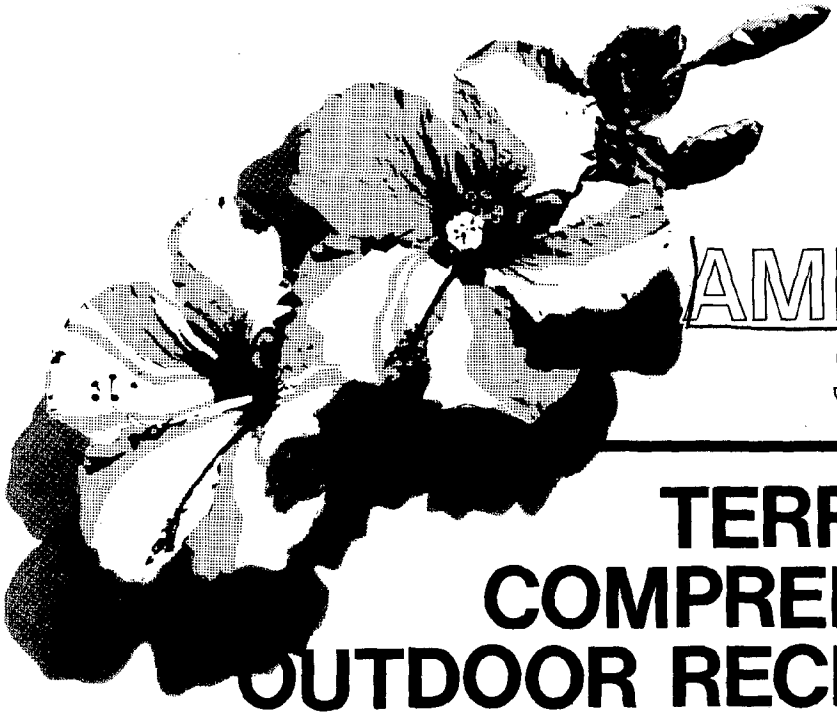

AMERICAN SAMOA

TERRITORIAL COMPREHENSIVE OUTDOOR RECREATION PLAN 1980 - 1985

AMERICAN SAMOA PARKS AND RECREATION COMMISSION

MKGK/YAMAMOTO, INC.

HONOLULU, HAWAII • JUNE, 1980

OFFICE OF THE GOVERNOR
PAGO PAGO, AMERICAN SAMOA 96799

PETER TALI COLEMAN
Governor

TUFELE LI'A
Lt. Governor

September 17, 1980

To the Residents of American Samoa:

The Territorial Comprehensive Outdoor Recreation Plan for American Samoa serves as the principal guide for our newly constituted Department of Parks and Recreation and Parks and Recreation Commission. This Plan has met the requirements set forth within Public Law 88-578-- The Land and Water Conservation Fund Act-- which provides for matching grants for qualified outdoor recreation projects.

The Territorial Plan stresses the need for organizing available resources in a manner that provides for a variety of community requirements and desires, not solely from the standpoint of recreation but also to realize quality of life goals related to social, cultural, economic and physical improvement of American Samoa. This organizational effort underscores the participative energy of the many and diverse segments of the community, both public and private agencies and individuals.

Another major emphasis that merits your attention is the focus on immediate action programming, marshaling and matching public resources with community needs at two levels - territorial and village. The Plan, thus, represents a realistic and workable approach to the establishment of outdoor recreation programs and activities to enhance opportunities for residents and visitors alike.

By stressing joint and multiple use concepts, serving diverse needs and requirements, we can initiate program actions as well as look forward to a steadily improving character of American Samoa outdoor recreation.

Peter T. Coleman

PETER TALI COLEMAN

AMERICAN SAMOA TERRITORIAL COMPREHENSIVE OUTDOOR RECREATION PLAN

American Samoa Territorial Parks and Recreation Commission

Tom Annastas, Member
Meki McMoore, Member
Rob Shaffer, Chairman
Tulani Teleso, Member
David Tupua, Member

Prepared by

MKGK/Yamamoto, Incorporated
Honolulu, Hawaii

August 1980

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Detailed information on education-related recreational programs was provided by the American Samoa Community College and recreational specialists of the Department of Education, Physical Education Division. Other recreational information was supplied by the American Athletic Association in American Samoa, Samoan Athletes in Action, the American Samoa Rotary Club, and the Feleti Library. Office of Tourism personnel, school principals, and other American Samoa Government personnel provided field researchers in the Manu'a Group with hospitality, information and transportation.

Outside of Samoa, the following agencies provided information and other forms of assistance during the planning period: Amerika Samoa Office in Honolulu; U.S. Army Engineer District, Honolulu; Department of Geography, University of Hawaii; Pacific Scientific Information Center, B.P. Bishop Museum, Honolulu; U.S. Forest Service Institute of Pacific Forestry, Honolulu; and the Aids to Navigation Branch, Fourteenth Coast Guard District, U.S. Department of Transportation.

Finally, appreciation is extended to all those who attended meetings, participated in surveys, and in various ways controbuted to the work of the planners, including the U.S Heritage, Conservation and Recreation Service, San Francisco.

MKGK/Yamamoto, Incorporated
Honolulu, Hawaii

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PREFACE

The American Samoa Government has determined that outdoor recreation is an identifiable element of territorial quality of life, both now and for the future. Outdoor recreation is being planned comprehensively in relation to social, economic and environmental concerns, with especial attention to the Coastal Management Program requirements.

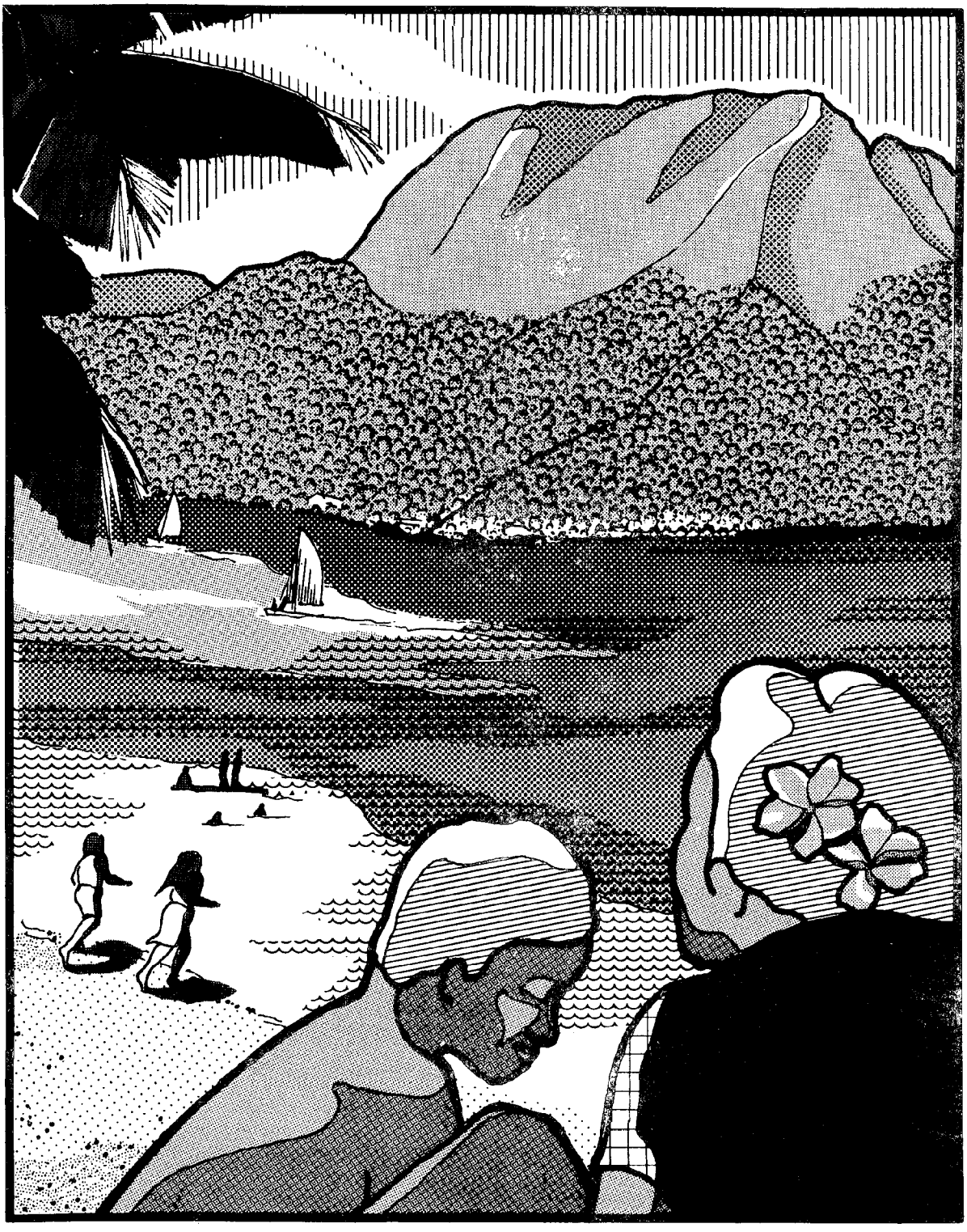
The Coastal Management Program provides for a broad environmental policy umbrella covering 16 policy themes in management of coastal resources. These 16 themes are organized around three major objectives: governmental processes, development, and resources. Outdoor recreation, of course, relates to all three major objectives.

The Territorial Comprehensive Outdoor Recreation Plan, as provided herein, serves to maintain access to federal involvement in local outdoor recreational planning and development. This access to federal involvement requires adherence to requirements of the U.S. Heritage, Conservation and Recreation Service as they relate to the Land and Water Conservation Fund Act of 1965, as amended.

Legislative authority to plan comprehensively for outdoor recreation is shared between the Development Planning Office (29 ASC 902) and the newly established Territorial Parks and Recreation Commission (32 ASC 301). The focus of planning residing with the Development Planning Office (DPO) is on general planning and economic development and coastal management while the Territorial Parks and Recreation Commission (TP&RC) is authorized to prepare comprehensive outdoor recreation plan with respect to federal assistance programs.

The present document, a Territorial Comprehensive Outdoor Recreation Plan (TCORP) was submitted to the HCRS of the U.S. Department of the Interior in order to establish federal assistance eligibility for land acquisition and development projects as provided for in the Land and Water Conservation Fund Act of 1965, as amended. For TCORP purposes, per 32 ASC 301, the chairman of the TP&RC, American Samoa Government has been designated the HCRS Territorial Liaison Officer by the Governor.

The newly established parks and recreation agency now has the authority to represent and act for the Territory in dealing with the Secretary of the U.S. Department of the Interior for purposes of federal assistance and for the acceptance and administration of funds.



I. INTRODUCTION

Fifty years of American naval administration from the turn of the century, followed by thirty formative years of condensed and rapid social change, economic development in harmony with the United States, and evolution of governmental forms have brought American Samoa to the 1980's. The next decade will witness consolidation and organization of all aspects of general planning, land and resource management, and the pursuit of definitive economic and social goals.

This is the setting in which contemporary outdoor recreational planning is being introduced. As the only U.S. territory south of the equator (see Map 1), American Samoa truly is isolated from the rest of the American recreational world. Recreational planning here must be built on local facts and understanding not just upon principles developed in other settings. Analysis of such contextual information is a central feature of this plan.

A. Purpose and Scope

The purpose of a comprehensive outdoor recreation plan is to organize and coordinate solutions to meet the needs of general public recreation within the Territory. The study area is the Territory of American Samoa -- excepting privately owned Swain's Island, and Rose Atoll -- which is organized as a National Wildlife Refuge. The clientele consists of all people seeking outdoor recreational opportunities within this area.

The scope of study includes the nature and distribution of the recreational service population; recreational patterns and preferences; existing and potential spatial resources and facilities; administrative organization and institutional capabilities; the interface of recreation with natural and

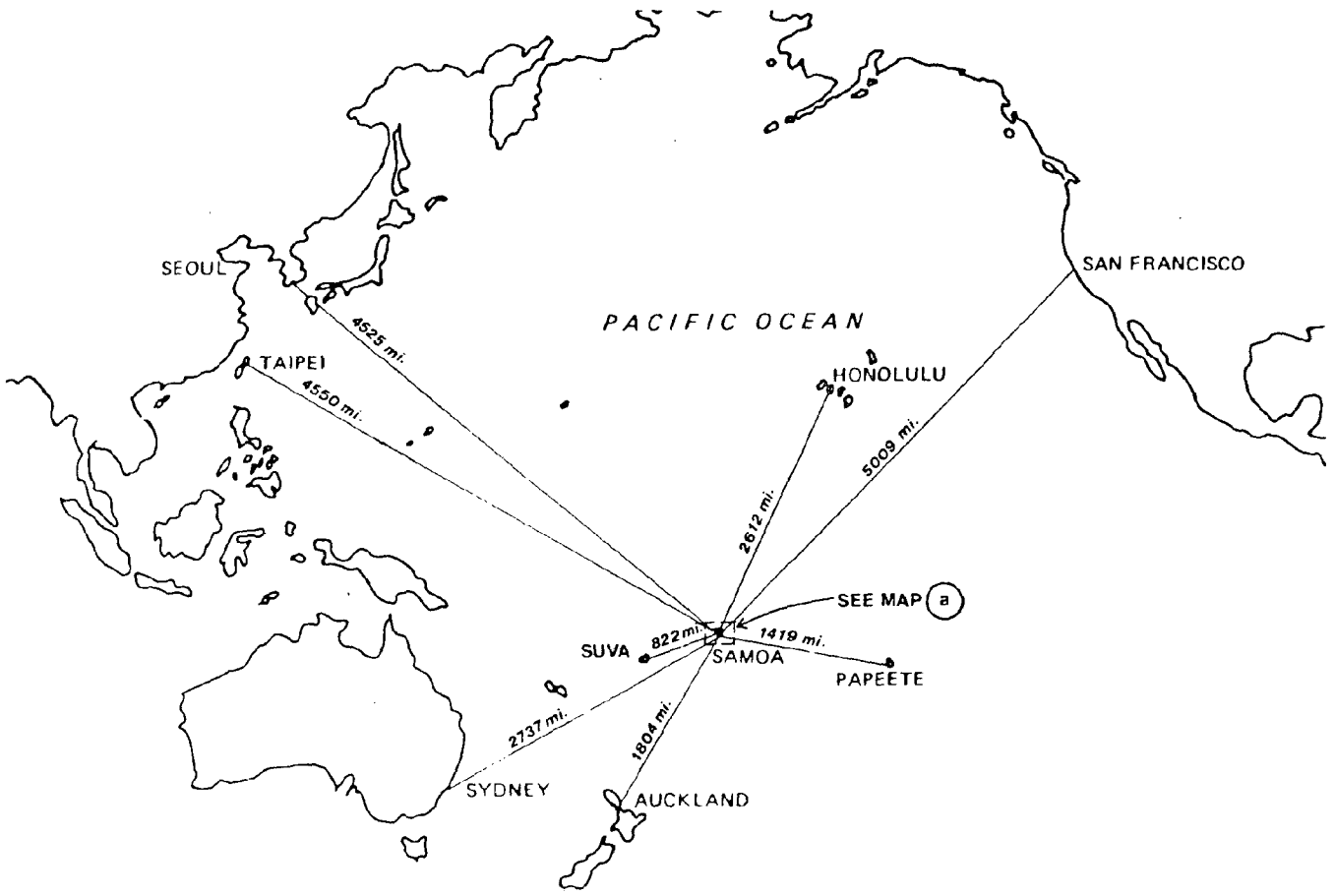
historical resources and open space; conditions of access; and the integration of recreation with general territorial planning and land use management.

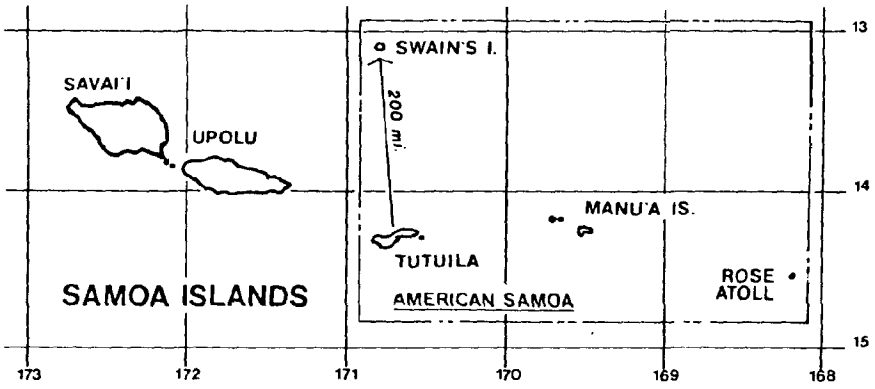
B. Background

In 1975 the American Samoa Parks and Recreation Control Board produced its American Samoa Recreation Area Development Plan 1975-1980, the basic recreation document in effect over the last few years. Since its preparation much additional thinking has been done, drawing in part on two formal surveys. In 1978, under the auspices of the U.S. Army Corps of Engineers American Samoa Water Resources Study, an American Samoa Community Profile -- 1978 survey study was conducted which included probes of general recreational attitudes, resource use and perception, and employment of leisure time.

In 1979 the ASG Development Planning Office carried out a Comprehensive Village Survey which directed specific questions on recreation to the village level throughout the Territory. In a June, 1979 Territorial Report to the Governor on the State of Parks and Recreation in American Samoa, the Parks and Recreation Control Board summarized past developments, identified current conditions, and provided recommendations for future action.

Subsequent contact with the U.S. Department of the Interior Heritage Conservation and Recreation Service led to the agreement under which current planning is being accomplished. More recently (1980) a bill has passed through the FONO (American Samoa legislature) and been signed by the Governor calling for the establishment of a Territorial Parks and Recreation Commission and a Department of Parks and Recreation.





MAP (a)

1 SAMOA ISLANDS

GENERAL LOCATION MAP

north

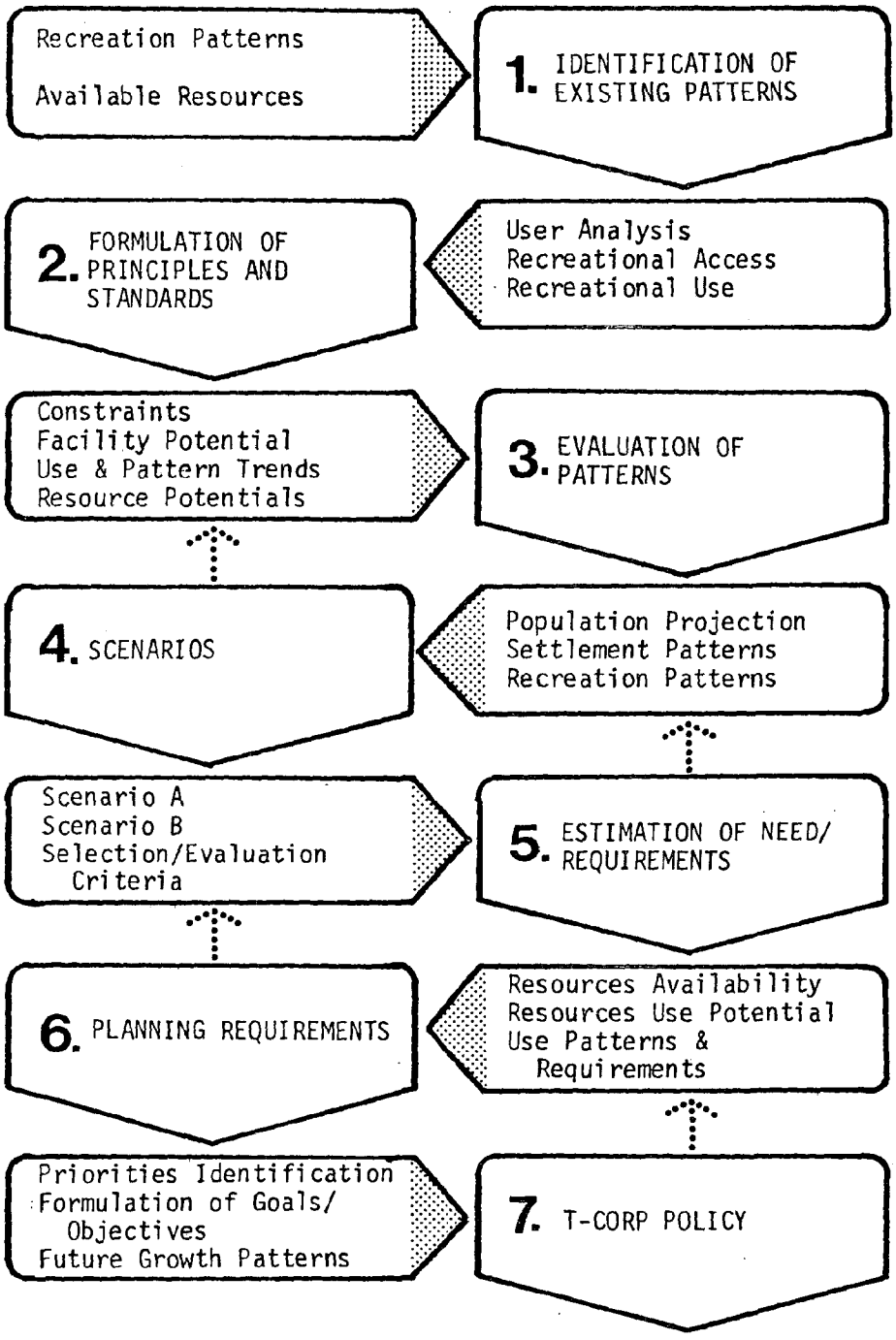
AMERICAN SAMOA T-CORP 1980

C. Planning Process and Methodology

The general phases of the planning process employed are displayed in the diagrams following. Recreation patterns and preferences are identified and placed in local context. These patterns are compared to existing opportunities to establish general recreational needs. Appropriate planning standards for population, space, access, and facilities are determined. Contemporary needs are projected into the future through socio-economic and population analysis. Planning standards are applied to projections to yield projected recreational requirements. Factors and conditions having a potential impact on the ability to meet these requirements are identified and arrayed as the issues in outdoor recreation planning and implementation that must be addressed. Potential future resources are identified and compared to future requirements.

In light of the above derived information and results, broad goals are formed, and policies framed for their pursuit. Specific implementing objectives are posted. Strategies for achieving objectives are developed and options are reviewed. The determined course of action evolving from this process is consolidated in the formal plan. Phasing and priority are assigned. On a yearly basis, actions to be accomplished are identified by priority in specific project and program lists. Implementing resources are allocated to these work elements. Roles and responsibilities are assigned, and the stage is set for implementation and recycling of the planning process.

The following techniques were employed in accomplishing the planning components of the preceding program: institutional research; review of contemporary literature and current events; extraction of data from broad-based



Iterative Process

D1 THE PLANNING PROCESS

a ASSESSMENT AND POLICY FORMATION

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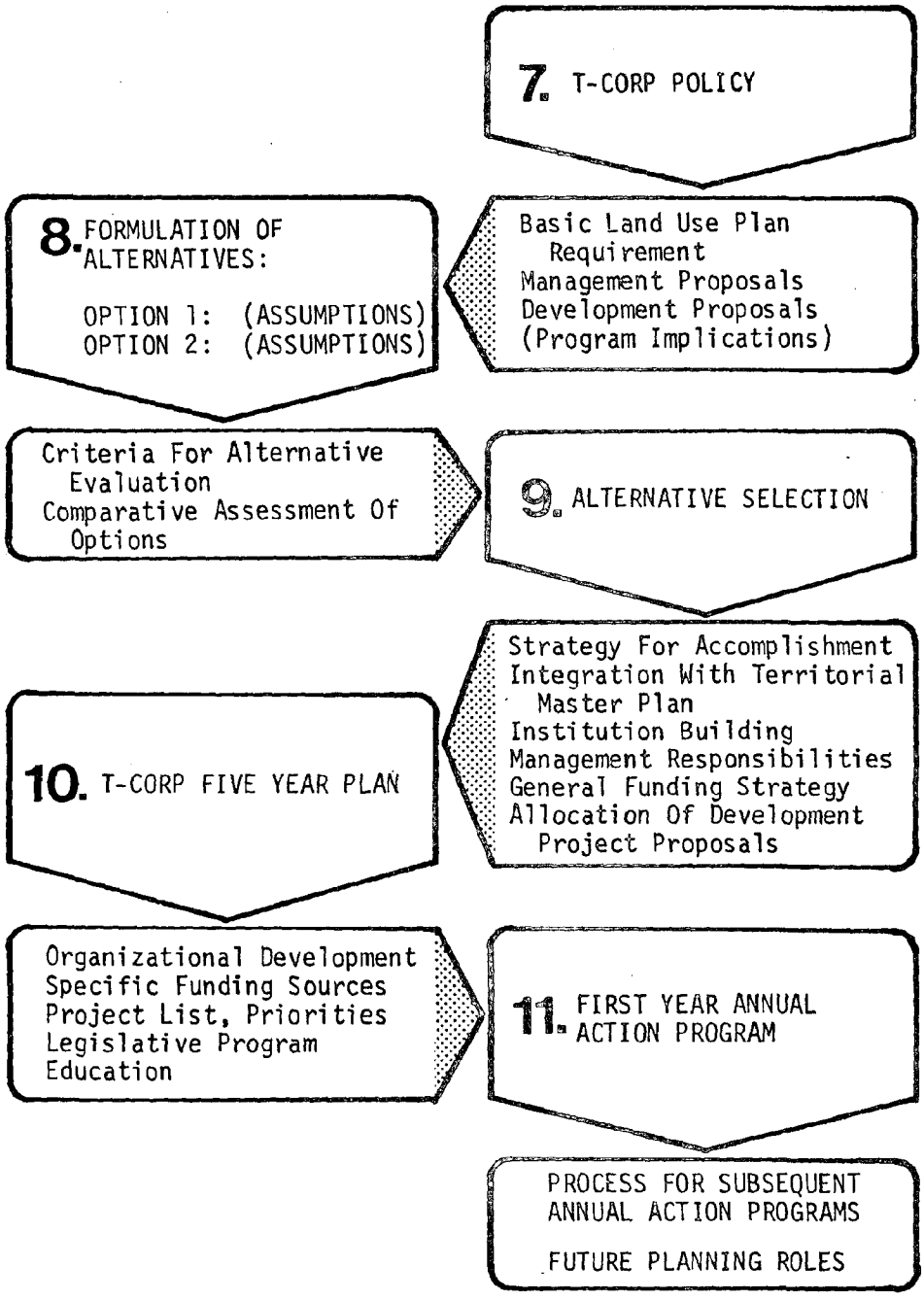


D1 THE PLANNING PROCESS

b PLAN FORMULATION AND IMPLEMENTATION

AMERICAN SAMOA T-CORP 1980

public surveys; on-site field inspections throughout the Territory; participation in public meetings arranged for review of interim document submissions; meetings with leaders and interested parties in the field of recreation from within the several branches of government administration and from the private sector; and comparison of recreational plans, goals, and objectives to the in-progress work and planning of other agencies and authorities to insure continuity of integration.

D. Summation

The general goal is to supply the public in American Samoa with outdoor recreational opportunities as desired in sufficient quality and quantity, based on projected future requirements. Opportunities must be distributed so as to be accessible, and identified for implementation by priorities within annual action programs. Facilities, maintenance, and recreational programs must be balanced with due regard to financial capabilities. Outdoor recreation must be integrated with other American Samoan goals of economic and organizational development, environmentally sound land use decisions, and the enhancement and preservation of viable traditional culture.

The T-CORP serves this goal through structured display of reasoned alternatives so that the public -- both the community and its leadership -- can visualize how outdoor recreation needs can be met in alternatives selected. Explicit public involvement complements analysis.

An additional role of the T-CORP is to provide those reviewing authorities not thoroughly familiar with American Samoa a culturally sensitive portrayal of the salient needs and issues that apply. This portrayal documents planning rationales for interpretive treatment of HCRS guidance in the Samoan context.

II. SUMMARY PROFILE OF AMERICAN SAMOA

A. Physical Setting

The well-weathered Samoan Archipelago (of volcanic origin) lies in the South Pacific around Latitude South 14 Degrees, Longitude 170 Degrees West. It is divided politically into the independent nation of Western Samoa (with strong ties to New Zealand) and the Unincorporated United States Territory of American Samoa (the most southern U.S. possession), the subject of this plan. Because the two Samoas share a common culture, have individual families extending to both locales, witness reciprocal travel, and are involved in a labor situation in which large numbers of Western Samoans work in American Samoa, it will be worthwhile to describe them jointly in greater detail.

Western Samoa's large islands of Savai'i and Upolu exceed 6000' and 3600' in elevation respectively, and are joined by seven noteworthy smaller islands to comprise that nation's combined area of 1,130 square miles.[1/] It's population is approximately 151,515.[2/]

American Samoa to the east is much smaller. The main island of Tutuila, famous for the deep, protected natural harbor of Pago Pago which first attracted American interest, elevates only to 2142 feet in Mt. Matafao and contains only 53 square miles.[3/] The highest point in American Samoa is Mt. Lata on Ta'u Island at about 3160 feet.

The other islands of the Territory (with areas in square miles indicated from the same source) follow: Aunu'u (.6) just a mile east of Tutuila; the Manu'a Group, commencing 63 miles east of Tutuila and composed of Ofu (2.8) and Olosega (2.1) -- these two islands with only a few hundred yards separation is now joined by a highway viaduct, and Ta'u (17.7) some 7 miles

farther east. Besides these five principal islands of the Territory are Rose Atoll (.2) an uninhabited U.S. National Wildlife Sanctuary some hundred miles further east, and Swain's Island (.1) under private ownership some 200 miles to the north-northwest of Tutuila and geographically in the Tokelau Islands. Rose and Swain's are not included in the present study.

Thus American Samoa (77.4 square miles) is only about 1/15 the size of Western Samoa. Its population of about 33,540[4/] is about 1/5 that of Western Samoa. The Polynesians of the Samoan Islands share the same racial heritage and traditional culture -- the latter subject to differential contemporary evolution stemming from the contrast of major external American influence on the one hand with comparatively less external involvement from New Zealand or other sources in Western Samoa.

These are steep, rugged tropical islands with thick vegetation (Refer to the Maps). Stream drainages are short and precipitous and there are no interior valleys. Flat, or comparatively flat land is in short supply as a review of Map 4 reveals. So steep is the general topography that along many stretches of coast there is barely space for the coastal highway, which can be subjected to landslides, sheet-flow runoff during storms, and the eroding influence of oceanic wave action.

The islands also have their white sand beaches -- generally pocketed in deeply indented bays on Tutuila, though more extensive in parts of the Manu'a Group. There are well-developed coral reefs, particularly along the southern shores of Tutuila, Ofu, and Olosega. There is scarcely any littoral zone vegetation, an exception being a small stand of mangrove in Pala Lagoon, south Tutuila. Pago Pago Harbor, approximately 3 miles long, fully protected, with depths of over 120 feet for the majority of its area is the only substantial body of protected water (excepting tiny Pala Lagoon) in the

Territory, but it is the best natural harbor in the Southeast Pacific.[5/]

Samoa has a maritime climate marked by easterly tradewinds and heavy rainfall. No isohyet map exists for American Samoa, but available records indicate that the mountain crests receive in excess of 250 inches annually. Pago Pago Village averages 200 inches. The mean annual rainfall in the harbor is 164 inches. Pago Pago International Airport, located on the south coast of the Tafuna Plains to the west of Pago Pago Bay receives an average of 125 inches.[6/]

Lying below the Equator, American Samoa experiences a comparatively wet southern summer from December on to April and a comparatively dry southern winter from June through September. Though rain is well distributed throughout the year, droughts lasting several months have occurred with severe effect on local subsistence agriculture and water delivery capability. In summer, tradewinds directly from the east dominate (though with less than winter intensity). Also in summer there is greatest likelihood of experiencing the 25-30 thunderstorms visited on American Samoa annually, and the hurricane season is in effect. Hurricanes generally approach from the north though occasionally from the east or west. In winter it is slightly cooler and not so humid. Winds are stronger but arrive mainly from the east-southeast and southeast. Northern and western shores have a "lee" aspect while the east and south shores are most exposed.

Pago Pago Bay is the hub of territorial activity - commerce, government, transport, and the visitor industry. By contrast, the Manu'a Group is isolated. The main highway running the length of Tutuila is the primary transport artery. Pioneer roads, jeep tracks, and trails branch off from it. The main roads in Manu'a are crushed coral, with some sealed paving planned for 1980. Interisland vessels connect Manu'a and Aunu'u with Tutuila, and

also travel to Western Samoa. Pago Pago Harbor and Pago Pago Airport handle all international traffic. There are small airfields on Ofu and Ta'u for interisland air service.

With regard to outdoor recreation planning, the physical picture is one of warm weather and rain. A complete rainfall picture is unavailable but it is obvious that southern shore locations on Tutuila (like the Airport) receive much less than places in the shadow of the crest ranges (like Pago Pago). Available outdoor recreational use time, and costs for protection against rain, are the significant related recreational planning parameters to be combined with general shortage of flat land, and the access needs of a dispersed village-oriented but gradually urbanizing population.

American Samoa is an isolated oceanic ecosystem. When planning of any type is introduced in this setting, the issue is one of island design with limited space, limited physical assets, and competing human uses for the land. The interaction of natural processes and introduced modifications cannot fully be predicted in advance. The environmental implications and the impact of human activities -- including any proposed outdoor recreational activities -- must be considered. Imperfections in the predictive process must be weighed in decision making. Environmental controls must accompany change if long term environmental stability is to be engendered. For these reasons, the fundamental approach to outdoor recreational planning as developed in this plan is the selective use and management of land, based on ecological concepts.

The physical components of the environment produce certain ecological restrictions on land use and site selections before human factors are added to the equation. Topographic patterns, slope, climatic factors, soils, oceanographic conditions, differential exposure to natural hazards in geo-

graphic space, and natural cycles, set a stage that economically and practically limits the quantity and quality of land use options. Applications of technology to counter extant conditions may spawn other environmental problems, and can involve costs defeating the feasibility of the effort.

The situation in the littoral zone where shorefront access and protection has become a contemporary issue is a case in point. Structures can be introduced in this zone -- breakwaters, groins, seawalls, and the like -- that enhance access or protection at one location. Simultaneously their introduction may alter dynamics of the circulation of water, potentially undermining the physical structure of the coast or inhibiting its ability to support biological processes.

The implications of any proposals involving the opening of the uplands and watershed via trails, camps, or roads are equally critical. Litter from non-biodegradable materials is an existing lowland problem which could extend to the uplands. Pollution of groundwater sources and the lower reaches of streams can occur. Inducing human entrance into the upland watershed implies a willingness to risk extension of the pollution problem.

The principle of the continuum of the environment is recognized. The introduction of pollution in any of its innumerable forms can endanger the system as a whole. Protective planning should tap traditional Samoan environmental experience, developed when man's numbers and lifestyle impinged less dangerously, but also lessons learned out of modern experience in locales where changing practices and increasing population have strained the sustaining capacity of the natural world. Thus, the relationship between recreation and conservation is an issue, one to be discussed further as regards urbanization and organizational development in American Samoa, and planning in the Coastal Zone.

B. Socio-Economic Profile

1. Demographic Characteristics

The population of American Samoa has been notable for its high fertility rate, high mobility in in/out migration, and sustained pattern of resettlement -- chiefly in California and Hawaii. Despite heavy out-migration, the residential population of American Samoa has increased by nearly 13,000 since 1960 to a current (1980) population of about 33,500 (See Appendix, Table 1).

The American Samoan population is characterized by the following:

* Large household size -- averaging 6.9 persons;
* A young age cohort structure -- with a median age of 17.8 (Table 8);
* High incidence of foreign birth -- with the result that some 50% of the population is composed of non-U.S. nationals.

There is some evidence that resident population growth of American Samoa is slowing down. The "decade changes in population" given in Table 9 reveal that as total population has increased, the rate of change between decades has fallen off.

2. Population Distribution

Increase in population has been accompanied by a shift in distribution, reflecting a change in the local economy. The local economy is changing from a subsistence-base to a market-base. Urbanization has accompanied this change, resulting in the shift of population from rural communities to the more urban settlements on the island of Tutuila.

There has been relative and absolute population loss from the Manu'a Group. There is a significant relative decrease of population within the northeastern and southeastern districts of the island of Tutuila. Predomi-

TABLE 1. POPULATION OF AMERICAN SAMOA 1900-1980 (Including Swain's Island)

Year	Population	% Change
1900	5,679	
		41.9
1920	8,056	
		24.8
1930	10,055	
		28.4
1940	12,908	
		46.7
1950	18,937	
		5.9
1960	20,051	
		35.4
1970	21,159	
		20.4
1980 est.	33,540	

Sources:
US Bureau of the Census, 1960 Census of Population, Number of Inhabitants, American Samoa, pages 56-57.

US Bureau of the Census, 1970 Census of Population, Number of Inhabitants, American Samoa, pages 55-56.

Development Planning Office, American Samoa Government, American Samoa: 1970-1980 Population Change by Six Planning Districts, 1980.

nant increased growth occurred in the central and southwestern districts of the island of Tutuila in the Tafuna Plains and Pago Pago Harbor area, including Nu'uuli (Tables 7, 11 and 12).

3. Settlement Density

The inhabited areas of American Samoa are relatively compact whether located in urban Fagatogo or rural villages. Household size throughout the Territory is about 6.9 persons. Overall population density on land of 30% or less ground slope is 1.97 persons per acre (1980). Examination of the existing residential component of that land area reveals a gross residential density of 13.2 persons per acre -- or approximately 1.9 household units. Comparable figures in the highly urbanized Pago Pago Bay Area are 10.3 persons per acre under 30% slope and 21.8 persons per residential acre -- or 3.2 households. Considering that nearly all residential structures in the Territory are a maximum of two stories high, these figures reveal that residential density does not show marked contrasts in the urban and rural com-

ponents of the settlement pattern. Concentration of population results from the large size of households despite comparatively low unit density (Tables 11 and 12).

4. Rural/Urban Dichotomy

Although the fundamental settlement pattern of villages persists, progressive urbanization has been discussed as the trend. This pattern emerges in the way the Pago Pago area has developed as the territorial hub of affairs and is also visible in the strip development which has accompanied the main trunk highway on Tutuila. By contrast, there is currently a net decrease in population from the isolated Manu'a Group. There is growing activity in Nuuuli, Leone and inland on the Tafuna Plain, but the dichotomies between the Bay Area and the remainder of south shore Tutuila, road-connected Tutuila locales and more isolated north shore locations, and between Tutuila and Manu'a are pronounced.

5. The Local Economy

The American Samoa economy is in large measure dependent on the federal government. (Refer to Tables 14 and 16 in the Appendix). It is in transition from a communal, subsistence economy to a market economy. The movement is towards greater self-reliance with the federal government providing an economic bridge to a different and improved local economy.

In an economic profile of American Samoa the basic fact is that development is in a transitional stage. Government remains the main employer, followed by the fisheries sector which includes fishing, processing and exporting. Fisheries are by far the largest contributors to local exports -- 97.4% (Table 14) in 1976.

Heavy importation of goods and services is another characteristic of this

transitional economy. There is a persistent balance of trade deficit; one however that is being studied critically for possible economic development opportunities. For example, the trade deficit in 1978 was reported to be $30,000,000. The largest single imported commodity is fuel; it represented over 37% of the value of imported commodities in 1977. Over 89% of the fuel is in diesel and jet fuels. Assuming a unit cost then of 50¢ per gallon for diesel fuel, the consumption of the local power industry represented about 34% of the total diesel fuel importation in 1977 (The remaining assumed to be allocated to the fishing industry).[7/]

One last item of note is that there are no government taxes levied below the level of the Territorial Government. Local government in American Samoa (at the district, county, village levels as now organized) has extremely limited potential for capital formation. As a result, the fiscal capacity to support local level decision-making resides with the Territorial Government, reinforcing local reliance on developments in the territorial political arena.

6. Subsistence Agriculture

With the advent of a cash economy, traditional economic practices now loom less large for much of the population, although subsistence agriculture is still an integral part of Samoan life. There is some plantation agriculture. Inshore fishing for food has become less prevalent at present, but the capacity to fall back on fishing in the future requires environmental preservation in inshore waters. The preservation of agricultural land is a general issue in Samoan development and a specific issue apropos the possibility that some potential agricultural sites might also be attractive for recreational opportunities.

The status of agriculture as a general issue is placed in perspective in

the following quote from Farrell.

> The agriculture of American Samoa is dominantly subsistence unaffected by a tradition of commercial planting . . . . Judged by prevailing western practices the level of technology is . . . low -- judged by indigenous standards the situation warrants little concern. The land provides reasonable sustenance, it performs a useful function in traditional custom and it provides a special status to the 'matai' who holds authority over it. Prestige for most Samoans however, may be obtained more readily away from the land by non-agricultural pursuits and service, and by paid employment . . . . The lure of paid employment reduces the number of young farm workers and the people as a whole become considerably less dependent on their environment than one would normally expect. The potential of the land is strictly limited. Already in places slopes of more than thirty-five degrees are cropped . . . . Development of the rural economy in American Samoa is a thorny problem and the territory is likely to develop education, health, transport and commerce while the admittedly limited yet fundamental resource, land, remains in comparison virtually undeveloped. 8/

7. Social Change

Perhaps the most fundamental issue in contemporary American Samoan life is social change. Introduced cultural, economic, and governmental ways are influencing all aspects of Samoan life. Samoan culture has demonstrated a certain resiliency in adapting with dignity to much that is new. But the quantity and pace of change is of such magnitude that a return strictly to traditional ways in their entirety is improbable, while the directions of the future are uncertain.

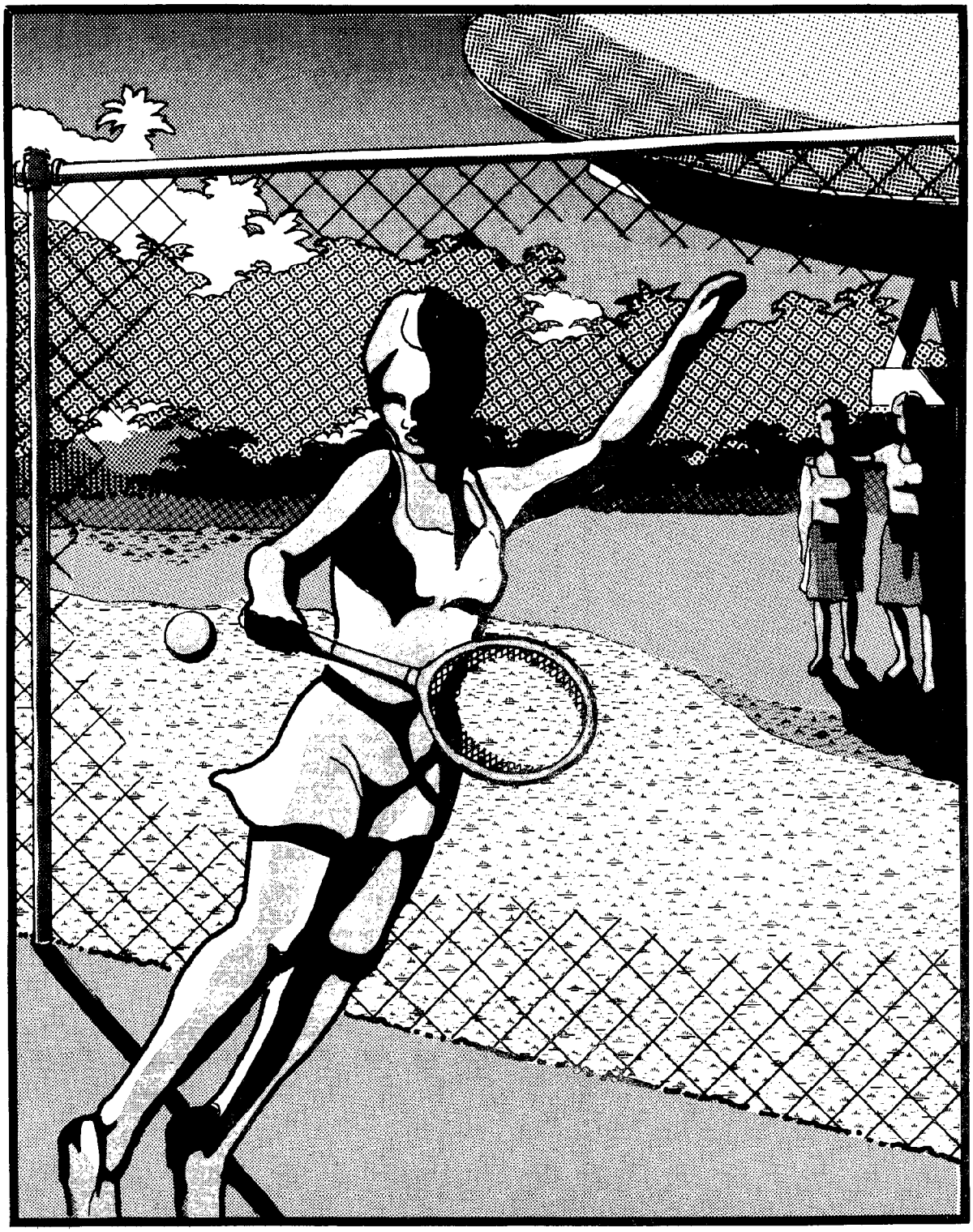
Culture change can be stressful. Work patterns are changing and discretionary time for constructive or dysfunctional utilization may become increasingly available. The essence of the emerging social function of outdoor recreation may be to maximize opportunities for constructive and gratifying use of leisure time -- benefitting society as a whole as well as the individual.

Examples of unresolved culture conflict exist, and future potential conflicts must be avoided. The problem of litter is a good example. The refuse of the traditional economy was chiefly natural material -- biodegrada-

ble over time, and not requiring a formal system of disposal. With the introduction of external material culture, the amount of non-biodegradable trash has increased. There is no traditional pattern for collection and disposal. A revised response that will keep litter from being a problem must still evolve.

The point is that any planning -- including outdoor recreation planning -- must be reviewed with an eye to possible culture conflicts that may be the unwitting by-products of well-intentioned alterations or innovations. There is a risk, under the current circumstances of rapid development and change, with heavy involvement by non-Samoans, that modern ways will be perceived as so likely to submerge traditional ways that there is little reason to incorporate the latter in concepts and assumptions. Such thinking is seriously in error, and its ascendancy is a threat -- not simply in its disrespectful tenor, but in its narrow willingness to address future problems without benefit of past experience. The present study seeks to avoid this error and emphasizes the need for more effective expression of Samoan philosophy, values, and experience, from within, to counter this trend. The following quote by ecologist Arthur Dahl applies.

