

29.79/3: Am 5/ final



general management plan development concept plan

PUBLIC DOCUMENTS
DEPOSITORY ITEM


JUN 16 1987

CLEMSON
LIBRARY

AMISTAD

RECREATION AREA - TEXAS





Digitized by the Internet Archive
in 2012 with funding from
LYRASIS Members and Sloan Foundation

<http://archive.org/details/finalgeneralmana00final>

GENERAL MANAGEMENT PLAN
DEVELOPMENT CONCEPT PLAN

AMISTAD RECREATION AREA
Val Verde County, Texas

RECOMMENDED:

Edward C. Rodriguez, Jr.
Superintendent

April 8, 1987
Date

John W. Bright
Assistant Manager, Denver Service Center

April 1, 1987
Date

APPROVED:

Donald A. Dayton
Acting Regional Director

April 27, 1987
Date

SUMMARY

This document presents the National Park Service's 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. A road system evaluation is also included.

Visitor use and 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 plan proposes increased cultural resources preservation and protection and new authority for entering into cooperative agreements with landowners adjacent to but outside the boundaries to protect these resources; upgrading the area to the status of a national recreation area; maintaining the capacity of existing facilities, with some upgrading; encouraging the private sector and local and state governments to provide road access and developments outside of the recreation area boundary and development of 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 development sites. Amistad's planned programs and facilities will provide practicable access and use by disabled individuals.

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 at Steam Plant Road and Diablo West (East) on the central reservoir area. Additional points of general public access may be considered if sites designated by the general management plan are not sufficient to accommodate increased visitation. 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, which will 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 protection and preservation of significant cultural resources. Adequate funding for qualified archeologists to identify and evaluate sites and establish priorities for preservation/protection funding requests is proposed. Uncontrollable threats to some significant sites may necessitate data recovery as a mitigative action.

CONTENTS

PURPOSE AND NEED FOR PLAN	1
Introduction	1
Brief Description and Significance	1
Operating Authority	3
Planning Issues	3
Management Objectives	9
THE PLAN	11
Concept	11
Land Use and Management	11
General Development and Visitor Use	12
Cultural Resource Management	29
Natural Resource Management	31
Cooperation	32
Plan Implementation	33
Recommendation for National Recreation Area Status	33
RECREATION AREA ENVIRONMENT	35
Reservoir Operation	35
Legal Factors	35
Water Level Fluctuations	35
Visitor Use	37
Existing Facilities	47
Amistad Recreation Area Sites and Facilities	47
Adjacent Visitor Facilities and Services	52
Cultural Resources	55
Significance of Archeological and Historical Resources	55
Distribution of Sites	56
Historic Sites	58
Threats to Cultural Resources	58
Current Preservation/Protection Methods	59
Compliance Requirements	60
Natural Resources	60
Landownership	63
Regional Land Use	64
Adjacent Uses	64
Regional Recreational Activities	65
Regional Socioeconomic Characteristics	67
FINDING OF NO SIGNIFICANT IMPACT	69
APPENDIXES	
A: Water Treaty, Legislation, and IBWC/NPS Agreement	72
B: Road System Evaluation	87
C: Plan Summary Description, Phasing, Staffing Requirements, Equipment Needs, and Visitor Capacity of Developed Areas	93
BIBLIOGRAPHY	101
LIST OF PREPARERS AND CONSULTANTS	103

ILLUSTRATIONS

Region	2
Existing Conditions	7
Management Zoning	13
General Development	17
Development Concept, Diablo West (East)	20
Development Concept, Rough Canyon	21
Development Concept, Diablo East Vicinity	25
Road System Evaluation	91

TABLES

1. Important Water Levels	4
2. Amistad Reservoir Elevations	36
3. Water Level on June 1	38
4. Number of Visits	38
5. Number of Boats	38
6. Number of Campers	38
7. Amistad Recreation Area Visitation	39
8. Visitation by Month, January 1979-December 1984	41
9. Boat Launchings by Month, January 1979-December 1984	42
10. Number of Campers by Month, January 1979-December 1984	42
11. Average Annual Visits by Developed Area 1980-1984	43
12. Boat Launching by Selected Development Areas	44
13. Average Number of Campers by Developed Area, 1981-1984	46
14. Amistad Recreation Area Visitor Facilities and Activities	53
15. National Register Sites/Districts Within or Adjacent to Amistad Recreation Area	57
16. Other Sites Potentially Eligible for National Register of Historic Places	58
17. Water Quality Factors, 1978-1981	61
18. Area Communities and Distance from Amistad Recreation Area	67
19. Road System Evaluation	88
20. Elements of the Plan	93
21. Phasing of the Plan	97
22. Total Staffing Requirements of the Plan, Permanent and (Temporary)	99
23. Additional Equipment Needs for the Plan	99
24. Visitor Capacity of Developed Areas, (based on momentary use of limiting facility at developed site)	100

PURPOSE AND NEED FOR PLAN

INTRODUCTION

This document describes the general management plan/development concept plan (GMP/DCP) for Amistad Recreation Area. The plan also includes a road system evaluation. The plan guides future management, use, and development of the recreation area and is the basis for future more detailed planning and design documents.

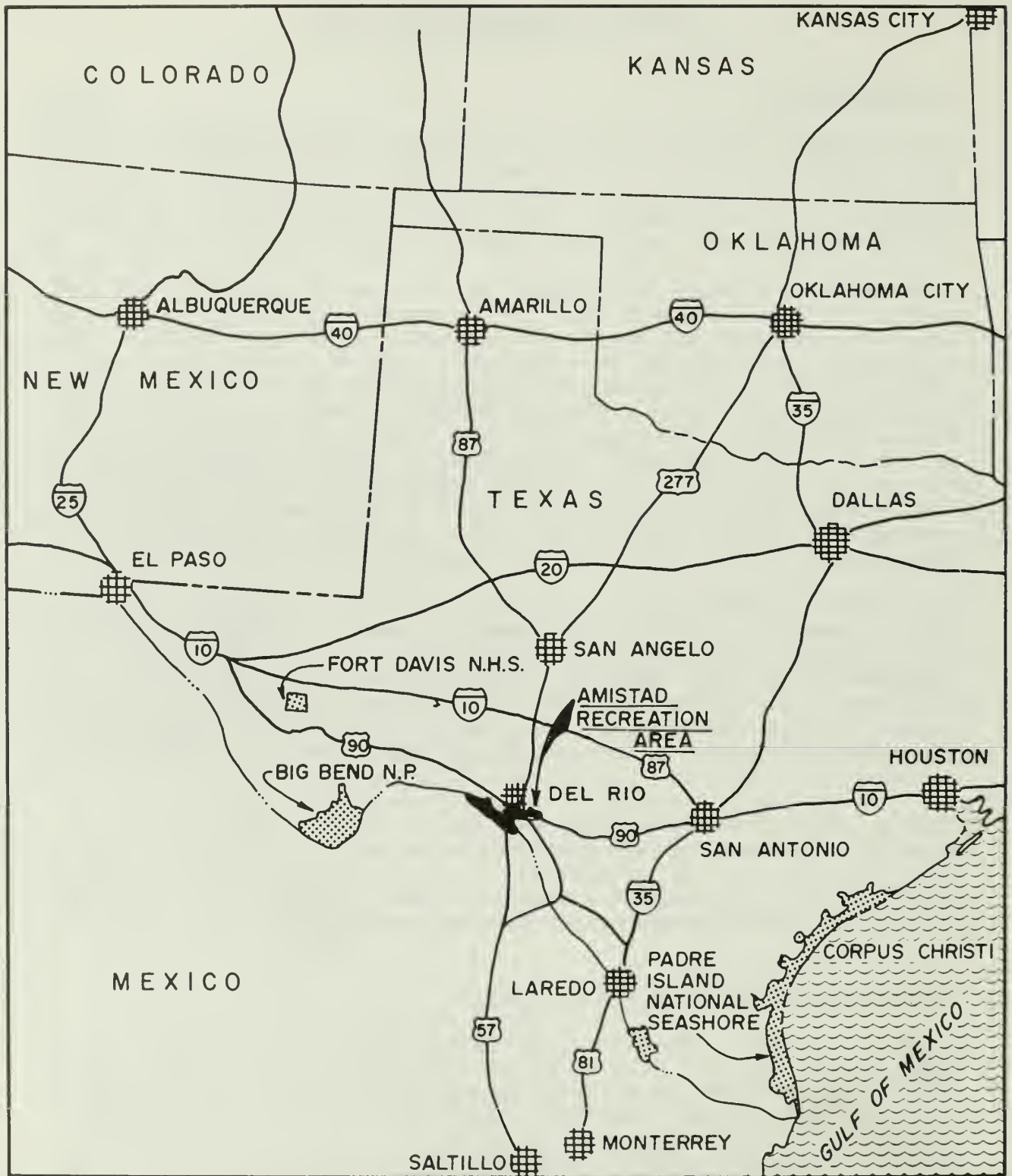
This GMP/DCP updates the Master Plan that was prepared in 1968 and revised in 1973. Although much of the master plan is still relevant, it does not adequately address current use patterns, facility conditions, and development needs. That plan selected 10 sites for recreational facilities. Developments 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 this is 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--recreation area land use, resource protection, research needs, visitor activities, interpretation, 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, Special Directive 83-3 "Accessibility for Disabled Persons," and other applicable laws, regulations, and policies.

Several alternatives were considered before selection of this plan; the impacts of implementing this plan as well as the impacts of the various alternatives were also considered and are delineated in the Draft GMP/DCP/EA (environmental assessment) dated February 1986; reference to that document is recommended if more detailed information is desired.

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 1963-1969. 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,



REGIONAL MAP

SCALE 0 50 100 200 300 MILES



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 other sites potentially eligible for listing on the National Register of Historic Places.

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, relevant to planning, are shown in table 1.

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

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
	1,078'	May 1986--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.

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 warrant continued operation.

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 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.

Private landowners and developers of subdivisions that are adjacent to the recreation area ask for more and better accesses to the water, including walkways, launch ramps, and docks on recreation area lands and waters. Allowing such access 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 and some visitors are unaware of hazards, activities, recreation area attractions, or rules.

Management

Amistad Recreation Area does not have the benefit of an act of Congress for management responsibility to protect, preserve, maintain, and administer significant natural and cultural resources.

Presently Amistad's operating authority--the 1965 memorandum of agreement between the United States Section of the International Boundary and Water Commission and the National Park Service--allows the Park Service to administer its federal lands and water surface, provide recreational facilities, and supervise uses. The significant cultural resources are not adequately recognized, and there is no specific guidance for land use, natural and cultural resource protection, research needs, visitor activities, interpretation, operations, or development; this can only be rectified by congressional mandate.

The memorandum of agreement has no provision for entering into cooperative agreements with landowners adjacent to but outside the boundary for conducting archeological surveys and protecting, preserving, and interpreting the cultural resources found there.

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

Recreation area 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 recreation area staff and a situation that adds to operating costs.

The waters of Amistad Reservoir are shared with Mexico. At the 1,117-foot conservation pool level, 21,750 acres of the 67,000-acre total are in Mexico. 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 recreation area lands with utility lines; this would impair the land and the visual scene.

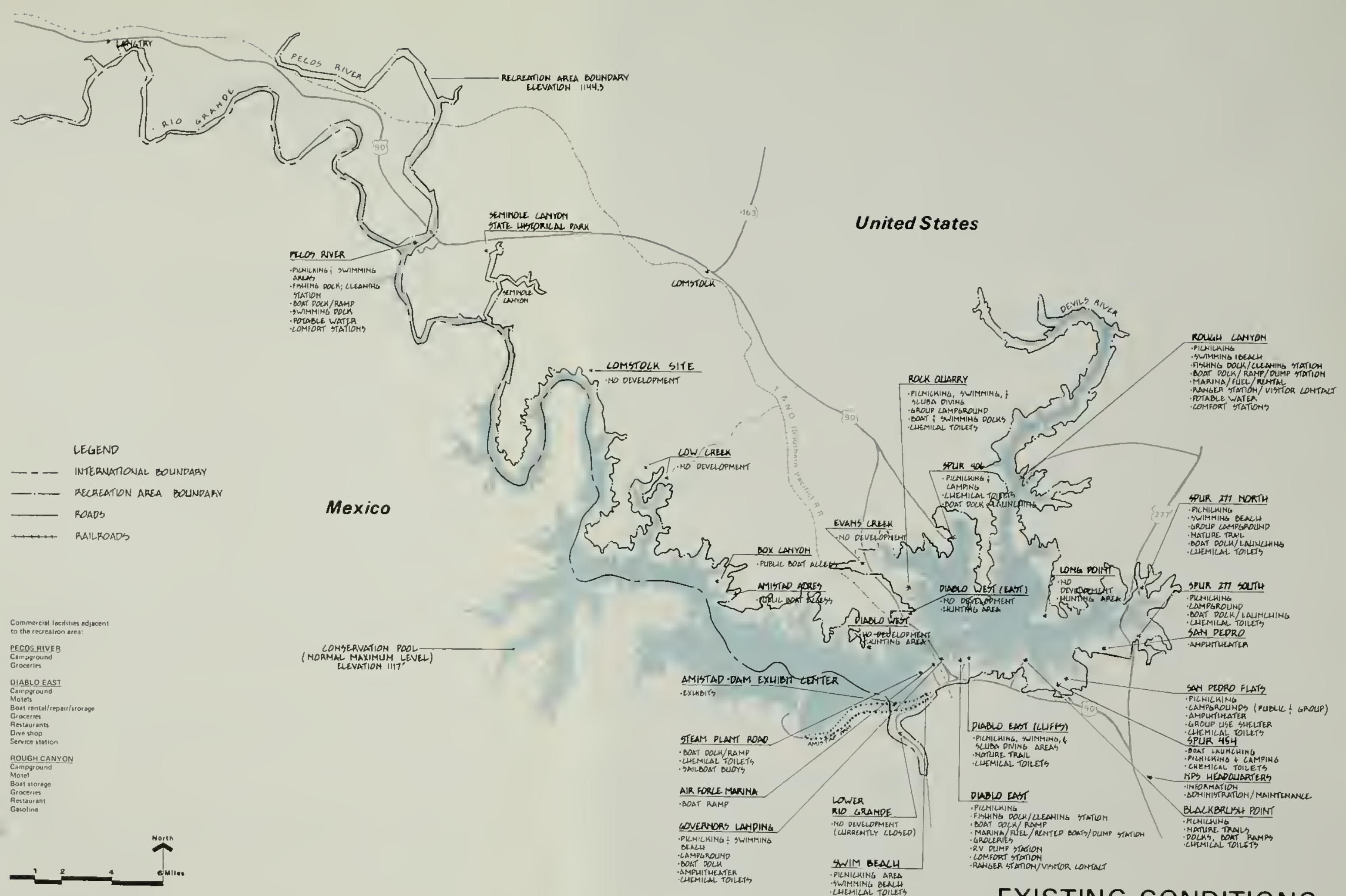
Resource Management

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 the resources are being degraded. Also, many sites are subject to submersion by reservoir waters during high waters.



EXISTING CONDITIONS AMISTAD RECREATION AREA

DATES DEPARTMENT OF THE INTERIOR / NATIONAL PARK SERVICE



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 scuba 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.

THE PLAN

CONCEPT

Visitor use and resource management concepts for Amistad Recreation Area can be divided naturally into zones based on 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 prehistoric pictograph and shelter sites; they thus best support a use that is lower density, such as slower-speed boating, fishing, boat-in camping, photography, and interpretation of 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 low density and intensive visitor use.

