

Coastal and Estuarine Land Conservation Plan
For the Territory of American Samoa



April 2008

American Samoa Coastal Management Program

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I. Introduction

A. Authority for the Program

The Department of Commerce, Justice, and State Appropriations Act of 2002 (Public Law 107-77), directed the Secretary of Commerce to establish a Coastal and Estuarine Land Conservation Program “for the purpose of protecting important coastal and estuarine areas that have significant conservation, recreation, ecological, historical, or aesthetic values, or that are threatened by conversion from their natural or recreational state to other uses,” giving priority to lands which can be effectively managed and protected and that have significant ecological value.

The American Samoa CELC Plan follows the guidelines directing the content, development, and implementation of state CELC Plans, available online at: <http://coastalmanagement.noaa.gov/land/welcome.html>

B. Definition of a CELC Plan

A Coastal and Estuarine Land Conservation Plan (CELC Plan) is developed by each coastal state in order to participate in the federal grant funding program for coastal and estuarine land conservation. It provides an assessment of priority land conservation needs and clear guidance for nominating and selecting land conservation projects within the state.

C. Background

American Samoa is located in the South Pacific, 14 degrees south of the Equator. Although a U.S. Territory for over one hundred years, American Samoa maintains and embraces its Polynesian identity. The Samoan way of life, the *fa’asamoa*, is evident in the daily lives of the people and plays a major role in any natural resource management effort, such as this CELC Plan.

American Samoa consists of five volcanic islands and two outlying atolls, with a total area of 76 square miles. Tutuila is the westernmost and largest of these islands, with an area of 55 square miles, and is home to 95% of the country’s population. Steep, rugged mountains make for a dramatic landscape on Tutuila, but also limit the amount of land available for development to about one third of its total area. With a rapidly growing population comes an increased demand for developable land. The population of American Samoa was 57,291 in 2000, according to the last census, which represented a 22% increase in population in just ten years. The 2007 population estimate is 68,200. Our population is considered one of the fastest growing populations in the Pacific

Region. This ever-growing population has resulted in more development and expansion into environmentally sensitive areas, including wetlands and lowland rainforest.

Development in the villages traditionally occurred with the houses clustered around a *malae* (village green). With the increased population and development pressure, this traditional development has become largely modified. Today, in the majority of villages, development is oriented along the main road in a “strip” pattern. Communities have spread to the edges of the water and mountains and have caused damage to wetlands and rainforests due to filling and clearing activities.

Given the growing population and the associated changes that come with growth, land conservation is increasingly important. The protection of lands is a major priority for the territory and the American Samoa Coastal Management Program (ASCMP). ASCMP was established in 1980 under a federally funded program created to promote the management and protection of the coastal resources of the territory. The mission of ASCMP is to provide effective resource management by protecting, maintaining, restoring, and enhancing the resources of the coastal zone.

The CELC Plan serves two purposes. The first is to satisfy requirements for participation in the federal program. A federally-approved CECL Plan is a pre-requisite for participating in the competitive federal grant funding program for coastal and estuarine land conservation. The second purpose is to create a comprehensive assessment of priority for conservation areas for American Samoa, as one does not currently exist. The intention of this plan is to draw on existing efforts and management plans that have identified potential conservation areas.

II. Priorities for Coastal and Estuarine Land Protection

A. Geographic Extent of Coastal and Estuarine Areas in American Samoa

By federal law, the coastal zone is defined as the area within three miles of the coast. In American Samoa, we have a unique coastal zone, in that all of our land falls within this three mile boundary. The definition of American Samoa’s coastal area is as follows: “The Island of Tutuila, the Manu’a Island group, Aunu’u Island, Rose Island, and Swains Island, Territory of American Samoa, and all coastal waters and submerged lands for the distance of three nautical miles seaward in all directions there from are declared within the Coastal Zone Management Area and subject to the coastal zone management policies of the Territory of American Samoa.” This means that the entire territory, consisting of five volcanic islands and two outlying atolls, will be used as the geographic extent of coastal and estuarine areas for the purposes of the CELCP (figure 1).