> There is much to be learned from the traditional Samoan culture which has successfully coexisted with the island environment for hundreds of years. The old ways should not be discarded lightly, and there is much in the local taboos and practices of use to the modern environmental planner. To lose this cultural wealth would be a tragedy . . . . The basic problem is one of a clash of value systems. The traditional Samoan ways cannot easily adapt to the new needs and influences of a world that is physically unified, while American values are supported by imported wealth and power. The government, large businesses, central educational system, etc. are American in style and personnel. Unfortunately, the American values most often adopted are the evident material ones, while Samoan concepts of human happiness and social responsibility, which may be more desirable in an island society than their American equivalents, are lost. 9/



III. THE FUTURE SETTING FOR OUTDOOR RECREATION

A. Dynamic Conditions

Projections are made difficult due to the dynamics of population movement that have largely resulted in the existing demography of American Samoa and American Samoans. Accelerating social and economic change over the last 20 years likely will continue -- particularly with new directions on the economic side. If economic opportunities expand in American Samoa, the pattern of outmigration may change and the resident population could increase. New economic opportunities linked to the general shift to a market economy might change household formation. A pattern of smaller household size with increased strengthening of the nuclear family -- itself marked by a smaller average number of children, but heightened independence from the extended family responsibilities of the past could emerge.

1. Projected Population, Year 2000

The population projection (36,900 in 1985 and 50,200 in 2000) used for outdoor recreation planning was adapted from the projected estimates developed by the ASG Development Planning Office (Table 2). These estimates include a distribution of population by districts and by villages (Table 7). Future population has been distributed for general display purposes in Map 3.

2. Settlement

Urbanization, in the broadest sense of the word, is proceeding despite the complex matter of inalienable communal lands to be discussed in some detail further on. In many cases the productive resource potential of land (its prime value in the traditional economy) has less significance than its physical location in relation to population, services, access, and so forth. Samoan villages are being urbanized. Strip development is occurring along

the principal highways of Tutuila. The non-Samoan population -- theoretically not tied in to the dominant communal land-owning extended families -- nonetheless finds space to live. Economically-based pressure to urbanize may increasingly erode the traditional Samoan settlement pattern revolving around village life.

The pressure is compounded by the limited developable land on Tutuila. The most intense urbanization activity can be expected in incremental redevelopment of the Pago Pago Bay shore settlements, Nu'uuli and the trunk road settlements west across the Tafuna Plains to Leone. Redevelopment in the Bay will be spurred by the proposed consolidation of governmental offices at Utulei, permitting comprehensive urban design of Fagatogo, the downtown of American Samoa. Additionally, bay area land use planning is being advanced to guide development within this critical locale.

Table 11 and Map 5 reveal that available land for absorbing additional growth lies chiefly in West Tutuila, particularly the Tafuna Plain. Also, there is space for development on the island of Ta'u. The trend, however, is the urbanization of the island of Tutuila. While the raw available lands are found in the western part of the principal island, there remains a basic development option related to urban design and land use -- the possible conversion of existing urban settlements to higher density (using multi-story structures) as shifts in household size and lifestyle accompany the urbanization trend.

B. Derivation for Planning Purposes of the Settlement Pattern, Year 2000

The projected population for the territory in the year 2000 is in excess of 50,000. Accommodation of this number will require changes in the settlement pattern. Two scenarios are developed below for comparison and combina-

TABLE 2. CENSUS OF AMERICAN SAMOA BY REGIONAL PLANNING AREA: 1970-1977 CENSUS FIGURES; 1980-2005 PROJECTIONS; WITH PERCENT INCREASES.

REGIONAL PLANNING AREAS	CENSUS FIGURES 1970	% Increase 1970-1974	1974	% Increase 1974-1977	1977	% Increase 1977-1980
1. MANU'A	2,112	-14.4	1,808	- 5.7	1,705	- 7.1
2. NE TUTUILA	2,441	- 1.6	2,401	1.5	2,438	1.7
3. SE TUTUILA	2,744	0	2,745	1.2	2,777	2.4
4. PAGO PAGO BAY	7,886	8.5	8,554	6.8	9,135	5.5
5. TAFUNA PLAINS	6,555	19.1	7,807	8.5	8,468	18.0
6. W TUTUILA *	5,347	9.2	5,841	3.0	6,015	15.9
TOTAL :	27,085	7.6	29,156	4.7	30,538	9.7

Census Sources: ASG, DPO, American Samoa: 1970 to 1980 Population Change by Six Planning Districts, Completed from 1970, 1974, and 1977 Ten Percent Sample Census of American Samoa. (Note: Tafananai is reported above in Area 4 instead of Area 3.)
* Excluding Swain's Island.

REGIONAL PLANNING AREAS	PROJECTIONS 1980	Av. Yearly % Growth	1985	1990	1995	2000	2005
1. MANU'A	1,583	1.00	1,665	1,750	1,838	1,935	2,035
2. NE TUTUILA	2,479	1.00	2,605	2,740	2,880	3,025	3,180
3. SE TUTUILA	2,844	.75	2,955	3,062	3,341	3,306	3,602
4. PAGO PAGO BAY	9,638	1.40	10,330	11,078	11,702	12,719	13,445
5. TAFUNA PLAINS	9,991	3.00	11,485	13,430	15,570	18,010	20,920
6. W TUTUILA *	6,971	2.40	7,850	8,840	9,950	11,200	12,610
TOTAL :	33,506	1.59	36,890	40,900	45,281	50,195	55,812

Projections Source: ASG, DPO, "American Samoa Population Projection by Planning Districts and by Five-Year Intervals 1980-2005", transmitted in letter of 4 Mar 1980 by S. Leasiolagi, Statistician to R.M. Towill Corp.

tion in order to derive a reasonable estimate of future settlement as a basis for broad recreational planning. Both depart from data on the existing situation as analyzed earlier in the text, documented in appended tables, and displayed in the maps attached.

Scenario (A) hypothesizes that land use and settlement patterns will continue as presently visible, with no major changes in governmental policy.

Scenario (B) assumes the establishment of a territorial land use plan with policies implemented and enforced down to the local level.

There is not great differential impact between the two as regards the Manu'a Group. Manu'a has a large inventory of developable land with a small population. Tutuila, the focus of projected growth and change, is the arena in which differences between the two scenarios will show up.

Scenario (A) operating on Tutuila predicts widely proliferating strip development along highways. As at present, density of development will be low. Low density development combined with population increase means that continuing encroachment on plantation lands and environmentally sensitive lands can be expected. Under these circumstances, suitable land for development will be scarce. Unsuitable sites will be used. Settlement will be more dispersed causing public facility and service planning difficulties. Open space will be hard to circumscribe and protect.

Under Scenario (B), a comprehensive land use plan would work to neutralize current low density expansion trends by restricting development on prime agricultural lands, and other lands deemed unsuitable due to environmental factors or sensitivities -- flood plains, coastal hazard zones, lands with excessive slope. The result would be a more orderly settlement pattern making more efficient delivery of public services possible as strip development came under control and options for increasing density were exercised.

TABLE 3.
AMERICAN SAMOA FUTURE SETTLEMENT PATTERNS, 1980-2000: DERIVATION OF COMPARATIVE SCENARIOS

Parameters	Manu'a Group	N.E. Tutuila	S.E. Tutuila	Pago Pago	Tafuna	West Tutuila	TUTUILA	TOTAL
Total Population								
Year 2000	1,935	3,025	3,276	12,719	18,010	11,200	48,260	50,195
Year 1977	1,705	2,438	2,826	9,066	8,468	6,015	28,833	30,538
Developed Area								
Total Area 1977 (Acres)	765	680	640	1,535	2,800	1,400	7,055	7,820
Density 1977 (Pop./Acre)	2.2	3.6	4.4	5.9	3.0	4.3	4.1	3.9
Scenario A								
Total Area Need, 2000	880	840	745	2,155	6,005	2,605	12,350	13,230
Balance, 1977-2000	115	160	105	620	3,205	1,205	5,295	5,410
Potential Lands 1/	4,235	40	-0-	-0-	3,200	1,990	5,230	9,465
Residual Lands, 2000	4,210	-0-	-0-	-0-	-0-	785	-0-	4,145
Total Available, 2000 2/	880	720	640	1,535	6,000	2,605	12,585	13,465
Projected Density, 2000	2.2	4.2	5.2	8.3	3.0	4.3	3.8	3.7
Scenario B								
Total Developed Area, 2000	730	720	630	925	3,025	1,500	6,800	7,530
Projected Density, 2000	2.6	4.2	5.2	13.7	5.9	7.5	7.1	6.7
Scenario Comparison A & B								
Density B-A/A	+18.2%	-0-	-0-	+65.1%	+96.7%	+74.4%	+86.8%	+81.1%
Scenario B Comparison with Existing Density (1977)								
Density B-1977/1977	+18.2%	+16.7%	+18.2%	+132.2%	+96.7%	+74.4	+73.2%	+71.8%

1/ Developable lands refer to areas with slope less than 31%.
2/ Total available, 2000 refers to developed areas within developable lands.

Source: Development Planning Office, Land Use Plan, 1978-1983, American Samoa Government (1978). Land use data (1977) were drawn from this report. All other data were developed for the formulation of the scenarios.

Refer to Table 3 for a quantitative summary of how land use in the year 2000 would evolve under Scenario (A) as compared with Scenario (B). Obviously the advantages of Scenario (B) are favored in this study. Although current patterns can be expected to continue to some extent in the next few years as land use planning is consolidated and applied, for the long term the more reasonable scenario to explore in developing outdoor recreation plans is the (B) alternative.

Implications include: better access for a larger majority of the population; the likelihood of more intense use of facilities and space developed; the ability to make effective use of existing opportunities already fielded in relation to concentrations in the habitation pattern (such as the schools); and the capacity to integrate recreation facilities with neighboring activities in the joint use of infrastructural support. Management of a smaller number of higher use facilities with concentrated recreational opportunities means greater financial feasibility for developing management advantages. Supervision works to protect recreational property and participants, set standards of use and maintenance, and allow an augmenting educational role that can improve the quality of overall recreational offerings.

C. Samoan Land Tenure, Use, and Village Settlement

Any discussion of site development, use, and accessibility must depart from an understanding of Samoan communal land tenure. The vast majority of lands in American Samoa (96%)[10/] are held or claimed communally by aigas (extended families). There are strong cultural preferences, and legal restrictions, against alienation or transfer of these lands. Even participation in formal boundary demarcation substantially is avoided, as indicated in this 1970 surveyor's report:

> Historically the ownership of lands in the Samoan Islands, and particularly in American Samoa has been a prerogative of the "aiga" or extended family group. Each aiga is represented by a chief or "matai" who acts as governor and spokesman for the group. The management of the lands of the aiga has been delegated to the matai whose authority derives from the express consent of the family group. The boundaries of aiga lands have, for the most part, been indefinite and unmarked. They remain so today. It is a peculiar fact that while a boundary between aiga lands may be indefinite it is determinate. The actual ownership and use of land is subject to a sort of communal acquiescence. Within certain limitations property lines remain transitory. This fluidity is highly desirable from the Samoan standpoint. For the above reasons property line disputes and conflicts are virtually unknown . . . . The Samoan Chiefs, including subordinate matais, generally resent compulsory identification survey and registration of boundaries or ownership of these lands. Under Fa'a Samoa this is regarded as an intrusion into the family life and an erosion of the authority of the matai and the entire aiga. It significantly reduces the influence of the matai and the local and superior chiefs. 11/

But even as one begins to align arguments to indicate that perhaps some traditional forms are dysfunctional, other points come to mind that reflect favorably on the very same forms, i.e. the following from Housing in American Samoa, 1972:

> There is much to be said for the present system of land use and tenure, despite -- or perhaps because of -- the barriers it poses to development. The system seems to be distinguished from most others by one overriding characteristic. Land is seen mainly as something to be used to meet social needs rather than as an individual property right or a tangible economic asset or resource as such. Those who view the Samoan land system as a 'barrier' or a 'problem' are viewing it from a western perspective based on non-Samoan values and motives. While possibly facilitating more and better housing or other facilities, removal of the 'barrier' might hasten the destruction of the Samoan perspective and open the way for land exploitation and domination by non-Samoans, similar to what has occurred in Hawaii and similar island 'paradises'. 12/

The theme reiterated has significance in outdoor recreation planning. If land is to be used to meet social needs, and most land is aiga-controlled, then deployment of land for recreation will require that recreation is perceived as fulfilling local social needs; and that such needs have priority over alternate land allocations. If such needs are not perceived at the aiga or possibly village level, then land and space for recreational developments

likely will not be made available from communal lands.

The subject of recreational land use raises the question use by whom. The 1979 ASG, DPO Comprehensive Village Survey, "Recreation Summary Sheets" reveal the prevalent response that the ASG should provide recreational opportunities for the village. When federal funds are expended (as in application of the U.S. Land and Water Conservation Fund Act of 1965, as amended), the public at large must benefit. This may conflict with the concept of "local dominion" -- an aspect of communal land holding reinforcing the traditional concept that the aiga has the say in what access, use or handling will be allowed on aiga lands, and village councils might restrict outside entrance to the village as they see fit.

The combination of communal land inalienability and the exercise of local dominion may effectively exclude federally supported recreation capital expenditures from the village level. Private lenders will also be inhibited due to the unsuitability of inalienable communal lands as collateral for capital loans. Alternately, village access guarantees, or ASG purchase of rights of way may be ways to bridge this gap.

D. Access and Zoning: Contemporary Needs

Urbanization and the shift to a market economy, as discussed previously, have sharpened the need for environmental conservation and protection and have given rise to economic values in contrast to "beneficial use" as practiced in the past. Economic value is reflected in the growing use potential of land resources, especially those that are accessible via highways. At the same time, environmental importance of land resources is becoming more evident as population increases result in the encroachment of floodplains and upland areas.

Access and the related issue of land use zoning are contemporary needs stemming from these twin forces (urbanization and a market economy) that alter economic values and the uses of physical resources. The beneficial use concept in Samoa is under strain as population continues to grow and the market economy expands. The concept of access in Samoa is a contextual issue, one which has, heretofore, not been acknowledged in the past communal setting of rural villages and small population size. Space and resources were amply distributed among the various villages. Now, however, under the strains of change and growth, some villages post signs restricting general access to local physical resources. The concept of village dominion, seldom an issue in the past, is an underlying contemporary problem area. The need for sharing spatial resources now extends beyond the bounds of the aiga and the village.

"Sharing" is not foreign to Samoa. However, it is now at a supra-village scale and there is a need for: 1) some new social instrument to accommodate access to the sea and the mountains; 2) a form of land use governance to conserve and protect the limited physical resources of Samoa. These two dimensions of contemporary need -- access and land use zoning -- are themes of importance in outdoor recreation planning.

Even non-communal lands identified for possible development as recreational sites may only be accessible by crossing communal lands. Access has maybe four possible aspects: 1) physical access -- referring to the difficulties, time, and costs involved in getting to a site; 2) legal access -- involving permission, rights of way, time restrictions, and regulations limiting use; 3) financial access -- fees are charged, perhaps beyond the means of some; 4) and type of access -- by foot, bicycle, cars, 4-wheel drive, tour busses, aiga busses, boats, swimmers, visual, and/or aircraft

(rotary-wing). All four, particularly legal, could become sources of contention if sites are not planned with access in mind. Satisfactory formal safeguard of equal opportunity access to planned public developments is one criterion of acceptability for federal funding support.

Zoning policy can be applied 1) protectively -- to keep people and activities out of hazardous areas, 2) for conservation purposes -- to preserve environmentally sensitive areas from encroachment, 3) for compatibility -- to segregate incompatible uses and activities (such as piggeries next to schools, or industrial activities in tourist and residential areas).

Restriction of access is one means of delimiting or specifying recreational opportunity. High use zones such as major parks require general, facile access. Conservation areas -- reserves and preserves amounting to a significant segment of the "open space" resource component of outdoor recreation, are too fragile for heavy use. Limitation of access and activity choice is indicated where environmental concerns weigh heavily -- as in the high watershed. However, in all cases where access plans are to be made, the bonafide traditional economic uses and gathering activities of residents must be thoroughly understood and accommodated as intended by law. Exclusionary decisions, even for pressing environmental reasons, ought not be unilateral, or prosecuted without due traditional process.

Zoning policy in application to outdoor recreation is another issue. "Open space" and "green belt" concepts may be elements in specific recommendations for land deployments. The idea of "buffering" elements in the landscape from neighboring activities and avoiding juxtaposition of incompatible land uses must be fostered. Policy for boundary demarcations in general - for parks, landmarks, conservation zones, and so forth, must be established.

E. Implications and Conclusions

Space sufficient for competing uses is a constant issue in American Samoa. Many individual localities, as now utilized and arranged, have no place to put new outdoor recreation elements. Elsewhere the introduction of possible recreation elements may be directly competitive with existing activities or other new projects being considered to fill other than recreational needs.

Economic implications are strong. How involved will a village-oriented population become in facilities to be fielded away from the home village? Will individual villages cooperate in support of developments to be fielded beyond the dominion of their respective villages? With what facility will existing cultural mechanisms allow compromises and political trade-offs to be made? Will such concepts as preservation of historic sites in common heritage and environmental protection of the watershed and coastal zone be perceived in traditional circles as appropriate topics for "greater good" consensus and uniform policy formulation? These are all issues which may to a greater or lesser extent have an effect on the formulation of T-CORP policy and action implementation.

In the quote following, Dahl suggests a framework within which the several land use requirements in American Samoa should be balanced.

> The problems in American Samoa outlined above call for an integrated program of environmental management. The land area is so limited that careful decisions are needed to prevent the waste of this scarce resource and to protect the three main island activities of agriculture, fisheries, and tourism. Parks need to be set aside for conservation purposes and for tourists. Prime agricultural land should not be lost to housing or commercial development if other areas can be adapted to those uses. Development of the land must not be permitted to endanger the reefs or their associated fisheries. Careful consultation with each village will be required, together with provisions insuring that all will benefit equally from the results. One village will not contribute land

> freely to a scenic park while its neighbor alone receives material benefits from that park as the site of a tourist hotel. 13/

The possible specific issue of competition for land use (with recreation perceived as a less important need) is hinted at in the quote following from a 1966 article by Robert Langdon.

> One of the most important chiefs in American Samoa . . . (is) quoted . . . as saying: 'If we lose any of our old ways, it will be because we choose to, not because changes are being forced upon us . . . .' (He) was one of two chiefs who strongly opposed a plan . . . to buy Samoan land (or even condemn it if necessary) for recreation parks on Tutuila. (He) argued that Samoa would need all the inches of soil it had to support its rapidly-growing population. 14/

The recreational issue implications are 1) that finding space to fill projected outdoor recreational needs may be difficult; 2) that this spatial obstacle will likely exert substantial influence on the feasibility of options and alternatives for meeting the need; 3) that coordination with other planning efforts representing potentially competing spatial needs is essential; 4) and that unless some concrete social functions are perceived for outdoor recreation it is sure to exercise weakened claims to sites sought to serve its goals.

The general conclusion is that enhancement and expansion of existing facilities, and development of government lands already alienated from the communal system will present most feasible resource development options -- provided they have the physical capacity to meet the projected need as determined on a case by case basis. The dominant land tenure - land availability issue is bound to influence recreational policy formulation, and the distribution, combination, and concentration of activity opportunities at "planned recreational destinations", as will be discussed. The possibility of application of other categories of land -- such as the growing body of "individually owned" land, church and private school lands, and the very small

amount of "freehold" land remains to be explored, but depends in large part on what role -- and how much of a role -- the private sector is willing or financially able to play in outdoor recreation in American Samoa.

Regardless of the specific results of the several trends and patterns discussed above, optimum administrative response appears to require activity in the following areas:

1. Greater integration of territorial and local government, now functioning dually;
2. Consolidation of dispersed functional planning within a framework of territorial master planning, with establishment of local land use planning;
3. Implementation of a territorial land use plan as a foundation for both of the above.

IV. THE EXISTING OUTDOOR RECREATIONAL SYSTEM

A. What Legacy from the Past?

"Outdoor recreation" as a concept or discrete collection of activities is new in Samoan culture. This is not to say that recreation was not woven into the traditional way of life. The following quote from anthropologist Peter Buck suggests that organized recreation played a significant role in traditional Samoan culture.

> The social value of the Community Games was important. The smaller competitions in the same village brought the young people and adults together and gave them relaxation from the perpetual quest for food on land and sea. The competitions between different sections of a village or different villages brought together a larger group of people on terms of social intercourse. The local people had to provide food for the visitors, spectators as well as competitors, and the occasions were social events in which all feasted as the foundation of enjoyment. Singing and dancing added to the festive nature of such occasions. A Polynesian attending the sports of people of (another) culture is struck by the lack of organized hospitality in providing free food and drink which is so characteristic of his own culture. In the return game played at the other village, the hospitality previously received was returned, if possible with added interest. In thus promoting social intercourse of a friendly and enjoyable nature, games of a competitive character between different villages held an important place in (Samoan) society. 15/

Does the same social function for recreation apply in the present day? Although the "so'o" (inter-village hospitality and sports challenges with the host village providing all the food and drinks) still exists, modern sports not traditional games are involved. Sports league activities, school programs, and introduced leisure alternatives appear to tap much energy expended in inter-village activities of the past, but the cultural aspects may not be the same.

By contrast, at the "territorial" level, a formal role for recreation persists in the cultural exchanges that occur between American Samoa and Western Samoa when they cooperate ceremonially and in athletic contests to commemorate American Samoa Flag Day and Western Samoa Independence Day. Formal recreation has an even larger expression in the South Pacific Games

which exert strong influence in focussing international attention on the South Pacific as a region.

Aside from these modern impacts of recreation, an issue is what contemporary social function outdoor recreation can or should have within American Samoa. How do American Samoans perceive outdoor recreation? An understanding of the pattern of perception is essential in evaluating demand for recreational opportunities, and in developing opportunities that are culturally sensitive.

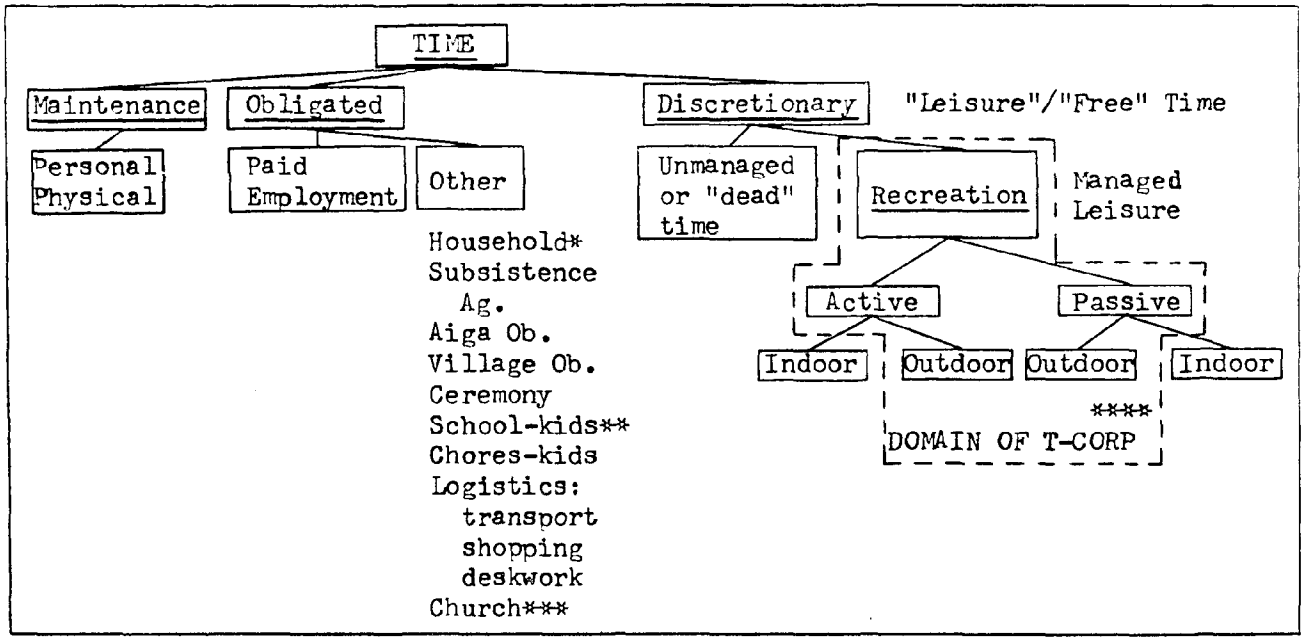
Aesthetics may become a topic in overall planning. Individuals may have little to say about aesthetics in the context in which they spend their obligated work time. Consequently they may consciously or unconsciously seek aesthetic satisfaction during their discretionary time.

Siting and design, integration with the landscape, preservation of vistas and open space, enhancement of traditional motifs, continuity in recreational themes and facilities, vegetative landscaping, respectful integration with the ceremonial life of Samoa, preservation of unique cultural symbolism -- these all may contribute to satisfaction derived from involvement in outdoor recreation. Value judgments are involved which should be elicited from the residents of Samoa.

Expressions of the best of Samoan culture need not be lost simply because "modernization" has closed off some of the avenues for such expression. Cultural expression can survive in new outlets if these are designed with understanding and attention to filling such a role. Newly designed recreational opportunities, in the outdoor setting that so explicitly influences Samoan cultural response, may be numbered among such new outlets. Exploration of possibilities should include a review of recreational activities of the past that might still be brought forward to meet renewed demand.

DIAGRAM 2.

DERIVATION OF T-CORP TIME-ACTIVITY DOMAIN FOR INDIVIDUALS



NOTES:

* Some household activities such as babysitting might be considered obligations by some, preferred activities by others.

** Students also get a ration of obligated outdoor recreational activity in school PE classes. Afterschool sports and teams considered discretionary.

*** Church in Samoa has some obligatory aspects for members while at the same time, much church activity is discretionary and perceived as recreational.

**** Samoan climate (rain and wind) can require some outdoor activities to have some sheltered facilities -- for example, roof shelter without walls as found in the ASCC Gym. Such exceptions are within the domain of the T-CORP whereas other active indoor pursuits such as bowling are excluded.

B. Outdoor Recreation Patterns

1. The Concept of Recreation in American Samoa

Outdoor recreation is commonly viewed as a leisure-time activity. American Samoa has a different lifestyle, not shared by many Americans, and one suggesting that outdoor recreation patterns are different. Accordingly, an in-context concept of outdoor recreation is necessary to understand recreation in American Samoa and to provide increasing opportunities for recreation in American Samoa. Diagram 2 depicts how time can be organized to yield leisure -- which can be applied to the T-CORP concern of outdoor recreation.

Samoan lifestyle permits a variety of outdoor recreational expressions, some quite similar to the national patterns and others that are more oriented to local resources. For example, there is an American-style school system fostering typical American school-related outdoor recreation. On the other hand, a Samoan-wide custom of avoidance of many recreational activities on Sundays causes a departure from the mainland American concept of the "weekend" as a 2-1/2 day block of unrestricted time.

The key difference lies in the amount of discretionary time available for recreating. Time limitations affect recreation patterns and the allocation of resources to recreation. The American Samoan's time is taken up with obligatory primary economic activities, standard human maintenance of body and soul, and a range of secondary obligations to the aiga (extended family).

2. Survey Results

Two community surveys are available that provide initial baseline data for recreation planning: a 1978 community profile and a 1979 comprehensive

village survey. They provide the starting point beyond which augmenting information was procured through interviews and public meetings with government officials, public and private recreation leaders, and other interested parties.

In the American Samoa Community Profile -- 1978, heads of households and their spouses were surveyed to identify attitudes, perceptions and views about water resource development and planning. The survey included questions related to recreation behavior, trends, and preferences. It revealed that the American Samoan did not value "leisure" time in the western sense at the time of survey, in the village setting.

When asked if they would like to have "more leisure time" than they presently have, 87% of the respondents indicated that they did not seek more leisure. It can be inferred that in the village setting at present, the clear-cut division between "work" and "play" so fundamental in the United States is not dominant. Life is lived "whole" so to speak. Extra or available time would generally be applied to some additional social or economic pursuits. Consequently the idea of striving to create more "free" time doesn't have much traditional meaning. Aiga or village duties are always waiting for those with "extra" time. Asked what activity is generally undertaken first when "free" time is available, 42% of respondents indicated they tend to family obligations first. There is little discretionary time left over for outdoor recreation -- particularly with some sabbath restrictions enforced in the villages.

However, as the economy shifts to a mixed, market-type with more wage and salary employment, increasing urbanization, and likely increased commuting from home to work locations, the dichotomy between work and leisure is expected to become stronger. Lifestyle changes accompanied by increases

in discretionary time will contribute heavily to demand for new recreational opportunities. Space to meet future leisure needs as expressed in changing patterns of outdoor recreation must be anticipated in plans.

A comparison of specific recreational preferences revealed by the study is summarized in Table 4. Response percentages shown are the proportions of all respondents who made positive mention of the activity as one they engaged in. There is, however, no indication of how many times individuals participated in these events, the duration of participation, or the relative share of available leisure time consumed by each. Swimming, picnicking, sports, and fishing were most frequently mentioned. The survey shows that "outdoor recreation" is viewed as active and in some cases competitive, with recognition of certain passive involvements as well.

Most frequently mentioned active pastimes were sports: volleyball, basketball, football, cricket, and rugby. Note however that actual pursuit of these sports depended on facility availability. Since facilities were often unavailable at the local level, this village-oriented survey demonstrated that considerable knowledge of an interest in active recreation did not necessarily translate into a major role for active recreation in the village.

Active sports are resource-related opportunities. The above-revealed pattern of recreational perception and interest being unmatched by resource opportunities is revealed again in the results of a second survey conducted in 1979 by the ASG Development Planning Office. This Comprehensive Village Survey explored several themes at the village level, one of which was recreation. Responses in this case were gathered from village council members -- the individuals chiefly concerned with village maintenance, management, and development. Interviews and follow-up discussion extended into 1980.

TABLE 4.

MOST FREQUENTLY MENTIONED OUTDOOR RECREATIONAL ACTIVITY AT THE VILLAGE LEVEL, 1978.

Activity	% Of All Respondents Mentioning Activity
Swimming	50%
Picnicking	49
Sports	45
Fishing	40
Camping	26
Hiking	22
Jogging	18
Skindiving	18
Hunting	14
Snorkeling	13

Source: American Samoa Community Profile -- 1978, for U.S. Army Corps of Engineers, Honolulu District, by MKGK/Yamamoto, Honolulu, 1978.

Table 5 shows the raw summary results of the manner in which villages arrayed their problems and concerns.

In this situation, wherein recreation was offered for ranking among several primary economic and habitation convenience concerns, it is no surprise to find it ranked in the second echelon. Note that top ranked responses all concern practical matters of living directly attributable to the socio-economic evolution detailed earlier. Population increases, low density development, the need to commute to wage/salary employment sites, dependence on newly proliferating infrastructural systems -- these are the new problems which the villages have to face, and for which traditional institutional mechanisms do not exist. Consequently they rank as leading concerns.

However, when the subject of recreation is broached independently, as was done within the same survey, the villages produced a considerable volume of detailed response on their wants and preferences. The Development Planning Office detailed the results of recreation queries to over fifty villages in a component of the survey entitled "Results of Recreational Village Council Survey conducted by the Development Planning Office (1979)". The content, too detailed for duplication here, took the format of noting for each village what its prime recreational concerns were, followed by the village's concept of what ought to be done to improve matters.

In the aggregate, responses covered the full range of inadequate space and facilities, environmental and locational problems, infrastructure and maintenance concerns, thoughts on specific action that the villages desired the ASG to undertake (chiefly geared only to individual village problems): access, litter, recreational equipment, tourism-related aspirations, and concern for program development as a way to provide productive outlets for

TABLE 5.

SUMMARY RESULTS, THEME COMPARISON,

ASG DPO 1979 COMPREHENSIVE VILLAGE SURVEY.

NUMBER OF VILLAGES & PRIORITIZED VILLAGE PROBLEMS

CATEGORY	NO. OF VILLAGES FIRST PRIORITY	NO. OF VILLAGES SECOND PRIORITY	NO. OF VILLAGES THIRD PRIORITY	TOTAL
Water Supply & Distribution	17	12	2	31
Transportation	11	11	8	30
Wastewater & Sewage	5	5	8	18
Drainage & Flooding	9	8	14	31
Power	1	4	1	6
Recreation	1	2	3	6
Solid Waste	1	2	2	5
Economic Development	0	1	1	2
Agriculture	0	0	4	4
Housing	0	0	2	2
	45	45	45	--

PERCENT OF VILLAGES & PRIORITIZED VILLAGE PROBLEMS

CATEGORY	% OF VILLAGES FIRST PRIORITY	% OF VILLAGES SECOND PRIORITY	% OF VILLAGES THIRD PRIORITY	TOTAL
Water Supply & Ditribution	37.8%	26.7%	4.4%	68.9
Transportation	24.5	24.5	17.8	66.8
Drainage & Flooding	20.0	17.8	31.1	68.9
Wastewater & Sewage	11.1	11.1	17.8	40.0
Power	2.2	8.9	2.2	13.3
Recreation	2.2	4.4	6.8	13.4
Solid Waste	2.2	4.4	4.4	11.0
Economic Development	0	2.2	2.2	4.4
Agriculture	0	0	8.9	8.9
Housing	0	0	4.4	4.4
-	100	100	100	

youth.

The point is that despite essential preoccupation with the real life work problems of economic and social transition, there is in American Samoa, a parallel explicit concern with the future of outdoor recreation which is expressed at the local level as well as among leaders of the public and private sectors. In response, the present study includes a full local-level component in planning proposals developed further on.

Facility/resource-related opportunities, then, are required for the future. At present, most program-opportunities are provided by the Department of Education through physical education classes, playground recesses, and after-school sports and programs. The American Samoa Community College (ASCC) has programs for its students, as do some of the private schools. Court sports -- basketball and volleyball -- appear to be the most popular at all levels.

Table 6 in the Appendix dealing with educational recreation programs shows that in the sample month of January 1980 there were over 11,500 public and private school students in the elementary and high schools, plus an additional 900 full or part-time college students in the ASCC. Note that this large segment of the population is also the one with the most discretionary time to apply to outdoor recreation. Further, it gets an added share of formal recreational exposure in physical education classes. Program centers on western/American athletics and is supported by a central team of recreation specialists operating out of the Department of Education. Consequently, the youth age cohorts are developing recreational involvement and habits that will influence strongly the future need for space, facilities, and program opportunities related to the exposure and participation they have had in school.

C. Public Organization and Administration: The Institutional Setting for Outdoor Recreation

1. General

Outdoor recreation planning, as approached through T-CORP plan cycling and development of annual action programs, must be geared to a projected corresponding level of organizational development. Coordination with other planning activities is a fundamental point of departure.

Economic health is the foundation upon which extended planning must be built. In placing American Samoa's economic situation in perspective, the American Samoa Development Planning Office has made the following statement.

> The present administration recognizes that clean-up and revitalization of American Samoa's existing economy are required before a more expansive program can be pursued. Consequently, the Territory's economic development emphasis to 1984 will be to maintain and improve existing economic efforts and explore potentials which are primarily based on existing resources. 16/

That statement includes major policy implications to which T-CORP planning ought to be related.

At present "outdoor recreation" falls under the supervisory aegis of the American Samoa Parks and Recreation Commission. The Commission was created in the American Samoa Legislation (1980) which also contains the legislative authority for participation in programs with the federal government, including funding programs. The 1980 legislation also creates a Department of Parks & Recreation charged to prepare and maintain a "Territorial Comprehensive Outdoor Recreation Plan" for submission to the Governor.

Recreational programs are managed mainly for school students and the youth age cohort through heavy institutionalized involvement of the public school system under the Department of Education. The private Catholic school system independently coordinates its program. Some churches and pri-

vate service organizations generate sports-oriented recreational programs that in part make use of some park open space but are not integrated under public management. Recreation by tourists is separately under the review of the Director of Tourism with coordinated discussion of joint use of park space with the Chairman of the Parks and Recreation Commission. The Territorial Sports Commission and Boxing Commission attend to certain formal events and activities where standards and procedures must be maintained. There are a Youth Office, a Youth Advisory Council, and an Advisory Committee on Elderly Programs.

Identification of historical landmarks -- a dimension of outdoor recreation planning -- would fall within the expertise of the American Samoa Historical Preservation Commission. Identification of natural landmarks is not under active pursuit, and no potentially facilitating existing agency is apparent. Outdoor recreation planning and broad conservation policy should be closely linked in the future, but organizational development of both is necessary. There is a Special Assistant to the Governor for Environment, an Environmental Quality Commission, and an Office of Marine Resources, but again, no cabinet level department. A Zoning Board and a Land and Site Use Committee function independently.

2. A Structured Role for Outdoor Recreation

As outdoor recreation becomes a significant part of contemporary Samoan life, it is obvious that a consolidated authority to handle the many aspects of its management is a necessity. The basic T-CORP related issues include creation of a cohesive organizational structure for outdoor recreation, and launching it effectively. This involves building the entity, creating interagency linkages, developing a standing body of information, prescribing

policy, producing and maintaining plans, and creating an efficient action route for project implementation. Creating facilities and developing sites is only one aspect of the work. They must then be maintained and their activities programmed. The pace of development must be matched to available resources. The application of resources must be within the organizational capacity so that construction and new development can be balanced with maintenance and program management. The ability to enforce and maintain standards in support of policy throughout the recreation system must be planned.

It must be remembered that a new central recreational authority in American Samoa must be at pains to balance the requirements of the two levels of government (village and Territorial) whose respective roles must be integrated carefully if optimum provision of recreational opportunities is to occur. This is a unique overlay of responsibility beyond planning; program management; facility design, building, and maintenance; and a leading role in inter-agency coordination.

The new Department is a cabinet level agency and requires budget and staff to manage recreational facilities and programs to any significant degree. It has a supervisory and policy recommending role and coordinates with other government agencies to produce results. Planning backup is provided by the Development Planning Office. Facility design drafting, construction, and maintenance is chiefly through the Department of Public Works.

The Parks and Recreation Commission itself recognizes the need for institutional development to best handle future recreational needs and opportunities.

The recent developments described in the preface - specifically the passage through the Fono, with endorsement into law by the Governor in

February 1980 of a bill to establish a Department of Parks and Recreation and supersede the Parks and Recreation Control Board with a Parks and Recreation Commission are most timely.

With this recent history of positive steps, an enduring structure for administration of outdoor recreation should receive the budgetary consideration necessary for it to function viably at an early date.

With regard to HCRS requirements in gaining access to recreational plan and project funding, the Department will have to conduct planning through an ongoing process, and implement action programs. Aside from its basic work load, such a newly formed department will have full time concerns in establishing itself, framing policy, and forging operational links to the several other governmental entities that have an impact on outdoor recreation. One of the reasons that the present plan recommends a multi-year eligibility for American Samoa to the HCRS is the perceived need for this new department to be free to concentrate on operations and management without constantly facing an annual job of plan recycling. It is suggested that extensive policy plan cycling on an annual basis can be dispensed with beneficially in this small island community.

Just as the implicit question posed throughout this discussion has been, where does outdoor recreation fit in the scheme of things in American Samoa? -- so must a question be posed as to priorities within outdoor recreation. There is no guarantee that sufficient funds will materialize to meet all perceived outdoor recreational needs. Determination of priority, and phasing of desired elements is required, and caution by both planners and implementers that more is not attempted than can be developed and maintained well.

The impact of institutional administration on the dynamic and evolving

field of outdoor recreation must be recognized. Exposure to western recreation has resulted in an induced demand for those choices which may well eclipse traditional Samoan forms. The central government efforts in promoting outdoor recreation will reinforce public opinion as a function of what is selected for emphasis. Minorities such as the palagi community do not face this "induced demand" situation. This group is in fact contributing to induced demand for western preferences. The situation of other minorities -- such as the Koreans and Taiwanese associated with the tuna fishing/canning industry, and other non-Samoan residents in American Samoa remains to be revealed. It is the overwhelming majority of Samoans themselves that is most subject to recreational inducement. Consequently specialists on scene must insure that this majority is not presented simply with one-sided recreational alternatives.

D. Inventory of Existing Recreational Resources and Potentials

The Samoan Islands, in the heart of the Polynesian tropics, have their own natural beauty in coves and stretching seascapes, white sand beaches and precipitous green mountains, waterfalls and broad fringing reefs. American Samoa has the great natural harbor of Pago Pago Bay and unspoiled wilderness in the Manu'a Group. Samoan culture adds a unique overlay to the tropical island ambience. This is a setting where the prospect of passing leisure time can be extremely attractive, but the organization of man-made facilities compatible with this natural setting has been understandably limited.

Existing outdoor recreational resources are the products of work by the former Territorial Parks and Recreation Control Board, the Department of Education, miscellaneous sports programs administration by the Sports and Boxing Commissions and a few service organizations, and limited involvement

by the private sector -- chiefly oriented to the visitor industry and centered in the one major hotel, the "Rainmaker."

The principal references for itemizing existing Territorial outdoor recreational facilities are the existing American Samoa Recreation Area Development Plan 1975-1980 (1975), and the recent Territorial Report to the Governor on the State of Parks and Recreation in American Samoa (1979). Diagram 3 which follows summarizes the utilization of current resource sites and facilities.

The mainstay of existing resources, apart from facilities in the public and private school systems, is a handful of Territorial Parks in various stages of development, briefly summarized as follows: Pago Pago Park, Fagatogo Malae/Shoreside development, Utulei Beach Park, Faga'alu Park, Anasosopo "Bicentennial" Park, Tafuna Park, Lava Lava Golf Course, and a few minor village parks.[17/] It may be noted that while all except the golf course are located at the shore, there are few facilities for access to the ocean beyond a couple of boat ramps (though a good network is planned) and a separate fishing pier at Malaloa. Proposed Autapini Shoreside park remains to be developed. Further, these facilities are grouped in the Pago Pago Bay Area or at points to the west, with no primary facilities in East Tutuila and nothing in the Manu'a Group.

The 1975 plan referenced above lists sites on the National Registers of Historic and Natural Landmarks: eight and seven respectively. This must be regarded as the most rudimentary of departure points. Traditional Samoan culture has not been tapped in the present historical site list. For example, the culture hearth of Manu'a and the personage and mystique of the Tuimanua,"King of Manu'a", surely must involve some sites of significance though none have yet been registered. The archaeological record remains to

DIAGRAM 3.

CURRENT USE & STATUS OF SELECTED EXISTING AND POTENTIAL RECREATIONAL RESOURCE SITES.

	EXISTING, MAJOR									EXISTING, MINOR										POTENTIAL REC SITES								
	Pago Park	Utulei Beach Park	Fagʻalu Park	Pagatogo Shore	Pagatogo Malae	Malaloa Pier	Tafuna Park & Playground	Lava Lava Golf	Rainmaker Hotel	Aoa Village Park	Fagʻitua Malae	Two-Dollar Beach	Solo/Aerial Tram	Tafuna Residential Playground	ICC Airport Park	Freddie's Beach	Aoloau Vil. Park	Vaitogi Malae	Utumea W. Beach	Amanave Vil. Park	Mormon Rec Courts Pailolei	Alao Open Space	Fagʻitua Crest	Anasosopo Landfill	Afono Road Crest	Pagasa Road Crest	Autapini Shore	Breakers Pt Trail	Blunt's Pt Trail
ORIENTATION																												
Land	X	X	X	X	X		X	X	X	X	X		X	X	X		X	X		X	X	X	X	X	X	X	X	X	X
Shoreline	X	X	X			X			X			X				X			X	X							X		
Marine		X	X			X			X																				
SERVICE USE																												
General Public	X	X	X	X		X	X	X	X			X	X	X	X	X							X	X	X	X	X	X	X
School Programs	X																X						X					
Tourists	X	X		X		X	X	X	X	X		X	X		X	X								X	X	X	X	X	X
Village/Local	X	X	X	X	X		X			X	X			X		X	X	X	X	X		X	X	X	X	X			
Special Interest	X	X	X			X		X	X																				
Restricted					X				X	X	X	X					X	X	X	X	X	X							
USE CAPACITY																												
Multiple Use	X	X	X				X											X						X				
Joint Use	X	X	X	X		X	X	X	X	X		X	X			X	X							X	X	X	X	X	X
Specialised Use		X				X		X	X			X	X			X			X					X			X	X
SUB-POPULATION USERS																												
Children	X	X	X	X	X		X			X	X	X		X		X	X	X	X	X		X		X				
Youth	X	X	X	X	X	X	X	X		X	X	X	X			X	X	X	X	X	X	X	X	X			X	X
Adults	X	X	X	X		X	X	X	X	X		X	X			X	X	X	X	X	X		X	X	X	X	X	X	X
The Elderly	X	X	X	X		X	X	X	X	X		X	X	X		X	X	X	X	X				X	X	X	X		
Tourists	X	X		X		X	X	X	X	X		X	X		X	X								X	X	X	X	X	X
Students	X	X	X					X			X						X							X					
LEVEL OF USE																												
Heavy	X	X	X	X			X	X	X																				
Moderate						X					X	X	X	X		X	X	X		X	X	X							
Light					X					X									X								X	X
Not Used															X								X	X	X	X	X		
ACTIVITIES																												
Basketball	X		X				X													X		X		X				
Volleyball	X	X	X	X			X				X						X			X	X	X		X				
Tennis	X						X																	X				
Baseball/Softball	X						X											X				X		X				
Football/Rugby/ Soccer	X																							X				
Cricket	X		X	X	X		X				X						X	X				X		X				
Golf								X																				
Playground	X		X	X			X				X			X	X		X	X		X		X	X	X		X			
Water-Related	X	X	X			X		X		X		X				X			X	X				X					
Hiking																							X		X	X		X	X
Strolling	X	X	X	X			X			X			X				X	X						X	X	X	X	X	X
Picnicking	X	X	X				X			X		X				X	X	X					X	X			X	X	
STATUS OF PLANS AND DEVELOPMENT																												
None					X				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X			
Initial Development																								X			X	X	X
Upgrade Existing			X	X																									
Expand or Change	X	X				X	X	X																					
TENURE																												
ASG	X	X	X	X		X	X	X					X	X	X	?							X	X	X	X	X	X	X
Village					X					X	X						X	X	X	X		X							
Other/Private									X			X									X								
SITE DEFICIENCIES																												
Drainage/Hazard	X	X	?	X																	X			X					X
Erosion	X	X	X																X	X				X	X		X		
Access										X						X												X	X
Parking				X	X	X						X				X		X	X	X				X	X	X	X	X	X
Maintenance/Litter	X	X	X	X			X																	X	X		X		
Surface Conditions	X		X				X									X				X		X		X	X			X	X
Excessive Rainfall	X			X	X	X				?		?					?						?		X	X	X		
Design/Landscaping	X	X	X	X		X	X																	X	X		X		X
Condition of Facilities & Courts	X	X	X	X			X										X			X		X		X			X		X

DIAGRAM 3.
(Continued)

	POTENTIAL REC SITES (Continued)																		MARINE PARKS, ETC.				EDUCATION INST. SITES						
	Pala Lagoon Mangrove Shore	Aoloau Open Space	Vaitogi Open Space	Vaitogi Shoreline	Logotala Hill	Steps/Larsen Fagatele/Fogama	Leala Shoreline	Taputimu Farm Shoreward parcel	Fagalele Shore Leone	Leone Falls	Centipede Row Marine Rec Facility	Sipiapi Plantation Land/Toa Cove Ta'u	Laufuti Falls, Ta'u	Ta'u Village Beach	Faleasao Beach Ta'u	Faalaga Beach, Ofu	Nuupule Rock, Ofu	Olosega Vil. Shore	Utulei Reef Park	Matu'u Outlook & Marine Park	Fagatele Marine Preserve	OMR Boat Ramps & Fish Buoys	Community College	Manu'a H.S.	Fagaitua H.S.	Samoana H.S./Track	Leone H.S.	Marist Bros. H.S. Boys, Catholic	Fa'asao H.S. Girls, Catholic
ORIENTATION																													
Land	X	X	X		X	X		X		X		X	X										X	X	X	X	X	X	X
Shoreline				X		X	X		X		X	X		X	X	X	X	X	X	X	X	X							
Marine				X		X					X						X		[illegible]	X	X	X							
SERVICE USE																													
General Public	X	X		X	X	X	X	X	X	X	X	X	X			X			X	X	X	X	?	X	X	X	X		
School Programs															X								X	X	X	X	X	X	X
Tourists				X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X				X			
Village/Local	X	X	X	X				X	X	X		X		X	X	X	X	X				X		X	X	X	X		
Special Interest						X					X		X						X	X	X	X	X						
Restricted			X			X			X						X			X	X	X	X		X					X	X
USE CAPACITY																													
Multiple Use	X	X	X		X			X			X	X										X	X	X	X	X	X	X	X
Joint Use	X	X		X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X	X	X	X	X	X	X
Specialized Use				X		X			X	X	X	X		X		X	X		X	X	X	X	X			X			
SUB-POPULATION USERS																													
Children	X	X	X		X			X		X				X	X	X	X	X						X	X	X	X	X	X
Youth	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Adults	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
The Elderly	X		X		X			X	X		X			X	X		X	X				X	X	X	X	X	X	X	X
Tourists				X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X				X			
Students																							X	X	X	X	X	X	X
LEVEL OF USE																													
Heavy																							X	X	X	X	X	X	X
Moderate			X	X					X	X				X	X	X	X	X				X							
Light							X												X	X									
Not Used	X	X			X	X		X			X	X	X								X								
ACTIVITIES																													
Basketball	X	X	X					X															X	X	X	X	X	X	X
Volleyball	X	X	X					X															X	X	X	X	X	X	X
Tennis		X						X															X	X	X	X	X	X	X
Baseball/Softball		X	X					X				X											X	X		X	X	X	
Football/Rugby/Soccer	X	X																					X	X		X	X	X	
Cricket	X	X	X		X			X				X											X	X		X	X	X	X
Golf																													
Playground	X	X	X		X			X				X											X	X	X	X	X	X	X
Water-Related				X		X			X	X	X	X		X	X	X	X	X	X	X	X	X	?						
Hiking				X	X	X	X						X																
Strolling	X	X	X		X			X	X	X		X		X	X	X		X					X			X			
Picnicking	X	X	X		X			X				X																	
STATUS OF PLANS AND DEVELOPMENT																													
None	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X									X	X	X
Initial Development																			X	X	X								
Upgrade Existing																									X	X			
Expand or Change																						X	X	X					
TENURE																													
ASO				X	X			?			X		X						X	X	X	X	X	X	X	X	X		
Village	X	X	X			X	X			X		X		X	X	X	X	X											
Other/Private									X																			X	X
SITE DEFICIENCIES																													
Drainage/Hazard	X									X			X	X	X								X		X	X			
Erosion	X													X	X		X					X				X			
Access	X				X	X	X		X	X		X	X							X	X		?						
Parking	X			X					X	X										X		X							
Maintenance/Litter	X								X	X																			
Surface Conditions	X	X	X		X	X	X			X		X								X				X		X			
Excessive Rainfall	?	?											?										?			?			
Design/Landscaping	X	X	X		X	X	X	X		X	X	X							X	X	X			X		X	X		
Condition of Facilities & Courts	X	X	X		X			X		X	X	X								X		X		X	X	X			

be examined with an eye to identification of sites that should be registered.