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. An area near Diablo East affords the most suitable area for 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.

Central to the plan are questions about the probable future visitation to the recreation area and the likely water level. These two factors were taken into consideration.

The plan will involve relocating some existing development to a site above the maximum water level and adding new lake accesses; these actions are efficient and cost-effective. Visitor capacity will be moderately increased and the protection of significant archeological resources will be greatly enhanced. The plan provides for potential cooperation with the private sector to develop a facility at Cow Creek, which would allow better access to this scenic section.

All visitor use and resource management concepts will provide for the needs of disabled persons wherever practicable.

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:

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.

Development Zone. This zone will encompass areas of substantial recreation area development such as buildings, campgrounds, launch ramps, and 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.

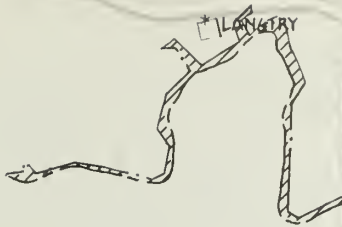
Historic Zone. This zone will include significant cultural resource sites for preservation management. (These sites are not on the Management Zoning map because of potential vandalism. The site locations are available to qualified professionals by contacting the recreation area superintendent. Sites may be added or deleted following surveys and evaluations.)

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

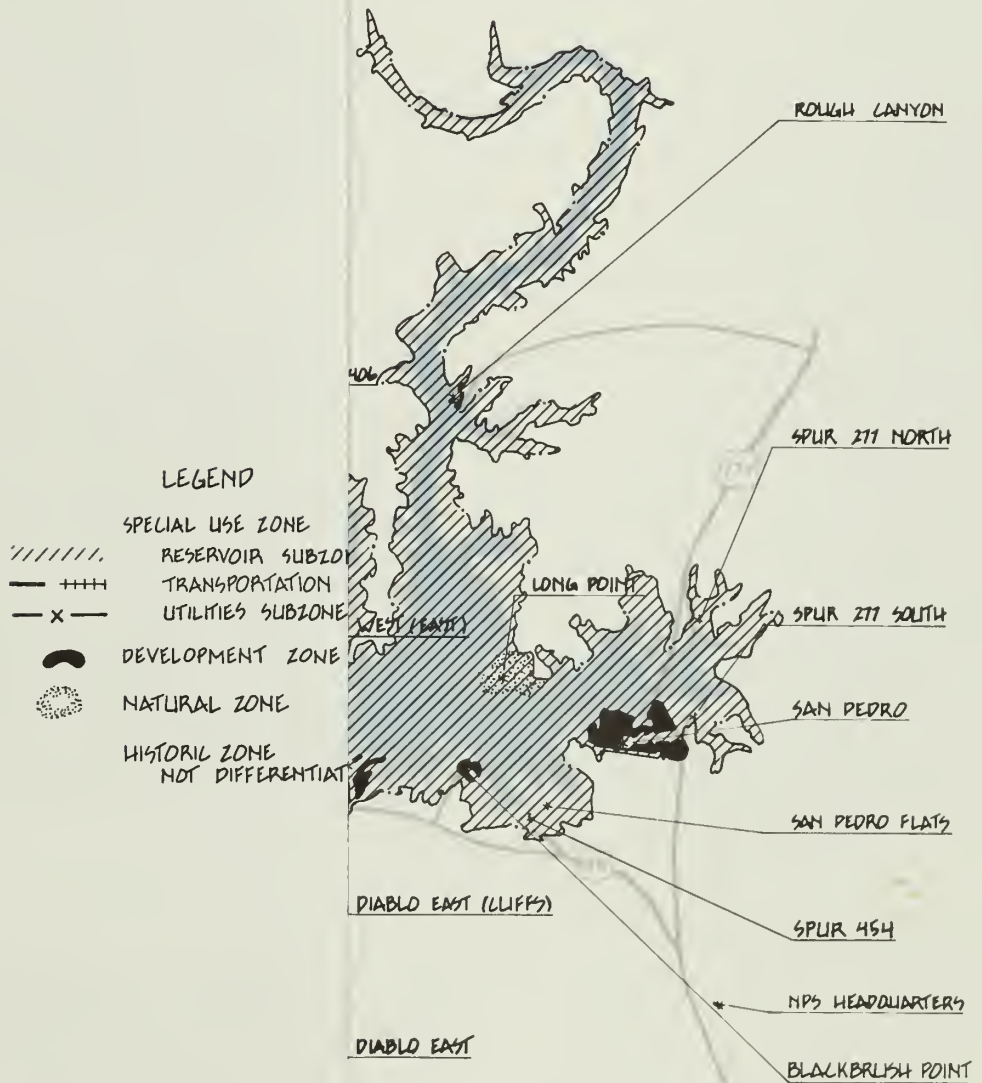
The recreation area will continue to provide for present uses (boating, fishing, swimming, camping, picnicking, scuba diving, and hunting) and will accommodate new recreational activities when they are compatible with



MANAGEMENT ZONING MISTAD RECREATION AREA

DEPARTMENT OF THE INTERIOR/NATIONAL PARK SERVICE

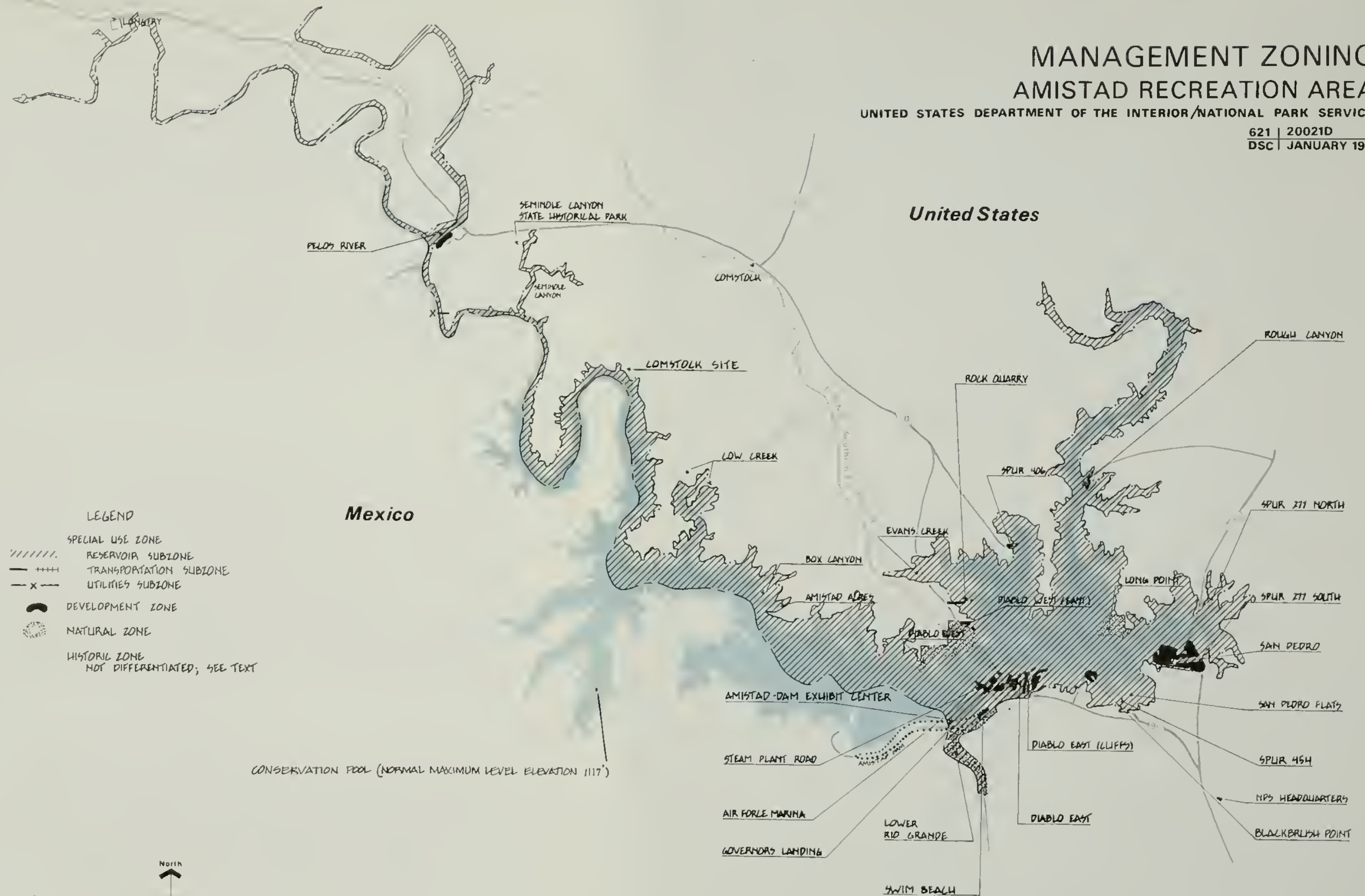
621 | 20021D
DSC | JANUARY 1987



MANAGEMENT ZONING AMISTAD RECREATION AREA

UNITED STATES DEPARTMENT OF THE INTERIOR/NATIONAL PARK SERVICE

621 | 20021D
DSC | JANUARY 1987



existing uses and are within staff capabilities--including volunteers--to manage effectively.

During the life of this plan, 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, recreation area management will set aside areas that are specially adapted for certain uses including scuba diving, archeological preservation, 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 recreation area's emergency operations plan will include measures to ensure visitor safety. Developments placed below the 100-year flood level of 1,140 feet will be designed to withstand occasional flooding. The basic NPS policy for floodplains and high-hazard areas (flash-flood areas) is to avoid having developments that would be within the 100-year floodplain whenever there is a practicable alternative and to prohibit the development of structures in which humans might seek shelter in potential flash-flood areas. Warning signs will be posted in flood-hazard areas and along sections of trails that could be subjected to flash flooding. Facilities and structures will be marked with flood heights. In addition, detection and communication capabilities will be implemented, evacuation strategies will be developed, and provisions will be made for emergency water and sewer service or temporarily closing areas and deactivating utilities.

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 nongroup primitive camping (the kind provided at most Amistad Recreation Area campgrounds). Fees are collected for special events such as tournaments and boat races and for group camping. 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

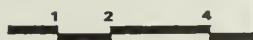
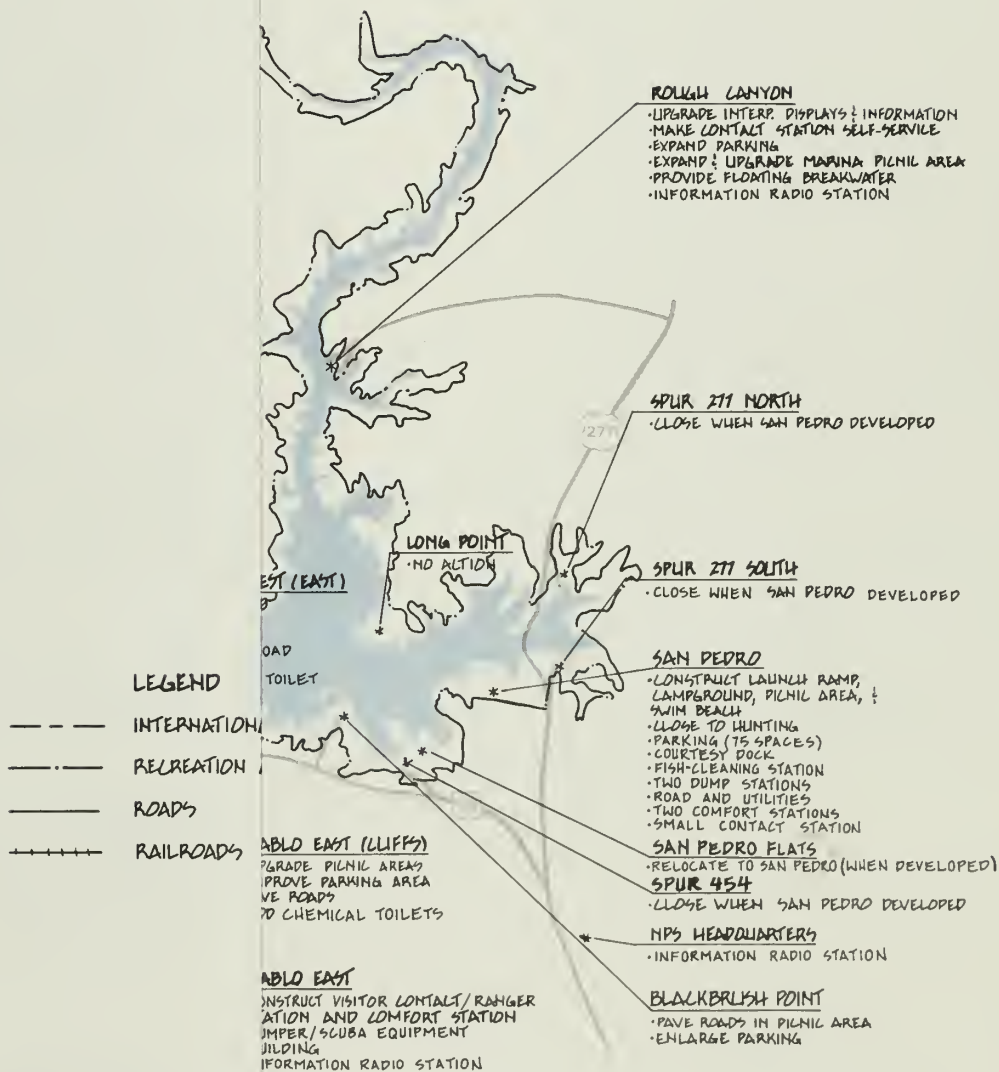
- responding to the need for cost-effective management and development

- 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 follow.

Langtry. No action.