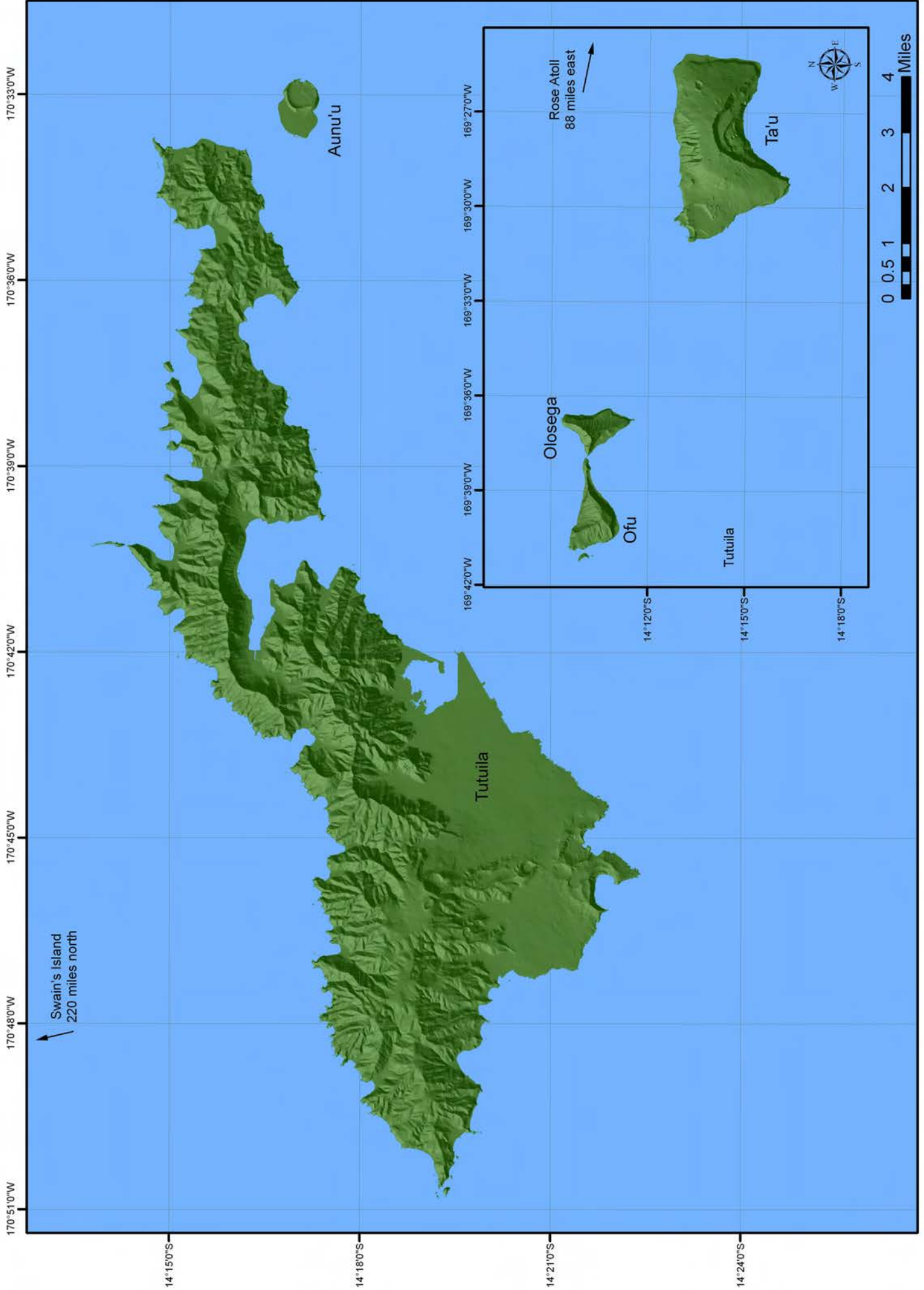


Figure 1. The islands of American Samoa.

B. Lands and Values to be Protected in American Samoa's CELCP

Social Values

Polynesians have inhabited the Samoa Islands for over 3,000 years. Many people still live on the land that their ancestors presided over thousands of years ago. Samoans have very strong family ties and these ties extend to the land. Maintaining family control over land is an important social value that greatly influences management plans for protected areas. Maintaining the health of the land is vital to the health of the American Samoa people. Social values that can be protected and enhanced through land conservation include community involvement, education, improvements to public health, preservation of historic or cultural areas, and aesthetic values.

Ecological Values and Lands to be Protected

Priority ecological values in American Samoa include maintaining ecosystem function, protecting water quality, retaining biodiversity, minimizing habitat loss due to development, and protecting our ocean resources. To protect these ecological values, the following types of land are those to be protected through the CELCP.

Wetlands

Wetlands serve important ecological and cultural roles. Many fish and shellfish use wetlands as their breeding grounds. Some wetlands serve as agricultural areas for such food as taro, and as sources of native medicines. Wetlands also help in the filtering of pollutants, flood control, erosion control, and storm protection.

The primary problem facing American Samoa's wetlands are development. Wetlands are cleared and filled for housing, commercial development, and agriculture. Other threats include dumping of debris and waste, cutting mangroves for firewood, upstream pollution and increased sedimentation resulting from erosion caused by the clearing of land on steeper slopes. Since 1961, American Samoa has lost over 30% of its wetlands, however prior to 1961 great numbers of wetland areas were destroyed for the construction of primary infrastructure including roads, schools, hospitals, parks and airports. Some experts estimate that American Samoa has lost in total, approximately 75-80% of its historic wetlands.

Watersheds

Watershed protection is important to maintain the water resources for the people of American Samoa. Not only do our watersheds provide fresh water, they are also important for wildlife habitat and flood control. Conservation of natural resources is largely dependent upon the balance of ecological relationships within the watershed where natural resources are located. This is particularly true in the tropical environment of American Samoa.

The extent of future groundwater production in American Samoa is largely dependent upon the type and location of current and future land use development. Land use development in American Samoa typically includes the construction of more impermeable surfaces such as paved driveways and buildings with metal roofs. Impermeable surfaces often redirect drainage flows from natural flood plains that contain more permeable soils conducive to the recharge of surface flows. When land use development builds upon these portions of flood plains and drainage areas, the amount of available recharge area is reduced.

Increased runoff from impermeable surfaces can generate local flooding and carry storm water flows to susceptible downstream areas. Groundwater quality can also be diminished from surface flows containing contaminated solid waste material, grease, oils, fuel, pesticides, sediments and other contaminants, especially during heavier and prolonged rainfall periods.

Coastline

American Samoa has approximately 72 miles of shoreline. With increasing population pressures, development is occurring along the shoreline at a rapid rate. Coastlines provide erosion control, recreational activities, and habitat for many different animals. Several beaches in American Samoa are utilized by nesting sea turtles, including the federally listed endangered hawksbill turtle.

American Samoa recognizes the importance of its coastlines. The ASCMP Administrative Code provides a 200-foot shoreline protection buffer under the Shoreline Development Policy. This is intended to protect the shoreline from frivolous development and ensure that any development in this area is a necessary development and properly designed to ensure public safety and minimize hazards.