Beyond this, the whole issue of how these sites should be handled in relation to parks and recreation, conservation, access, and boundary delineation remains to be explored. Natural Landmarks also deserve comprehensive attention. Some as yet unhandled sites come to mind immediately -- such as Laufuti Falls on Ta'u said to have perhaps as high as a 1000-foot cascade. Swain's Island deserves a look too.

Conservation areas such as sanctuaries and preserves, refuges and natural areas logically should be planned in coordination with parks and recreation development -- if only to establish clearly the extent to which access should be encouraged or restricted in each individual instance. Although distant Rose Atoll is a National Wildlife Refuge, no other conservation areas have yet been established.

Inventory of existing recreational programs from governmental, educational, religious, commercial, and private service organizations and clubs reveals that schools (both public and private) are focal institutions for outdoor recreation. Current lists from the Department of Education reveal a well-distributed hierarchy of schools from the American Samoa Community College (ASCC) to the 4 public high schools, to 27 elementary schools, and even to 145 "Village Early Childhood Education Centers." Private schools make a contribution as well. The Marist Brothers High School playing field, though private, is available for certain Department of Education activities such as high school football games. It is regarded as one of the best existing fields.

Other private organizations include Samoan Athletes in Action, the American Athletic Association, Rotary Club, Rainmaker Hotel, Pago Pago Yacht Club, American Samoa Tennis Association, American Samoa Game Fish Associa-

tion, and the American Samoa Dive Club. At issue is how effectively different recreation resource managers can cooperate, with inclusion of private sector counterparts, to realize mutually compatible goals in optimal use of facilities and application of program with continuity.

Feedback from recreational leaders in American Samoa indicates that sailing and small boat operations are in ascendency and that a pattern of mooring off Utulei and Faga'alu Beach Parks and Malaloa is developing, particularly when some vessels ride out the hurricane season with extended anchorage in Pago Pago Bay. A check with U.S. Coast Guard Aids to Navigation in Honolulu reveals that there are not now any Special Anchorage Areas in American Samoa. In federal "special anchorages", vessels under 65 feet in length may anchor without the need to show anchor lights. Establishment of such anchorages offers improved safety conditions, better defined space available for mooring yachts, provides a basis for controlled setting of fixed mooring buoys where these are appropriate, and has the additional beneficial effect of providing anchorage ground space to seaward of beach areas as a buffer against potentially incompatible and dangerous boating activity. The utility of creating such anchorages off beach parks in Pago Pago Bay can be explored further. None now exist.

Appendix B (keyed to Map 5) lists a detailed inventory of a wide range of locations and features of potential interest in recreation/historical site/conservation/open space planning. Appendix C extracts and lists sites identified as making a significant spatial and locational contribution to projected land-based recreational planning needs. It also deals with "special use" sites, including beaches, and summarizes "open space" categoric resources for future organization.

E. General Analysis of the Recreational System

In American Samoa, few traditional active recreational pastimes persist in the present. The exception is the "so'o" which maintains its hospitality aspects while substituting modern sports competition (rugby, basketball, football, cricket, volleyball) for traditional activities. Beyond this, every indication is that future demand will be for contemporary recreational opportunities. There is new awareness of the entire field of modern outdoor recreation in American Samoa. The Territorial Government has incorporated it in the general planning process.

Survey results reveal an immediate need for program emphasis on youth and sports. Public discussion (specifically at the February 1980 meeting of the Parks and Recreation Control Board) reveals a need to balance this early requirement with lifetime recreational opportunities for all ages, in long term planning.

The extensive public education system -- which includes physical education classes and league sports competition -- powerfully reinforces awareness of outdoor recreation with the young age groups which have the discretionary time to apply to recreation. Competitive athletics and league play are in ascendency, as is spectator participation -- with modern and western activities predominating exclusively. Most recently, Department of Education recreation specialists have introduced "touch" flag football and girls' volleyball at the 7th and 8th grade levels.

Induced demand for new rather than traditional recreation choices can be expected to continue. Mass media, an active resident community of westerners, publicity attached to outstanding Samoan athletes competing abroad, and the supportive role of service organizations such as Samoan Athletes in Action all foster this demand for new opportunities.

tion, and the American Samoa Dive Club. At issue is how effectively different recreation resource managers can cooperate, with inclusion of private sector counterparts, to realize mutually compatible goals in optimal use of facilities and application of program with continuity.

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E. General Analysis of the Recreational System

In American Samoa, few traditional active recreational pastimes persist in the present. The exception is the "so'o" which maintains its hospitality aspects while substituting modern sports competition (rugby, basketball, football, cricket, volleyball) for traditional activities. Beyond this, every indication is that future demand will be for contemporary recreational opportunities. There is new awareness of the entire field of modern outdoor recreation in American Samoa. The Territorial Government has incorporated it in the general planning process.

Survey results reveal an immediate need for program emphasis on youth and sports. Public discussion (specifically at the February 1980 meeting of the Parks and Recreation Control Board) reveals a need to balance this early requirement with lifetime recreational opportunities for all ages, in long term planning.

The extensive public education system -- which includes physical education classes and league sports competition -- powerfully reinforces awareness of outdoor recreation with the young age groups which have the discretionary time to apply to recreation. Competitive athletics and league play are in ascendency, as is spectator participation -- with modern and western activities predominating exclusively. Most recently, Department of Education recreation specialists have introduced "touch" flag football and girls' volleyball at the 7th and 8th grade levels.

Induced demand for new rather than traditional recreation choices can be expected to continue. Mass media, an active resident community of westerners, publicity attached to outstanding Samoan athletes competing abroad, and the supportive role of service organizations such as Samoan Athletes in Action all foster this demand for new opportunities.

Awareness of modern activities is expected to be matched by demand for the equipment, space, and rule standards of the rest of the world since Samoans will want to compete in an international setting. The role of the public sector will predominate. There is scarcely any direct involvement by the private commercial sector at present. Non-commercial bodies such as the Catholic and Mormon private schools will develop facilities to match their program requirements. There is good opportunity for public-private coordination of outdoor recreation program among Parks and Recreation authorities, the public school system (DOE), the American Samoa Community College, private schools, and community service organizations.

Tourism also relates to outdoor recreation development in American Samoa and joint use of facilities. Tourism is part of the economic development strategy for American Samoa. Enhancing tourism depends in large part on developing things for tourists to do. In Oceania, this means development of the shoreline -- the focus of the visitor industry. At present the shoreline is generally an undeveloped resource in Samoa. Only Utulei Beach Park with its extension into the Rainmaker Hotel is a true sandy beach park with protected swimming and support facilities.

There is capacity for recreational development in support of the visitor industry. But it cannot be expected automatically that multiple or joint use of specific tourist-oriented recreational facilities will become the rule -- first due to private use restrictions; and second due to varying activity preferences. Visitors and tourists will make more and more use of territorial parks and other public recreational facilities as quality opportunities with good access are offered. Table 10 in the Appendix displays American Samoa visitor traffic for the year 1978.

With land and space at a premium, and difficult to alienate under the

communal land tenure system, use of existing government lands and facilities for new developments will be unavoidable in many cases and, moreover, generally an attractive option. The dispersed public school system presents itself as a ready-made organizational and spatial network for the development and expansion of recreational facilities, and for coordinating program and joint use.

The littoral zone was mentioned as an example of a zonal category of land space not yet well planned for public recreational use. Opportunities for organization and administration of "open space" depend on the eventual framing of a Territorial land use plan. Similarly, the whole question of environmental conservation remains unanswered. Conservation planning should be linked to parks and recreation planning in an effective organizational structure. Appendices B and C of this report call attention to some sites and general areas that have noticeable potential for handling as structured open space.

Another concern is the lack of uniform functional standards for facilities and activities at present. Interaction with the rest of the recreational world at large requires application of such standards. The limited space and population of the Territory does not warrant heavy public development of elaborate recreational destinations at the local level. Thus although a strong village-oriented program of recreation is viewed as a great asset, space and fund limitations and the smallness of the user population dictate that such program be pursued at the "recreational district" level and at the "territorial" level in facilities serving many villages, with general public access.

The following recreation-related trends must be addressed:

- INCREASED LEISURE TIME AS THE ECONOMY LOSES ITS COMMUNAL, SUBSISTENCE CHARACTER.

- INCREASED EMPHASIS ON WESTERN/AMERICAN SPORTS AND OUTDOOR RECREATIONAL ACTIVITIES IN QUALITY FACILITIES AND PROGRAMS.

- GROWING DEMAND FOR ORGANIZED SPORTS WITH FACILITIES CAPABLE OF HOUSING SPECTATORS.

- INCREASED DEMAND FOR SHORELINE AND WATER-RELATED OPPORTUNITIES.

- INCREASED COMPETITIVE DEMAND FOR LIMITED LAND RESOURCES BY ALL SECTORS OF SOCIETY COMPELLING THOUGHTFUL AND EFFICIENT USE OF RECREATIONAL SPACE FOR MAXIMUM PUBLIC BENEFIT.

- THE EVIDENT NEED FOR LAND PLANNING AT ALL LEVELS FROM COMPREHENSIVE TERRITORIAL PLANNING TO VILLAGE LAND PLANNING AND MANAGEMENT AS PRESSURE FOR CONVERSION OF COMMUNAL LANDS INCREASES; THE NEED FOR "OUTDOOR RECREATION" AS A FUNCTIONAL SEGMENT OF PLANNING TO BE INTEGRATED WITH TERRITORIAL AND LOCAL LEVEL LAND PLANNING.

In response, a system of territorial and district parks and other facilities specializing in certain roles is suggested. Pick the best locales to develop spectator capabilities, beach activities, field sports, court sports etc., and develop quality specialized offerings for each by: applying space and design standards; accounting for access and infrastructure capacity; and by applying environmental criteria in site selection to avoid future hazards or deficiencies.

Organizational development (on the cornerstone of the new Department of Parks and Recreation, facilitated by workable inter-agency agreements) will be necessary to build for the future and maintain quality through administrative continuity. Coordination must be fostered among the following governmental arms: Parks and Recreation, Education, Community College, Local Government, Development and Planning, Conservation, Tourism, Public Works, League and Sports Commissions, Zoning, Public Safety, Historical Commission -- as well as with private schools and service organizations.

V. APPLICATION OF PLANNING STANDARDS

A. Service Population Planning Standards

NB. Table 2 tabulates and projects the population of American Samoa through to the year 2005. Maps 3a and 3b show the approximate distribution of the resident population incrementally from 1980 to 1985 to the year 2000. The recreational service population includes visitors and transients who might seek recreational opportunities. The service population has minority components such as the handicapped and the elderly.

It has been pointed out how youth plays a dominant role in outdoor recreation in American Samoa and how it also has the greatest opportunities in programs supplied through the schools, and in the basic leisure time to apply at this stage of life. The very young have the support of a broad network of public Village Early Childhood Education Centers. There is a government Youth Advisory Council.

The elderly benefit from the elderly handicraft fales operating in Pago Park and at the Museum of American Samoa, and there is a government Advisory Council on Elderly Programs. The Special Education Branch of the Department of Education plays an important role in meeting the needs of the handicapped. As to minorities, the vast majority of the resident population is Samoan with an admixture of other Polynesians who are in the main integrated with Samoan village life.

The "palagi" community -- that is the outsiders who have come to work, teach, advise, and do business in American Samoa -- have been shown to be a major factor in the evolution of induced demand for American recreation and thus are in no sense a minority for recreation planning purposes despite their comparatively small numbers.

Visitors fall within the domain of the Office of Tourism. At present there are relatively few things for visitors to do in Samoa. Little joint use of existing recreational facilities occurs beyond use of the Rainmaker Hotel, Utulei Beach, and Lava Lava Golf Course. Transient yachtsmen, divers, and sport fishermen make some use of the marine environment, but their numbers are few. A theme of the present study has been to emphasize the need for cooperation among parks and recreation authorities, the Office of Marine Resources, and the Office of Tourism to investigate ways to adapt existing facilities to better joint use, enhance marine-related opportunities by development of support services at several locations, and in general to use outdoor recreation as one element within which to create a broader range of things for visitors to do. These are also stated themes in American Samoa economic development planning.

The last somewhat specialized segment of the service population is that composed of transient commercial fishermen -- almost entirely Korean and Taiwanese who work the fleets that supply the Van Camp and Starkist tuna canneries. Their reason for being in Samoa is entirely due to their commercial status. Managing business factors in the industry, both ashore and afloat have their own contractual responsibilities for meeting the needs of their workers. The home governments in Korea and Taiwan also have an indirect role. Korean fishermen are provided a leisure "home away from home" in Korea House, an independent facility located in the Pago Park area.

The general homogeneity of the population and its pattern of settlement predominates over such minority conditions as must occur in any population. There is no segregation of age-sex cohort components of the service population. Active pursuits are, in any event, limited to those physically quali-

fied to participate. Passive opportunities can certainly be designed for access by all. Design is the key for enhancing opportunities for the handicapped. There is a wealth of contemporary expertise in facility design geared to the handicapped per access, supporting infrastructures, safety features, and so forth. Those unable to pursue certain active sports can certainly enjoy them as spectators -- provided awareness of the needs of the handicapped has been applied to construction and design standards. Diagram 4 following identifies some physical and social concerns relating to selected activities.

The applicable service population planning concept to be applied in the American Samoan case, then, does not relate to formulas or models for disaggregating the total population into specialized components. Rather it is to establish the distribution of fairly uniform recreational requirements through the geographic space of the territory according to the parameters of aggregate population as dispersed in the landscape, and access to facilities and sites serving it.

To this end, three levels of areal criteria have been set in defining planning standards: territorial, district, and local. Later sections describe in detail the precise population and access standards applying at each level.

The basic standard applied has been to define areal qualification for territorial level opportunities to be a service population of up to 50,000 people -- in effect, the Territory of American Samoa.

A district level standard set at a district service population of up to 10,000 people was applied in association with access to derive five separate recreational service districts to encompass the territory as a whole.

DIAGRAM 4. ACTIVITIES - PHYSICAL AND SOCIAL CONSIDERATIONS

"x" indicates standard applies to the activity

	STANDARDS	1. Orientation	Land	Shoreline/Water	2. User Patterns and Trends	Population Served/Size	Distribution	Characteristics	3. User Groups	Family/Household	Children	Youths	Adults	Tourist/visitor	Special Users	4. User Orientation	Individual	Team	5. Environmental Factors	Vegetation	Soil	Drainage	Erosion	Site Characteristics	6. Site Standards	Dimensions	Size	Location	7. Design	Supportive Facilities	Use Characteristics	8. Versatility/Compatibility	Multiple Use	Joint Use
OUTDOOR RECREATION ACTIVITIES																																	
Active Pursuits: Land																																	
1. Court Sports																																	
Basketball/Volleyball			x			x	x	x			x	x	x		x			x				x	x	x		x	x	x		x	x		x	x
Badminton			x			x	x	x			x	x	x		x		x					x	x	x		x	x	x		x	x		x	x
Tennis			x			x	x	x			x	x	x	x			x					x	x	x		x	x	x		x	x		x	x
2. Field Sports																																	
Baseball/softball			x			x	x	x			x	x	x					x		x	x	x	x	x		x	x	x		x	x		x	x
Football/rugby/soccer			x			x	x	x			x	x						x		x	x	x	x	x		x	x	x		x	x		x	x
Cricket			x			x	x	x			x	x	x					x		x	x	x	x	x		x	x	x		x	x		x	x
Track and field			x			x	x	x			x	x						x		x	x	x	x	x		x	x	x		x	x		x	x
Golf			x			x	x	x			x	x	x	x			x			x	x	x	x	x		x	x	x		x	x		x	x
3. Other																																	
Swimming (pool)			x			x	x	x		x	x	x	x	x			x							x		x	x	x		x	x		x	x
Diving (board)			x			x	x	x			x	x	x				x							x		x	x	x		x	x		x	x
Water Polo (pool)			x			x	x	x			x	x							x					x		x	x	x		x	x		x	
Active Pursuits: Shoreline/Water																																	
1. Boating/Racing/Sailing				x		x	x	x		x			x	x			x							x			x	x		x	x		x	x
2. Swimming/Surfing				x		x	x	x		x	x	x	x	x			x							x			x	x		x	x		x	x
3. Water Skiing				x		x	x	x				x	x	x			x							x			x	x		x	x			x
4. Sail Surfing				x		x	x	x				x	x	x			x							x			x	x		x	x		x	x
5. Surfing, board/body				x		x	x	x			x	x	x				x							x			x	x		x	x			x
6. Diving				x		x	x	x				x	x	x			x							x			x	x		x	x			x
7. Fishing/general				x		x	x	x		x	x	x	x				x							x				x		x	x		x	x
Passive Pursuits																																	
1. Hiking			x			x	x	x		x	x	x	x	x			x			x	x	x	x	x			x	x		x	x			x
2. Strolling			x			x	x	x		x	x	x	x	x			x			x	x	x	x	x			x	x		x	x		x	x
3. Picnicking			x			x	x	x		x	x	x	x	x	x		x			x		x	x	x			x	x		x	x		x	x
Other																																	
1. Biking			x			x	x	x		x	x	x	x				x			x	x	x	x	x			x	x		x	x		x	x
2. Motoring			x			x	x	x		x	x	x	x	x	x		x				x	x	x	x			x	x		x	x			x
3. Hunting			x			x	x	x					x				x			x		x		x			x	x		x	x			x

At the local level, recreational divisions within districts were described using a basic population criterion of 1,000 people.

Having set these standards, a land-based recreational spatial requirement of 1 land-based recreational acre per 2,000 population at each level was determined to suit American Samoan conditions. Thus the combined land-based recreational space per 2,000 population would be a total of three acres.[18/] Note that this standard is built strictly on non-specialized land space. Facilities or recreational elements to be fielded within that space are a separate consideration. Specialized facilities such as golf courses and beaches are not allowed to contribute to satisfaction of the land-based requirement. They represent additional opportunities, just as do marine resources, open space, conservation zones, natural and historic landmarks, etc.

The purpose of this rigorous comparison of land-based resources to requirements is to test availability of essential recreational space for the future -- suitably distributed per population and access standards. Specific results of this matching process are reported in the section following.

B. Explicit Spatial Comparison: Resources and Needs

1. Application of Standards

Application of planning standards developed earlier in this section has required geographic division of the landscape according to population and access so as to derive the recreational districts displayed in Map VI. Note that these recreational districts do not conform to existing administrative districts or regional planning areas. Development of pioneer roads has created new access patterns with outlying areas which in turn have yielded

the analytical divisions explained below.

The basic spatial need calculation revolves strictly around land-based and shore-located but land-related requirements and resources at the territorial, "recreational" district, and local levels. Shorefront and water-related resources are handled separately, as are specialized land-based uses (such as the golf course). Open space, either in the high watershed or littoral zone, trails, marine preserves, natural landmarks, territorial marine facilities (such as fish aggregation buoys), and such conservation zones as may be established are all treated separately.

a. Territorial Level

The overall planning standard for need qualification at the territorial level is "over 30,000 up to 50,000 population." The standard space requirement developed earlier of "1 acre per 2,000 population" for each qualifying level of recreational need applies at the territorial level. Siting is simply "within the territory as a whole" with primary consideration for central location and access per the total population coupled with selection of individual sites best suited for intended uses -- and needs projected to the year 2000. By these criteria, the isolated Manu'a Group does not qualify for siting of any territorial level land-based facilities. Manu'a does qualify at the district and local levels, and does have marine and open space resources.

b. Recreational District Level

To accommodate the physical layout of American Samoa, the dichotomy between urban and rural locales, and the particularly acute isolation of the Manu'a Islands, three complementary standards for district level need

qualification were developed for population projections to 1985 and 2000:

1) "Severe access" problems coupled with population of at least 1,500.

Manu'a Recreation District

2) Access problems due to geographic "attenuation" coupled with population of at least 5,000.

East Tutuila Recreation District
(Regional Planning Areas #2 & #3 + Aua Village + Tafanani. This includes all access to the main trunk road from Aua Village east, including Vatia and Afono which have their trunk access through Aua).

West Tutuila Recreation District
(Regional Planning Area #6 minus Aoloau Village minus Aasu Village. This includes all access to the main trunk road west of the bottleneck at Futiga).

3) Generally "acceptable access" (open road or urban walking) coupled with population of at least 10,000.

Pago Pago Bay Recreation District
(Regional Planning Area #4 + Fagasa + Matuu/Faganeanea minus Aua minus Tafananai. This includes all Bay Area/trunk road access west of Aua Village and east of the narrow coast road bottleneck east of Nu'uuli).

Tafuna Area Recreation District
(Regional Planning Area #5 + Aoloau + Aasu minus Fagasa minus Matuu/Faganeanea, thus the entire contiguous shared-access area east of Futiga, west of the east Nu'uuli road bottleneck, and up to the Aoloau Plateau).

Five Recreation Districts thus have been derived which should have recreational planning utility through the turn of the century, regardless of idiosyncratic development of settlement and distribution of population at the local level. The basic spatial standard of one land-based acre per 2000 population applies for district level requirements.

c. Local Level

It is not realistic to set a local level access standard so high that every isolated residence has access. At the same time, a dispersed population that spends much time in the village, and which is organized in villages of greatly varying sizes, must be accorded standards that insure that smaller settlements more isolated from territorial opportunities and perhaps even district level opportunities still have some appropriate recreational resources to meet their needs. Thus the standard "one acre per 2000 population" spatial guideline is modified (made more responsive) at the local level to allow qualification by any of the three following formulas:

1) Local Level "Exceptional": 1/2 acre for less than 500 people where access to non-local opportunities or neighboring local opportunities is limited by unusual geographic conditions and distances. Note that "clustering" of small settlements close together is required for enumeration purposes so that a sufficient user field of at least a few hundred people is generated to warrant some sort of resource development.

2) Local Level "Rural": 1/2 area per 500 people either isolated across water (example: Aunu'u) or more than 15-20 minutes driving from territorial/district facilities.

3) Local Level "Urban": 1/2 area per 1000 people with normal access -- within 10-15 minutes walking or 5-10 minutes driving of local recreational opportunities.

These local level standards have been applied within the areas of the separate recreational districts to develop "local" divisions within which to compare local level requirements and resources.

d. Comparison of Requirements to Resources

Complete tabular analysis is displayed in Appendix C. Net results, discussion, and conclusions are summarized in Diagram 5 following. On the assumption of reasonable availability through provision of access and coordination of program, significant existing resources from among the following authorities have been inventoried: Parks & Recreation, Department of

RESULTS: TAPPING ALL EXISTING RESOURCES.

GENERALLY GOOD FIT BOTH SPACE AND DISTRIBUTION PROVIDED

- DEVELOP ANASOSOPO DISTRICT PARK.
- CREATE 3 ADDITIONAL ACRES OF DISTRICT-LEVEL PARK IN TAFUNA.
- UPGRADE A CORE 14 ACRES IN PAGO PARK (TERRITORIAL LEVEL).

RESULTS: DOE/ASCC RESOURCES UNAVAILABLE.

- COLLAPSE OF ENTIRE LOCAL LEVEL RESOURCE RESPONSE VIA LOSS OF 8+ ACRES, CHIEFLY IN DISPERSED HALF-ACRE PARCELS.
- LOSS OF ALL EXISTING WEST TUTUILA RESOURCES -- 6 ACRES OF LEONE HIGH SCHOOL FIELDS AND COURTS.
- IDENTICAL DISTRICT-LEVEL DEVELOPMENT REQUIREMENTS IN ANASOSOPO AND TAFUNA PLUS THE PAGO PARK UPGRADING REQUIREMENT.

CONCLUSIONS: FUNDAMENTAL PLAN IMPLEMENTATION ACTIONS.

- SEEK 5-YEAR T-CORP POLICY PLAN ELIGIBILITY FROM DEPT. OF INTERIOR HCRS SO THAT SUBSEQUENT RESOURCE APPLICATIONS CAN BE TO IMPLEMENTATION NOT REPLANNING.
- CONSOLIDATE A DEFINITE PARKS AND OUTDOOR RECREATION AUTHORITY WITHIN THE EVOLVING ORGANIZATION OF THE AMERICAN SAMOA GOVERNMENT.
- EFFECT INTER-AGENCY FACILITY-SHARING AND PROGRAM AGREEMENTS -- PARTICULARLY AMONG PARKS & RECREATION, DEPT. OF EDUCATION, AND THE COMMUNITY COLLEGE, TO PROTECT LOCAL LEVEL CAPABILITY.
- EXPAND AND UPGRADE THE MANU'A HIGH SCHOOL FIELD ON AVAILABLE ASG DOE LAND, TO MEET MINIMUM NEEDS OF ISOLATED MANU'A.
- DEVELOP ANASOSOPO PARK, FOR EAST TUTUILA MINIMUM DISTRICT NEEDS.
- CREATE 3 ADDITIONAL ACRES OF DISTRICT-LEVEL PARK IN THE TAFUNA RECREATION SERVICE DISTRICT, FOR MINIMUM DISTRICT NEEDS.
- UPGRADE CORE 14 ACRES IN PAGO PARK (TERRITORIAL LEVEL).
- DEVELOP A CAREFULLY AND COMPREHENSIVELY PLANNED RECREATION PIER COMPLEX IN MALALOA -- IMMEDIATE ASSOCIATED ECONOMIC AND TOURISM IMPLICATIONS.
- EARMARK LOCAL PARK SPACE IN NU'UULI -- A CRITICAL GROWTH AREA.
- EXPAND AND UPGRADE UTULEI BEACH PARK AS PLANNED.
- REVIEW TERRITORIAL POLICY ON FUTURE PUBLIC AVAILABILITY OF ASCC RECREATIONAL DEVELOPMENTS, AS A PLANNING FOUNDATION.
- DEVELOP THE OPEN SPACE, COASTAL ZONE, CONSERVATION DIMENSION OF OUTDOOR RECREATION PER REGULATIONS AND STATUTE.
- COORDINATE WITH HISTORIC PRESERVATION COMMISSION TOWARD POLICY AND PROGRAM OF SITE SELECTION.
- APPLY FUNDS EARMARKED FOR LAVA LAVA GOLF COURSE EXPANSION.

DIAGRAM 5. QUANTITATIVE SUMMARY: LAND-BASED RECREATIONAL RESOURCES & REQUIREMENTS -- TERRITORIAL, RECREATIONAL SERVICE DISTRICT, & LOCAL LEVELS + CORE RESULTS & CONCLUSIONS.

QUANTITATIVE SUMMARY: LAND-BASED RECREATIONAL RESOURCES & REQUIREMENTS.

LEVELS		REQ ACRES 1985	RESOURCES EXISTING	COMPARE: REQ & RES	RESOURCES LESS DOE/ASCC	COMPARE: REQ & RES
TERRITORIAL	:	18	23.25	+ 5.25	20	+ 2
MANU'A	DISTRICT:	1	.75	- .25	0	- 1
	LOCAL :	1.25	2.25	+ 1	.25	- 1
EAST T.	DISTRICT:	4	4.5	+ .5	4.5	+ .5
	LOCAL :	4.75	8	+ 3.25	3.25	- 1.5
PAGO B.	DISTRICT:	5	10.5	+ 5.5	10.5	+ 5.5
	LOCAL :	5.25	4.75	- .5	1	- 4.25
TAFUNA	DISTRICT:	6	3	- 3	3	- 3
	LOCAL :	6	8	+ 2	3.5	- 2.5
WEST T.	DISTRICT:	4	6	+ 2	0	- 4
	LOCAL :	4.5	9.25	+ 4.75	5.5	+ 1
TOTALS	OVERALL :	59.75	80.25	+ 20.5	51.5	- 8.25
	TER. :	18.0	23.25	+ 5.25	20.0	+ 2.0
	DISTRICT:	20.0	24.75	+ 4.75	18.0	- 2.0
	LOCAL :	21.75	32.25	+ 10.5	13.5	- 8.25

Education, Community College, other ASG, existing village developments, and selected private resources -- chiefly schools. The general conclusion resulting is that with such inter-agency coordination there is adequate space and distribution of resources to meet the vast majority of requirements at all levels. Without such coordination, that is, with the Department of Parks and Recreation unable to tap the resources of other authorities (particularly DOE), there would be a serious shortfall in delivery of adequate recreational opportunities to the general public.

Calculations yield a combined 1985 land-based recreational acreage requirement of 59.75 acres. With resources of all listed sources available, this requirement in the aggregate would be more than met by identified acreage totalling 80.25. In fact, an excess (aggregate) would be present at all three levels which would come very close to meeting the aggregate land-based requirements for population projected to the year 2000.[19/] Note however that filling territorial level requirements (18 acres) requires upgrading of a core 14.75 acres in Pago Park. Further, the standards discussed above refer only to space and not to the extent or condition of facilities within such space, a separate concern entirely.

Distributionally, a serious immediate shortfall occurs at the district level for the Tafuna Area. A 1985 requirement of 6 acres is calculated but only an estimated 3 net acres (in Tafuna Park) exists. It is possible that rigorous surveyor calculations might show more acreage in Tafuna Park, but practically speaking, its long narrow design does not lend itself to the basic multiple-use athletic field requirement that is essential in a district level park. As it will be noted that the Tafuna area is the major region of projected growth, the obvious conclusion is that development of sufficient district level facilities in Tafuna must be given priority. The

American Samoa Community College has phased plans for recreational developments that could help satisfy this need. However, availability might be in doubt due to the internal use requirements of the ASCC which might leave little time left over for public use. In any event, an interagency agreement would be required to access even such time as ASCC scheduling could leave available.

Perhaps an entirely new park site is needed in a central land location on the Tafuna Plain, near the trunk road, under direct Departmental control. Alternatives are expansion at Tafuna Park (perhaps in a non-contiguous parcel), expansion and shared development at the ASCC, associated development at the Lava Lava Golf Course, or breaking of new ground in the open space on the Aoloau Plateau or conceivably on Logotala Hill. (Spatially, this latter site is possible, but its access is poor and its development would be expensive. Moreover the theme at Logotala is conceived as more in the line of conservation and open space as opposed to heavy active use). Research of a brand new park site near the "geometric center" of the Tafuna Plain is recommended as a medium-range objective. In the short run, the Tafuna district requirement must be met by space-sharing and program coordination. If such is not possible, development of new district park space may require more immediate priority. Notice that a possible site on the Pala Lagoon shore Nuuuli-side was not mentioned. Projected expansion of population in Nuuuli is so great that any potential space available there will require direct application to local level needs. Apart from this, Nuuuli is at the edge of the Tafuna Recreation District. General access requires a more central location.

Anasosopo Landfill Park in the East Tutuila Recreation District is another high priority requirement. The district level requirement there is

for 4 acres. All of this requirement must be filled by Anasosopo Park which is not yet developed. There is another 3/4 acre at Faga'itua High School, but its small size and configuration cause it to be applied to local rather than district level requirements.

Contrast the above picture with the result that would occur if DOE and ASCC land resources were excluded from the equation. Under these conditions only an aggregate 50.5 available acres can be mustered -- a shortfall of 9.25 acres. No problem occurs at the territorial level where an excess of 2 acres would still exist. At the district level, the same shortfall of 3 acres in Tafuna would persist. Loss of Leone schools would eliminate the entire current West Tutuila district resource leaving a shortfall of 4 acres. Manua would lose its full available resource for a deficit of 1 acre. Only the Pago Bay Area would show a surplus at the district level.

Most importantly, a local level shortfall of 8.25 acres would be introduced as a result of withdrawing the elementary schools. Since the local requirement is chiefly subdivided into 1/2 and 1/4 acre parcels, the 8.25 acre deficit would in effect undermine the local level recreation effort throughout the territory and create a wholly unacceptable shortfall per recreational requirements.

In summary, meeting projected spatial requirements means:

1) priority attention to inter-agency agreements, particularly with DOE, to protect the potential for satisfactory local level recreation;

2) immediate improvement of Anasosopo as the prime East Tutuila district level resource;

3) the development of 3 additional acres at the district level in the Tafuna Plains Area;

4) fundamental upgrading of a core 14+ acres in Pago Park to meet territorial requirements;

5) in Manu'a, turning attention to expansion of the field area at Manu'a High School (on available ASG DOE land extending along the road beyond the present field) to provide a full-size multi-purpose athletic field for this one recreational district that is remote from all land-based territorial resources found in Tutuila;

6) creating local park space in Nu'uuli which has none now and is a projected high growth area;

7) upgrading school recreation space on Aunu'u Island since it is water isolated from all territorial and district level land-based recreational opportunities.

C. Facilities, Specialized Activities and Open Space

1. Facilities

The term "facility" has a range of applications -- anything from a large-scale multi-purpose park to a single building, court, playground, boat ramp or other improvement standing alone, or as an element in a larger complex. Appendix D gives the area and dimension requirements for regulation-size development of some of the larger facilities such as multiple-use courts and fields. Design of specific facilities, how they would be arranged at specific sites, and what construction standards would be

applied, are implementation concerns beyond the scope of general outdoor recreation planning.

Individual developments must be tailored to site conditions, but must share common space, design, construction, and identification standards with the rest of the recreational system. Color schemes and identification signs ought to be consistent. Court and field markings ought to be applied in consistent patterns. Such continuity in the physical plant complements the consistent application of use policy and management. The overall result is to provide good visibility of the general recreation system to the public. Such application of physical design and improvement standards helps create a setting in which preferred norms for behavioral standards can be more readily induced. It is all part of good management, again, beyond the scope of base-line planning.

For T-CORP planning purposes a general assignment of activities to facility types, within site classifications (as follows), and overall space and dimension standards (as supplied in Appendix D) are the essential components.

Grouping of Activity Clusters by Facilities and Sites

- Land-Based

Territorial Park:	Multiple-Athletic Field/Ceremonial Malae with Spectator Facility. Multiple-Recreation Courts. Picnic Areas and Rain Shelter Pavilions. Handicraft/Elderly Fales. Cricket Runs and Playground. Strollways and Landscaping. Equipment Issue and Control Station with Permanent Security/Maintenance. Night Lighting for Extended Use.
District Park:	Multiple-Use Sports Field. Multiple-Recreation Courts. Cricket Run and Playground. Picnic Areas/Strollways. Additional elements unique to the particular park setting.

Local Park:
Multiple-Recreation Court.
General Playground Space.
"Tot Lot".

- Land-Based Specialized:
  Track & Field Facility with some Spectator Capacity.
  Football/Rugby/Soccer/Baseball Field Installation designed for Spectators.
  Field House/Gymnasium/Weight Room/Ring.
  Olympic Swimming Pool with Spring-Board Diving.
  9 or 18 Hole Golf Course.
  Special Conveyances -- Example: Aerial Tramway.

- Water-Based

  Territorial Level:
  Beach Parks & Designated Beaches with Swimming, Snorkeling, Smallboat Sailing.
  Marinas and Recreational Piers/Support Services.
  Fish Aggregation Buoys & Fish Weighing Stations.
  Underwater Marine Preserves.
  Special Anchorage Mooring Areas.

  District Level:
  Elements such as boat ramps, fishing piers, finger piers, swimming and surfing spots that may or may not be part of a territorial system, but which can be located compatibly at district park developments.

  Local Level:
  Village beaches and swimming spots plus such individual elements as introduced above which may happen to be appropriate at a local level site even though isolated from a larger park complex.

- Open Space
  (All administered territorially, but possibly contiguous or integrated with other elements in the recreational system.)

  Scenic coasts, islands, mountain watersheds.
  Trail and camp systems, jogging/running courses.
  Historic Landmarks.
  Natural Landmarks.
  Wildlife/Vegetation Refuges & Conservation Zones.
  Special wilderness or unspoiled natural areas -- such as the Steps Pt area -- identified for unusual management handling.

2. Specialized Activities and Open Space

Outdoor recreation sites and facilities must meet both passive and active requirements. Picnicking, strolling, and playing the spectator role are examples of the former. Sports competition, jogging, snorkeling, and sailing are examples of the latter.

Activities are pursued at facilities and sites. Such facilities and sites may be land-based (as detailed in the resource tabulations in Appendix C, Diagrams 6a-6h) or water-based -- that is related to the marine and shoreline environments per water/shoreline-dependent uses and activities. As Diagram 4 shows, there need to be active and passive opportunities in both settings. Specialized uses require specialized facilities. A big public park like Pago Pago can handle a wide range of activities, but it takes a golf course to serve the specialized activity of golf. A general public beach park like Utulei Beach covers most of the standard beach activities like swimming, sunning, and small sailboat activities. But it takes a marina with vessel-related space and services to handle the special marine needs of cruising yachts. Marine and shoreline-related resources are detailed in Appendix C, Diagram 6j. For planning purposes, these are all considered "specialized." Active and passive pursuits are covered.

The third major category of recreational resources besides established land-based and water-based recreational facilities encompasses open space, conservation zones, and historical and natural landmarks. Once again both passive and active pursuits may be involved, but the overriding theme is one of environmental control, regulation of access, and restriction of activity. Wildlife sanctuaries, historical sites, improved hiking trails, unique natural settings, scenic coasts and mountain wilderness are all examples.

Planned open space contributes to preservation of scenic quality and local lifestyle. It can help maintain the character of a locality ("local color") and economic land values -- as in farm land or coastal resort land. It provides spatial relief in the urban setting, contributes to urban design, and enhances the quality of life. Designation of open space further can protect watersheds, animal habitat, environmentally sensitive or scenic areas, and can contribute to containment of the settlement pattern and to floodplain management. It can provide an additional setting for certain types of outdoor recreation and can be used to establish, buffer, and protect historic or archeaological sites. Open space is a valuable resource and an important component of comprehensive land use planning and management. Appendix B, and Diagram 6i in Appendix C report on open space resources and identify some explicit opportunities of potential priority interest.

D. Focus on the Coastal Zone: Access, Use, Protection

1. The Coastal Zone: Its Management Potential

The shoreline, as an outdoor recreation and open space resource, remains relatively unimproved. The coast is characterized by sandy and coral rubble beaches. Though relatively unimproved, it is well used as a recreational resource and economic asset. In a recently conducted community profile survey, heads of households or their spouses indicated that they swam (50%) and they fished (40%), generally to supplement their income and for home consumption.[20/]

The use of the coastal zone as an economic resource is further substantiated by the recently completed village survey by the Development Planning Office of the American Samoa Government. The villagers were able to iden-

tify well over 25 species of fish, suggesting the importance of fish in their diet. This important littoral recreational and economic resource is being threatened by growth and economic change.

There is a contemporary need to plan and manage the shore. The recently completed Draft Coastal Zone Management Program Document catalogs a host of shore-related issues. Specific policies have been formulated to address principal problem areas. The most noteworthy statements relate to shoreline development, access, protection and management.

The Coastal Zone Management Program (CZMP) provides a broad management umbrella to guide the use, development and protection/conservation of the American Samoa ecosystem.[21/] The program consists of three major policy areas: government processes, development policies, and resource policies. One section pertinent to outdoor recreation and open space issues is Executive Order X-80 which delegates the responsibility for and establishes a network of executive agencies managing coastal resources. It also designates inner Pago Pago Harbor and Pala Lagoon as Special Areas. It includes development policies for the shoreline, emphasizing review of any proposed permits or projects within an area 200 feet landward from the mean high tide mark in order to reduce, avoid or otherwise limit degradation of shoreline resources, insure visual access and reduce susceptability to coastal hazards. It outlines resource policies, environmental protection and conservation in general, and shoreline access, specifically physical access to beaches.

2. Inventory of Potential Resources

An inventory of potential resources relating to the shoreline has been completed and is found in Appendix C of this Plan. The inventory is classified by the following categories:

Underwater Parks and Preserves
General Recreation-Related Marine Facilities
Proposed Special Anchorages
Boat Ramps and Fish Aggregation Buoys
Surfing Sites
Beaches
Historic Landmarks
Natural Landmarks
Potential Conservation Sites

These sites and facilities are elements in the coastal resource base for recreation. Primary shoreline protection concerns are shown on the "Selected Environmental Factors" Map.

3. Defining Shoreline Management Concepts

Protection and access in the coastal zone require a few operational planning concepts. The following concepts are suggested to help supply a management context.

a. Operational Definition of Beaches:

The American Samoa Coastal Zone Management Program defines a beach as --

> An accumulation of unconsolidated deposits along the shore with their seaward boundary being at the low tide or reef flat platform level and extending in a landward direction to the strand vegetation of first change in physiographic relief to topographic shoreline. All shorelines of American Samoa are included for visual purposes.

This comprehensive definition encompasses the entire shoreline for all islands within American Samoa.

b. Operational Definition of Protection: An Environmental Perspective

Protection of shoreline resources refers to public safety as well as to conservation and preservation of physical resources. Public safety of course refers to areas which are subject to periodic hazards relating to flooding, high winds, stormwave surge, and to geologically-hazardous lands. These areas are generally identified as <u>environmentally-sensitive</u> areas.

Conservation and preservation of physical resources include the follow-

ing definitions:

Coastal Dependent Development -- Activities, improvements and facilities that are associated with water transportation, power generation, and tourism.

Water Dependent Uses -- Activities which require a site on or immediately adjacent to coastal waters to function effectively: ports, marinas, boat ramps, and dry docks.

Water Related Uses -- Activities which rely on water dependent facilities for purposes such as: utilization of coastal waters as a production source; utilization of the coastal zone for the cycling and transportation of materials and products -- canneries, manufacturing plants, and water desalinization installations; and utilization for shoreline recreation.

Scenic Aesthetics -- pleasing natural open space includes but is not limited to vistas and visual corridors of landscapes and seascapes, unusual landforms and vegetation complexes, particular beaches and aquatic use areas, and sites of unusual cultural significance (archaeologically or historically) which happen to be located in the coastal zone.

4. Future Prospects

The American Samoa Government has taken the initial steps to provide a planning and management framework for guiding the use, development, and protection of its shoreline zone. Focus on a management network in the initial stages of developmental planning provides the context within which to identify opportunities and problems. A 200-foot developmental review zone has been recommended; two special areas have been identified (Pala Lagoon and Inner Pago Pago Harbor); and the entire shoreline has been designated as a resource.

Involvement of the T-CORP in the coastal zone is based on the need to identify and establish sites for water-dependent and water-related recreational activities. Such sites must have suitable access. They must avoid hazard zones -- or be managed so that use is restricted when hazardous conditions exist. They must be developed, used, and maintained with ecological and aesthetic concerns in mind.

E. Resource Management Concepts

Certain resource themes have been implied in the text so far that should be summarized at this point since they figure so prominently in the subsequent statement of a "Strategy for Accomplishment" of goals and objectives to be set forth in the T-CORP Policy Statement.

The first is joint use -- the concept that a single resource base, site, or facility can be utilized by more than one recreational sub-population. For example, a school playground can serve students in physical education classes during school hours, and can also serve the general public after hours. Utulei Beach Park, as another example, can be jointly used by tourists from the Rainmaker, the general public, transient fishermen and villagers from Utulei.

