Temporary check stations at hunt area entrances will be staffed on hunting season weekends. Information will be gathered on the number of hunters, compliance with hunting permits, and number of animals taken. Wildlife transects will be established to determine species populations in each hunt area. Visual counts will be conducted at designated locations and times. As development occurs along the recreation area boundaries, existing hunt areas may have to be reduced in size or closed for safety reasons. The San Pedro hunting area will be closed when the site is developed by the National Park Service. Additional hunt areas may be established to provide new opportunities. Game management will take into account the characteristics of adjacent areas.

Data on plants, amphibians, reptiles, and birds will continue to be gathered to provide baseline information for more detailed management planning and decision making. Any field surveys will identify listed or proposed endangered or threatened species. The Park Service will encourage educational institutions to conduct research on area resources that will benefit management needs. A study will be made of the two nuisance plants, tamarisk and pondweed, to determine appropriate management.

COOPERATION

The Park Service will clarify responsibilities and authorities of protection personnel for emergency assistance to persons across the international boundary in Mexico. The proposal is that response to emergencies by rescue personnel will be part of their official duties.

No boundary adjustments are recommended. The existing boundary will be marked so that visitors can avoid unintentional trespass, and the park staff will continue to advise against trespass onto private property. This will also reduce intentional and unintentional damage to the archeological resources.

Scenic canyon cliff areas are not now threatened with degradation and have not been found of national significance. The Park Service will cooperate with the county zoning boards to help protect the regional scenery.

Existing utility rights-of-way will be continued. New permits will be granted on a case-by-case basis following the guidelines on special park use (NPS-53).

PLAN IMPLEMENTATION

The Park Service will complete development at Pecos River, Diablo East, and Rough Canyon, and the new San Pedro site, but it will rely on other entities (private developers and local/state governments) to initiate new construction at Cow Creek. The new NPS launch ramps proposed at Steam Plant Road and at Diablo West (East)--on the north shore east of US 90--will likely not be developed for many years unless by nonfederal funds. Other ramps and accesses wanted by the private sector will not be built by the Park Service given the limited funding anticipated for Amistad Recreation Area.

Launch ramps proposed in the plan will be constructed sooner than other facilities if/when lower reservoir levels provide the best opportunities, especially the proposed San Pedro ramp. Bottom elevations proposed for the ramps are the potentials that appear attainable from map inspection; field verifications of these potential levels will be required during design.

Development cost and phasing, personnel required, and major equipment needed for the proposal are shown in the "Environmental Consequences" section.

AFFECTED ENVIRONMENT

RESERVOIR OPERATION

LEGAL FACTORS

Authority to construct Amistad Dam and Reservoir was provided to the International Boundary and Water Commission by the Water Treaty of 1944 between the United States and Mexico (59 Stat. 1219) and by Public Law 86-605 of July 7, 1960 (74 Stat. 360).

The treaty provides that each country is free, at any time, to utilize its share of water for direct beneficial use or for storage in other reservoirs. The treaty further stipulates that storage shall be maintained at the maximum possible water level, consistent with flood control, irrigation use, and power requirements. As a guide, the treaty specifies the following "order of preference" for joint use of international waters:

- domestic and municipal uses
- agriculture and stock raising
- electric power generation
- other industrial uses
- navigation
- fishing and hunting
- any other beneficial use determined by the commission

The treaty also establishes that public use of the reservoir surface is to be "free and common to both countries, subject to police regulation of each country in its territory."

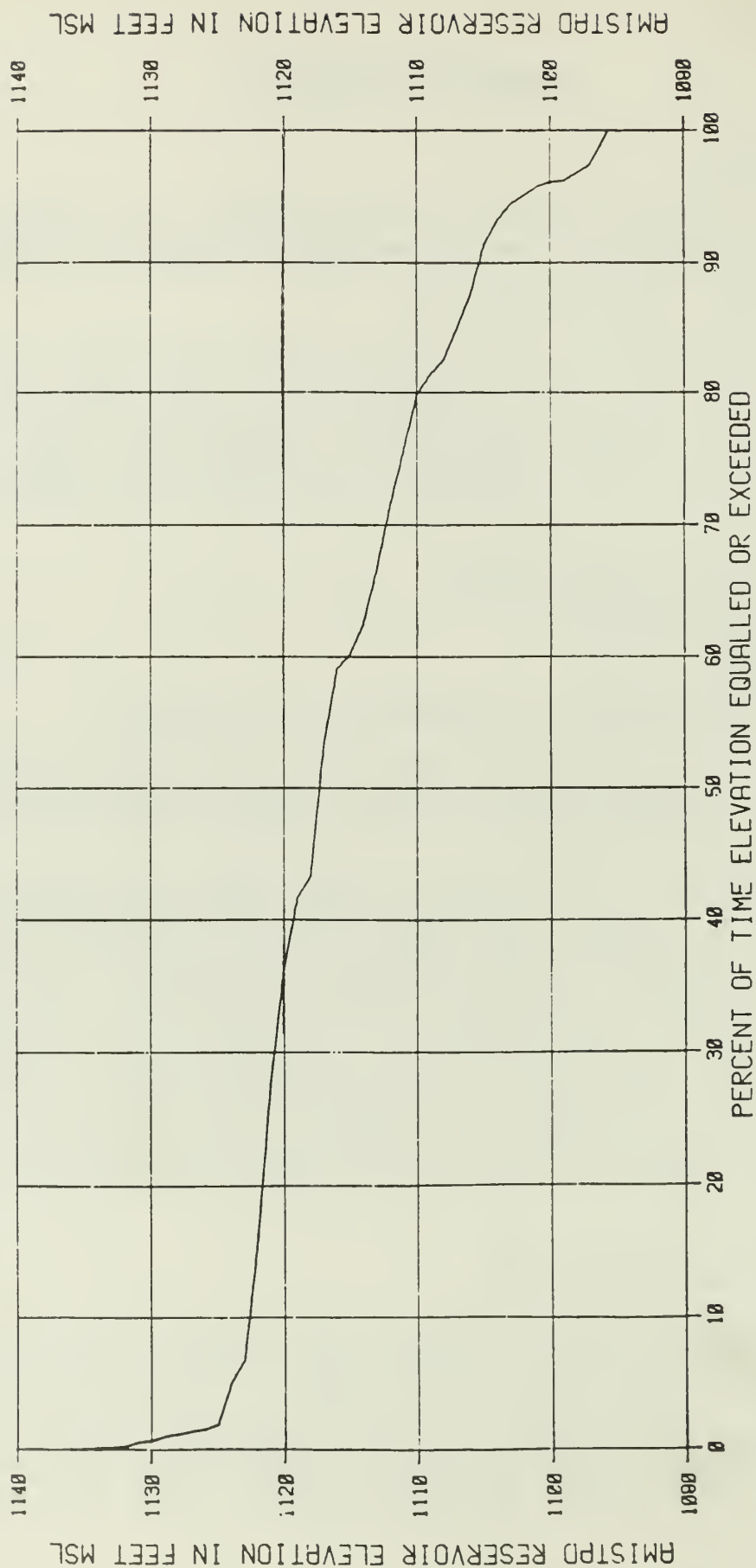
Public Law 86-605, in authorizing United States' participation in the Amistad project, refers to and in effect adopts the specifications described in a September 1958 report by the U.S. Section of the IBWC entitled "Rio Grande International Storage Dams Project: Proposed Diablo Dam and Reservoir," which includes an NPS report on recreation potential. Citing of this document in the legislation thus establishes the basic authority for including outdoor recreation as one of the project purposes. (As initially conceived in the feasibility studies, responsibility for administering recreation was proposed for the state level.) A major provision of the law specifies that releases of the U.S. share of waters for domestic, municipal, industrial, and irrigation purposes shall be made pursuant to order by the appropriate authority of the state of Texas.

WATER LEVEL FLUCTUATIONS

At its conservation pool elevation of 1,117 feet (normal maximum) above sea level, Amistad Reservoir extends some 74 miles up the Rio Grande, approximately 25 miles up the Devils River, and about 14 miles up the Pecos River. Shorter bays extend into Mexico. At this level the United States' portion of the water surface is 43,250 acres, and there are 547 miles of shoreline. During brief periods of flood storage these dimensions are considerably greater. Reservoir operations result in levels below

Table 2: Amistad Reservoir Elevation

AMISTAD RESERVOIR ELEVATION DURATION 1972-OCT.1984



IBWC, U.S. Section, El Paso, Texas

1,117 feet, but the lake will normally remain large enough to provide for a full range of boating, sailing, fishing, and other watersport activities (see table 3).

During occasional deep drawdowns recreational use of the reservoir may be adversely affected and its attractiveness diminished. At the maximum drawdown, elevation 930 feet, the water will extend about 10 miles up the Rio Grande and be 30 feet deep at the dam. Most boat ramps do not extend down to this limit, and it is assumed that visitor use will decline sharply and concession operations will be unprofitable during these times. However, launches at Pecos River and Spur 454 will be usable at the lowest lake levels because waters at these former river crossings would again be flowing rivers. The Rough Canyon launch and marina will remain usable at low levels because of the former Devils Lake (see below).

The Amistad project flooded two narrow reservoirs on Devils River--Lake Walk (downstream from Rough Canyon) and Devils Lake (at Rough Canyon). These had provided hydropower generation and recreation. Devils Lake will reappear first should Amistad Reservoir fall to 1,040 feet. Lake Walk will reappear at 1,000 feet. Either case is projected to be an extremely rare occurrence. Should this occur, stability of the dams will be investigated.

A 1,020-foot elevation was selected as the minimum design level for launching ramps in the 1968/73 master plan because prefilling studies indicated that the reservoir would be drawn lower only 4 percent of the time (although in periods that could have lasted two years). Experience with reservoir levels since filling is short but tentatively indicates a higher minimum elevation may be applicable.

Sedimentation occurs in the upper canyon reaches. It is most pronounced on the Rio Grande and moderate on the Pecos and Devils rivers. Each time the reservoir drops from a higher level, the Rio Grande in particular flushes silt farther downstream.

The water released below Amistad Dam is a cold, clear stream with a minimum flow of about 400 cubic feet per second (cfs). Releases as high as 62,200 cfs have occurred.

VISITOR USE

Visitation to Amistad Recreation Area began in 1965 when the reservoir started filling behind the newly constructed dam and the Park Service began developing recreational facilities and programs. By the early 1970s, visitor use had grown to a million. Now visitation is stabilizing at about 1.2 million (see tables 4, 5, 6, and 7). In terms of the 335 areas in the national park system, Amistad Recreation Area ranks 47th in visitor use. Although the region's population is growing, increased visits to Amistad are not occurring. Growth may occur if recreational preferences change or in response to economic improvement, increases in heating costs in the northern United States (from where many winter visitors come), or substantially lower gasoline prices (which would affect both the costs of driving to the lake and motorboating once there).

About 55 percent of the visitors come from Texas, and they are frequent users of the lake (Ditton & Schmidly 1977, pp. 32 & 207). During the later winter and spring months, many visitors also come from midwestern areas and California. Most use is by small parties, but large fishing tournaments, boat races, and competitive scuba dives are also held. Hunters are almost entirely from the local county and from the San Antonio area (Ditton & Schmidly 1977, p. 68).

Most visitors arrive by private automobile, often towing boats or camping trailers; many use recreation vehicles. Bus service is not available to serve the activities at developed sites, but there are regional bus tours that stop at places like Amistad Dam and Seminole Canyon State Historical Park.

Visitor information is obtained at the NPS headquarters building on US 90, Diablo East ranger station, IBWC/NPS visitor facility on Amistad Dam, Rough Canyon visitor contact station, and information bulletin boards at other developed sites. The high proportion of repeat visitors appears to reduce the importance of this service. Off-site programs are provided upon request, and with the park's roving interpretive van, interpretation/information can be provided almost anywhere.

Use is mainly from March through September/October (table 8); peak month of use is April--for total visitation as well as for boating (table 9) and camping (table 10). Table 11 shows visits by developed area. The most popular area for boat launching is Diablo East; Rough Canyon follows, and then Pecos River and the Air Force Marina (table 12). All other ramps combined are used less than any one of these major ones. In 1984, 63,500 boats were launched, carrying approximately 254,000 visitors onto the water. Day use is also most popular at these four sites. The road along the dam's top, where visitors view the dam and reservoir plus the international boundary as well as exhibits on construction and water conservation, accounts for some 10 percent (approximately 130,000) of Amistad Recreation Area's visits. What the rest of the visitors do is not so well reported. Apparently, most visitors do not boat or visit the dam. Picnicking and sunbathing/swimming are quite popular.

Table 3: Water Level on June 1

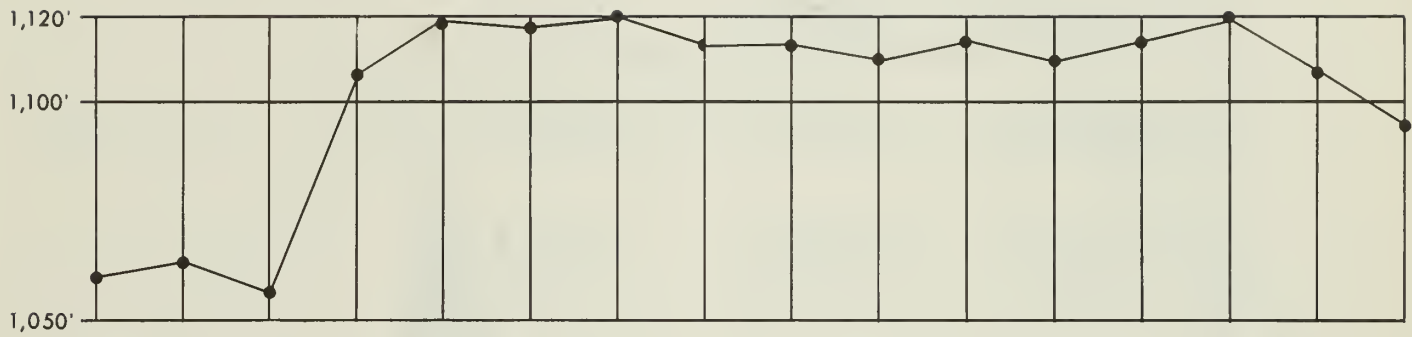


Table 4: Number of Visits

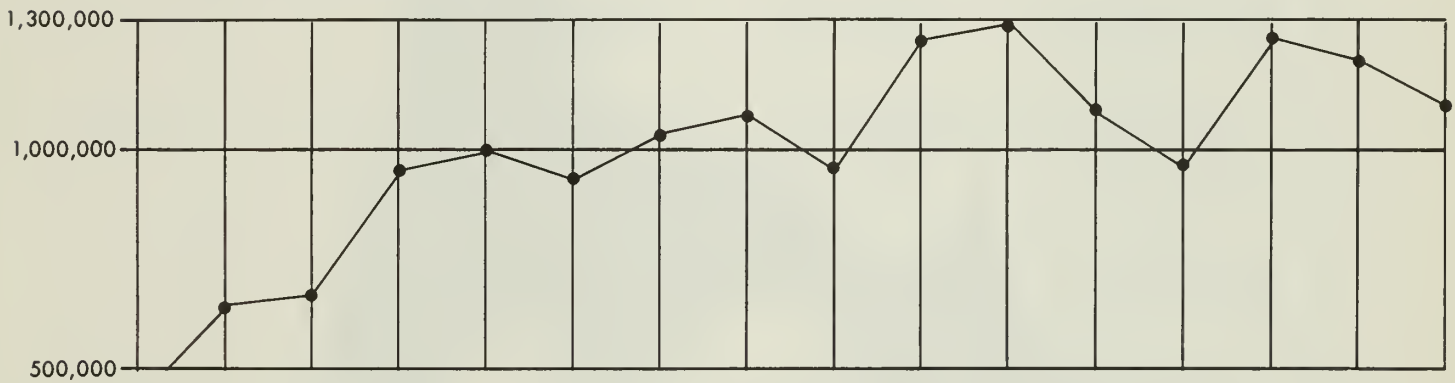


Table 5: Number of Boats

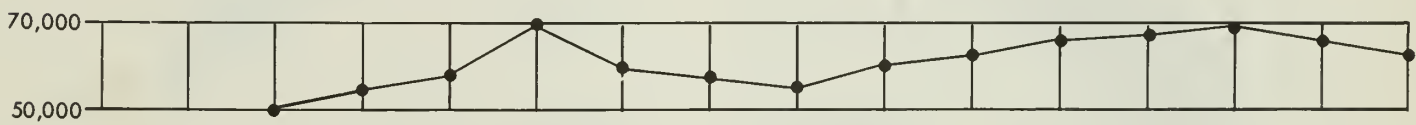


Table 6: Number of Campers

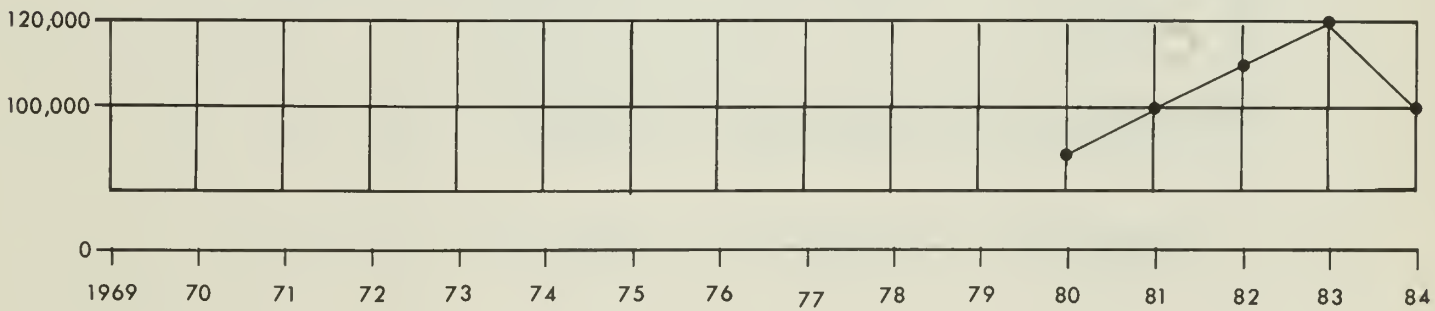


Table 7: Amistad Recreation Area Visitation by Month 1979-1984

	January	February	March	April	May	June	July	August	September	October	November	December	Annual
1979	51,702	75,708	166,406	183,625	153,351	145,080	140,263	97,826	114,176	77,429	58,028	26,762	1,290,356
1980	60,736	60,703	101,253	132,135	144,278	123,066	118,365	80,212	135,570	54,260	48,089	42,206	1,100,873
1981	53,631	61,567	82,451	114,766	93,234	111,690	121,383	101,020	75,949	70,987	52,174	53,402	992,254
1982	53,715	67,921	129,927	250,361	112,933	143,418	133,812	96,834	80,632	77,696	74,720	53,539	1,275,508
1983	59,303	84,092	114,692	136,190	112,973	150,073	141,231	122,587	89,430	85,603	79,857	51,353	1,219,609
1984	53,859	87,791	121,603	141,942	121,941	149,081	119,283	400,238	90,715	74,258	58,389	46,246	1,160,197
Average	53,824	72,963	119,389	159,837	123,118	137,068	129,056	99,786	97,745	73,372	61,876	45,585	1,173,133
Boats by Month 1979-1984													
1979	1,070	2,600	6,594	10,936	7,575	6,088	5,405	6,151	6,428	4,694	2,524	1,392	61,457
1980	2,337	2,981	9,180	10,003	7,662	6,501	6,293	4,697	6,743	5,533	3,222	1,802	66,954
1981	2,865	4,028	5,238	7,323	8,192	6,915	6,380	6,264	6,834	5,781	4,620	3,839	68,279
1982	2,893	3,644	7,452	9,337	6,447	8,300	6,609	4,937	6,370	6,712	4,337	3,048	70,086
1983	3,029	4,936	6,805	8,642	6,950	8,409	5,037	4,745	5,379	5,390	4,632	1,860	65,814
1984	1,478	4,689	6,829	7,212	6,949	7,242	4,870	5,892	6,208	5,890	4,503	2,221	63,983
Average	2,279	3,813	7,016	8,909	7,295	7,243	5,766	5,448	6,327	5,667	3,973	2,360	66,096
Campers by Month 1981-1984													
1981	6,239	8,127	10,340	11,118	10,163	8,729	9,499	7,411	6,668	8,369	6,605	6,437	99,705
1982	6,816	8,495	11,767	12,708	8,000	12,667	8,765	6,952	9,210	11,520	8,568	5,675	111,143
1983	7,534	12,158	14,842	17,780	9,423	13,023	7,146	7,142	6,783	9,706	8,890	6,448	120,875
1984	6,490	11,142	15,762	13,435	8,527	9,726	4,476	5,495	5,007	9,258	7,493	6,271	103,352
Average	6,770	10,026	13,178	13,760	9,028	11,036	7,471	6,750	6,915	9,804	7,889	6,208	108,769