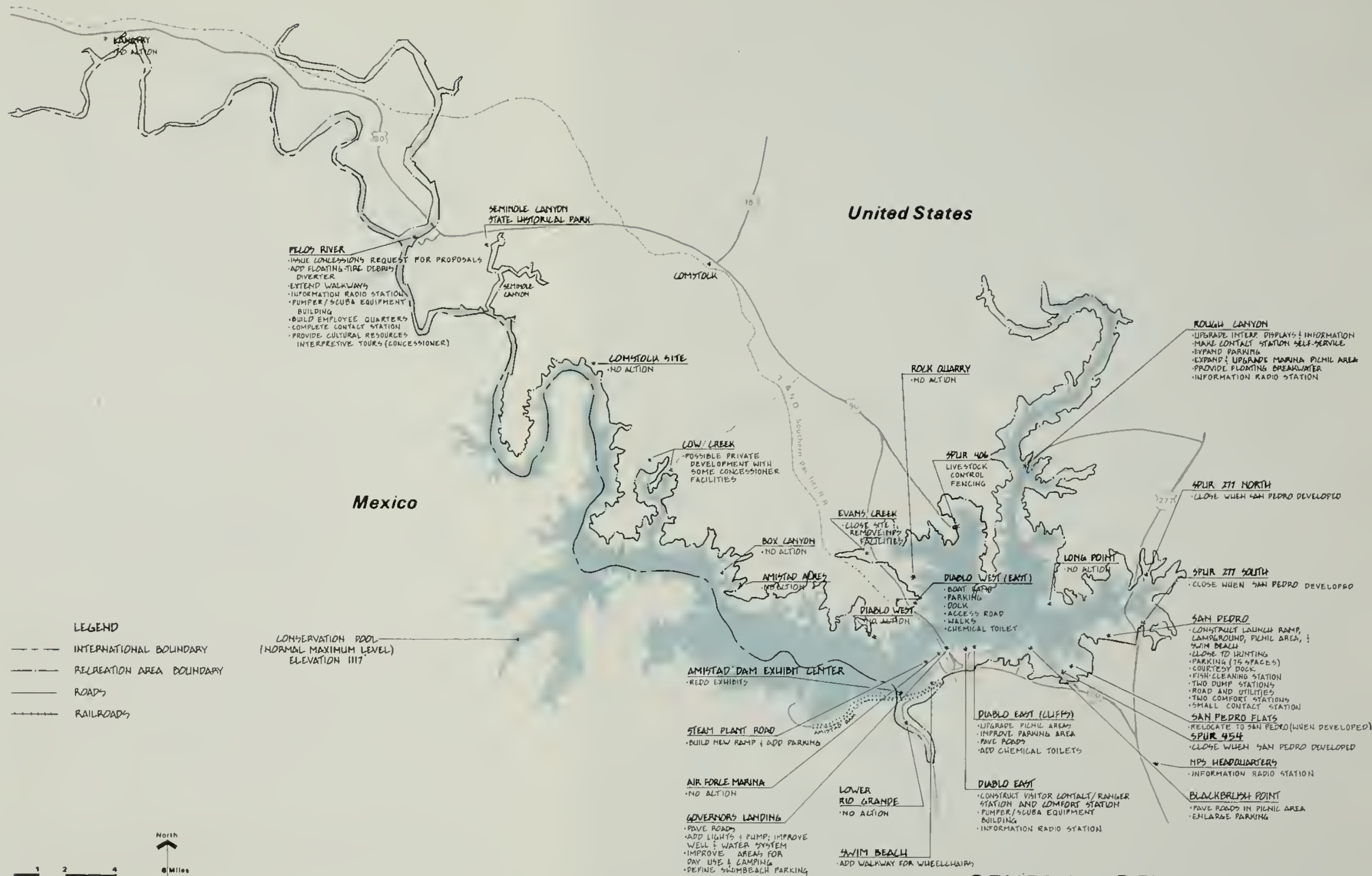
Pecos River. The 1975 Development Concept Plan (DCP) for this site is being implemented. Completed elements include the boat launch ramp, parking area, interpretive shelter, fish cleaning station, and comfort station. Yet to be completed are a visitor contact/ranger station (required to provide a meeting point between the National Park Service and recreation area 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 provides access to a flooded stream that still develops a current, during higher flow volumes, causing debris to collect in the eddy caused by the launch ramp), extension of walkways (to provide a safe route over boulders to low water), a pumper and scuba equipment building, a travelers' information and radio station, and a presentation about cultural resources at the launch ramp (to enhance awareness of the importance of these cultural resources as well as the need to preserve them). All facilities except the launch ramp, walkways, and docks will be above the maximum water level of 1,144.3 feet.



621 | 20020E

DSC | JANUARY 1987ES DEPARTMENT OF THE INTERIOR / NATIONAL PARK SERVICE

GENERAL DEVELOPMENT MISTAD RECREATION AREA



621 | 20020E
DSC | JANUARY 1987

GENERAL DEVELOPMENT AMISTAD RECREATION AREA UNITED STATES DEPARTMENT OF THE INTERIOR / NATIONAL PARK SERVICE

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

Cow Creek. Development of this area would provide access to this isolated section of the reservoir and reduce the safety hazard during hazardous winds for boaters who would otherwise have to travel back to Diablo East. Except for on-water and launch ramp facilities, federal land is not available for development here; Cow Creek cannot be developed by anyone except the landowners/concessioner. At a minimum, the landowner/concessioner would have to provide a 7-mile access road from US 90 (the existing dirt road is private), parking, marina slips, and a boat fueling facility. The landowner/concessioner might also want to provide a boat launching ramp, a marina store/restaurant, additional parking, trash disposal and toilet facilities, or other facilities as long as the County Amistad Zoning Authority and state and federal requirements are met. If interest is demonstrated by the landowner/concessioner, an economic feasibility study will be conducted to determine viability before issuance of a prospectus. (The private access might later be turned over to the state as a public road.)

Amistad Acres and Box Canyon. No action.

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). A boat launch ramp and dock and access road 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. Chemical toilets and walks will also be provided.

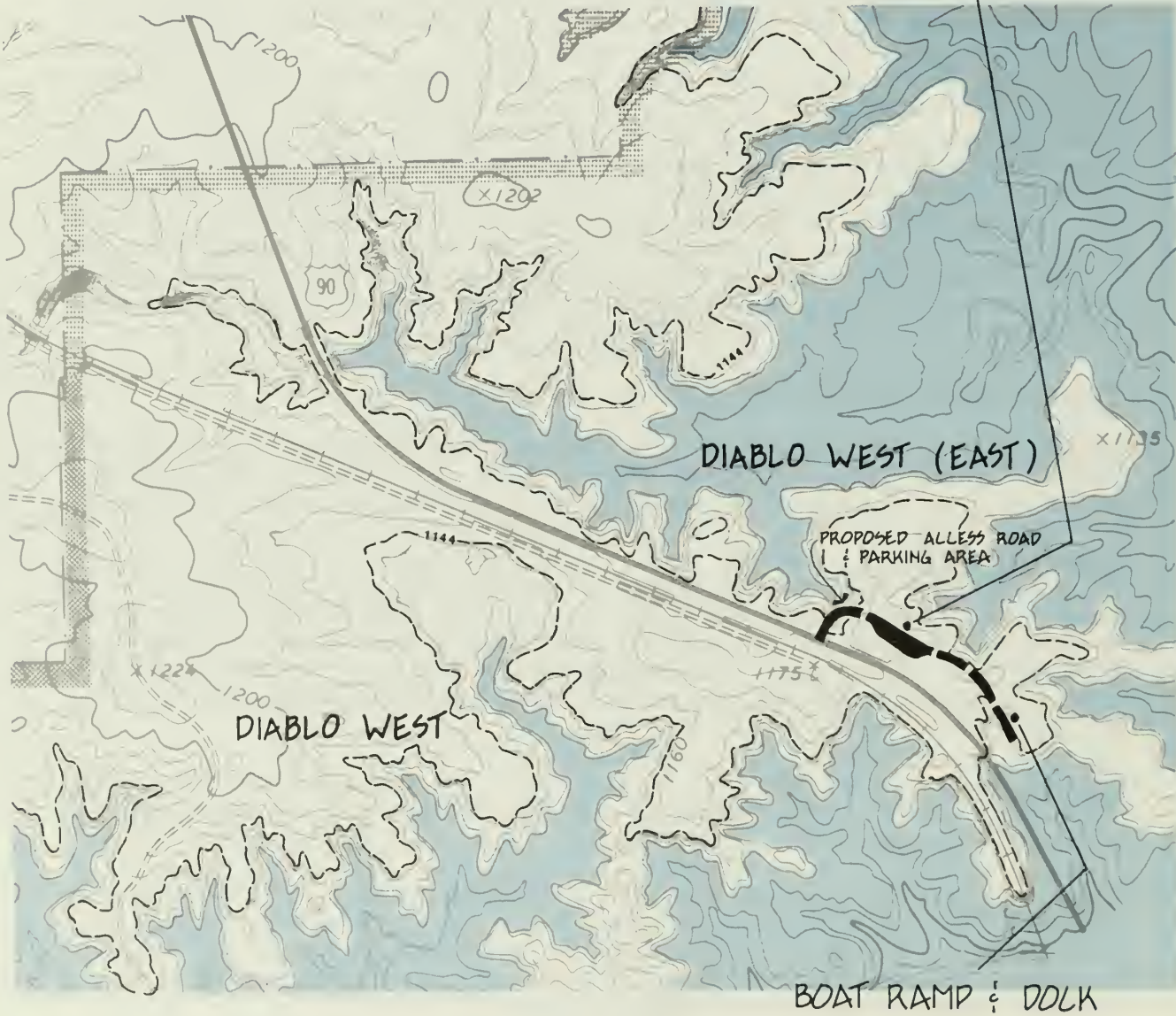
Rock Quarry. No action. No improvements are proposed for the nearby Rock Quarry site, which serves as a group campground and is adjacent to a swimming/scuba diving/fishing area.

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.

Spur 406. Livestock control fencing (4 miles) will be provided.

Rough Canyon. Most of the 1976 DCP for this site has been implemented. Planning for a floating breakwater will be pursued 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 even if NPS personnel are not present. To

PARKING - 20 CARS W/ TRAILER
• CHEMICAL TOILETS
• WALKS

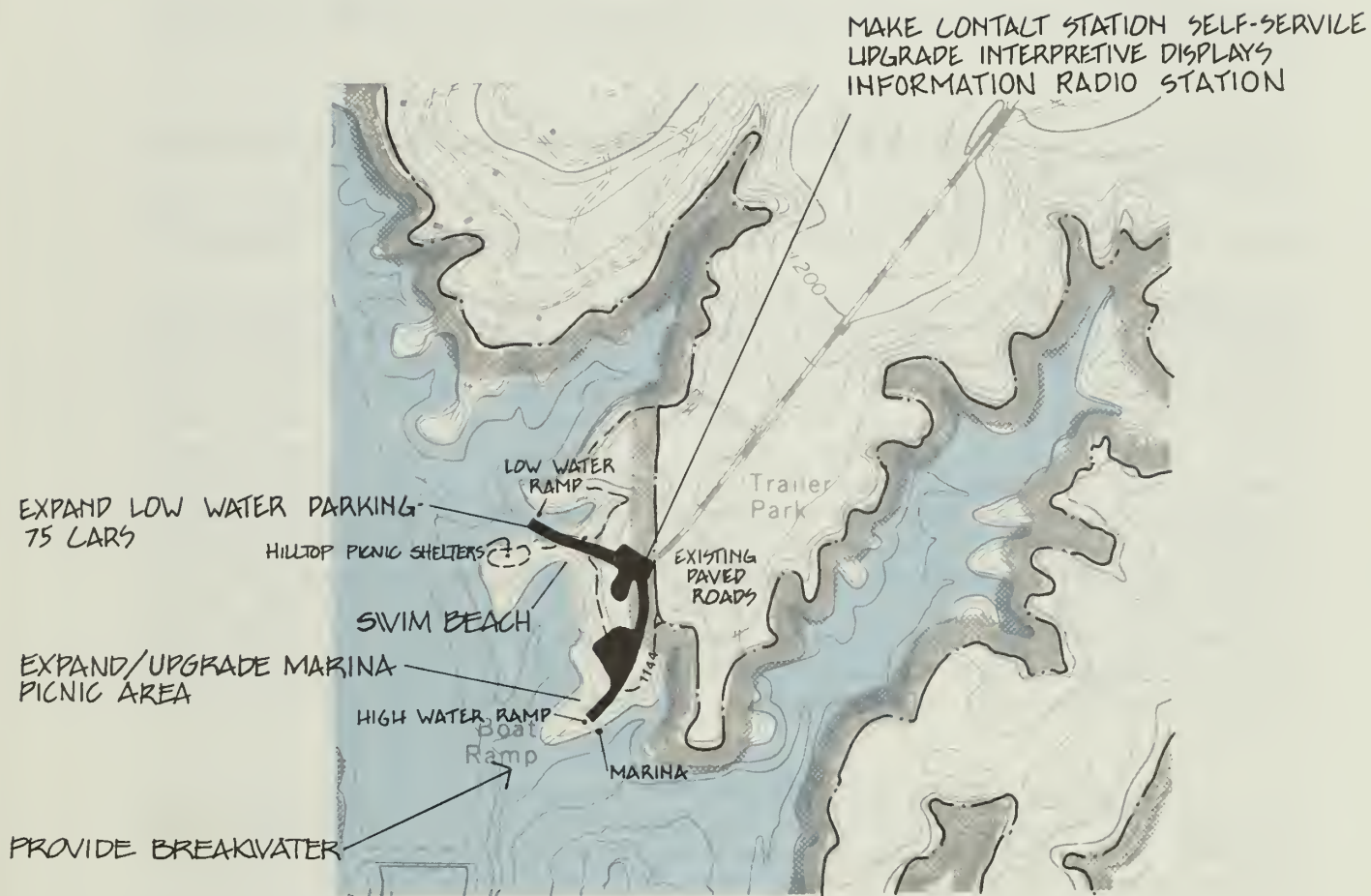


DEVELOPMENT CONCEPT DIABLO WEST (EAST) AMISTAD RECREATION AREA

UNITED STATES DEPARTMENT OF THE INTERIOR / NATIONAL PARK SERVICE



621 | 20027C
DSC | JANUARY 1987



ROUGH CANYON

DEVELOPMENT CONCEPT ROUGH CANYON AMISTAD RECREATION AREA

UNITED STATES DEPARTMENT OF THE INTERIOR / NATIONAL PARK SERVICE



621 | 20026D
DSC | JANUARY 1987

better provide for peak use periods, planning will be undertaken to expand the present rough-graded parking area for 35-40 additional cars with boat trailers, the marina picnic area will be expanded and upgraded, and a radio information station will be installed. Staff housing is being maintained at this remote site, where resident personnel provide protection to visitors, 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 (see below).

Spur 277 South. This site will be closed when San Pedro is developed.

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 ramp (potentially able to reach the 1,080-foot level), 75 parking spaces, campground, picnic area, swim beach, a courtesy dock, fish-cleaning station, two dump stations (one for RVs and one for houseboats), two comfort stations, a small contact station, 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. The new site can be developed more effectively and managed more efficiently than the sites it will replace.

San Pedro Flats. This area is in the 100-year flood zone but is far from the shoreline during low water. Functions here will be relocated to new facilities to be built at the future San Pedro site, which is above the maximum water level and has a more desirable gradient for shoreline proximity.

Spur 454. This site will be closed when San Pedro is developed.

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.

Recreation Area Headquarters/Maintenance Facility. The main operational facility will remain at the present site. An information radio station will also be provided.

Diablo East. A final environmental impact statement for the Diablo East DCP was approved in 1973; most facilities proposed therein have been installed. This plan includes a handicapped-accessible permanent visitor contact/ranger station with a comfort station (to replace two trailers), a pumper/scuba equipment building, and provision of an information radio station. Marina expansion 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 the 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 installing chemical toilets, and paving access roads, picnic area road loops, and parking area. 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 for swimming by this visitor group. Toilets will also be handicapped-accessible. This area is almost entirely below 1,140 feet.

Lower Rio Grande. No change.

Governors Landing. A major expansion of this popular camping/picnicking/swimming area is not possible here. The developable land here has already been developed. 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 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.

Amistad Dam Exhibit Center. Exhibits here will be redone with additional information, and the center will be staffed until the Diablo East visitor contact/ranger station is operational.

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 B.

Factors other than design criteria 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.

Any new borrow pits in the recreation area 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 a 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

When the National Park Service determines that developed sites designated by this GMP are not sufficient to accommodate visitation, it will consider additional public access. This would require a written request, submittal of drawings, and approval by the regional director before any new development could be provided.

General criteria for pedestrian accesses and launch ramps:

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.