The second is multiple use -- the concept that a single resource base, site, or facility can be utilized for more than one purpose. For example, when a hard-surfaced recreation court is constructed, it makes sense to configure and mark it so that the one court can be used for basketball, volleyball, tennis, tetherball, or school "square" and "circle" games. (In other words, make it big enough for the largest of these activities, mark it with different playing lines suitable to the different activities, and supply it with alternative stations for basketball backboards; volleyball

poles, or tennis net stanchions, so it can be set up for any of these multiple uses as necessary.)

If a big grassy athletic field is to be created, make sure the surface is designed and configured so it can be used for football, rugby, or soccer, and if possible, for baseball and softball as well.

Using Utulei again as an example, the beach park can be used for beach activities, swimming, snorkeling, or for launching and retrieving light sailboats.

The third is specialized use. It is not possible to make every park a beach park or to have spectator facilities at every field. There is not enough land, not enough money, and all sites are not universally suited to every activity. Instead, some sites are intended for specialized uses. Utulei is a beach park. Lava Lava is a golf course. Malaloa is a recreational boating pier. Samoana High School has a running track -- although a substandard one that should be relocated. After all, American Samoa has only a population of about 30,000 -- equivalent to a small town on the U.S. mainland, wherein one normally would not expect to find "two high schools," "two stadiums," "two swimming pools," and so forth. Facilities of this nature, by all planning standards, must be unitary for a service population as small as 30,000. Therefore, since such specialized use is indicated, it makes sense to look for the best possible locations in which to field these one-of-a-kind recreational opportunities.

The fourth is upgrading and expansion of existing facilities -- a self-explanatory concept that is a central theme of the current American Samoa Economic Development Plan. This concept is extra important in the communal land-holding setting of American Samoa because of difficulty in finding new alternate sites suitable or available for alienation from current non-

recreational uses.

Fifth is the concept of quality development, linked closely with the previous paragraph. With resources of space and money in short supply, with increasing joint and multiple use intended, and with potential competing land uses always waiting in the wings, developments must be of good quality in order to provide good service, justify use of the site, and stand up to wear and tear.

VI. AMERICAN SAMOA OUTDOOR RECREATION POLICY

Immediate objectives will be listed in the Five-Year Plan. Initial implementation will be contained in the first Annual Action Plan. But a Policy Statement must be long range -- at least 20 years and thus to the turn of the century. For this reason the present plan has been at pains to project population and land use/settlement trends into that future time frame.

The fundamental intent of future outdoor recreation policy is that it be developed in the context of general planning efforts. It is assumed that unified central governmental control of overall planning will evolve and increasingly integrate functional planning toward territorial goals. It is further assumed that comprehensive land use planning will be the basic paradigm of island design in American Samoa for the future, and that social, economic, and environmental concerns will be balanced and sustained.

Parks and outdoor recreation development is seen as having a significant impact and "function" in regards to all three of these broad aspects of life in American Samoa. Socially it will provide an outlet for human energy and a range of opportunity choices for the use of increasing amounts of leisure time. Outdoor recreation should be an integral part of community life. It can be one avenue of exploration for ways to retain a viable link to the past and to traditional Samoan culture. A positive influence in this regard can result if the application of recreational policy in site selection and design works to retain rather than diminish the character and condition of the natural landscape.

Economically it will serve in enhancing the quality of life in general in American Samoa as an attraction to many people. It will help provide things for visitors to do, therefore encouraging them to stay longer. It will contribute to the upgrading and expansion of marine facilities and

hence opportunities for the island community as a whole to make much more substantial use of its littoral and marine resources, including increased ability to attract cruising yachtsmen to a haven in Pago Pago Harbor -- distinctive not only for its natural physical qualities, but for the comforts, services, and economies it has to offer.

Environmentally, parks and outdoor recreation development comes at a time when standards in general for environmental handling need to be applied in American Samoa. Park developments can set an environmental standard for high use/extensively accessed sites. The "open space" component of outdoor recreation opportunity development relates directly to conservation goals -- particularly in the littoral zone where beach parks, beaches designated for public access, and marine facility proliferation are expected. The same conservation orientation applies in handling of the mountain areas and the extension of planned, improved trails into the watershed zone. Natural landmarks and wildlife refuges and sanctuaries may further be established. The interface of culture with nature may be reinforced in the identification and preservation of historical landmarks and archaeological sites. Establishment of underwater preserves by the Office of Marine Resources, an objective shared by parks and recreation authorities, will extend the impact of recreational planning into the strictly marine environment as well.

B. Goals

In the context described above, the central goal in parks and outdoor recreation development put forward in the Introduction should be both reiterated and extended.

The goal is to supply the public in American Samoa with outdoor recre-

ational opportunities as desired in sufficient quality and quantity, based on projected future requirements. Opportunities must be distributed so as to be accessible, and identified for implementation by priorities within annual action programs. Facilities, maintenance, and recreational programs must be balanced with due regard to financial capabilities. Outdoor recreation must be integrated with other American Samoan goals of economic and organizational development, environmentally sound land use decisions, and the enhancement and preservation of viable traditional culture. In addition this goal must be pursued with an awareness of the pioneering role to be played in effecting socio-economically/environmentally suitable land use decisions, and the pervasive impact, via involvement and example, that T-CORP policy implementation can have on nature, and on man's life, work, and play in American Samoa.

C. Objectives

The present T-CORP is intended as a starting point for building over time a fully developed recreational system in American Samoa. Progress toward that goal depends on accomplishing several broad tasks which are themselves composed of many project starts, site developments, and program initiations. A fully mature recreational system would allow a regional role for American Samoa in international recreational affairs. At present, American Samoa sends some participants to this international scene, but its capacity as a host or factor remains to be developed. Within the time and resource constraints of the upcoming five-year plan period it is not realistic to strive for an expanded external role. Resources must be applied to local objectives as itemized below.

1. Organizational Objectives

* Establish and launch a formal governmental entity for handling the planning and development of parks and outdoor recreation.

* Establish a budget and make appropriate contacts with all pertinent funding agencies and sources.

* Define administrative relationships -- particularly with Territorial general planning authorities and comprehensive land use planning.

* Define responsibility and process for recycling T-CORP plan and determining annual implementation programs.

* Set and pursue consistent policies for interaction with the private sector, local communities, the body of the citizenry as a whole, and visitors.

* Pursue legislation as necessary to facilitate achievement of the various objectives.

2. Physical Development Objectives

* Proceed on a requirement priority basis to gain access to and provide the spatial component standard of land-based parks at the territorial, recreational service district, and local levels.

* Upgrade and expand existing facilities according to official international standards (where appropriate) and prescribe local space, dimension, design, and construction standards (where appropriate).

* Develop marine and coastal resources for the specialized recreational

opportunities they hold, on a priority basis due to the extent to which these resources are at present under-utilized, and their importance with regard to the visitor industry and to general economic development.

* Identify and set boundaries (as appropriate within the Samoan cultural setting) for open space and conservation zones in coordination with other environmental authorities in the Territory and apply consistent standards of access and activity specification/restriction.

* Research and establish a trail and camp net, tied into a recreational boat circuit, according to sound ecological principles and with due regard to safety and to cultural concerns.

* Develop a policy, a system, and expertise in identifying potential natural landmarks for local or national registry and preservation, and implement establishment of sites appropriately determined.

* Coordinate with public agencies and interested private parties to participate in development of a policy, a system, and local expertise in identifying potential historic landmarks for local or national registry and preservation. Implement the establishment of such sites as are appropriately determined.

* Organize and coordinate all sites, locations, facilities, and spaces itemized above into a master American Samoa Parks System for management and maintenance according to standard operating procedures and for economies of scale in handling input personnel and materiel resources necessary to keep it viable and up to standard. Facilitate access and provide good visibility by adopting standard markings, labels, signs, color combinations, structure types, infrastructural components and use procedures throughout the park system.

3. Program and Educational Objectives

* Conclude inter-agency agreements with all pertinent public agencies concerning cooperation in joint use of facilities and development of recreational program.

* Conclude cooperative agreements with private sector entities interested in parks and outdoor recreation so as to tap their expertise and develop roles for them to play in the recreational system as a whole.

* Build expertise in recreational fields so as to supply guidance on all matters concerning programs, specific activities, facilities, competition, regulations and standards for playing and officiating and record keeping.

* Develop a long range program concept for residents to pursue recreation throughout their lives in both active and passive ways with attention to youth-oriented competitive sports as well as to preparing for and participating in lifetime recreational pursuits not dependent on the combination of structured organizational opportunities and available discretionary time which marks younger life.

* Build a community recreation program by going into the field to publicize recreational opportunities, offering instruction in how to make use of them, and assisting local leaders in generating activity.

* Develop educational presentations on conservation and environmental protection, maintenance and litter control, health, sanitation, and safety as applicable to the field of outdoor recreation, and the concept of pollution and vandalism avoidance.

* Develop basic learned skills program opportunities particularly learning to swim, health and fitness, the production of Samoan handicrafts and articles of material culture, and boating/water safety.

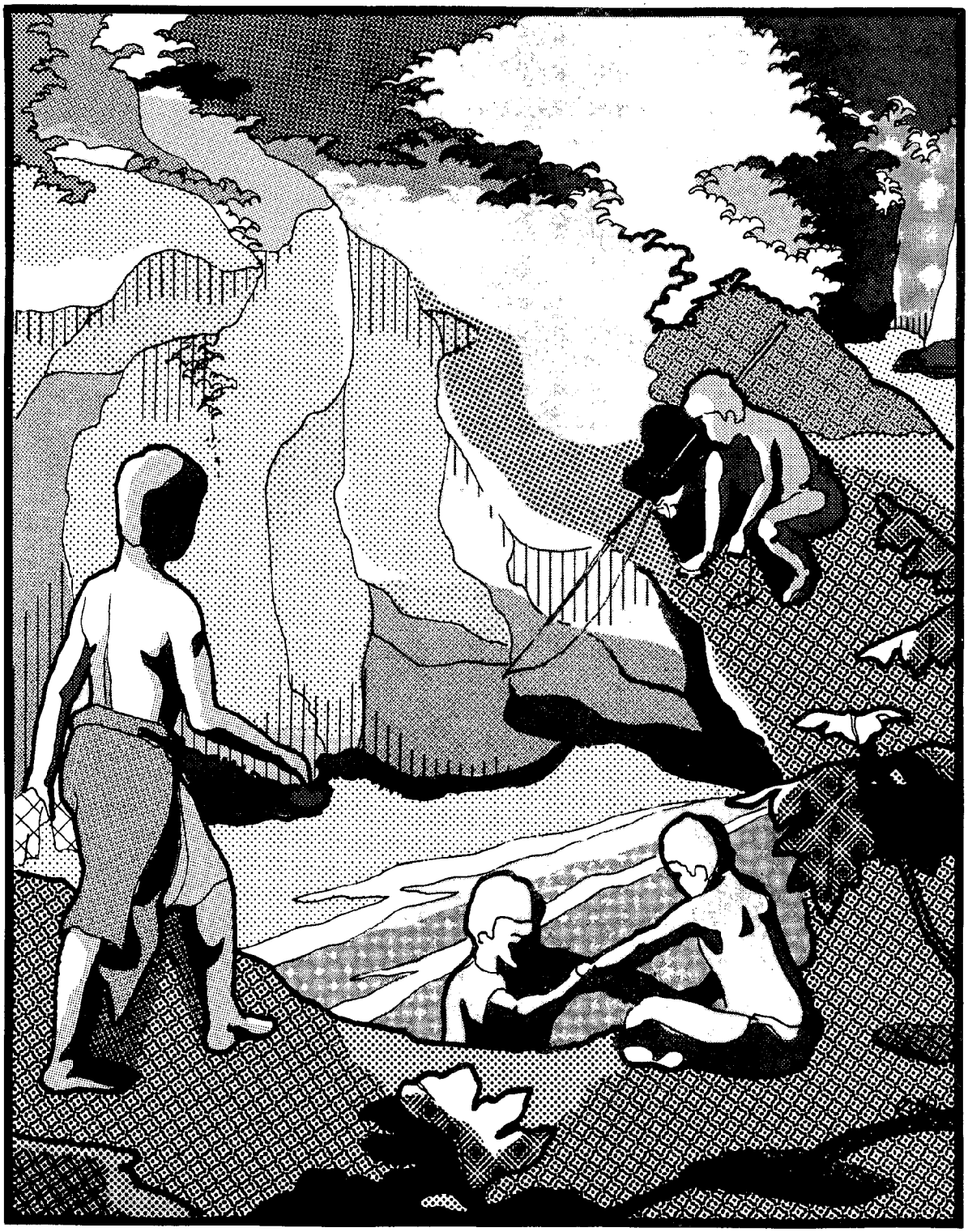
* Establish a programming capability for building and evolving programs and for scheduling the use of resources on a day to day basis. Attend to associated needs for insuring access, arranging shared transportation in some situations, and maintaining control and supervision.

* Recruit and coordinate a roster of qualified recreation specialists from various sources who are willing under various arrangements to serve as program coordinators and supervisors. Use time/preference/talent sheets to provide opportunities for interested parties to get into roles where they can make a contribution while themselves enjoy-

ing a preferred leisure activity in training, supervising, coaching, etc.

* Develop protocols and procedures for hosting major ceremonial and sporting events at Parks & Recreation facilities and develop a schedule of sponsorship for regular tournaments and outdoor events both physical and cultural.

* Promote outdoor recreation to the private sector and inform business entities of opportunities for undertaking private, independent venture roles in the field of recreation.



VII. STRATEGY FOR ACCOMPLISHMENT

A. Checklist

Following is a consolidated list of the principles, concepts, and stragies which have been determined to be most useful in the pursuit and realization of recreational goals in American Samoa.

* Organization and development of the new Department of Parks and Recreation to insure the capacity for planning and management of recreational resources.

* Establishment of multi-year (five year) T-CORP policy plan eligibility to permit recreation authorities to concentrate on development and programming. HCRS planning requirements are intended to be flexible. American Samoa is small and consequently may not have the need or capacity to devote resources to continual, comprehensive annual policy plan recycling.

* Compliance with HCRS program requirements to maintain eligibility for obtaining developmental resources.

* Focus in the short term on active pursuits (as revealed in survey analysis) with emphasis on facility programming and the improvement of existing available resources. Develop basic learned skills programs -- such as learning to swim and water safety.

* Consider needs at all three levels: territorial, recreational district, and local, but key priority actions to the main land-based recreational shortfalls identified, regardless of level.

* Optimize involvement of coastal and marine resources through coordination with the Office of Marine Resources and the Coastal Zone Management Program. (Note parallel impacts on economic development and the visitor industry as well as recreation.) Adhere to a policy of barring non-shore dependent developments in the littoral zone.

* Balance a current need for emphasis on youth/athletics programming with fundamental opportunities to develop and pursue lifetime recreational activity skills.

* Let baseline planning reside with the Development Planning Office which has existing staff and resources. At the same time coordinate operational planning with other pertinent executive agencies for continuity and economy.

* Maintain compatibility of planning and action with territorial development policy.

* Maintain internal consistency with the T-CORP Policy Statement.

* In implementation decision-making stress likelihood of efforts leading to realization of long term goals. Require individual project concepts to be translated into Annual Action Program elements.

* Develop program opportunities so parties interested in outdoor recreation can participate in effective/preferred roles. Canvas the community for "time and talent" that can assist with coaching and supervision.

Adopt the following resource use/management concepts:

* Joint site/facility use.

* Multiple-use site/facility development.

* Specialized use of sites and facilities according to differential suitability and natural attributes per specific activities.

* Upgrading and expansion of existing facilities.

* Quality development -- balance facilities (construction and site development), with program development, with capacity for maintenance, so as not to overextend resources or capabilities in any one sector.

* Application of standards -- in activity rules and procedures; in site space and dimension requirements; and in facility design, construction, infrastructures, and safety features. Apply standards that account for the needs of the handicapped so that their participation ability is minimally limited. (Spectator facilities are a primary case in point.)

* Foster good "visibility" of the park and recreation system. Use consistent signs, labels, color schemes, and access procedures so the public recognizes and can use the various elements as part of an overall system of recreational opportunities. Use this standardization of form to encourage standards of behavior during use.

* Insure appropriate access to facilities -- physically, and as regards permission and public policy. (Beach access is a primary concern.)

* Recognize and employ ecological principles. Avoid pollution in its several forms and do not contribute to it.

* For the immediate future, apply available resources to local objectives without attempting to pursue external objectives via an expanded recreational role in the South Pacific region. An expanded regional role in athletic involvements must follow the building of a foundation in the field of recreation at home.

* Pursue outdoor recreation space and site development as a theme within comprehensive territorial land use planning in which social, environ-

mental, and economic concerns are balanced. Maintain a map of the recreational system throughout the territory.

* Participate in general environmental policy formulation and implementation.

* Accommodate the two-tier system of government in American Samoa -- the central ASG and the dispersed, communal village/aiga matai system. Reconcile through consensus any conflict between local dominion and public accessibility.

* Formulate policy and define roles for a Village Recreation Program with emphasis on the contribution of recreation to community development.

* Conduct a Public Education Program relating to outdoor recreation, conservation, environmental protection, and identification and preservation of historic, archaeological, and other cultural resources. Work in timely themes such as energy conservation, an anti-litter program, public safety, and norms of use and behavior in public facilities.

* Emphasize public involvement and cultural sensitivity. Group participation and consensus decision-making count in Samoa. Pursuit of these policies should help reveal ways to enhance the elusive theme of viable traditional culture. Program cultural and ceremonial uses and events for outdoor recreation facilities -- not just physical/athletic contests or passive individual pursuits. Study the cultural foundations of the community games tradition of "so'o" and apply them in the contemporary outdoor recreation setting.

* Review regularly the delivery of recreational opportunities to the general public. Scout out shortfalls and oversights and rectify through program extensions and innovations.

* Develop funding strategies by drawing on the expertise of the ASG as a whole. Procure an initial operating budget. Gain access to Land and Water Conservation funds. Explore resource matching opportunities with other government agencies. Explore inter-agency joint resource application to projects serving mutual purposes, on a case by case basis. Benefit from the unfunded, valuable input of service organizations and individuals with time and talent to offer in support of outdoor recreation. Document quantitatively the impact of funds expended to demonstrate the heightened return in use and opportunity delivered as justification for seeking further developmental support. Develop standard operating procedure to insure that administration/implementation requirements attached to funds received from various sources are compiled with in order to establish a good "track record."

B. Optional Approaches to Outdoor Recreation

Regardless of the operational course of action selected upon, it is re-

iterated that implementation of a territorial land use plan is the essential "umbrella" within which the theme of outdoor recreation and park development should be pursued. Given this framework, all of the above strategies could be applied in greater or lesser degree in either of two operational scenario situations as follows:

Option One Scenario: The new Parks and Recreation Department is able to develop workable interagency agreements with pertinent public counterparts so as to share in resource application, facility development and sharing, and program coordination.

Option Two Scenario: The new Parks and Recreation Department could follow an independent course of action without seeking to involve public counterpart agencies in coordinating agreements.

Assessment of existing outdoor recreational resource in American Samoa today revealed the potential for meeting existing and future requirements with a minimal addition to the public inventory. This assessment, however, was contingent on the working assumption that these "potential" resources would be available and that reasonable allocation of time and minimal improvements to the inventory could be made. With these modifications to the existing resources, requirements can be met effectively.

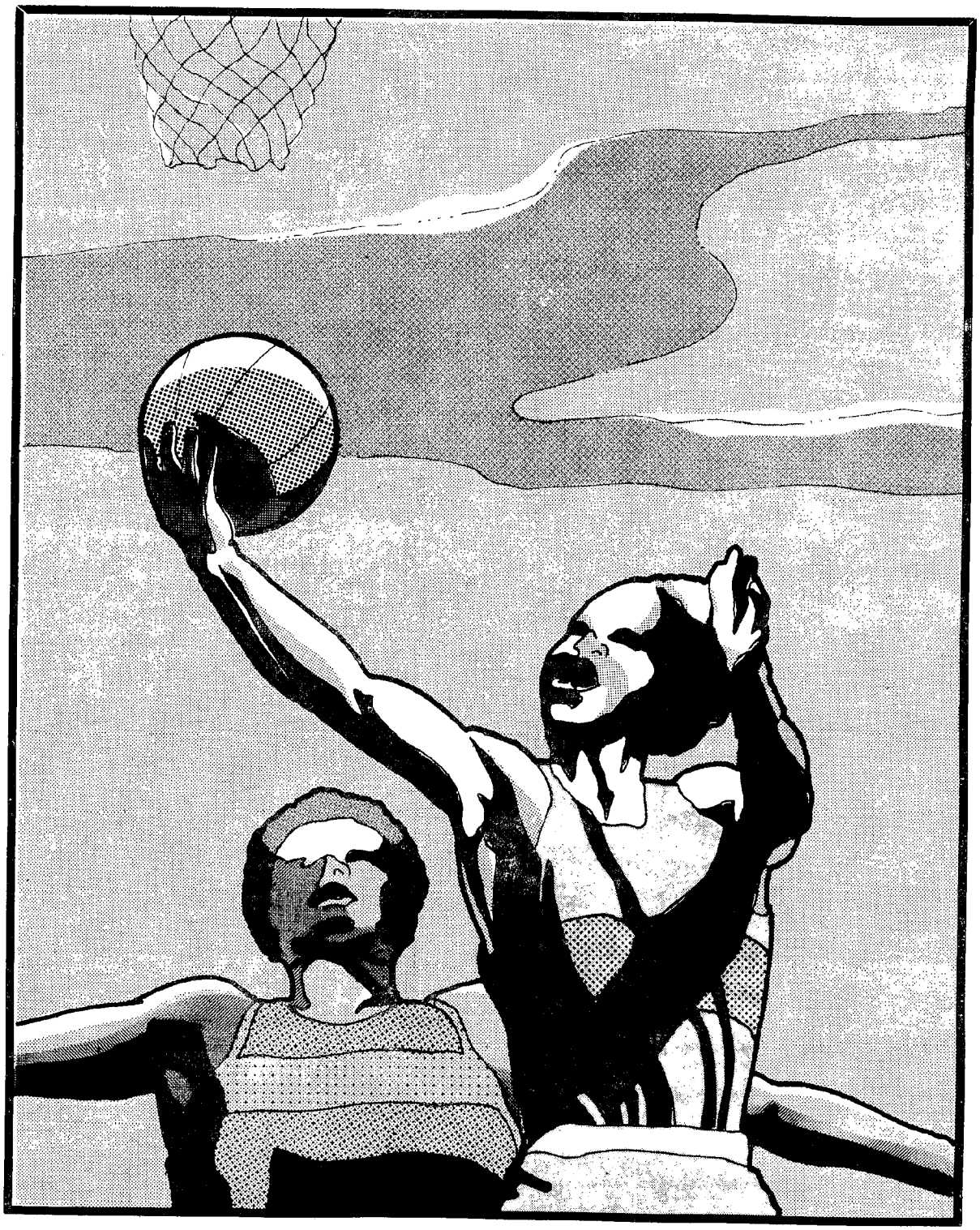
Development of independent territorially-owned recreational resources would immediately place the Department of Parks and Recreation under severe planning and management constraints. The department, in addition to establishing a viable working organization, would have to contend with selecting sites throughout the territory, planning site improvements on newly acquired lands, administering the improvements to the existing and newly acquired sites, and managing the resources in all aspects from maintenance through programming from "Square One." The physical and spatial limitations of American Samoa, and the extreme difficulties in alienation of land which

would have to be faced have already been explained.

Obviously the entire thrust of the discussion thus far has been in support of Scenario One. It is not necessary to discuss the entire checklist of strategies in a point by point comparison by scenario. Whereas an outdoor recreation program could be prosecuted by the new department along independent lines -- a necessity should agreements not be forthcoming -- it is clear that the capacity for employment of strategies identified, thus the capacity to accomplish objectives, and hence the ability to achieve long range outdoor recreational goals would be severely inhibited in the absence of the teamwork that can be generated through inter-agency coordination.

Thus comparative assessment of the two scenarios clearly favors Scenario One and supplies the fundamental outdoor recreation strategy to cap the checklist above:

* Create Interagency Cooperative Agreements for joint and complementary use of facility and program resources in the public sector, and add coordinating agreements from pertinent private sector organizations so that all resources are pooled, and all are pulling together. Use the agreements to identify roles and responsibilities for the several participating entities toward the shared goal of building the best possible recreational system without wasted effort, duplication, or incomplete mobilization of resources.



VIII. 1980-1985 FIVE-YEAR PLAN IMPLEMENTATION

The planning orientation in this study has been toward building the permanent and comprehensive park and outdoor recreation system of American Samoa as a major component of island design. Just how much may be accomplished within the first five years depends on funds available, competing development priorities, legislative considerations, personnel involved, the extent of interagency coordination, and unforeseen events. As an example of the latter, during April 1980 while this plan was being written, an airplane crashed into the Rainmaker Hotel causing 70% destruction. This event certainly will affect tourism planning, and tourism has its links to outdoor recreation.

Categories following group the principal implementation concerns which should be addressed over the next five years, and pursued to the fullest extent possible within resource constraints.

A. Organization

* Have the ASG executive branch implement the law creating the new Department of Parks & Recreation.

* Organize the new Department and the new Commission. Fill personnel requirements. Secure an initial minimum operating budget. Secure an operating location.

* Implement in detail the working interrelationships between the Commission and the Department. Review the assignment of roles and functions as currently detailed in the law toward possible realignment geared to letting baseline planning reside with the Development Planning Office; letting policy formulation, monitoring, and an advisory role reside with the Commission; and letting the Department handle operations and the implementation of capital developments.

* Develop inter-agency facility joint use and program coordination agreements with counterpart public agencies as described in the strategy for accomplishment of recreational goals.

* Work up corresponding agreements with private sector entities with particular attention to registering a cadre of individuals with "time and talent" to devote on a volunteer basis to Parks and Recreation Department programs -- as coaches, supervisors, referees, and so forth.

B. Management Tools

* Establish a master address and contacts file.

* Work up recurrent consummable supply and equipment requirements and arrange regular channels of supply.

* Maintain a master location map of the Territorial Recreation System.

* Develop and maintain a file of site plans for all locations involved in the territorial recreation system.

* Work up the annual calendar of outdoor recreation, holidays, ceremonies, special events, athletic contests, and regional and international competitions and events pertinent to American Samoa. Display these cultural events opposite corresponding climatic and geographic conditions, and also opposite socio-economic data such as the cycle of peaks and valleys in visitor traffic, times when school is out of session and so forth. Then use this composite calendar for broad-based scheduling and design of the outdoor recreational year by balancing activities through the annual cycle, and avoiding conflicts due to climatic factors or more pressing cultural commitments. Take a leading role with this approach in the South Pacific Region so that other states can benefit from the model.

* Determine standard colors, labels, signs, logos of the American Samoa Park System so that they can be consistently applied to developments, literature, uniforms, etc. Maintain a file of these official standards for general reference and consistent application.

* Maintain a file of standards of all types: space, dimension, activity rules and regulations, measuring and scoring.

* Establish a checklist of "barrier free site design criteria" to facilitate access and use by the handicapped. Insure compliance in new projects. Convert substandard conditions at existing sites as feasible.

* Establish Pago Pago Park to be the prime territorial ceremonial site, develop formal standard plans for handling major events, ceremonies, etc., including specific ways and means to handle, move, and accommodate the numbers of people involved per access, sanitation, public safety, general supervision and contingencies. Bear ceremonial requirements in mind when siting and grouping elements in Pago Pago Park.

C. Planning and Implementation

*Get ASG written commitments that sites intended for parks & recreation development will be so reserved and not changed over to alternate uses instead. Particularly Anasosopo and district level park space in Tafuna.

* Establish an action route for project implementation.

* Solve the village dominion/access problem and proceed to designate public beaches and establish and maintain access to them.

* Designate sites for the major, single specialized territorial level facilities under consideration: running track with multi-purpose fields and spectator facilities; multi-purpose field house and gym; olympic swimming pool.

* Review with the ASCC its future policy on facility availability and scheduling. Identify when phased projects will materialize so that an estimate of developing outdoor recreational opportunities there can be coordinated into the development process.

* Request the U.S. Geological Survey to develop a more precise system of rain gauge stations so that a start can be made on generating data on this critical climatic component at a level of precision that can be of use in future site selection.

* Conduct an annual check of basic policy to make refinements for the year approaching to accommodate new or unexpected opportunities.

D. Education and Information

* Implement a public education program on outdoor recreation, conservation, environmental protection, historic and cultural preservation, litter control, and safe and appropriate use of public facilities.

* Develop a training program for coaches, supervisors, referees, and scorers.

* In the high school level physical education curriculum, add emphasis on rules and supervision for upper-classmen so they can play a teaching role for younger residents of the community.

* Encourage the physical education curriculum at the ASCC. Provide student internship opportunities in Parks & Recreation programs.

* Explore the possibility of a Departmental Newsletter geared to the general reader and use this as a mechanism for publicizing recreational opportunities, seeking public feedback on problems and preferences, reporting the results of league competitions and special interest group news -- such as fishing, golf, tennis, etc. Also use it to create the type of image desired for the American Samoa Park System and to encourage preferred standards of behavior. Print it in accordance with standards of design, color, logo, etc. Print issues at sufficient intervals so that a worthwhile body of reporting can be delivered.

* Plan, research, schedule, and hold a workshop on the future role of the private sector in outdoor recreation. Attempt to generate various

possible public incentives that could encourage such a larger and sustained financial involvement by the private sector.

E. Programming Activities and Facilities

* Play a leadership role in program coordination with the Department of Education, ASCC, Samoan Athletes in Action, American Athletic Association, and church groups involved in outdoor recreation.

* Work out the intricacies of facility sharing and scheduling according to policies of request channeling, lead time, procedures, and priorities. Maintain a single master calendar for general reference.

* Consolidate all league play in the various sports, at various levels, by various organizations, boys and girls into a single master league play system for the entire territory and produce a master display. This is an essential tool in scheduling facility use and in program coordination. Its structure should help suggest how to inject training and apply standards consistently.

* Develop and implement a plan with schedules and priorities for improving existing facilities. At the local level, link this effort to development of a village recreation program. For example, take the sport of basketball. Design a program in which the village and the Department play complementary roles. Ask the village to invest in upgrading its own local facilities -- either a village court or the nearest elementary school court. In this way the kids can play and practice on village teams in the village where they spend a lot of time. The Department's role would be to organize the village teams into a league and arrange scheduling at prime facilities for league games. The Department might even help out on cost of transporting kids to games. Facility use would be allowed by the controlling organization -- ASCC, public/private high school, etc., with the central scheduling assistance of the Department. Finally, private volunteers would be enlisted to ref and coach the competitions -- and also to train the older youth so that they can play a coaching role back in the village. This is program coordination at several levels.

* As a top priority project, with the professional assistance of the Red Cross, YMCA/YWCA or other service organizations, develop a territory-wide "Learn To Swim" program. Rather than wait for facility development, make this a program-based effort. Use the existing resources of the Rainmaker Hotel Pool and Utulei Beach Park. Perhaps school physical education class groups could be bussed to Utulei on a rotation basis to receive instruction from a team of professionals operating out of Samoana High School. Portable equipment for use during classes (if necessary) -- floats, lane markers, water polo gear, etc., would be stored at Samoana High School. Emphasis should be on water safety in general.

* Coordinate with the U.S. Coast Guard on ways to extend boating safety information to the general public.

* Encourage and support the elderly handicraft fales as cultural resources within the American Samoa Park System.

F. Primary Land-Based Facility Planning and Development

* Improvement of existing small facilities -- see discussion in the entry under "Programming."

* Develop full specifications and cost analysis for expansion of the field at Manu'a High School on existing, available ASG DOE land along the road. Pay special attention to grading, drainage, and full-size playing field dimensions.

* Prepare detailed site plans for Pago Pago Park, Anasosopo, and additional district level park space in Tafuna.

* Develop Anasosopo Park giving primary attention to 1) quality of the landfill; 2) integrity of the perimeter -- both land and sea; 3) optimal siting of marine and water-related components -- boat ramp, swimming area, fishing frontage, multi-purpose mini-pier for fishermen, divers, and shuttle service from Nuututai Point by the Rainmaker Hotel; 4) siting of playing fields so as to meet space and dimension standards.

* Prepare a site plan for expansion of Utulei Beach Park and work on the problem of relocation of ASG housing currently on the site. Upgrade the existing park by repairing and/or redesigning shore protection and drainage infrastructures.

* Begin general upgrading of Pago Pago Park (particularly a core 14 acres) to meet immediate territorial level land-based needs. Phase park development through the level of well-maintained open space until such time as more extensive project element developments can be pursued. Define the boundary of the park and remove incompatible uses, activities, and elements from within this boundary. Seek Army Corps of Engineers assistance in a permanent channel and outlet solution for Vaipito Stream. Analyze environmental hazards and limitations (rainfall, flooding, tsunami run-up) that will determine what future elements can be considered for development here.

* Upgrade and clean up Tafuna Park.

* Undertake site study for local level park space in Nu'uuli -- a critical projected growth area which does not now have any park space and does not have an elementary school. Ascertain whether DOE plans to field an elementary school here. If so, the recreational space can be jointly designed. Particular attention to easy public access, environmental sensitivities, pollution avoidance, and non-interference with the bulk of the mangroves on the Pala Lagoon shore required.

* Apply funds earmarked for expansion of the Lava Lava Golf Course before they are lost. Consider ways to work other activities into that site -- for example, a cross-country course around the periphery.

* Upgrade the field and court facilities at Leone High School.

* Upgrade local level school facilities on Aunu'u Island.

G. Primary Shore/Marine Facility Planning and Development

* Participate with OMR and harbor authorities (Port Administration) in design and development of Malaloa Recreation Pier, with attention to the grouping of services most useful to cruising yachtsmen and small boat operators in general.

* Participate with the Office of Marine Resources in rounding out the boat ramp system. The first step is to establish design and construction standards by analyzing the potential user field and the type of boats involved. Pay particular attention to siting of new ramps at Anasosopo and Leone, and insure that sites selected are incorporated in overall site plans.

* Apply to the U.S. Coast Guard for assistance in delineating and establishing Federal Special Anchorages off Faga'alu, Malaloa, Pago Pago, and Utulei by working through the Office of Marine Resources to insure that ecological conflicts are avoided -- particularly in the area of the proposed Utulei underwater reef observation park.

* Develop territorial policy reserving for ASG Parks and Recreation the right to manage fixed moorings for small craft. Work out an agreement with the Coast Guard to the effect that if Federal Special Anchorages are established, fixed mooring permits will only be issued to this arm of the ASG which may then dispense them to the public for a fee. Note: nobody can charge for the "right" to moor in a Federal Special Anchorage, but charges can be made for use of actual fixed buoy hardware and for services related to it -- such as dingy service, security, shore services.

* Submit via the Office of the Governor a proposal to reserve space at the hotel end of the fuel pier area for a new Parks and Recreation special recreational marine installation. The concept is not to control a large sector of shorefront, but to create a compact facility to serve as a buffer between the hotel and commercial wharf operations. The facility could include mooring space for a charter boat, a glass bottom boat, a shuttle boat for harbor tours or trips back and forth to Anasosopo, a dive/tackle/bait/shell shop, a sport fishing weigh station, and perhaps a beachware arcade shop. Seek concurrence in the proposal submission from OMR and the Office of Tourism as well. Make this an element in current redevelopment plans for Pago Pago Harbor.

* Pursue with OMR development of the Matu'u shore outlook and turn-out and Underwater Park; and the Utulei Reef Underwater Observation Park off the Rainmaker Hotel.

H. Conservation and Open Space Planning and Development

* Fully develop Trail System #1 (including appropriate conservation and development on Alava Ridge) around the bay area. Identify and set aside the archaeological site of old Pago Pago Village purported to be up on the ridge.

* Prepare a site plan for Blunt's Point and develop: involves trail improvement; perhaps guard rails in some places, vegetation clearing; gun emplacement upgrading + drainage; perhaps rain shelter pavilion; perhaps historic marker telling the story; attention to parking and access, and litter control.

* Prepare a site plan for Breakers Point. Cut and develop the trail. Work in picnic, shelter, and rock fishing components if appropriate.

* Prepare site plans for roadside observation spots on the crest passes of the Afono Road and the Fagasa Road.

* Do a site plan for Leone Falls stressing removal of current obstructions and eye sores and the formulation of long range conservation themes. Perhaps include trail development to forest sites above the falls. However, before taking action, get consensus among parties involved on what the themes and concepts will be -- including the nature of access and activities. Include development concepts that will make Leone Falls a place for tourists to visit.

* Participate in any review of the role and status of Taputimu Experimental Farm. Develop a feasibility statement regarding conversion of the seaward section of the farm as a future park/open space site for handling by Parks and Recreation.

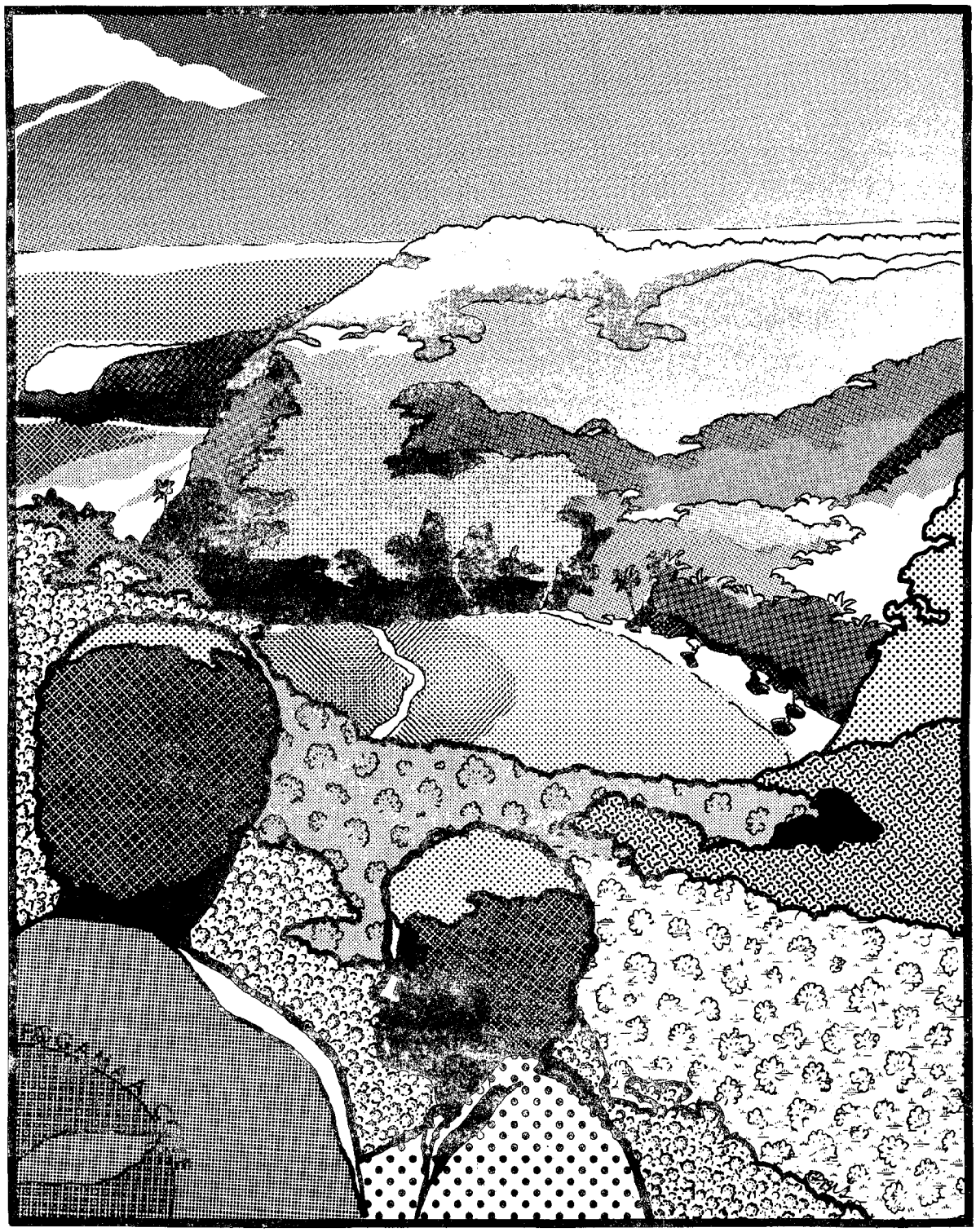
* Have the ASG-owned land at Logotala Hill reserved for future Parks and Recreation Department handling.

* Develop policy and procedure for historic sites/landmarks identification and preservation. Coordinate with Historic Preservation Commission.

* Formulate the Steps Point conservation complex proposal, including Trail System #2 cross-island to Aasu. Coordinate with OMR on marine component.

* Conduct a formal reconnaissance of interior Ta'u Island with particular attention to Laufuti Falls, Mt. Lata, the Lavania coast, conspicuous craters, and potential trail circuit routes -- all as raw material for future concept formulation on Trail System #3 and the identification of natural landmarks for possible registration.

* Participate with other conservation entities in establishing such wildlife and vegetation refuges and sanctuaries as are suggested.



IX. FIRST YEAR ANNUAL ACTION PROGRAM AND FUTURE CYCLING

The first year of operation of the new Department of Parks and Recreation will be dominated by organizational activities as it pioneers in its new role. At the same time, it is important to initiate planning and official action on a variety of long term projects.

All subsequent actions and actual field implementations depend on accomplishing three general tasks:

. Launching the new Department of Parks and Recreation;

. Establishing HCRS eligibility and securing funding through an initial budget allocation;

. Arranging formal interagency agreements on facility joint use, program coordination, and plan integration.

Following on these primary requirements -- which are essential in establishing a capability to act further -- the next actions to be initiated have to do with sites.

Reservation of sites for Parks and Recreation management:

. Anasosopo Park.

. The Afono and Fagasa Road Crests and the Alava Ridge park strip.

. Logotala Hill and the seaward parcel of Taputimu Farm.

. Recreational Service District Level park expansion space in Tafuna.

. Expansion space for Utulei Beach Park.

. The Autapini coastal strip.

. Pago Pago Park with an official, permanent boundary determination.

. Reservation of a new site at the extreme "hotel" end of the fuel dock for a compact special recreational marine installation as previously discussed.

. Nu'uuli local level park.

Site determinations for certain specialized facilities:[22/]

. Running track with interior multi-purpose field and spectator facilities. (Note: it is recommended that the substandard track at

Samoana High School be phased out and that a site to the west be identified. Initial assessment appears to disqualify Pago Pago Park due to the extremely high rainfall.)

. Enclosed multi-purpose center including gym and field house elements.

. Olympic-size swimming pool.

Detailed site plan preparations, stressing Barrier-Free design for the handicapped.

. Malaloa Recreational Pier.

. Manu'a High School playing field expansion -- on existing, available ASG DOE land.

. Anasosopo Park.

. Utulei Beach Expansion.

. Pago Pago Park in its entirety. (It is recommended that phased development of this park include preliminary development as generalized open space, then develop fully in the future. Establish the boundary; remove hazards, and unauthorized or incompatible elements; handle the drainage problem and channelize Vaipito Stream; and improve the surface for general interim use.)

. Tafuna district level park expansion.

. Nu'uuli local level park.

. The newly proposed Nuututai Point recreational marine installation between the hotel and the fuel pier.

. Blunt's Point.

. Alava Ridge and the road crests at Afono and Fagasa.

. Leone Falls redevelopment.

At the same time, positive programming action should be implemented in areas listed below. Good management and consistency is essential as this will be the first substantial exposure the new department will have to the general public.

. Organize a volunteer group of interested recreationalists with time and talent to devote to programming.

- Playing a leadership role and using this volunteer talent -- in coordination with other programming entities -- organize league sports play in American Samoa.

- Start at the village level and link program enhancement and league competition to the process of upgrading local level facilities -- especially recreational courts -- as previously detailed.

- Launch an aggressive "Learn to Swim" program using the Rainmaker Hotel Pool and Utulei Beach, with trained, certified professional instructors. Maximize impact by close coordination with other entities, especially the DOE.

- Support the handicraft program in the elderly fales. Consider establishment of additional fales at dispersed locations in future years.

Lastly, other actions should be accomplished relative to specialized concerns and open space. The standard colors, labels, and signs for the entire American Samoa Park System should be decided upon.

The Department should prepare a general contingency plan for dealing with large ceremonies and events that could come up on lands it will control. This plan should be geared to existing conditions and should be modified as those conditions change.

The Department should meet with the Historic Preservation Commission and solicit other public input to establish policy on identifying and protecting historic landmarks, including archaeological sites. Guidance should be drawn directly from HCRS directives on the subject. The Tuimanu'a Tomb on Ta'u, and the Territorial Cession Site in Pago Pago should be given first attention. They can serve as carefully documented test cases in setting a future pattern.

The Department should meet with all conservation entities to gain knowledge and involvement in environmental concerns. It should encourage the ASG to move toward a comprehensive environmental policy -- a matter now fragmented among a number of enforcement, planning, and advisory offices. HCRS guidance and requirements on natural landmarks should be applied to

policy formation on this subject within the new Department of Parks and Recreation. Laufuti Falls on Ta'u should be submitted as a test case pending the results of a formal reconnaissance survey.

The proposed Steps Point conservation area as introduced elsewhere in the Plan and appendices should be pursued as the first large scale "open space" project. Although this will be an extremely complex matter, some opening action -- such as presenting an initial conceptual overall site plan for public review -- should be accomplished within the first year. The area is under little contention at present. It is important to work now to set it aside before it becomes subjected to other potential use claims.

Support the Office of Marine Resources in its plans to establish marine parks and preserves at Utulei, Matu'u, and Fagatele. As previously discussed there is a substantial opportunity here for integrated action between OMR and the Department of Parks and Recreation. Also support OMR in the development of its system of boat ramps. Insure that appropriate sites are reserved in new park developments. Coordinate with OMR in establishing design and construction standards. Seek to have these marine elements affiliated with the American Samoa Park System (or included in the system) with consistent signs, colors, labels.

Introduce a proposal for Federal Special Anchorage Areas in Pago Pago Bay as previously discussed. Consolidate feedback from within the ASG, and pending ASG executive approval, submit to the U.S. Coast Guard for consideration. In the process investigate the legal basis and the position of the U.S. Coast Guard on the concept of reserving the issue of USCG permits for fixed moorings exclusively to the ASG Department of Parks and Recreation within special anchorage areas.

Fully develop Trail System #1 around the Pago Pago Bay mountain rim as elsewhere described. Some elements exist now but need upgrading. Other stretches must be developed. Get expert advice on safety and environmental aspects of this project and design the system as a whole according to standards.

A separate concern is to apply existing funds already earmarked for expansion of the Lava Lava Golf Course lest they become unavailable.

Finally, in cooperation with the ASG Development Planning Office formulate policy on the ways and means by which outdoor recreation planning will be cycled, coordinated with the operational planning of other functional entities, and integrated with general territorial planning. Also, establish a procedure and schedule for preparing subsequent Annual Action Programs.