Table 8 : Visitation by Month, January 1979-December 1984



Table 9 : Boat Launchings by Month, January 1979-December 1984

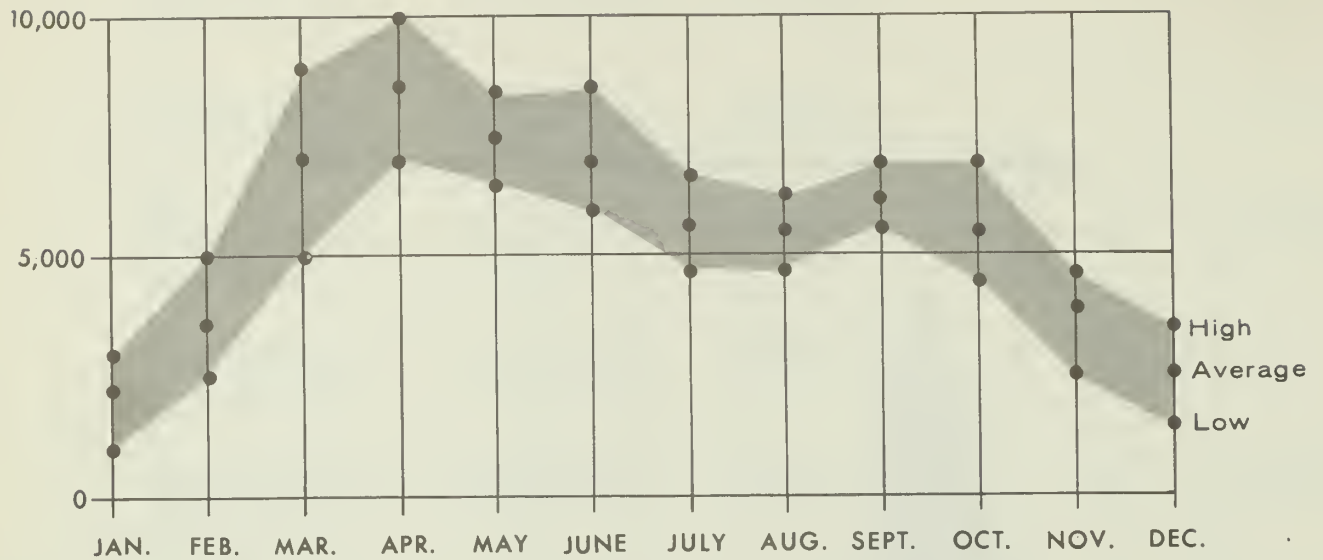


Table10: Number of Campers by Month, January 1981-December 1984

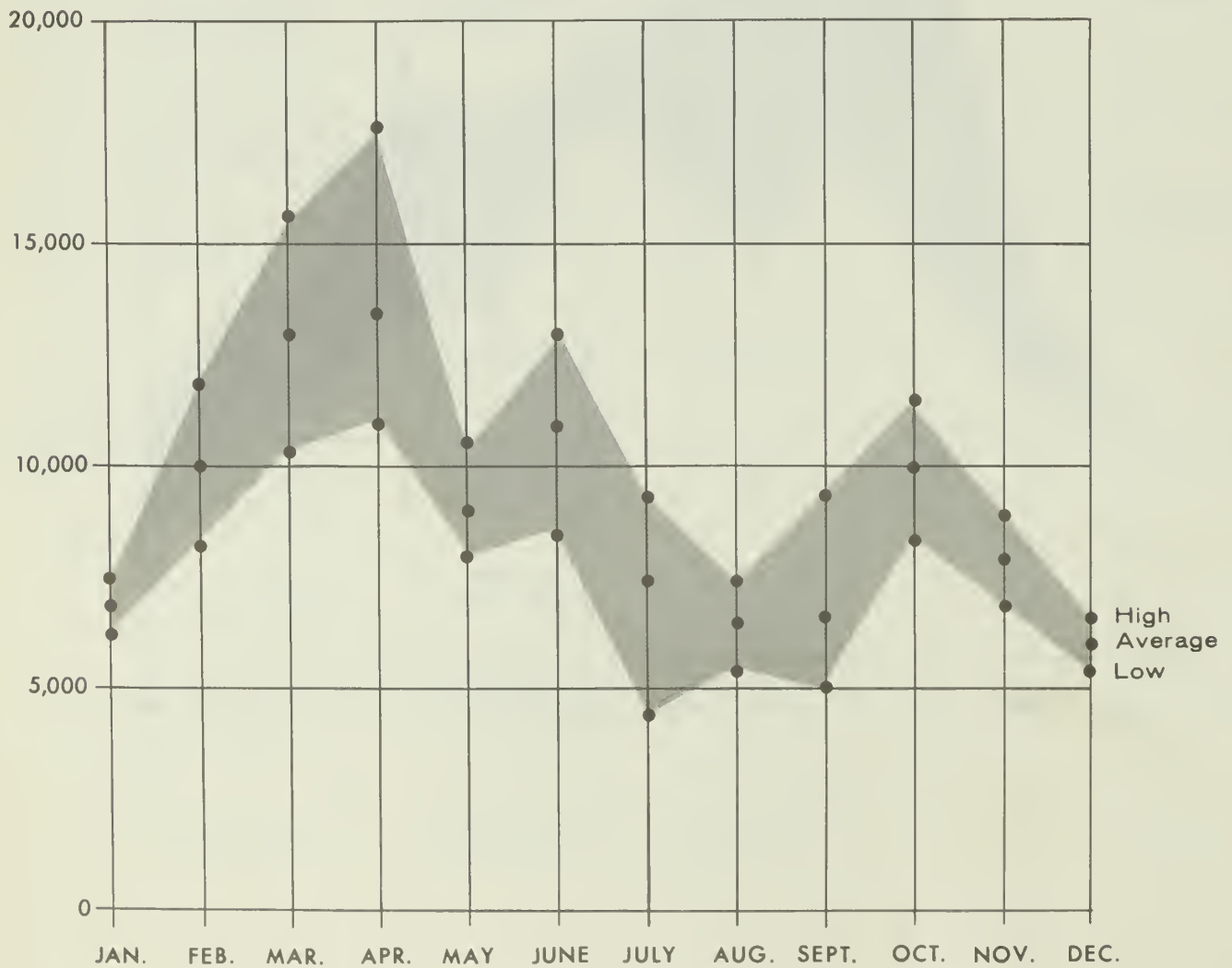
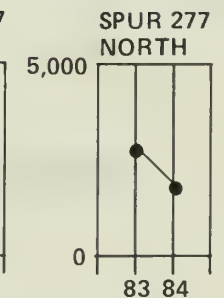
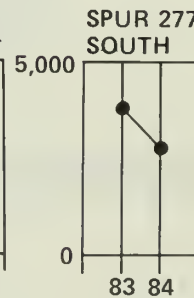
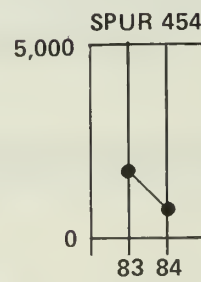
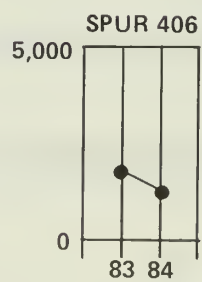
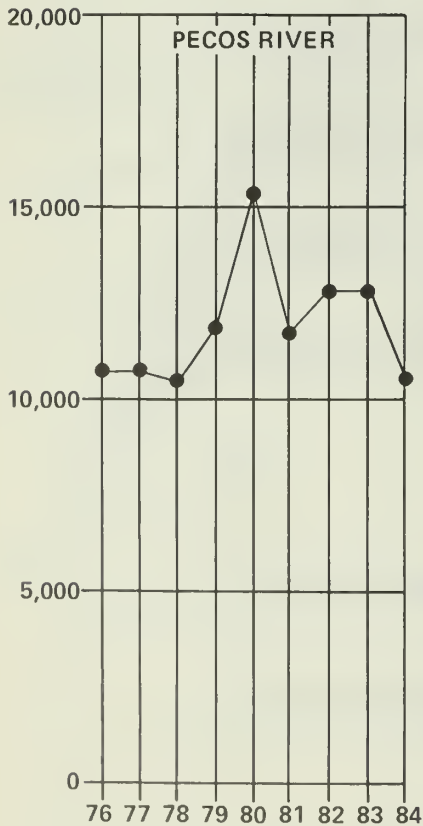
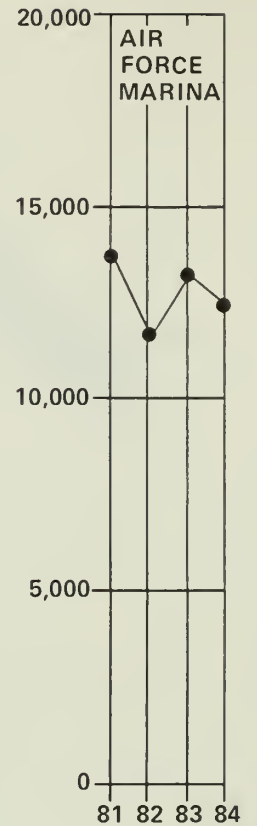
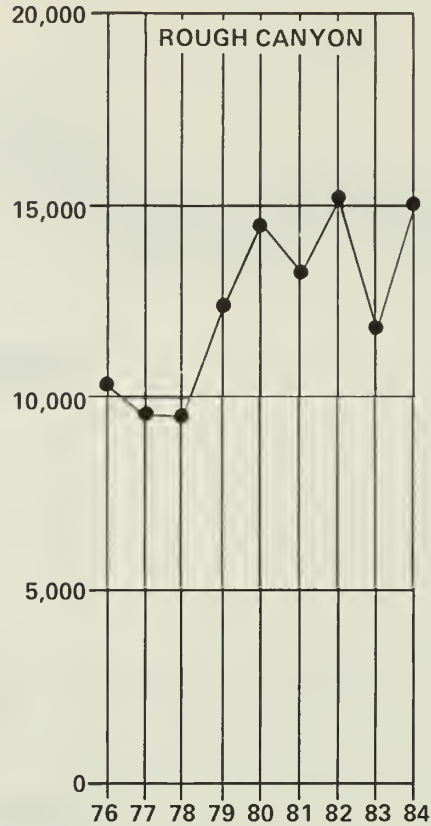
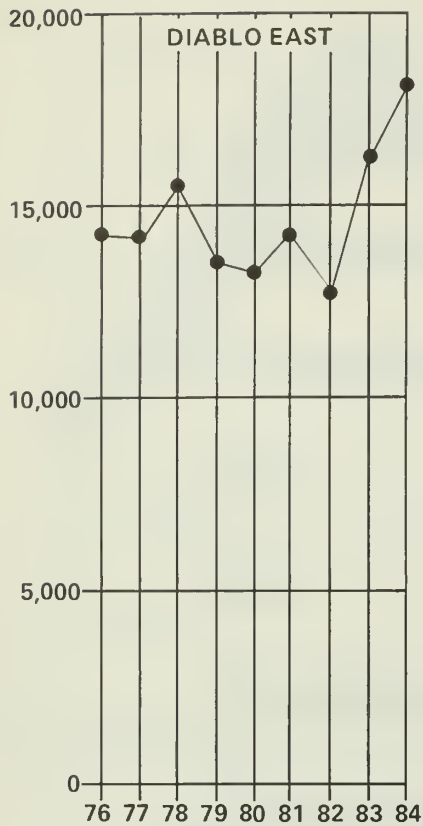


Table 11: Average Annual Visits by Developed Area, 1980-1984



Table 12: Boat Launchings by Selected Development Areas



Access for the handicapped is generally inconvenient; the complexity of correcting this situation is compounded by the rugged terrain, active character of the recreation activity, and the fluctuating water level that affects facility design. Roads do, however, serve launch ramps and, with assistance, handicapped persons can be transferred via courtesy docks from cars to boats at all principal use sites. No swimming beach is wheelchair-accessible nor are most toilet facilities, which are primarily portable chemical units.

Use occurs primarily on weekends and holidays, when local users predominate. Easter, Memorial Day, and the Fourth of July attract large numbers; Labor Day and other holidays do not attract as many. Except for tournaments and group gatherings, which on occasion lead to some congestion, and the three holidays, the reservoir is uncrowded.

Sportfishing is very popular. Activities involving active outdoor recreation include boating, waterskiing, sailboarding, scuba diving, sailing, cliff diving, and swimming. Hunting takes place in the fall. Activities involving social groupings include picnicking, sunning, boat racing, and fishing tournaments (up to 800 or more competitors). Local clubs, work groups, and extended families participate in these activities, and a number of group-use sites may be reserved.

Camping is available at developed sites that are accessible by automobile and at remote boat-in areas (see table 13). In 1984, Amistad had 80,900 overnight visitors in the following campgrounds, both single-party and groups:

Spur 454	23,100
Governors Landing	18,600
Spur 277 North	17,700
Spur 406	11,400
Air Force Marina	5,200
Spur 277 South	3,200
Rock Quarry	1,300
San Pedro Flats	400

In addition, backcountry camping takes place on the upper Rio Grande and Pecos River, with 22,441 campers during 1984 in this district. Peak backcountry camping was in the spring and early summer; secondary peak use occurred in fall. Parties averaged 3 persons. Backcountry camping also occurs on the upper Devils River.

Day users without boats stay an average of 4 hours; day users with boats stay an average of 8 hours; overnight users remain an average of 3½ days. Overnight users include many groups of club members or work unit associates as well as families and friends.

On the Mexican side of the reservoir are a day use picnic area, a marina that was damaged in a storm, and a launch ramp, which is only usable at high water. There is no park department to manage Mexico's portion of

Table 13 : Average Number of Campers by Developed Area, 1981-1984



the lake, and there is little tourism or use of the water on that side of the border.

Although Amistad Recreation Area contains interesting cultural resources, many more people visit the adjacent Seminole Canyon State Historical Park, which preserves outstanding petroglyphs and provides excellent museum exhibits and interpretive tours, to see cultural resources. Visitation at Seminole Canyon is stable at 41,000 per year (1981-1983); 7,400 persons per year go on the interpretive tour. The campground here serves 7,000 per year.

In 1984 the reservoir fell to a lower level (at times under 1,100 feet) due to a dry climatic cycle within its watershed; some launch ramps were unusable, and certain picnic areas and campgrounds were left far from the water. This condition continued into 1985 but did not significantly affect total recreation area visitation or boat launchings, although use patterns did shift to favor those developed areas that had low-water launch ramps. There was still an enormous water surface, and from visitor's statements, use would have dispersed over it even more had facilities been available in upriver areas.

EXISTING FACILITIES

AMISTAD RECREATION AREA SITES AND FACILITIES

Langtry

The flowing Rio Grande provides the resource attraction here in a scenic canyon setting. There is no federal land or access point at this site, and the topography near the river is steep. The town of Langtry provides minimal visitor services, which are oriented to the Judge Roy Bean Museum and Visitor Center.

Pecos River

The Park Service provides a major boat ramp (damaged in 1985) and parking area, comfort station, fishing dock, swim dock, picnic area, and shelter overlooking the Rio Grande. The boat ramp is usable from elevation 1,122 feet to the water (it is an existing road flooded by the lake). Commercial camping and snacks and beverages are available outside the park. The state of Texas maintains a wayside/picnic area adjacent to the nearby Pecos River highway bridge. Employee quarters consist of a trailer. All developments are on 10 acres of government land and are above 1,144.3 feet (maximum water elevation).

Comstock Site

Centrally located on the upper reservoir, the Comstock site is a scenic canyon area below level upland about 7 miles from the town of Comstock. There is no federal land, public road access, or utilities at this site, and only a tiny bay to shelter launch or marina facilities. Slopes are steep and rocky. A launch ramp potentially could extend to an elevation of 1,080 feet.

Cow Creek

Centrally located on the upper reservoir, Cow Creek is a large drowned canyon that provides sheltered sites for launch or marina facilities. Depending on location, a ramp could potentially be constructed down to water level 1,000 feet. Slopes in this area are rolling and conducive to construction of facilities. There is no federal land, public road access to, or utilities at this site.

Amistad Acres

Public boat launch ramp is provided by the community through a permit. Road access is minimal.

Box Canyon

Public boat launch ramp is provided by the community through a permit. Road access is minimal.

Diablo West

The area is presently a hunting area. A launch ramp could be constructed here, on the east side of US 90, which would potentially be usable down to the river at a level of 930 feet and would provide protected launching when the wind blew unfavorably at Diablo East. Federal ownership above 1,144.3 feet is 1,150 acres (the overall Diablo West site).

Rock Quarry

This small area provides four picnic shelters, two chemical toilets, and docks for swimming, boating, and scuba diving. Group camping is available by reservation. Noise and vehicle activity from nearby US 90 are intrusive. All developments are above 1,144.3 feet.

Evans Creek

This area is under the Evans Creek bridge on US 90. Basically undeveloped, there is some camping and day use during high-water periods. The area has little potential as a designated campground because of the noise from US 90, potential flash flooding, and a generally unsightly character. There is no federal land above elevation 1,144.3 feet and little above 1,140 feet (elevation of 100-year floodplain).

Spur 406

Spur 406 provides a dock and a submerged road for launching small boats. There are six picnic shelters at designated campsites and three chemical toilets. There is no NPS land here above 1,144.3 feet and little above 1,140 feet; west of the access road government rights are limited to a flowage easement. Because this area is so flat and sites undefined, when reservoir levels change, campers tend to follow the shore in search of campsites closer to the water, causing increased litter and impacts from pioneered roads and uncontrolled use. Boat launching on the spur road is usable from water levels 1,115 to 1,122 feet. The area provides excellent opportunities for bird-watching.

Rockhouse

Rock walls, which remain from a lodge building acquired when the reservoir basin lands were purchased, stand on a bluff above the Devils

River arm of the reservoir. Now closed to use, a dock and interpretive exhibit were formerly provided. The structure is unstable.

Rough Canyon

A 7-mile, state-owned road from US 277 goes to this major boat launching area. Six picnicking areas and parking for boat trailers and individual vehicles are provided, as is potable water. A new visitor contact building provides information, interpretation, and toilet facilities. It is handicapped-accessible. There is a swimming beach, fish-cleaning station, and boat dump station. Because of wind conditions affecting boat launching, there are two ramps. The boat ramps are usable from water levels of 1,108 to 1,132 and 1,030 to 1,121 feet. Approximately 15 acres of government land lies above 1,144.3 feet.

Rough Canyon Marina 1144, Inc. has a five-year contract with the Park Service, which runs until December 31, 1986, to provide a marina. Included are 46 slips, 35 buoy ties, a fishing dock, and a fuel dock. The concessioner also operates separately a store, gas station, and campground on private property.

Long Point

This area was acquired for future development and the Park Service has a road right-of-way to it from US 277. The area contains about 409 acres of land above 1,144.3 feet. A launch ramp could potentially extend to water level 1,040 feet. It is currently used as a hunt area.

Spur 277 North

This area provides picnicking and group camping (a total of 17 sites), bank fishing, a swim beach, a nature trail, and six chemical toilets. A dock is provided, and a submerged road is usable to launch boats from water levels 1,111 to 1,121 feet. There is no federal land here above 1,144.3 feet and little above 1,140 feet.

Spur 277 South

Boat launching, picnicking, bank fishing, and two chemical toilets are available at this small area. Boat launching occurs on a submerged road down to water level 1,080 feet. Camping (four sites) is along the access road, creating potential camper/vehicle conflicts. There is no federal land above 1,144.3 feet here and little above 1,140 feet.

San Pedro

This area was acquired for future development. It contains 610 acres above 1,144.3 feet, with much of it on a level upland which fronts

steeper slopes leading down to the water. A large cove provides protection from the wind. Vegetation here is sparse brush and there are a few dirt roads in the area. Access is from adjacent US 277. Potentially, launch ramps could extend down to 1,080 feet. San Pedro is currently used as a hunt area.

San Pedro Flats

This developed area serves day users and campers. Twenty-five shelters and tables and six chemical toilets are available, plus an amphitheater and group-use shelter. A high-water launch ramp is present. The treeless area is often windy. There is no federal land above 1,144.3 feet here. All developments are below 1,144.3 feet; most are below 1,140 feet.

Spur 454

Launching of small boats takes place on an abandoned road at water levels from 1,112 to 1,118 feet. Facilities are provided for picnicking and camping, and there are chemical toilets. Picnic areas, campground sites, and roads are ill-defined and unpaved. There is no federal land here above 1,144.3 feet; all developments are below 1,144.3 feet, most are below 1,140 feet.

Park Headquarters

The Park Service occupies space outside the recreation area in two leased buildings just north of Del Rio, Texas. These are 8 miles from the nearest developed area--not where the visitors are--thus requiring that personnel commute to work sites and thereby substantially increasing yearly park operation costs. The headquarters building (administration and information) is 4,026 square feet and provides adequate space for staff offices. The size of the information area is inadequate. The building includes a 30-seat auditorium, which, however, does not lend itself for use as an exhibit area because its entrance is interior to the building, mixing visitors and administrative staff. This headquarters building is handicapped-accessible. The adjacent maintenance building (4,230 sq ft) is adequate in size. Also present is a 60,000-square-foot paved enclosure for storage.

Blackbrush Point

Blackbrush Point has two boat ramps, a 13-site picnicking area, chemical toilets, a dock, and a nature trail. All development except launch ramps are above 1,117 but below 1,144.3 feet. There is no federal land above 1,144.3 feet and little above 1,140 feet. The boat ramps are usable at water levels from 1,103 to 1,130 feet.

Diablo East

Diablo East, Amistad Recreation Area's largest and most popular area, has a boat launch ramp and concession marina. The boat ramp is usable from water levels of 1,015 to 1,141 feet and includes a courtesy dock. There are also NPS operations docks here. Launching boats or taking them out of the water is not possible during certain wind conditions. There is parking for boat trailers and individual vehicles and an associated RV dump station. A fish-cleaning station is provided. One converted mobile home serves as a combination ranger station/visitor contact station; another is a comfort station. Four picnic sites are present. There is potable water. A handicapped-accessible fishing dock is provided. At Diablo East and the contiguous Governors Landing approximately 610 acres of government land lies above 1,144.3 feet.

Diablo East Marina is operated by Diablo East Recreation under a 10-year contract with the Park Service that expires March 31, 1990. There are 48 slips for small boats and 12 slips for houseboats, which are fully rented all year. There are also 20 buoy ties. Gasoline and diesel are provided at a floating fuel dock; additive for mix is sold at the marina store where general supplies (some groceries, sundries, soft drinks, beer, ice, live bait, and fishing and camping items) are also sold. The store is handicapped-accessible. Rental services at the marina include canvas-covered inner tubes, hydrosleds, water skis, fishing boats, storage lockers, boat trailers, and some dry storage space. Boat repairs are handled by a qualified boat mechanic. Other miscellaneous services include boat towing, taxi service, boat launching, boat washing, and houseboat preparation for rental.

In 1984, because of low water and exposure to storm waves, the marina was moved to deeper water and protected by a floating breakwater. Sailboats moored here during high water do not have access to the more popular waters west of the US 90 and railroad bridges because of insufficient clearance at these bridges.

Diablo East (Cliffs)

A part of the site is very popular for scuba diving. Nearby, cliffs are used for high diving. The near-shore water is buoyed to protect these uses. There is a nature trail. Parking and 13 picnicking sites and three chemical toilets are also provided. Recreational activities tend to overlap here and conflicts among users sometimes develop.

Swim Beach

This area at the side of the dam provides seven picnic sites, parking, and two chemical toilets. The area is usable for swimming mainly at higher water levels. Space is available for additional day use sites (with shelters, grills, and picnic tables). This facility is on IBWC land and is all below 1,144.3 feet; it is operated by the Park Service under a special use permit.

Lower Rio Grande

This area below Amistad Dam is closed to public use. Prior to 1982 picnicking facilities were provided and fishing was allowed. Cliffs nearby contain pictographs and the riparian vegetation along the river supports a variety of birds. When water is low, illegal border crossing occurs here, creating potential conflicts with visitor use. A stream-gauging structure downstream from the main dam creates a drop in the river, making boating and swimming extremely hazardous. A road, controlled by the IBWC, leads down the dam face to this site, then continues on to Del Rio. There has been significant public interest in reopening this area to use.

Governors Landing

This area provides 20 camping and picnicking sites, five chemical toilets, swim area, and dock. Day users and campers share the same areas. The area is quite popular on weekends and holidays. Parking can accommodate about 50 cars near the swim area. An open-air amphitheater is used for interpretive programs. There is no potable water. Developments are partly above and below 1,144.3 feet. The area totals 3 acres, 2 of which are above 1,144.3 feet. Available land is heavily utilized. The paved access road dips to 1,140.0 feet, and thus will only rarely be flooded. Campground roads are unpaved.

Air Force Marina

Since 1967 the U.S. Air Force has been operating a recreation camp under a cooperative agreement with the Park Service. Its boat launch ramp is open to the public. Other facilities are for use only by military and retired military personnel; these include overnight tent platforms, RV campsites, and a marina with boat slips, store, and fuel. Road access is over IBWC land. The boat ramp is usable from water levels 1,070 to 1,150 feet. Federal acreage above 1,144.3 feet is 415 acres.

Steam Plant Road

The Steam Plant Road site provides parking, boat launch ramp, dock, bank fishing, and chemical toilet facilities for high water levels. There is a small dock. Ten buoys for sailboats are provided by the Diablo East concessioner. Road access is over IBWC land. The present parking area is below 1,144.3 feet. The boat ramp is usable from water levels 1,109 to 1,122 feet. West of this area is a deep-water cove that is protected from storms by ridges and the dam. It is potentially an alternative launching site to the Air Force Marina, providing both additional capacity and better shelter. Terrain here would allow construction of a swimming beach. The slope permits a ramp potentially down to 1,040 feet.

Table 14. Amistad Recreation Area Visitor Facilities and Activities

	*Pecos River	*Comstock Access	*Cow Creek	*Diablo West	*Rock Quarry	*Spur 406	*Rough Canyon	*Long Point	*Spur 277 North	*San Pedro	*San Pedro Flats	*Spur 454	NPS Headquarters	Blackbrush point	Diablo East	Diablo East (Cliffs)	Swin Beach	Governors Landing	Air Force Marina	Steam Plant Road	Amistad Dam Exhibit Center
Picnic Area	X																				
Campground																					
Group Campground																					
Nature Trail																					
Bank Fishing Area																					
Fishing Dock	X																				
Fish-Cleaning Station	X																				
Boat Dock	X																				
Boat Ramp	X																				
Boat Rental	X																				
Boat Sanitary Dump Station																					
Marina																					
Marine Fuel	X																				
Swimming Beach/Area	X																				
Swimming Dock																					
Scuba Diving Area																					
Groceries																					
Amphitheater																					
Group-use Shelter																					
Public Phone																					
Water	X																				
RV Dump Station	X																				
Chemical Toilets																					
Comfort Stations																					
Information Service																					
Sailboat Buoys																					
Lowest Launching (existing)	river																				
Lowest Launching (potential)	river																				
Acreeage above 1144.3	10	0	0	0	1,150	0	15	409	0	0	610	0	0	0	610	0	N/A	2	415	1,070	1,109

*Potential developed areas.

Amistad Dam Exhibit Center

An exhibit room atop the U.S. side of the dam is under the jurisdiction of and operated by the IBWC. During summer an NPS information attendant is sometimes on duty; the remainder of the year the building is open on a self-serve basis. It is handicapped-accessible. Exhibits portray the various stages of dam construction and the room's windows overlook the reservoir. The Park Service and the IBWC are interested in redesigning the presentation to include Amistad Recreation Area and the role it plays in the region, as well as the spirit of international cooperation that led to construction of the dam.

ADJACENT VISITOR FACILITIES AND SERVICES

Private recreational developments occur around Amistad Recreation Area, generally near the developed areas established by the National Park Service, as follows:

Diablo East/San Pedro Area (between US 90 bridge and US 277)

- 3 motels, with 97 rooms

- 3 campgrounds, with 345 drive-thru sites with hookups, plus tent sites, stores, dump stations, swimming pools, recreation facilities, laundry machines, and boat rentals

- 4 restaurants

- stores, gasoline stations, boat storage, diving supplies, tours, and boat rental and repair

(Within Amistad Recreation Area, the concessioner at Diablo East also provides a store, a marina, moorings, a boat-gasoline dock, boat rental, and boat taxi and towing services.)