GOVERNORS LANDING

IMPROVE SWIM BEACH

- DEFINE PARKING
- ADD LIGHTS

IMPROVE PICNIC/LAMPING 'ARTS

- PAVE LOOP ROADS
- IMPROVE WELL & WATER SYSTEM

PARKING AREA

WIDE PICNIC AREA

BLACKBRUSH POINT

Boat Ramps

ENLARGE PARKING

Picnic Area PAVE ROADS

Picnic Area

Boat Ramp

Air Field

EXISTING RAMP

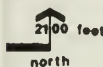
STEAM PLANT ROAD

SWIM BEACH

- BUILD HANDICAPPED ACCESS

DEVELOPMENT CONCEPT DIABLO EAST VICINITY AMISTAD RECREATION AREA

DEPARTMENT OF THE INTERIOR / NATIONAL PARK SERVICE



621 20025C
DSC JANUARY 1987

GOVERNORS LANDING

IMPROVE SWIM BEACH

- DEFINE PARKING
- ADD LIGHTS

IMPROVE PICNIC/LAMPING AREA

- PAVE LOOP ROADS
- IMPROVE WELL & WATER SYSTEM

CONSTRUCT VISITOR CONTACT/RANGER STATION

- ADD PERMANENT COMFORT STATION
- INFORMATION RADIO STATION

IMPROVE PARKING AREA

- CHEMICAL TOILETS

UPGRADE PICNIC AREA

BLACKBRUSH POINT

Boat Ramps

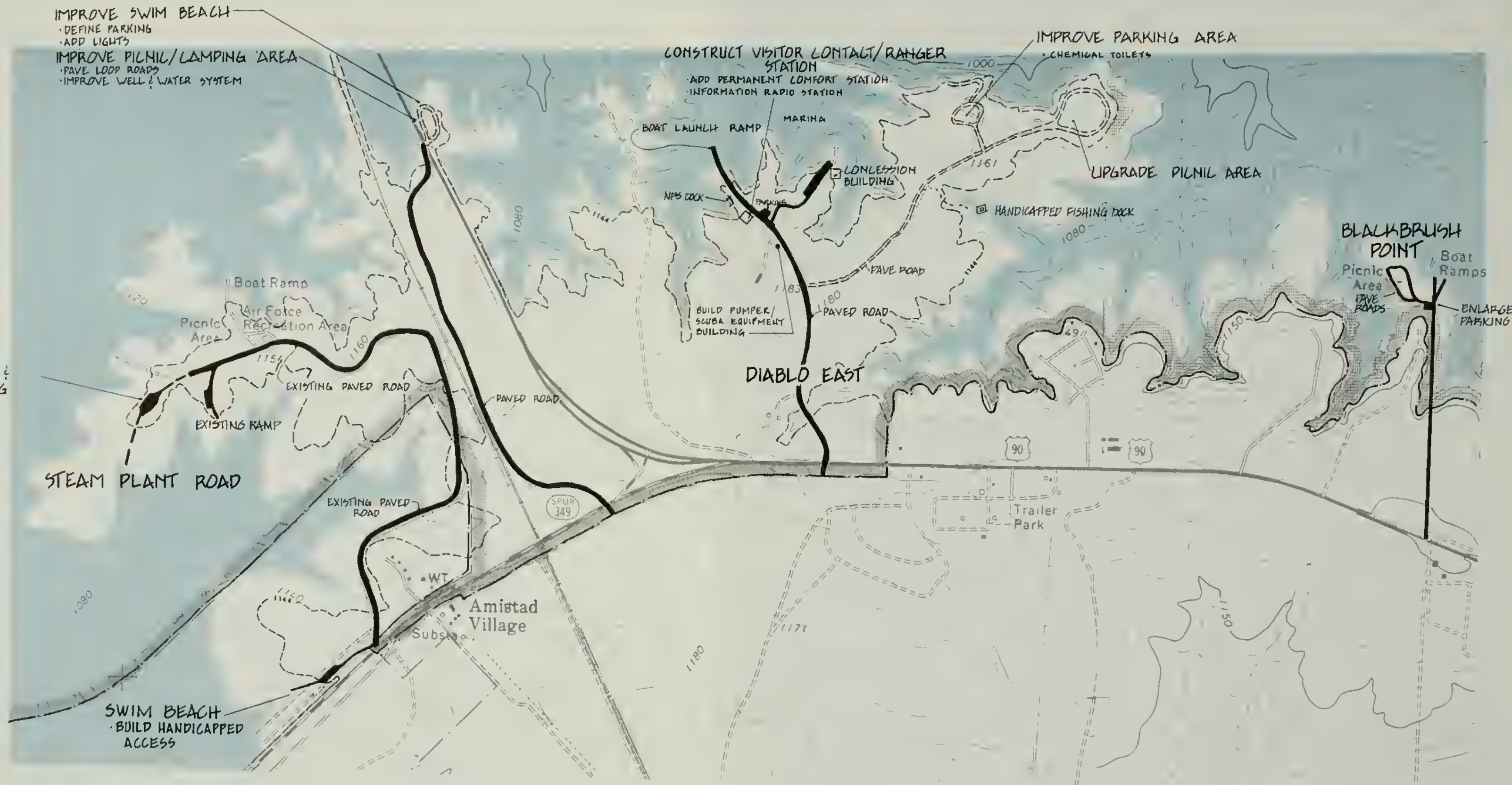
ENLARGE PARKING

BUILD RAMP & ADD PARKING

STEAM PLANT ROAD

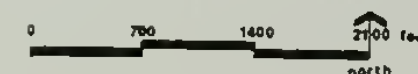
SWIM BEACH

- BUILD HANDICAPPED ACCESS



DEVELOPMENT CONCEPT DIABLO EAST VICINITY AMISTAD RECREATION AREA

UNITED STATES DEPARTMENT OF THE INTERIOR / NATIONAL PARK SERVICE



621 | 20025C
DSC | JANUARY 1987

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 general public.

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.

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 considered when the residents of at least 25 housing units agree to the above-stated conditions.

Parking will be provided on private land and at the expense of the private landowner.

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

Additional criteria for pedestrian accesses are as follows:

Permission to construct a walk or stairway will be considered 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. 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.

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/radio station for visitor 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. However, several prehistoric themes for the archeological resources will be defined.

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 recreation area.

Additional signing will be provided in the recreation area, including bulletin boards with updated area maps, to better inform visitors of activities and procedures, the need to protect the archeological resources, and the legal requirements of the Archeological Resources Protection Act of 1979.

The recreation area's "Interpretive Prospectus" will be rewritten to reflect 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. Recreation area personnel will continue to intermittently staff the facility until the visitor contact station at Diablo East is completed.

CULTURAL RESOURCE MANAGEMENT

The National Park Service is the leading federal agency with the primary mission and goal to preserve and protect America's historic and cultural resources. The National Historic Preservation Act, the Archeological Resources Protection Act, the National Environmental Policy Act, Executive Order 11593, and their implementing regulations provide the laws for carrying out this mission and goal. The Park Service assumed protection responsibilities for the cultural resources at Amistad under the cooperative agreement between the Park Service and the IBWC. These resources include those on federal lands within the recreation area and those on adjacent nonfederal lands that may be affected by actions of the National Park Service or recreation area visitors. The plan outlines how the Park Service intends to comply with these laws and provide full protection for these resources.

A "Resources Management Plan and Environmental Assessment," approved in December 1982, delineates projects needed to protect and preserve the cultural resources of the recreation area and the necessary funding and staffing for their accomplishment. 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.

The "Resources Management Plan and Environmental Assessment" (NPS 1982) will be revised to include actions in this GMP, including hiring two archeologists and the use of signing, fencing, and other alternative methods for site protection. Prioritization for projects in the resources management plan and in this GMP will be as follows (funding will be sought according to this prioritization):

1. Addition of two archeologists to the staff.
2. Protection of archeological sites (AMIS-C1).
3. Preservation of rock art (AMIS-C3).
4. Development of signing program.

5. Implementation of fencing and/or other methods of physical protection.
6. Preservation of archeological artifacts and human skeletal remains (AMIS-C2).
7. Preservation of historic resources (AMIS-C4).
8. Ethnographic overview/assessment.

These projects will be accomplished by the archeological staff or through contracts. Projects will be implemented as soon as funding is received.

A cultural resources management program for Amistad was initiated in 1973, with the archeological survey of most of the sites that were proposed for development. In 1974 an archeological assessment for the recreation area 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 area is needed. 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. A brochure that informs visitors about protecting archeological sites was also developed by the staff. The information sheet on backcountry camping contains a statement explaining why campers should not dig holes for building campfires or burying garbage, which may curb inadvertent damage to archeological sites. The interpretive program will emphasize the provisions of the Archeological Resources Protection Act of 1979. Camping will be prohibited in significant archeological sites.

Signs will be placed at appropriate places throughout the recreation area 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. To mitigate vandalism, the recreation area staff will actively enforce the Archeological Resources Protection Act of 1979; they will receive training in enforcement of this 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.

Funding will be sought for two staff archeologists. These employees will assist the interpretive staff in program design, develop barrier designs, implement site protection methods, and conduct small-scale surveys and evaluations. They will also identify known National Register significant

sites (see table 15 in "Recreation Area 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 to prevent impacts from visitor use. The success of these methods will be monitored and evaluated.

Funds will also be sought as soon as possible to conduct a comprehensive survey of archeological resources. The work will be accomplished by contract or by the staff archeologists. This survey would locate, identify, and evaluate all sites within and immediately adjacent to 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 will describe the kinds, chronology, significance, state of preservation, and anticipated impacts of the resources located. The report will provide information for prioritizing projects to deal with impacts through a preservation program. Protection, mitigation, recordation, and other appropriate preservation methods will be decided for each site listed or eligible for listing on the National Register of Historic Places. The Servicewide Cultural Resources Preservation program will be the source of funding for these projects unless another funding source is available.

An ethnographic overview/assessment will be done to identify any native American Indian groups for National Environment Protection Act mandated public involvement and to determine whether or not an ethnographic field study is needed for Amistad. If warranted, the field study would acquire data on traditional and present-day uses of the recreation area resources by native American Indians.

The Park Service will seek Amistad's official designation as a national recreation area by congressional legislation, with support from the state of Texas and its congressional delegation, to aid in protecting and preserving Amistad's cultural resources and those resources outside the present NPS boundary currently being impacted by visitor use. The legislation will authorize the National Park Service to develop and enter into cooperative agreements with individuals and organizations to assist the Park Service in conducting archeological surveys and for providing protection, preservation, and interpretation of the adjacent cultural resources. Further, if such cooperative agreements cannot be obtained from an adjacent landowner, the Park Service may recommend and pursue--as a last resort--minor boundary adjustments (not to exceed a total of 1,000 acres) to ensure, under NPS ownership, the protection, preservation, and interpretation of these significant cultural resources and to conduct archeological surveys.

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, the 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.

No boundary adjustments are currently recommended. However, the Park Service will seek authority to make minor boundary adjustments to protect significant cultural resources where needed. The existing boundary will be marked, where feasible, 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 to be 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 recreation area 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. 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.

The launch ramps in this plan will be constructed sooner than other facilities if/when lower reservoir levels provide the best opportunities, especially for the San Pedro ramp. Bottom elevations for the ramps are the potentials that appear attainable from map inspection; field verifications of these potential levels will be required during design. A contingency fund to provide money for extending NPS boat ramps during low water levels will be established.

A site-by-site summarized description of the plan and the development cost and phasing, personnel required, and major equipment needed for the plan are shown in the appendix C.

RECOMMENDATION FOR NATIONAL RECREATION AREA STATUS

To aid in protecting and preserving Amistad's natural and significant cultural resources, this plan recommends that Amistad Recreation Area be designated as a national recreation area.

Amistad Lake is the third largest international man-made lake in the world. It has been and will continue to be instrumental in developing and maintaining friendship between citizens of the United States and Mexico. "Amistad" means friendship in the Spanish language. Visitors have come to Amistad Lake from all 50 states and 43 foreign nations.

Amistad Recreation Area has important flora and fauna and scenic, scientific, and wildlife resources; it also has important geologic, ecologic, ethnographic, archeological, pictographic, historical, and recreational features. Because of these numerous and multipurpose resources, Amistad Recreation Area warrants national and international recognition.

It would be desirable for Congress to enact legislation establishing Amistad National Recreation Area (not to exceed approximately 58,292 acres). The legislation should provide for the conservation, preservation, and interpretation of these important natural and cultural resources and facilitate research activities associated with these resources within available funds. Such legislation should also authorize the Park Service to enter into cooperative agreements with adjacent landowners whose property contains significant cultural resources to protect, preserve, and interpret the resources and to conduct archeological surveys.

The legislation should also authorize the secretary of the interior to make minor boundary adjustments, not to exceed a total of 1,000 acres. Boundary changes will only be recommended as a last resort--when a cooperative agreement that will ensure the protection, preservation, and interpretation of the area's significant cultural resources cannot be obtained from the adjacent landowner. Any boundary adjustments will be limited to the minimum amount of land necessary to protect the significant resources.

The legislation should also continue to support the harmonious relationship between the National Park Service and United States Section of the IBWC pursuant to a November 11, 1965 memorandum of agreement (under the principles of multiple use stemming from the act of August 7, 1946 (60 stat. 885)), that authorized the National Park Service, through cooperative agreements, to administer recreation on lands under jurisdiction of other federal agencies. The legislation should emphasize continuing and improved cooperation and review of Amistad issues by all concerned, such as state and local agencies and interests and private landowners.

RECREATION AREA 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."

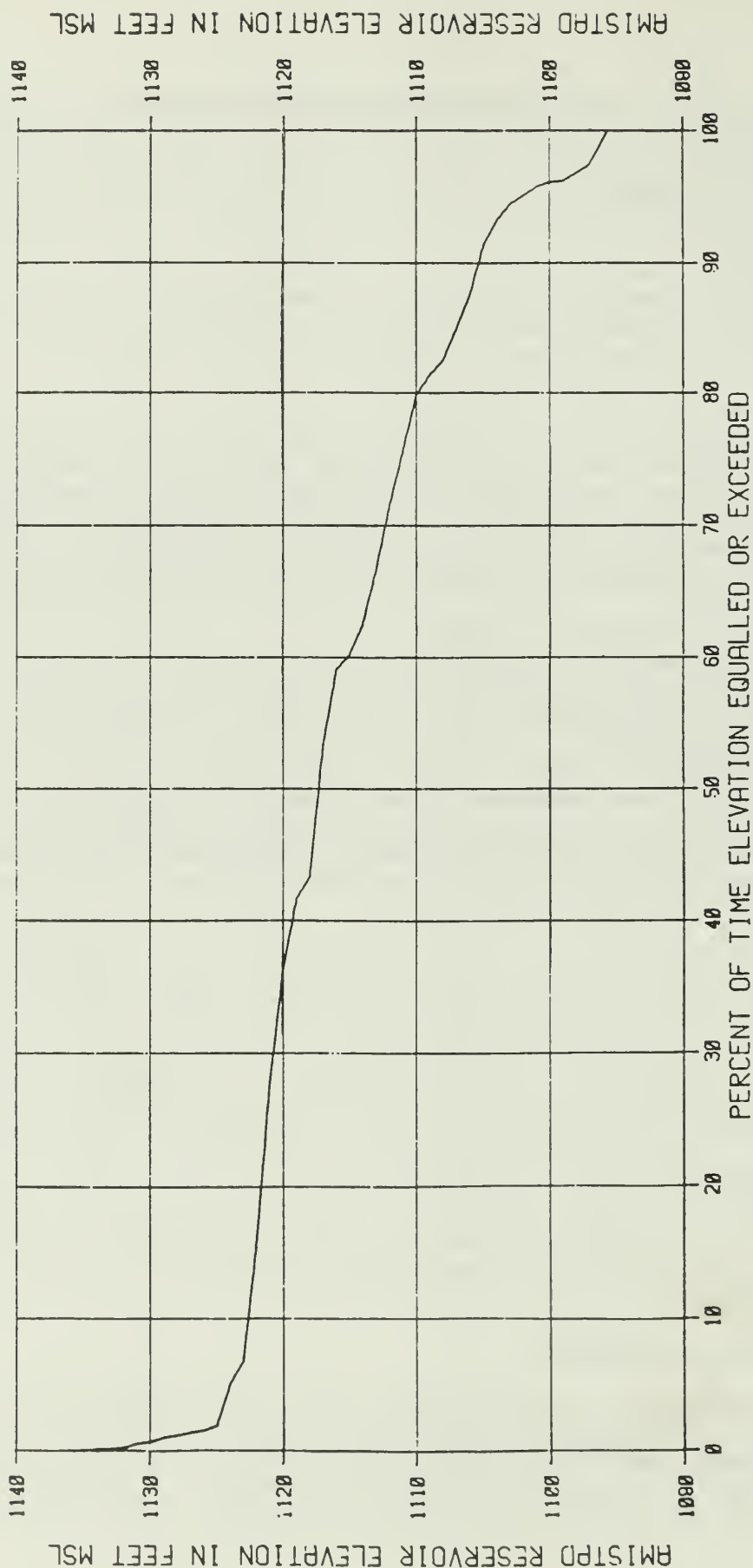
Public Law 86-605, in authorizing United States' participation in the Amistad project, refers to and in effect adopts the specifications described in a September 1958 report by the U.S. Section of the IBWC entitled "Rio Grande International Storage Dams Project: Proposed Diablo Dam and Reservoir," which 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

Table 2: Amistad Reservoir Elevations

AMISTAD RESERVOIR ELEVATION DURATION 1972-OCT. 1984



PLOTTED 12/21/1024 AT 13:26:22 HOURS

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

miles of shoreline. During brief periods of flood storage these dimensions are considerably greater. Reservoir operations result in levels below 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).