Native Forests

Over 90% of the Samoan Archipelago was originally covered with tropical rainforest, but as the islands became settled and populations increased, the native forest was slowly cleared for agriculture and housing needs. Over half of our native vegetation has been severely altered by human activity and natural catastrophes, much of it in the last few decades, as an increasing population and three destructive hurricanes have taken their toll.

Forests are of great benefit to American Samoa as they provide erosion and flood control, native plants for cultural and medicinal uses, wildlife habitat, watershed health, and aesthetic value.

Areas of Connectivity

Areas adjacent to existing protected areas, such as the National Park of American Samoa and the Fagatele Bay Marine Sanctuary, should be considered as buffer zones. Buffer

areas have long been established as useful in mitigating outside effects to the managed area. For example, an invasive tree has been eradicated from the National Park and efforts are underway to eradicate further areas outside the park boundary in order to prevent their reintroduction. It is recognized in American Samoa that expanding the boundaries of protected areas provides enhancement to the protected area.

Similarly, lands adjacent to marine protected areas should be given high consideration for conservation, as the protection of the land enhances the protection of the associated ocean resources. Plans are underway to protect a mandated 20% of the marine areas surrounding American Samoa as “no take” zones. This is a national goal that was mandated for American Samoa by Governor Sunia in 2000. The MPA program is in the research phase and no-take areas will be selected starting in 2009.

Species and Habitat Biodiversity

The above values each support the need to preserve and maintain diverse and rich habitats for species in our coastal areas. We have an abundance of coral reefs surrounding our islands that are home to a high diversity of marine species. American Samoa has 900 coral reef fish species, over 200 corals, and several whales and dolphins. Conservation of our lands directly affects the health of our coral reefs. Our remoteness in the South Pacific leads to a much lower diversity of terrestrial species, and many of these species are locally listed as threatened or endangered, such as the sheath-tailed bat and several species of birds. Our native species need healthy habitats that conservation areas can offer.

C. Identification of Project Areas

For the purposes of the CELCP, “*Project Areas*” are defined as “Discrete areas to be identified within a CELC Plan that describe the state’s priority areas for conservation based on national and state criteria, representing the values to be protected through the program and areas threatened by conversion. Project areas may consist, for example, of: geographic areas or habitat types identified by a state coastal management plan as areas of concern; significant areas within other coastal, estuarine, or watershed management plan(s) that may be priority areas for conservation; or areas that provide linkages or corridors among conservation areas within a geographical area.” The following Project Areas have been identified as priority conservation areas for American Samoa.

Existing Special Management Areas (SMAs)

The American Samoa Administrative Code (ASAC) defines Special Management Areas to be geographical areas that possess unique and irreplaceable habitat, products, or materials; offer beneficial functions; or affect the cultural values or quality of life that are significant to the general population of the Territory of American Samoa and the *fa’asamoa*.

The American Samoa Coastal Management Program has already identified several key areas as Special Management Areas (SMAs). The SMAs are regulated by the ASCMP land-use division, the Project Notification and Review System (PNRS) Board, and in these areas the general land-use standards apply in addition to the specific development standards of each management area. As stated in the ASAC 26.0221 “any proposed project, use or action in a Special Management Area shall be deemed a major project, and all proposed projects, uses or activities in any Special Management Area...shall require a public hearing as provided by this chapter.”

These SMAs are considered to be among the highest priority for conservation needs. They are the Ottoville Rainforest, Malaeimi Valley, Pago Pago Harbor Area, Nu'uuli Pala wetland, and Leone Pala wetland (figure 2) The Pago Pago Harbor SMA was created to ensure the harbor area is developed properly as the largest natural deepwater harbor in the South Pacific. The Nu'uuli Pala and Leone Pala SMAs were created to protect the important lagoon, wetland and mangrove areas in these villages. The Ottoville Lowland Rainforest and Malaeimi Valley are still in process of being legally recognized as SMAs and are described in detail below.

Ottoville Lowland Rainforest

One of the most recognized areas of conservation potential in American Samoa is the privately-owned Ottoville Lowland Rainforest (figure 3). This 20 acre property is located in the Tafuna Plain and is the last remaining lowland rainforest of its type (lava-flow forest). Most of the original 4000 acre Tafuna Plain was cleared to make way for residential and commercial development. The Ottoville Lowland Rainforest is a major habitat for our two threatened species of fruit bats, as well as several native birds. It is also the only place on the island where the locally rare native tree *Dendrocnide harveyi* occurs. The forest is one of the most important aquifer recharge areas within the Tafuna Plain. This site also has great cultural significance as it is adjacent to the Tia Seu Lupe star mound.

This ecologically and culturally significant track of land is under constant threat of development. In fact, as this CECL Plan was being prepared several acres of the forest were illegally cleared. The Ottoville Lowland Rainforest remains of the utmost priority for conservation.

Malaeimi Valley

The Malaeimi Valley is highly important to the island of Tutuila, as it serves as the largest groundwater source on the island. The potential degradation of groundwater supplies in Malaeimi Valley would generate significant impacts upon the residents and economy of American Samoa. Existing and future land-uses in the area could reduce the extent of the available groundwater recharge area and diminish the quality of groundwater supplies. Furthermore, this valley is one of the island's most pristine sections of native forest tracks and is home to populations of many forest animals found in American Samoa.