Rough Canyon Area

- 2 motels with 30 rooms

- 1 trailer park/campground having 52 recreation vehicle sites, 20 campsites, and 20 permanent mobile home sites, a store, a dump station, a recreation facility, laundry machines, and boat rentals

- 1 restaurant

- 2 stores

- 1 gasoline station

- boat storage

(Within Amistad Recreation Area, the concessioner at Rough Canyon also provides a marina, moorings, a boat-gasoline dock, and boat rental, and also operates some of the facilities on the above list.)

Pecos River

1 private campground with hookups

1 state park campground (Seminole Canyon State Historical Park)
with 31 sites, showers, sanitary dump station, a picnic area,
and 4.6 miles of hiking trails on 2,173 acres

1 state highway picnic area

Comstock

restaurants, service stations, motels

Langtry

restaurants, service stations, motels, museum

Del Rio

14 motels with 829 rooms; also many restaurants and services for
travelers

CULTURAL RESOURCES

SIGNIFICANCE OF ARCHEOLOGICAL AND HISTORICAL RESOURCES

At Amistad Recreation Area prehistoric archeological sites represent occupations that began approximately 8000 B.C. and extend until the days of Spanish conquest. They reflect adaptation to the arid or semiarid environment and a life dependent on hunting and gathering. Evidence of prehistoric occupation is from the big game hunters of the Paleo-Indian stage (at least 8,000 years B.C.) through the Archaic stage (7000 B.C. to A.D. 1000) and Post-Archaic stage (A.D. 1000 to 1600) and into the early part of the Historic stage (A.D. 1600 on). Within Amistad Recreation Area and its vicinity--on American soil--are approximately 350 sites, a number of which were studied and excavated prior to inundation.

The significance of the archeological resources is well explained by Graham and Davis, archeologists who conducted early research (Graham and Davis 1958):

In several respects the Diablo (Amistad) Reservoir is one of the unique archeological regions of North America. Probably no area of comparable size can boast of so rich a series of archeological and pictographic sites. In the desiccated rockshelters, in the open midden sites, and in the stratified terrace sites are preserved an unusually complete array of material remains, representing, all in all, several thousand years of human history and prehistory. For this reason alone the archeology of the area is of exceptional scientific significance. But in addition to this rich inventory of archeological materials, here exists one of the truly unique pictograph regions of the world. The magnificent galleries of superb cave murals, executed in polychromatic and monochromatic styles, in stylized and naturalistic forms, are perhaps comparable only to the famous cave paintings of Europe. (pp. 84-85)

Archeological work near Amistad Recreation Area began in 1932 at Fate Bell Shelter in Seminole Canyon. Even at this early date these resources were recognized to be highly significant and rich in archeological data.

DISTRIBUTION OF SITES

Many of the pictograph sites (Indian rock paintings) were located and recorded in 1936-1940. Intensive field work was renewed in 1958 when the Texas Archeological Salvage Project did surveys and excavation prior to the reservoir's inundation in 1968. Little survey or excavation has been done since the filling of the reservoir. However, areas which were proposed for development in the 1968 master plan (NPS lands at Langtry, Pecos River, Comstock site, Cow Creek, Diablo West, Diablo East, Lower Rio Grande, San Pedro, Rough Canyon) were surveyed in 1973 by NPS

personnel. Four districts and one site are currently listed in the National Register of Historic Places--Lower Pecos Canyon archeological district, Mile Canyon archeological district, Seminole Canyon archeological district, Rattlesnake Canyon Site, and West of Pecos Railroad Camps district (see table 15). These areas include 24 sites on federally controlled lands and many more sites on adjacent private lands. Additional sites are eligible or potentially eligible for listing on the Register (see table 16). Portions of the Mexican side of the reservoir were surveyed by the Mexican government; approximately 78 sites were located (Taylor and Rul 1961). An assessment of these sites and survey data was made in Archeological Assessment, Amistad Recreation Area, Texas (NPS 1974).

Table 15: National Register Sites/Districts
Within or Adjacent to Amistad Recreation Area

(Each number is preceded by 41VV)

Seminole Canyon Archeological District - 84 sites

394	372	78	587	370	573	72	373
80	375	212	147	545	214	223	73
77	74	417	139	606	407	401	216
408	140	605	405	403	146	406	604
418	141	336	540	374	413	542	446
603	416	144	335	201	602	404	145
410	402	377	409	541	215	601	588
76	219	364	84	415	365	411	414
371	412	397	222	230	398	366	83*
226	367	82*	544	217	81*	395	220
85	393	221	79*	396			

Lower Pecos Canyon Archeological District - 72 sites

54*	132	55	133	56	134	57	135*
58	136	59	137	60	138	61	151
62*	152	63	153	64	154*	65	155*
66	156	69*	157	70	158	71	210
88*	234	89*	237	90*	238	91	239
92	249	93	321	94	322	95*	323
96	325	97	344	98	345	99*	346
119	347*	120	348	121	419	122	123
124	125*	126*	127	128	129	130*	131

Mile Canyon Archeological District - 6 sites

164*	168	167*	218	165*	166*
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Rattlesnake Canyon Site - 1 site

205

West of Pecos Railroad Camps District - 12 sites

382	383	384	385	386	387	388	389
390	391	392	575*				

* Federally owned--based on best available data--and within Amistad Recreation Area.

Table 16: Other Sites Potentially Eligible for National Register
of Historic Places
Within or Adjacent to Amistad Recreation Area

(Each number is preceded by 41VV)

Believed to be federally controlled

225	348	148	321
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Not within currently listed districts or on federally controlled property

298	179	18	28	16	15	12	75
227	187	84	621	184	182	183	180
249	103	Burial Site (unnumbered, on Rough Canyon Quad)					

The largest and most spectacular sites in the region are primarily in Mile Canyon, the lower Pecos River, and adjacent stretches of the Rio Grande.

CHARACTERISTICS OF SITES

Many dry rock-shelters occur below steep or overhanging limestone cliffs along canyon walls in the upper Rio Grande and Peco River areas. Prehistoric occupations in many of these rock-shelters have associated middens (trash dumps) that exceed 10 feet (3 meters) in depth. Burials are also present.

Unique and excellently preserved pictographs adorn the walls of many of the shelters. These superbly executed pictograph panels combine color, form, and composition in a highly developed art style, and most feature polychromatic techniques that depict highly stylized, life-size, anthropomorphic figures, naturalistic animal representations, and a variety of geometric forms. Artistic qualities of color harmony and balance, accuracy, conventionalization, and action are remarkably advanced. This polychromatic/anthropomorphic style appears to be related to the Pecos River Focus culture area and is the dominant one in the Amistad Recreation Area vicinity. Another style, which is regarded as a late intrusion, is found in separate sites or superimposed upon the earlier Pecos River Focus art; its red or black monochrome paintings are also characterized by realistic depiction of natural forms. At one site pictographs of this later type include historical elements such as horses, missions, and men in European dress.

Near the recreation area at Bonfire Shelter in Mile Canyon is a bison kill site. Paleo-Indian hunters repeatedly used a precipice here as a bison "jump"--where the Indians drove herds of unsuspecting bison off the cliff to their death and then butchered them. No other such kill site is known within 350 miles. After a lapse of more than 7,000 years, it was again used briefly by Indians of late Archaic times (about 650 B.C.)--perhaps for only one season--when over 800 bison were herded over the cliff.

HISTORIC SITES

There are no known historic sites within the boundaries of Amistad Recreation Area which have been determined eligible for or are listed on the National Register of Historic Places. Although portions of the Southern Pacific's railroad bed and a portion of one tunnel (Tunnel #1) are within the Amistad Recreation Area boundary, the Texas State Historic Preservation Officer (SHPO) did not include these features when the West of Pecos Railroad Camp District was nominated to the National Register in 1972. However, Tunnel #1 is considered by the National Park Service as a potentially significant component because both Tunnels #1 and #2 (the latter is already included within the district) were critical to building the bridge across the Pecos River, which completed the railroad link between New Orleans and Los Angeles. The NPS Southwest Regional Office will submit documentation to the Texas SHPO and the keeper of the National Register to have the West of Pecos District amended to include Tunnel #1. All other historic sites or component areas included within this district are located well outside Amistad Recreation Area.

THREATS TO CULTURAL RESOURCES

Prior to filling the reservoir and its establishment as a recreation area, private ownership and remoteness protected Amistad's rich cultural resources; now, the water surface provides easy access to a large number of sites on federal and adjacent private lands. Fishermen, hunters, relic collectors, and campers are damaging prehistoric sites, although sometimes unintentionally.

Trespass onto private lands for collecting is common. Sites receiving the greatest degree of damage are the highly visible rock-shelters just above the normal maximum water elevation of 1,117 feet, which are attractive places to camp or picnic and, unfortunately, to illegally collect relics. Holes are dug into middens in search of artifacts, and the deposits are disturbed for latrines and firepits. A fire might spread into the extensive fiber materials in the middens. Fluctuating water levels in the lake expose artifacts, human skeletal remains, and other archeological materials from sites, which are washed away or picked up by visitors if not immediately recovered by the park staff.

The very dry conditions within the rock-shelters formerly protected both the pictographs and the perishable artifacts, such as plant and animal food remains, basketry, sandals, etc. However, researchers have documented greatly accelerated deterioration of the pictographs since the reservoir's filling. Scientists speculate the cause to be increased humidity and/or soluble salt deposits. Also, lichen has formed over some of the pictures. Panels are also vandalized by visitors who cover or scratch their names over the rock art or by hunters who shoot at the pictographs.

These activities will eventually destroy many of these nationally significant rock-shelter sites and their pictographs.

Overgrazing may be increasing erosion runoff and disturbance of sites located on the surface of tablelands above the cliffs.

CURRENT PRESERVATION/PROTECTION METHODS

On Amistad Recreation Area lands, NPS and other federal regulations prohibit collection of artifacts or their destruction. On private lands, the Antiquities Code of Texas (Title 9, Chapter 191) prohibits archeological "pot hunting."

The state of Texas has initiated some preservation efforts. Seminole Canyon State Historical Park was established to protect and interpret the archeological resources in this canyon. An NPS permit to the state closes part of Seminole Canyon to protect archeological sites located on adjacent Texas lands. One site, Panther Cave, is jointly owned by the state of Texas and the federal government. It has been fenced, with monies from private donations, to protect it. The Park Service and the state of Texas have a cooperative agreement to provide joint protection and surveillance of the Seminole Canyon resources.

All construction or other ground-disturbing activities are preceded by an archeological survey to determine whether significant resources are present. If they are and if impacts cannot be avoided through project relocation or redesign, appropriate investigation and/or salvage is completed prior to construction.

COMPLIANCE REQUIREMENTS

The National Park Service is the leading federal agency with the primary mission and goal to preserve and protect America's historical and cultural resources. Under the National Historic Preservation Act, the National Environmental Policy Act, and their implementing regulations, the Park Service is mandated to consider the impacts of its proposals. The area of concern includes federal lands within the recreation area as well as adjacent nonfederal lands that may be affected by actions of the Service or the visitors attracted to Amistad Recreation Area. The Park Service assumed protection responsibilities for cultural resources under the cooperative agreement between the Park Service and the IBWC (Article II, 5).

NATURAL RESOURCES

Amistad Reservoir is the primary "natural" resource of the recreation area. It stores water from the Rio Grande, Pecos River, and Devils River to form an immense lake of some 65,000 acres (43,250 acres in the recreation area) when at the conservation pool level of 1,117 feet above sea level. The dam was completed in 1969 and the water first reached conservation pool level in 1972. During the 12-year period 1972-1983, the reservoir was at or just above this level about 50 percent of the time. In 1984, the lake dropped below 1,100 feet for the first time since 1972. The highest water level, 1,135.7 feet, was recorded in September 1974 during a flood control event. The estimated 100-year flood level is 1,140 feet, assuming a starting elevation of 1,117 feet. The maximum potential water surface elevation is 1,145 feet, (also the estimated 500-year flood elevation) assuming a starting elevation of 1,117 feet (IBWC).

Water quality in the reservoir is monitored by the Texas Department of Water Resources (TDWR) and the IBWC. Based on available data and personal communications with both agencies, the water quality is very good. There are no appreciable water quality problems, although total dissolved solids sometimes exceed the state standards for the reservoir (TDWR 1982). There are some potential problems on the Rio Grande upstream from Amistad, but to date these have not adversely affected the reservoir. Part of the watershed is in Mexico where environmental laws governing agricultural practices, such as use of certain pesticides, may differ from those in the United States. Forty-two measurements/samples were used to determine ranges and means in the following table.

Table 17: Water Quality Factors, 1978-1981

<u>Parameter</u>	<u>Range</u>	<u>Mean</u>
Dissolved Oxygen (mg/l)	6.5 - 10.4	8.3
Temperature (°F)	49.1 - 81.5	67.7
pH	7.8 - 8.5	8.3
Chlorides (mg/l)	68 - 135	105
Sulfates (mg/l)	52 - 242	199
Total Dissolved Solids (mg/l)	395 - 690	525
Fecal Coliform (#/100 ml)	0 - 2	1

Source: The State of Texas Water Quality Inventory, 6th Ed., Texas Department of Water Resources, Austin, 1982.

The lands within Amistad Recreation Area consist primarily of low hills and valleys in areas in the general vicinity of the dam. Scenic cliffs occur in upstream areas of narrower canyons where tributary rivers have cut down through the limestone. (In such areas steep and rocky slopes make development difficult.) Most of the soils in the recreation area are

formed from this limestone when it weathers. They are shallow, loamy soils that are cobbly and stony, with some rocky limestone exposures on the uplands. There are no prime farmlands, as defined by the U.S. Department of Agriculture, within Amistad Recreation Area.

Air quality in the region is generally good. Wind-blown dust is occasionally a problem, especially during periods of strong winter winds from the north and northwest. Thunderstorms occur during the spring and summer, with storm cells generally originating in the east and moving to the northwest. The proportion of possible sunshine is 80 percent in summer and 53 percent in winter.

The climate is semiarid and continental, with moderate, dry winters and hot summers. Precipitation averages about 16-18 inches per year although wet and dry years are common. The watershed has recently experienced extended drought, which has resulted in significantly lowered water levels in the reservoir.

Amistad Recreation Area is in a transitional zone between the Chihuahuan desert and the south Texas brushlands. Because of the thin soils, limited rainfall, and a long history of grazing use, vegetation on the uplands is sparse. Common plants include catclaw, ocotillo, yucca, cenizo, lechuguilla, blackbrush, creosotebush, sotol, leatherplant, and various cacti. Scattered, low-growing trees such as mesquite, shin oak, live oak, Texas persimmon, and hackberry are found in protected locations. Prior to the introduction of cattle, and later sheep and goats, short grasses were common, but now they are a small percentage of the flora. Along the narrow bands of deep, well-watered alluvium that border the rivers above and below the reservoir, the vegetation consists of thick stands of cane, tall grasses, and dense growths of willow, mesquite, and tamarisk.

There are no known endangered or threatened plant species on lands within Amistad Recreation Area. One proposed for listing, the Texas snow-bell (Styrax texana), may occur, but no plant of this species has been identified here. Several species that are under review for probable listing may also occur, although none have yet been identified within the park boundaries. It should be noted that no comprehensive vegetation survey of the Amistad Recreation Area has been performed.

Mammals commonly found in the region include coyote, whitetail deer, collared peccary, ringtail, raccoon, skunk, jackrabbit, cottontail, and rock squirrel. Various reptiles inhabit the area including the poisonous diamondback and rock rattlesnakes. Common birds include the vulture, raven, quail, mourning dove, white-winged dove, sparrow wren, and various types of water birds, including the great blue heron, and several species of ducks. Principal fish species are bass (largemouth, smallmouth, and striped), channel catfish, crappie, sunfish, and carp.

There are no known endangered or threatened animals inhabiting the park. Bald eagles are occasionally observed during the winter feeding on fish. They do not nest in Amistad Recreation Area or remain for long. The peregrine falcon has been sighted while migrating, but no known

nesting has occurred. There are several reptiles inhabiting the park that are protected by the state of Texas, but none are on the federal list.

The Texas Parks and Wildlife Department has an agreement with the Park Service for cooperative management of wildlife resources. Hunting, under state and federal laws and regulations, as supplemented by NPS regulations, is permitted in Amistad Recreation Area. Hunters are required to obtain a free NPS hunting permit. Hunting is allowed for deer, javelina, and turkey (by long bow only). Dove, quail, and waterfowl may also be hunted (with shotguns only). Hunting may occur only in five separate NPS-designated hunt areas or on water immediately adjacent to the hunt areas in the case of waterfowl. These hunt areas are at Diablo West, south of Evans Creek, San Pedro Flats, Long Point, and San Pedro. Trapping is not permitted. No stocking of hunted animals is done. Of the 57,292 acres in Amistad Recreation Area (land and water), 1,700 acres are included in the hunt areas. Hunt areas range in size from 120 to 500 acres. During the 1983-84 hunting season there were 1,324 hunting permits issued. The known harvest included 22 deer, 59 doves, 20 quails, 13 ducks, and 2 javelinass. Open seasons vary by species but are generally in the fall and winter.

Fishing is permitted in Amistad Recreation Area under state laws and regulations. The principal sport and eating fish are bass, channel catfish, yellow catfish, crappie, sunfish, and carp. The season is open yearlong, but is best in spring and early summer. Success ratios are unknown. During 1981 the state surveyed Amistad Reservoir for fish populations. Excellent survival of young-of-the-year bass and above normal forage populations reflected the increased fertility, abundance of aquatic vegetation, and submerged cover resulting from rising water (Texas Parks and Wildlife Department 1982). Since that time water levels have receded and fish populations may have suffered. The state intends to conduct another survey in 1986 (TPWD personal communication). Fish have been stocked in the reservoir annually over the last 10 years (except 1981) by the TPWD. During the past 5 years this has included various species of bass as follows:

<u>Year</u>	<u>Fish Stocked</u>
1979	750,000
1981	0
1982	127,000
1983	200,500
1984	649,000

No stocking is scheduled for 1985 as the state now intends to stock about 600,000 striped bass every other year (TPWD, personal communication). The state also requests that the IBWC stabilize the water level in the reservoir during the prime April spawning season. IBWC complies with this request to the extent possible. Commercial fishing occurs on the Mexican side of the reservoir. Fishing on the U.S. side is limited to sport angling.

LANDOWNERSHIP

Amistad Recreation Area lands were acquired by the IBWC in compliance with the 1944 Water Treaty in anticipation of creating the reservoir. The land for the dam and permanent operating structures was acquired in fee simple. For most other lands in the reservoir basin area below the 1,144.3-foot contour, for certain recreation development sites above that contour plus an additional site below the dam, and for all islands that will be formed, the estate is "fee simple, save and except oil and gas." This title reserves the oil and gas rights to the former owner but restricts exploiting them except by directional drilling from outside the federal area.

In its earliest acquisitions in areas near the dam and along the Devils River, the commission was following a policy calling for acquiring fee title on only those lands in the basin below the 1,117-foot contour, with a flowage easement on the remainder of the lands up to the 1,144.3-foot contour. The latter interest is described as a

perpetual easement to overflow, flood, and submerge lands intermittently between elevation 1117 and 1144.3 and for ingress, egress, and regress for purpose of operation and maintenance of the Amistad Dam and Reservoir; provided that no structure for human habitation shall be constructed or maintained on said lands; and provided further that no other structures shall hereafter be constructed or maintained on said lands except as may be approved in writing by the United States Commissioner, International Boundary and Water Commission. . .

Other than this interest, the government has no right to use or develop such lands. Throughout the areas covered by this easement, the commission also acquired the overlapping negative easement pertaining to oil and gas, but only for the zone between the 1,117- and 1,140-foot contours.

There remain some islands and mainland strips between 1,117 and 1,144.3 feet in elevation on which the government lacks fee title but has flowage easements, as well as some islands above 1,144.3 feet on which there is no acquired interest. The mainland strips are in three places: Rough Canyon both north and south along the shoreline, on both sides of the peninsula west of Devils River, and between Spur 406 and Evans Creek.

A 50-foot-wide right-of-way for an access link between US 277 and the proposed Long Point site is owned in fee.

The Amistad project necessitated relocation of US 90 and 277 and realigning the Southern Pacific Railroad, segments of which cross Amistad Recreation Area near the dam. The commission acquired the new rights-of-way and retained fee title to the portions within Amistad Recreation Area. No relocation was required where US 90 and the railroad cross the Pecos River, and there the commission acquired only a flowage easement within the preexisting rights-of-way.

REGIONAL LAND USE

ADJACENT USES

Amistad Recreation Area extends southward within Amistad Reservoir to the international boundary, which is marked by buoys a mile or so apart. Beyond, Mexican laws prevail. The American part of Amistad Dam and adjacent lands are administered by the IBWC.

Below the dam, the recreation area extends along the Rio Grande floodplain, on the south following the river shore and on the north adjoining private land. Illegal crossings of the international border occur in this Lower Rio Grande area during periods of lesser releases from the dam.

At Seminole Canyon, Amistad Recreation Area adjoins Texas Department of Parks and Wildlife lands at Seminole Canyon State Historical Park.

Elsewhere around Amistad Recreation Area, the meandering 1,144.3-foot contour boundary separates federal and private lands. In upstream areas, sheep and goat ranches average 10,000 acres and some owners pay for permits to graze their animals on the federal land--a solution adopted in lieu of fencing the circuitous property line. Where the government owns only a flowage easement grazing permits are not required.

At several places along the boundary in mid- and lower-reservoir areas, private parties have subdivided lands and/or individual owners have established residences or mobile homes. Present centers for this activity are Box Canyon, Amistad Acres, between US 90 bridge and San Pedro, and on the east side of Devils River north of Rough Canyon. Plans were once formulated for a private development at Cow Creek, and a major expansion is contemplated adjacent to the government's San Pedro site. Those who locate around Amistad Recreation Area want convenient boat access to the reservoir, but this is only permitted at designated sites. Mooring near their homesites is another wish of many, but it is only permitted on a daily basis. Likewise, some wish to improve foot access from their 1,144.3-foot property lines to the water, but this has not been permitted. The basis for these policies has been that Amistad Recreation Area is public land and should be retained for general use, and that private developments would be of inconsistent architecture and uncertain maintenance. Only when a public need would also be met has private development been allowed, and then only on a limited-permit basis.

Seeing the lake from homes is another aim of developers and individual owners, but the reverse is also true: The homes are just as visible from the lake. It is easy to imagine that in time most views from within Amistad Recreation Area will include homes or other developments.

Supervision of development on nearby private lands is controlled by Val Verde County under The Land Use Order for the Amistad Zoned Area, (1975). This order is aimed at ensuring a given quality of area layout

and individual construction, and it also addresses standards for sewage disposal. To date, the adequacy of these zoning controls has not been reviewed with respect to the reservoir itself--specifically, determining which of the areas adjacent to the lake are more suited for development, which should be left in a pastoral condition, and what effect sewage disposal will have on the reservoir's water.

REGIONAL RECREATIONAL ACTIVITIES

Amistad Recreation Area is the major outdoor recreation resource in this region. The city parks of Del Rio, some of which are associated with large groundwater springs, include swimming and picnicking. There are historical tours of old town buildings, a horse-racing track, golf course, and shopping and dining in adjacent Mexico. Seminole Canyon State Historical Park provides camping, picnicking, museum exhibits, hiking, and interpretive tours. Langtry has the Judge Roy Bean Museum, with historical dioramas, visitor center, and restored historic courtroom/saloon provided by the Texas Department of Highways and Public Transportation.

Hunters purchase permits to use private lands or use designated areas within Amistad Recreation Area, as there are no other large public land holdings in the vicinity.

Other reservoirs providing recreation in this part of Texas are few. Only Falcon Reservoir has recreation activities that are similar to those of Amistad Recreation Area. Falcon is 240 miles southeast, down the Rio Grande, and normally has 87,210 acres of water. Visitors use Falcon Reservoir for fishing, picnicking, camping, swimming, hiking, and other water sports. It includes a state park and is readily accessible from many private holdings around the shores.

Other popular tourist attractions in southwest Texas are: Kerrville (163 miles from Amistad Recreation Area) in the "heart of the hills"; San Antonio (165 miles), with the Alamo and other missions and the River Walk; and Corpus Christi (292 miles) and Brownsville (392 miles), where there are beaches and ocean.