Table3: Water Level on June 1

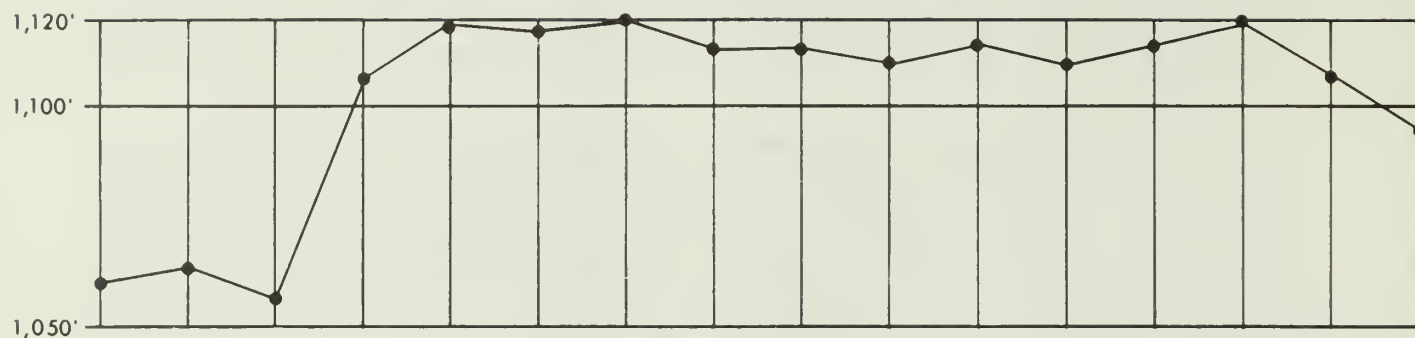


Table4: Number of Visits

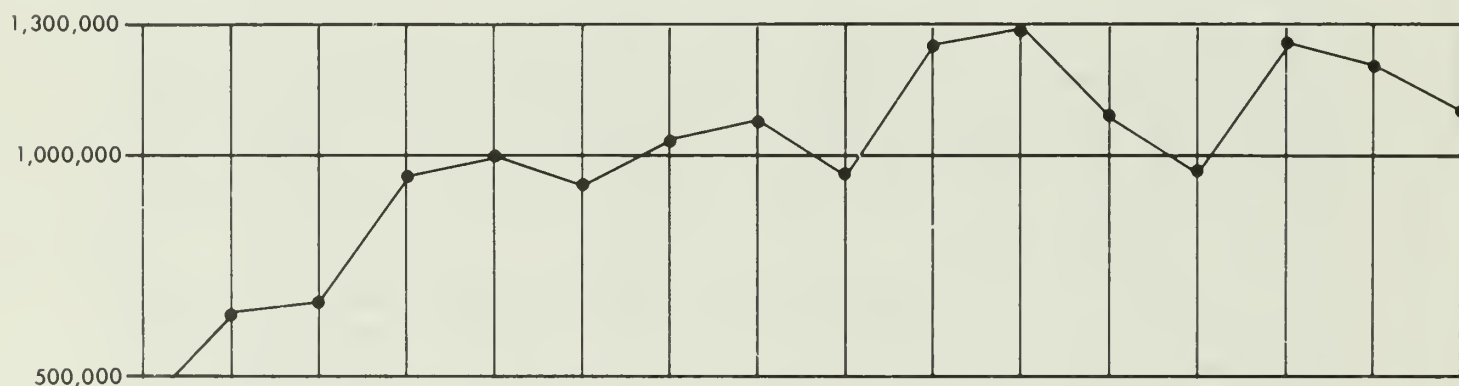


Table5: Number of Boats

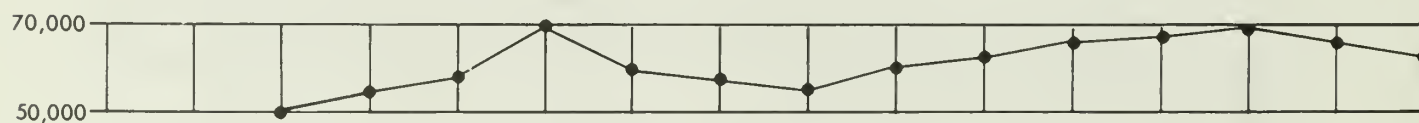


Table6: Number of Campers

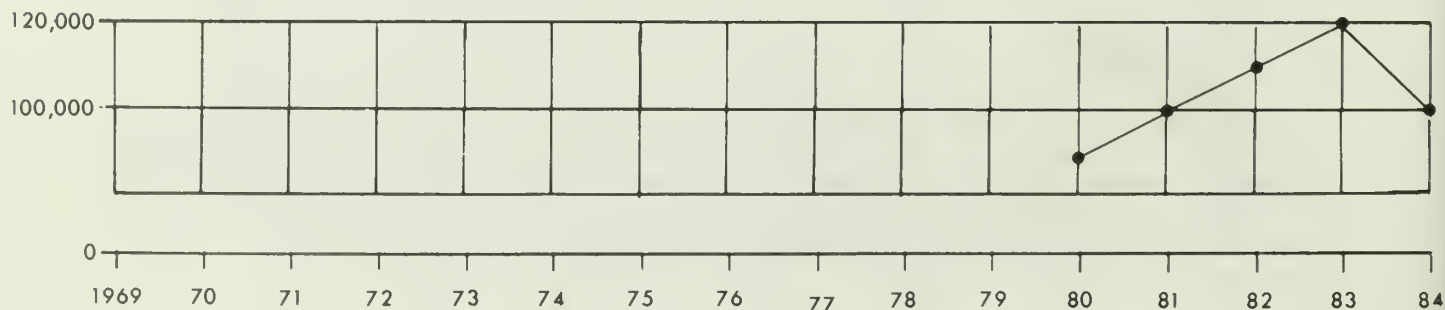


Table 7: Amistad Recreation Area Visitation

Total Visits 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	136,103	112,973	150,141	141,231	122,587	89,430	85,603	79,857	51,353	1,227,365
1984	53,859	87,791	121,603	141,942	121,941	149,081	119,283	100,332	90,809	73,990	58,483	46,340	1,165,454
Average	53,824	72,963	119,389	159,822	123,118	137,079	129,056	99,802	97,761	73,328	61,892	45,600	1,175,302

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

A visit is the entry of any person, except Park Service personnel, onto lands or waters administered by the National Park Service. Visits may occur as recreation visits or nonrecreation visits. Recreation visits are entries of persons for recreation purposes. Nonrecreation visits are entries by (a) persons going to and from inholdings, (b) through traffic, (c) trades-people with business in the recreation area, and (d) government personnel (other than Park Service employees) with business in the recreation area. Nonreportable visits are entries by Park Service employees, their families, concessioner employees, members of cooperating associations, and Park Service contractors. Visitation figures given in this document are the sum of recreation and nonrecreation visits, with the latter consisting of less than 1 percent to 1.6 percent of the totals given for the years 1979 through 1984.

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 and Pecos ranger stations, the 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 minimize the importance of this service. Off-site programs are provided upon request, and with the recreation area'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