In conclusion, the scope of action described above is deemed appropriate toward generating initial action on several fronts. It is not to be expected that complete action will be accomplished in all areas, particularly when fundamental building of organizational capability must be dealt with first.

FOOTNOTES

1. National Geographic, Oct. 1962, 58.

2. 1978 Pacific Island Yearbook.

3. Economic Development Plan for American Samoa: FY 1979-1984, 1979, III-6.

4. "Adjusted 1980 Figure" from corrected projections through the ASG, Development Planning Office Ten Percent Sample Census 1977.

5. U.S. Army Engineer District, Honolulu. "Draft Environmental Statement, U.S. Dept. of the Army Permit Processing Guidelines to Control the Cumulative Effects of Shoreline Development in Pago Pago Harbor, etc.", 1978, 2-1.

6. Information combined from the preceding reference and from: U.S. Dept. of Commerce, NOAA, Environmental Data Service, Local Climatological Data, Annual Summary of Comparative Data, Pago Pago, American Samoa, 1971, "Narrative Climatological Summary", 1971 -- also the source for subsequent climate information.

7. ASG Development Planning Office. Statistical Bulletin, Annual Report on Economic Indicators, 1979; and ASG, and Action Resources, Inc. Energy Facility Siting: CZM Plan, American Samoa, 10 Jan. 1980.

8. Bryan Farrell. "Perspective on Land Use -- American Samoa", Journal of the Graduate Research Center, 34:3 (June 1965) 325-327.

9. Arthur Lyon Dahl (Dept. of Botany, Smithsonian Institution). "Ecological Report on Tutuila, American Samoa", 13-page typescript based on 1970 visits, 12, 13.

10. ASG Department of Public Works. Wastewater Facilities Plan American Samoa, Vol. 1, prepared by CH2M Hill, Feb. 1976, p. 2-42.

11. William H. Teller. "Final Report and Recommendations pertaining to Land Tenure and Cadastral Survey in American Samoa", 30 June 1970, 2, 6.

12. Marshall Kaplan, Gans, Kahn, and Yamamoto (for ASG Development Planning Office). Housing in American Samoa, Oct. 1972, 91.

13. Arthur Lyon Dahl. "Ecological Report on Tutuila, American Samoa", 13-page typescript based on 1970 visits, 12.

14. Robert Langdon. "All that Glitters isn't Gold in America's South Seas 'Showplace' ", Pacific Islands Monthly, Sept. 1966, 33.

15. Te Rangi Hiroa (Peter H. Buck). Samoan Material Culture, Bernice P. Bishop Museum Bulletin No. 75, Honolulu, 1930, 523-524.

16. ASG Development Planning Office. Economic Development Plan for American Samoa: FY 1979-1984, 1979, iii.

17. ASG Parks and Recreation Control Board, Territorial Report to the Governor, transmitted 22 June 1979.

18. The methodological explanation for selection of this standard of 3 land-based acres of recreational space per 2,000 population is as follows. The National Recreation and Park Association suggests a standard of 5 acres per 1,000 population for all outdoor recreation resources (not merely land-based space) as ideal.
In Honolulu (HAWAII SCORP, 1972) in actual practice there were 3.24 land-based recreational acres per 2,000 population. (Since population increase has outstripped park development since then, the ratio is probably lower at present.) Hawaii has a lifestyle marked by heavy pursuit of leisure time opportunities. It does not have a subsistence or communal base, nor is it in transition from a traditional Polynesian past. Further, although land is at a premium in Hawaii, the scarcity in relation to demand for comparatively flat land is much more severe in American Samoa. Note further that Honolulu has one of the heaviest non-resident (tourist) involvements in recreational opportunities of any city in the world, whereas in American Samoa tourism is still a very minor activity. On top of these several fundamental differentiating points it should be kept in mind that high-intensity resource management is the rule in Honolulu -- with such multiplying advantages as night lighting and night urban mass transit infrastructures. With these several factors in mind, a 3-acre per 2,000 population land-based figure for American compares very favorably with the Honolulu figure of 3.24-acres per 2,000 population.

19. Reduction of figures from Appendix C yields the following results:

General Planning Standard:	3 acres/2,000 people.	
1985 Calculated Requirement:	59.75 a/36,890 p = 3.24	acres/2,000 people.
1985 Availability, all resources:	80.25 a/36,890 p = 4.35	acres/2,000 people.
1985 Availability, no DOE/ASCC:	51.5 a/36,890 p = 2.79	acres/2,000 people.
2000 Calculated Requirement:	81.5 a/50,195 p = 3.25	acres/2,000 people.

Interpretation: Qualifications and exceptions entertained at the district and local levels produced a calculated 1985 requirement at a standard higher than the baseline 3 acres/2,000 people. Full resource availability in 1985 gave a considerable margin (4.35 acres vs. 3.24 acres) above even that higher standard. However, without DOE/ASCC resources, availability dropped below even the baseline standard (2.79 acres vs. 3 acres), unacceptable. By projecting case by case calculations by area according to standards to the year 2,000, a requirement of 3.25 acres/2,000 people was yielded - precisely comparable to the 1985 requirement (due to parallel derivation) and nearly satisfied by the 1985 all resource availability. Note again, this is aggregate spatial

satisfaction without regard to quality of facility content, or distribution of that space per population and access standards.

20. Army Corps of Engineers, American Samoa Community Profile, American Samoa Water Resources Study, May 1979. The survey interviewed only heads of households or their spouses; it may be assumed that participation rates would have been higher if the entire household were surveyed.

21. Development Planning Office, Draft American Samoa Coastal Zone Management Program Document, American Samoa Government, March 1980.

22. A basic determination is whether or not such facilities planned for the ASCC should be duplicated. Cost, space, and access considerations will be required, including an ASG decision.

APPENDICES

A: ADMINISTRATION AND ORGANIZATION

B: RECREATIONAL INVENTORY ITEMS AND RELATED MAPPED DATA

C: RECREATION AND OPEN SPACE RESOURCES, DETAILED SUMMARY DISPLAYS

D: AREA AND DIMENSION REQUIREMENTS
SELECTED RECREATION/SPORTS FACILITY ELEMENTS

E: AMERICAN SAMOA DEPARTMENT OF EDUCATION RECREATION PROGRAMS
IN THE SECONDARY AND ELEMENTARY SCHOOLS

F : SOCIO-ECONOMIC PROFILE TABLES

APPENDIX A. ADMINISTRATION AND ORGANIZATION

Three subjects are covered in this appendix: a short summary of public involvement; memorandums of understanding; and the new law establishing the American Samoa Department of Parks and Recreation.

Summary of Public Involvement

Although the present document is the first formal T-CORP to be prepared for American Samoa, a glance at the list of references shows that there have been earlier recreation plans. These culminated in the American Samoa Recreation Area Development Plan 1975-1980 prepared in January 1975 by the Parks and Recreation Control Board.

The stage was set for preparation of the present T-CORP by two major broad-based public surveys conducted in 1978 and 1979 respectively. The first, in 1978, was an American Samoa Community Profile conducted as part of the major US Army Corps of Engineers American Samoa Water Resources Study. In this survey, household heads and their spouses in villages throughout the Territory were queried on a variety of subjects to gain understanding of their perception of the environment, resource use, and their activity preferences as regards the environment. It was in this latter connection that questions on recreational preferences and existing recreational use of the environment were introduced. Results have been discussed in some detail in the text.

The second survey, in 1979 and early 1980, conducted by the American Samoa Development Planning Office was called the 1979 Comprehensive Village Survey. It covered a list of themes, one of which was recreation -- in direct anticipation of the pending T-CORP project. This survey was directed at the Village Councils of the 55 American Samoan villages having pulenuus

(village chiefs) appointed by the Department of Local Government -- also known as the Department of Samoan Affairs. Results of this survey were forwarded to the T-CORP consultant in three forms: original packets of survey questionnaires dealing with recreation; "Results of Recreation Village Council Survey Conducted by the DPO (1979)" -- in three large sheets; and finally in a typescript received in March 1980 entitled "Village Development" with "Recreation -- Main Aspects" highlighted as one theme. This typescript also included detailed information on fish and other marine forms gathered in the littoral zone. These results have also been analyzed in the text.

The consultants followed this work up with four field visits which covered all villages and areas accessible by road on Tutuila -- hence the vast majority of villages there, and all islands of the isolated Manu'a Group. In Manu'a, interviews with leading individuals in all villages were conducted.

Independently, the American Samoa Parks and Recreation Control Board was pursuing recreational topics among public agencies, village chiefs, and interested private parties, and holding its own Board meetings. Feedback from these sources was relayed to the consultants, and discussed in great detail during visits by the consultants to American Samoa, and by officials of the Parks and Recreation Control Board, and the Development Planning Office during their visits to Honolulu.

During this period the Office of Samoan Information through its daily organ, the "News Bulletin" publicized recreation in general and the work of the Parks and Recreation Control Board, described the recreational planning underway, and called for public input from any and all interested parties. (The most significant release is reproduced later in this appendix.)

Independently, the consultants undertook interviews in the Office of Samoan Affairs with its Director, and with selected village leaders, particularly in Leone Village. Extensive discussions were held with the recreation specialists at the Department of Education -- who were accompanied into the field so as to watch their program in action. Additionally, talks were held with the Director and Fishery Biologist at the Office of Marine Resources -- which in its most recent literature had described upcoming projects in a wide variety of areas pertinent to outdoor recreation. These include the Malaloa Recreational Pier development and the territorial nets of boat ramps and fish aggregation buoys.

As a result of these contacts, marine and coastal opportunities have been heavily stressed in the present T-CORP with the intention that cooperation among agencies be developed to serve the mutually compatible goals of economic and recreational marine opportunities. Also, future coordination between Parks and Recreation and the Department of Education has been solidified in the Memorandum of Understanding which follows in this section.

The consultants also visited officials in the Office of Tourism, Department of Public Works, Development Planning Office, Coastal Zone Management Program, American Samoa Community College, Office of the Port Director and U.S. Coast Guard, and the Special Assistant to the Governor for Environment. Additionally, in Hawaii, close contact was maintained with the Geography Department, University of Hawaii, working on a CZM Atlas of American Samoa, and with the U.S. Army Corps of Engineers and subcontractors working on American Samoa.

All public and private high schools were visited, all elementary schools in Manu'a, and a good number on Tutuila. All existing recreational facilities were field checked, including undeveloped resources such as the Ana-

sosopo landfill area. Sites were checked from the air, by car, and on the ground, and a photographic record was developed for future referral.

These several activities were brought together in a major public meeting at the Rainmaker Hotel in American Samoa, called by the Parks and Recreation Control Board. One of the public announcements of that meeting, and the subsequent attendance list, are reported on the following page.

Finally, an effort was made in the field to visit park sites in the late afternoon (after school and work let out) in order to get a feel for facility use at the busiest time and talk to some of the individuals present.

NEWS BULLETIN

THURSDAY, FEBRUARY 21, 1980

PUBLISHED BY THE OFFICE OF SAMOAN INFORMATION PAGO PAGO, AMERICAN SAMOA

PARKS & RECREATION MEETING SET FOR MONDAY

Parks & Recreation Chairman Rob Shaffer has announced that the Parks & Recreation Control Board & Task Force will hold a public meeting at the Rainmaker Hotel poolside, Monday, February 25th, at 1:30 p.m.

The meeting is being held to review the preliminary draft of the American Samoa Territorial Comprehensive Outdoor Recreation Plan which is to be submitted to the Department of the Interior on June 1st of this year. The Outdoor Recreation Plan, which is being prepared by MKGK/Yamamoto, Inc. of Honolulu, is a mandatory requirement by the Department of the Interior of all U.S. states and territories in order that they either become or remain eligible for federal matching money and/or grant funds.

Mr. Tim Wright and Mr. Derek Wong of MKGK/Yamamoto will attend the meeting and present the draft report to those present.

It is requested that representatives from the Department of Education, Samoan Athletes in Action, Community College, the Triple A, Tennis Association and all those in the public or private sector who wish to contribute to the Territorial Outdoor Recreation Plan attend the meeting. This will be the last public meeting for the review of this recreation plan, as the final draft will be prepared based on comments and input received at this meeting.

ATTENDANCE

1.	R. Shaffer, Chairman	Parks and Recreation
2.	P. Templet	Development Planning Office (CZM)
3.	J. Sundquist	Private Sector
4.	J. Chun	Private Business/L.A.T.L.
5.	E. Imo	Samoan Athletes in Action; Dept. of Ed.
6.	D. Behan	Samoan Athletes in Action; Dept. of Ed.
7.	R. Hessler	Samoa News
8.	V. Afoa	Leone High School
9.	L. Epati, Jr.	Samoan Athletic Association
10.	O. Lefforge, Vice-President	American Samoa Community College
11.	T. Uperesa	American Samoa Community College
12.	H. Sesepasara, Director	Office of Marine Resources
13.	J. Samia, Jr.	American Athletic Association
14.	T. Annastas	Parks and Recreation
15.	D. Wong, consultant	MKGK/Yamamoto, Honolulu
16.	T. Wright, consultant	MKGK/Yamamoto, Honolulu
17.	M. McMoore	Parks and Recreation
18.	P. Tuiteleleapaga	Man Power Resources Commission
19.	J. Samia, Sr.	American Athletic Association
20.	L. Simonsen, Inst. Planner	American Samoa Community College

NEWS BULLETIN

THURSDAY, JANUARY 17, 1980

PUBLISHED BY THE OFFICE OF SAMOAN INFORMATION PAGO PAGO, AMERICAN SAMOA

PARKS & RECREATION BOARD TO MEET

Members of the Parks & Recreation Control Board and Task Force will meet this afternoon at 4:00 p.m. at the Rainmaker Hotel poolside to discuss the Territorial Comprehensive Outdoor Recreation Plan which is required by federal law for eligibility for Department of the Interior recreation grant funds.

Attending the meeting will be Mr. James Yamamoto, President of MKGK/Yamamoto, Inc., whose firm is preparing the recreation plan for submission to the Department of the Interior.

Parks & Recreation Control Board chairman, Rob Shaffer, is also requesting that members of the Samoan Athletes In Action, Triple A, and the Tennis Association attend this important meeting, so that their views regarding recreation development in the territory can be heard.

Attendance

Faufano Li, Veterans Organizations
Letasi Epati, Jr., Chairman, Samoan Athletic Association
Paul Templet, CZM Program Manager, DPO, ASG
Tusi Avegalio, DOE, ASG
Meki McMoore, Member of the Board
Sipa Anoai, CETA
Dan Pritchard, DOE, ASG
John Newton, Businessman
Harold Siufauna, CETA
Paul Stevenson, DOE, ASG
D. T. Tupua, Member of the Board
Lorence Simonsen, AS Community College
Robert Shaffer, Chairman, Parks and Recreation Control Board
J.T. Yamamoto, MKGK/Yamamoto, Inc., Consultant to the Board

GOVERNMENT OF AMERICAN SAMOA
PAGO PAGO, AMERICAN SAMOA 96799
DEPARTMENT OF EDUCATION

In reply refer to:

April 9, 1980

To: Rob Shaffer, Chairman of the Parks & Recreation Control Board

From: Mere Betham, Director of Education

Subject: Inter-agency facility-sharing agreement

The Department of Education fully supports the creation of the new Parks & Recreation Department. It is the hope of the Department of Education that through an aggressive and imaginative Parks & Recreation Department, the recreational and athletic needs of the territory of American Samoa will finally be realized.

The Department of Education provides the territory's school-age boys and girls with a wide range of athletic and sporting programs and competition at both the elementary and secondary levels. However, proper recreational and athletic facilities are still underdeveloped on a territory-wide level.

The Department of Education recognizes the need for the development of new athletic facilities and fields in American Samoa. The department also realizes however, that in a territory of this size, that these facilities be available for use not only by those students attending school—should the facilities be on DOE property—but to the community as well. By the same token, DOE would expect to reserve for use certain facilities for elementary and high school athletic events which are under the administration of the Parks & Recreation Department.

In consideration of the creation of the new Parks & Recreation Department, I, as Director of the Department of Education, do hereby agree to cooperate with the Parks & Recreation Department to every extent possible in the joint use of all DOE athletic facilities, and at the same time look forward to a long and mutually beneficial working relationship.

MERE BETHAM

GOVERNMENT OF AMERICAN SAMOA
PAGO PAGO, AMERICAN SAMOA 96799
PARKS & RECREATION CONTROL BOARD

In reply refer to:

April 10, 1980

To: *Director of Education*

From: *Chairman, Parks & Recreation Control Board*

Subject: *Inter-agency facility-sharing agreement*

The Parks & Recreation Control Board, as the governing voice for the newly-created Parks & Recreation Department, believes that in order for American Samoa to justify the expenditure of large amounts of money for the construction of much-needed recreational and athletic facilities in a territory of this size, that these facilities be open to use by all the territory's various interest groups, whether they be private, religious or governmental.

The Parks & Recreational Control Board also believes that the Department of Education--with its wide range of elementary and secondary school sporting and athletic programs--should be given top priority in the use of Parks & Recreation Department facilities. The Control Board also believes that the DOE should be consulted in the planning of future Parks & Recreation facilities before construction is begun, thereby fitting the facilities to DOE use as much as is feasible.

This memorandum is to officially inform you that the Parks & Recreation Department will give the Department of Education top priority in the use of facilities under our administration and will cooperate with your department to every extend possible in this regard.

Rob Shaffer
ROB SHAFFER

MEMORANDUM OF UNDERSTANDING

The American Samoa Parks and Recreation Commission, in coordination with the Development Planning Office and the Coastal Zone Management Program, is preparing a Comprehensive Outdoor Recreation Plan for submission to the Heritage Conservation and Recreation Service of the U.S. Department of Interior.

Analysis of resources and requirements shows that optimum recreational opportunities can be delivered to the public through joint use of facilities and inter-agency cooperation in program and resource development.

As a basic implementive step, the Commission is seeking inter-agency agreements with its counterparts for the mutual benefit of all concerned, especially the Samoan people. This MEMORANDUM is being circulated with an invitation to share in an understanding via signatory action to the following statement:

The signatory agencies below share a common interest in supporting the American Samoa Parks and Recreation Commission in its work to implement a Comprehensive Outdoor Recreation Plan and support the basic strategy of joint use and inter-agency cooperation. It is understood that cooperating agencies always reserve the capacity to meet their own requirements first, and that an accountable inter-agency agreement would first require a schedule of specific roles and responsibilities within the framework of the approved plan.

Signature	Title	Agency	Date

Public Agencies to be Canvassed:

Parks and Recreation Commission.

Development Planning Office/CZMP.

Budget Director.

Samoan Affairs.

DOE.

ASCC.

Special Ass't to Governor for Environment.

DPW.

Office of Marine Resources.

Historic Preservation Commission.

Office of Tourism.

etc.

MEMORANDUM OF COOPERATIVE INTENT

(PRIVATE SECTOR)

We the undersigned private clubs, associations, and service organizations of American Samoa with a permanent interest and involvement in the development of sound recreational opportunities, have been informed by the American Samoa Parks and Recreation Commission of its current work in preparing a Comprehensive Outdoor Recreation Plan.

We welcome this positive step and look forward to future cooperation with the Commission in seeing that public/private sector coordination is applied to program enhancement for the mutual benefit of the Samoan people and the several organizations that can make a future contribution to this important component of American Samoan life.

Signature	Title	Organization	Date

Private Parties Suggested for Canvassing:

American Athletic Association.

Samoan Athletes in Action.

Rotary Club.

Pago Pago Yacht Club.

American Samoa Game Fish Association.

Rainmaker Hotel.

American Samoa Tennis Association.

American Samoa Dive Club.

Van Camp Cannery.

Starkist Cannery.

Korea House.

Two-Dollar Beach Proprietors.

etc: other clubs, league/church teams, organizations, community groups, elderly organizations, as may be appropriate.

H.B. No. 145 PUBLIC LAW NO. 16-

THE SIXTEENTH LEGISLATURE OF AMERICAN SAMOA

Third Regular Session

Begun and held at Fagatogo, Tutuila, American Samoa
on Monday, the fourteenth day of January
one thousand nine hundred and eighty

AN ACT CREATING THE DEPARTMENT OF PARKS AND RECREATION, THE AMERICAN SAMOA PARK SYSTEM AND THE PARKS AND RECREATION COMMISSION; PRESCRIBING POWERS, DUTIES, SERVICES, AND PROCEDURES; AMENDING 32 ASC 201-02 AND 3 ASC 201; REPEALING 32 ASC 1-4; REDESIGNATING 32 201-02 AS 301-02; AND CREATING NEW 32 ASC 201-10 AND 32 ASC 401-02.

BE IT ENACTED BY THE LEGISLATURE OF AMERICAN SAMOA:

Section 1. This act shall be known and may be cited as the "American Samoa Parks and Recreation Act of 1979".

Sec 2. A new chapter 2 of title 32 is added which reads:

"CHAPTER 2. DEPARTMENT OF PARKS AND RECREATION

"§ 201. Definitions

As used in this title:

(1) "Commission" means the parks and recreation commission;
(2) "Department" means the department of parks and recreation;
(3) "Director" means the director of parks and recreation and the head of the department;
(4) "Government" means the Government of American Samoa;
(5) "Governor" shall mean the Governor of American Samoa or the person who exercises the power of Acting Governor;
(6) "Legislature" means the Legislature of American Samoa;
(7) "Parks system" means the American Samoa parks system;
(8) "Person" includes the plural and includes the individuals, partnerships, corporations, matais of families, and other legal entities; and
(9) "Territory" means the Territory of American Samoa.

"§ 202. Department of parks and recreation

There is created within the executive branch of the Government a department of parks and recreation. The head of the department is a director appointed by the Governor and confirmed by the Legislature in accordance with 3 ASC 12(c).

"§ 203. Director; powers and duties

The director has the following powers and duties:

(1) Manage, develop, control and maintain the park system;

(2) Initiate, promote, equip and supervise recreational programs in areas within the park system;

(3) Submit an annual report on the operations of the park system and recreational programs by the department for each fiscal year to the Governor and Legislature not later than December 1;

(4) Administer the department through organizational units which he may establish;

(5) Prescribe the duties of assistants, deputies, attendants and other persons employed in the department;

(6) Manage the budget of the department;

(7) Attend, ex-officio, all meetings of the commission; and

(8) Establish rules in accordance with the Administrative Procedure Act, 3 ASC 1931 et. seq. to accomplish the purposes of this act.

"§ 204. American Samoa Parks System; classification; mapping

(a) There is created the American Samoa Parks System. The department shall inventory all properties belonging to the Government and with the Governor's approval determine which properties are included in the park system. The department keeps a list of all areas in the park system according to classification, with correct and accurate descriptions, and provides the Legislature with a current copy of the list.

(b) The department classifies, and may subsequently reclassify, each area within the park system in 1 of the following categories:

(1) "Natural Preserves" which are to remain unimproved;

(2) "Conservation Preserves" which may be improved for the purpose of making them accessible to the public in a manner consistent with the preservation of their natural features;

(3) "Territorial Parks" or "Community Parks" which may be improved for the purpose of providing public recreational facilities in a manner consistent with the preservations and enhancement of the natural features;

(4) "Territorial Recreation Facilities" or "Community Recreation Facilities" which may be improved for the purpose of providing public recreation facilities; and

(5) "Historical and Pre-historic Objects and Sites" which are administered in accordance with federal guidelines as set by the Department of the Interior.

(c) The territorial surveyor provides the department with maps of record, and any new maps which may be needed, for all property within the park system not later than 1 year after each request by the department.

"§ 205. Seashore reserve

All land including underwater land, and water areas of the Territory of American Samoa extending from the mean high waterline seaward to 10 fathoms is included within the park system and be administered by the director in accordance with § 204 above.

"§ 206. Parks fund; revenues from concessions and uses; donations

(a) There is established, separate and apart from any other fund of the Government of American Samoa, a parks fund for the development and improvement of the parks system. The fund is managed by the department. Financial statements on the fund for each fiscal year are included in the department's annual report to the Governor and Legislature.

(b) The department may grant permits and charge fees to individuals or groups to establish concessions on or otherwise use any part of the parks system. The fees from the permits shall be deposited in the parks fund. Any person or group granted a permit must be bonded in an amount necessary, in the department's judgment, to insure that damage to the system caused by that person or group, including littering, can be rectified.

(c) Money or the proceeds of any property donated, granted or bequeathed for the benefit of the parks system are deposited in the parks fund; provided, that, money or property donated, granted, or bequeathed for specific purposes is held in trust and may only be used for those purposes.

"§ 207. Voluntary improvements

The department may grant permits to any individuals or group to improve, without expense to the Government, any part of the park system.

"§ 208. Damage to property

Any person who injures or damages any property within the parks system, or who removes, destroys, or defaces any tree, shrub, plant, or other attraction of any nature on or in that property is guilty of a misdemeanor, punishable by a fine not to exceed $500.

"§ 209. Recreational use of school facilities

The department may, with the consent and cooperation of the department of education, initiate, promote, and supervise recreational programs on properties and in facilities under the control of the department of education.

"§ 210. Transfer of offices and employees

The Governor is authorized to transfer to the department the employees of existing agencies of the Government, engaged in performing functions that come within the purposes of the department and the entire or any part of the budget related to those functions transferred.

Sec 3. 32 ASC 201 is amended to read:

~~"§ 201. Powers and duties of territorial park and recreation control board~~

"§ 301, Federal assistance programs; department's powers and duties

(a) The ~~territorial park and recreation control board~~ department is authorized with respect to federal assistance programs, to prepare, maintain and keep up-to-date, a comprehensive plan for the development, use and conservation of outdoor recreation resources of the territory, to develop, operate and maintain outdoor recreation areas and facilities of the territory, and to ~~acquire~~ oversee acquisition land, waters and interests in land and waters for such areas and facilities. The Legislature must be provided with a copy of the plan and any modifications that are from time to time made to it.

(b) With the approval of the Governor ~~of American Samoa it~~ the department may enter into contracts and agreements with the United States or any appropriate agency thereof, keep financial and other records relating thereto, and furnish to appropriate officials and agencies of the United States ~~such~~ the reports and information as may be reasonably necessary to enable ~~such~~ those officials and agencies to perform their duties under ~~such~~ those programs.

(c) The ~~territorial-park-and-recreation-control-board~~ department, with the approval of the Governor ~~of American Samoa~~, may enter into and administer agreements with the United States or any appropriate agency thereof for planning, acquisition and development projects involving participating federal aid funds on behalf of the territory.

(d) In connection with obtaining for the territory ~~of American Samoa~~ the benefits of any such program, the ~~territorial-park and recreation-control-board~~ department shall coordinate its activities with, and represent the interest of, all agencies of the territory having interests in the planning, development and maintenance of outdoor recreation resources and facilities within the territory."

Sec 4. 32 ASC 202 is amended to read:

"~~§-202~~ § 302. Funds

(a) Federal assistance projects may be undertaken by the ~~territorial-park-and-recreation-control-board~~ department only after it has determined that sufficient funds are available to it for meeting the territory's share of project costs

(b) It is the legislative intent that, to ~~such~~ the extent as may be necessary to assure the proper operation and maintenance of areas and facilities acquired or developed ~~pursuant to~~ under any program participated in by this the territory under authority of this ~~chapter~~ title, ~~such~~ these areas and facilities shall be publicly maintained for outdoor recreation purposes."

Sec 5. There is a new chapter 4 of title 32 is added which reads:

"CHAPTER 4. PARKS AND RECREATION COMMISSION

"§ 401. Park and recreation commission; appointments; removals

(a) There is established within the executive branch of the Government the parks and recreation commission, which consists of 5 members appointed by the Governor for terms of 2 years, except that the 4th and 5th initial appointees shall serve for 1 year only in order to establish staggered terms.

(b) Officials of the Government may be appointed to the commission.

(c) All appointees may be reappointed to the commission.

(d) All appointees may be removed from the commission by the Governor for cause; provided, that, the majority of the commission concurs in the cause offered.

"§ 402. Commission; powers and duties

The commission has the following powers and duties:

(1) Carry out those duties as may be set out in this title and other laws, and the rules, of the Government which specifically delegate power or authority to the commission;

(2) Elect, at its 1st meeting and thereafter annually at the 1st meeting in October, a chairman, who presides at all meetings, and other officers as it may consider desirable from among its members;

(3) Develop policies and programs for the administration, management and operation of the parks system and recreational activities;

(4) Review and make recommendations to the Governor and department on:

(i) comprehensive plans, applications and acceptances pertaining to federal assistance programs prior to their final approval and submission;

(ii) the preliminary and final budgets of the department prior to submission to the Legislature;

(iii) during the 1st month of each quarter, the operation and financial records of the department for the previous quarter; and

(iv) the department's annual report prior to submission to the Legislature; and

(5) Perform other assignments as the Governor may make in the furtherance of the overall development of the parks system recreational programs."

Sec 6. 3 ASC 201 is amended to read:

"§ 201. Required departments

There shall be (1) a department of legal affairs, (2) a department of health (3) a department of public works, (4) a department of education (5) a department of agriculture, (6) a department of administrative services, (7) a department of port administration, (8) a department of local government, and (9) a department of parks recreation, with such responsibilities as may be prescribed by law or assigned by the Governor."

Sec 7. Repealer

32 ASC 1-4 are repealed.

GALEA'I P. POUMELE
President of the Senate

TUANA'ITAU F. TUIĀ
Speaker of the House

APPENDIX B. RECREATIONAL INVENTORY ITEMS AND RELATED MAPPED DATA

Following is a detailed inventory checklist which correlates with mapped locations on MAP #5. Categories are arranged as follows:

 : Principal Territorial parks and facilities and a few major private sector facilities.

 : Smaller recreational locations or facilities.

 : Miscellaneous points of interest or potential recreational identification and development.

 : Existing registered National Historic Landmarks.

 : Existing registered National Natural Landmarks.

ASCC : American Samoa Community College.

 : Public High Schools.

 : Public Elementary Schools.

 : Private High Schools.

 : Private Elementary Schools.

SA : Locations where creation of federal "Special Anchorage" areas might be considered for the future.

••••• : Selected scenic trails.

INVENTORY

Unmapped

- Rose Atoll National Wildlife Refuge: the only existing special conservation zone, encompassing Rose Atoll some 100 miles east of Manu'a.
- Swain's Island: privately owned, located some 200 miles north of Tutuila (geographically in the Tokelau Islands); Swain's Elementary School located here; documentation of its history may yield identifiable sites.

  NOTE: Rose and Swain's are not included in the scope of T-CORP.
- 145 "Village Early Childhood Education Centers" dispersed on the five principal islands.
- Archaeological sites remain to be inventoried and identified by American Samoa Historical Commission.

Principal Territorial and Private Recreation Facilities

A. Proposed

Anasosopo "Bicentennial" Park (Public): the most important available site east of Pago Pago on Tutuila. Landfill currently is only partly consolidated, uncompacted, and with a large standing sump pool in the center, the shoreline perimeter is irregular and unimproved. Potential includes fields, courts, playground, picnic/open space, water access and boat ramp, fishing, clean wading/swimming conditions, parking, boat shuttle linkage to the Utulei shore, etc.

B. Existing

Pago Pago Park and proposed Marina (Public): this park is intended to become a focus for events and interchange on American Samoa Flag Day (April 17) and Western Samoa Independence Day (June 1). The "finish lines" are here for the new "Marathon" race inaugurated in 1979, and the Fautasi (longboat) races which begin out toward the mouth of the harbor. Proposed plaque sites where Cession was achieved and the flag officially raised are located here. Courts and playing fields and a stadium with partially-protected spectator seating exist. Present elements or near neighbors include Handicraft Fales and a Senior Citizen Handicraft Center, Korea House, relocated "Goat Island Club", AAA Gym, a sometimes operational bowling alley, and existing boat ramp and finger pier. Organizations involved at the park include the Rotary Club of American Samoa, Samoan Athletes in Action, the American Athletic Association, and the American Samoa Tennis Association.

C. Proposed

Autapini Coastal Park (Public).

D. Existing

Malaloa Fishing Pier (Public): yachts and boats tie up and anchor off; there is a Fish Weigh Station. The American Samoa Game Fishing Association may have an interest here. Current development concepts include creating a focus here for yacht services with expanded slip space, perhaps mooring buoys, and possible relocation of U.S. Coast Guard operating space at or near the pier.

E. Existing

Fagotogo-Malae Shore Development and Open Space (Public): will contribute to urban design of adjacent "downtown" commercial area and shopping mall and promenade developments.

F. Existing

Solo Ridge Observation Point and Aerial Tramway Terminal (Public): site

under development; existing aerial tramway is unique with 6,000' cable crossing Pago Pago Inner Bay to the other terminal at approximately 1,610' on Alava Peak. (Solo-Togatoga Ridge).

G. Existing

Utulei Beach Park (Public): the only full-fledged existing public beach park with sandy beach and swimming with inshore raft floats. Small craft anchor off. The private Pago Pago Yacht Club is located near the south end, and is the center of sailing activity. The "Apia Cup" is one prominent race. The American Samoa Dive Club is based somewhere on the Pago Pago Bay south shore.

H. Existing

Faga'alu Park (Public): a coastal park but not a beach park. Cruising yachts wait out the hurricane season by anchoring off along with other small boats. (Note: interior Faga'alu Valley has Vaitanoa "Virgin" Falls and Pool (Faga'alu Reservoir).

I. Existing

Tafuna Park on Pala Lagoon (Public): includes Rotary-sponsored Children's playground, courts and open picnic space. (Note: Mangrove forest on inner Pala Lagoon and "puzzle nut" - Le'ile'i trees - Xylocarpus moluccensis on the park shore proposed as "Natural Area" in Environmental Consultants Draft).

J. Existing

Lava Lava (Tafuna) Golf Course (Public): a short 9-holes with proposed expansion to 18. To E. - Tafuna Lowland Rainforest, proposed Natural Area.

K. Existing

The "Rainmaker" Hotel (Private): the principal hotel in American Samoa, located on fill encompassing the former Goat Island; with the only existing swimming pool, and a private beach. The Rainmaker is the focus of visitor and tourist activity. The ASG Office of Marine Resources plans an underwater observation park for the reefs directly off the Hotel and Utulei Beach.

* See also "Blunt's Point" Development under the National Historic Landmarks List.

◎ Smaller Recreational Locations or Facilities

a. Existing

Aoa Village Tourist Pavilion and Camp Site (Village).

b. Existing

Two-Dollar Beach (Private): good swimming and shady picnicking at Avaio Village; note Lion's Head Rock offshore -- is "Lion's Park" another name for this spot? Marathon Run begins here, goes on to Tafuna, comes back to end at Pago Pago Park.

c. Proposed

Breakers Point Trail (Public): trail tends up from crest of road.

d. Proposed

Aua Village Park (Village): no actual site observed -- although a school basketball court was noted along with a ruined Mormon Church court.

e. Proposed

Centipede Row Recreational Dock Development (Public): when the existing Centipede Row "G.A.S." housing is removed, most of this strip will be applied to port expansion. However, Office of Marine Resources (in Feb. 1980) discussed the possibility and desirability of reserving the end toward the hotel for a tourist-oriented marine recreation focus. A spatially modest development could include moorings for the one existing true charter fishing boat (moorings rented on concession); moorings for a glass-bottom boat to visit reefs off the hotel and Utulei; a fish weigh station with an attractive backdrop for photographing game fish catches; a small dive and tackle concession; and possibly an embarkation point for small boat shuttles that might develop to carry passengers across the bay to the newly planned facilities at Anasosopo Park. Note the advantageous "buffer" role such an installation would have between the port dock operations and the Tourist Office and Hotel grounds. Constraint would be a requirement for moving existing fuel handling functions -- for reasons of space, safety, aesthetics, and pollution control.

f. Proposed

Matuu Beach Outlook and Access to Matuu Underwater Park (Public): composition, location, and boundaries of the Underwater Park must be determined.

g. Existing

Tafuna Residential Playground (Public): in the Tafuna housing area.

h. Existing

"YCC" (Youth Conservation Corps) Airport Landscape Park (Public): on the grounds outside the International Airport.

i. Existing

Freddie's Beach Park (Status?): at Fogagogo rock pool and surge channel swimming, and picnicking. It is not a territorial public park.

j. Existing

Aoloau Village Park (Village): on the high Aoloau plateau, adjacent to the elementary school with a carved tourism sign like the one in Aoa Village. Actually the same school grounds with basketball court, and the small open space for the village park are incorporated with the landscaped lawn and botanicals behind the school.

k. Existing

Utumea (West) Park (Village?) (Private?): proposed in the "implementation program" in American Samoa Recreation Area Development Plan: 1975; has "private" signs posted, no facilities.

l. Existing

Amanave Village Beach Park (Village): a small sami-side lawn with some small fales, unimproved basketball court, painted trash cans, and the beach below.

m. Proposed

Marine Resources, Fagatogo (Public): existing pilings for finger piers, existing boat ramp, scientific moorings. Conceptual plans for creating wharf space fronting this section of coast have been mentioned to serve both commercial and pleasure fishing interests. Fish aggregation buoys currently are made up and deployed from this location.

△ Existing Registered National Historic Landmarks

1. Blunt's Point Artillery Rifle Preservation and Proposed Historic Walk. (Winding trail to two heavy emplacements and light weapons pits higher up; presently overgrown and undeveloped; emplacements filled with rainwater).

2. Aasu Bay Historic Monument: commemorating massacre of members of a La Perouse shore party killed by Samoans in 1787.

3. Jean P. Haydon Museum of American Samoa.

4. Office of Tourism Building -- now American Samoan Bank Building.

5. Atauloma Girls' School: now ASG housing.

6. Former Fagalele Boys' School, Grounds, and Fagalele Shoreline: the structure, built between 1855 and 1885, is thought to be the oldest standing non-indigenous structure on Tutuila. The lawns and shaded

grounds, though private, are made available on a mutual courtesy basis to visiting picnickers. The rocky but accessible coast fronting on the Fagalele private church property is a popular swimming spot shared in by the Leone Village public. Village elders discourage recreational use by Leone youth on Sundays while the church intervenes if use becomes too heavy with associated litter problems. There appears to be a workable balance with infrequent need to invoke restrictive control.

7. Government House: with its parklike surrounding grounds.

8. High Court of American Samoa.

▽ Existing Registered National Natural Landmarks

1. Aunu'u Island: with Faimulivai Marsh in the old crater proposed as "Natural Area" in Environmental Consultants Draft. Note also Red "Pala" Lake just NW of the crater and Maamaa Cove breaking the east crater wall.

2. Cape Taputapu (Proposed): (also must check a reference at this spot to 'Taema - Founder of this Island'). Include Taputapu Island.

3. Fogama'a Crater (Proposed): (The whole Fogama'a/Fagatele crater and coast area might be considered as a unit. Fagatele Point to the west proposed as "Wildlife Sanctuary" in Environmental Consultants Draft. Leala Shoreline just west of Fagatele Point is an existing National Natural Landmark. An adjoining marine park/sanctuary component might be included, as discussed by the ASG Office of Marine Resources in 1976 and 1980.

4. Leala Shoreline: lying just west of Fagatele Point (see previous entry) note that the traditional "sliding rock" site is nearby, though the precise location must be mapped. This stretch of coast is delimited by the impressive grave of High Chief Satele Moasegi on a low rocky point sami of the road at about the point where the Taputimu Experimental farm grounds come closest to the coast. Coast is marked by rocky outcroppings, deep and shallow surge channels, and tide pools, backed by a mix of coconut, grass and scrub forest.

5. Matafao Peak: 2,142', the highest summit on Tutuila and the second highest in American Samoa; montane scrub on the summit; reached by a scenic trail up from the Fagasa Road crest pass.

6. Rainmaker Mountain (Mt. Pioa): 1,718', second highest on Tutuila and fourth highest in all American Samoa; montane scrub on summit, reached by steep trail to the Afono Road crest pass.

7. Vaiava Strait: The whole area of Pola Island, Polauta Ridge, and the white cliffs "Sami Tu'utu'u" on the west of Polauta Ridge should be considered jointly. This area is proposed a "Wildlife Sanctuary" in Environmental Consultants Draft. (Possibility of a marine component remains to be explored).

Schools

ASCC - American Samoa Community College (Public): the only college (2-year) in American Samoa, with some discussion of future expansion to a 4-year program. ASCC has a new gym and some outside facilities, with long-range plans for recreational facilities including a swimming pool.

VOC "Voc-Tech Ed Center" (Public): formerly linked to ASCC, now under DOE. Program oriented to correspondence course distribution, and involves adult education as well as serving secondary level needs.

Public High Schools

A Manu'a Islands: in Luma, Ta'u.

B Faga'itua: in Faga'itua, East Tutuila.

C Samoana: in Utulei, Pago Pago Bay South Shore.

D Leone: in Leone, West Tutuila.

Private High Schools

A Marist Brothers: Malaeloa, West Tutuila. (Boys), Catholic.

B Fa'asao: "Lepuapua", Puapua, Leone. (Girls), Catholic.

Public Elementary Schools (Swain's Island Elementary School, unmapped)

a Fitiuta, Ta'u.

b Faleasao, Ta'u.

c Olosega, Olosega.

d Ofu, Ofu.

e Aunu'u, Aunu'u.

f Matatula, Tula.

g Olomoana, Aoa.

h Alofau.

i Masefau.

j Afono.

k Lauli'i.

l Aua.

m Mauga-O-Alava, Vatia.

n Matafao, Faga'alu.

o Fia Iloa, Utulei (exact spot?).

p Pago Pago.

q Le'atele, Fagasa.

r Manulele Tausala, east of Tafuna and northwest of International Airport (exact spot?).

s Lupelele, Ili'ili.

t Pava'ia'i.

u Aasu (inactive).

v Sili'aga, Aoloau.

w Leone-Midkiff, Leone.

x Alataua-Lua, Nua.

y Fagamalo.

z Poloa (sometimes listed as Fagali'i or Taputimu).

(unmapped) Swain's Island.

⌖ Private Elementary Schools

a Marist Brothers: Atuu, Pago Pago Bay North Shore; (boys), Catholic.

b St. Francis: Lepua, Pago Pago Bay North Shore; (girls), Catholic.

c St. Theresa: Leone, West Tutuila; (boys and girls), Catholic.

d South Pacific Academy: located in Tafuna (exact location Sponsorship?).

(unmapped) Pre-Elementary Public & Private Educational Facilities

Public

ASG supervises some 145 public Village Early Childhood Education Centers on the five principal islands, according to the ASG DPO Economic Development Plan for American Samoa: fy 1979-1984, p. IV-79.

Private

. Independent Cooperative Kindergarten, Fatagoto.

. ABC Nursery, Futiga.

. Seventh Day Adventist School, Satala.

. Seventh Day Adventist School, Tafuna.

. Bethany School, Leone.

. Manumalo Baptist School, Malaeimi.

Miscellaneous Points of Interest or Potential Recreation Development

1. Laufuti Falls, Ta'u South coast, cascade said to be 1,000'. (Question on all waterfalls, when do they flow?) All Lata Mt., Lavania Cove, Ulufala Pt. are proposed as "Natural Area" in Environmental Consultants Draft.

2. Tiaiu Falls, inland west of Afono.

3. Vaitanoa, "Virgin" Falls, interior Faga'alu.

4. Sina Falls, between Malaeloa and Leone.

5. Leone Falls, interior on Leafu Stream, Leone, unattractive due to pipes, cement, debris, poor approach trail.

6. Logoua Falls, near Failolo, West Tutuila, not significant.

7. Alava Mountain, 1,610' aerial tramway terminal and television towers located here; fifth highest on Tutuila, eighth highest in all American Samoa.

8. Olotele Mountain, 1,617' at the edge of the Aoloau Plateau, Tutuila; fourth highest on Tutuila, seventh highest in all American Samoa.

9. Lata Mountain, Ta'u, 3,160'+, montane scrub and cloud forest in highest parts; summit of Ta'u and highest peak in all American Samoa.

10. Piumafua Mountain, top of Olosega at 2,095'; third highest in all American Samoa.

11. Tumu Mountain, top of Ofu at 1,621'; sixth highest in all American Samoa.

12. Nuutele Island and Nuusilaelae Islet, west of Ofu; proposed as "Wildlife Sanctuary" in Environmental Consultants Draft. Summit of Nuutele is rock in likeness of man called Foysia. There is a deep, large tidepool on the seaside of the island.

13. Nuusetoga Island, northeast Tutuila; has ifilele trees (Intsia bijuga) used for best kava bowls and house posts; proposed "Natural Area" in Environmental Consultants Draft.

14. Anape'ape'a Cove + two caves, on the east side of Afono Bay; said to be the major known caves on Tutuila, used by swifts and the sheath-tailed bat, proposed "Wildlife Sanctuary" in Environmental Consultants Draft.

15. "Airport Secondary Forest", in the airport perimeter to the west on Tutuila; proposed as possible "Natural Area" in Environmental Consultants Draft.

16. "Flower Pot Rock" Islet, and wreck of vessel "Van Winkle Nuan", off Fatumafuti.

17. Lighthouse, Pofala Hill, Aunu'u.

18. Lighthouse, Breakers Point, east side Pago Pago Bay entrance.

19. Lighthouse, Steps Point, southernmost point of Tutuila.

20. Main Dock, Pago Pago Bay; cruise ships tie up here, USCG (with 55' Search and Rescue vessel) and Custom House located just to the west.

21. Leone Landing; possible historical significance as first missionaries landed here; nearest prime landing point for traffic from Western Samoa.

22. Auasi Boat Landing; regular landing for Aunu'u boat traffic to Tutuila; also nearest prime Tutuila landing point for traffic from Manu'a; nice swimming water here at present.

23. Van Camp and Starkist Tuna Canneries, and industrial "Marine Railway" (tracked dry-docking facility); guided tours are offered.

24. Ofu Airfield, 2,200', ASG owned, DPO's Economic Development Plan (1979) discussed proposed development of recreation facilities in association with the airfield. This is the Vaoto Marsh area at the south tip of Ofu. "Ofu Airport Lowland Rainforest" nearby is a proposed "Natural Area" in Environmental Consultants Draft.

25. Ta'u Airfield, 1,600;, privately owned by SPIA, at approximately 185' elevation inland from northern Luma, and on the heights to the south of Faleasao Village; DPO's Economic Development Plan (1979) discussed proposed development of recreation facilities in association with the airfield. See 79 Faga, proposed new airfield site.

26. Asaga Strait Road Viaduct, connecting Ofu and Olosega Islands; one lane. (Note that Ofu used to be said to have the most feral pigs; will opening of this causeway affect their distribution?).

27. Ta'u Church, London Missionaries.

28. Tomb of the last Tui'manu'a, near the coast below Papatea in north Luma, Ta'u.

29. Botanic and Agricultural Park, Aoloaufou; small landscaped area adjacent to school.

30. Taputimu Experimental Farm; government controlled open space, buildings in ruinous condition, out of use, only taro and bananas growing. An excellent location.