The Park Service operates several units in Texas, all distant from Amistad Recreation Area: Big Bend and Guadalupe Mountains national parks, Fort Davis and Lyndon B. Johnson national historic sites, San Antonio Missions National Historical Park, Lake Meredith Recreation Area, Alibates Flint Quarries National Monument, Chamizal National Memorial, Padre Island National Seashore, Big Thicket National Preserve, and Rio Grande Wild and Scenic River.

The 1985 "Draft Texas Outdoor Recreation Plan" (TORP) indicates that recreation activity in the Amistad region will increase due to a projected growth rate in population of 39 percent from 1980-1990. (It defines the Amistad region as the counties of Val Verde, Edwards, Real, Kinney, Uvalde, Maverick, Zavala, Dimmit, and La Salle.) The most popular

activities for residents are predicted to be swimming, picnicking, softball, and jogging/running. Walking/hiking, freshwater swimming, fishing, and playground use are each projected to have over 46 percent of the population participating by 1990. Recommendations for Amistad Recreation Area are roadside exhibits, mobile interpretation units, a 65-mile trail to connect developed areas along the shoreline (most of which would of topographic necessity be outside Amistad Recreation Area), plus a 30-mile trail adjacent to Amistad Recreation Area along the abandoned Southern Transcontinental Railroad grade between Langtry and the town of Comstock. The TORP also proposed that 64 miles of the Devils River above Amistad Reservoir and 61 miles of the Pecos River above the lake be included in a natural rivers system.

Responsibilities suggested in the TORP for levels of government were as follows:

commercial:	golf courses, horseback riding trails, motorcycling trails, campsites, swimming pools
local:	courts and fields, playgrounds, picnic areas
state:	walking/hiking trails, campsites, multiuse courts and fields, coordinate state and federal programs
federal:	bicycle trails, boat ramps, fishing structures

Additional facilities needed in the planning region by 1990 were projected for several categories, including these:

boat ramps	27 lanes	
freshwater for boating, fishing, skiing	0	
camping	402 sites	
freshwater fishing - pier, barge, or marina	1,106 linear yards	
horseback riding trails	3 miles	
picnicking	81 tables	
freshwater swimming	0	
walking/hiking trails	8 miles	

REGIONAL SOCIOECONOMIC CHARACTERISTICS

Amistad Recreation Area lies in a sparsely populated region of southern Texas, in Val Verde County. This region of Val Verde County and the five counties touching it contains 51,555 people (1980 census). Val Verde County's population is 35,910. Within Val Verde County, Del Rio's population is 30,034 residents, which is over 80 percent of the county and about 60 percent of the six-county region population. The balance of the population lives mainly in scattered towns of a few tens of people and in a half-dozen small towns of a few thousand.

Communities in the vicinity and in the general visitor region include the following (listed in increasing distance from Amistad Recreation Area):

Table 18: Area Communities and Distance from Amistad Recreation Area

	<u>Population (1980)</u>	<u>Distance from Amistad (in miles)</u>	<u>Closest Developed Area</u>
Langtry	145	1	Pecos River
Del Rio	30,034	8	Diablo East
Comstock	375	12	Pecos River
Cuidad Acuña (Mexico)	45,000	12	Diablo East
Laughlin AFB	*	20	Air Force Marina and Diablo East
Bracketville	1,676	42	Diablo East
Rocksprings	1,317	66	Rough Canyon
Sanderson	1,500	74	Pecos River
Sonora	3,856	80	Rough Canyon
Ozona	3,500	97	Pecos River
San Angelo	73,240	144	Rough Canyon
San Antonio	785,410	163	Diablo East
Midland-Odessa	160,552	215	Pecos River
		235	Rough Canyon

*Laughlin Air Force Base, 8 miles east of Del Rio, employs about 2,500 military and 615 civilian persons.

Although Mexico's Ciudad Acuña is immediately across the Rio Grande from Del Rio, use of the reservoir from there is minor.

Ethnic composition of a contiguous nine-county region, which includes Amistad Recreation Area, (Draft TORP, 1985) is 71 percent Hispanic, 28 percent Anglo, and 1 percent Black (1980 census). Del Rio's news media includes a Spanish-language TV station and weekly newspaper; the daily newspaper and all other TV stations use English.

The Del Rio Chamber of Commerce projects the population of Val Verde County and Del Rio, respectively, to be 43,800 and 34,461 by 1990. The City's Comprehensive Plan Advisory Committee Final Report (1983) projected that older age groups (45 up) will grow more rapidly than younger ones for at least the next 25 years. At least two factors contribute to this: snow-bird vacationers from northern states (often in older age groups) who decide to settle here rather than continue their yearly migrations, and military persons who retire near Laughlin Air Force Base to benefit from the services it provides them.

The population of Del Rio has shown substantial growth in its history. Del Rio has long been an important staging point along the Southern Transcontinental horse, wagon, stage, train, truck, and auto routes. Its favorable position on this supply/travel line is enhanced by the copious groundwater flow from its San Felipe Springs. It is also a location for import/export to Mexico. Four U.S. highways converge to cross the border at this location, the first effective crossing for 250 miles when coming from the west. There were 1,282,507 automobile crossings on the international bridge between Del Rio and Acuna in 1982, as reported by the Del Rio Chamber of Commerce.

Construction of Amistad Dam boosted the economy for a number of years in the 1960s. In the 1970s recreational use of the reservoir grew to 1.2 million visits annually, many from outside the area. Private tourist businesses have sprung up around the reservoir and in Del Rio. The Park Service employs 44 persons and contracts with and purchases supplies from local firms. There are two concessioners and 15 fishing guides in the recreation area. Del Rio has an active chamber of commerce, which is interested in attracting more convention and general tourist business.

ENVIRONMENTAL CONSEQUENCES OF THE PROPOSED ACTION AND ALTERNATIVES

THE PROPOSAL AND ALTERNATIVES FOR VISITOR USE, DEVELOPMENT, AND CULTURAL RESOURCE MANAGEMENT

THE PROPOSAL

This GMP for Amistad Recreation Area proposes that the National Park Service

maintain present capacity at existing major facilities, with some upgrading

consolidate several sites, mainly from below the maximum water level, to a single site above it which has better resource characteristics

continue minor sites around the reservoir to give access to sections not otherwise served

encourage the private sector plus local and state governments to provide new facilities at Cow Creek and assist with programs and development throughout the recreation area

improve many hazardous areas

Overall, an expansion in visitor use capacity would result, and there would be better dispersion of use into more scenic areas. A wide variety of lake levels would effectively be served by the proposal.

The Park Service would complete facilities at Pecos River, Diablo East, and Rough Canyon. Wind-protected launch ramps would be provided near the Air Force Marina and Diablo West, and the Lower Rio Grande area below the dam would be reopened for day use. Several minor overnight sites that are below the maximum water level would be closed and relocated to San Pedro, above the maximum water level. Cultural resources would be prioritized for preservation/protection funding requests.

A major new public recreational facility funded by the private sector is proposed at Cow Creek, and the private sector would be encouraged to fund NPS facilities (launch ramps, walks) at points where public access is needed.

This is the "minimum requirements" alternative.

A description and map of this GMP proposal is in "The Proposal" section of this document. It is also compared with the other alternatives in table 19 later in this section.

ALTERNATIVE 1: NO ACTION

Facilities and management of the park would continue as described in the "Affected Environment" section. Development under this alternative would

continue to serve present visitor use, functioning best when the water is near the 1,117-foot level. There would be no new development. During lower water-level periods, many smaller access sites would be dry and use would concentrate at major sites where launch ramps extend deeper into the lake. Cultural resources would be managed as at present potentially resulting in their loss. (See Existing Conditions map in the "Purpose and Need" section of this document.)

ALTERNATIVE 2: COMPLETING EXISTING DEVELOPMENTS

Development under this alternative would serve a minor increase in visitor use, with some upgrading. The developments in this alternative would function best when the water is near the 1,117-foot level (see Alternative 2 map). During lower water-level periods, many smaller access sites would be dry and use would concentrate at major sites where launch ramps extend deeper into the lake. The Park Service would complete facilities at Pecos River, Diablo East, and Rough Canyon. The Lower Rio Grande area below the dam would be reopened for day use. Minor overnight sites that are within the reservoir would be continued. Cultural resources would be managed as in the proposal except that camping would be prohibited in all archeological areas.

ALTERNATIVE 3: CONSOLIDATING DEVELOPMENTS

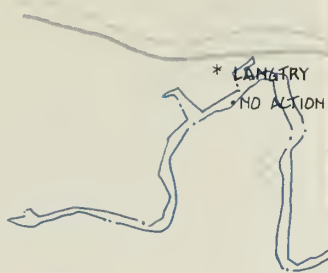
This alternative would result in a decrease in visitor capacity and minor overnight sites below the maximum water level would be relocated to areas with better resource characteristics that would serve a wider range of water levels (see Alternative 3 map). Relocating would remove overnight facilities from Evans Creek, Rock Quarry, Spur 406, Rockhouse, Spur 277 North, Spur 277 South, San Pedro Flats, Blackbrush Point, Spur 454, and Governors Landing.

The Park Service would complete facilities at Pecos River, Diablo East, and Rough Canyon. The Lower Rio Grande area below the dam would be reopened for day use and a major new facility for overnight use would be provided at San Pedro.

Cultural resource management would be as in the proposal except that camping would be prohibited in all archeological areas.

ALTERNATIVE 4: EXPANSION

Development under this alternative would serve a significant increase in use by expanding existing sites below the maximum water level and adding new ones above; new sites would be ones having improved resource characteristics and serving a wider range of water levels (see Alternative 4 map). Major new use areas would be provided at Long Point and San Pedro. The Park Service would encourage the private sector and local and state governments to provide new facilities at Cow

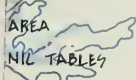


ROCKHOUSE

- STABILIZE
- BUILD PICNIC SHELTER

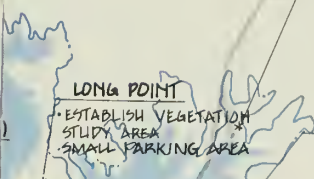
ROUGH CANYON

- UPGRADE EXISTING INTERP. DISPLAYS : INFO.
- MAKE CONTACT STATION SELF-SERVICE
- EXPAND PARKING
- EXPAND : UPGRADE MARINA PICNIC AREA
- PROVIDE FLOATING BREAKWATER (NPS STANDARD)



SPUR 277 NORTH

- UPGRADE EXISTING PICNICKING : CAMPING;
- DELINEATE SITES
- UPGRADE SWIM BEACH
- PAVE ROADS



SPUR 277 SOUTH

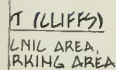
- NO ACTION

SAN PEDRO

- NO ACTION

LEGEND

- INTERNATIONAL B
- RECREATION AREA
- ROADS
- +++++ RAILROADS



SAN PEDRO FLATS

- REDESIGN CAMPGROUND
- PAVE ROAD

SPUR 454

- NO ACTION

NPS HEADQUARTERS

- NO ACTION

BLACKBUSH POINT

- PAVE ROADS IN PICNIC AREA
- ENLARGE PARKING
- EXTEND LIGHTS TO PICNIC AREA
- UPGRADE NATURE TRAIL

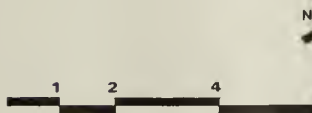
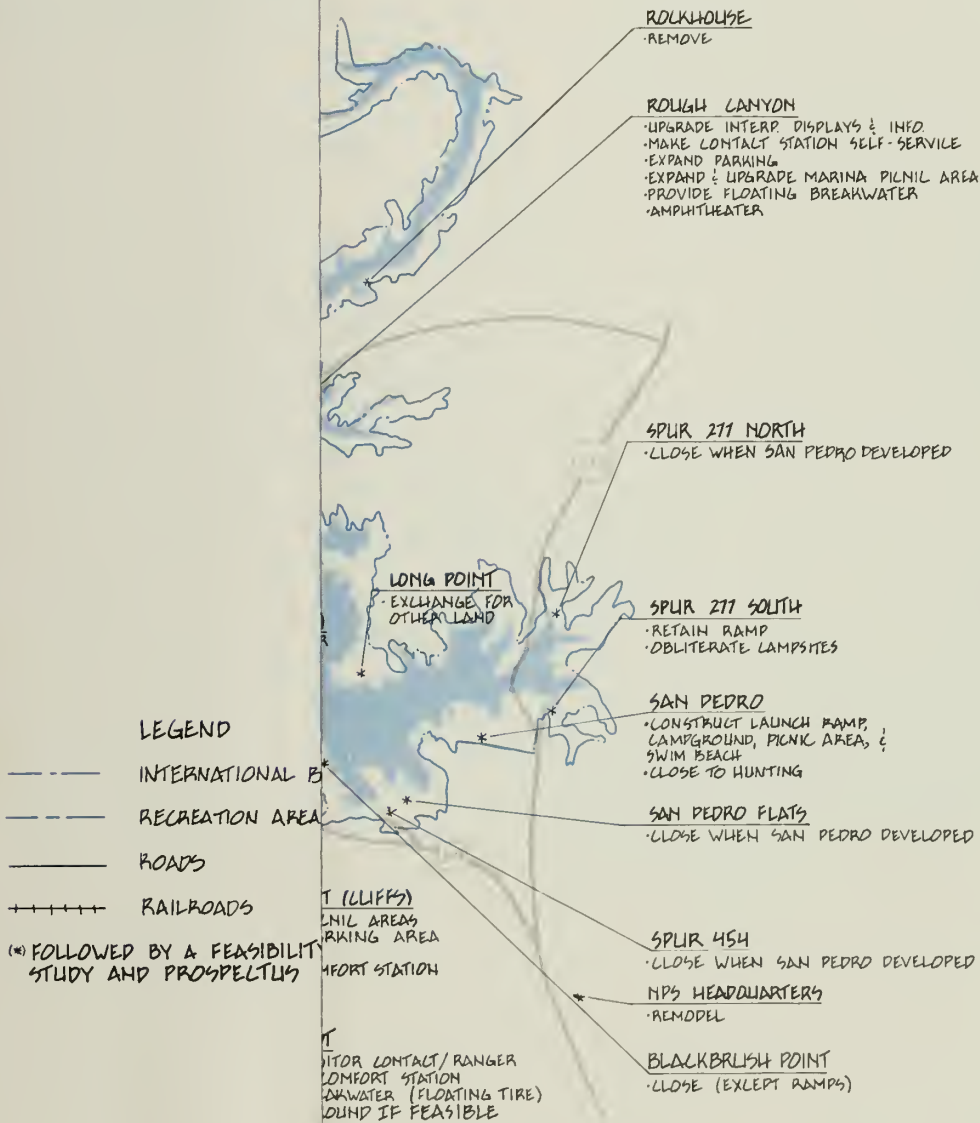
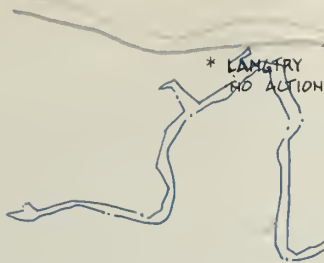


ALTERNATIVE 2 GENERAL DEVELOPMENT STAD RECREATION AREA

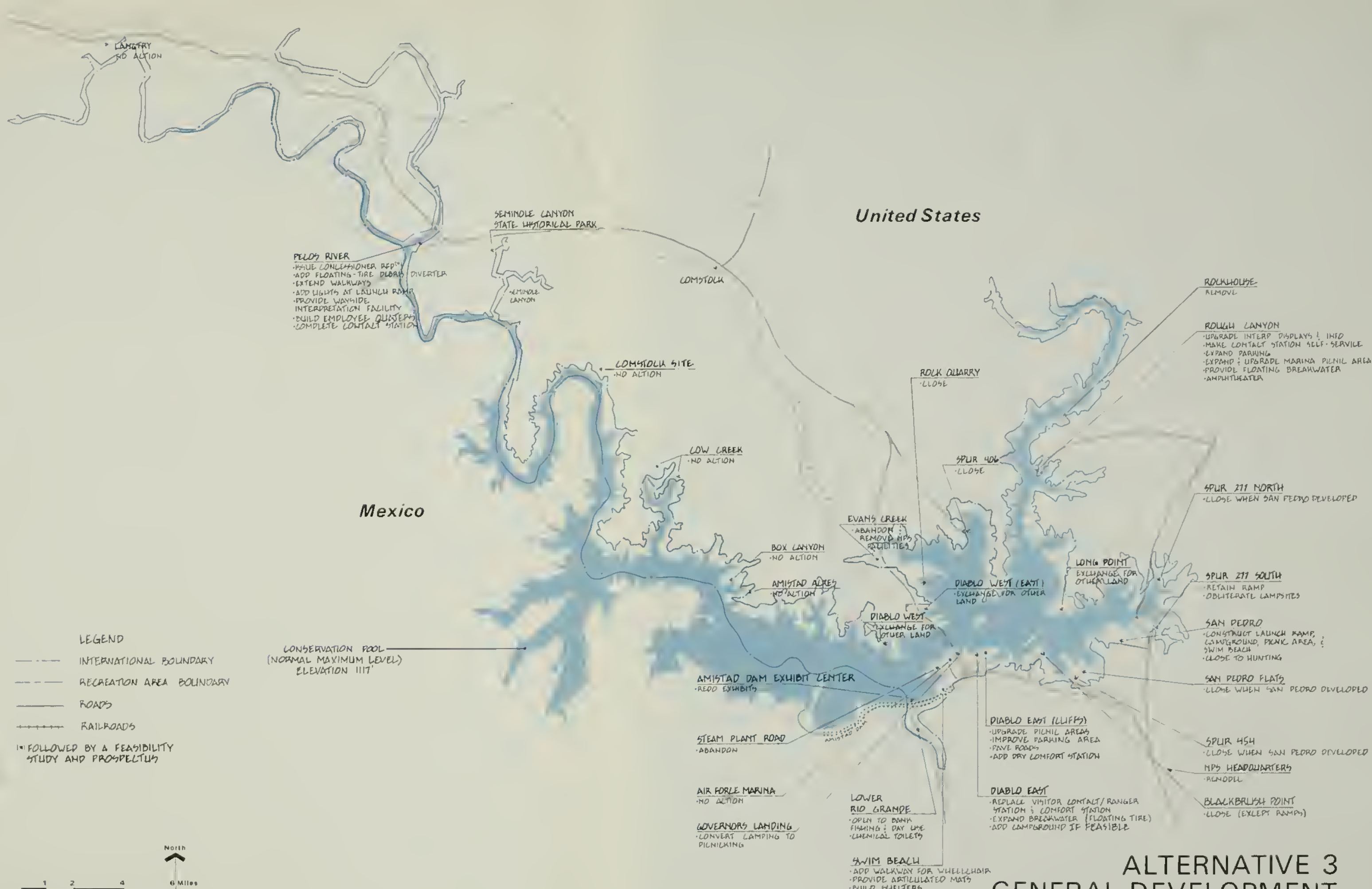


ALTERNATIVE 2 GENERAL DEVELOPMENT AMISTAD RECREATION AREA

UNITED STATES DEPARTMENT OF THE INTERIOR / NATIONAL PARK SERVICE



ALTERNATIVE 3 GENERAL DEVELOPMENT TAD RECREATION AREA



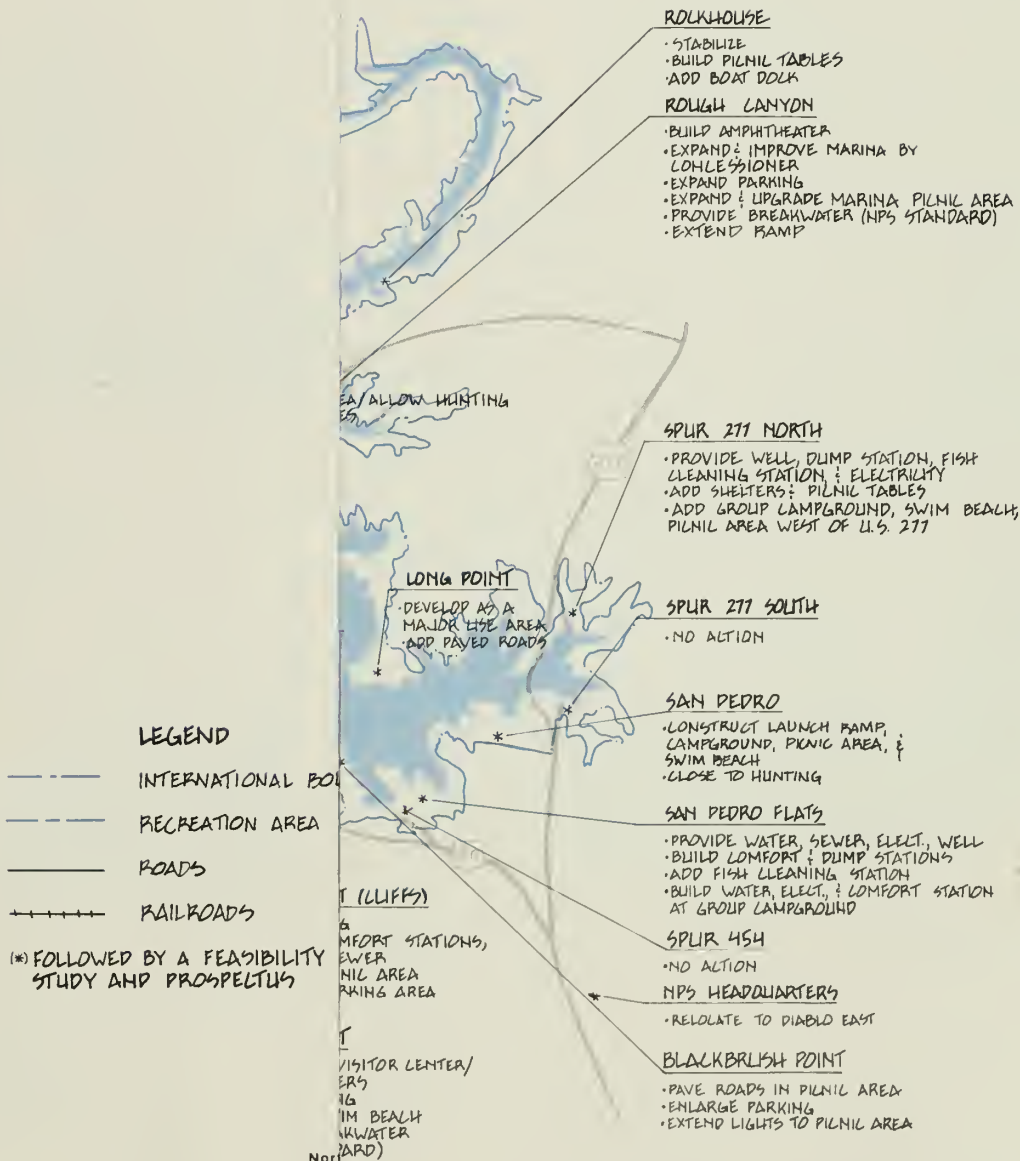
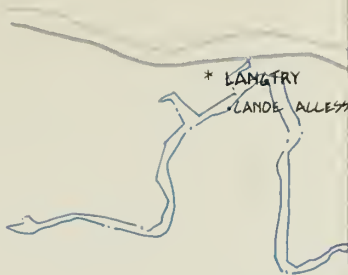
ALTERNATIVE 3 GENERAL DEVELOPMENT AMISTAD RECREATION AREA

UNITED STATES DEPARTMENT OF THE INTERIOR / NATIONAL PARK SERVICE

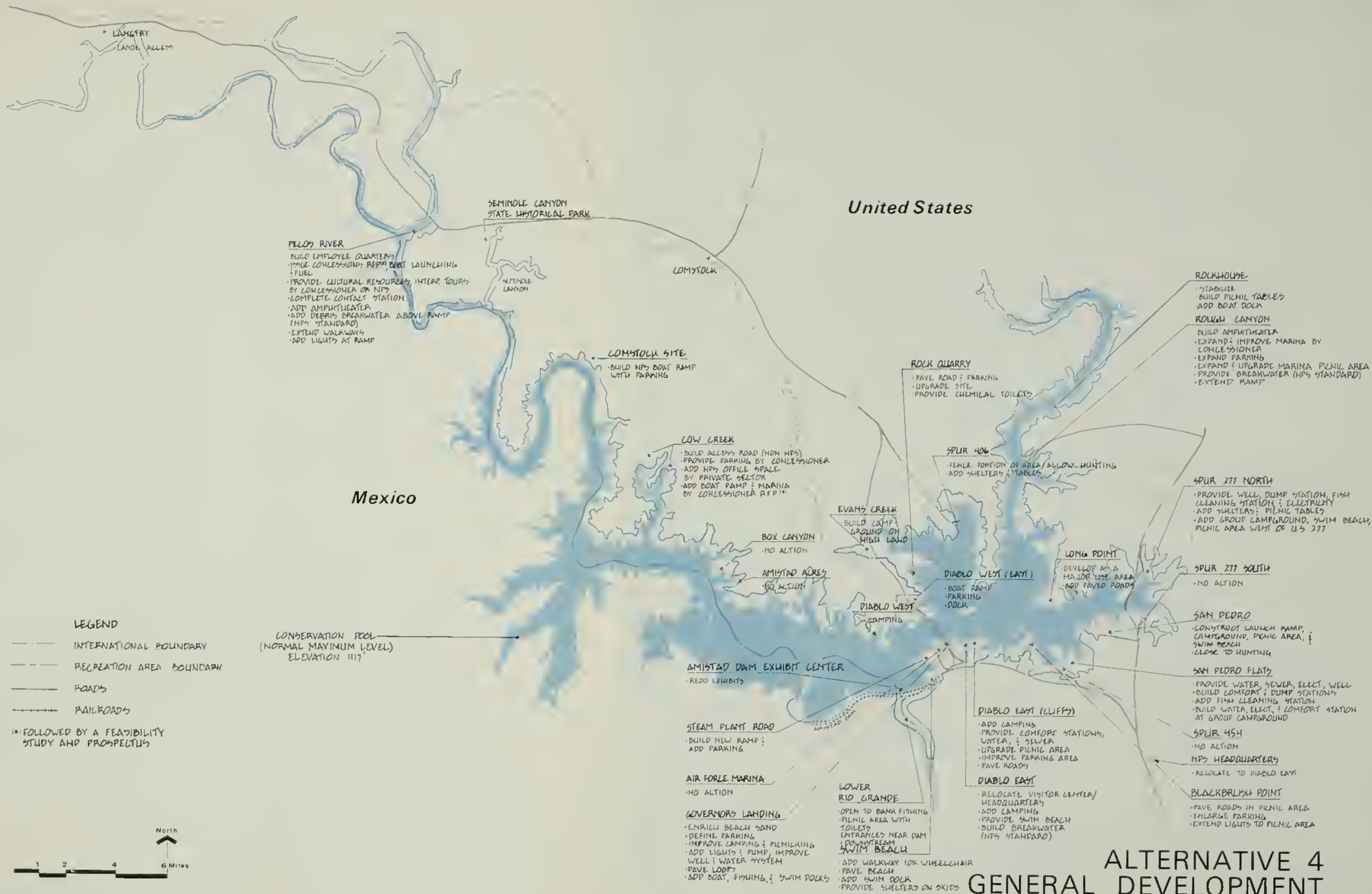
Creek and assist with programs and developments throughout Amistad Recreation Area.