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

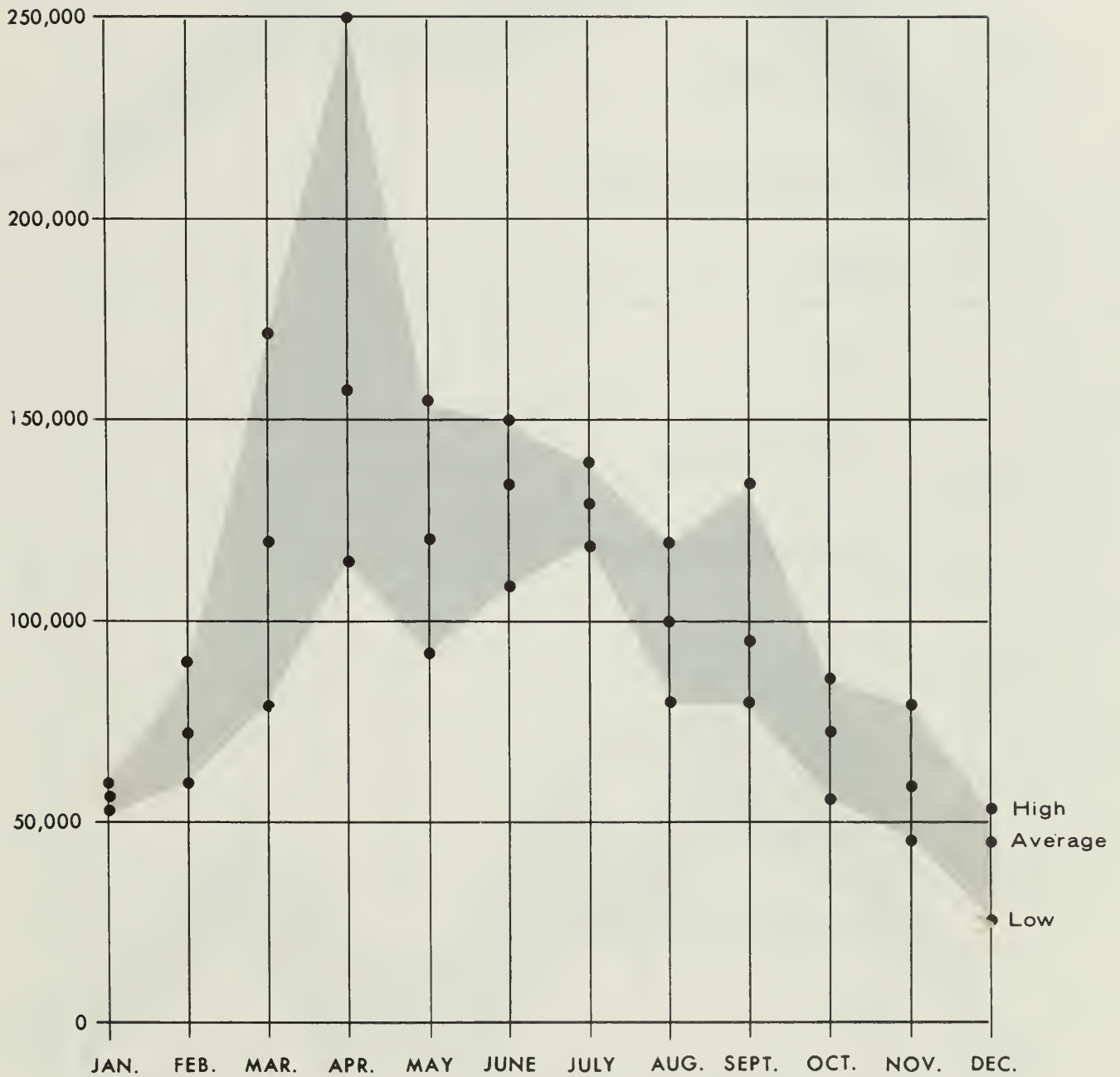


Table 9 : Boat Launchings by Month, January 1979-December 1984

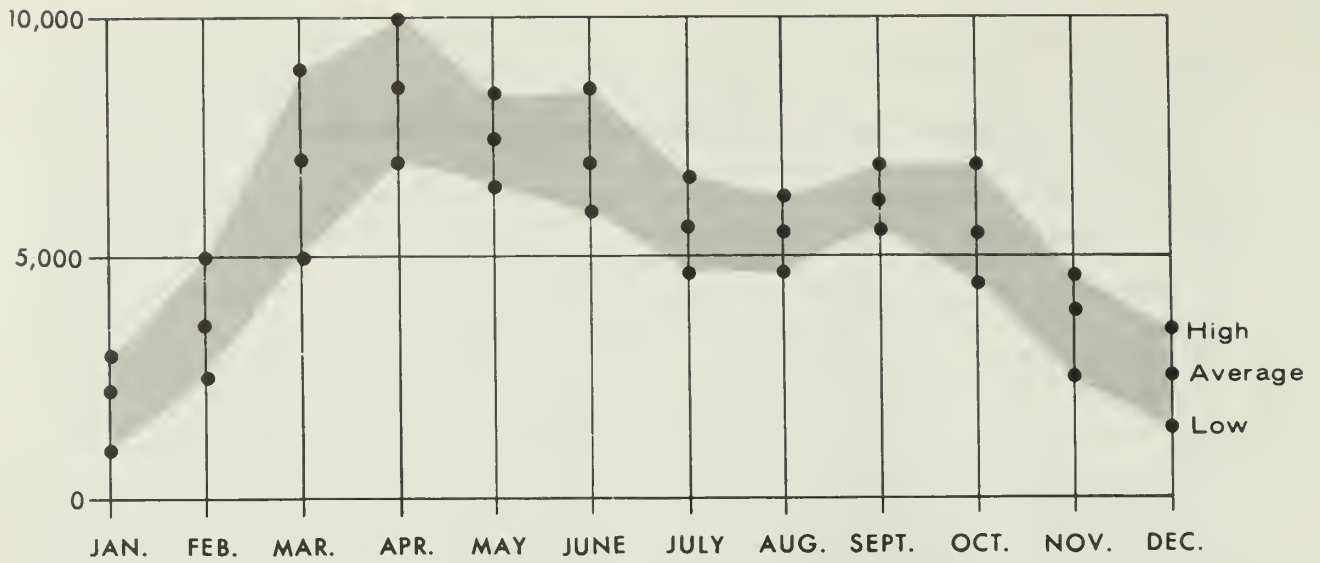


Table10: Number of Campers by Month, January 1981-December 1984

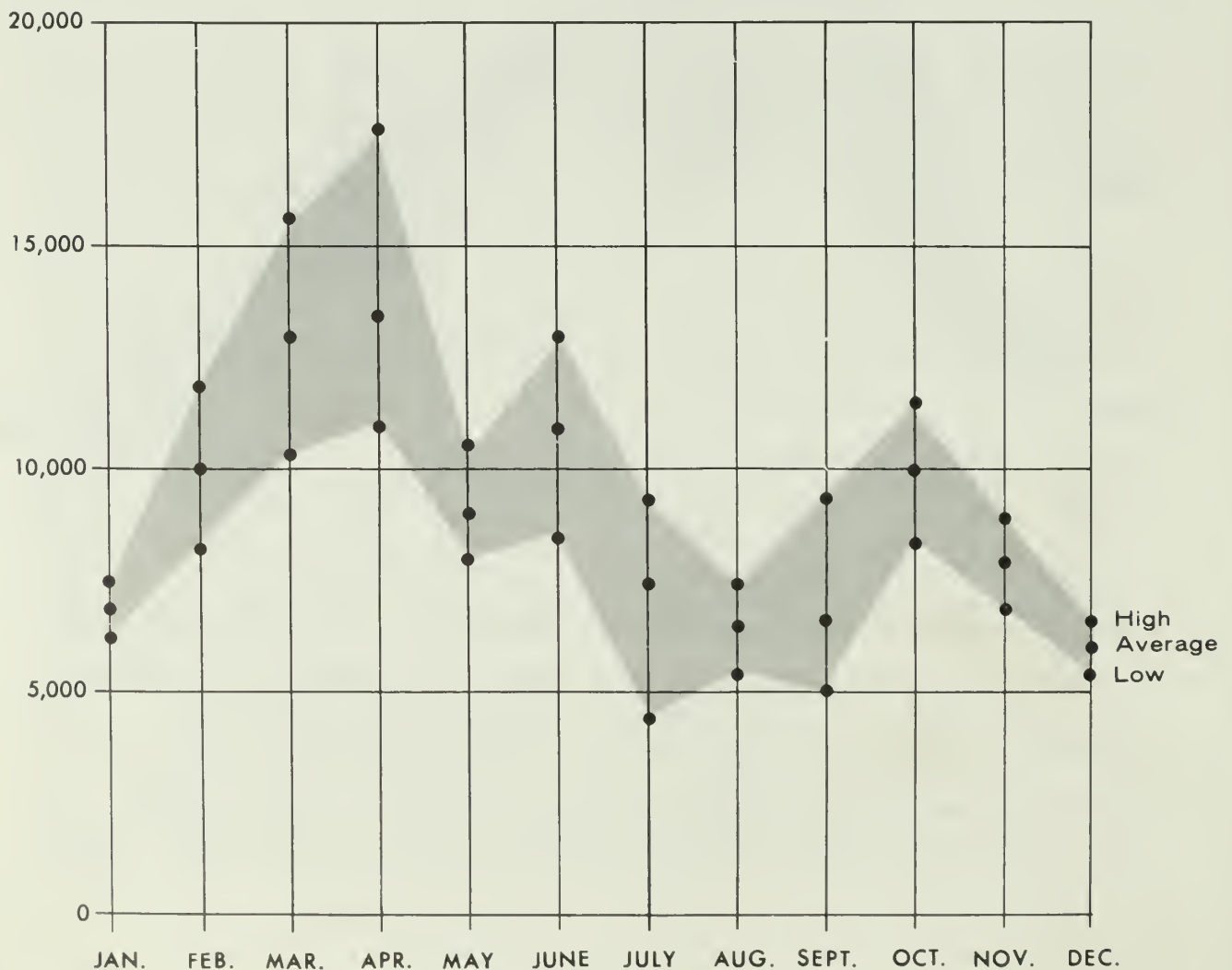


Table 11 : Average Annual Visits by Developed Area, 1980-1984

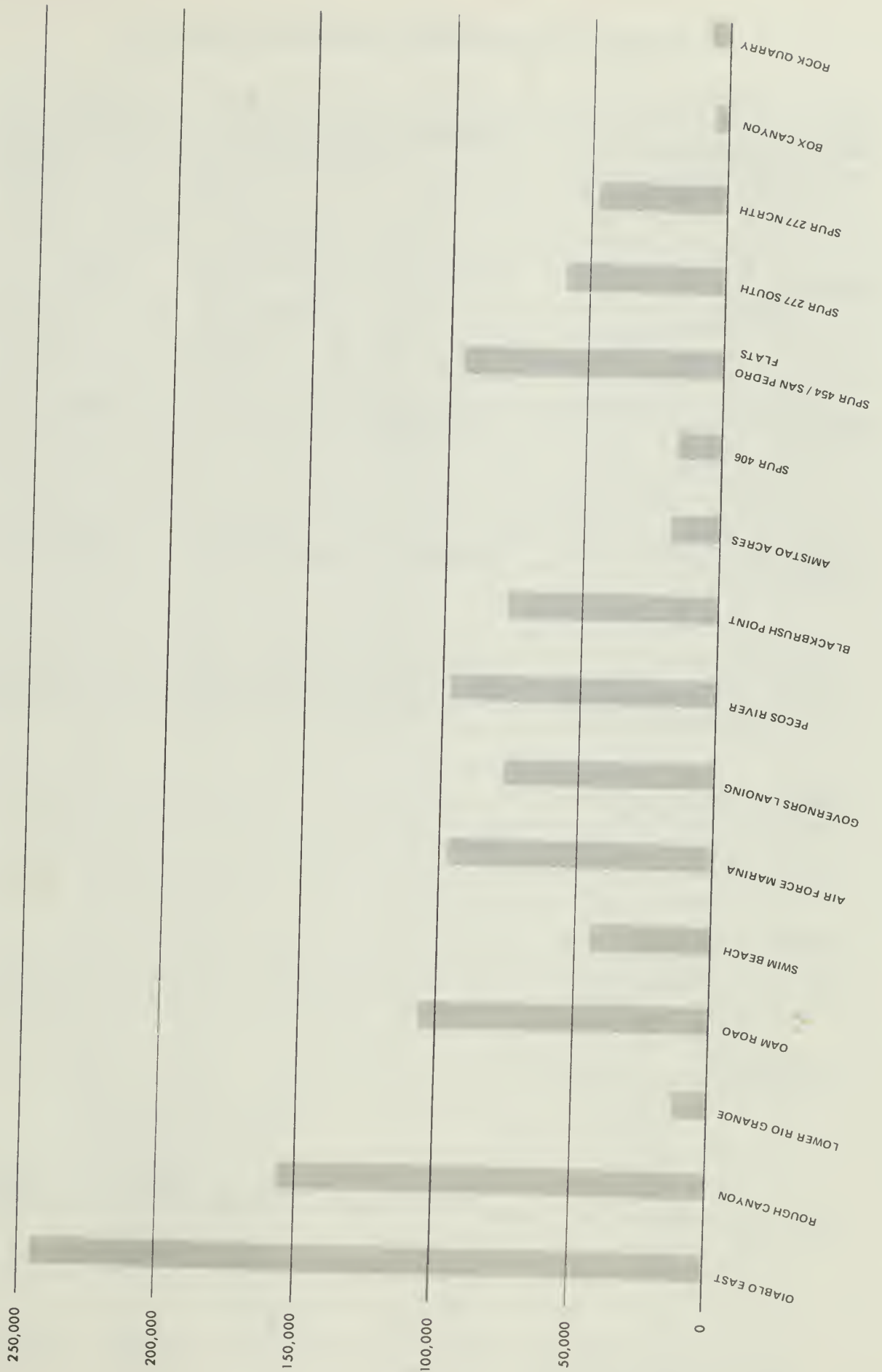
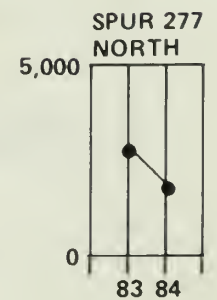
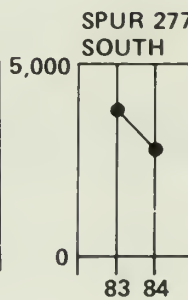
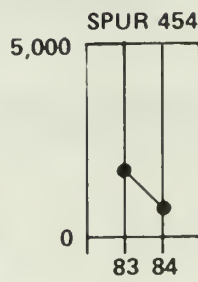
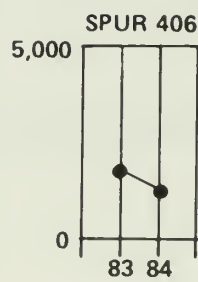
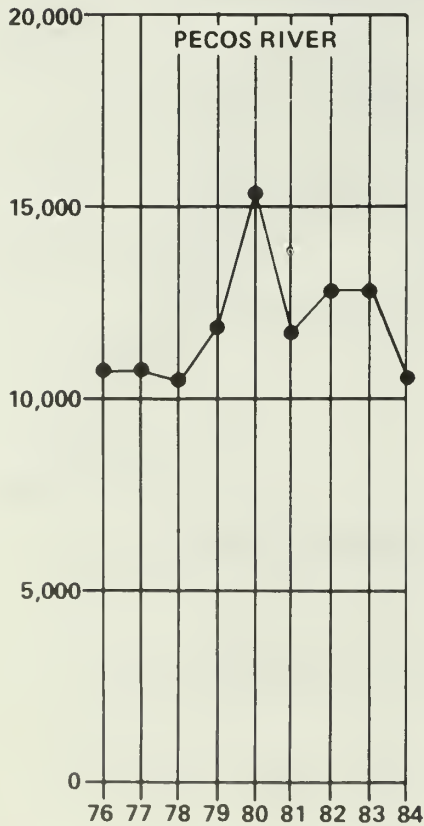
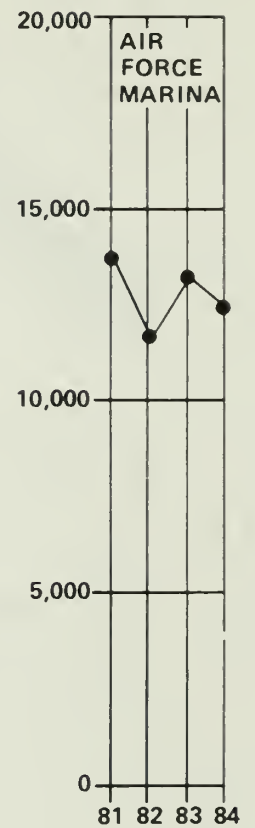
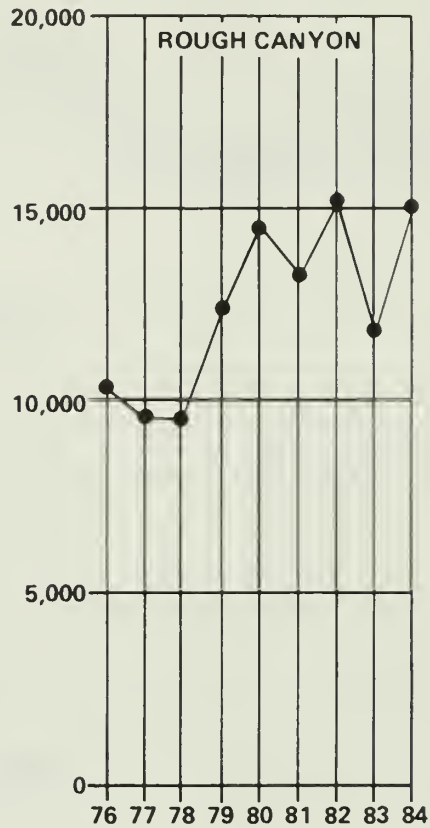
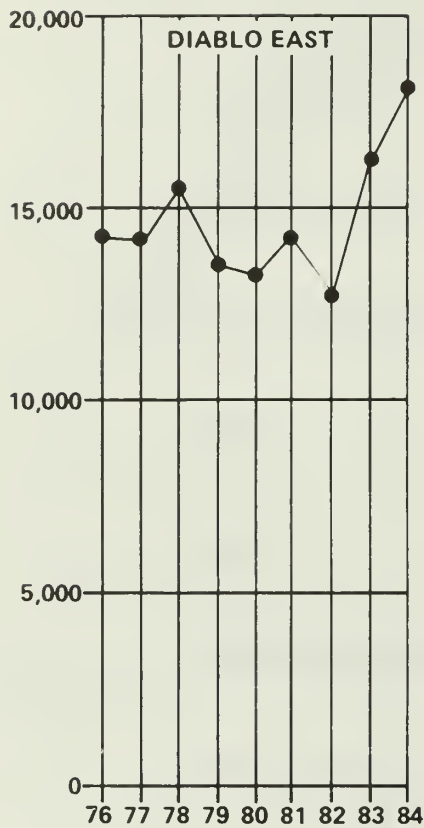


Table 12: Boat Launchings by Selected Development Areas



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.

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 and are transferred by way of courtesy docks from cars to boats at Diablo East and Pecos. No swimming beach is wheelchair-accessible nor are most toilet facilities, which are primarily portable chemical units. A detailed assessment of additional measures to make facilities accessible--where feasible--to disabled visitors is being conducted by the recreation area staff. Upon completion of this survey, the study results should be implemented to ensure that the handicapped visitors will have access to the recreation area facilities.

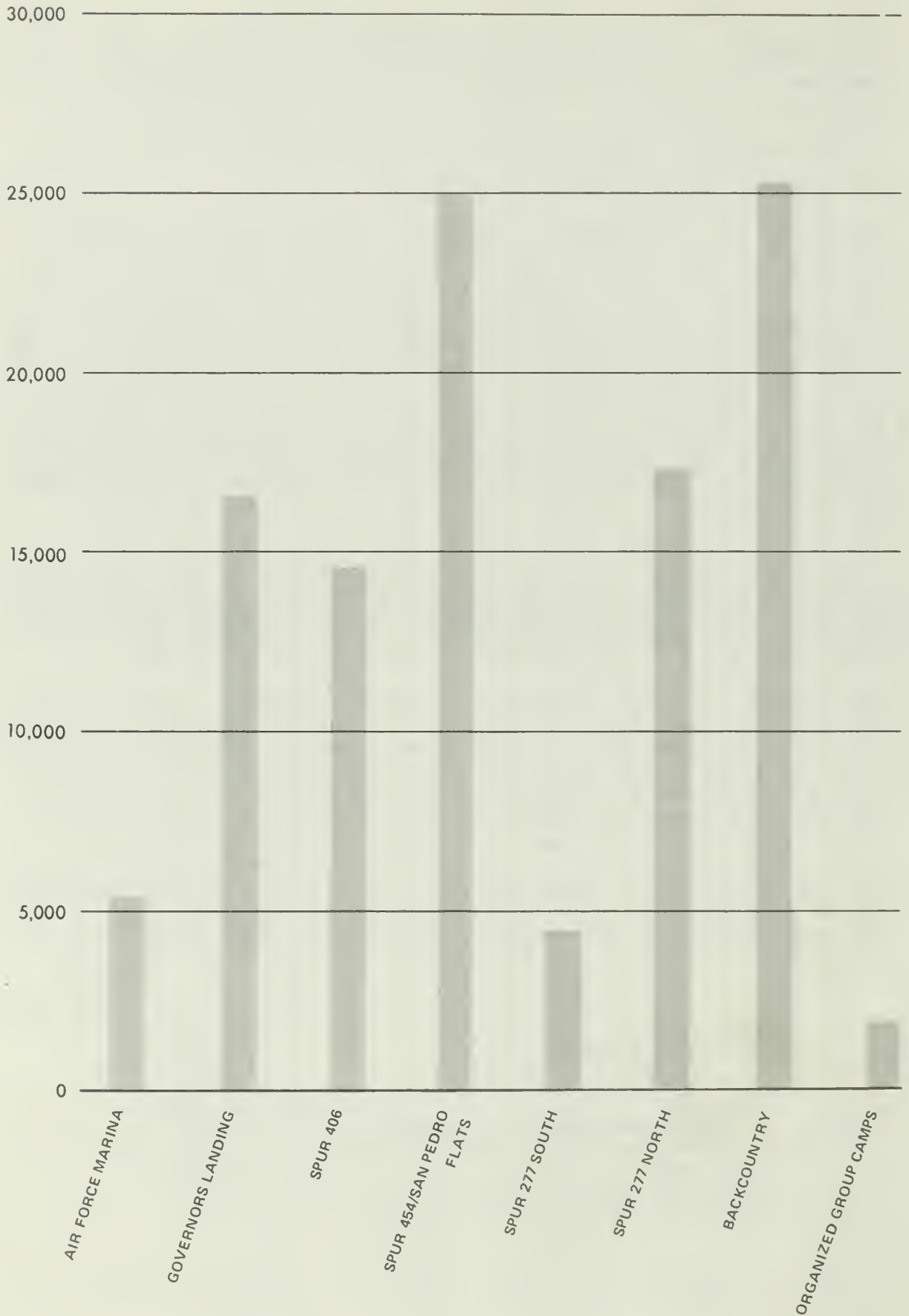
Use occurs primarily on weekends and holidays, when local users predominate. Easter, Memorial Day, and the Fourth of July attract large numbers; Labor Day and other holidays do not attract as many. Except for tournaments and group gatherings, which on occasion lead to some congestion, and the three holidays,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

Sportfishing is very popular. Activities involving active outdoor recreation include boating, waterskiing, sailboarding, scuba diving, sailing, 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

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



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 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. 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) because of a dry climatic cycle of 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 and parking area, comfort station, fishing dock, fish-cleaning station, swim dock, picnic area, and shelter overlooking the Rio Grande. Commercial camping and snacks and beverages are available outside the recreation area. 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. No federal land, public road access, or utilities are at this site, and there is only a tiny bay that would 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. No federal land, public road access, or utilities exist at this site.