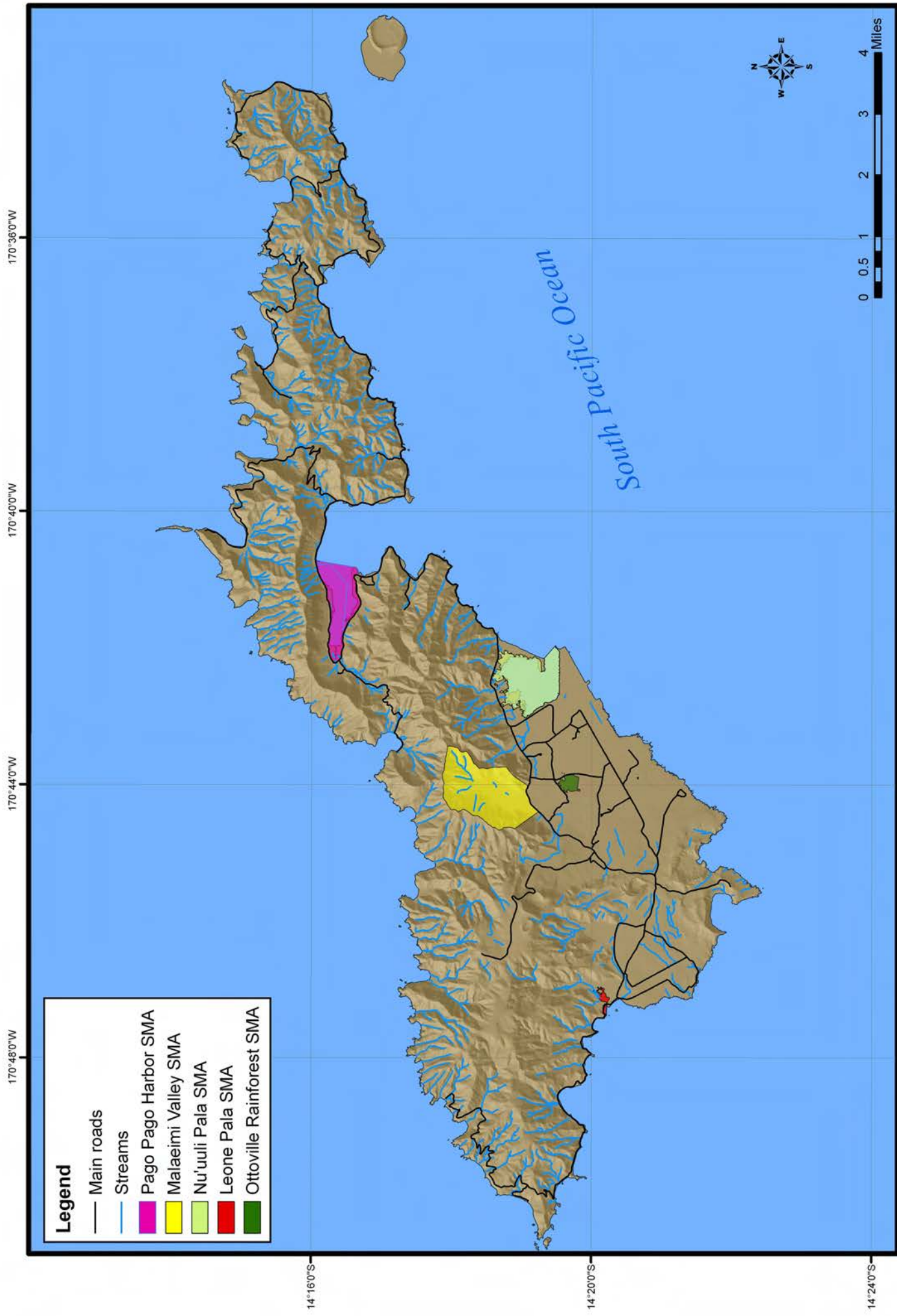


Figure 2. Special Management Areas (SMAs) of Tutuila, American Samoa.