The Park Service would complete facilities at Pecos River, Diablo East, and Rough Canyon. The Lower Rio Grande area below the dam would be reopened for day use. All cultural resources eligible for listing on the National Register of Historic Places would be preserved without a prioritized list. Camping would be prohibited in archeological areas. Two cultural resource professionals with backgrounds in archeology would be added to the staff.

Each of the development alternatives, along with the proposal, is presented in the following table to facilitate comparison. Also included are tables for comparison of the proposal and the alternatives in terms of staffing needs, equipment needs, and capacity levels.



ALTERNATIVE 4 GENERAL DEVELOPMENT STAD RECREATION AREA



ALTERNATIVE 4 GENERAL DEVELOPMENT AMISTAD RECREATION AREA

UNITED STATES DEPARTMENT OF THE INTERIOR / NATIONAL PARK SERVICE

Table 19: Elements of Proposal and Alternatives with NPS Cost

Area/Subject	Proposal	Alternative 1	Alternative 2	Alternative 3	Alternative 4
Langtry	No action	No action	No action	No action	Canoe access (\$75,000)
Pecos River	Wayside interpretation facility (\$5,000)	No action	Wayside interpretation facility (\$5,000)	Same as proposal (\$263,000)	Lights at ramp (\$2,000)
	Two lights at ramp (\$2,000)		Two lights at ramp (\$2,000)		Extend walkways to low water (\$1,000)
	Extend walkways to low water (\$1,000)		Extend walkways to water (\$1,000)		Debris breakwater above ramp (\$750,000)
	Floating-tire debris diverter above ramp (\$50,000)		Standard debris breakwater above ramp (\$750,000)		Duplex employee quarters (\$100,000)
Comstock Site	Duplex employee quarters (\$100,000)				Concession RFP, boat launching/fuel
	Concessions RFP, boat launching/fuel				Cultural resources interpretive tours (by concessioner or NPS)
	Cultural resources interpretive tours (by concessioner)				Contact station (\$105,000)
	Contact station (\$105,000)				Amphitheater (\$50,000)
Cow Creek	No action	No action	No action	No action	NPS boat ramp (\$35,000) 20 parking spaces (\$30,000)
	Access road, parking, NPS office space to be developed by private sector; also boat ramp and marina by concessions RFP	No action	No action	No action	Same as proposal
Amistad Acres and Box Canyon	No action	No action	No action	No action	No action
Diablo West (West)	No action	No action	No action	Exchange for other land	Camping (\$30,000)
Diablo West (East)	Build boat ramp (\$32,000) Parking (\$40,000) Dock (\$12,000)	No action	No action	Exchange for other land	Boat ramp (\$32,000) Parking (\$40,000) Dock (\$12,000)
	No action	No action	Grade road (\$28,000) 20 parking spaces (\$30,000)	Close	Pave road (\$400,000) Pave parking (\$30,000)
Rock Quarry			Upgrade site (\$2,000)		Upgrade site (\$2,000)
			2 Chemical toilets (\$8,000)		2 Chemical toilets (\$8,000)

Area/Subject	Proposal	Alternative 1	Alternative 2	Alternative 3	Alternative 4
Evans Creek	Close site and remove NPS facilities, trash cans, fence walkover (\$1,000)	No action	No action	Abandon and remove NPS facilities, trash cans, fence walkover (\$1,000)	Camping on high ground (\$20,000)
Spur 406	No action	No action	Fence portion, allow hunting, add shelters and tables (\$60,000)	Close (\$3,000)	Fence portion, allow hunting, add shelters and tables (\$60,000)
Rockhouse	Stabilize picnic tables (\$3,000) Boat dock (\$12,000) (by private sector or NPS)	No action	Stabilize Picnic shelter (\$3,000)	Remove (\$10,000)	Same as proposal (\$25,000)
Rough Canyon	Upgrade interpretive displays/information (\$25,000)	No action	Upgrade interpretive displays/information (\$25,000)	Same as proposal (\$232,000)	Expand/improve marina by concessioner
	Make contact station self-service (\$2,000)		Make contact station self-service (\$2,000)		Extend high-water ramp near marina (\$45,000)
	Expand parking (\$90,000)		Expand 75 parking spaces (\$90,000)		Expand 75 parking spaces (\$90,000)
Long Point	Expand and upgrade marina picnic area (\$15,000)		Expand and upgrade marina picnic area (\$15,000)		Expand by 6 tables/shelters and upgrade marina picnic area (\$15,000)
	Provide floating-tire breakwater at high-water ramp (\$50,000)		Provide standard floating breakwater at low-water ramp (\$750,000)		Provide floating breakwater at low-water ramp (\$750,000)
	No action	No action	Establish vegetation study area	Exchange for other land	Amphitheater (\$50,000)
Spur 217 North	Close when San Pedro developed (\$5,000)	No action	Same as proposal (\$110,000)	Same as proposal (\$5,000)	Add paved road (\$1,500,000)
			Add gravel road (\$250,000) and small parking area (\$15,000)		Develop major use site (\$200,000)
					Well, dump station, fish cleaning station and electricity (\$45,000)
					Add shelters and picnic tables (\$30,000)
					Add on northwest side of highway: group campground, swim beach, picnic area (\$40,000)
					Discontinue nature trail

Area/Subject	Proposal	Alternative 1	Alternative 2	Alternative 3	Alternative 4
Spur 277 South	Close when San Pedro developed	No action	No action	Retain ramp Obliterate camp-sites (\$1,000)	No action
	Obliterate campsites (\$1,000)				
San Pedro	Launch ramp (\$35,000) 75 parking spaces (\$96,000) 20 campsites (individual and group) (\$18,000) 15 picnicking sites (\$9,000); swim beach (\$20,000)	No action	No action	Same as proposal (\$443,000)	Same as proposal (\$443,000)
	Fish cleaning station (\$25,000); Dump station (\$40,000)				
	Add road and utilities (\$200,000)				
San Pedro Flats	Close when San Pedro developed (\$5,000)	No action	Redesign primitive campground (\$15,000) Pave road (\$122,000)	Same as proposal (\$5,000)	Water, sewer, electricity, well (\$30,000) Comfort station and dump station (\$75,000) Fish cleaning station (\$25,000) Water, electricity and comfort station at group campground (\$50,000)
Spur 454	Close when San Pedro developed (\$5,000)	No action	No action	Same as proposal (\$5,000)	No action
Blackbrush Point	Pave roads in picnic area (\$10,000) Enlarge parking by 10 spaces (\$15,000)	No action	Pave roads in picnic area (\$10,000) Enlarge parking by 10 spaces (\$15,000) Extend lights to picnic area (\$2,000)	Close site (except ramp) (\$5,000)	Same as alternative 2 (\$27,000)
Diablo East	Replace visitor contact/ranger station (\$60,000)	No action	Replace visitor contact/ranger station (\$60,000)	Same as proposal (\$135,000)	Relocate visitor contact to new visitor center for recreation area (\$935,000)
	Permanent comfort station (\$15,000)		Permanent comfort station (\$75,000)	Explore site to determine characteristics and feasibility for camping (\$100,000 if feasible)	Camping Add swim beach (\$35,000)
	Strengthen floating-tire breakwater in process (\$0)		Add standard break-water (\$750,000)	Complete floating-tire breakwater in process (0)	Add standard breakwater (\$750,000)

Area/Subject	Proposal	Alternative 1	Alternative 2	Alternative 3	Alternative 4
Diablo East (Cliffs)	Upgrade picnic area (\$30,000) Improve parking area (\$30,000) Pave roads (\$85,000), Dry comfort station (\$10,000)	No action	Upgrade picnic area (\$30,000), Improve parking area (\$30,000) Pave roads (\$85,000) Close at night	Same as proposal (\$155,000)	Add camping, add comfort stations, water, sewer. (\$50,000) Upgrade picnic area (\$30,000) Improve parking area (\$30,000) Pave roads (\$85,000)
*Park Headquarters/ Maintenance	No action	No action	No action	Remodel head- quarters building (\$20,000)	Relocate to new facility at Diablo East (\$851,000)
Governors Landing	Improve swimbeach, define parking, enrich beach sand (\$39,000) Electricity - lights and pump, improve well and water distribution (\$8,000) Pave loops (\$65,000) Improve camping and picnicking area (\$32,000)	No action	Define parking, enrich beach sand (\$39,000) Electricity - lights and pump, improve well and water distribution (\$8,000) Pave loops (\$65,000) Improve camping and picnicking area (\$32,000)	Convert camping to picnicking (\$20,000)	Same as alternative 2 (\$180,000)
Air Force Marina	No action	No action	No action	No action	No action
Steam Plant Road	Build ramp (\$38,000) Add parking on west side of point (\$15,000)	No action	Pave road and 15 parking spaces (\$35,000) Pave ramp (\$15,000)	Abandon	Same as proposal (\$53,000)
Swim Beach Area	Walkway to water for wheelchairs and others (\$10,000) Add sand (\$40,000)	No action	Walkway to water for wheelchairs and others (\$10,000) Concrete beach (\$20,000), Add 6 shelters on skids (\$75,000)	Walkway to water for wheelchairs and others (\$10,000) Add articulated mats (\$20,000) Add 6 shelters on skids (\$75,000)	Same as alternative 2 (\$105,000) plus swim dock (\$12,000)
Lower Rio Grande	Open to bank fishing, day use (\$5,000) Chemical toilets (\$10,000) One entrance near dam	No action	Open to bank fishing and picnicking (no facilities) (\$5,000) One entrance near dam	Same as proposal (\$15,000)	Open to bank fishing, picnicking (no facilities) (\$5,000) Develop picnic area with toilets (\$30,000) Two entrances near dam and downstream

*See appendix C for separate analysis of cost/benefits of park headquarters/maintenance facility sites.

Area/Subject	Alternative			
	Proposal	Alternative 1	Alternative 2	Alternative 3
Amistad Dam Exhibit Center	Redo exhibits - add information on recreation area, purpose of project, international theme (NPS/IBWC to share \$50,000 cost = \$25,000)	No action	Redo exhibits as in proposal (\$25,000)	Redo exhibits as in proposal (\$25,000)
	Staff - until Diablo East visitor contact/ranger station is operational		Staff	Make self-service Staff
Land Use and Management	See management zoning map in the "Proposal" section.	Same as proposal except add park development zone at Evans Creek; Cow Creek and Diablo West would not be zoned as park development	Same as proposal except add park development zone at Cow Creek, Diablo West, Rock Quarry, Spur 406, Rockhouse, Spur 277 N, San Pedro Flats, Spur 454, Blackbrush Point, or Steam Plant Road. Diablo West and Long Point would be disposed of and not zoned natural. San Pedro would be zoned for development.	Same as proposal except add development zone at Langtry, Comstock, Diablo West, Evans Creek, Long Point, and San Pedro
	Survey recreation area and evaluate sites; establish priorities for preservation/protection program (costs) cannot be estimated until studies are completed). Add one cultural resource management specialist. Camping may be closed in certain significant archeological areas, which would be identified by the cultural resource management specialist.	No action	Same as proposal except camping in archeological areas would be prohibited.	Survey recreation area and evaluate sites; preserve all National Register sites without a prioritized list. (costs cannot be estimated until studies are completed). Camping closed in archeological areas. Add two cultural resource management specialists to staff.
Net Construction Costs (FY 1985 dollars)	\$1,606,000	0	\$3,705,000	\$1,548,000
Gross Development Costs	\$2,344,760	0	\$5,409,300	\$2,260,080
				\$12,261,080

Notes: Costs are 1985 rough "class C" estimates based on comparable installations rather than site-specific designs. Net construction costs are for construction only; gross amounts would also include project planning, project supervision, and administrative contingencies, an additional 46 percent. Costs of concession facilities are not included.

Table 20: Phasing of Proposed Development

	<u>Net costs*</u>	<u>Gross costs*</u>
FIRST PHASE- Complete development at one major use site and open inaccessible areas to use; correct safety hazards; provide for handicapped swimming access; initiate ramp construction when water is low.		
Complete major use area at Diablo East (and DE-Cliffs)	\$ 290,000	} \$ 570,860
Provide for handicapped swimming at Swim Beach	50,000	
Correct flash-flood hazard at Evans Creek by closing site	1,000	
Open Lower Rio Grande to limited bank use	15,000	
Cooperate with private sector to develop Cow Creek	0	
Install ramp at San Pedro if/when water level permits	35,000	
Subtotal	\$ 391,000	
SECOND PHASE- Complete developments at remaining major existing use sites and redo dam visitor center exhibits for tourists to international border.		
Complete major use area at Rough Canyon	\$ 182,000	} \$ 708,100
Provide for picnicking at Rockhouse adjacent to above (cost if by NPS)	15,000	
Redo exhibits at Amistad Dam visitor center cooperatively with IBWC	25,000	
Complete major use area at Pecos River	263,000	
Subtotal	\$ 485,000	
THIRD PHASE-Relocate facilities in San Pedro area above flood zone.		
Develop major new site	\$ 408,000	} \$ 619,040
Remove facilities and restore sites at Spur 277 (North and South) and San Pedro Flats/Spur 454	16,000	
Subtotal	\$ 424,000	
FOURTH PHASE- Rehabilitate sites and add new launch ramps in central reservoir.		
Improve picnicking and parking at Blackbrush Point	\$ 25,000	} \$ 446,760
Rehabilitate Governors Landing campground, picnic area, and swim beach	144,000	
Construct launch ramp and parking at Steam Plant Road	53,000	
Construct launch ramp and parking at Diablo West (East)	84,000	
Subtotal	\$ 306,000	
Total	\$1,606,000	\$2,344,760

*Costs are 1985 rough "Class C" estimates based on comparable installations rather than site-specific designs. Gross amounts include construction plus a factor of 46 percent for project planning, project supervision, and administrative contingencies. Costs of concessions facilities are not included.

Table 21: Total Staffing Requirements of Proposal and Alternatives,
Permanent and (Temporary)

<u>Function</u>	<u>Proposal</u>	<u>Alternative 1 (No Action - Current Staff)</u>	<u>Alternative 2</u>	<u>Alternative 3</u>	<u>Alternative 4</u>
Area Management	2	3	2	2	3
Administration	4	4	4	3	5
Maintenance	18	19	20	16	27
Resources Protection and Visitor Services					
Division Staff	2	2	2	2	3
Pecos River District	3	2	3	3	5
Diablo East District	5	5	6	4	9
Rough Canyon District	2 (1)	2 (1)	2 (1)	2 (1)	5 (2)
Interpretation	2 (2)	2 (2)	2 (2)	2 (2)	4 (3)
Resource Management	<u>1</u>	<u>0</u>	<u>1</u>	<u>1</u>	<u>2</u>
Total	39(3)	39(3)	42(3)	35(3)	46(5)

Table 22: Additional Equipment Needs for Proposal and Alternatives

<u>Unit</u>	<u>Proposal</u>	<u>Alternative 1</u>	<u>Alternative 2</u>	<u>Alternative 3</u>	<u>Alternative 4</u>
Patrol vehicle	1	0	1	1	2
Boat and trailer	1	0	1	1	2
Pickup	1	0	1	1	2
Dock	1	0	1	1	1

Table 23: Visitor Capacity of Developed Areas,
(based on momentary use of limiting facility at developed site)

<u>Area/Facility</u>	<u>Proposal</u>	<u>Alternative 1</u>	<u>Alternative 2</u>	<u>Alternative 3</u>	<u>Alternative 4</u>
Langtry	0	0	0	0	20
Pecos River	230	230	230	230	230
Comstock Site	0	0	0	0	70
Cow Creek	90	0	0	0	90
Amistad Acres	20	20	20	20	20
Box Canyon	20	20	20	20	20
Diablo West (West)	0	0	0	0	40
Diablo West (East)	140	0	0	0	140
Rock Quarry	70	70	70	0	70
Evans Creek	0	30	30	0	70
Spur 406	30	10	30	0	30
Rockhouse	10	0	10	0	10
Rough Canyon	600	310	600	600	600
Long Point	0	0	40	0	200
Spur 277 North	0	70	100	0	150
Spur 277 South	0	10	10	20	10
San Pedro	240	0	0	240	385
San Pedro Flats/454	0	120	120	0	120
Blackbrush Point	270	230	270	20	270
Diablo East					
launch ramp	340	340	340	340	340
marina	230	230	230	230	230
cliff area	100	100	80	100	100
contact site/visitor center	10	10	10	10	50
Governors Landing	240	240	240	240	240
Air Force Marina	220	220	220	220	220
Swim Beach	180	180	180	180	180
Steam Plant Road	70	20	50	0	70
Lower Rio Grande	30	0	50	30	50
Dam Visitor Center	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>
	3,160	2,480	2,970	2,520	4,045

THE PROPOSAL AND ALTERNATIVES FOR OTHER ISSUES

Alternatives for natural resources management were considered in the recreation area's approved "Resources Management Plan" (NPS 1982), which reflects NPS policies and interagency agreements. The recommended actions in that document are supported in this GMP. No new alternatives surfaced in present planning.

Except for no action, alternatives to the proposal were not developed regarding international cooperation, boundary identification, utility guidelines, and management efficiency.

Alternatives for boat-in camping will be considered during preparation of the backcountry management plan.

The 1968/73 master plan proposed development of sites and preservation of archeological and scenic resources (by land acquisition) to an extent that satisfied criteria for redesignation of Amistad Recreation Area as Amistad National Recreation Area. Subsequently, bills to accomplish this site development and resource preservation plus redesignation were introduced in both the Senate and House of Representatives. These were not enacted. The national recreation area proposal has been dropped in this plan because of this inaction and thus Amistad Recreation Area's establishment remains by means of an NPS/IBWC agreement that gives administration to the National Park Service.

The proposal would allow additional boat and pedestrian accesses provided they were open to the public, under government control, and developed without cost to National Park Service. Alternatives considered are these:

Continue present case-by-case decision-making (no-action alternative).

Restrict future access to present sites.

Follow precedents set in other park areas to develop a national policy.

Allow steps and launch ramps under criteria similar to proposal, but no docks. The Park Service would designate all future ramp sites and build them, allowing no others. Totally private access would be unlimited.

The proposal would present a narrower spectrum of information, orientation, and interpretation themes than at present, emphasizing only those aspects of each that are pertinent to the recreation area. Alternatives considered are these:

Continue program of presenting a wide spectrum of themes (no-action alternative).

Present a broad spectrum of themes, including natural and cultural resources, recreation, and water safety.

Present a narrower spectrum of themes, as in the proposal, but rely totally on Seminole Canyon State Historical Park to present the archeological story.

ENVIRONMENTAL CONSEQUENCES

Presented here are the differing impacts that would be caused by implementing the proposal and alternatives at Amistad Recreation Area. The impacts differ mainly for the major issues of visitor use, development, and cultural resources management. For each of the other issues, there are either no impacts or impacts do not differ among the proposal and alternatives (except for the no-action alternatives, which, however, are also no impact). Impacts for these other issues are also presented below.

IMPACTS ON CULTURAL RESOURCES

Under the proposal, development and visitor use would continue at many sites, generating no new impacts on cultural resources at such sites but continuing current impacts. Cultural resources in the path of construction might be disturbed or destroyed at San Pedro and Cow Creek where new use areas would be built, at Diablo West (East) and Steam Plant Road where new launch ramps would be constructed, and at sites where new public accesses could be built from private lands. Because of required mitigation, these impacts would be primarily those caused by removal of artifacts during salvage operations. Marking the recreation area boundary would help protect archeological sites by clarifying their legal status for potential collectors and enforcement personnel. By stressing the importance of cultural resources and their protection, interpretation would enhance preservation. Impacts by grazing animals would continue, including trampling of artifacts, horizontal displacement, and increased erosion. Certain archeological sites, which would be identified by the cultural resource management specialist, could be closed to camping activity.

Protection and preservation of cultural resources would be enhanced by assessing and prioritizing the needs.

Under the no-action alternative there would be no new impacts, nor any correction of existing resource threats and impacts.

Alternative 2 would result in less potential impact from development on cultural resources than the proposal because all construction would occur in existing developed areas, which have already been surveyed for archeological sites. Impacts from marking the boundary, interpretation, and grazing would be the same as for the proposal. Prohibiting camping in archeological areas would reduce visitor impacts.

Under alternative 3 development and visitor use would continue at several sites, generating no new impacts on cultural resources in those locations. Unavoidable impacts might occur to cultural resources at San Pedro and Diablo East, much as in the proposal, where development would be relocated from other sites. Impacts from marking the boundary, interpretation, prohibition of camping in archeological areas, and grazing would be same as for the proposal.

Alternative 4 would potentially have the greatest impacts on cultural resources because greater development would occur at existing areas and extensive new areas would be disturbed for additional development sites, including Diablo West (East) and Steam Plant Road, where new launch ramps would be built and at San Pedro, Cow Creek, Comstock Site, and Long Point where development would be initiated. Because of required mitigation these impacts would be primarily those caused by disturbance to sites or removal of artifacts during salvage operations much as in the proposal but on a broader scope. However, this alternative would preserve all cultural resources eligible for listing on the National Register rather than just those awarded priority for funding. Impacts from marking the boundary, interpretation, and grazing would be the same as in the proposal. Prohibiting camping in archeological areas would reduce visitor impacts.

IMPACTS ON NATURAL RESOURCES

Under the proposal there would be some temporary noise and air pollution during construction. Paving and upgrading roads and sites would reduce dust and improve air quality.

The replacement of existing structures with permanent, designed structures would reduce visual intrusions. Some water-related facilities in the 100-year floodplain would be improved. However, this would have no effect on floodplain values because the facilities would be designed to withstand flooding and would be closed during flood events. No improvements are proposed in areas of suspected flash-flood hazards, and one area so threatened (Evans Creek) would be closed. Therefore, the threat to life and property would be minimal, and this plan is in compliance with EO 11988, "Floodplain Management."