Amistad Acres. Public boat launch ramp is provided by the community through a permit.

Box Canyon. Public boat launch ramp is provided by the community through a permit.

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 bank fishing, a group picnic shelter, 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. Bank fishing is also available here.

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. Bank fishing is also available here.

Rough Canyon Marina 1144, Inc. has a five-year contract with the Park Service, which expired on December 31, 1986, and has been extended until a new contract is executed. Included are 32 slips, 35 buoy ties, a fishing dock, and a fuel dock. The concessioner also operates a store, gas station, and campground on private property.

Long Point. This area was acquired for future development, and the Park Service has an undeveloped 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. Four camping sites are 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, and there is an amphitheater here. 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. Seventeen family campsites, one group campsite, and six chemical toilets are available, plus an amphitheater and group day use shelter. The campsites have fire grills. Six family campsites have shelters. 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. Bank fishing is available here.

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 and most are below 1,140 feet. Bank fishing is available here.

Recreation Area Headquarters. The Park Service occupies space outside the recreation area in two leased buildings just north of Del Rio, Texas. These buildings are 8 miles from the nearest developed area--where the visitors are--thus requiring that personnel commute to work sites and thereby substantially increasing yearly 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 restrooms are not. 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. Bank fishing is available here.

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 and bank fishing is available. 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. The near-shore water is buoyed to protect this use. There is a nature trail and bank fishing is also available. Parking, 13 picnicking sites, and three chemical toilets are also provided.

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 dam creates a dangerous current 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, bank fishing, 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 active 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.

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 not 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.)

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	*Spur 277 South	*San Pedro	*San Pedro Flats	*Spur 454	*NPS Headquarters	*Blackburn Point	*Diablo East	*Diablo East (Cliffs)	*Swim Beach	*Governors Landing	*Air Force Marina	*Steam Plant Road	*Amistad Dam Exhibit Center
Picnic Area																						
Campground																						
Group Campground																						
Nature Trail																						
Bank Fishing Area																						
Fishing Dock																						
Fish-Cleaning Station																						
Boat Dock																						
Boat Ramp																						
Boat Rental																						
Boat Sanitary Dump Station																						
Marina																						
Marine Fuel																						
Swimming Beach/Area																						
Swimming Dock																						
Scuba Diving Area																						
Groceries																						
Amphitheater																						
Group-use Shelter																						
Public Phone																						
Water																						
RV Dump Station																						
Chemical Toilets																						
Comfort Stations																						
Information Service																						
Sailboat Buoys																						
Lowest Launching (existing)	river																					
Lowest Launching (potential)	river																					
Acreage above 1144.3	10	1,080	0	1,150	1,115	1,115	1,030	1,040	1,111	1,080	1,080	1,112	1,112	1,103	1,103	1,015	0	610	0	N/A	2	415

*Potential developed areas.

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 known sites, some of which were studied and excavated prior to inundation.

Unique and excellently preserved pictographs adorn the walls of many of the shelters. Many of these sites are of national significance and are probably the best pictographs (Indian rock paintings) in North America. The murals are not only of major scientific importance but are examples of beautiful prehistoric works of art. These magnificently 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. Some murals in Amistad are as impressive as the ones in Europe. 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 the European dress.

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 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*
------	-----	------	-----	------	------

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
-----	-----	-----	-----

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.

Historic Sites

There are no known historic sites within the boundaries of the recreation area that 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 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 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 recreation area 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 on the surface of tablelands above the cliffs.

Current Preservation/Protection Methods

On 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 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 Historic Sites Act of 1935, the National Environmental Policy Act, Executive Order 11593, the Archeological Resources Protection Act and their implementing regulations, the Park Service is mandated to consider the impacts of its proposals (see 1986 Draft General Management Plan). 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 Park Service or the visitors attracted to the 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

Parameter	Range	Mean
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 the 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 farmlands within the 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.

The 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 the 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 recreation area boundaries. It should be noted that no comprehensive vegetation survey of the 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 recreation area. Bald eagles are occasionally observed during the winter feeding on fish. They do not nest in the 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 recreation area 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 the 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 the 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 javelinas. Open seasons vary by species but are generally in the fall and winter.

Fishing is permitted in the 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 five 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

The 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

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 the 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

The 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, the recreation area adjoins Texas Department of Parks and Wildlife lands at Seminole Canyon State Historical Park.

Elsewhere around the 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 the 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 the 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 the 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 the 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

The 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, a 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 the 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 the 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, and it includes a state park.

Other popular tourist attractions in southwest Texas are: Kerrville (163 miles from the 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 the 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 the boundary), plus a 30-mile trail adjacent to the 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	
fresh water 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

The 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 the recreation area):

Table 18: Area Communities and Distance from
Amistad Recreation Area

	Population (1980)	Distance from Amistad (in miles)	Closest Developed Area
Langtry	145	1	Pecos River
Del Rio	30,034	8	Diablo East
Comstock	375	12	Pecos River
Cuidad Acuna (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 Acuna 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 the 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 personnel 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 US 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.

FINDING OF NO SIGNIFICANT IMPACT

General Management Plan/Development Concept Plan/ Environmental Assessment

Amistad Recreation Area Texas

INTRODUCTION

The National Park Service (NPS) is preparing a final general management plan/development concept plan for Amistad Recreation Area. The plan will guide preservation, use, development, and operation of the recreation area for the next 10-15 years. The plan will replace the 1968 "Master Plan," revised in 1973, for the 57,292-acre area, which has been administered by the National Park Service since 1965.

The Texas State Historic Preservation Office and the Advisory Council on Historic Preservation participated in the development of the plan in accord with the programmatic memorandum of agreement between the National Park Service, the Advisory Council, and the National Conference of State Historic Preservation Officers. Also, the National Park Service has consulted with the United States Section, International Boundary and Water Commission, as per a November 1965 memorandum of agreement. In compliance with the Endangered Species Act of 1973, as amended, the U.S. Fish and Wildlife Service was also consulted.

Based on recreation area needs and public response to a preplanning meeting held in October 1984, a Draft General Management Plan/Development Concept Plan/Environmental Assessment (hereafter referred to as the draft plan/EA) was prepared in February 1986 and released in April 1986. Comments were received through June 12, 1986. Public meetings on the draft plan/EA were held in Del Rio, Texas, on April 22, 1986 (attended by 92 individuals) and in Austin, Texas, on May 28, 1986 (attended by 65 individuals). During these public meetings, a proposal for a new small marina operation at Amistad Acres, in the north central area of Lake Amistad, was also presented. This proposal, submitted by the recreation area's marina concessioner on April 4, 1986, had not been included in the draft plan/EA.

The purpose of this Finding of No Significant Impact (FONSI) is to record the selection of a revised plan and complete compliance in accord with the Council on Environmental Quality's regulations for implementing the National Environmental Policy Act (40 CFR 1500-1508). Thirty days following publication of this FONSI, a final plan will be approved and printed. This Finding of No Significant Impact should be attached to the draft plan/EA as specified in Department of the Interior and National Park Service guidelines. It will also be appended to the final plan.

SUMMARY OF PUBLIC INVOLVEMENT

A total of 78 responses to the draft plan/EA were received, including statements given at the public meetings held in April and May and written comments received by the June 12 deadline. The majority of the comments received during the public review opposed the proposed Amistad Acres marina operation, primarily because it would result in the invasion of privacy, disturb the peace and quiet, and create safety hazards because of lack of police and fire protection and increased traffic and crowds. Also, it was felt that the draft plan needed a stronger cultural resources section that would describe the planning process, the laws, and the regulations under which the National Park Service functions and how the National Park Service will comply with these laws. The kinds, chronology, and significance of known cultural resources and the existing and anticipated impacts and general programs and time frames for dealing with these impacts should also be described. An inventory of the cultural resources that includes site assessment and nominations to the National Register of Historic Places was also suggested.

PLAN CHANGES AS A RESULT OF PUBLIC REVIEW

Additions and modifications will be made to the final plan to reflect changes that were formulated during and subsequent to the public review period. Major changes are described below.

On May 5, 1986, because of the strong objections by Amistad Acres residents to the marina proposal, the regional director of the Southwest Region disapproved the Amistad Acres marina development, and the final plan will not include this proposal.

The draft plan/EA proposed opening the lower Rio Grande area to public use; however the final plan will not include this proposal because of potential vandalism and sabotage to the U.S. and Mexican Amistad power plants, dangerous river conditions caused by pronounced fluctuations in releases and a hazardous steam-gauging structure about ½-mile downstream, and potential danger to the public associated with aliens illegally crossing in the tailwater area.

Any wording that could encourage continuance of diving off cliffs or bluff tops will be removed from the final plan.

The final plan will be revised to reflect the need for full protection and preservation of significant cultural resources, many of which are of national significance, taking into consideration changes requested by the state historic preservation office. Adequate funding for qualified archeologists to survey and assess the cultural resources and then revise the cultural resources management plan will be proposed. The final plan will state how these programs will be accomplished and the sequence in the planning process. Additional archeological staff, better interpretation, signing, and implementation of the provisions of the Archeological Resources Protection Act of 1979 will enhance preservation.

To help these preservation efforts, the final plan will state the need for Amistad to be officially designated as a national recreation area (NRA) by Congressional legislation, with support from the state of Texas and its congressional delegation.

Minor boundary changes may be needed to protect significant cultural resources found adjacent to the present NPS boundary; if so, these changes may be achieved through minor boundary adjustment authority included in the proposed NRA legislation. NPS ownership will provide maximum protection for sites that are adjacent to the boundary and are currently being impacted by visitor use. For land that the National Park Service cannot acquire, cooperative agreements with individuals and organizations will be developed to assist the National Park Service in conducting archeological surveys and for providing protection, preservation, and interpretation of these adjacent cultural resources. Significant archeological sites will be protected by fencing (where feasible) or other appropriate protection techniques.

Also, the final plan will recommend that a contingency fund be established to extend existing NPS boat ramps during lower water levels in Lake Amistad. This will assure public access during low water levels.


IMPACT SUMMARY

The plan is expected to provide protection for and long-range care of the important cultural and natural resources of Amistad Recreation Area. With proper mitigating measures, the plan is expected to have minimal adverse impact on these resources. No impacts on endangered species, floodplains, or wetlands are anticipated, contingent upon implementation of appropriate mitigating actions. Improved visitor use opportunities will be provided. Under the plan an opportunity for a new concession businesses would be provided at Pecos River (pending private interest and positive feasibility analysis) and at Cow Creek. Otherwise, impacts of the plan on the local economy will be minimal. A more detailed analysis of the impacts is included in the draft plan/EA.

CONCLUSION

Based on a review of the draft plan/EA, public review responses, and the proposed revisions, it has been determined that the implementation of the final plan will not constitute a major federal action significantly affecting the human environment and that preparation of an environmental impact statement will not be necessary.

Recommended:


Superintendent, Amistad Recreation Area

10-20-86
Date

Approved:


Acting Regional Director Southwest Region

10/27/86
Date

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.

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.

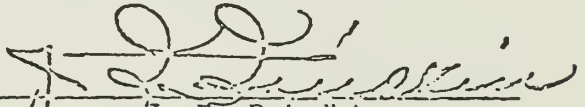
ARTICLE IV

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.

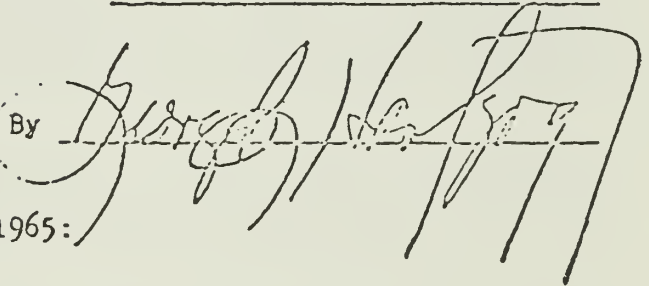
UNITED STATES SECTION, INTERNATIONAL
BOUNDARY AND WATER COMMISSION

Dated OCT 22 1965

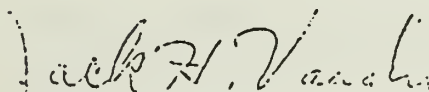
By 
J. F. Friedkin
United States Commissioner

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

APPENDIX B: ROAD SYSTEM EVALUATION

This material supplements the discussion in the text in "The Plan" section. However, information about recreation area road standards in this document was prepared prior to the approval and printing of the 1984 "Park Road Standards." At some later feasible time, this study should be revised to be in conformance with the 1984 standards.

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 visitors. No roads within the recreation area fall into this classification; state and county highways provide this function.

Class II: Connector Park Road. These roads provide access within the recreation area 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 recreation area 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 in the recreation area fall into this category.

Table 19: 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:

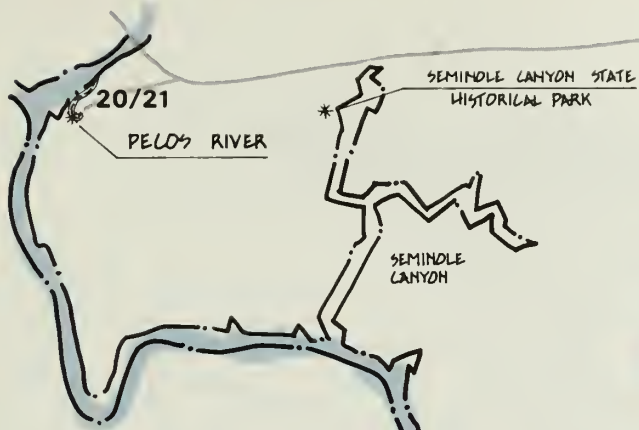
Average daily traffic estimated from recreation area traffic counts are for 1981.