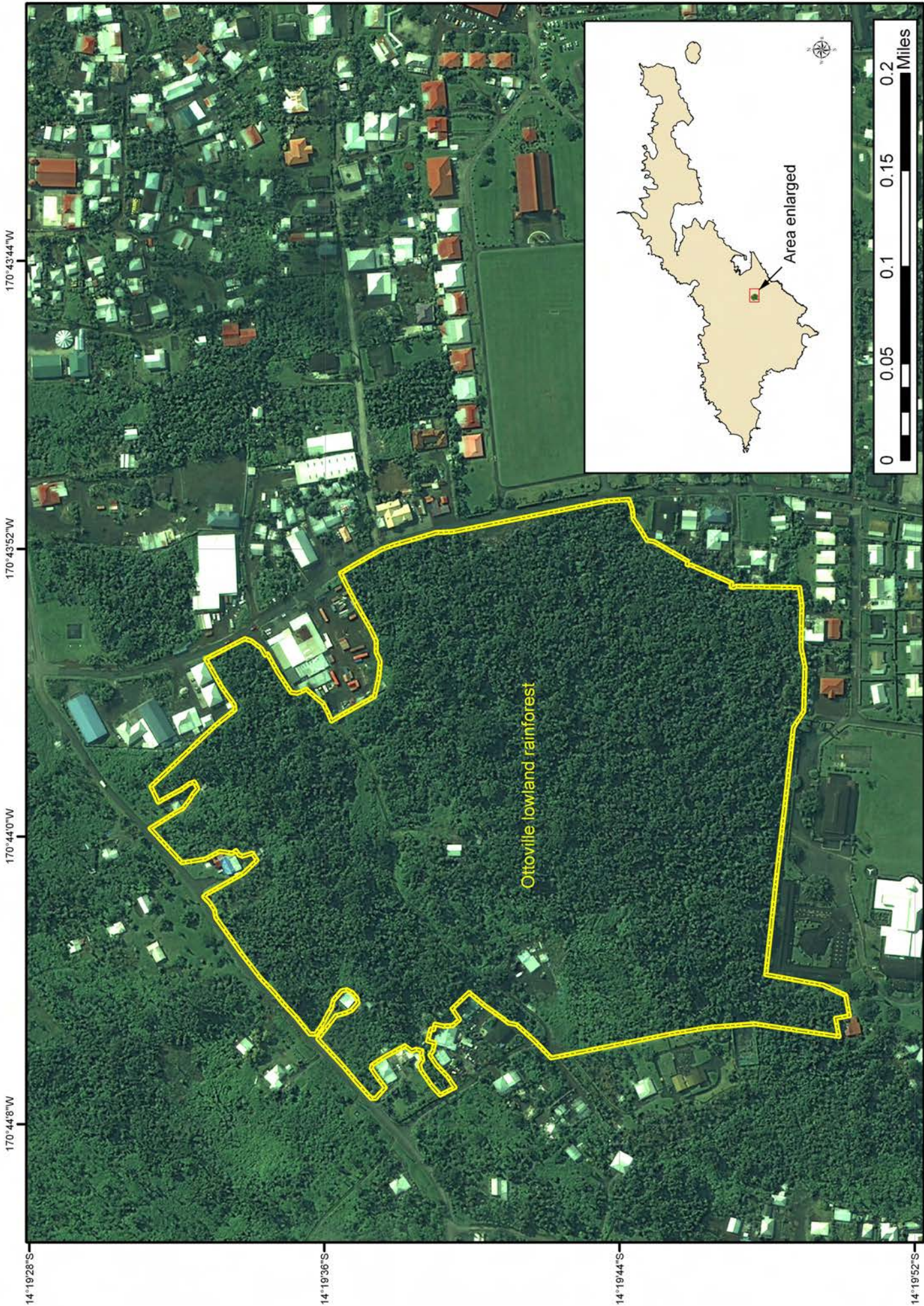


Figure 3. Ottoville Lowland Rainforest, located in the Tafuna Plains on the island of Tutuila.

Wetlands

In addition to the two wetlands that are classified as Special Management Areas (Nu'uuli and Leone Palas), the territory's other known wetlands are also identified as Project Areas. There are ten wetland sites on Tutuila, four on Aunu'u, and five in the Manu'a Islands (figures 4 & 5). Future proposals that include any of the territory's wetlands are considered of high conservation value.

Watersheds

The American Samoa Watershed Management Plan has identified four categories of watersheds based on anthropogenic factors: extensive human impacts, intermediate human impacts, minimal human impacts, and pristine (figure 6). Project proposals that occur in the watershed areas designated as pristine or with minimal human impacts are given high conservation status. Additionally, the Malaeimi Valley watershed is designated as a Project Area as previously stated in the CELC Plan.

Wildlife Habitat Areas

The Department of Marine and Wildlife Resources has identified several areas of significant wildlife habitat. These areas are consistent with the goals of the CELC Plan and are included as potential Project Areas. Future proposals that conserve these areas and the species found within them are of high value to American Samoa.

The DMWR's Priority Habitat Preservation Areas are listed in four categories: refugia, critically threatened habitats, habitat for rare wildlife, and contiguous expanses of habitat (figure 7). Refugia are known refuges from hurricanes, introduced predators, and human disturbance. For example, the Olovalu Crater on Tutuila is home to a large population of our native flying foxes. Critically threatened habitats are those habitats with very limited distributions, high uniqueness, rare plants, or high rates of loss. The Ottoville Lowland Rainforest falls into this category. Habitat for rare wildlife are areas determined to have significant remnants of rare or declining wildlife, such as the Mt. Lata montane scrub forest in Ta'u, which is home to the spotless crane. Contiguous expanses of habitat are large remaining areas of native habitat, such as Leele Mountain on Tutuila.

Additional Lands to be Protected

Lands that provide buffers and extension of existing protected areas, such as the National Park, Fagatele Bay Marine Sanctuary, and lands adjacent to other current and future marine protected areas, are identified as Project Areas.