Redesigning the picnic/camping areas would reduce soil and vegetation disturbance by restricting random circulation and reducing site densities. Some destruction of vegetation and disturbance of soils would occur during improvement; however, these areas would be revegetated. Formerly disturbed areas that would no longer be needed would also be revegetated. Animals would be temporarily disturbed during the rehabilitation program. There would be no effects on endangered plant or animal species or wetlands.

Under the no-action alternative, there would be no new impacts.

Alternative 2 would result in less impact than the proposal on natural resources because all construction would occur in existing developed areas. The hazard to facilities and visitors from flooding would increase.

Alternative 3 would have the same impacts as the proposal at the new San Pedro site. However, additional developed areas would be closed and restored to natural conditions. The hazard to facilities and visitors from flooding would be less than that of the proposal.

Alternative 4 would have the greatest impacts on natural resources because more development would occur at existing areas and extensive new areas would be disturbed for additional development sites. Additional facilities would be located below the 100-year flood level of the reservoir, increasing the hazard to facilities and visitors from flooding to a level greater than that of the proposal.

IMPACTS ON VISITOR USE

Under the proposal visitors would have more convenient access to the reservoir to the extent that the private sector participated in developing potential access points including Cow Creek and other private developments. Closer proximity to the shore for users would occur at the new San Pedro site for a greater range of water levels. Planting of shade trees and general landscaping would become possible at these sites above the maximum water level. Also, the Lower Rio Grande area would again be opened to use. There would be an overall increase in capacity. New launch ramps at Steam Plant Road and Diablo West (East) on the north shore would provide more convenient lake access and also improve safety during windy periods. Traditional-use opportunities would be lost at replaced sites including Spur 277 South and North and San Pedro Flats/Spur 454 as well as Evans Creek. Walkway improvements at Pecos River would improve visitor safety, as would the debris diverter at Pecos River, breakwaters at Diablo East and Rough Canyon, and lights at the Pecos River ramp. Improved information services would be provided. The opportunity to observe features along the discontinued nature trails would be lost. Backcountry campers would be subject to more restrictions. The opportunity to hunt at San Pedro would be lost. Visitor safety would be improved by relocation of four sites outside the 100-year flood zone. Some archeological resources would be in part lost and some saved for visitor enjoyment and appreciation.

Under alternative 1 present visitor experiences would continue. Many significant archeological resources would be lost to visitor enjoyment and appreciation.

In alternative 2 improvements at present visitor use areas would enhance experiences but also make relocation to more suitable areas that would serve a wider range of lake levels unlikely. Visitors would have more convenient access to the reservoir to the extent that the private sector participated in developing potential access points, but the Cow Creek site would not be opened. Also, the Lower Rio Grande would again be opened to use. There would be an increase in capacity from the present but not to the extent of the proposal. Walkway improvements at Pecos River would improve visitor safety, as would the debris diverter at Pecos River, breakwaters at Diablo East and Rough Canyon, and lights at the Pecos River ramp. Information and interpretation services would be the same as for the proposal. Fencing at Spur 406 would eliminate conflicts between animal and human users; opening the area to hunting would conflict with the tranquility and security sought by most nonhunting visitors. Backcountry campers would be subject to more restrictions.

Some archeological resources would be in part lost and some saved for visitor enjoyment and appreciation.

Under alternative 3 more suitable sites would provide improved visitor experiences and would serve a wider range of lake levels. Planting of shade trees and general landscaping would become possible at these sites above the maximum water level in the proposal. Visitors would have more convenient access to the reservoir to the extent that the private sector participated in developing potential access points. The Cow Creek site would not be opened. Also, the Lower Rio Grande would again be opened to use. There would be a reduction in visitor capacity from the present. Some visitors would lose the opportunity to camp at favorite sites, such as Governors Landing, which would be converted from mixed day/overnight use to day use only. Traditional-use opportunities would also be lost at Rock Quarry, Evans Creek, Spur 406, Rockhouse, Spurs 277 North and South, San Pedro Flats/Spur 454, Blackbrush Point (ramp would remain), and Steam Plant Road. Walkway improvements at Pecos River would improve visitor safety, as would the debris diverter at Pecos River, breakwaters at Diablo East and Rough Canyon, and lights at the Pecos River ramp. Information and interpretation services would be same as in the proposal. Visitor safety would be improved more than in the proposal by relocating more use areas to sites outside the reservoir basin. Backcountry campers would be subject to more restrictions. The opportunity to camp in rock-shelters that harbor archeological resources would be lost. The opportunity to hunt at San Pedro would be lost. Archeological resources would be in part lost and in part saved for visitor enjoyment and appreciation.

Alternative 4 improvements at present visitor use areas would enhance experiences, while development of more suitable sites would allow planting of shade trees and general landscaping that would provide improved visitor experiences and would serve a wider range of lake levels. Visitors would have more convenient access to the reservoir to the extent that the private sector participated in developing potential access points, including Cow Creek and the Comstock site. There would be a major increase in capacity. More choices would be available for visitors, but there would also be a greater level of development that would be perceived by some visitors as cluttering the landscape. New launch ramps at Steam Plant Road and Diablo West (East) on the north shore would provide more convenient lake access and also improve safety during windy periods. Walkway improvements at Pecos River would improve visitor safety, as would the debris diverter at Pecos River, breakwaters at Diablo East and Rough Canyon, and lights at the Pecos River launch ramp. Information and interpretation services would be substantially expanded, providing improved visitor experiences. Fencing at Spur 406 would eliminate conflicts between animal and human users; opening the area to hunting would conflict with the tranquility and security sought by most nonhunting visitors. The opportunity to hunt at San Pedro would be lost. The visitor center at Diablo East would enhance visitors' understanding of the park's resources and how best to enjoy them. Some visitors would lose the opportunity to camp at favorite sites, such as

Governors Landing, which would be converted from mixed day/overnight use to day use only, but this would be offset by the new camping opportunities at Diablo West, Diablo East, Long Point, and San Pedro. Backcountry campers would be subject to more restrictions. The opportunity to camp in rock-shelters that harbor archeological resources would be lost. All significant cultural resources would be preserved for long-term visitor enjoyment and appreciation.

IMPACTS ON SOCIOECONOMIC ENVIRONMENT

Under the proposal an opportunity for a new concessioner business would be provided at Pecos River, pending private interest and positive feasibility analysis. Construction of launch ramps at Steam Plant Road and Diablo West (East) might divert some visitor use from Diablo East, taking potential business from the park concessioner and other businesses adjacent to the park at that location. Better and more visitor information at Diablo East would have the opposite effect. The new development at Cow Creek, pending private interest and positive feasibility analysis, would also divert some visitors to this new area, yet might attract first-time recreation area visitors as well. Boat tours would make Amistad a more diverse and attractive place to visit and would stimulate additional visits, as would the proposal as a whole. Better public access from private developments adjacent to Amistad Recreation Area could increase land values and stimulate private developments. Construction projects would stimulate the economy during their terms. To the extent that NPS campgrounds are improved, some use now met by higher-standard private campgrounds could be diverted to those operated by the Park Service.

Under alternative 1 the present socioeconomic environment would continue.

Under alternative 2 the present socioeconomic environment would basically continue. Improved visitor information at Diablo East would encourage more visits to this site, the park concessioner, and other businesses in this vicinity. Improved facilities might stimulate more visits. Staff expansion would add three permanent employees to the regional employment base. Better public access from private development adjacent to Amistad Recreation Area could increase land values and stimulate private developments. Construction projects would stimulate the economy during their terms. To the extent that NPS campgrounds are improved, which would be to a standard still insufficient to charge fees, some use now met by higher-standard private campgrounds could be diverted to those operated by the Park Service.

Development at the San Pedro site in alternative 3 would encourage private sector development adjacent to the park to serve general park visitors and also to provide public housing near this new public access point. A new marina here would compete with the ones now operated at Diablo East and Rough Canyon and, unless additional business could be generated, could place all three in submarginal positions. This alternative would make Amistad a more attractive place to visit and would thus stimulate additional visits, but capacity at peak-use times would be less. Better public access from private developments adjacent to Amistad

Recreation Area could increase land values and stimulate private developments. Construction projects would stimulate the economy during their terms. There would be a staff reduction of three employees from the regional employment base. Improvements to the relocated NPS campgrounds, for which fees would be charged, would compete with private campgrounds that are outside the recreation area.

In alternative 4 additional visitation would occur at Langtry, with potential increased demand on tourist businesses there because of the canoe access that would be developed. An opportunity for a small new concessioner business would be provided at Pecos River, pending private interest and positive feasibility analysis. As in the proposal, the new development at Cow Creek, pending private interest and positive feasibility analysis, would divert some visitors to this new area, yet may attract some first-time recreation area visitors as well. To a lesser extent, the same would be true at Comstock Access. Construction of launch ramps at Steam Plant Road and Diablo West (East) would divert some visitor use and potential business from the Diablo East park concessioner and other nearby businesses. The new major use sites at Long Point and San Pedro would encourage private sector development, both to serve general park visitors and also to provide public housing near these new public access points. Relocation of park headquarters and provision of a visitor center at Diablo East would encourage visitor traffic to this site and adjacent businesses, including the concessioner. It would also save staff time, government funds, and reduce vehicle costs. The alternative would make Amistad a more attractive place to visit and would thus stimulate additional visits, for which there would be capacity. Better public access from private developments adjacent to Amistad Recreation Area could increase land values and stimulate private developments. Construction projects would stimulate the economy during their terms, and staff expansion would add two temporary and seven permanent employees to the regional employment base. Improved NPS campgrounds, for which fees would be charged, would compete with private campgrounds outside the recreation area. Boat tours would make Amistad a more diverse and attractive place to visit and would thus stimulate additional visits, as would the proposal as a whole. Most socioeconomic consequences of this alternative would be perceived as positive; the cost of providing them, however, appears beyond the level of effective use of tax dollars.

IMPACTS ON PARK MANAGEMENT

Under the proposal, increased visitor services at San Pedro, Cow Creek, Diablo West (East), Steam Plant Road, Lower Rio Grande, and Rockhouse, the visitor contact station at Diablo East, and added access points adjacent to private developments, would increase management requirements. Closing Evans Creek and campsites at Spurs 277 North and South plus San Pedro Flats and Spur 454 would reduce such requirements there. Provision of adequate employee quarters at Pecos River would facilitate protection services and contacts with park neighbors at this site by increasing the desirability of living there.

Safety improvements, including trails and breakwaters, would reduce the number of incidents involving the protection staff. Additional concessions services at Pecos River and Cow Creek (pending private interest and positive feasibility analysis) would increase management requirements for this function. Cultural resources management would require added staff. Overall, however, the staff size would remain the same as at present.

Under alternative 1 present management operations would continue.

Under alternative 2 increased visitor services at Lower Rio Grande, Rockhouse, Long Point, at added access points adjacent to private developments, and at the dam visitor center would increase management requirements. Safety improvements, including trails and breakwaters, would reduce the number of incidents involving the protection staff. Cultural resources management would require added staff. Overall, there would be three more permanent positions than at present.

Under alternative 3 decreased visitor services would occur at Rock Quarry, Evans Creek, Spur 406, Rockhouse, Spurs 277 North and 277 South, San Pedro Flats, Spur 454, Blackbrush Point, Governors Landing, the dam exhibit center, and Steam Plant Road, freeing staff time for operating the new developments at Diablo East, Lower Rio Grande, the dam visitor center, and San Pedro. Safety improvements including trails and breakwaters, would reduce the number of incidents involving the protection staff. Cultural resources management would required added staff. Overall, there would be four fewer permanent positions than at present.

Under alternative 4 increased visitor services would be provided, increasing management requirements at all existing developed sites plus new sites at Langtry, Cow Creek, Comstock Site, the northshore launch ramp at Diablo West (East), Evans Creek, Rockhouse, the Rough Canyon amphitheater, Long Point, Spur 277 North northwest of US 277, San Pedro, the Diablo East visitor center, Steam Plant Road, and Lower Rio Grande. Provision of adequate employee quarters at Pecos River would facilitate protection services and contacts with park neighbors at this site by increasing the desirability of living there. Safety improvements, including trails and breakwaters, would reduce the number of incidents involving the protection staff. Additional concessions services at Pecos River and Cow Creek, pending private interest and positive feasibility analysis, would increase management requirements. Relocation of headquarters to Diablo East would reduce personnel travel time; it would also increase personal commuting time and the length of trips to Del Rio. Trips to Rough Canyon would be slightly longer; those to the dam, Comstock, and Pecos River would be shorter. Relocation of the facility to Diablo East would cost less than continuing at its present site and would generate an operational saving in staff time and vehicle costs. It would, however, provide a smaller facility and would require a large initial capital investment. Cultural resources management would require added staff, more than in the proposal or the other alternatives. Overall, there would be seven more permanent and two more temporary positions than at present.

APPENDIXES

Water Treaty of 1944: Among other things the treaty established that the international boundary between the two countries—i.e., the centerline of the Rio Grande—will remain unchanged after it is obscured by the impoundment, and that public use of the reservoir surface is to be “free and common to both countries, subject to police regulation of each country in its territory.” The international boundary is also the southerly, or water-side, boundary of the proposed national recreation area.

The treaty provides that the flow of water into the reservoir be measured and credited to each country in accordance with ownership of such inflows and that each country is free, at any time, to utilize its share of water for direct beneficial use or for storage in other reservoirs. While this might imply an unfavorable outlook regarding stability of the lake for recreational use, the treaty further stipulates that storage shall be maintained at the maximum possible water level consistent with flood control, irrigation use, and power requirements. As a guide, the treaty also specifies the following “order of preference” for joint use of international waters:

1. Domestic and municipal uses
2. Agriculture and stock raising
3. Electric Power generation
4. Other industrial uses
5. Navigation
6. Fishing and hunting
7. Any other beneficial use which may be determined by the Commission.

STORAGE DAM—U. S. AND MEXICO

PUBLIC LAW 86-605; 74 STAT. 360

[H. R. 12263]

An Act to authorize the conclusion of an agreement for the joint construction by the United States and Mexico of a major international storage dam on the Rio Grande in accordance with the provisions of the treaty of February 3, 1944, with Mexico, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That:

The Secretary of State, acting through the United States Commissioner, International Boundary and Water Commission, United States and Mexico, is hereby authorized to conclude with the appropriate official or officials of the Government of Mexico an agreement for the joint construction, operation, and maintenance by the United States and Mexico, in accordance with the provisions of the treaty of February 3, 1944, with Mexico, of a major international storage dam on the Rio Grande at the site and having substantially the characteristics described in minute numbered 207 adopted June 19, 1958, by the said Commission, and in the "Rio Grande International Storage Dams Project—Report on Proposed Dam and Reservoir" prepared by the United States Section of the said Commission and dated September 1958.

Sec. 2. If agreement is concluded pursuant to section 1 of this Act for the construction of a major international storage dam the Secretary of State, acting through the United States Commissioner, International Boundary and Water Commission, United States and Mexico, is authorized to conclude with the appropriate official or officials of Mexico an agreement consistent with article 7 of the treaty of February 3, 1944, for the construction, operation, and maintenance on a self-liquidating basis, for the United States share, of facilities for generating hydroelectric energy at said dam.

If agreement for the construction of separate facilities for generating hydroelectric energy is concluded, the United States Commissioner, International Boundary and Water Commission, United States and Mexico, is directed to construct, operate, and maintain such self-liquidating facilities for the United States.

Sec. 3. If a dam is constructed pursuant to an agreement concluded under the authorization granted by section 1 of this Act, its operation for conservation and release of United States share of waters shall be integrated with other United States water conservation activities on the Rio Grande below Fort Quitman, Texas, in such manner as to provide the maximum feasible amount of water for beneficial use in the United States with the understandings that (a) releases of United States share of waters from said dam for domestic, municipal, industrial, and irrigation uses in the United States shall be made pursuant to order by the appropriate authority or authorities of the State of Texas, and (b) the State of Texas having stipulated that the amount of water that will be available for use in the United States below Falcon Dam after the proposed dam is placed in operation will

be not less than the amount available under existing conditions of river development, and to carry out such understandings and said stipulation the conservation storage of said dam shall be used, and it shall be the exclusive responsibility of the appropriate authority or authorities of said State to distribute available United States share of waters of the Rio Grande in such manner as will comply with said stipulation.

Sec. 4. There is hereby authorized to be appropriated to the Department of State for the use of the United States Section, International Boundary and Water Commission, United States and Mexico, such sums as may be necessary to carry out the provisions of this Act.

Approved July 7, 1960.

An Act To provide basic authority for the performance of certain functions and activities of the National Park Service, approved August 7, 1946 (60 Stat. 885)

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That appropriations for the National Park Service are authorized for— . . .

(b) Administration, protection, improvement, and maintenance of areas, under the jurisdiction of other agencies of the Government, devoted to recreational use pursuant to cooperative agreements. . . .

Recreational
areas.

APPENDIX B: AGREEMENTS/PERMITS/CONCESSIONS

MEMORANDUM OF AGREEMENT

between

THE UNITED STATES SECTION,
INTERNATIONAL BOUNDARY AND WATER COMMISSION

and

THE NATIONAL PARK SERVICE

RELATING TO THE DEVELOPMENT AND ADMINISTRATION OF
RECREATION ON THE UNITED STATES SIDE OF
AMISTAD INTERNATIONAL DAM AND RESERVOIR

THIS MEMORANDUM OF AGREEMENT, made and entered into this 11th day of November, 1965, between the UNITED STATES SECTION of the INTERNATIONAL BOUNDARY AND WATER COMMISSION, hereinafter referred to as the Section, and the NATIONAL PARK SERVICE, hereinafter referred to as the Service, as agencies of the United States of America, pursuant to the Treaty of February 3, 1944 between the United States and Mexico (Treaty Series 994), the Act of July 7, 1960 (74 Stat. 360), and the Act of August 7, 1946 (60 Stat. 885)

WITNESSETH THAT:

WHEREAS, the Section is proceeding jointly with the Mexican Section of the International Boundary and Water Commission with the construction of the Amistad Dam and Reservoir as contemplated in the Treaty with Mexico relating to the utilization of waters of the Colorado and Tijuana Rivers and of the Rio Grande, signed at Washington, February 3, 1944 (59 Stat. 1219), and in accordance with subsequent agreements between the two Governments, and as authorized by the Act

approved July 7, 1960 (74 Stat. 360) insofar as the United States Section is concerned; and

WHEREAS, lands in the United States are being acquired for the purposes of the project, as authorized by the aforesaid Water Treaty with Mexico, February 3, 1944, and the Act approved July 7, 1960; and it is contemplated that additional lands may be acquired for the United States; and

WHEREAS, a large number of persons are expected to use the United States lands and waters of the acquired area for the purposes of recreation; and

WHEREAS, the Service is experienced in administering areas devoted to recreation; and

WHEREAS, Section 1(b) of the Act of August 7, 1946 (60 Stat. 885) authorizes the use of appropriated funds by the Service for the administration, protection, improvement, and maintenance of areas under the jurisdiction of other agencies of the Government when such areas are devoted to recreational use pursuant to cooperative agreements; and

WHEREAS, it is the belief of both agencies that the best interests of the public may be better served through administration of certain portions of the lands and the surface of waters within the United

States side of the project area, and the provision of recreation therein, by the Service:

NOW, THEREFORE, the Section and the Service do hereby mutually agree as follows:

ARTICLE I

GENERAL PROVISIONS

1. The Section shall retain complete authority over and responsibility for the construction, operation, and maintenance of the United States portion of Amistad Dam and Reservoir, together with all engineering works in connection therewith, in accordance with the Treaty of February 3, 1944 (Treaty Series 994) and the Act of July 7, 1960 (74 Stat. 360). Except for the areas required by the Section for construction, operation, and maintenance of the portion of the dam and reservoir allocated to the United States, the Service shall, subject to understandings set forth hereinafter, administer all lands and the surface of the waters within the project area and on the United States side thereof, providing for recreation therein. The agreed areas of authority between the Section and the Service include all those lands acquired by the Section for project purposes under the authority of the aforesaid Act of July 7, 1960, the surface of the waters on the United States side, and such other related lands as may hereafter be acquired by the United States under future authority. These lands,

to the extent now acquired, are generally depicted on the enclosed Exhibit "A" entitled Proposed Amistad Recreation Area, SA-AMI-7104, dated August 1965, which is expressly made a part hereof, with the understanding that the same may be revised at any time to illustrate changes in the project area as a result of land acquisition.

2. The parties to this agreement acknowledge: (a) that Amistad Dam and Reservoir are being jointly constructed and will be jointly operated and maintained by the United States and Mexico, in accordance with the provisions of the Water Treaty with Mexico, in accordance with the provisions of the Water Treaty with Mexico, February 3, 1944, and subsequent agreements between the two Governments; (b) that the ownership and control of the waters stored therein are determined pursuant to said Treaty; (c) that requirements in the United States for domestic and irrigation use of the waters therein belonging to the United States are determined by the authorities of the State of Texas and the waters belonging to Mexico are controlled by Mexican authorities; and (d) that insofar as the United States portion thereof is concerned, the project was authorized and is being constructed for the Treaty purposes of flood control, water conservation, and the generation of hydroelectric power; and such other beneficial purposes as recreation and fish and wildlife conservation, as determined by the Section. This agreement shall not be construed to (a) conflict with said Treaty purposes of the project; (b) alter or in any way interfere with the Section's control over storage and release of the United States share of water pursuant to

orders of the State of Texas; or (c) conflict with the construction, operation, and maintenance of Amistad Dam and Reservoir by the International Boundary and Water Commission, United States and Mexico, pursuant to the provisions of the Treaty of February 3, 1944, and any agreement thereunder or the operational mandate for the Section contained in Sec. 3 of the Act of July 7, 1960. However, subject to said Treaty and statutory requirements for operation of the project for the primary purposes for which it is being built, the Section will at all times conduct its operations with consideration for the best possible use of the Reservoir and the adjacent areas for recreational enjoyment by the public. The Service shall determine the optimum and minimum pool levels desirable for public recreational use and will provide the Section with this information for its consideration in carrying out the purposes of this paragraph.

3. The Service shall obtain the concurrence of the Section prior to making any new development or granting any concession, lease, license, or permit which, because of its nature or location, could affect the Section's activities at the area under its administration. The Section shall obtain the concurrence of the Service before making any new development or granting any concession, lease, license, or permit at the Amistad Dam and Reservoir which could affect the recreational and tourist facilities on the remainder of the project area, with the exception of those works required for effecting said Treaty purposes

of the project. The Section shall when practical advise the Service beforehand of works to be installed for said Treaty purposes.

4. The parties to this agreement acknowledge and understand that the fulfillment of the agreement is contingent upon the availability of funds for the purposes thereof.

ARTICLE II

FUNCTIONS OF THE NATIONAL PARK SERVICE

Subject to the primary purposes of the project, area limitations, and other provisions contained in Article I hereof, the Service in its administration of the project area for recreation shall be responsible for:

1. Preparing plans for, obtaining appropriations for, and constructing recreational facilities, including roads and trails, within the United States project area. The preparation and implementation of such plans will be coordinated with the Section and other concerned Federal, State, and local agencies.

2. Advertising for, evaluating, and approving or rejecting bids and negotiating contracts for the installation or construction of recreational facilities.

3. Negotiating and executing contracts with private individuals, partnerships, or corporations for supplying necessary visitor services

related to recreational use of the project area, including, but not limited to, use of the waters for boating, canoeing, bathing, and sightseeing; and prescribing and enforcing reasonable rates and standards for the supplying of such services, with the understanding that any consumptive uses of waters will be arranged for with appropriate authorities of the State of Texas and that such uses will be measured and reported to the State and to the Section.

4. Establishing and enforcing policies, rules, and regulations regarding the recreational use of lands and waters in the project area, including those required to prevent pollution or contamination of the international waters. It is understood that grazing activities, if any, will be confined to that portion of the area administered by the Service and will be controlled and supervised by the Service after consultation with the Texas Parks and Wildlife Department.

5. Promulgating and enforcing such rules and regulations as are necessary or desirable for the conservation of any historic or archeological remains, and control of all archeological excavation and historical or archeological research, or as may be needed for recreational use and enjoyment of the area and for the public health, safety, and welfare of visitors.

6. Establishing and maintaining protective, interpretive, and other facilities and services as may be necessary for the safe and

full use and enjoyment of the area for recreational purposes. Public information activities and services shall be provided by the Service in coordination with the Section in order to facilitate public understanding of the interrelated programs of these agencies within the area.