N/A = Not Applicable

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

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

MISTAD RECREATION AREA

MENT OF THE INTERIOR/NATIONAL PARK SERVICE

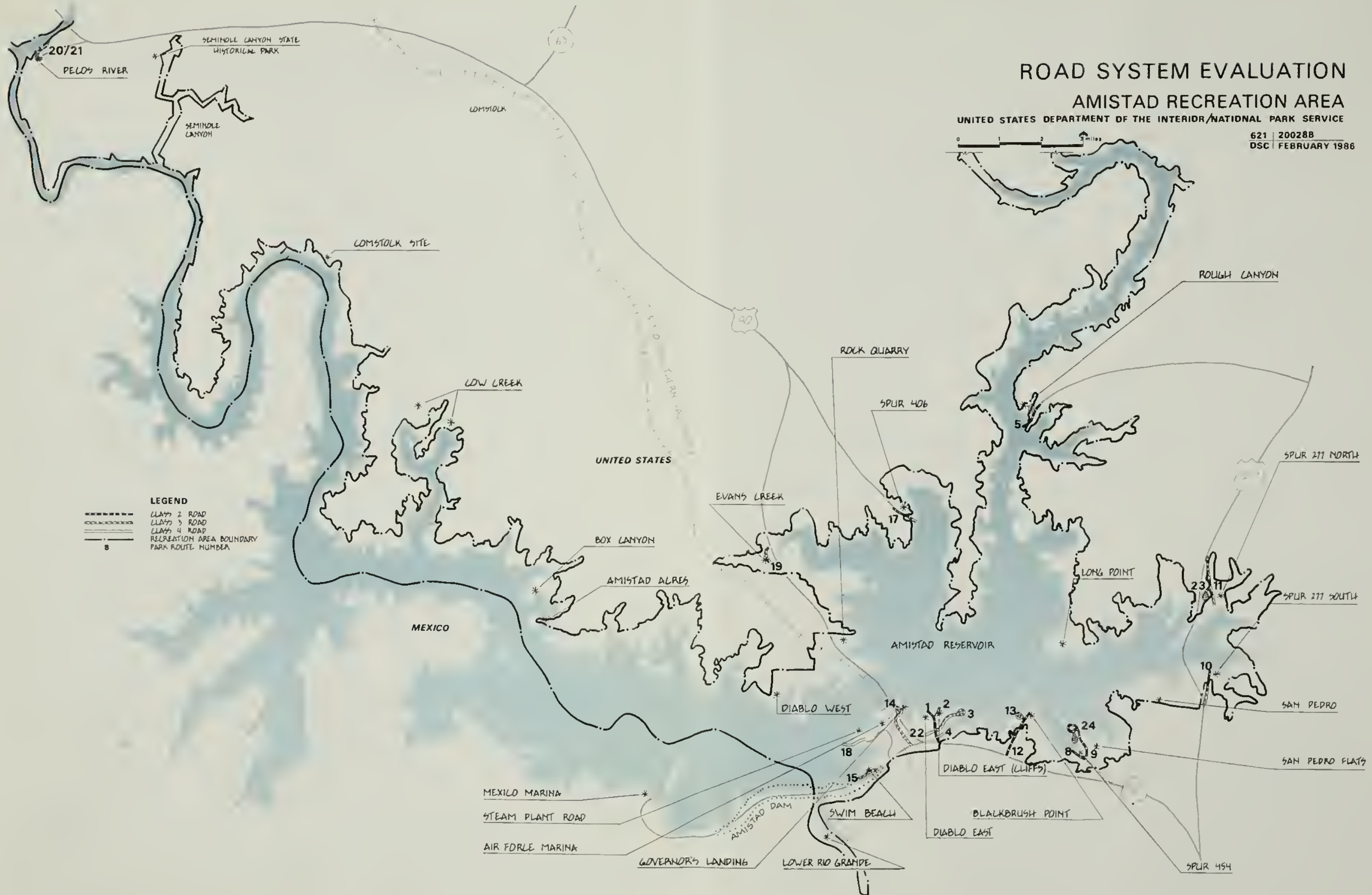
621 | 200288
DSC | FEBRUARY 1986

LEGEND

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

8





ROAD SYSTEM EVALUATION

AMISTAD RECREATION AREA

UNITED STATES DEPARTMENT OF THE INTERIOR/NATIONAL PARK SERVICE

621 200288
DSC FEBRUARY 1986

LEGEND

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

8

APPENDIX C: PLAN SUMMARY DESCRIPTION, PHASING,
STAFFING REQUIREMENTS, EQUIPMENT NEEDS, AND
VISITOR CAPACITY OF DEVELOPED AREAS

Table 20: Elements of the Plan

Area/Subject	The Plan
Langtry	No action
Pecos River \$367,000	Extend walkways and steps with railing to low water, 4 feet wide, 50 linear feet (\$4,000) Floating-tire debris diverter above ramp (\$50,000) Duplex employee quarters (\$130,000) Concessions request for proposals for boat launching/fuel services Cultural resources interpretive tours (by concessioner) Install travelers' information and radio station (\$8,000) Contact station (\$150,000) to be added on to comfort station Pumper and scuba equipment building (\$25,000)
Comstock Site	No action
Cow Creek	Possible private development with some concessioner facilities.
Amistad Acres and Box Canyon	No action
Diablo West (West)	No action
Diablo West (East) \$305,000	Boat ramp (\$32,000) Access road and parking (\$232,000) Dock (\$12,000) Chemical toilets (\$25,000) Walks (\$4,000)
Rock Quarry	No action
Evans Creek \$1,000	Close site and remove NPS facilities-- trash cans, fence walkover (\$1,000)
Spur 406 \$42,000	Livestock control fencing - 4 miles (\$42,000)

Area/Subject	The Plan
Rough Canyon \$190,000	Upgrade interpretive displays/information (\$25,000) Make contact station self-service (\$2,000) Expand parking (\$90,000) Expand and upgrade marina picnic area (\$15,000) Provide floating-tire breakwater at high-water ramp (\$50,000) Install travelers' information and radio station (\$8,000)
Long Point	No action
Spur 277 North \$5,000	Close when San Pedro developed (\$5,000)
Spur 277 South \$1,000	Close when San Pedro developed (\$1,000)
San Pedro \$980,000	Launch ramp (\$35,000) 75 parking spaces (\$96,000) 20 campsites (individual and group) (\$18,000) 40 picnicking sites (\$40,000) Swim beach (\$20,000) Courtesy dock (\$25,000) Fish-cleaning station (\$36,000) 2 dump stations (\$150,000)--one for RVs and one for houseboats Add road and utilities (\$200,000) 2 comfort stations (\$210,000) Small contact station (\$150,000)
San Pedro Flats \$5,000	Close (relocate) when San Pedro site is developed (\$5,000)
Spur 454 \$5,000	Close when San Pedro developed (\$5,000)
Blackbrush Point \$189,000	Pave roads in picnic area (\$174,000) Enlarge parking by 10 spaces (\$15,000)
Headquarters/Maintenance Facility \$8,000	Install travelers' information and radio station (\$8,000)

<u>Area/Subject</u>	<u>The Plan</u>
Diablo East \$288,000	Replace visitor contact/ranger station (\$150,000) Permanent comfort station (\$105,000) Pumper/scuba equipment building (\$25,000) Install travelers' information and radio station (\$8,000)
Diablo East (Cliffs) \$1,624,000	Upgrade picnic area (\$30,000) Improve parking area (\$30,000) Pave/repair/rehabilitate roads (\$1,539,000) Chemical toilets (\$25,000)
Swim Beach Area \$10,000	Walkway to water for wheelchairs and others (\$10,000)
Lower Rio Grande	No action
Governors Landing \$114,000	Define swim beach parking (\$9,000) Electricity - lights and pump, improve well and water distribution (\$8,000) Pave road loops (\$65,000) Improve camping and picnicking area (\$32,000)
Air Force Marina	No action
Steam Plant Road \$53,000	Build ramp (\$38,000) Add parking on west side of point (\$15,000)
Amistad Dam Exhibit Center \$50,000	Redo exhibits - add information on recreation area, purpose of project, international theme (\$50,000) Staff - until Diablo East visitor contact/ranger station is operational
<u>Land Use and Management</u>	See management zoning map in the "Proposal" section.
<u>Cultural Resources Management</u>	Survey recreation area and evaluate sites; establish priorities for preservation/protection program (costs cannot be estimated until studies are completed). Add two archeologists. Camping may be closed in certain significant archeological areas, which would be identified by the archeologists. Physical protection measures will be instigated for threatened sites.

Area/Subject	The Plan
Net Construction Costs (FY 1985 dollars)	\$4,237,000
Gross Development Costs	\$6,186,000

Notes: Costs are 1985 rough "class C" estimates based on comparable installations rather than site-specific designs.

Net construct 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 21: Phasing of the Plan

	<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)	\$1,912,000	
Provide for handicapped swimming at Swim Beach	10,000	
Correct flash-flood hazard at Evans Creek by closing site	1,000	\$3,327,000
Cooperate with private sector to develop Cow Creek	0	
Construct access road, parking, boat dock, and ramp at San Pedro if/when water level permits	<u>356,000</u>	
Subtotal	\$2,279,000	
SECOND PHASE- Rehabilitate sites and add new launch ramps in central reservoir.		
Improve picnicking and parking at Blackbrush Point	\$ 189,000	
Rehabilitate Governors Landing campground and picnic area	114,000	
Construct launch ramp and parking at Steam Plant Road	53,000	\$1,501,000
Complete major use area at Diablo West (East)	305,000	
Complete major use area at Pecos River	<u>367,000</u>	
Subtotal	\$1,028,000	
THIRD 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	\$ 190,000	
Redo exhibits at Amistad Dam visitor center	<u>50,000</u>	\$ 350,000
Subtotal	\$ 240,000	

	<u>Net costs*</u>	<u>Gross costs*</u>
FOURTH PHASE- Relocate facilities in San Pedro area above flood zone.		
Develop major new site	\$ 624,000	
Remove facilities and restore sites at Spur 277 (North and South) and San Pedro Flats/Spur 454	16,000	\$1,007,000
Replace boundary fencing at Spur 406 and install radio station at headquarters	<u>50,000</u>	
Subtotal	\$ 690,000	
Total	\$4,237,000	\$6,186,000

*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 22: Total Staffing Requirements of the Plan
Permanent and (Temporary)

<u>Function</u>	<u>The Plan</u>
Area Management	2
Administration	4
Maintenance	18
Resources Protection and Visitor Services	
Division Staff	2
Pecos River District	3
Diablo East District	5
Rough Canyon District	2 (1)
Interpretation	2 (2)
Archeologists	<u>2</u>
Total	40 (3)

Table 23: Additional Equipment Needs for The Plan

<u>Unit</u>	<u>The Plan</u>
Patrol vehicle	1
Boat and trailer	1
Pickup	1
Dock	1

Table 24: Visitor Capacity of Developed Areas*

<u>Area/Facility</u>	<u>The Plan</u>
Langtry	0
Pecos River	230
Comstock Site	0
Cow Creek	90
Amistad Acres	20
Box Canyon	20
Diablo West (West)	0
Diablo West (East)	140
Rock Quarry	70
Evans Creek	0
Spur 406	30
Rough Canyon	600
Long Point	0
Spur 277 North	0
Spur 277 South	0
San Pedro	240
San Pedro Flats/454	0
Blackbrush Point	270
Diablo East	
launch ramp	340
marina	230
cliff area	100
contact site/visitor center	10
Governors Landing	240
Air Force Marina	220
Swim Beach	180
Steam Plant Road	70
Lower Rio Grande	30
Dam Visitor Center	20
	<hr/>
	3,150 Individuals

*This table is based on momentary use--i.e., all development facilities being occupied to capacity at a given time.

BIBLIOGRAPHY

DEL RIO CHAMBER OF COMMERCE

circa Del Rio, Texas, Data File.

1980

DITTON AND SCHMIDLY

1977 "A User-Resource Analysis of Amistad Recreation Area".
Texas A&M University.

GRAHAM, JOHN A. AND WILLIAM A. DAVIS

1958 "Appraisal of the Archeological Resources of Diablo Reservoir,
Val Verde County, Texas," (a project of the Interagency
Archeological Salvage Program).

NATIONAL PARK SERVICE, U.S. DEPARTMENT OF THE INTERIOR

1968 Master Plan revised circa 1973 (unapproved).

1973a Proposed Diablo East Development Site, Final Environmental
Statement.

circa "Development Concept Plan, Cow Creek (with EA),"

1973b Southwest Regional Office.

1974 Archeological Assessment, Amistad Recreation Area, Texas,"
by Bruce Anderson, Division of Archeology, Southwest
Region.

1975 Development Concept Plan - Pecos River, June 1975.

1976a Final Development Concept Plan, Rough Canyon.

1976b Final Environmental Assessment, Rough Canyon Development
Concept.

1978 "Interpretive Prospectus."

1981 Statement for Management.

1982 "Resources Management Plan and Environmental Assessment."

1985 Planning Workbook, An Invitation to Participate in Planning
for Amistad Recreation Area.

1986 Draft General Management Plan/Development Concept Plan/
Environmental Assessment.

TAYLOR, WALTER W. AND FRANCISCO GONZALIS, RNL

1961 "An Archeological Reconnaissance Behind the Diablo Dam,
Coahuila, Mexico," Texas Archological Society 31:153-165.
Austin, 1960.

TEXAS DEPARTMENT OF WATER RESOURCES

1982 The State of Texas Water Quality Inventory, 6th ed. Austin.

TEXAS PARKS AND WILDLIFE DEPARTMENT

1982 "Performance Report: Stateside Fishery Management
Recommendations; Job A: Existing Reservoir and Stream
Management Recommendations, Amistad Lake."

1985 "Texas Outdoor Recreation Plan" Draft.

LIST OF PREPARERS AND CONSULTANTS

CORE TEAM

Bill Jones, Team Captain, Visitor Use Planner, DSC
Edward C. Rodriguez, Jr., Superintendent, Amistad
Don Goldman, Assistant Superintendent, Amistad
Ric Alesch, Planner/Environmental Specialist, DSC
John Murphy, Landscape Architect, DSC
Judy Shafer, Archeologist/Cultural Resources Compliance Specialist, DSC
Ed Natay, Park Planner/Regional Office Liaison, Division of Planning and Design, Southwest Regional Office
Larry Knowles, Landscape Architect (Team Captain for final plan), DSC

CONSULTANTS

Bob Davidson, Park Planner, Division of Planning and Design, SWRO
Division Chiefs and Park Staff, Amistad
Judi Rozelle, Concessions Specialist, DSC
Cloyd Kump, Chief, Division of Concessions, SWRO
Ron Ice, Regional Archeological, SWRO
Joseph Sanchez, Historian, Division of Interpretation and Visitor Services, SWRO
Milford Fletcher, Division of Natural Resources Management, SWRO
Robert Schreffler, Road Engineer, DSC
Don Crawford, International Boundary & Water Commission, Amistad
Mexico Consultants
 Jorge Ortiz, Saltillo, Coahuila, Subdeputy for Urban Development and Ecology for State of Coahuila
 Juan Bezaury, Mexico City, Chief of Department of Promotion of Reserves and Protected Ecological areas
Marc Sagan, Manager, Harpers Ferry Center

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.

Publication services were provided by the editorial and graphics staffs of the Denver Service Center. NPS D-20A, May 1987