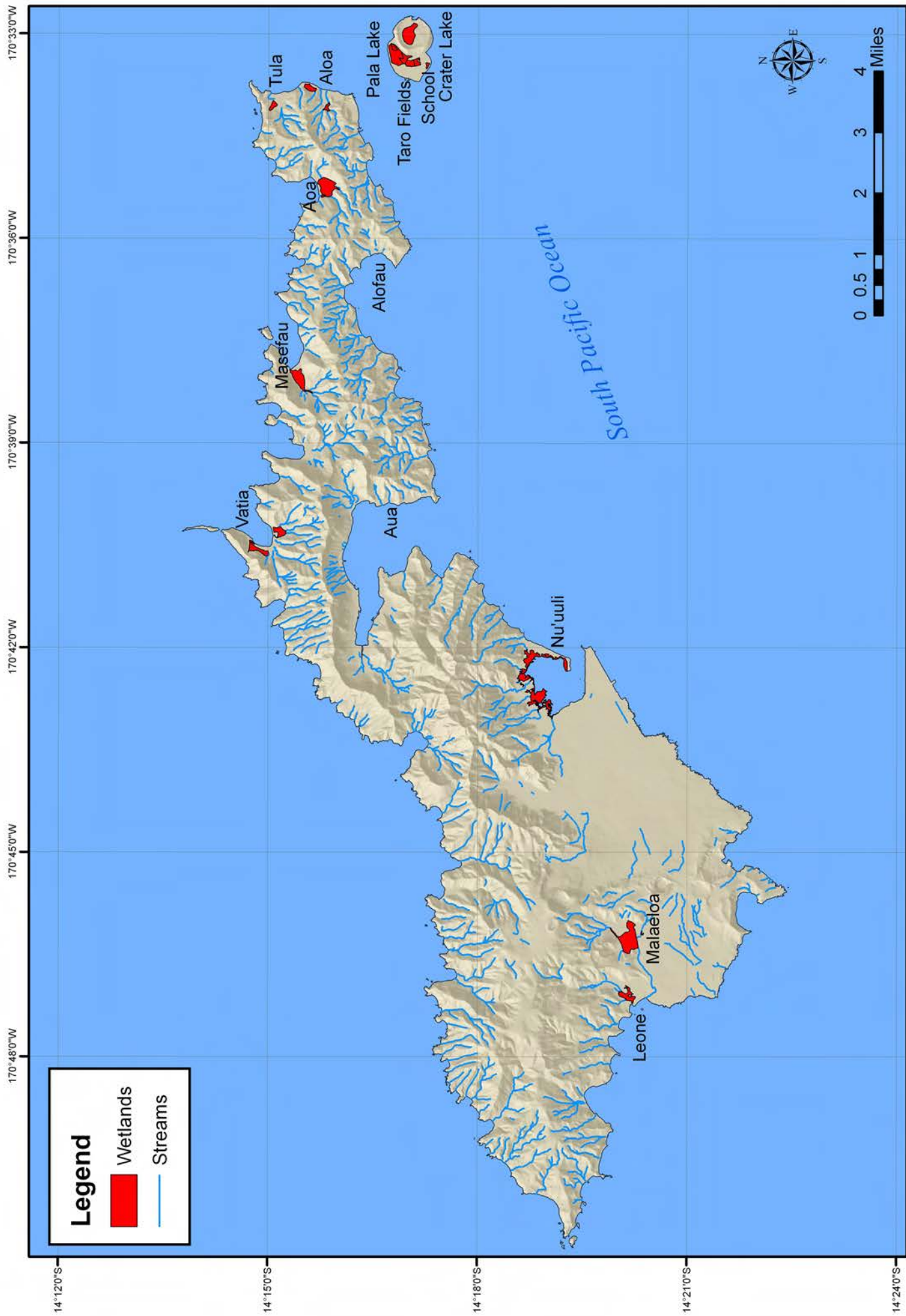


Figure 4. Major wetlands of Tutuila and Aunu'u.

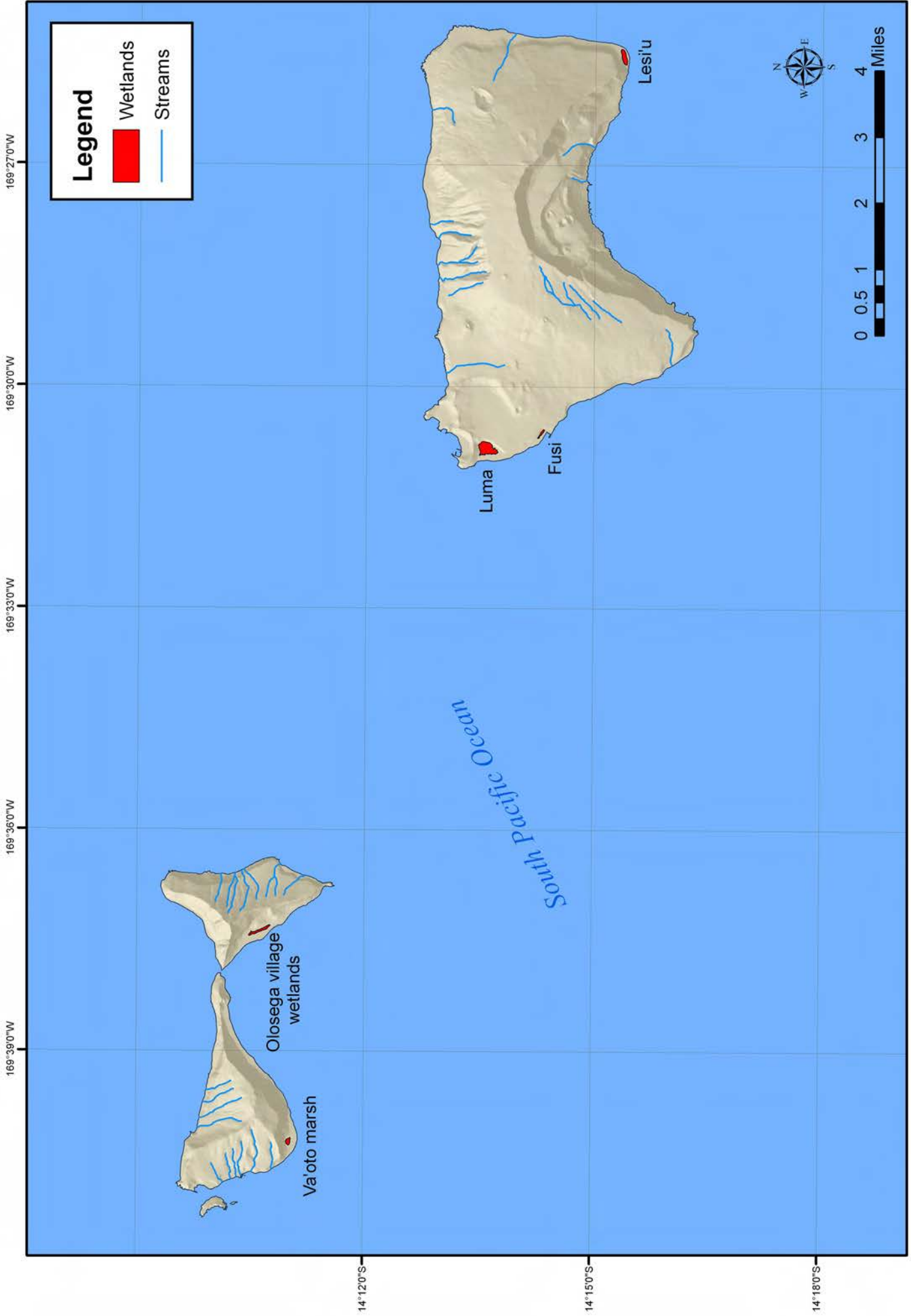


Figure 5. Major wetlands of the Manu'a Islands, American Samoa.