7. Control of transportation in the area under its administration, whether by land, water, or air, to the extent consistent with Federal law, but such control shall not affect transportation the Section may require for the performance of its functions or transportation governed by Article III, paragraphs numbered 3 and 4.

8. Extending to the Section technical assistance in the planning and development of exhibits and interpretive devices oriented toward visitor understanding and enjoyment of the project and related resources.

9. Negotiation of agreements or coordination of activities with State and Federal wildlife agencies as desirable for the conservation and protection of wildlife consistent with applicable law.

10. Such other functions as are reasonably related to, or necessary for, its administration of the project area.

11. Ensuring that no recreational use of Amistad Dam and Reservoir Project areas within the United States shall be permitted

which is inconsistent with the laws of the State of Texas for the protection of fish and game and the protection of the public health, safety, and welfare. The Service, after consultation with the Texas Parks and Wildlife Department, may issue regulations designating zones where and establishing periods when no hunting, fishing, or trapping shall be permitted for reasons of public safety, use, or enjoyment.

ARTICLE III

FUNCTIONS OF THE UNITED STATES SECTION, INTERNATIONAL BOUNDARY & WATER COMMISSION

Subject to the area limitations and provisions contained in Article I hereof, the Section shall be responsible for:

1. Construction, operation, and maintenance of the United States portion of Amistad Dam and Reservoir and all engineering works incidental thereto or in connection therewith, together with all appurtenances thereof for the proper storage, release, protection, and utilization of water under the provisions of the Water Treaty with Mexico, February 3, 1944, and the Act approved July 7, 1960.

2. Consultation with the Service on matters involving the development or administration of recreational facilities or public information services to be provided in the area required by the

Section for construction, operation, and maintenance of the United States portion of Amistad Dam and Reservoir.

3. Establishment and enforcement of rules and regulations governing public access to Amistad Dam and the engineering works appurtenant thereto, and the control of traffic on the roads providing immediate access to the dam and its appurtenant engineering works, including meteorological and hydrological stations.

4. Establishment and, in cooperation with the Service, enforcement of such limitations governing approach to the dam and appurtenant works by water as may be necessary either for their efficient functioning or for the safety of the public.

5. Consulting with and advising the Service so that recreational development and administration of the project area will be coordinated with construction and operation of Amistad Dam and Reservoir.

ARTICLE IV

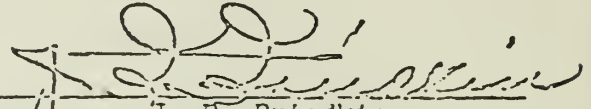
REVISION OR TERMINATION

This Memorandum shall remain in force as written unless the parties thereto mutually agree to its revision or termination, or unless termination is directed by the Secretaries of State and Interior, or until enactment by the Congress of inconsistent or superseding legislation.

UNITED STATES SECTION, INTERNATIONAL
BOUNDARY AND WATER COMMISSION

Dated OCT 22 1965

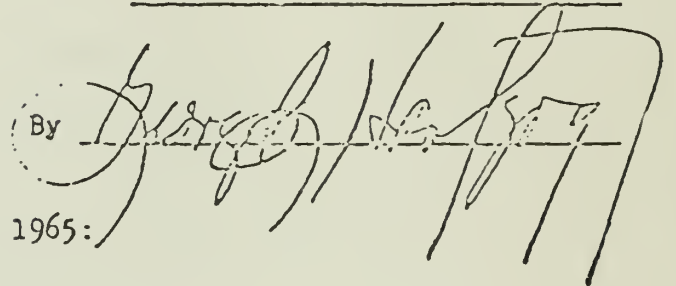
By


J. F. Friedkin
United States Commissioner

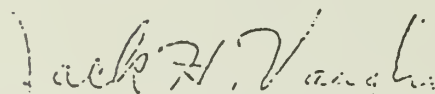
NATIONAL PARK SERVICE

Dated OCT 18 1965


By

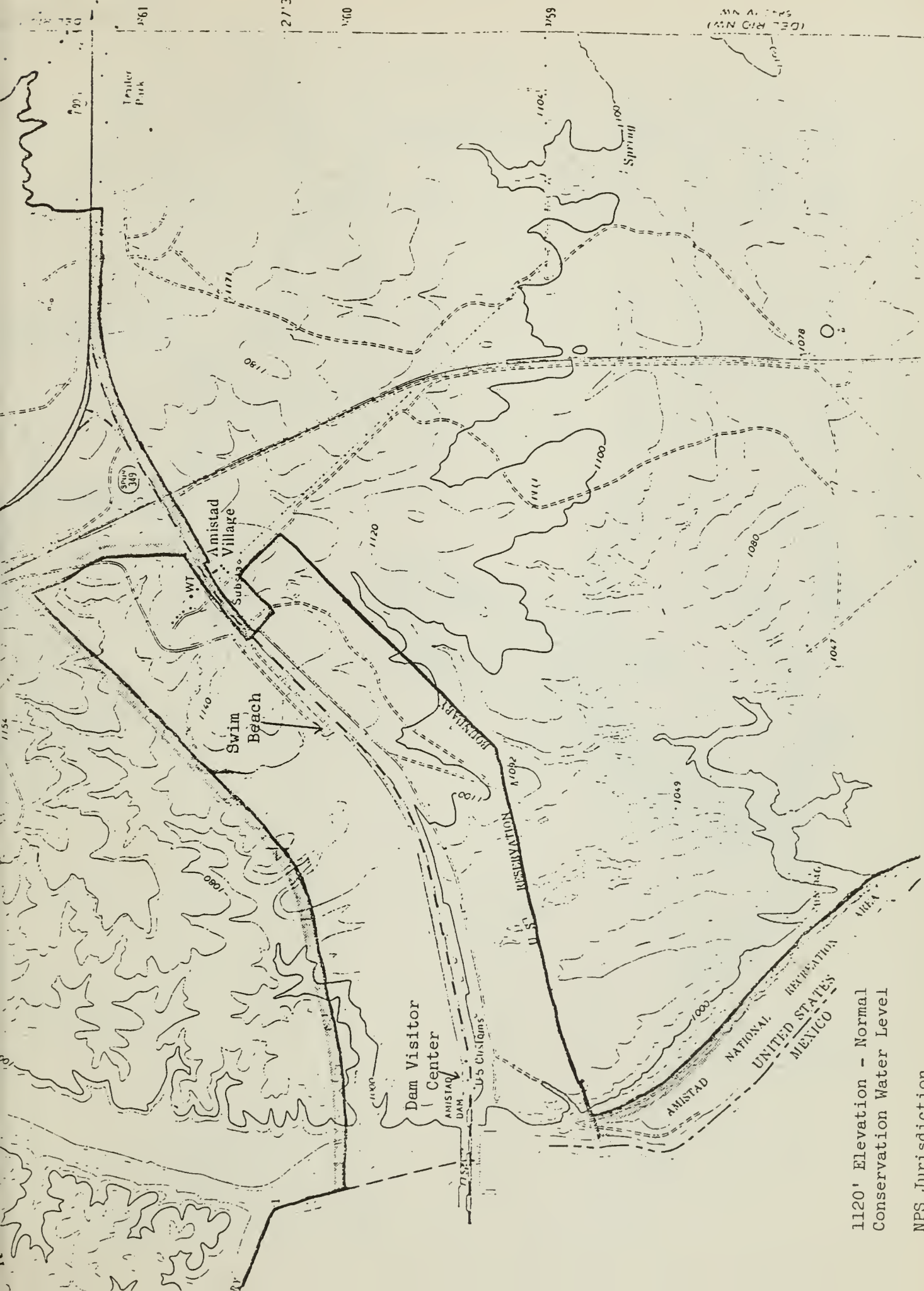


APPROVED Nov-11, 1965:


Assistant Secretary for Inter-
American Affairs, Department
of State

APPROVED 5 Nov., 1965:


Assistant Secretary of the Interior



1120' Elevation - Normal
Conservation Water Level

NPS Jurisdiction



COOPERATIVE AGREEMENTS - NPS 20
SUMMARY OF
AMISTAD RECREATION AREA

March 30, 1984

AGREEMENT WITH	NUMBER OF AGREEMENT	ORIGINAL DATE	EXPIRATION DATE	PURPOSE OF AGREEMENT	TITLE OF AGREEMENT
1. International Boundary & Water Commission	IA 7100-65-01	11/11/65	-	Development & administration of U.S. side of Amistad RA for recreational purposes	Memorandum of Agreement between International Boundary & Water Commission & NPS
2. Laughlin Air Force Base	IA 7100-67-01	12/11/67	-	Provide recreational facilities for AF personnel and public boat launching	Interagency Agreement between Dept. of Air Force Laughlin AFB and NPS
3. International Boundary & Water Commission	IA 7100-68-01	5/1/68	-	Establishment & operation of a joint usage sewage treatment facility at DE development, Amistad RA	Memorandum of Agreement between IB&WC & Amistad
4. Texas Parks & Wildlife Dept.	MU 7100-68-02 and	3/1/68	-	Management of wildlife resources, of Amistad RA	Memorandum of Understanding between Texas Parks & Wildlife and Amistad
5. Laughlin Air Force Base	A 7100-68-03	5/10/72	-	Joint usage of sewage treatment facilities at IB&WC - NPS sewage treatment facilities	Interagency Agreement between Laughlin Air Force Base and Amistad RA
6. Texas State Dept. of Highways & Transportation	MU 7100-72-02	7/11/72	-	Installation of sewer main on SPT Railroad's overpass at Spur 349 near Del Rio.	Memorandum of Understanding between Texas Highway Dept and Amistad RA
7. Border Patrol, Del Rio Sector	MU 7100-73-01	1/12/73	-	Use of Border Patrol firing range by NPS personnel	Memorandum of Understanding between Border Patrol and Amistad RA
8. Pecos River Company	CA 7100-75-01	11/11/74	11/10/84	Provide potable domestic water to NPS quarters at Pecos area	Cooperative Agreement between Pecos River Co. and Amistad RA

COOPERATIVE AGREEMENTS - NPS 20
SUMMARY OF
AMISTAD RECREATION AREA

March 30, 1984

AGREEMENT WITH	NUMBER OF AGREEMENT	ORIGINAL DATE	EXPIRATION DATE	PURPOSE OF AGREEMENT	TITLE OF AGREEMENT
9. National Weather Service	CA 7100-77-03	7/11/77	7/10/87	NPS provides space for equipment to be used to transmit continuous weather info.	Cooperative Agreement between Nat'l Weather Service and Amistad RA
10. USAE Waterways Experiment Station, Corps of Engineers	CA 7001-79-01	11/2/79	11/1/84	Share data on recreation and demonstration unit at Amistad Recreation Area	Cooperative Agreement between USAE Waterways Experiment Station & Amistad RA
11. U.S. Coast Guard, 8th District	CA 7100-80-01	6/30/70	6/30/85	Provide navigational aids needed for safe boat operation on lake.	Cooperative Agreement between U.S. Coast Guard and Amistad RA
12. Texas Parks & Wildlife	MU 7100-80-02	12/3/75	11/9/85	Close a portion of Seminole Canyon to provide maximum protection & interpretation of archeological sites located on State of Texas property.	Memorandum of Understanding between Texas Parks & Wildlife and Amistad RA
13. U.S. Border Patrol, Del Rio Sector	IA 7100-83-01	11/8/83	11/7/88	Provide facilities to dock U.S. Border Patrol boat at NPS dock.	Interagency Agreement between U.S. Border Patrol and Amistad RA.

Amistad Recreation Area
Revocable Special Use Permit

The National Park Service of the Department of the Interior, hereinafter referred to as the "Service", acting by and through the Director, National Park Service, under general authority provided in the act of August 25, 1916 (39 Stat. 535, as amended; 16 U.S.C. 1), hereby authorizes the Department of the Air Force, hereinafter referred to as the "Permittee" acting by and through the Base Commander, Laughlin Air Force Base, Texas, to use, occupy and develop for recreational purposes an area of land comprising 12 acres, more or less, described as Parcel V-4-B-3, which land is a part of the Amistad Recreation Area and is depicted and described on the attached map, subject to the following terms and conditions:

1. In the use, occupancy and development of the area assigned, the Permittee will comply with all the terms and conditions of a Memorandum of Agreement between the Service and the United States Section, International Boundary and Water Commission dated November 11, 1965, which is attached hereto and made a part hereof, which Memorandum transferred to the Service certain administrative responsibilities over the Amistad Reservoir and adjacent lands. .

2. The privilege of use, occupancy and development of the area hereby assigned shall be without charge to the Permittee.

3. The water and beach areas of Amistad Reservoir within the assigned area shall be open to public use without charge by the Permittee for boating, swimming, bathing, fishing, and other recreational purposes,

and public access by water or along the shoreline to such areas shall be permitted. Public use of dock facilities in the assigned area shall be allowed provided it does not interfere with use by the Permittee.

4. All uses, visitation and enjoyment of the area shall be subject to the rules and regulations of the Service and the Department of the Interior. In the enforcement of these regulations the Superintendent of the area will work in close cooperation with the Permittee. The Permittee may make additional regulations, not inconsistent with the rules and regulations of the Service, and the Department, respecting use of the area by military and civilian personnel of the United States Air Force and their dependents and guests.

5. The Permittee within the area hereby assigned to it is authorized to construct and develop, at no cost to the Service, the following facilities:

- (a) Administration building.
- (b) Toilet and sewage disposal facilities.
- (c) Camping areas and trailer parking spaces with water and electricity.
- (d) Floating boat dock.
- (e) Boat-launching ramp.
- (f) Picnic areas with grills.
- (g) Necessary utilities.
- (h) Roads and trails.
- (i) Such other facilities and structures as are mutually agreed upon by the Service and the Permittee.

It shall be the responsibility of the Permittee to develop or improve access roads to the area assigned, without cost to the Service.

6. No development or construction shall be commenced on the assigned area by the Permittee without the prior written approval of the plans and specifications therefor by the Service. The location and development or improvement of access routes to the assigned area may not be undertaken by the permittee until the route or routes therefor have been approved by the Service.

7. The Permittee shall, at its own expense and without cost or expense to the Service, maintain and keep in good repair and condition the area herein authorized to be used, including buildings and grounds and roads, and shall maintain the area (including the assigned water and shoreline), in a neat and orderly appearance.

8. Any interference with or damage to the Amistad Recreation Area, incident to the exercise of the privileges herein granted, shall be promptly corrected by the Permittee to the satisfaction of the Service.

9. The Permittee shall furnish at its expense all services and utilities needed within the assigned area or on account of use of the assigned area, including sewerage, water, heat, and power. Any services and utilities furnished by the Service or through Service facilities at the request of the Permittee will be provided on a reimbursable basis.

10. Upon termination of this permit the Permittee shall vacate the said premises and may, or to the extent required by the Service

shall, remove its property therefrom, and shall, where further utilization of the improvement by the Service is infeasible, restore the premises to their natural condition, ordinary wear and tear and damage excepted, within such time as the Service may designate. Developments or improvements not so removed upon termination of this permit shall be transferred to the Service and may be utilized in its administration of the recreation area.

11. The Service shall have the right at any time to enter upon lands assigned hereunder for any purpose it may deem necessary for the administration of the recreation area, but not so as to unreasonably interfere with the Permittee's use of such lands or the improvements thereon.

12. The Permittee agrees, to the extent authorized by law, to settle and pay all claims for injuries to persons or damage to property resulting from the exercise of the privileges granted by this permit.

13. The Permittee shall reimburse the Service for any damage that occurs on lands or waters outside of the permit area as a result of the exercise of the privileges granted under this permit.

14. This permit shall in no way limit or restrict the Service's responsibility and authority to administer the Anisted Recreation Area, including the area covered by this permit, or the right of the Service to develop the portions of the recreation area not covered by this permit.

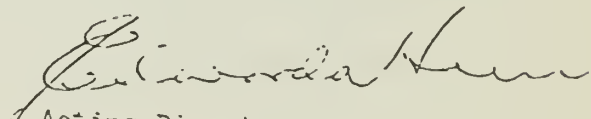
15. The Permittee and his employees shall take all reasonable precautions to prevent forest, brush, grass, and structural fires and also shall assist the Service in extinguishing such fires in the vicinity of the area assigned hereunder.

16. The Permittee shall take adequate measures, as directed and approved by the Service to restrict and prevent soil erosion on the lands covered hereby and shall so utilize such lands as not to contribute to soil erosion on adjoining lands.


17. This permit is granted for an indefinite period from the date of the last signature below and may be amended by the mutual agreement of the Permittee and Service. The permit may be revoked for breach of any of its conditions or otherwise in the discretion of the Service upon 90-day written notice to the Permittee.

18. This permit shall not be assigned or transferred by the Permittee, nor any interest or privilege therein, without prior written approval of the Service.

Date DEC 11 1967


Acting Director
National Park Service
Department of the Interior

Date DEC 12 1967


Department of the Air Force
LEWIS E. TURNER
Deputy Assistant Secretary
(Installations)

DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS

Southwestern Division
Fort Worth District

Amistad Recreation Area
Laughlin Air Force Base, TX
Revocable, Special Use Permit

Supplemental Agreement No. 1

THIS SUPPLEMENTAL AGREEMENT NO. 1, made and entered into this 5th day of November 1981, by and between the National Park Service of the Department of the Interior, hereinafter referred to as the "Service", and the Department of the Air Force, hereinafter referred to as the "Permittee",

W I T N E S S E T H:

THAT WHEREAS, on the 11th day of December 1967, a Special Use Permit was entered into by and between the Service and the Permittee covering approximately 12 acres, more or less, located on Amistad Reservoir, Del Rio, Val Verde County, Texas, and as shown in red on the attached Exhibit No. 1, and with an effective date of 11 December 1967; and

WHEREAS, the Permittee has a requirement for additional land and water area at Amistad Reservoir for recreational development and the Service and Permittee are mutually agreeable to amending the Special Use Permit to include the additional area.

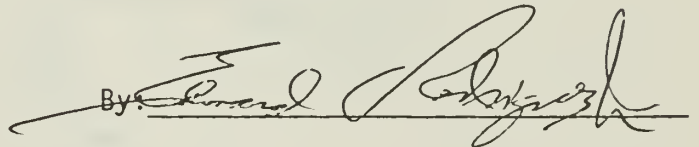
NOW, THEREFORE, both parties hereto agree that the existing Special Use Permit is supplemented to include the area denoted on the map attached hereto identified as "Supplemental Agreement Exhibit No. 1" and comprising approximately 26 acres, more or less, of land and water, said area being a part of Parcel V-4-B-3 of the Amistad Reservoir Area. That use of the additional 26 acres

will be in accordance with the terms and conditions of the Special Use Permit, and that the total area covered by this Permit will be 38 acres of land and water.

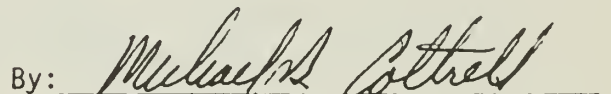
IT IS FURTHER AGREED, that other than the increase in area as contained in this supplement, all other aspects of the original Special Use Permit will remain in full force and effect.

IN WITNESS WHEREOF, the parties hereto have caused these presents to be executed as of the day and year first above written.

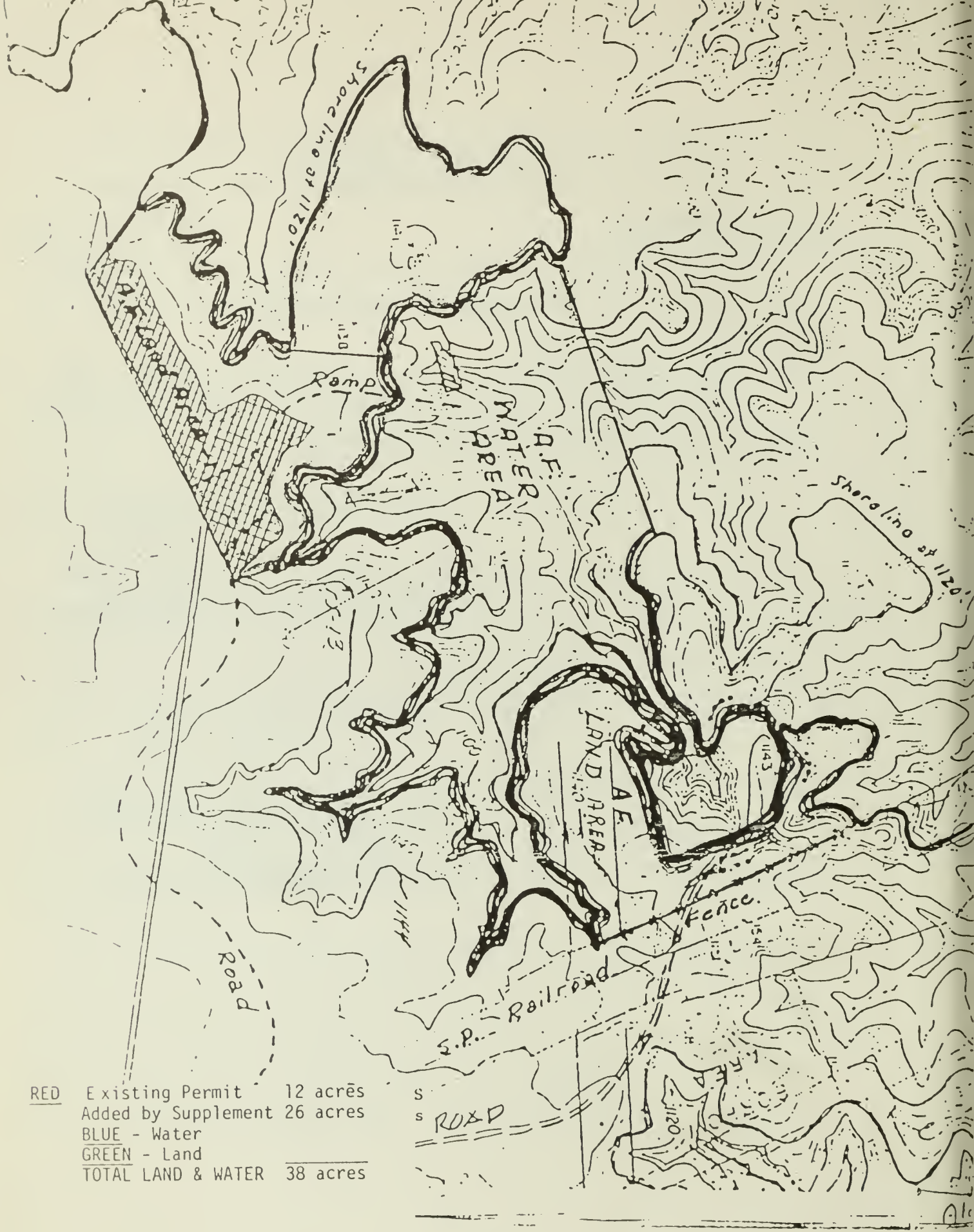
THE DEPARTMENT OF THE INTERIOR

By: 

THE UNITED STATES OF AMERICA

By: 

6 NOV 1981 MICHAEL B. COTTRELL
Chief, Real Estate Division
U.S. Army Engr Dist, Ft Worth



MEMORANDUM OF UNDERSTANDING
BETWEEN
THE NATIONAL PARK SERVICE
AND
THE TEXAS PARKS AND WILDLIFE DEPARTMENT

This Memorandum of Understanding is between the Texas Parks and Wildlife Department represented by the Director, hereinafter called the Department; and the National Park Service, Department of the Interior, represented by the Southwest Regional Director, hereinafter called the Service.