31. Ancient site of Pago Pago Village on Alava Ridge; exact site and composition must be determined.

32. "Mauga 'Alii" - "High Chiefs Burial Ground", in the Sa'ilele area, exact location and composition to be determined.

33. Vaitogi Village, seaward to the south side is open recreational space; blow holes along the shore; site of the popular "Turtle and Shark" legend which school children sing. There are good swimming holes with pockets of sand in the rock channels along the shore.

34. Cinema: Pago Pago Cinemas, Lepua.

35. Cinema: Haleck's West, Pava'ia'i.

36. Cinema: Leone Theatre, Leone.

37. Rex Lee Auditorium.

38. LBJ Hospital, now moved to Faga'alu.

39. Fautasi (longboat) races begin here (exact spot?) and finish off Pago Pago Park.

40. Scenic crest road pass to Afono.

41. Scenic crest road pass to Fagasa.

42. Feleti Pacific Library, in Centipede Row area, Pago Pago Bay south shore. (Note also the Library of American Samoa in Utulei).

SURFING SITES: Reported by R. Shaffer, Director, Office of Samoan Information, ASG, Feb. 1980. He indicates sites remain to be discovered in Manu'a. Sites listed presumably for regular surfboards and some overlap with body surfing. He estimates maximum wave heights.

43. Tula Reef Break: best on calm days with small ground swell and on an incoming tide; rights and lefts, similar to normal beach break conditions, November to March.

44. Alao Reef Break: same conditions as (43).

45. Aunu'u Reef Break: can handle large westerly swell up to 10 feet; right and left break on incoming to high tide; normal southeast trade winds are offshore at this spot.

46. "Gas Stations" near Alofau Village: long left break; can handle large southerly swell up to 10+ feet; incoming and high tide, and calm or northwest wind conditions are best.

47. Lauli'i "No. 2" Point Break: rights only into channel; can handle south or easterly swell up to 6-8 feet; incoming to high tide, and calm or northwest wind conditions are best, November to March.

48. Lauli'i "No. 1" Point Break: left break only; southerly swell; best during light southeast trades and incoming tide; good to 8-10 feet.

49. "The Hotel": learner's spot; tiny waves year around on any large swell; incoming tide necessary; wind conditions unimportant.

50. "The Park" next to Faga'alu Park: right break only 2-6 feet; extremely shallow, very fast waves and very hollow; excellent on good southeast swell and incoming tide with northwest winds or glassy conditions; November to April.

51. Matu'u: big right break into channel; rideable waves up to 10+ feet with large peaks, steep drop, short ride; best during incoming tide and northwest winds or glassy conditions; November to March.

52. "Lefts" west of Matu'u: good left break, steep takeoff, long wall, and good ride; from 2-10 feet on east or southerly swell; incoming tide and glassy conditions or northwest winds; November to March.

53. "The Rock" (Fatuuli Rock off Utulaina Point): good right break into channel, and radical left over reef -- but good wave in certain conditions; Right break: steep drop, long ride, excellent wave, very fast and hollow, from 3-10+ feet. Left break: steep takeoff, short fast ride with pullout at the end; both waves on incoming tide, northwest winds or glassy conditions best; November to March.

54. Nu'uuli: excellent right break, 3-9+ feet, long wall, steep takeoff, fast and hollow; easy paddle out; incoming tide and northwest wind or glassy conditions; November to March.

55. "Birds" point break (Asili): a right in front of the village; long smooth lines from 4-10 feet; far out and long paddle; must be near high tide as a coral head is located near the end of the ride; best on glassy days or northwest winds; known to break at any time of year and not affected much by southeast trades.

56. "The Pastor's" House (Amanave Village): long, fast over reef; incoming tide necessary as very shallow; must pull out at end of ride; good year around and not affected by southeast trades.

57. Poloa: rights and lefts similar to beach break waves; incoming or high tide year around but blows out on north or west winds; 3-8' and easy paddle.

58. Faleasao Village, Ta'u: rights and lefts at channel mouth on a north swell, but closes out at 6'; incoming tide, and good on all winds except north or west, or when conditions are too glassy.

59. Ofu Boat Harbor and Power Station.

60. Ofu Village Basketball Court.

61. Ofu, Nuupule Rock, good swimming.

62. Faalaaga Beach, most outstanding example of curving tropical white sand beach in American Samoa.

63. Olosega Village Shoreline, another outstanding white beach.

64. Faleasao Power Plant and Beach.

65. Ta'u Village Tourism Guest Fales and Village Beach.

66. Ta'u Theater.

67. Fusi Boat Harbor, Ta'u.

68. North Faleasao (interior of Siulagi Pt.) plantation land and Toa Cove/Beach.

69. Agricultural Station, Ta'u.

70. Aunu'u Island Boat Harbor.

71. Alao Open Space.

72. Faga'itua Crest Park.

73. Aoloau/Aasufou open space/chief's tomb/super Fale.

74. Logotala Hill open space (ASG owned).

75. Olovalu Crater.

76. Vailoatai Village Malae.

77. Faga'itua Village Malae.

78. Pala Lagoon Mangrove Shore/Conservation Park/Open Space.

79. Faga Shore, Ta'u, proposed new airfield site; 2,000'+.

80. Papa Stream Valley (potential recreation space?).

81. Mormon Church Courts, Malaimi.

82. Sailele Beach.

Boat Ramps (BR1 - BR13)

1. Pago Pago, existing.

2. Fagasa, existing.

3. Leone, proposed priority.

4. Faga'alu, concrete pad only.

5. Auasi, sand launch beside Boat Harbor.

6. Masefau, existing private.

7. Poloa, planned.

8. Ofu, planned, current beach launching.

9. Ta'u, existing, part of Boat Harbor.

10. Pala Lagoon, planned.

11. OMR Ramp, Fagatogo: existing, but too narrow.

12. Anasosopo, planned, priority.

13. Aunu'u Island, in Boat Harbor, potential.

Fish Aggregation Buoys (FBA - FBJ)

Buoy	Position	Depth (fathom)	Distance from land (mile)
A	14°15.2'S, 170°29.0'W	535	4.2
B	14°21.1'S, 170°37.8'W	900	3.0
C	14°24.6'S, 170°43.5'W	935	3.0
D	14°19.2'S, 170°53.9'W	25	3.1
E	14°12.5'S, 170°43.7'W	500	3.1
F	14°10.1'S, 170°33.9'W	1,050	4.6
G	14°18.4'S, 170°25.4'W	520	7.4
H	14°44.2'S, 170°38.5'W	1,350	23.2
I	14°26.2'S, 170°04.1'W	672	26.3
J	14°14.7'S, 169°34.3'W	520	3.4

SA Indicates possible locales for federal "Special Anchorage Areas" wherein vessels under 65' long can anchor without the requirement to show anchor lights. Since a pattern is developing of small boat and yacht moorage off the south shore of Pago Pago Bay, concern for safety and control of protected water space may make Special Anchorages an appropriate innovation. Sites off Faga'alu, Utulei, Malaloa, and Pago Pago initially have been noted.

.... Indicates routes of selected existing scenic trails. The whole trail picture in American Samoa remains to be well documented. Out of the full complex of trails, many of which are no doubt used for regular travel, work, and access, some will present themselves as chiefly recreational in nature. Trails marked here include the ridge trails from Fagasa Road crest pass up to the summit of Matafao Peak and up to the north bay ridge culminating in Alava summit where the Aerial Tramway terminates, then eastwards along the ridge to the point where a trail north downslope to Vatia or a trail south downslope to Pago Pago near Leloaloa can be taken. Also shown is the steep trail up the Rainmaker (Pioa) from the Afono Road crest pass. Note also trails on Aunu'u Island. Many other trails, and perhaps some new ones, must be located.

Special Identification of a Major Potential Territorial Conservation Area

The preceding list includes a variety of conservation, open space, and potential recreational sites in the general "Steps Point" area. A closer look shows that these form a cohesive group of contiguous locations, not now suffering encroachment in any large degree, which could well be designated jointly as a territorial conservation area with specified restricted use and access.

A summary list of the elements follows. Note the symmetry of distribution - east from Steps, including the Fogamaa/Larsen crater landforms, to Vaitogi Village; west from Steps, including the Fagatele Crater landform, to Vailoatai Village; north on the Steps Point road to the main highway at Futiga opposite Olovalu Crater just north of the main road.

* Vaitogi Village: well-maintained with wide village open space and a scenic shoreline with swimming, blow holes, and the "Shark & Turtle" coast; note also the Chief's tomb and the high ceremonial arch in the village. (A small number of more well-to-do homes lie westwards on an unimproved road.)

* Logotala Hill: with unimproved road access; an ASG-owned parcel capped with a large, flat open space area with impressive views the length of Tutuila and into the Fogamaa Crater/Cove complex; a potential district/territorial level recreation/open space site identified in the survey.

* Fogamaa Crater: a proposed National Natural Landmark, currently with model subsistence farming activities within.

* Fogamaa Cove and beach: idyllic and isolated on the inner margin of Larsen's Bay.

* Larsen's Bay itself: potential for coastal/clifftop walking trails here.

* Steps Pt.: the farthest southern point of U.S. Territory (worthy of a plaque and a scenic lookout); with the USCG lighthouse on a small federal reservation at the point; with controlled-access road leading down to the point from the north.

* Fagatele Bay and Point: potential for clifftop walking trails here; note also extensive seabird breeding grounds on the cliff faces both here and in Larsen's Bay; one draft report suggests Fagatele Point as a wildlife sanctuary (land-based).

* Office of Marine Resources proposed Marine Preserve in waters of Fagatele Bay and environs, said to be an outstanding and little-spoiled natural marine area.

* Fish Aggregation Buoys (C) and (H) located to the south approximately 3 and 26 miles from land respectively -- intended to be served chiefly

by boat ramps proposed for Leone and Pala Lagoon, and by launchings in Pago Pago Bay.

* Leala Scenic Shoreline: a National Natural Landmark lying to the west of Fagatele Point. (Also in this area is the "sliding rock" site.)

* Chief Moasegi's Tomb on the rocks above the sea: at the point where the Vailoatai South Road meets the coast -- a definite landmark at the west end of Leala Shoreline.

* Taputimu Experimental Farm -- and Potential open space: this ASG (owned? controlled? managed?) facility is located quite near the coast, just inside the turn of the road mentioned above; buildings currently in derelict condition with only banana and taro observed; great potential here for the seaward end of the farm to be developed as territorial/district level open space -- even as the remainder of the farm is revitalized in a productive and pertinent ag role as permanent buffer and open space to the rear of the suggested coastal preserve area.

* Vailoatai Shoreline and lawn Malae: buffer the west of the whole proposed area just as do Vaitogi at the east end and Futiga to the north.

* 4 land routes of access (restricted): 1) Vaitogi road; 2) Logotala Hill Road turnoff; 3) Steps Pt. road and turnoff to the landfill project inland from Fagatele Bay; 4) and the Vailotai South Road at Leala. (Note a few well-to-do houses above the coast just beyond the Moasegi Tomb.)

* Steps Pt. also one end of potential scenic cross island trail to Olovalu Crater, up to Olotele Peak along the drainage divide, across Aoloau and down to Aasu on the north shore - Aasu Memorial and good potential camp site.

APPENDIX C. RECREATION AND OPEN SPACE RESOURCES, DETAILED SUMMARY DISPLAYS

Diagram 5 in the text provides a compressed quantitative summary of land-based recreational acreage available. Displays in this appendix identify and group the sites that were tallied to produce Diagram 5. They also extend beyond land-based spatial resources to marine-related and specialized resources, open space and selected conservation sites of potential interest, and selected potential natural and historic landmarks.

Diagram	Display Title
D-6a	Composite Summary of Land-Based Recreational Requirements and Resources.
D-6b	Territorial Level Land-Based Resources.
D-6c	Manu'a Recreational Service District & Local Land-Based Resources.
D-6d	East Tutuila Recreational Service District & Local Land-Based Resources.
D-6e	Pago Bay Area Recreational Service District & Local Land-Based Resources.
D-6f	Tafuna Area Recreational Service District & Local Land-Based Resources.
D-6g	West Tutuila Recreational Service District & Local Land-Based Resources.
D-6h	Local Land-Based Recreation Spatial Requirements Projected to Year 2000.
D-6i	Composite Summary of Non-Marine Specialized Resources, Conservation/Open Space, and Historic & Natural Landmarks.
D-6j	Composite Summary of Coastal Zone and Marine Resources, Including Selected Beach Park/Swimmable Beach Sites Requiring Public Access, Marine Preserves, Boat Ramps, Fish Aggregation Buoys, Surfing Sites, and Related Facilities.

DIAGRAM 6a. COMPOSITE SUMMARY OF LAND-BASED RECREATIONAL REQUIREMENTS AND RESOURCES*

LEVELS	REQUIRED ACRES 1985	RESOURCES, AUTHORITY, ESTIMATED ACRES						Compared To Req.	Dist/Loc Composite	Total Less DOE/ASCC	Compared To Req.	REQUIRED ACRES 2000
		P&R	DOE	ASCC	ASG	Other Village/ Private	TOTAL					
TERRITORIAL:	18	20	3	.25			23.25	+ 5.25	+ 5.25	20	+ 2	25.0
MANU'A:												
District**	1		.75				.75	- .25		0	- 1	0
Local	1.25		2			.25	2.25	+ 1	+ .75	.25	- 1	2.5
E. TUTUILA:												
District	4	4.5					4.5	+ .5		4.5	+ .5	4.0
Local	4.75		4.75			3.25	8	+ 3.25	+ 4.25	3.25	- 1.5	6.75
PAGO BAY:												
District	5	10.5					10.5	+ 5.5		10.5	+ 5.5	6.0
Local	5.25		3.75			1	4.75	- .5	+ 5	1	- 4.25	6.25
TAFUNA:												
District	6	3					3	- 3		3	- 3	9.0
Local	6		2.5	2	.25	3.25	8	+ 2	- 1	3.5	- 2.5	9.25
W. TUTUILA												
District	4		6				6	+ 2		0	- 4	5.0
Local	4.5		3.75			5.5	9.25	+ 4.75	+ 6.75	5.5	+ 1	6.75
TOTALS:***	59.75	38.0	26.5	2.25	.25	13.25	80.25	+20.5	+20.5	51.5	- 8.25	81.5
-Territorial	18.0						23.25	+ 5.25		20.0	+ 2.0	25.0
-Rec District	20.0						24.75	+ 4.75		18.0	- 2.0	25.0
-Local	21.75						32.25	+10.5		13.5	- 8.25	31.5

* Only Non-Specialized, Land-Based Resources. (Ex: Golf Course = Specialized, not included.)

** "Districts" are derived Recreational Service Districts, not administrative districts or regional planning areas.

*** These aggregate space totals require the context of access revealed in the District/Local displays following for full interpretation. Facility availability and suitability is a separate concern.

DIAGRAM 6b. TERRITORIAL LAND-BASED RESOURCES

TERRITORIAL LEVEL: (Central Location and Access per Total Population)
(Overall Planning Standard: Over 30,000 Population)
(Space Requirement: 1 Acre per 2,000 Population)

Projected Population 1985	Requirement 1985 (acres)
36,890	18

Projected Population 2000	Requirement 2000 (acres)
50,195	+7= 25

EXISTING RESOURCES: Non-Specialized Land-Based, and Shorefront Land-Related.
(Some current development or planned treatment)

SITE	Authority & Estimated Net Acreage							Comparison to 1985 Requirement
	P&R	DOE	ASCC	Other ASG	Village	Private	TOTAL	
Pago Pago Park (Final Elements Pend)	20							
Samoana High School Fields & Running Track		3						
ASCC Sheltered Gym			.25					
TOTAL	20	3	.25				23.25	+ 5.25

POTENTIAL RESOURCES:

ASCC: Phased development plans for Olympic Swimming Pool.
Phased development plans for Running Track/Athletic Field with Stadium.

Leone Open Space (Between Elementary and High Schools): Alternate site for Running Track/Athletic Field.

Faga'itua High School: Alternate site for Olympic Swimming Pool.

DIAGRAM 6c. MANU'A RECREATIONAL SERVICE DISTRICT & LOCAL LAND-BASED RESOURCES

District Level Standard: "Severe access problems coupled with population of at least 1,500."

Population: 1985/2000 -- 1,655/1,935. District Requirement Acres: 1985/2000 -- 1 + 0 = 1.

LEVEL/DIVISION/STANDARD	SITE/LOCATION	EXISTING RESOURCES, AUTHORITY, EST. ACRES						REQUIREMENT 1985, AND COMPARISON
		P&R	DOE	ASCC	ASG	Other Village/ Private	TOTAL	
DISTRICT								
	Manu'a High School		.75				.75	1 : -.25
LOCAL								
East Ta'u : Rural	Fiti'uta School		.5				.5	.25: +.25
West Ta'u : Rural	Faleasao School		.5				.5	.5 : 0
Olosega : Exception	Olosega School		.5				.5	.25: +.25
Ofu : Rural	Ofu School		.5					
	Ofu Village Court					.25		
							.75	.25: +.5
							2.25	1.25: +1
							3.0	2.25: +.75

POTENTIAL: Manu'a High School: Expansion on available DOE ASG land to create full size athletic field.

Siulagi Plantation Land and Toa Cove, N. Faleasao: Possible future redeployment as a major park site.

Vaoto Airfield/Marsh Space, Ofu: Possible enhancement of airfield and surroundings for alternate recreational use outside of air hours.

DIAGRAM 6d. EAST TUTUILA RECREATIONAL SERVICE DISTRICT & LOCAL LAND-BASED RESOURCES

District Level Standard: "Geographic attenuation access problems + population of at least 5,000."

Population: 1985/2000 -- 7,220/8,230. District Requirement Acres: 1985/2000 -- 4 + 0 = 4.

LEVEL/DIVISION/STANDARD	SITE/LOCATION	EXISTING RESOURCES, AUTHORITY, EST. ACRES						REQUIREMENT 1985, AND COMPARISON
		P&R	DOE	ASCC	Other Village/ ASG	Private	TOTAL	
DISTRICT	Anasosopo Landfill Park	4.5					4.5	4 : + .5
LOCAL								
Aunu'u: Rural/Water-Isolated	Aunu'u School		.5				.5	.25: + .25
Tula Coast: Rural	Matatula School		.5				.5	.25: + .25
Alao/Utumea E.: Rural	Alao Sandy Open Space					2		
	Utumea E. Village Land					?		
							2.0	.5 : +1.5
Alofau/Amouli: Rural	Alofau School		.5				.5	.5 : 0
Aoa Coast: Rural	Olomoana School, Aoa		.5					
	Aoa Village Tour Site					.25		
							.75	.5 : + .25
Masefau/Masausi: Rural	Masefau School		.5				.5	.5 : 0
Faga'itua Coast: Rural	Faga'itua High School		.75					
	Faga'itua Malae					.5		
							1.25	.5 : + .75
Lauli'i: Rural/Urban	Lauli'i School		.5				.5	.5 : 0
Vatia/Afono: Rural	Mauga-o-Alava School		.5					
	Afono School		.5				1	.5 : + .5
Aua Coast: Urban	Aua School		.5				.5	.75: - .25
							8.0	4.75: +3.25
							12.5	8.75: +3.75

POTENTIAL: Faga'itua Crest Park: Picnic and play area up off the ridge road.

Aua (Proposed) Village Park: No site observed.

Afono Road Crest: Possible lookout/mini-park development.

DIAGRAM 6e. PAGO BAY AREA RECREATIONAL SERVICE DISTRICT & LOCAL LAND-BASED RESOURCES

District Level Standard: "Generally acceptable access + population of at least 10,000."

Population: 1985/2000 -- 9,705/12,320. District Requirement Acres: 1985/2000 -- 5 + 1 = 6.

LEVEL/DIVISION/STANDARD	SITE/LOCATION	EXISTING RESOURCES, AUTHORITY, EST. ACRES						REQUIREMENT 1985, AND COMPARISON
		P&R	DOE	ASCC	Other ASG	Village/ Private	TOTAL	
DISTRICT	Autapini Coastal Park	1						
	Fagatogo Shorefront	1.5						
	Utulei Beach + Expansion	5.25						
	Faga'alu Park	2.75						
							10.5	5 : +5.5
LOCAL								
Leloaloa Coast: Urban	St.Francis School (Private)					.25	.25	.5 : - .25
Atuu Coast: Urban	Marist Bros. School (Private)					.5	.5	.5 : 0
Fagasa/Fagatele: Rur/Urb	Le'atele School, Fagasa		.5				.5	.5 : 0
Pago Pago/Fagatogo: Urban	Pago Pago School		1.25					
	Fagatogo Malae					1.5		
							2.75	2.5 : + .25
Utulei: Urban	Fia Iloa School, Utulei		.25				.25	.5 : - .25
Faga'alu/Matu'u: Urban	Matafao School, Faga'alu		.5				.5	.75: - .25
							4.75	5.25: - .5
							15.25	10.25: +5.0

POTENTIAL: Fagasa Road Crest/Alava Ridge: Mini-Park/Strip Park/Lookout Potential.

Matu'u Village: Any possible space mountain-side (uka) of the road in the valley?

DIAGRAM 6f. TAFUNA AREA RECREATIONAL SERVICE DISTRICT & LOCAL LAND-BASED RESOURCES

District Level Standard: "Generally acceptable access + population of at least 10,000."

Population: 1985/2000 -- 11,180/17,615. District Requirement Acres: 1985/2000 -- 6 + 3 = 9.

LEVEL/DIVISION/STANDARD	SITE/LOCATION	EXISTING RESOURCES, AUTHORITY, EST. ACRES						REQUIREMENT 1985, AND COMPARISON
		P&R	DOE	ASCC	Other Village/ ASG	Private	TOTAL	
DISTRICT	Tafuna Park/Playground	3					3	6 : -3
LOCAL								
Nu'uuli: Urban							0	1.5 : -1.5
Tafuna: Urban	Manulele Tausala School		.5					
	Tafuna Residential Playground, ASG Housing				.25			
	South Pacific Academy (Private School)					.5		
							1.25	.75: + .5
Malaeimi Area: Urban	ASCC Front Field			2				
	Mormon Church Courts					1		
							3	.5 : +2.5
Faleniu Area: Urban							0	.5 : - .5
Aoloau Plat: Rural/Urban	Aoloau Landscape Park					.25		
	Sili'aga School, Aoloau		.5					
							.75	.5 : + .25
Mapusaga Area: Urban							0	.5 : - .5
Pava'ia'i: Urban	Pava'ia'i School		1				1	.75: + .25
Ili'ili: Urban	Lupelele School, Ili'ili		.5				.5	.5 : 0
Vaitogi: Rural/Urban	Vaitogi Open Space					1.5	1.5	.5 : +1.
							8.0	6.0 +2.0
							11.0	12.0 -1.0

POTENTIAL:
Tafuna Park Expansion Space: Commsat area; contiguous? amount? configuration?
Aasufou/Aoloau Open Space: Large open area across from quarry.
Logotala Hill: large flat-topped height of land, NE of Fogomaa, ASG owned.
Pala Lagoon Shore, Nu'uuli-side: required space must be found for local level needs.
Papa Stream Valley: mountain-side (uka) of road, W. Nu'uuli -- any space here?
Aasutuai School: at the coast, apparently inactive at present, future plans?

DIAGRAM 6g. WEST TUTUILA RECREATIONAL SERVICE DISTRICT & LOCAL LAND-BASED RESOURCES

District Level Standard: "Geographic attenuation access problems + population of at least 5,000."

Population: 1985/2000 -- 7,120/10,095. District Requirement Acres: 1985/2000 -- 4 + 1 = 5.

LEVEL/DIVISION/STANDARD	SITE/LOCATION	EXISTING RESOURCES, AUTHORITY, EST. ACRES						REQUIREMENT 1985, AND COMPARISON
		P&R	DOE	ASCC	Other Village/ ASG	Private	TOTAL	
DISTRICT	Leone High School Fields and Courts		6				6	4 : +2
LOCAL								
Futiga: Urban							0	.25: - .25
Malaeloa/Itu'au: Urban	Marist Bros. High School (Private)					2		
	Fa'asao High School (Private)					.75		
							2.75	.5 : +2.25
Taputimu: Rural/Urban							0	.25: - .25
Vailoatai: Urban	Vailoatai Village Malae					1.5	1.5	.5 : +1
Leone: Urban	Leone-Midkiff School		2.25					
	St. Theresa's School (Private)					.5		
	Fagalele Mission Grounds					.25		
							3	1 : +2
Faletolu Coast: Rural							0	.5 : - .5
Nua/Se'etaga: Rural	Alataua-Lua School, Nua		.5				.5	.5 : 0
Amanave Coast: Rural	Amanave Village Park					.5	.5	.5 : 0
Poloa/Fagali'i/Fagamalo Coast: Exception	Poloa School		.5					
	Fagamalo School		.5					
							1	.5 : + .5
							9.25	4.5 : +4.75
							15.25	8.5 : +6.75

POTENTIAL: Taputimu Experimental Farm: Shoreward parcel has tremendous potential for redevelopment as park/open space.

Leone Falls: Could be developed with more open space along the stream, cleanup and redesign of the falls area + possible access on trail above the falls.

Poloa-Amanave Road Crest: Possible mini-park picnic area here.

DIAGRAM 6h. LOCAL LAND-BASED RECREATION SPATIAL REQUIREMENTS PROJECTED TO YEAR 2000, IN ACRES

REC DIVISION	STANDARD	EXISTING	REQ. 1985	REQ. 2000
MANU'A				
East Ta'u	Rural	.5	.25, + .25	+ .25 = .5
West Ta'u	Rural	.5	.5 , 0	+ .5 = 1
Olosega	Except.	.5	.25, + .25	+ .25 = .5
Ofu	Rural	.75	.25, + .5	+ .25 = .5
SUBTOTAL		2.25	1.25, +1	+1.25 = 2.5
EAST TUTUILA				
Aunu'u	Wat. Iso.	.5	.25, + .25	+ .25 = .5
Tula Coast	Rural	.5	.25, + .25	+ .25 = .5
Alao/Utumea E.	Rural	2	.5 , +1.5	0 = .5
Alofau/Amouli	Rural	.5	.5 , 0	+ .25 = .75
Aoa Coast	Rural	.75	.5 , + .25	0 = .5
Masefau/Masausi	Rural	.5	.5 , 0	+ .25 = .75
Faga'itua Coast	Rural	1.25	.5 , + .75	+ .25 = .75
Lauli'i	Rural/Urb.	.5	.5 , 0	+ .25 = .75
Vatia/Afono	Rural	1	.5 , + .5	+ .25 = .75
Aua Coast	Urban	.5	.75, - .25	+ .25 = 1
SUBTOTAL		8.0	4.75, +3.25	+2.0 = 6.75
PAGO BAY AREA				
Leloaloa Coast	Urban	.25	.5 , - .25	0 = .5
Atuu Coast	Urban	.5	.5 , 0	0 = .5
Fagasa/Fagatele	Rural/Urb.	.5	.5 , 0	0 = .5
Pago/Fagatogo	Urban	2.75	2.5 , + .25	+ .5 = 3
Utulei	Urban	.25	.5 , - .25	+ .25 = .75
Faga'alu/Matu'u	Urban	.5	.75, - .25	+ .25 = 1
SUBTOTAL		4.75	5.25, - .5	+1 = 6.25
TAFUNA AREA				
Nu'uuli	Urban	0	1.5 , -1.5	+ .5 = 2
Tafuna	Urban	1.25	.75, + .5	+ .25 = 1
Malaeimi Area	Urban	3	.5 , +2.5	+ .75 = 1.25
Faleniu Area	Urban	0	.5 , - .5	0 = .5
Aoloau Plateau	Rural/Urb.	.75	.5 , + .25	+ .25 = .75
Mapusaga Area	Urban	0	.5 , - .5	+ .5 = 1
Pava'ia'i	Urban	1	.75, + .25	+ .5 = 1.25
Ili'ili	Urban	.5	.5 , 0	0 = .5
Vaitogi	Rural/Urb.	1.5	.5 , +1	+ .5 = 1
SUBTOTAL		8.0	6.0 , +2.0	+3.25 = 9.25
WEST TUTUILA				
Futiga	Urban	0	.25, - .25	+ .25 = .5
Malaeloa/Itu'au	Urban	2.75	.5 , +2.25	+ .25 = .75
Taputimu	Rural/Urb.	0	.25, - .25	+ .25 = .5
Vailoatai	Urban	1.5	.5 , +1	+ .5 = 1
Leone	Urban	3	1 , +2	+ .5 = 1.5
Faletolu Coast	Rural	0	.5 , - .5	0 = .5
Nua/Se'etaga	Rural	.5	.5 , 0	+ .25 = .75
Amanave	Rural	.5	.5 , 0	0 = .5
Poloa/Fagali'i Fagamalo Coast	Except.	1	.5 , + .5	+ .25 = .75
SUBTOTAL		9.25	4.5 , +4.75	+2.25 = 6.75
GRAND TOTAL		32.25	21.75, +10.5	+9.75 =31.5

DIAGRAM 6i. COMPOSITE SUMMARY OF NON-MARINE SPECIALIZED RECREATION RESOURCES, CONSERVATION/OPEN SPACE, AND HISTORIC AND NATURAL LANDMARKS

SPECIALIZED SITES & FACILITIES

* Solo Ridge Observation Point and Aerial Tramway (6,000' Cable) to the top of Alava Peak.
* Rainmaker Hotel: the only major hotel and principal tourism facility, with the only swimming pool in the islands, and a private swimming/sailing beach.
* Lava Lava Golf Course: 9 holes at present with expansion plans to 18.
* ASCC Gym: currently unique; as would be the standard running track and olympic-size swimming pool -- should these phased developments be accomplished.

EXISTING HISTORIC LANDMARKS, NATIONAL (See Appendix B details)

* Blunt's Point Coastal Artillery Installation.
* Aasu Bay (La Perouse) Historic Monument.
* Jean P. Hayden Museum of American Samoa.
* "Office of Tourism" Building -- now housing American Samoan Bank.
* Atauloma Girls' School.
* Fagalele Boys' School.
* Government House.
* High Court of American Samoa

NOTE: This cursory preliminary listing should be developed further in the context of a consistent local policy for differentiating sites of local historical interest for appropriate preservation as well. Two sites of national historic significance not listed would be the Tuimanu'a Tomb on Ta'u, and the U.S. Cession Site in Pago Pago.

SELECTED SCENIC TRAILS, EXISTING & PROPOSED

* Breakers Point Trail: to be developed.
* Blunt's Point Trail: to be developed and integrated with historic artillery.
* Pioa (Rainmaker Mt.) Trail: requires upgrading and safety assessment.
* Alava Peak Trail: up from Fagasa Road Crest, requires improvement and integration with such ridge park development as may be determined.
* Mt. Matafao Trail: up from Fagasa Road Crest to highest summit on Tutuila, with possible further extension to Vaitanoa in interior Faga'alu Valley.

NOTE: "Trail System 1" could integrate all of the above. Start at Breakers Point and ascend a new up trail to the Pioa Summit; then down to the Afono Pass; then Maugaloa Ridge to Alava Peak; (optional descent on Aerial Tramway); then along Alava Ridge to the Fagasa Road Crest; then up to Mt. Matafao; then down to Vaitanoa Falls and Pool; then outbound in the Faga'alu Valley interior to an upslope entrance to the Blunt's Point trail; hence down to Utulei.

* Aunu'u Island Walking Trail: could be upgraded and developed as day trip access to the interesting coast and open space features of the crater area.

DIAGRAM 6i. (Concluded)

SELECTED SCENIC TRAILS, EXISTING & PROPOSED, (Continued)

* Steps Pt.-Fagatele-Fogamaa Coastal Vista Trail: potential for development could be explored; see comprehensive discussion of the integrated conservation/open space potential of the greater Steps Pt area as detailed in Appendix B.
* "Trail System 2": proposed cross-island trail from Steps Point at the U.S. Coast Guard lighthouse; along the heights of Fagatele and Fogamaa Craters; then north to cross the main road near Futiga; then up the western side of Olovalu Crater; then along the main ridge crest northwards to the height of land at Olotele Peak -- a site for developing an independent observation tower; then across the Aoloau Plateau and down the crest trail to the Aasu coast for termination at the Aasu Monument and a possible campsite.
* Tumu Peak Trail, Ofu Island: could be developed provided extreme care taken to avoid current economic use areas, environmentally unsuitable terrain where man might harm nature, and hazardous terrain where nature might harm man -- or cause maintenance of the trail to be unfeasible.
* Piumafua Peak Trail, Olosega Island: topographic maps show a faint trail at present that might be upgraded or altered per conditions given in the preceding entry.
* "Trail System 3" -- Lata Mt., and Laufuti Falls, Ta'u Island: offered as a concept for further study as a potential serious wilderness trail planned to traverse a broad range of environmental zones. As with all trails that would penetrate the high watershed, no development should be pursued until territory-wide conservation policies, standards, zones, and site identifications have been implemented per ecologic criteria.

HIGH WATERSHED, COASTAL CONSERVATION ZONES, WILDLIFE AND VEGETATION SANCTUARIES AND PRESERVES, AND SMALL ISLAND PRESERVATIONS

As suggested in the last trails entry above, these topics should be treated comprehensively within the framework of fundamental territorial policies and authorities encompassing environmental conservation. Individual sites that may be noteworthy include Laufuti Falls, Ta'u; Olovalu Crater, Tutuila; the Aunu'u backlands; the entire Steps Point area; Anape'ape'a Cove in east Afono; all the highest summits; the Vaitanoa Falls area of interior Faga'alu; the Pala Lagoon mangrove shore area; and the small islands of Pola (with main island Tutuila environs), Nuusetoga, Taputapu, and Nuutele (Ofu).

EXISTING NATURAL LANDMARKS, NATIONAL (See Appendix B details)

* Aunu'u Island.
* Cape Taputapu (proposed).
* Fogamaa Crater (proposed).
* Leala Shoreline.
* Matafao Peak.
* Rainmaker Mountain.
* Vaiava Strait.

NOTE: Rose Atoll, outside the T-CORP study area, is organized as a U.S. National Wildlife Refuge.

DIAGRAM 6j. COMPOSITE SUMMARY OF COASTAL ZONE AND MARINE-RELATED RECREATIONAL RESOURCES, INCLUDING SELECTED BEACH PARK/SWIMMABLE BEACH SITES REQUIRING PUBLIC ACCESS, MARINE PRESERVES, BOAT RAMPS, FISH AGGREGATION BUOYS, SURFING SITES, AND RELATED FACILITIES.

FISH AGGREGATION BUOYS, (10) -- See detailed list in Appendix B. These buoys are anchored generally 3-4 miles offshore and tend to concentrate fish (which are attracted to them) to the benefit of sport and commercial fishermen.

BOAT RAMPS, (13 proposed) -- See detailed list in Appendix B. As with the Fish Aggregation Buoys, the Office of Marine Resources is the prime mover. Ramp sites are spread at good access points and their pattern is related to the pattern of fish aggregation buoys.

UNDERWATER PARKS & PRESERVES, (3 proposed); all OMR projects.

* Utulei Reef Preserve off the Rainmaker Hotel and Utulei Beach Park. This underwater site is the most accessible to visitors and residents alike.
* Matu'u Underwater Park, and Beach Outlook. The Matu'u reefs are said to be the most popular of the readily accessible reefs for divers. Required is a minimal shore access point and facility.
* Fagatele Bay Marine Preserve. A relatively undisturbed and rich marine environment identified by OMR for extensive conservation handling. See further detail in the special Steps Point discussion in Appendix B.

GENERAL RECREATION-RELATED MARINE FACILITIES

* Main Dock, Utulei. Cruise ships tie up here.
* Boat Harbors: Auasi, Aunu'u, Ofu Village, and Fusi (Ta'u), with concept proposals for Leone development.
* Pago Pago Yacht Club, Utulei Beach. This is the hub of small sailing craft activities in American Samoa. Beach launchings at Utulei and at the private beach at Rainmaker Hotel are conducted.
* Malaloa Recreational Pier. This is the principal safe haven for larger cruising yachts although facilities are severely limited at present. Carefully planned development and expansion is recommended, with development of services, space for relocated USCG facilities, and slip/mooring expansion room reserved in the direction of the Autapini coastal open space development.
* OMR scientific moorings, offices, boat ramp, former finger piers, and fish buoy depot, Fagatogo. Plans are being formed for upgrading of this general area along with possible increase of wharfage for better access by commercial/recreational fishermen. (Note: Pago Park also has a modest finger pier.)
* Proposed Centipede Row Recreational Dock Development. Details are given in Appendix B. The concept is to develop a small, clean marine recreation related access point and buffer between the existing Rainmaker Hotel and the existing fuel pier which is incompatible as a present neighbor to this tourist hotel.

PROPOSED SPECIAL ANCHORAGE AREAS, (4) -- See discussion in Appendix B. These charted anchorage grounds could be established off the current principal concentrations of recreational boating activity for better control and use of water space in Pago Pago Harbor. Proposed sites are at Faga'alu, Utulei, Malaloa, and Pago Pago -- all of which areas are used currently for moorings. (Must determine reef/anchorage facts, Utulei.)

SURFING SITES, A preliminary list of 16 supplied by the Director of the Office of Samoan Information is given in Appendix B.

DIAGRAM 6j. (Concluded)

PRINCIPAL BEACHES, SWIMMING SITES, & SELECTED COASTAL LOCATIONS

Manu'a

* Toa Cove, N. Faleasao, Ta'u: Swimming? Courtesy access, Faleasao Village.
* Faleasao Beach, Ta'u: Swimming. Courtesy access, Faleasao Village.
* Ta'u Village Beach, Ta'u: Swimming -- particularly in the central channel opposite the Tourism Guest Fales. Courtesy access, Ta'u Village.
* Olosega Village Beach, Olosega. Swimming. Courtesy access, Olosega village.
* Faalaaga Beach, Ofu. Swimming on the longest most photogenic beach in American Samoa.
* Nuupele Rocks, Ofu. Swimming in a good protected area. Courtesy access, Ofu Village.

Aunu'u

* Aunu'u Village south shore. Swimming? Courtesy access, Aunu'u Village.

Tutuila South Shore

* Two-Dollar Beach. Swimming at this popular picnic beach. Access requires payment to private families in Avaio. Only present private beach park.
* Sea-end of proposed Anasosopo Park. Swimming could be developed, all under ASG control.
* Rainmaker Hotel private beach. Swimming and sailing. Reserved for hotel guests.
* Utulei Beach Park. Swimming with moored raft platforms. This is the top public swimming beach in the Territory and a headquarters for small sailboats as the Pago Pago Yacht Club is located here too. It is under ASG control with plans for expansion once existing Utulei ASG housing can be relocated. It is the only public beach park at present.
* Faga'alu Park. No swimming. Faga'alu Bay is chiefly used for small craft mooring and there is no beach at the park.
* Matu'u Shore Outlook and Diving Access. No beach or shore swimming. This is a proposed ASG development to create a shore spot facilitating access to the Matu'u reefs, a favorite diving spot.
* Freddie's Beach, Fogagogo. Minimal swimming only in the tide pool niches of this generally rocky coast which is a favorite picnic spot. Ownership/control status?
* Vaitogi Village Surge Swimming Area. Swimming in the pocket beach covelets among the rocky coastal prominences. Courtesy access, Vaitogi Village.
* Vaitogi Shark & Turtle Shore. No beach, no swimming; a scenic rocky shore famous in a Samoan legend chant. Access through Vaitogi Village on an unimproved road with no parking turnouts.
* Fogamaa Cove. Idyllic beach cove deep in Larsen Bay without direct access. Undoubtedly swimmable but recommended for conservation/restricted access. Ownership?
* Leala Shoreline. No beach; some exposed swimming along the rocky coast. A good picnic and shore fishing area with some tide pools too. ASG controlled.
* Vailoatai Scenic Shore. No beach, no swimming, just the scenic background to the manicured Vailoatai village malae. Courtesy access.
* Fagalele Shoreline. Good swimming off the rocks below the old Mission Grounds. Courtesy access across private mission grounds or along shore with village approval.
* Nua Village Beach. Some swimming. Courtesy access.
* Utumea West Beach. Swimming? This narrow beach is marked with "private" signs, presumably considered restricted for local use.
* Amanave Village Park/Beach. Swimming. Courtesy access, Amanave Village.

Tutuila North Shore - Conditions little documented; access generally poor.

* Sa'ilele Village Beach provides a classic setting -- coralline white beach backed by palms, encompassed by rocky points. Swimming conditions unknown. Village courtesy access presumed. Great potential.
* Vatia Village Beach -- and several others -- may play future rec roles.

APPENDIX D.

AREA AND DIMENSION REQUIREMENTS

SELECTED RECREATION/SPORTS FACILITY ELEMENTS

Diagram

D-7a * Combination Baseball, Football, Softball Fields.

D-7b * Multiple Recreation Court.

D-7c * Athletic Ballfields within 1/4 Mile Running Track.

D-7d * Touch and Flag Football.

D-7e * Softball 12" (Fast and Slow Pitch).

Source: Departments of the Army, Navy, & Air Force, Planning and Design of Outdoor Sports Facilities, October, 1975.

DIAGRAM 7a. SPACE STANDARDS: COMBINATION BASEBALL, FOOTBALL SOFTBALL FIELDS

COMBINATION BASEBALL, FOOTBALL, SOFTBALL FIELDS

NAME OF SPORTS ORGANIZATION

Baseball-The Official Playing Rules Committee, Official Baseball Rules, 1974.
Softball-Amateur Softball Association of America (ASA). Touch and Flag Football-National Touch and Flag Football Rules-The Athletic Institute.
Football, 11 man-National Collegiate Athletic Association (NCAA).

RECOMMENDED AREA

Varies with number of fields and configuration.

SIZE AND DIMENSION

Varies with number of fields and configuration.

ORIENTATION

Preferred orientation varies when combinations are used. Selection for priority should be based on anticipated use, time of play, and local site conditions.

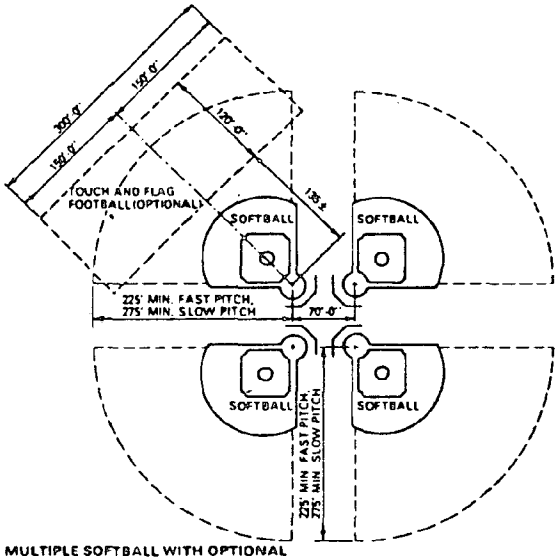
SURFACE AND DRAINAGE

Surface is to be turf.

Drainage is to be provided following guidelines for individual sports.

SPECIAL CONSIDERATIONS

Safety aspects of each sport or field must not be compromised when multi-use concepts are employed.



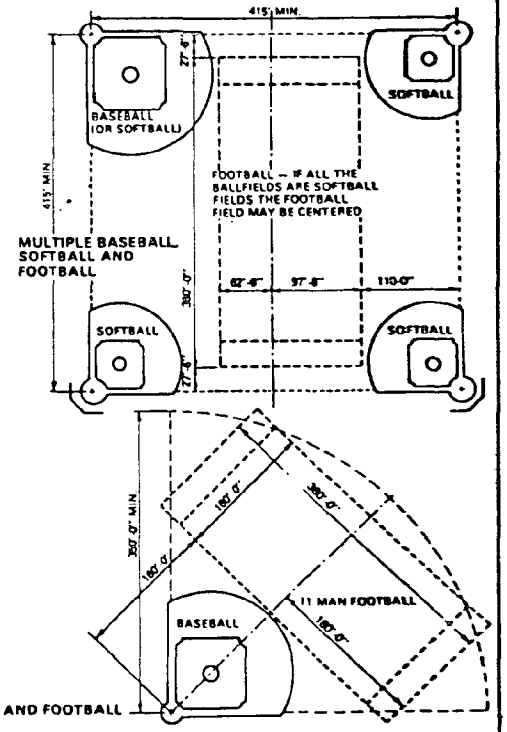
MULTIPLE SOFTBALL WITH OPTIONAL TOUCH AND FLAG FOOTBALL

NOTES:

For individual field dimensions and details see figure 22 (Baseball), figure 29 (Football), figure 30 (Touch and Flag Football) and figure 36 (Softball).

For grading and drainage details see figure 69.

For surfacing details see figure 70.



BASEBALL AND FOOTBALL

COMBINATION BALLFIELDS
FIGURE 58

DIAGRAM 7b. SPACE STANDARDS: MULTIPLE RECREATION COURT

TM 5-803-10 / NAVFAC P 457 / AFR 88 33

MULTIPLE RECREATION COURT

NAME OF SPORTS ORGANIZATION

Basketball-National Collegiate Athletic Association, (NCAA), 1974. Volleyball-United States Volleyball Association, (USVA), 1974. Tennis-United States Lawn Tennis Association, (USLTA), 1974. Shuffleboard-National Shuffleboard Association, (NSA), 1974.

RECOMMENDED AREA

Ground space is 9,840 square feet.

SIZE AND DIMENSION

Overall length is 120'-0". Overall width is 82'-0".

ORIENTATION

Preferred orientation is for the long axis of the court(s), which is(are) expected to have primary use, to be north-south.

SURFACE AND DRAINAGE

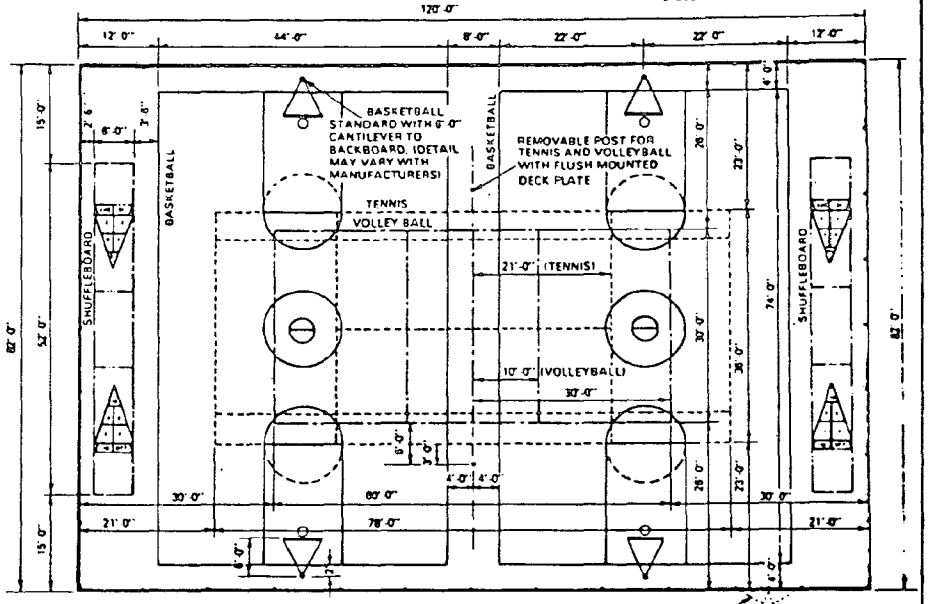
Surface is to be bituminous material with optional protective colorcoating or Portland Cement concrete (PCC), except that shuffleboard courts must be concrete.