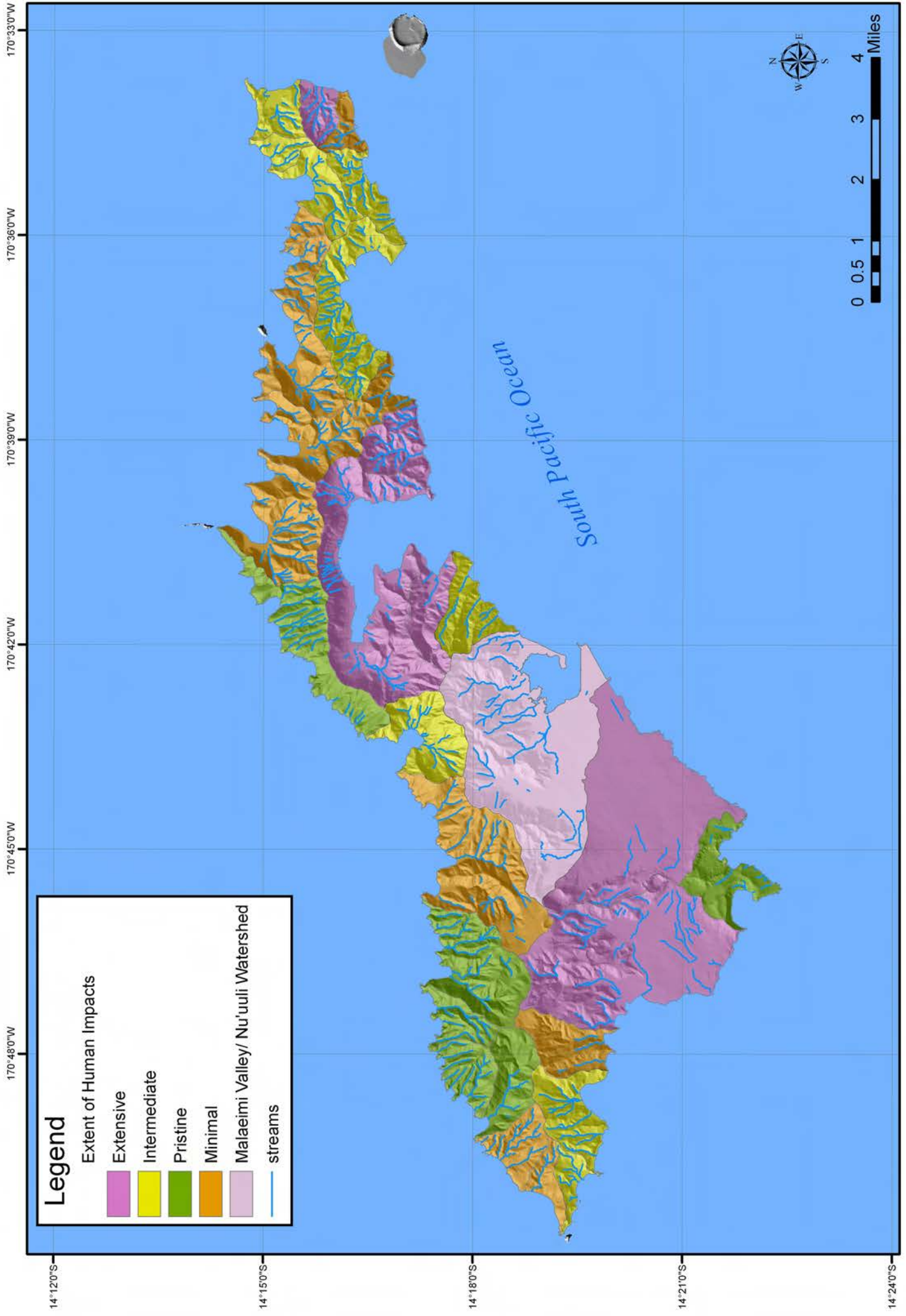


Figure 6. Anthropogenic effects of major watersheds on Tutuila.