Whereas, the Department is responsible under various laws, acts and directives to: (1) promote and establish a State system of scientific areas for the purpose of education, research and preservation of flora or fauna of scientific or educational value; (2) administer and manage the lands, waters, natural environment and historic resources contained within the boundaries of the State of Texas; (3) preserve the State's natural resources through research, restoration and management of fish and wildlife; (4) acquire, develop and administer a State park system; (5) enforce hunting and fishing laws and water safety and pollution laws affecting wildlife and fisheries; and (6) direct boat ramp and beach cleanliness programs; and

Whereas, the Service is responsible under various acts, laws, treaties and cooperative agreements to administer and manage the lands, waters and natural and historic resources contained within the boundaries of Alibates Flint Quarry National Monument, Amistad Recreation Area, Big Bend National Park, Big Thicket National Preserve, Chamizal National Memorial, Fort Davis National Historic Site, Guadalupe Mountains National Park, Lake Meredith Recreation Area, Lyndon B. Johnson National Historic Site, Padre Island National Seashore, and any other Service areas set aside for the benefit and enjoyment of all the people of the United States; and

Whereas, the Department and the Service recognize the necessity for ecologically sound regional planning to perpetuate and to restore, where opportunity presents, the diversity and abundance of fish, wildlife and recreation resources within the State of Texas; and

Whereas, the Department and the Service desire to conduct joint and cooperative endeavors which will focus the skills and abilities of the Department and the Service on: (1) resolving their mutual fish and wildlife problems and recreation situation; (2) achieving maximum public benefits from fish and wildlife resources; and (3) insuring that the respective objectives and responsibilities of the Department and the Service are fulfilled;

Now therefore,

The Service agrees:

1. To cooperate with the Department in the joint enforcement of the Texas game and fish laws and the Texas Water Safety Act.
2. To practice those forms of resource management which recognize and benefit fish and wildlife resources consistent with the respective official Service policies and objectives for natural, historic and recreational areas.
3. To authorize no fish and wildlife control work involving the use of poisons, other killing chemical agents or traps on lands and waters administered by the Service until the designated employees of the Department have had an opportunity to review such programs.
4. To recognize the Department as having the regulatory responsibility for the management of fish and wildlife on Service areas of proprietary or concurrent jurisdiction where such is permitted by law and is compatible with the mission of the area as determined by the Service. Service areas having exclusive jurisdiction are exempt from the provisions of this paragraph.
5. To make available to the Department such Service facilities, equipment, and personnel as can be devoted to fish and wildlife needs consistent and coordinated with other Service requirements.
6. To provide the Department with reports and copies of all vital correspondence directly related to this memorandum.

7. To cooperate with the Department in the development or construction of fish and wildlife habitat improvements within the limitations of funds available for such purposes when such activity is not in conflict with the laws, policies or objectives governing the management of the area.

8. To permit the erection and maintenance of structures needed to facilitate fish and wildlife management activities on lands under the management of the Service, provided such structures conform in character and location with the requirements of the Service, and their intended use is not in conflict with policies of the area.

The Department agrees:

1. To notify the Service of any proposed changes in the fish and wildlife regulations on or near areas administered by the Service.

2. To provide the Service with reports and copies of vital correspondence relating to this memorandum.

3. To make no introduction of fish and wildlife which may affect management of the Service areas until the Service has been notified.

4. To make no use of poisons, other killing chemical agents, or traps for the control of fish and wildlife on the lands and waters administered by the Service without the approval of the area Superintendent.

5. To erect no signs or structures and perform no construction or other acts on Service areas not herein provided for without first securing the concurrence of the Superintendent.
6. To create no game preserves, refuges, or sanctuaries within any Service-administered area without approval of the Service.
7. To recognize the Service as the agency having regulatory authority for determining the proper use of Service lands in the interest of coordination with other uses and values.
8. To provide, upon request, correspondence and reports relating to fish, wildlife, or recreation management on Service lands or lands immediately adjacent to Service areas.

The Department and the Service agree:

1. To promote a united approach to the problems relating to wildlife and fisheries management and water safety by all interested parties.
2. To cooperate in the formulation and application of plans and programs to guide the management of wildlife upon lands under Service administration.
3. To meet at least once every two years for discussion of matters relating to the management of fish and wildlife resources on or affecting the lands and waters administered by the Service; and to provide for other meetings at various administrative levels for discussion of law enforcement,

educational programs, cooperative studies, plans, wildlife surveys, hunting, fishing and trapping seasons and other such matters as are relevant to the fish and wildlife resource and its habitat.

4. To cooperate in the restoration and management of fish and wildlife resources in proper relation with the land and water management plans for the area.

5. To require as close cooperation as practicable of all Department and Service personnel, including, as requested, the prompt and complete interchange of information in matters such as game counts, population trends, kill records, losses, studies, and other information required for the management of fish and wildlife on Service areas.

6. That each and every provision of this Memorandum of Understanding is subject to the laws of the State of Texas and the laws of the United States, and to the delegated authority in each instance.

7. Nothing in this agreement shall be construed as obligating either party hereto in the expenditure of funds or for the future payment of money in excess of appropriations authorized by law.

8. Nothing contained herein shall be construed as limiting in any way the responsibility and authority as defined by law of the Department and the Service, in connection with the administration and protection of lands and resources under their respective administrations.

9. That no member of, or delegate to Congress, or Resident Commissioner, shall be admitted to any share or part of this Memorandum of Understanding or to any benefit to arise therefrom, unless it is made with a corporation for its general benefit.

10. This agreement shall become effective when signed by the parties hereto and shall continue in force until terminated by mutual agreement or by either party upon thirty (30) days notice in writing to the other of the intention to do so. Amendments to this Memorandum of Understanding may be proposed by either party and shall become effective upon approval by both parties.

11. This Memorandum of Understanding incorporates among its terms all civil rights and non-discrimination laws and regulations required by law in the State of Texas and the United States of America as though fully set forth herein.

This Memorandum of Understanding replaces the document titled Master Memorandum of Understanding Concerning Wildlife Resources in National Recreation Areas signed August 1, 1968.

IN WITNESS WHEREOF, the parties hereto cause this Memorandum of Understanding to be executed as of the date when last signed below.

DATE: 6/26/75

NATIONAL PARK SERVICE
U.S. DEPARTMENT OF INTERIOR

By: 

DATE: 6/16/75

TEXAS PARKS AND WILDLIFE DEPARTMENT

By: 

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

--oo000oo--

Diablo East Recreation, Inc.
Amistad Recreation Area

--oo000oo--

CONTRACT NO. CC 7076-0-0002

EXECUTED July 28, 1980

Covering the Period

April 1, 1980

Through

March 31, 1990

This contract is not reproduced herein; it may be reviewed by contacting the superintendent, Amistad Recreation Area.

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

--oo0oo--

ROUGH CANYON MARINA, 1144, INC.
AMISTAD RECREATION AREA, TEXAS

--oo0oo--

CONTRACT NO. CC-7076-1-0002

EXECUTED August 11, 1981

COVERING THE PERIOD

JANUARY 1, 1982

THROUGH

DECEMBER 31, 1986

This contract is not reproduced herein; it may be reviewed by contacting the superintendent, Amistad Recreation Area.

Commercial Use Licenses	Amistad Recreation Area Fish Guides	6/11/84
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3/1/83-2/28/85 - \$50 (2 years)
 3/1/83-2/28/85 - \$50 (2 years)
 1/1/84-12/31/85 - \$50 (2 years)
 2/2/84-2/1/86 - \$50 (2 years)
 3/1/83-2/28/85 - \$50 (2 years)
 3/1/83-2/28/85 - \$50 (2 years)
 3/1/83-2/28/85 - \$50 (2 years)
 3/1/83-2/28/85 - \$50 (2 years)
 3/1/83-2/28/85 - \$50 (2 years)
 3/1/83-2/28/85 - \$50 (2 years)
 3/1/83-2/28/85 - \$50 (2 years)
 9/1/83-8/31/84 - \$50 (2 years)
 3/1/83-2/28/85 - \$50 (2 years)
 3/1/83-2/28/85 - \$50 (2 years)
 3/1/83-2/28/85 - \$50 (2 years)

Scuba Commercial Use Licenses		6/11/84
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5/1/83-4/30/85 - \$50 (\$25 per annum)
 3/1/83-2/28/85 - \$50 (\$25 per annum)
 6/15/83-6/14/85 - \$50
 8/8/83-8/7/85 - \$50
 7/21/83-7/20/85 - \$50
 4/1/83-3/31/85 - \$50
 1/1/84-12/31/85 - \$50
 6/15/83-6/14/85 - \$50
 11/1/83-10/31/85 - \$50

Grazing Permits**

<u>Acreage</u>	<u>Fee</u>	<u>Period</u>
1,480	\$200 annually	5 years
800	\$200 annually	5 years
(174)	\$100 annually)	5 years
456	\$100 annually	5 years
450	\$100 annually	5 years
394	\$100 annually	5 years
348	\$100 annually	5 years
302	\$ 50 annually	5 years
300	\$ 50 annally	5 years
282	\$ 50 annually	5 years
145	\$ 50 annually	5 years

**All grazing permits are being reworked as to acreage and fee. The above are the new figures.

Special Use Permits

<u>Period Covered</u>	<u>Fee</u>	<u>Purpose</u>
9/5/82-9/4/87	\$125 (5 years)	Boat ramp
3/6/84-3/5/89	\$125 (5 years)	Boat ramp
1/1/82-12/31/2002	no charge	Install and operate a magnetic observatory
3/22/82-3/21/87	\$125 (5 years)	Road access
8/1/82-7/31/87	no charge	Telephone line to geological observatory
11/14/78-11/13/88	no charge	Utility line
5/1/82-4/30/87	no charge	Utility line
11/1/83-10/31/88	\$ 50 annually	Road access
5/17/83-5/16/88	\$ 25 annually	Fence
12/1/80-11/30/85	\$ 50 annually	Road access
4/1/81-3/31/86	\$ 25 annually	Road access

APPENDIX C: COST COMPARISON OF HEADQUARTERS LOCATIONS

The following comparison shows costs of park headquarters at its present site versus relocation to Diablo East. Relocation would provide less staff space but at a lower 25-year cost. Operational savings at the new site are also projected.

Table 24: Cost Comparison of Headquarters Locations

Present Site

Headquarters building--annual lease cost 4,026 sq ft @ \$6.82/sq ft =	\$ 27,440
Maintenance building--annual lease cost 4,230 sq ft @ \$5.17/sq ft =	\$ 21,880
Paved area--annual lease cost 60,000 sq ft @ \$0.21/sq ft =	\$ 12,704
Total annual lease cost	\$ 62,024
25-year lease	\$1,551,000
life-cycle cost of above 25-year lease	\$ 723,000

Diablo East Site

Headquarters building (14 employees @ 135 sq ft each + toilets; at GSA standards)	2,100 sq ft
Construction cost @ \$120/sq ft	\$ 252,000
Site development @ 30%	76,000
	\$ 328,000
Construction drawings, contract supervision, contingencies @ 46%	151,000
Gross cost	\$ 479,000
Maintenance and operation cost @ 3% of net construction cost of \$328,000	\$ 10,000/year
cost to maintain/operate 25 years	250,000
life-cycle cost of above	117,000
life-cycle costs (including gross construction costs plus life-cycle maintenance cost)	596,000
Maintenance building	4,230 sq ft
construction cost @ \$95/sq ft	402,000
site development @ 30%	121,000
	\$ 523,000

construction drawings, contract supervision, contingencies @ 40%	241,000
Gross cost	\$ 764,000
maintenance and operation cost @ 3% of net construction cost of \$523,000	16,000/year
cost to maintain/operate 25 years	400,000
life-cycle cost of above	186,000
life-cycle costs (including gross construction costs plus life-cycle maintenance costs)	950,000
Total life-cycle costs headquarters and maintenance building	\$1,546,000
Less operational savings (see below) 25 years @ \$35,775 per year	-893,000
	\$ 653,000

Offsetting Savings to NPS of Relocation to Diablo East

The Diablo East water system, including a well, 250,000-gallon tank, chlorinator, water line, and 6" sewer line, were built for a proposed development, which included a motel and visitor center, that never took place. It is at the site of the proposed headquarters and ready for use.

The sewage lagoon was also designed for the heavier use that never occurred. As a result, the sewage currently produced at Diablo East is insufficient to maintain the lagoon's operation, and the staff periodically has to flush fresh chlorinated water into the lagoon to prevent it from becoming septic. Operating cost for producing water is \$.0039/gallon. This wasteful consumption would be unnecessary if the new headquarters and maintenance facility was put in the system.

Estimated current annual water waste: 400,000 gallons × .0039 = \$1,560

Maintenance Division. Those involved in maintenance work in or around Diablo East start and end their work day at headquarters (8 miles apart). There is thus a dollar outlay for many 16-mile round-trips in GSA vehicles. There is also the cost in salary and benefits for the ½-hour round-trips. If the headquarters was relocated at Diablo East, at the site of a major work area, the staff would be able to function with two fewer GSA vehicles.

Most of the maintenance employees go to Diablo East at least once a day. The five employees of the water branch, especially, must commute between Diablo East and headquarters. All boats, buoys, boat trailers, and other water-related supplies and materials are stored in the maintenance building or its secured yard. Considerable time spent in

transporting boats, buoys, etc. to the shop for service or repair. All medium and heavy motorized equipment operators must also start and end their workday at headquarters.

422 mi./week @ \$.16/mile = \$67.52 × 52	\$ 3,511
Return 2 GSA vehicles: @ 274/mo. × 12	3,288
6.5 hr. per day of travel time × 260 days =	
1,690 hr. × average of \$9.00	15,210
2 hr. per weekend day × 104 = 208 hr.	
× average of \$7.50	1,560
	<hr/> \$23,569

Interpretation and Resource Management Division. The rangers have a similar travel problem. Most of the rangers (all but the Pecos staff) report for duty at headquarters. The district rangers, regularly (and the others as needed) meet with the Chief Ranger. There is, then, a considerable amount of time when the rangers are not near their districts. Their emergency response time would be 10-15 minutes as opposed to a few minutes if they were already in the park. If headquarters was at Diablo East, the Rough Canyon rangers could report by water rather than by road (approximately 30 miles). They would thus provide additional boat patrols en route. With headquarters located at Diablo East the division would be able to operate with one less GSA-leased vehicle.

Table 25: Annual Operational Savings
of Relocating Headquarters to Diablo East

Return 1 GSA vehicle: \$313/mo. x 12 =	\$ 3,756
Reduced vehicle use:	
Emergency van: 112 mi/week @ .23/mi. = 25.76 x 52	1,339
Pickup and sedan: 160 mi/week @ .13/mi. = 20.80 x 52	1,081
Chief Ranger: (1 trip per week to each of Pecos and Diablo East) 32 mi/week @ .11 = 3.52 x 52	183
Pecos Rangers: (1 trip per week to headquarters) 16 mi/week @ .23 = 3.68 x 52	191
Interpreters: 64 mi/week @ .23 = 14.72 x 52	765

Work time:	
Headquarters to Diablo East: 1 hr/day x 260 @ 8.50	2,210
Pecos to headquarters: 17 hr/year @ 8.50	145
Chief Ranger: 2/3 hr/week 13.50 x 52	468
Interpreters: 1 hr/week 9.00 x 52	468
Total, Interpretation and Resource Management	<u>\$10,606</u>

Summary of NPS Costs Per Year:

Water in lagoon	\$ 1,560
Maintenance	23,569
I & RM	<u>10,606</u>

Total Annual Operation Savings \$35,735

<u>Summary</u>	<u>Headquarters at</u>	
	<u>Present Site</u>	<u>Diablo East</u>
25-year costs	\$723,000	\$653,000
office space	4,026 sq ft	2,100 sq ft
maintenance space	4,230 sq ft	4,230 sq ft
visitor safety	no change	improved
personnel management	no change	improved
facility security	no change	improved
visitor convenience	no change	improved
employee commute to work site	no change	longer
site impacts	no change	disturbance within design- ated developed area
capital investment	none	required

APPENDIX D: ROAD SYSTEM EVALUATION

This material supplements the discussion in the text in "The Proposal and Alternatives Addressing the Issues, General Development and Visitor Use--Roads" section.

The five classification levels are defined as follows:

Class I: Principal Park Road. These roads constitute the main access route, circulatory tour, or thoroughfare for park visitors. No roads within Amistad Recreation Area fall into this classification; state and county highways provide this function.

Class II: Connector Park Road. These roads provide access within a park to areas of scenic, scientific, recreational, or cultural interest, such as overlooks and campgrounds.

Class III: Special-Purpose Park Roads. Roads in this class provide circulation within public use areas, such as campgrounds, picnic areas, visitor center complexes, and concessioner facilities. These roads generally serve low speed traffic and are often designed for one-way circulation.

Class IV: Administrative Access Road. These roads are generally intended for nonpublic access to administrative areas such as park offices, employee quarters, or utility areas.

Class V: Restricted Road. Roads in this class are normally closed to the public, and include patrol roads, truck trails, and other similar roads. None of the roads at Amistad Recreation Area fall into this category.

Table 26: Road System Evaluation

		Existing Conditions							
Route Number/Section		Length (mile)	Average Daily Traffic	Traveled Surface Width (ft)	Road Surface	General Condition	Purpose/Function	Visitor Use	Classi- fication
1	Diablo E. entrance road	.79	500	20	paved	very good	main access	recreational	II
2	Diablo E. marina road	.27	100	varies	paved	very good	access to marina	recreational	III
3	Diablo E. scuba diving area	.18	150	20	gravel	poor	access to scuba	interpretive/ recreational	III
4	Diablo E. utility area	.16	5	20	paved	very good	access to utility area	administrative	IV
5 (a)	Rough Canyon entrance road near ramp	.20	300	22	paved	very good	entrance road	interpretive/ recreation	II
5 (b)	Rough Canyon res. area	.22	10	18	paved	very good	access to res. area	employee housing	IV
8	Spur 454	.76	120	22	paved	very good	access to devel- oped area	recreational	II
9	San Pedro Flats road	1.66	100	16	dirt	fair	access to devel- oped area	recreational	II
10	Spur 277 South	.61	20	20	paved	very good	access to boat ramp	recreational	III
11	Spur 277 North	.46	20	20	paved	very good	access to boat ramp	recreational	III
12	Blackbrush road	.63	20	22	paved	very good	access to boat ramp	recreational	II
13 (a)	Blackbrush picnic road	.04	20	18	paved	very good	access to picnic area	recreational	III
13 (b)	Blackbrush picnic loop	.28	20	12	gravel	poor	access to picnic area	recreational	III
14	Governors Landing	1.45	250	20	paved	very good	main access	recreational	III
15	Swim Beach road	.24	150	20	paved	very good	access to beach	recreational	III
17	Spur 406	1.02	50	24	paved	very good	access to devel- oped area	interpretive/ recreational	III
18	Steam Plant road	.35	5	18	gravel	fair	access to boat ramp	recreational	IV
19	Evans Creek hunt area #2 road	.85	5	12	dirt	fair	access to hunt area # 2	recreational	III
20/21	Pecos River	.38	50	30	paved	very good	access to boat ramp	recreational	III
22	Diablo E. pump house road	.15	5	10	gravel	fair	access to pump house	maintenance	IV
23	Spur 277 N. group camp	.68	20	15	gravel	fair	access to group camping	recreational	III
24	San Pedro Flats picnic loop	.12	100	15	gravel	fair	access to picnic area	recreational	III
--	San Pedro	No present roads							II & III

NOTES:

Average daily traffic estimated from park traffic counts are for 1981.

N/A = Not Applicable

Route numbers were taken from the Federal Highway Administration Road Inspection/Inventory Program report for Amistad Recreation Area. This table includes only roads subject to significant visitor/administrative use.

* Design criteria are from the 1984 National Park Service "Park Road Standards."

Proposed Design Criteria*

Design Speed (mph)	Traveled Surface Width (ft)	Shoulder Width (ft)	Surface Type	Recommendations
30	22	3	paved	widen
20	20	2	paved	widen shoulders
10	20	2	paved	major improvement recommended
10	20	1	paved	widen shoulders
10	22	3	paved	widen shoulders
15	18	1	paved	widen shoulders
				close and obliterate
				close and obliterate
				close and obliterate
				close and obliterate
30	20	3	paved	reduce width
10	18	1	paved	widen shoulders
10	12	0	paved	pave road
35	20	2	paved	pave road
10	20	2	paved	widen shoulders
40	20	3	paved	reduce road width
10	18	0	gravel	minimum improvement recommended
10	12	0	dirt	no improvement recommended
25	20	2	paved	reduce road width; add shoulders
10	10	0	gravel	add gravel
				close and obliterate
				close and obliterate
20	22	3	paved	construct to NPS standard to serve new site

SYSTEM EVALUATION STAD RECREATION AREA OF THE INTERIOR/NATIONAL PARK SERVICE

621 20028B
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LEGEND

CLASS 2 ROAD
CLASS 3 ROAD
CLASS 4 ROAD
RECREATION AREA BOUNDARY
PARK ROUTE NUMBER

8

POINT

23

11

10

SPLUR 277 SOUTH

SAN PEDRO

SAN PEDRO FLATS

SPLUR 454

90

SPLUR 277 NORTH

277

ROUGH CANYON

SEMINOLE CANYON

SEMINOLE CANYON STA
HISTORICAL PARK

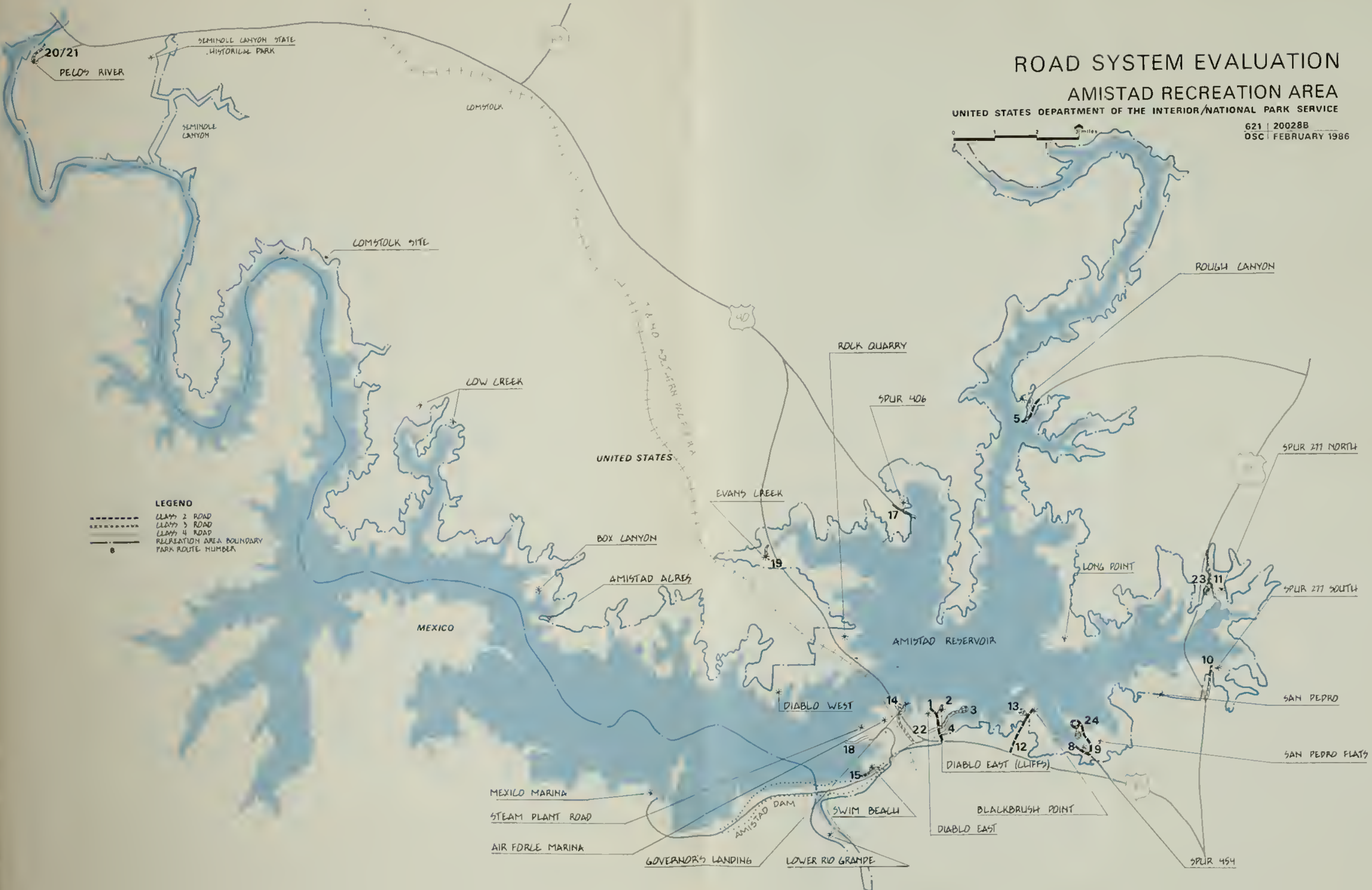
PELOS RIVER

20/21

ROAD SYSTEM EVALUATION AMISTAD RECREATION AREA

UNITED STATES DEPARTMENT OF THE INTERIOR/NATIONAL PARK SERVICE

621 200288
OSC FEBRUARY 1986



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As the nation's principal conservation agency, the Department of the Interior has basic responsibilities to protect and conserve our land and water, energy and minerals, fish and wildlife, parks and recreation areas, and to ensure the wise use of all these resources. The department also has major responsibility for American Indian reservation communities and for people who live in island territories under U.S. administration.

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