Preferred drainage is from end to end at a slope of 1" in 10' with the 12'-0" areas on each end to be level for the shuffleboard courts.

SPECIAL CONSIDERATIONS

Removable posts with flush mounted deck plates must be used for tennis and volleyball to allow unobstructed use of other courts.

Fencing should be provided 10'-0" high on all sides.



COURT LAYOUT

NOTES:

For individual court dimensions and details see figure 3 (Basketball), figure 18 (Shuffleboard), figure 19 (Tennis) and figure 21 (Volleyball); for fence details see figure 63.

For drainage details see figure 55; for surfacing details see figure 70.

For removable net post details see figure 65.

TYPICAL GATE SECTION (LOCATION OPTIONAL DEPENDING ON SITE CONDITIONS).

MULTIPLE RECREATION COURT

FIGURE 94

DIAGRAM 7c. SPACE STANDARDS: ATHLETIC BALLFIELDS WITHIN ¼ MILE RUNNING TRACK

ATHLETIC BALLFIELDS WITHIN ¼ MILE RUNNING TRACK

NAME OF SPORTS ORGANIZATION

¼ Mile Running Track-National Collegiate Athletic Association (NCAA). Football-National Collegiate Athletic Association (NCAA). Soccer-National Collegiate Athletic Association (NCAA).

RECOMMENDED AREA

Ground space is 4.0 acres.

SIZE AND DIMENSION

Overall length is 600.02'. Overall width is 276.00'.

ORIENTATION

The long axis of the complex should be so oriented that it runs north-south to northwest-southeast.

SURFACE AND DRAINAGE

Track surface is to be preferably bituminous with optional synthetic surface.

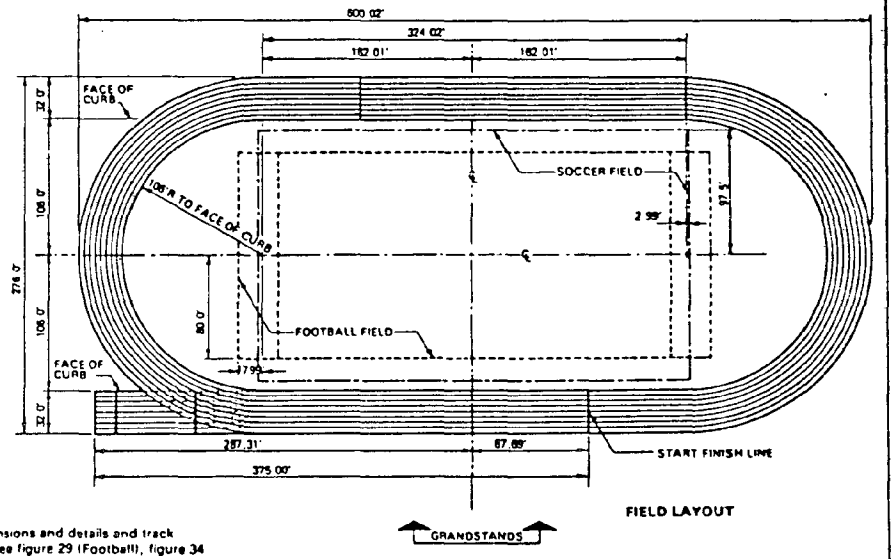
Ballfields are to be turf.

Ballfields should be crowned for drainage.

Track should pitch inward at one percent(1:100) maximum slope.

SPECIAL CONSIDERATIONS

A system of underdrains and/or storm water sewers must be provided to accommodate surface runoff.



FIELD LAYOUT

NOTES:

For individual field dimensions and details and track dimensions and details see figure 29 (Football), figure 34 (Soccer) and figures 40, 41, 42, 43 and 44 (¼ Mile Running Track Layout).

For grading and drainage details see figure 69.

For surfacing details see figure 70.

BALLFIELDS WITHIN RUNNING TRACK

FIGURE 57

DIAGRAM 7d. SPACE STANDARDS: TOUCH AND FLAG FOOTBALL

TOUCH AND FLAG FOOTBALL

NAME OF SPORTS ORGANIZATION

National Touch and Flag Football Rules, The Athletic Institute, 1971.

RECOMMENDED AREA

Ground space is 41,200 square feet (.94 acre) minimum.

SIZE AND DIMENSION

Playing field width is 120'-0". Length is 300'-0". Additional area recommended is 6'-0" minimum unobstructed space on all sides.

ORIENTATION

Preferred orientation is for the long axis to be northwest-southeast to suit the angle of the sun in the fall playing season, or north-south for longer periods.

SURFACE AND DRAINAGE

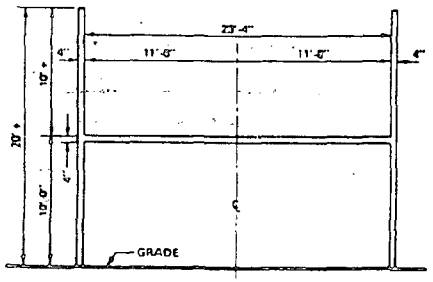
Surface is to be turf.

Preferred grading is a longitudinal crown with a 1% slope from center to each side and adequate underdrainage.

Grading may be from side to side or corner to corner diagonally if conditions do not permit the preferred grading.

SPECIAL CONSIDERATIONS

Goal posts are to be provided at each end of the playing field. Pylons are to be provided as required by rules.



GOAL POSTS

NOTES:

All measurements should be made from the inside edge of lines marking boundaries.

All field dimension lines shown must be marked 4" in width with a white, non-toxic material which is not injurious to the eyes or skin.

If cross hatching in end zone is white, it shall be no closer than two feet to the boundary lines.

When teams are composed of 9 or 11 players, a field 360'-0" (120 YDS) long with five 60'-0" (20 YD) zones and two 30'-0" (10 YD) end zones is recommended.

For grading and drainage details see figure 69.

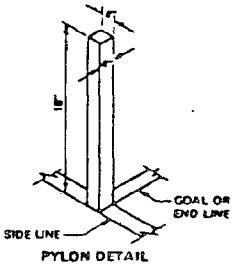
For surfacing details see figure 70.

NOTES:

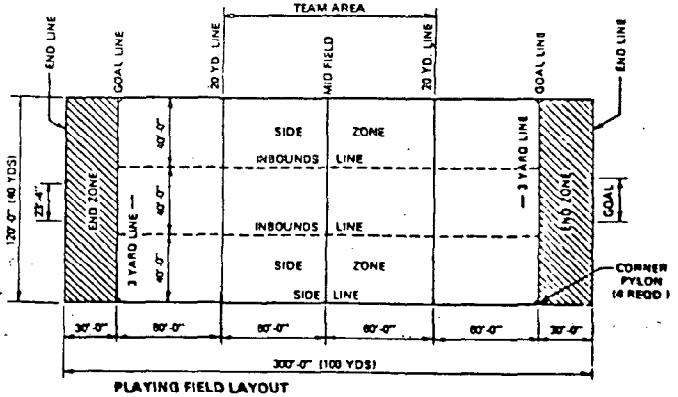
Optional goal post may be used in the form of a single metal post set behind the end zone with a cantilevered horizontal crossbar and two uprights of the same height and spacing as for dual posts.

For goal post construction details see figure 65.

Pylon to be constructed of soft flexible material, red or orange in color.



PYLON DETAIL



PLAYING FIELD LAYOUT

TOUCH AND FLAG FOOTBALL
FIGURE 38

DIAGRAM 7e. SPACE STANDARDS: SOFTBALL 12" (FAST AND SLOW PITCH)

SOFTBALL 12" (Fast and Slow Pitch)

NAME OF SPORTS ORGANIZATION

Amateur Softball Association of America, (ASA), 1974.

RECOMMENDED AREA

Ground space is 62,500 square feet (1.5 acres) to 90,000 square feet (2.0 acres).

SIZE AND DIMENSION

Baselines are 60'-0" for man and women, 45'-0" for juniors. Pitching distances are 46'-0" for men, 40'-0" for women, 35'-0" for juniors. Fast pitch playing field is 225' radius from home plate between foul lines for men and women. Slow pitch is 275' radius for men, 250' radius for women.

ORIENTATION

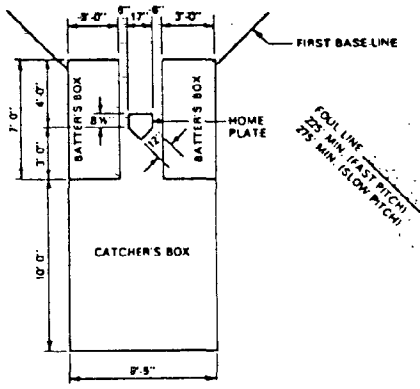
Optimum orientation is to locate home plate so that the pitcher is throwing across the sun and the batter is not facing it.

SURFACE AND DRAINAGE

Surface is to be turf. Infield may be skinned. The infield shall be graded so that the base lines and home plate are level.

SPECIAL CONSIDERATIONS

Backstop is to be located at a minimum distance of 25' behind home plate.



LAYOUT AT HOME PLATE

NOTES:

Foul lines, catcher's, batter's and coach's boxes, and 3' lines are 2" to 3" chalk lines.

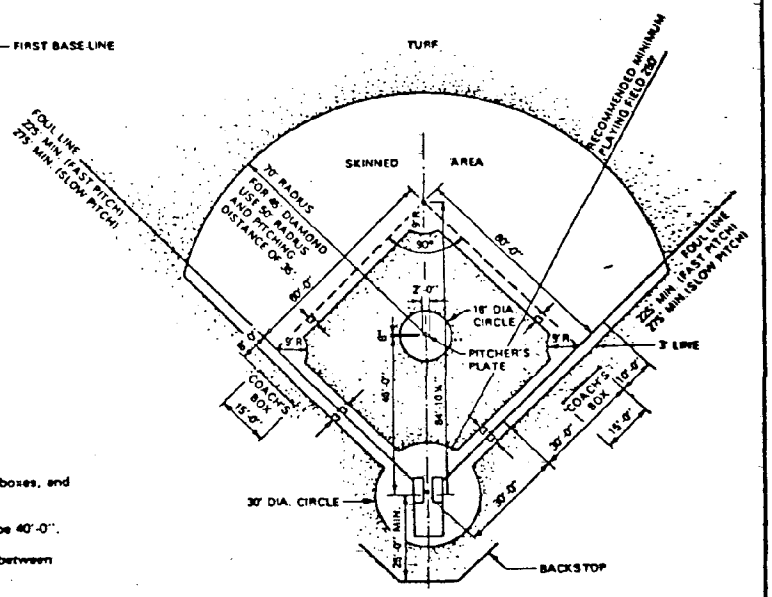
Pitching distance for women's softball to be 40'-0".

For junior player (9-12 years) 45' distance between bases, 35' pitching distance.

For grading and drainage details see figure 69.

For surfacing details see figure 70.

For backstop details see figure 71.



DIAMOND LAYOUT

TM 5-803-10 / NAVFAC P-457 / AFR 88-33

SOFTBALL 12"

FIGURE 38

APPENDIX E. AMERICAN SAMOA DEPARTMENT OF EDUCATION RECREATION PROGRAMS IN THE SECONDARY AND ELEMENTARY SCHOOLS.

Recreational specialists in the Department of Education prosecute an active schedule of physical education and after school sports activities throughout the territory. They also represent the schools in the American Samoa recreation community at large. Most recently flag football and volleyball have been introduced for seventh and eighth graders.

Following are tables showing total enrollments of students based on information provided through the courtesy of the Department of Education. The subsequent pieces on physical education are adapted from Department of Education reports entitled: "Elementary Physical Education", "Secondary Physical Education Program", and "Elementary and Secondary Athletics", all supplied by the Department of Education in February 1980.

It should be noted further that in 1976 the same office prepared a "Physical Education Facility Survey Report" which discussed general conditions, highlighted specific problems at individual school sites, and suggested space and layout standards for multiple-use hard-surfaced courts.

Elementary and Secondary Athletics (Adapted from the D.O.E. Report.)

The increase in interest and support by students, coaches, and school administrators, plus the community, were big factors in success of the athletic program. We accomplished all the scheduled sports previously set for the school year. In the secondary program, seven major sports were offered: football, volleyball, basketball, track, softball, rugby, and soccer. Much effort and concern was focused on better game administration, especially officiating, and implementation of league competition. We introduced for the first time in regular league competition two new sports: rugby and soc-

TABLE 6a. AMERICAN SAMOA EDUCATIONAL ENROLLMENT, JAN. 1980, ELEMENTARY SCHOOLS.

(Figures Supplied by Department of Education.)

ELEMENTARY SCHOOL	1	2	3	4	5	6	7	8	BOYS	GIRLS	TOTAL
AFONO	9	12	9	17	9	9	8	8	43	38	81
ALATAUA-LUA,NUA	No Figures Supplied			-	-	-	-	-	-	-	-
ALOFAU	33	25	34	35	34	34	18	32	119	126	245
AUA	32	44	43	36	35	49	34	41	163	151	314
AUNU'UFOU	13	14	6	7	5	18	11	8	48	34	82
FAGAMALO	3	5	4	4	No Figures Supplied			-	7	9	16
FALEASAO	27	30	16	26	29	24	26	24	101	101	202
FITI'UTA	12	12	13	18	15	16	17	17	68	52	120
LAULI'I	13	13	13	6	13	12	10	7	46	41	87
LE'ATELE,FAGASA	7	19	13	13	18	17	13	10	60	50	110
LEONE-MIDKIFF	85	90	96	87	99	95	92	103	411	336	747
LUPELELE, ILI'ILI	39	45	40	43	34	46	37	38	196	126	322
MANULELE, TAFUNA	103	101	89	113	70	82	65	61	359	325	684
MASEFAU	4	6	5	8	7	5	6	9	25	25	50
MATAFAO	35	55	38	42	39	42	47	43	191	150	341
MATATULA	16	29	31	30	33	28	34	20	130	91	221
MAUGA-O-ALAVA (VAITIA)	13	11	18	10	12	16	10	6	47	49	96
OFU	10	8	12	12	11	11	14	13	44	47	91
OLOMOANA, AOA	10	8	4	13	4	5	10		29	25	54
OLOSEGA	6	9	5	8	15	14	9	15	42	39	81
PAGO PAGO	84	107	98	78	86	84	80	73	371	319	690
PAVA'IA'I	61	46	64	68	61	49	51	54	256	198	454
POLOA	16	16	13	15	12	15	7	11	62	43	105
SILI'AGA, AOLOAU	15	16	20	16	10	13	16	17	84	42	126
FIA ILOA, UTULEI	No Figures Supplied			-	-	-	-	-	-	-	-
(Aasu - Inactive; Swain's not included) TOTAL	646	724	684	705	651	684	615	610	2,902	2,417	5,319

TABLE 6b. AMERICAN SAMOA EDUCATIONAL ENROLLMENT, JAN. 1980: SECONDARY SCHOOLS.
(Figures supplied by Department of Education.)

SECONDARY	9			10			11			12			TOTAL		
	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total
FAGA'ITUA H.S.	78	73	151	65	62	127	63	63	126	68	57	125	274	255	529
LEONE H.S.	109	112	221	122	102	224	111	106	217	95	75	170	437	395	832
MANU'A H.S.	15	23	38	19	21	40	25	21	46	30	22	52	89	87	176
SAMOANA H.S.	161	118	279	111	119	230	106	109	215	88	87	175	466	433	899
TOTALS	363	326	689	317	304	621	305	299	604	281	241	522	1,266	1,170	2,436

TABLE 6c.

AMERICAN SAMOA EDUCATIONAL ENROLLMENT, JAN. 1980: ALL LEVEL TOTALS.
(Figures supplied by Department of Education.)

PRIVATE SCHOOL	*BOYS*	*GIRLS*	*TOTAL*
St. Francis		*419*	*419*
St. Theresa-Leone	*70*	*238*	*308*
South Pacific Academy	54	59	113
Marist Brother-Elementary-Atu'u	*461*		*461*
Marist Brother-High School-Malaeloa	*250*		*250*
Fa'asao High School-Lepuapua		*238*	*238*
TOTAL	835	954	1,789
PUBLIC SCHOOL			
ECE	*949*	*948*	*1,897*
Special Education	*52*	*31*	*83*
Elementary School	*2,902*	*2,417*	*5,319*
Secondary School	*1,266*	*1,170*	*2,436*
TOTAL	*5,169*	*4,566*	*9,735*
COMBINED			
Private School	1,789		
Public School	9,735		
TOTAL	11,524		
AMERICAN SAMOA COMMUNITY COLLEGE (ASCC) (January 1980 figures courtesy ASCC, Feb. 1980.) Full-Time:	485		
Part-Time:	415		
College Subtotal:	900		
GRAND STUDENT TOTAL :	12,424		

cer. The Hawaii-Samoa Invitational game and Mid-Pac tournament were big additions to the program. ASHAA made decisions covering player eligibility, regulation on age limit, and academic status.

At the elementary level, we were successful in conducting flagfootball for boys and volleyball for girls in the 7th and 8th grades. The 24 schools in the elementary level were divided into 3 groups according to size: "Four A" division of 400 and up; "Double A" division between 200 and 400; "Single A" division up to 200; while the Manu'a schools make their own divisions. We need to direct more attention to developing athletic programs in the lower grades.

NUMBER OF PARTICIPANTS/RESULTS OF LEAGUE:

HIGH SCHOOL LEAGUE:

VOLLEYBALL

52	JV girls	Fagaitua
49	JV boys	Samoana
53	Var girls	Faasao
50	Var boys	Fagaitua

HIGH SCHOOL LEAGUE:

BASKETBALL

43	JV girls	Samoana
53	JV boys	Samoana
		Fagaitua
47	Var girls	Leone
50	Var boys	Samoana

FOOTBALL

160	Var boys	Samoana

ELEMENTARY LEAGUE:

4A FLAGFOOTBALL

144	Pago Pago - Leone

2A FLAGFOOTBALL

107	Matatula

4A VOLLEYBALL

61	Matafao

ELEMENTARY LEAGUE:

2A VOLLEYBALL

56	Aua

RUGBY

74 JV boys Samoana

SOCCER

61 Var boys Samoana

SOFTBALL

48 JV boys Samoana

43 Var girls Samoana

TRACK

96 JV girls/boys TOTAL (HIGH SCHOOL) 990

111 Var girls/boys TOTAL (ELEMENTARY) 369

PROBLEMS:

The ideal situation for any high school is the availability of a fully equipped indoor gymnasium. We need the locker rooms, showers, safe storage rooms, weight rooms, etc. High school basketball and volleyball courts need re-surfacing with special top fine asphalt finish - not the coarse asphalt. Most elementary schools are in desperate need of multi-purpose hard-surface courts to accommodate basketball, volleyball, square games, tether ball, etc.

RECOMMENDATIONS:

1. A survey report was done by the Department of Public Works to improve our local fields. The estimated costs for improvement are summarized by priority in the following table.

a. Marist Brothers School	5,400.00
b. Pago Pago Park field	20,700.00
c. Leone field	7,900.00
d. Samoana field	7,400.00

2. A full-time professional person is needed to develop and implement a full-scale Athletic program at the elementary level for grades 5-8 (a total of 2,542 students) not including the private schools.

3. A major concern is a thorough physical examination for each student. Two-year interval physical examinations are recommended for all students. This 2-year interval plan should start when the child is about to enter 7th grade. The 2nd exam should be prior to entering 9th grade, and the 3rd exam should be prior to entering 11th grade.

4. D.O.E. should seek membership in the National Federation of High Schools Associations. To be sanctioned by this association would bring nation-wide recognition to our high school athletics programs.

5. Off-island D.O.E. recruitments should also include athletic coaches. Up-to-date movies featuring fundamental skills in each sport should be made available to students.

PROJECTION:

1. ASHAA's projection for the 1979-80 school year in the high schools will feature the 7 major sports plus special 1-to-3 day tournaments in the following: volleyball, basketball, tennis, table tennis, golf, and wrestling.

2. The elementary program needs to get off the ground. A projection for the next two years is summarized in the following table.

	1978-79				1979-80				1980-81			
Sports	4A	2A	1A	M	4A	2A	1A	M	4A	2A	1A	M
Flagfootball (B)	X	X			X	X	--	--	X	X	X	X
Volleyball (B & G)	X	X			X	X	X	X	X	X	X	
Track (B & G)					X	X	X	X	X	X	X	X

	1978-79				1979-80				1980-81			
Sports	4A	2A	1A	M	4A	2A	1A	M	4A	2A	1A	M
Basketball (B)					X	X	--	--	X	X		
Softball (G)					X	X	--	--	X	X	X	
Soccer (B & G)					X	X	X	--	X	X	X	X
Wrestling (B)					X	X	--	--	X	X		

3. A full-time professional person is required for the elementary program.

Secondary Physical Education (Adapted from the D.O.E. Report.)

The Physical Education program in the public high schools is operating under limited staff. There is a definite need to have specialized P.E. instructors in all high schools to promote beneficial changes in the secondary physical education program. The secondary teachers' physical education background has generally been improved. There are, however, a few who have not felt confident implementing the P.E. program this school year (1978-79).

Evidently, the P.E. program is stable. The P.E. instructors feel that the program must be diversified to meet the needs of P.E.-oriented students. Most important of all is that the P.E. program has some positive direction which leads towards meeting the goals and objectives of the Department of Education.

The present physical education program is planned and developed to provide sequential development of physical education skills fundamental to organized sports. In order to develop the skills fundamental to group sports, the history, rules, and skills are required to be taught in P.E.

classes in all high schools. It is the intention of the D.O.E. that such sports as basketball, volleyball, softball, soccer, football (flag or touch), and track and field be implemented in all high schools. In addition to the above sports, the Physical Fitness Test was also conducted during the school year.

The school year of 1978-1979 was marked by the desire to expand the P.E. programs in all high schools. The number of P.E. participants has increased every school year. The present number of boys and girls who are enrolled in P.E. classes this school year is 1,296. Below is the count for the respective high schools:

Faga'itua High School	=	9th grade boys 66, girls 61
		10th grade boys 61, girls 60
Samoana High School	=	9th grade boys 157, girls 111
		10th grade boys 94, girls 130
Leone High School	=	9th grade boys 112, girls 116
		10th grade boys 99, girls 105
Manu'a High School	=	9th grade boys 20, girls 19
		10th grade boys 24, girls 22

The major emphasis of the P.E. program for the coming school year will be:

. Maintain and implement the present P.E. program.

. Revise the existing P.E. guide.

. Enlarge the P.E. program by adding more sports.

. Develop advanced P.E. courses for the upper classmen.

. Continue the implementation of Physical Fitness Tests.

. Organize workshops for P.E. instructors with emphasis on First Aid Care.

The P.E. education program was not as successful as it could have been due to the turnover of teachers at the beginning of the school year and through misplacing P.E. majors to teach other subjects. Effective leadership and qualified instructors are the prime elements in a successful program.

Future Recommendations.

- Samoana High School should have a multi-purpose court and showers.
- P.E. majors graduated from colleges must teach P.E. classes.
- Storage room and classroom for P.E. classes must be provided.
- Accountability of P.E. equipment must be improved in all schools.
- More sports must be added to the program.
- Establish a P.E. committee to evaluate the program at the end of the school year.
- Five days for P.E. instruction instead of three.

Elementary Physical Education (Adapted from the D.O.E. Report.)

The Elementary Physical Education Program is fulfilling its potential. Personnel in the various schools have different backgrounds. Some still lack the basic training necessary in teaching a broad physical education program. A trained physical education instructor has great advantages over other classroom teachers within the P.E. setting. Emphasis has been toward keeping the students active and providing enjoyment in the activities.

Present development is in providing elementary teachers with a curriculum guide that is simple, useable and activity oriented. Hopefully, a new guide will be implemented by early 1980. Though instruction takes place in group form, we would like to make provision also for individual instruction.

MAJOR ACCOMPLISHMENT OF THE YEAR:

- Greater number of people working in the total physical education and sports program.
- Started on preliminary ground-work for physical education curriculum guide.
- Completed majority of workshops planned throughout the school year.
- Generally, there has been more participation in various activities.
- Innovative activities are being offered.
- Received some professional enrichment by way of attending National Convention.
- Many more teachers are becoming aware of physical education and fitness as vital parts of the educational program.

STRENGTHS OF THE PROGRAM:

Many teachers that have experience in elementary physical education contribute tremendously. Being able to work together and share ideas has greatly aided the program. Many more educators are realizing the significant role that P.E. plays in total education.

WEAKNESSES OF THE PROGRAM:

In-service training is a main concern of ours. Not being able to meet with teachers consistently causes harm to the program. The allowable time set aside to conduct P.E. classes is very minimal. Still many teachers elect to use this as "free time." If more of the schools followed the schedule for P.E. periods, there would be less conflict over equipment use and play space. Insufficient equipment is a problem, but not a major one. If

storage, care and maintenance were properly administered, a minimum would be lost, stolen, or damaged. In order to establish adequate fitness habits, the P.E. program must be vigorously and regularly applied by trained personnel.

APPENDIX F. SOCIO-ECONOMIC PROFILE TABLES

TABLE 7. POPULATION OF AMERICAN SAMOA STUDY AREA VILLAGES BY CENSUS (1970-1980) & PROJECTION (1980-2000).

	1970[1]	1974[2]	1977[3]	1980[4]	1985[4]	2000[4]
MANU'A ADMIN DISTRICT						
I. REG. PLANNING AREA #1	2,112	1,808	1,705	1,583	1,665	1,935
A. Fiti'uta County						
1.*Leasoalii	240	197	181	162	170	198
2. Maia	252	244	241	236	250	291
B. Faleasao County						
3. Faleasao	288	253	239	222	235	273
C. Ta'u County						
4. Luma	260	251	247	242	255	296
5. Siufaga	280	239	224	205	219	255
D. Olosega County						
6. Sili	99	83	77	70	66	75
7. Olosega	281	167	137	107	115	135
E. Ofu County						
8. Ofu	412	374	359	339	355	412
EASTERN TUTUILA ADMIN DISTRICT						
II. REG. PLANNING AREA #2	2,441	2,401	2,438	2,479	2,605	3,025
F. Vaifanua County (E&W)						
9. Vatia (West)	391	395	398	402	415	485
10. Aoa (East)	390	345	326	392	415	480
11. Onenoa	173	143	131	117	123	141
12. Tula	329	345	357	370	389	450
13. Alao	271	345	326	303	318	367
G. Sua County						
14. Afono	278	273	271	268	280	325
15. Masefau	340	306	292	274	288	337
16. Masausi	140	175	212	261	280	328
17. Sailele	129	109	101	92	97	112
III. REG. PLANNING AREA #3	2,744	2,745	2,777	2,844	2,955	3,306
18. Lauli'i	451	498	530	570	592	655
19. Amaua	496	511	534	580	603	691
(Amaua)	–	–	–	(60)	(62)	(75)
(Aumi)	–	–	–	(111)	(115)	(130)
(Alega)	–	–	–	(23)	(25)	(38)
(Avaio)	–	–	–	(79)	(82)	(91)
(Auto)	–	–	–	(280)	(291)	(320)
(Utusia)	–	–	–	(27)	(28)	(37)
20. Faga'itua	502	457	431	405	421	485

TABLE 7. (Continued)

	1970	1974	1977	1980	1985	2000
H. Sa'ole County						
21. Alofau	378	409	430	445	462	495
22. Amouli	365	324	291	260	270	310
23. Auasi/Utumea E.	104	120	134	156	162	180
24. Aunu'u	425	426	427	428	445	490
IV. REG. PLANNING AREA #4	7,886	8,554	9,135	9,638	10,330	12,719
I. Maoputasi County						
25. Aua + Anasosopo	1,002	1,200	1,335	1,475	1,585	1,815
Tafananai	23	36	49	72	75	84
26. Leloaloa + Lepua	390	429	453	484	515	600
27. Atuu	305	582	880	1,025	1,100	1,325
Anua	56	41	35	29	31	37
28. Pago Pago (to Satala + Autopini)	2,451	2,529	2,575	2,631	2,820	3,630
29. Fagatogo + Malaloa	1,592	1,788	1,912	2,077	2,225	2,600
30. Utulei	1,074	939	870	799	859	1,298
31. Faga'alu	993	1,012	1,026	1,046	1,120	1,330
(Faga'alu)	-	-	-	992	1,060	1,240
(Fatumafuti)	-	-	-	54	60	90
V. REG. PLANNING AREA #5	6,555	7,807	8,468	9,991	11,485	18,010
J. Itu'au County						
32. Fagasa + Fagatele	649	622	609	593	580	850
33. Matu'u/Faganeanea	431	410	402	392	455	650
34. Nu'uuli	1,804	2,096	2,329	2,619	3,040	4,400
WESTERN TUTUILA ADMIN DISTRICT						
K. Tualauta County						
35. Tafuna	545	820	1,104	1,479	1,720	3,000
Malaeimi	-	340	386	437	500	750
Mesepa	462	340	295	249	290	600
36. Faleniu	614	566	544	517	600	860
37. Mapusagafou	314	532	786	987	1,150	1,700
38. Pava'ia'i	638	853	1,051	1,199	1,390	2,400
39. Ili'ili	625	615	610	604	700	1,200
40. Vaitogi	473	613	738	915	1,060	1,600
VI. REG. PLANNING AREA #6	5,347	5,841	6,015	6,971	7,850	11,200
L. Leasina County						
41. Aasu	89	168	252	331	350	425
42. Aoloau	359	276	245	278	380	680
43. Malaeloa	192	300	326	358	430	750

TABLE 7. (Concluded)

	1970	1974	1977	1980	1985	2000
M. Tualatai County						
44. Itu'au	332	268	242	247	300	500
45. Futiga	288	273	266	276	350	560
46. Taputimu	341	396	435	460	500	650
47. Vailoatai	554	742	931	1,107	1,180	1,965
N. Lealataua County						
48. Leone	1,657	1,823	1,948	2,090	2,325	3,000
49. Faletolu-Pulenuu Title	446	473	496	507	560	730
Components:						
(Amaluia)	(158)	(188)	(210)	(220)	(240)	(300)
(Asili)	(197)	(184)	(178)	(170)	(190)	(250)
(Afao)	(91)	(101)	(108)	(117)	(130)	(180)
50. Nua/Se'etaga	276	366	433	507	560	780
Utumea W.	50	46	44	42	50	80
51. Agugulu/Failolo	99	135	162	206	225	285
52. Amanave	292	292	292	292	330	420
53. Poloa	166	152	147	140	150	220
54. Fagali'i	90	78	73	78	90	120
Maloata	7	1	1	1	10	25
55. Fagamalo	62	52	48	51	60	90
GRAND TOTALS	27,085	29,156	30,538	33,506	36,890	50,195

Note that study area omits Swain's Island. Tafananai reported in Plan. Area #4.

* Numbered sequence is of villages with pulenuus appointed by the Department of Local Government.

Sources: [1] U.S. Census of Population.

[2] Report on the 1974 Census of American Samoa.

[3] ASG DPO, Ten Percent Sample Survey.

[4] ASG DPO, "American Samoa Population Projection by Planning Districts and by Five Year Intervals 1980-2005", transmitted in letter of 4 Mar. 1980 by S. Leasiolagi, Statistician, to R.M. Towill Corp.

TABLE 8. AMERICAN SAMOA AGE-SEX COHORTS

Age Cohort	Male	Female	Total	Male/Female Ratio	
0-9	4,583	4,494	9,077	50.5:49.5	
10-19	3,466	3,376	6,842	50.7:49.3	
20-29	1,873	1,973	3,846	48.7:51.3	
30-39	1,397	1,365	2,762	50.6:49.4	1970
40-49	1,036	1,056	2,092	49.5:50.5	
50-59	788	652	1,440	54.7:45.3	
60 & +	496	531	1,027	48.3:51.7	
Total	13,639	13,446	27,025	50.4:49.6	
Median Age		16.5			
In Households		26,722			
Heads of Households		3,844			
Average HH Size		6.95			
0-9	4,774	4,396	9,170	52.1:47.9	
10-19	3,529	3,523	7,052	50.0:50.0	
20-29	1,957	2,399	4,356	44.9:55.1	
30-39	1,734	1,512	3,246	53.4:46.6	1974
40-49	1,237	1,199	2,436	50.8:49.2	
50-59	849	761	1,610	52.7:47.3	
60 & +	596	603	1,199	49.7:50.3	
N.S.	55	32	87		
Total	14,731	14,425	29,156	50.5:49.5	
Median Age		17.6			
In Households		29,156			
Heads of Households		4,252			
Average HH Size		6.85			
0-9	5,220	4,500	9,720	53.7:46.3	
10-19	3,890	3,750	7,640	50.9:49.1	
20-29	1,600	2,660	4,260	37.6:62.4	
30-39	1,770	1,730	3,500	50.6:49.4	1977
40-49	1,280	1,040	2,320	55.2:44.8	
50-59	740	990	1,730	42.8:57.2	
60 & +	750	680	1,430	52.4:47.6	
Total	15,250	15,350	30,600	49.8:50.2[1/]	
Median Age		17.8			

Source: U.S. Bureau of Census, 1970 Census of Population, General Population Characteristics, American Samoa, Pages 56-11, 12;
Development Planning Office, Report on the 1974 Census of American Samoa, East-West Population Institute, page 14-17;
Development Planning Office, Annual Report on Economic Indicators, Statistical Bulletin, American Samoa Government, 1979, page 1.

TABLE 9. PLACE OF BIRTH OF AMERICAN SAMOAN RESIDENTS, 1960 & 1970

		Total Population	NATIVE				FOREIGN BORN			
			Total	American Samoa	United States	Other	Total	Western Samoa	Other Pacific	Other Foreigners
1960	Male		9.060	8,911	146	4	1,104	875	123	106
	Female		8,904	8,821	76	7	983	829	75	76
	Total	20,051	17,964	17,732	221	11	2,087	1,704	198	185
1970	Total	27,159	21,286	20,067	1,211	8	5,873	4,535	NA	NA

Source: U.S. Bureau of Census, 1960 Census of Population, General Population Characteristics, Page 56-14;
_____, 1970 Census of Population, General Population Characteristics, Page 56-13;

TABLE 10.

VISITOR TRAFFIC: SAMPLE YEAR 1978

DEPARTURES BY MONTH AND PURPOSE OF TRAVEL
AMERICAN SAMOA: 1978

MONTH	BUSINESS	TOURIST	TRANSITS	OTHERS	TOTAL
JAN	211	916	3,154	2,507	6,788
FEB	251	611	1,991	2,305	5,158
MAR	228	622	831	2,441	4,122
APR	224	369	488	2,161	3,242
MAY	306	587	968	3,620	5,481
JUN	257	714	1,507	3,207	5,685
JUL	283	840	3,081	3,866	8,070
AUG	365	1,144	1,920	4,185	7,614
SEP	353	626	994	3,667	5,640
OCT	362	960	1,170	3,189	5,681
NOV	328	791	2,874	2,986	6,979
DEC	288	747	1,723	3,104	5,862
TOTAL	3,456	8,927	20,701	37,238	70,322

ARRIVALS BY MONTH AND PURPOSE OF TRAVEL
AMERICAN SAMOA: 1978

MONTH	BUSINESS	TOURIST	TRANSITS	OTHERS	TOTAL
JAN	448	1,063	3,636	3,285	8,432
FEB	450	926	1,699	3,042	6,117
MAR	373	854	1,133	3,186	5,546
APR	516	642	962	3,603	5,723
MAY	439	774	999	3,715	5,927
JUN	361	977	1,308	4,619	7,265
JUL	422	1,133	3,304	4,614	9,473
AUG	531	1,001	1,986	5,494	9,012
SEP	584	836	1,389	4,904	7,713
OCT	369	1,113	1,213	3,353	6,048
NOV	255	908	2,937	3,082	7,182
DEC	432	930	1,870	3,932	7,164
TOTAL	5,180	11,157	22,436	46,829	85,602

Source:

ASG Immigration Division data in ASG Development Planning Office, Statistical Bulletin, Annual Report of Economic Indicators, 1979, p. 12.

TABLE 11. LAND AVAILABILITY AND DENSITY, 1977

AMERICAN SAMOA STUDY AREA	Total Acres	Percent of Total	Total Acres 30% or Less	Percent of Total	Population 1977	% Total	Density*
Manu'a Group	14,464	29.7%	5,000	30.0%	1,705	5.6%	0.34
Ofu	1,792	3.6	175	1.0	359	1.2	2.05
Olosega	1,344	2.9	124	0.7	214	0.7	1.72
Tau	11,328	23.2	4,700	28.2	1,132	3.7	0.24
Tutuila*	34,304	70.3	11,675	70.0	28,833	94.4	2.47
Northeast Shore	4,205	8.6	720	4.3	2,438	8.0	3.39
Southeast Shore	4,281	8.8	630	3.8	2,777	9.1	4.41
Pago Pago Bay	4,326	8.9	925	5.5	9,135	29.9	9.87
Tafuna Plains	9,767	20.0	6,000	36.0	8,468	27.7	1.41
West Tutuila	11,725	24.0	3,400	20.4	6,015	19.7	1.77
Total Area	48,765	100.0	16,675	34.2	30,538	100.0	1.83

*Tutuila includes the island of Aunu'u which contains 384 acres, 115 acres of these lands are found on 30% slope or less. The density is measured in terms of population found on lands with 30% slope or less (population/land area).

Source: Development Planning Office, Economic Development Plan for American Samoa: FY 1979-1984, American Samoa Government, March 1979, pages III-11 and 18.

TABLE 12. RESIDENTIAL LAND USE DENSITY

AMERICAN SAMOA STUDY AREA	1977* Existing	1977* Population Density	1983 Residential Lands	1983 Population	1983 Density
Manu'a Group	205	8.3	200	1,457	7.28
Tutuila	2,270	12.7	2,503	33,446	13.36
Northeast Shore	255	9.6	280	2,552	9.11
Southeast Shore	252	11.0	273	3,006	11.01
Pago Pago Bay	438	20.9	455	10,033	22.05
Tafuna Plains	820	10.3	940	10,646	11.33
West Tutuila	505	11.9	555	7,239	13.04
Total	2,475	12.3	2,705	34,903	12.90

*Land area in acres; population density in people per acre

Source: Development Planning Office, Economic Development Plan for American Samoa: FY 1979-1984, American Samoa Government, March 1979, Page III-19, 20.

TABLE 13.

AGRICULTURAL EMPLOYMENT

1960	
Total Employed	5,833
Employed in Agriculture	2,840
Private Wage and Salary	47
Government	18
Self-Employed	1,064
Unpaid Family	1,711
Employed in Non-Agriculture	2,993
Private Wage	1,427
Government	1,349
Self-Employed	135
Unpaid Family	82
1974	
Employed in Agriculture	493
Communal	412
Commercial	72
No Stated	9
Produce Sold for Cash by Agriculture Principal Source of Income	187 131
1976	
Total Employed	7,297
Government	3,285
Cannery	1,214
Secondary	2,798

Source: U.S. Bureau of Census, 1960 Census of Population: General Population Characteristics, American Samoa, p. 56-21. Development Planning Office, Report on the 1974 Census of American Samoa, East-West Population Institute, p. 98-101. _____, Annual Report on Statistical Indicators, Statistical Bulletin 1979, p. 20.

TABLE 14. PRIMARY AND SECONDARY INCOME AND EMPLOYMENT, 1973-1976

	1973	1974	1975	1976	PERCENTAGE CHANGE, 1973-1976
TOTAL INCOME	$29,266,255	$29,800,265	$26,248,254	$26,580,235	- 9.0
ASG Income.....	16,630,828	19,415,140	18,396,140	17,242,204	+ 3.7
Canneries Income.....	3,464,131	2,021,598	3,319,764	3,640,305	+ 5.1
Secondary Economy Income.....	9,171,296	8,363,527	4,532,350	5,697,726	-37.9
TOTAL EMPLOYMENT *.....	8,200	7,994	7,878	7,297	-11.1
ASG Employment.....	3,901	3,884	3,359	3,285	-15.8
Canneries Employment.....	1,217	700	1,300	1,214	- 0.25
Secondary Economy Employment.....	3,082	3,410	3,219	2,798	- 9.2
AVERAGE INCOME.....	3,569	3,728	3,332	3,643	+ 2.0
ASG Average Income.....	4,263	4,999	5,477	5,249	+23.1
Canneries Acerage Income.....	2,846	2,888	2,554	2,999	+ 5.4
Secondary Economy Average Income..	2,976	2,453	1,408	2,036	- 31.6
AVERAGE HOUSEHOLD INCOME.....	7,241	6,995	6,205	6,329	-12.6
Population.....	28,574	29,190	29,400	29,800	+ 4.3
Number of Households.....	4,042	4,260	4,230	4,200	+ 3.9
PER CAPITA INCOME.....	1,024	1,021	893	892	-13.0

Source: Development Planning Office, Annual Report on Economic Indicators, Statistical Bulletin, American Samoa Government, 1979, page 20.

* Tax Office employment figures have been adjusted by the Development Planning Office to represent fulltime employment of an average of 30+ hours of work per week. Tax Office employment data did not make this distinction.

TABLE 15.

AMERICAN SAMOA GOVERNMENT TRADE BALANCE, 1970-1978

YEARS	IMPORT	EXPORT	TRADE BALANCE
1978	$ 73,339,727	$104,155,656	$ 30,815,929
1977	54,940,452	81,232,067	26,291,615
1976	50,690,638	64,892,749	14,197,111
1975	49,893,544	55,897,558	6,004,014
1974	46,549,418	82,988,726	36,439,308
1973	35,952,859	66,576,005	30,623,146
1972	24,114,332	53,738,997	29,624,665
1971	19,556,873	41,396,235	21,839,362
1970	15,713,339	36,735,384	21,022,045

N.B. Figures presented cover only the private sector import and export.

Source: Development Planning Office, Annual Report on Economic Indicators, Statistical Bulletin, American Samoa Government, 1979, page 30

TABLE 16.

SOURCES OF REVENUE, 1971-1978

FISCAL YEAR	LOCAL APPROPRIATION	DIRECT CONGRESSIONAL APPROPRIATION	DEPARTMENT OF INTERIOR GRANT-IN-AID	OTHER FEDERAL GRANTS	SUB-TOTAL	RECEIPTS BY ASG INDUSTRIAL/ COMMERCIAL OPERATIONS	GRAND TOTAL (ALL SOURCES)
1971	7,348,000	400,000	7,842,000	1,111,000	16,701,000	2,195,000	18,896,000
1972	7,306,000	470,000	10,733,000	5,183,000	24,692,000	2,360,000	27,052,000
1973	9,836,000	520,000	14,510,000	5,545,000	30,411,000	3,510,000	33,921,000
1974	16,695,000	556,000	13,444,000	6,981,000	37,676,000	5,996,000	43,672,000
1975	11,142,000	647,000	14,203,000	5,567,000	31,559,000	6,007,000	37,566,000
1976	5,563,000	942,000	29,615,000	13,547,000	49,667,000	6,142,000	55,809,000
1977	9,582,000	798,000	22,074,000	23,721,000	56,175,000	6,206,000	62,381,000
1978	10,087,000	774,000	19,831,000	11,495,500	42,187,500	NA	NA

Source: Development Planning Office, Annual Report on Economic Indicators, Statistical Bulletin, American Samoa Government, 1979, page 16.

MAPS

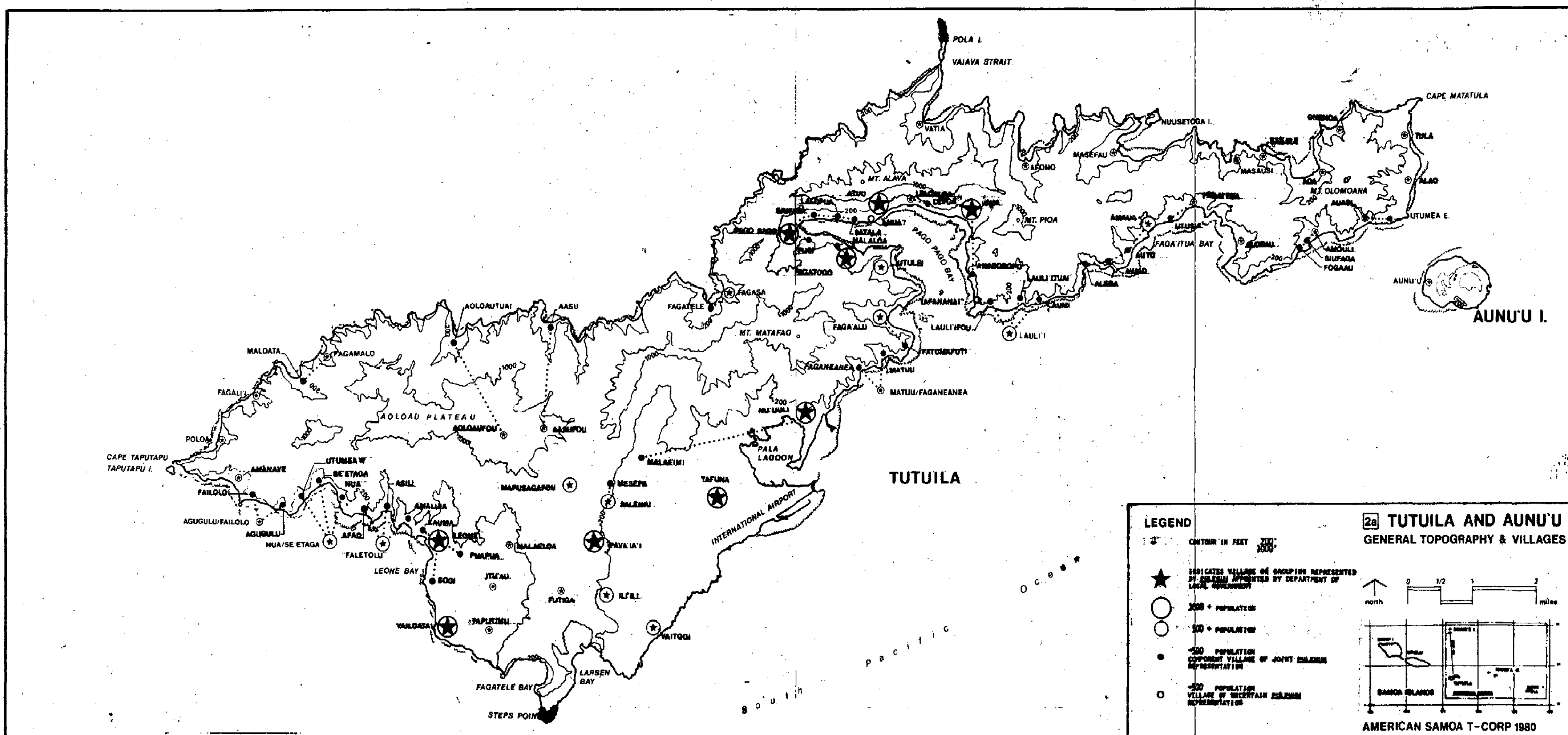
2a/b: General Topography and Villages.

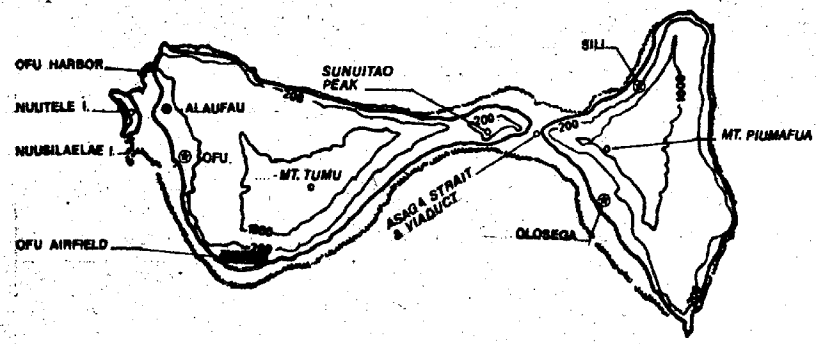
3a/b: Population and Roads.

4a/b: Selected Environmental Factors.

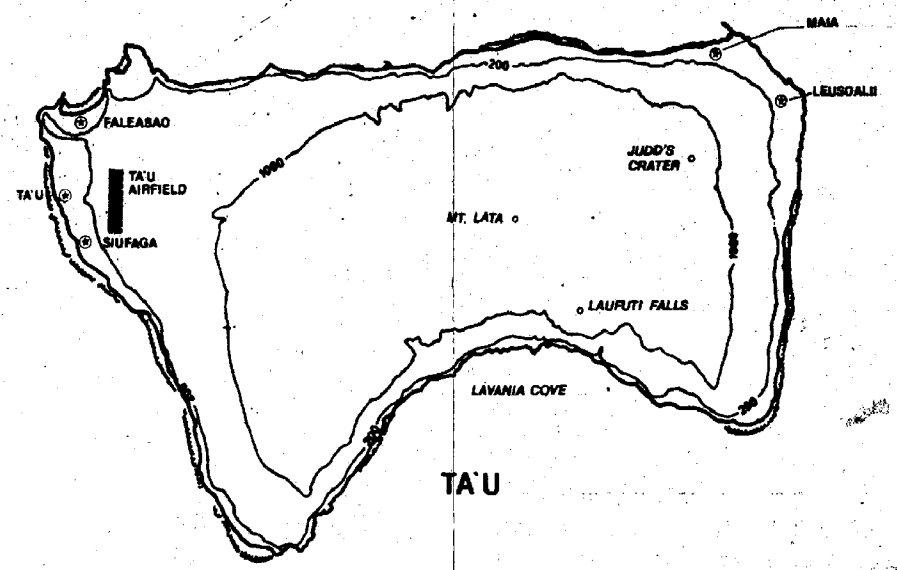
5a/b: Existing Recreational Resources, Landmarks, Schools, & Related Mapped Data, 1980.

6a/b: Principal Land-Based, Specialized, and Marine Recreation Sites by Recreational Service District.


2a TUTUILA AND AUNU'U
GENERAL TOPOGRAPHY & VILLAGES
LEGEND
north
miles
AMERICAN SAMOA T-CORP 1980
TUTUILA
AUNU'U I.
AUNU'U
POLA I.
VAIAVA STRAIT
VATIA
CAPE MATATULA
TULA
ALAO
UTUMEA E.
MT. OLOMOANA
MASAUSI
MASEFAU
AFONO
NUUSETOGA I.
MT. ALAVA
MT. PIOA
PAGO PAGO BAY
FAGA'ITUA BAY
LAULI'I
LAULI'IFOU
FATUMAFUTI
MATUU
MATUU/FAGANEANEA
FAGANEANEA
FAGA'ALU
MT. MATAFAO
FAGASA
FAGATELE
AASU
AOLOAUTUAI
AOLOAU PLATEAU
AOLOAUFOU
MALOATA
FAGAMALO
FAGALII
POLOA
CAPE TAPUTAPU
TAPUTAPU I.
AMANAVE
FAILOLO
AGUGULU/FAILOLO
AGUGULU
NUA/SE'ETAGA
UTUMEA W
SE'ETAGA
NUA
AFAO
ASILI
FALETOLU
AMALUIA
LEONE BAY
LEONE
SOGI
VAILOATAI
PAPATAIMU
FAGATELE BAY
STEPS POINT
LARSEN BAY
FUTIGA
MAPUSAGAFOU
MALAELOA
MESEPA
MALAEIMI
TAFUNA
PALA LAGOON
INTERNATIONAL AIRPORT
ILI'ILI
VAITOGI
south pacific ocean
SAMOA ISLANDS

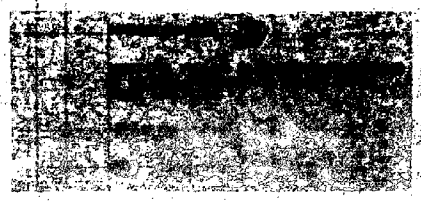


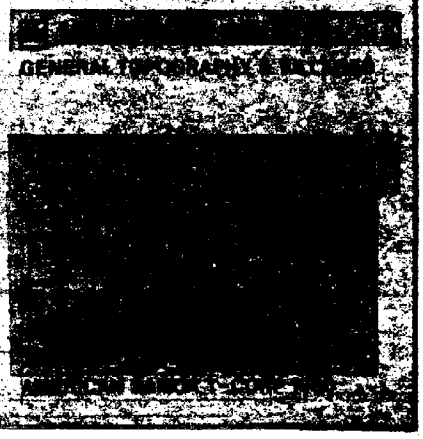
OFU OLOSEGA

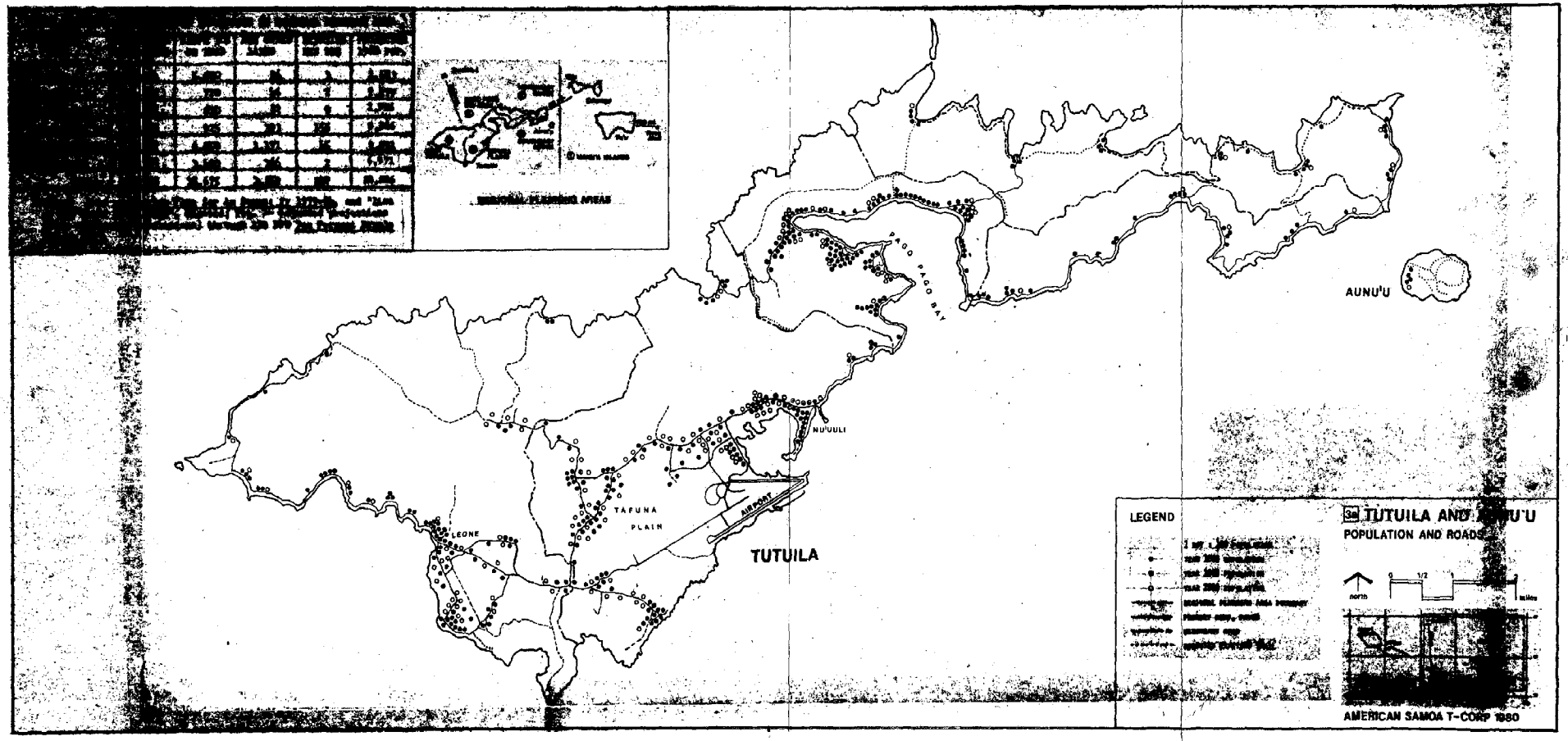


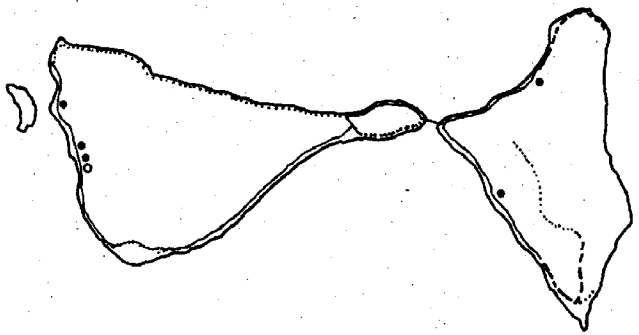
TA'U

LEGEND






AUNU'U
PAGO BAY
NU'UULI
TAFUNA
PLAIN
AIRPORT
LEONE
TUTUILA
LEGEND
POPULATION AND ROADS
north
AMERICAN SAMOA T-CORP 1980



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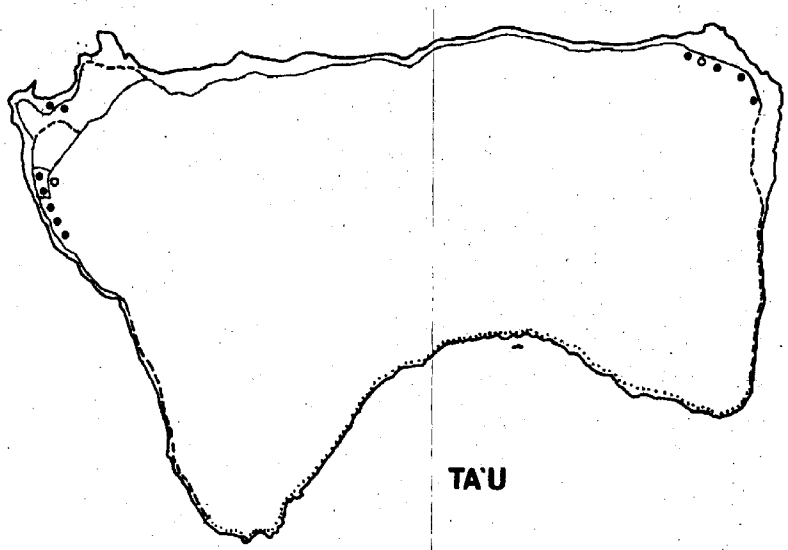

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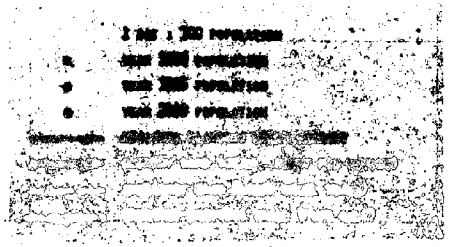
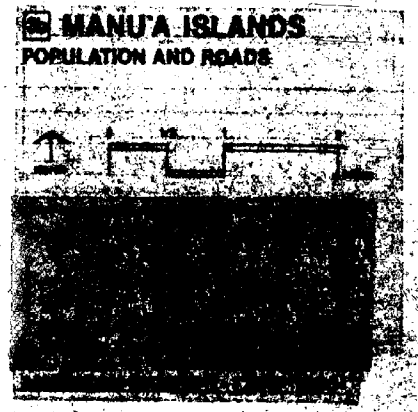
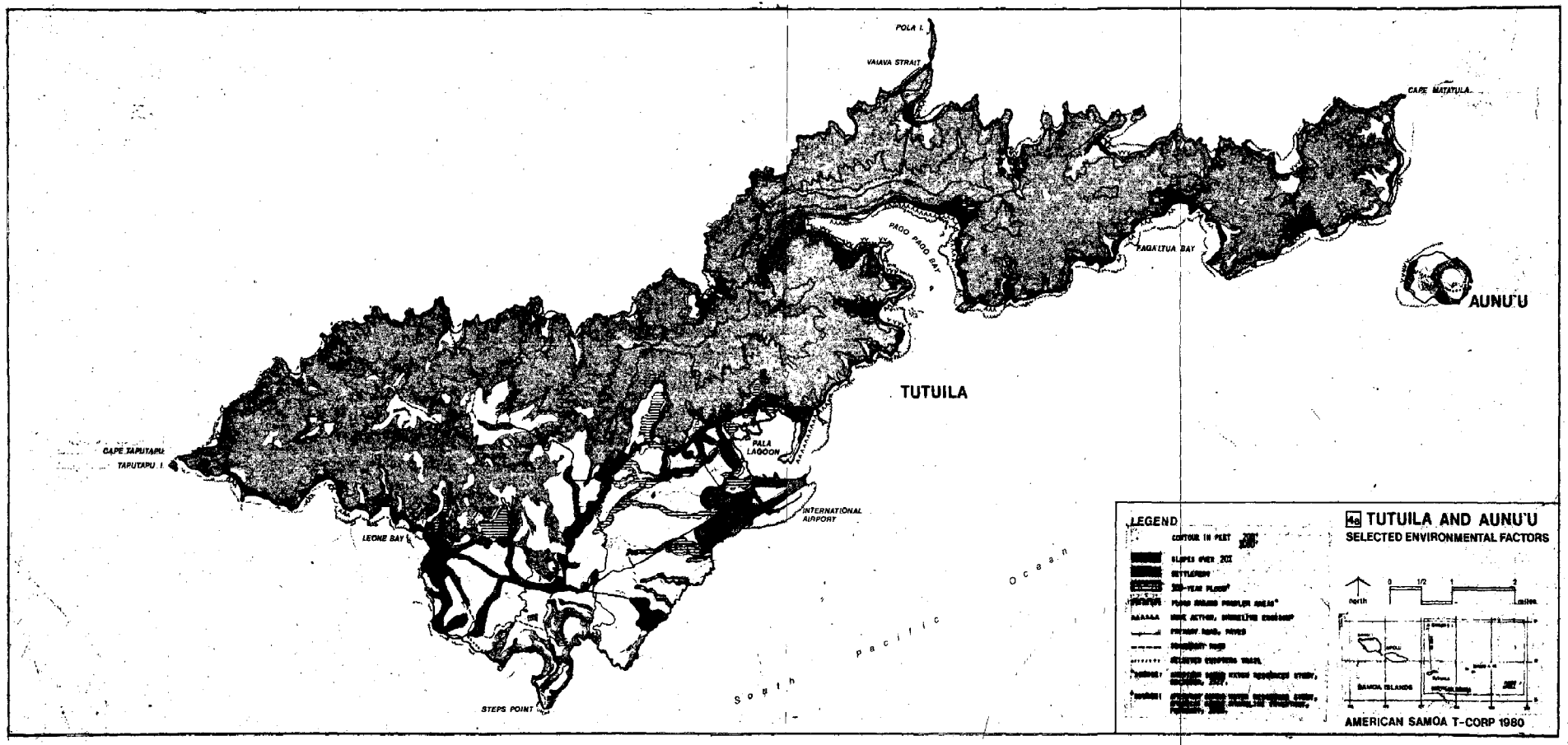
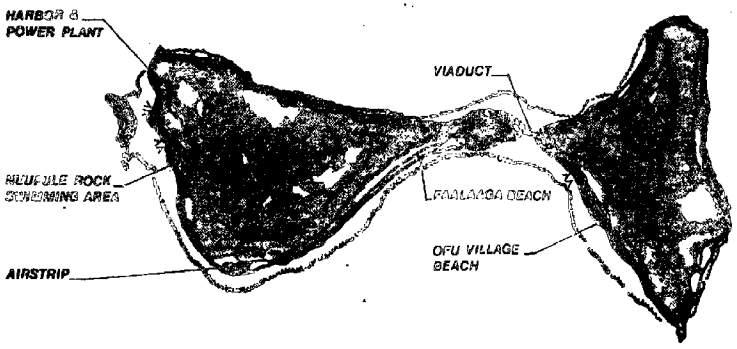






4e TUTUILA AND AUNU'U
SELECTED ENVIRONMENTAL FACTORS

AMERICAN SAMOA T-CORP 1980



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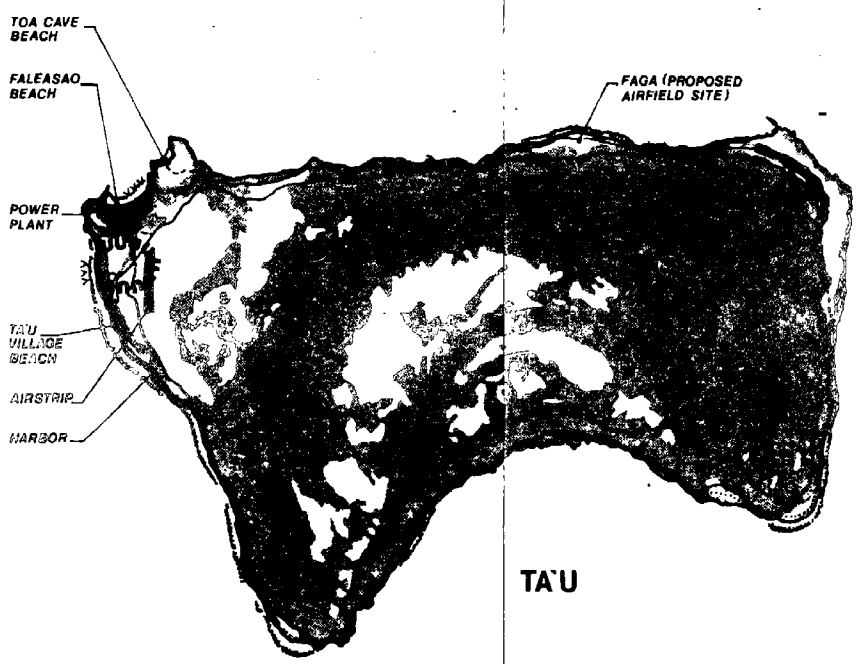

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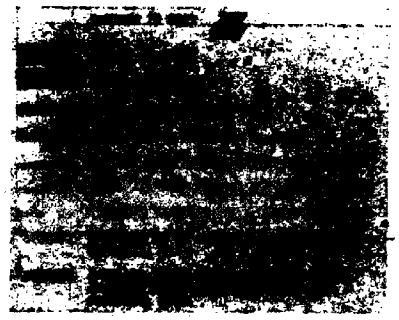
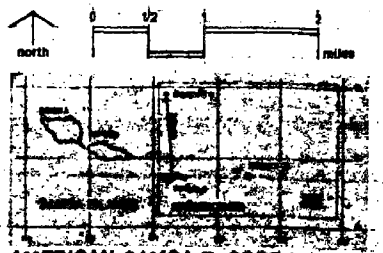
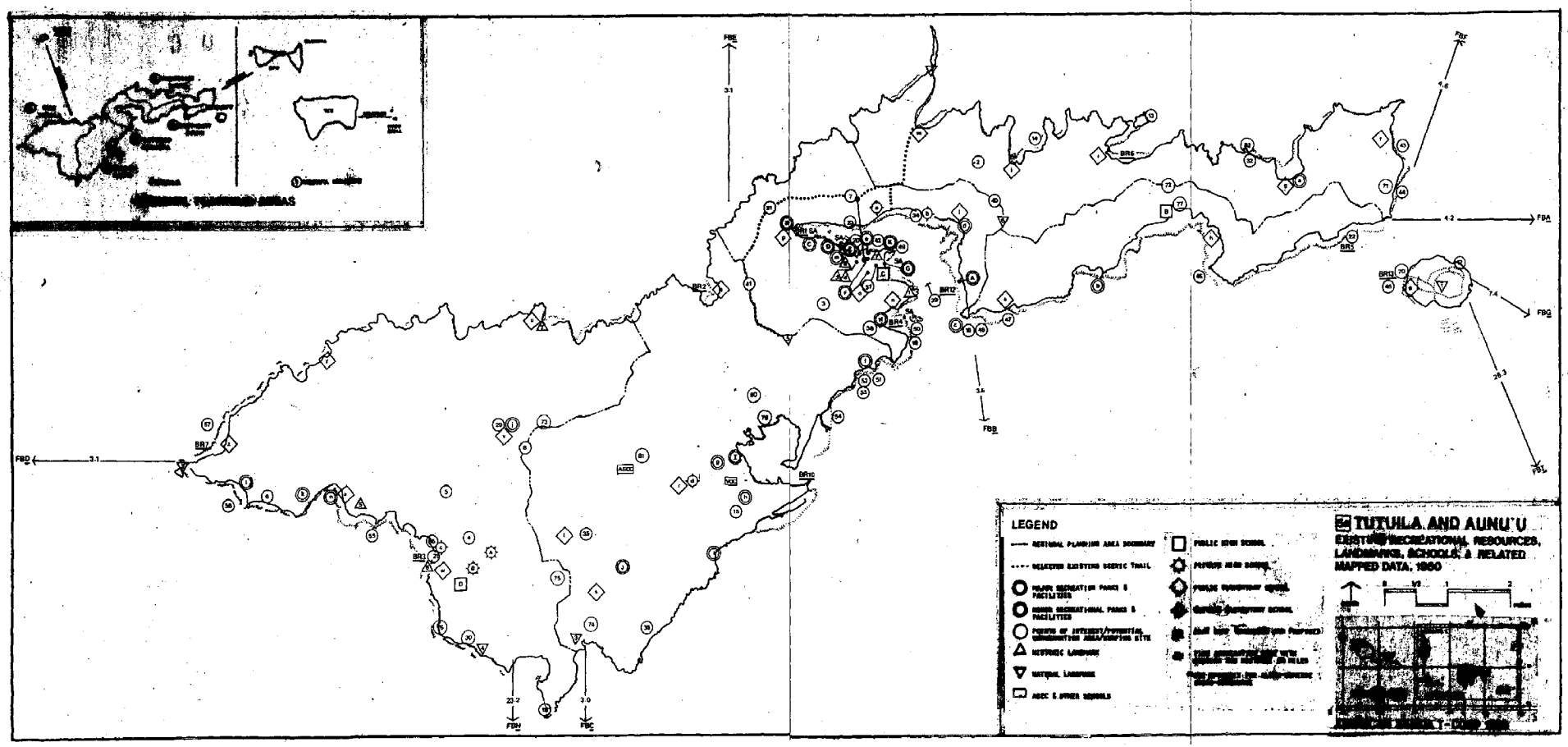


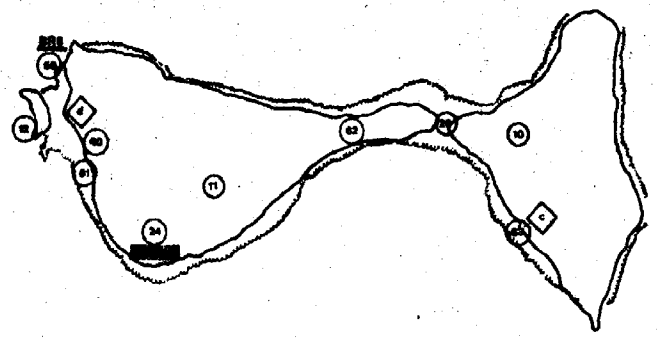
4b MANU'A ISLANDS

SELECTED ENVIRONMENTAL FACTORS



AMERICAN SAMOA T-CORP 1980


LEGEND
TUTUILA AND AUNU'U
EXISTING RECREATIONAL RESOURCES, LANDMARKS, SCHOOLS, & RELATED MAPPED DATA, 1980



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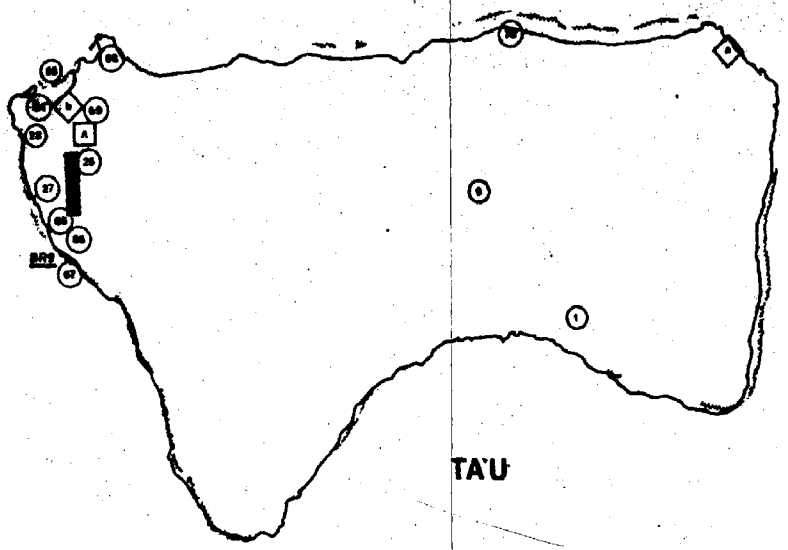
OLOSEGA



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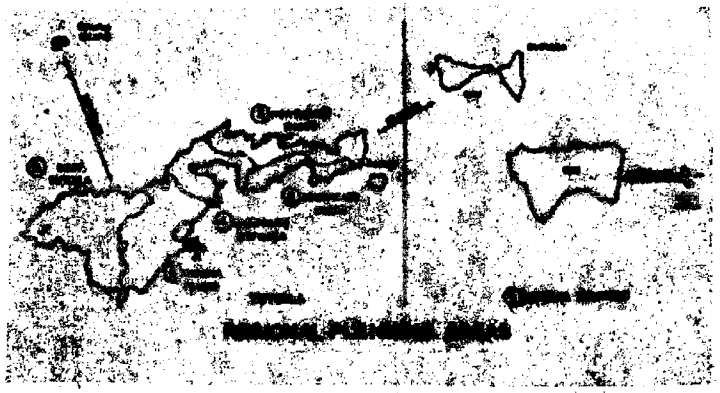


LEGEND

- PUBLIC HIGH SCHOOL
- PUBLIC ELEMENTARY SCHOOL

5b MANU'A ISLANDS

EXISTING RECREATION RESOURCES, LANDMARKS, SCHOOLS, & RELATED MAPPED DATA, 1980

AMERICAN SAMOA T-CORP 1980

MAPS 6a/6b. DETAILED LEGEND

RECREATIONAL RESOURCES (LAND-BASED) ◯ = DOE/ASCC Resource.

TERRITORIAL LEVEL:

(1) Pago Pago Park (upgrading required)

(2) ◯Samoana H.S. - field/courts + track (substandard)

(3) ◯ASCC Sheltered Gym

REC SERVICE DISTRICT LEVEL - derived per population & access:

(4) ◯MANU'A: Manu'a H.S. (expansion required)

(5) EAST T: Anasosopo Landfill Park (initial development)

(A) ◯Faga'itua H.S. - courts/limited field

(6) PAGO B: Utulei Beach Park (expansion programmed)

(7) Faga'alu Park

(8) Malalda Rec Pier (planned expansion required)

(9) Fagatogo Shorefront (upgrading required)

(10) Autapini Shore (development planned)

(11) TAFUNA: Tafuna Park & Children's Playground (requires maintenance & possible expansion)

(12) WEST T:◯Leone H.S. - fields & courts

POTENTIAL TERRITORIAL/REC DISTRICT SITES

(13) Siulagi Plantation Land

(14) Aasu/Aoloau Open Space

(15) Logotala Hill (ASG)

(16) Taputimu Farm - seaward parcel (ASG)

(17) ◯ASCC - planned swimming pool, field, track, stadium

LOCAL LEVEL

(a)-(z) Public Elementary Schools

a. Fitiuta, Ta'u
b. Faleasao, Ta'u
c. Olosega, Olosega
d. Ofu, Ofu
e. Aunu'u, Aunu'u
f. Matatula, Tula
g. Olomoana, Aoa
h. Alofau
i. Masefau
j. Afono
k. Lauli'i
l. Aua
m. Mauga-O-Alava, Vatia
n. Matafao, Faga'alu
o. Fia Iloa, Utulei
p. Pago Pago
q. Le'atele, Fagasa
r. Manulele Tausala, Tafuna
s. Lupelele, Ili'ili
t. Pava'ia'i
u. Aasu (inactive)
v. Sili'aga, Aoloau
w. Leone-Midkiff, Leone
x. Alataua-Lua, Nua
y. Fagamalo
z. Poloa

MAPS 6a/6b. DETAILED LEGEND (Continued)

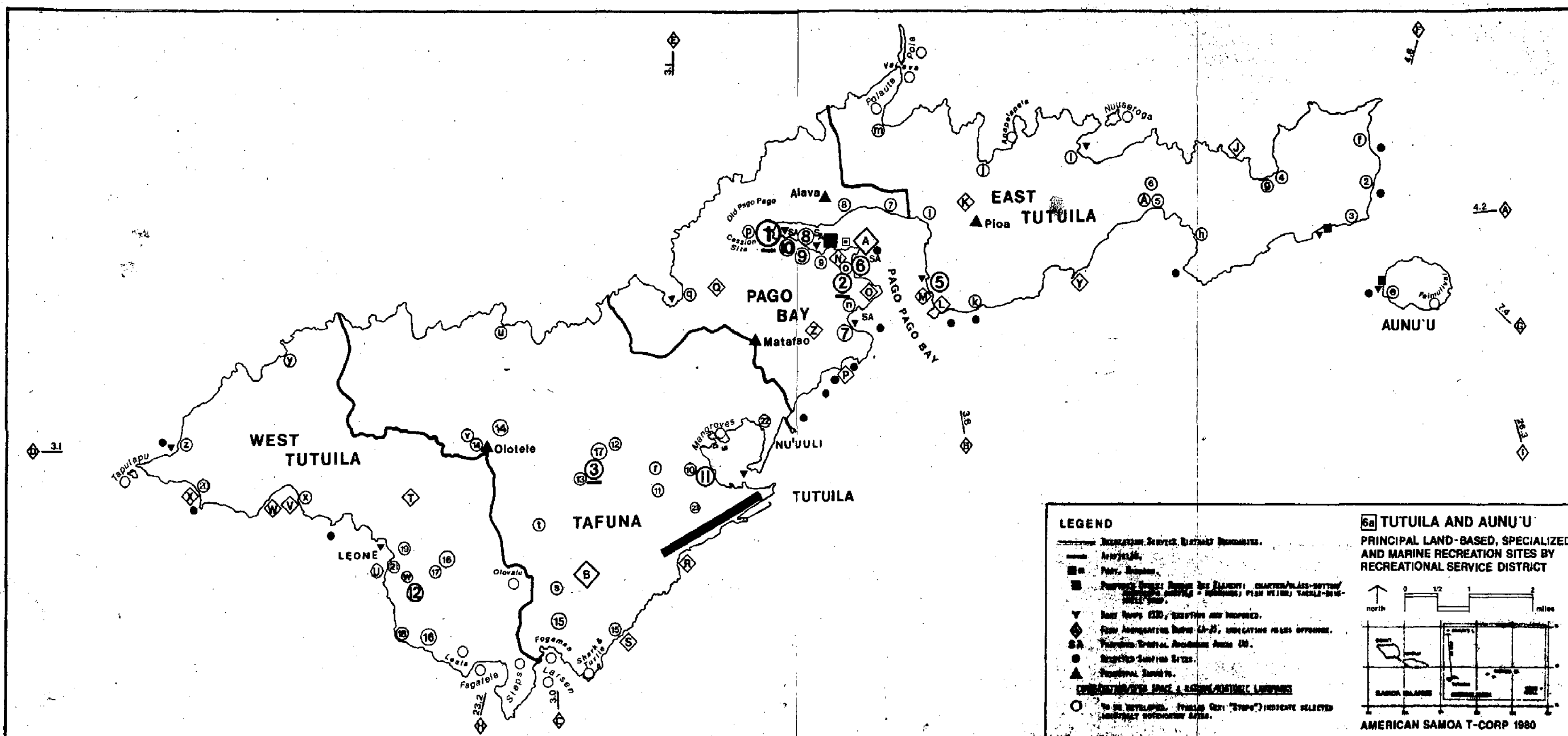
①-㉓ PRIVATE SCHOOL, VILLAGE, OTHER RESOURCES

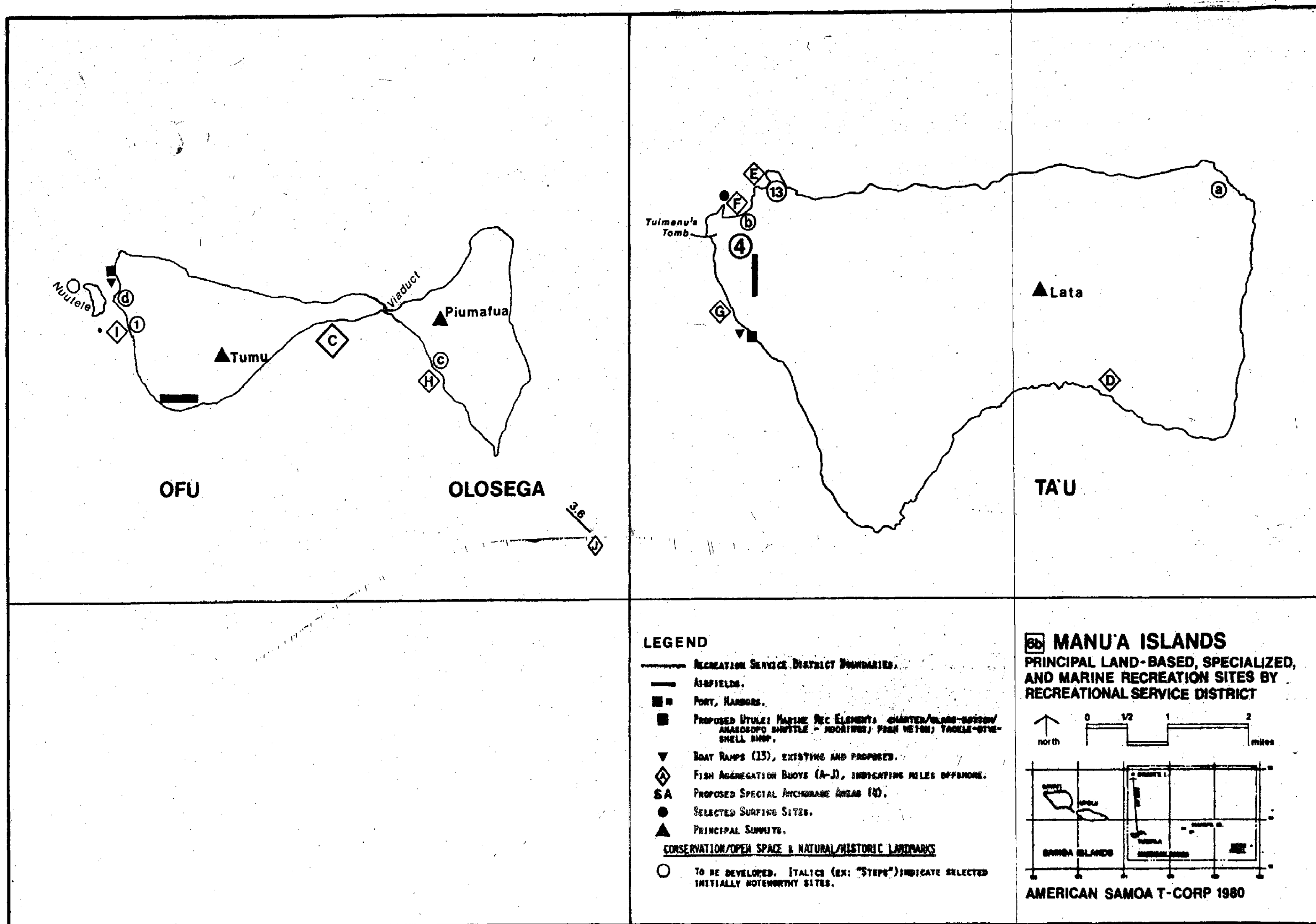
1. Ofu Village Basketball Court
2. Alao Village Open Space
3. Utumea E. Village Space
4. Aoa Village Park Pavilion
5. Faga'itua Village Malae
6. Faga'itua Crest Park
7. St. Francis Private El School
8. Marist Bros Private El School
9. Fagatogo Village Malae
10. Tafuna Residential Playground
11. South Pacific Academy (Private)
12. Mormon Church Recreation Courts
13. ASCC, Existing Field
14. Aoloau Village Landscape Park
15. Vaitogi Village Open Space
16. Marist Bros Private High School
17. Fa'asao Private High School
18. Vailoatai Village Malae
19. St. Theresa's Private El School
20. Amanave Village Park
21. Fagalele Private Mission Grounds
22. Pala Lagoon (Nu'uuli-side) Shore Space
23. YCC Airport Landscape Park

SPECIALIZED RESOURCES

Ⓐ RAINMAKER HOTEL - SWIMMING POOL, PRIVATE BEACH
Ⓑ LAVA LAVA GOLF COURSE - 9 HOLES WITH EXPANSION PLANS
◇ SELECTED BEACH OR SWIMMING SITES
◇ MISCELLANEOUS SPECIALIZED SITES

A. Rainmaker Hotel
B. Lava Lava Golf Course
C. Faalaaga Beach, Ofu
D. Laufuti Falls, Ta'u
E. Toa Cove Beach, Ta'u
F. Faleasao Beach, Ta'u
G. Ta'u Village Beach
H. Olosega Village Beach
I. Nuupule Rock, Ofu, Swimming
J. Sa'ilele Beach, (Swimming?)
K. Afono Road Crest
L. Breakers Point Trail
M. Anasosopo Park, Swimming
N. Solo Ridge Aerial Tramway to Alava Pk.
O. Blunt's Point Historic Walk
P. Matu'u Outlook & Underwater Park Access
Q. Fagasa Road Crest
R. Freddie's Beach, Fogagogo
S. Vaitogi Shore Pocket Beach Swimming
T. Leone Falls
U. Fagalele Shore, (Leone) Swimming
V. Nua Beach, Swimming
W. Utumea W. Beach, Swimming
X. Amanave Beach, Swimming
Y. Two-Dollar Beach (Private) Swimming
Z. Vaitanoa Falls and Pool


6a TUTUILA AND AUNU'U
PRINCIPAL LAND-BASED, SPECIALIZED, AND MARINE RECREATION SITES BY RECREATIONAL SERVICE DISTRICT
LEGEND
north
0
1/2
1
2
miles
AMERICAN SAMOA T-CORP 1980
WEST TUTUILA
TAFUNA
PAGO BAY
EAST TUTUILA
AUNU'U
TUTUILA
PAGO PAGO BAY
Tapulapu
LEONE
Olotele
Olovalu
Leala
Fagafele
Sleps
Larsen
Fogamaa
Shark & Turtle
Mangroves
NU'UULI
Matafao
Alava
Old Pago Pago
Cession Site
Palauta
Vaiava
Pola
Anapalapala
Nuusetoga
Pioa
Faimulivai
3.1
23.2
3.0
3.6
4.6
4.2
7.4
26.3


OFU
OLOSEGA
TA'U
Nuutele
Tumu
Viaduct
Piumafua
Tuimanu'a Tomb
Lata
3.6
LEGEND
Recreation Service District Boundaries.
Airfields.
Port, Harbors.
Boat Ramps (13), existing and proposed.
Fish Aggregation Buoys (A-J), indicating miles offshore.
Proposed Special Anchorage Areas (4).
Selected Surfing Sites.
Principal Summits.
CONSERVATION/OPEN SPACE & NATURAL/HISTORIC LANDMARKS
To be developed. Italics (ex: "Steps") indicate selected initially noteworthy sites.
6b MANU'A ISLANDS
PRINCIPAL LAND-BASED, SPECIALIZED, AND MARINE RECREATION SITES BY RECREATIONAL SERVICE DISTRICT
north
0
1/2
1
2
miles
SAMOA ISLANDS
AMERICAN SAMOA T-CORP 1980

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Categories

1. Recreation
2. American Samoa, General
3. Socio-Cultural and Historical
4. Population and Migration
5. Marine and Coastal Zone
6. Other Environment, Conservation, and Natural History
7. Land Use and Tenure
8. Planning and Economic Development
9. Infrastructure (physical)
10. Legal Source Documents
11. Miscellaneous
12. Map and Imagery Sources

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US Army Corps of Engineers, Pacific Ocean Division. Flood Hazard Studies, Tutuila, American Samoa, for ASG, 1976-77:

* Aua and Lauliituai, May 1977.
* Fagaalu Stream, Aug. 1976.
* Fagaitua and Amouli, May 1977.
* Leone Village Area, Aug. 1976.
* Nuuuli Village Area, Aug. 1976.
* Tafunafou, May 1977.
* Vaipito Stream, May 1977.

Forestry and the Watershed: No specific forest maps located, refer to "vegetation" and "conservation" citations and some physical data under "water resources".

Geology: Pocket map in Harold T. Stearns, Geology of the Samoan Islands, Nov. 1944, plus coverage of Manu'a being added in 1980 by University of Hawaii Geography Dept. as part of the CZM Atlas of American Samoa, in progress.

Historic Landmarks (National, Registered): American Samoa Recreation Area Development Plan: 1975-1980.

Hydrography: Map 2-2, Vol. I, of ASG DPW Wastewater Facilities Plan American Samoa, prepared by CH2M Hill, Feb. 1976. (Note this map locates the new rainfall gaging stations scattered around Tutuila).

Imagery: 1) Aero Service 1971 air photos.
2) USGS air photos (used photogrammetrically to produce the 1963 topographic maps).

Infrastructure: Power, Water, Sewer, and Solid Waste Facilities: ASG DPW Wastewater Facilities Plan American Samoa, prepared by CH2M Hill, Feb. 1976, also includes general maps of land use, slope, soils.

Isohyet Map (Rainfall Distribution): Extensive checking shows none in existence; shallow records from a few new gaging stations on Tutuila may exist.

Land Tenure: ASG DPO office maps.

Land Use: 1) Bryan Farrell, "Perspective on Land Use -- American Samoa", Journal of the Graduate Research Center, 34:3, June 1965, 300-327, also includes general land use, soils, and geology maps.
2) Aero Service circa 1973 map "Tutuila Island -- Land Use Map of Tutuila Island, American Samoa", with an extensive classification key modified from the International Geographical Union classification proposal of 1970.

Location Map: MKGK/Y 1980 map.

Natural Landmarks (National, Registered): American Samoa Recreation Area Development Plan: 1975-1980.

Navigation and Ports: U.S. Nautical Charts and U.S. Coast Guard Notices to Mariners.

Pacific Regional Maps: The Pacific Island Yearbook, and National Geographic maps.

Pago Pago Harbor -- Circulation, Foreshore Fill/Erosion Characteristics, etc.: Maps included in the 1978 US Army Engineer District (Honolulu) Draft Environmental Statement, US Dept. of the Army, Permit Processing Guidelines to Control the Cumulative Effects of Shoreline Development in American Samoa.

Planning Areas (Regional): ASG DPO 1979 Economic Development Plan.

Political Boundaries: MKGK/Y compilations and cross checks of various existing references. County and Administrative District lines per standard map displayed in ASWRS American Samoa Community Profile - 1978 and US Dept. of Commerce Census Reports.

Population -- Distribution: MKGK/Y 1980 map compiled from all existing data.

Population -- 1974 Enumeration Districts: Original mylar planning bases annotated for the Report on the 1974 Census of American Samoa.

Power/Energy Facilities: Exhibit III-I of ASG and Action Resources, Inc. Energy Facility Siting: CZM Plan, American Samoa, 10 Jan. 1980.

Recreation: MKGK/Y 1980 Map compiled from all existing sources, and checked in the field Feb. 1980.

Reefs and the "Near Shore": Maps in progress by AECOS and Aquatic Farms of Hawaii to be submitted to the Army Corps of Engineers circa March 1980.

Roads: USGS Topographic maps, MKGK/Y research, and information in the DPO 1979 Economic Development Plan; plus Dept. of Public Works sources.

Schools: 1) Public: Dept. of Education location map (received Jan. 1980) for high and elementary schools.
2) Private: MKGK/Y field and institutional research compilations.

Shoreline Beach Inventory:

US Army Engineer District, Honolulu. American Samoa Water Resources Study, American Samoa Shoreline Inventory, prepared by Sea Engineering Services, Inc., and R.M. Towill Corp., Honolulu, Feb. 1980.

Slope Zone: Dames and Moore, Sept. 1979 map "Slope Map Planning Districts, Tutuila Island". Note: Dames and Moore used a range of slope breakpoints in "%" that will be altered to a different range of breakpoints (though still in "%") in the in-progress CZM Atlas of American Samoa.

Soils: (See Climate, etc. and Farrell under Land Use, and Infrastructure).

Surfing Sites: Rob Shaffer's map and annotated list delivered Feb. 1980.

"Tourism" -- popular, contemporary: Map by James Bier in production at the University Press of Hawaii in February 1980 entitled "American Samoa" (obverse) -- "Western Samoa" (reverse) -- as corrected and updated by MKGK/Y.

Trails: MKGK/Y research; also map in progress on Trails of American Samoa by Susan Ryan.

Vegetation: (See Climate, etc.).

Water Resources in General: 1) The several components of the US Army Corps of Engineers, American Samoa Water Resources Study, 1977-78, 2) US Geological Survey. Water Resources Data for Hawaii and other Pacific Areas, (Water-Data Report HI-78-2), Vol. 2: "Trust Territory of the Pacific Islands, Guam, American Samoa, and Northern Mariana Islands, 1979, 1-108.