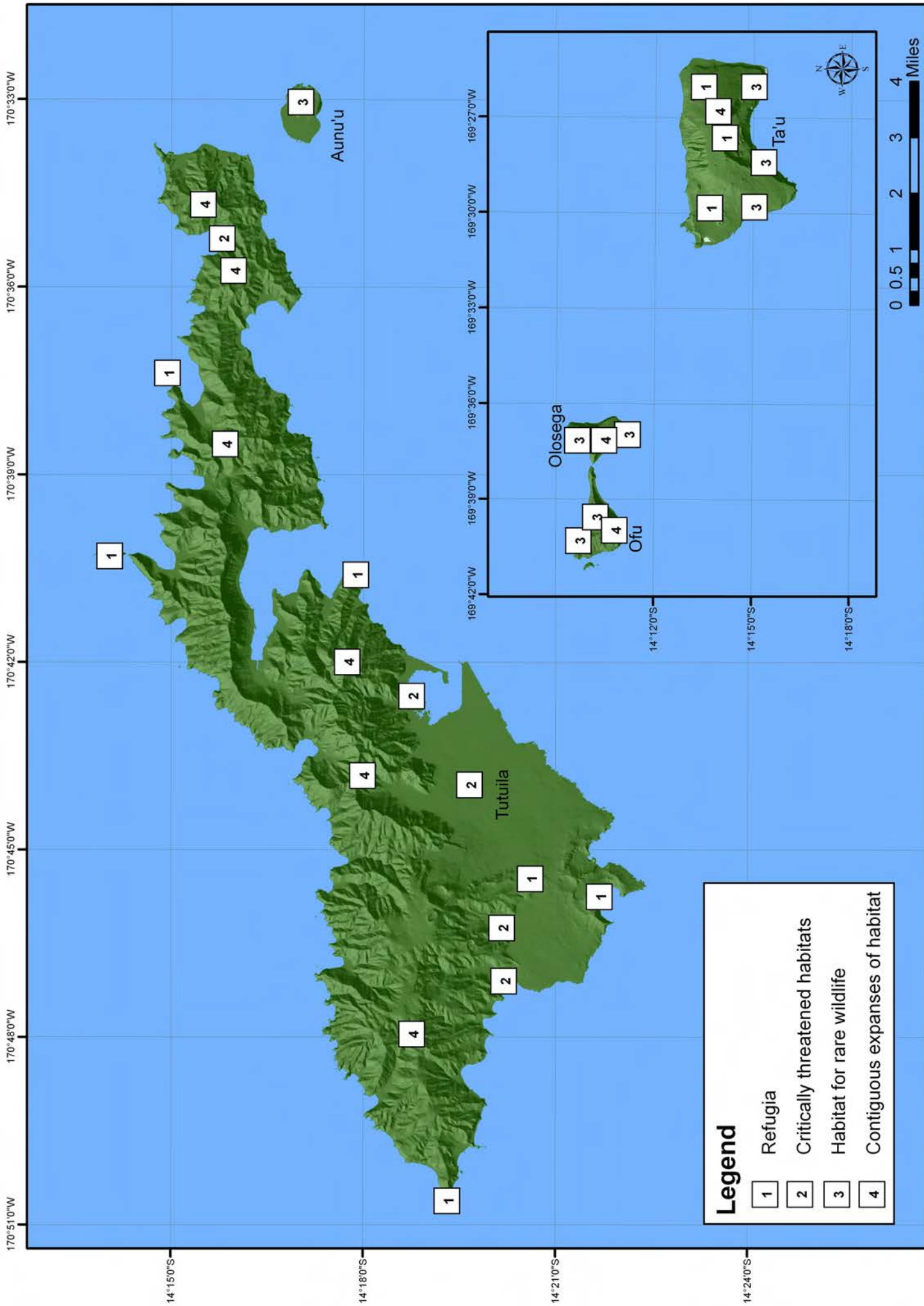


Figure 7. Priority Habitat Preservation Areas, as defined by the Department of Marine and Wildlife Resources.

D. Description of Existing Plans

In this section, existing plans are listed that are incorporated into the CELC Plan. A summary of each plan is given, as well as how each plan relates to the CELC Plan. Future management plans and other assessments should not be excluded from providing support when implementing the CELC Plan. ASCMP will take into account the best science available when reviewing and selecting future proposals.

A Comprehensive Wetlands Management Plan for the Islands of American Samoa

These management plans are actually two documents, one specific to the islands of Tutuila and Aunu'u, while the other focuses on the territory's Manu'a Islands group (consisting of Ofu, Olosega, and Ta'u). Both plans were created in 1993 as the degradation of our wetlands was becoming more and more apparent. Existing wetland resources were identified as well as site specific areas for wetland restoration and rehabilitation. All of the known wetlands were delineated and mapped (see figures).

Although this plan is becoming outdated, it is the most current wetland plan available in American Samoa. The Wetlands Management Plan offers an array of management tools and options, but falls short on providing a specific strategy for wetland management in American Samoa. However, this plan is still important to the CECL Plan as it provides maps and descriptions of all of the Territory's wetlands, the threats to those wetlands, and areas that are of special concern (Nu'uuli Pala and Leone Pala). High priority should be given to future project proposals that provide protection to our wetlands.

American Samoa Watershed Protection Plan

The American Samoa Watershed Protection Plan was prepared in 2000, as a joint effort between the American Samoa Coastal Management Program and the American Samoa Environmental Protection Agency. Forty-one different watershed planning areas are identified in the watershed plan. Multiple resource management issues of watersheds are addressed in the plan including: soil characteristics, stream locations, water quality, wetlands, coral communities and marine environment, wildlife habitat, groundwater and surface water supplies, and storm water runoff and sedimentation.

The Watershed Protection Plan offers 41 different management plans, but fails to offer over-arching watershed management goals. This plan is still important to the CELC Plan as it provides maps, descriptions, and threats to each of American Samoa's watersheds. The locations of future proposals can be referenced in the Watershed Plan and it can be determined which watershed the proposal is in and what resource issues apply to the proposed site.

A Comprehensive Strategy for Wildlife Conservation in American Samoa

A Comprehensive Strategy for Wildlife Conservation in American Samoa was revised and released in 2006 by the Department of Marine and Wildlife Resources. This territorial plan provides guidance for the allocation of resources and efforts to those species and their associated habitats that are vulnerable to threats and in need of conservation. Priority conservation actions for each species are defined in the plan, and specific strategies and mechanisms for their implementation are listed.

Although this CELC Plan does not need to address a specific action plan for each species, the wildlife conservation plan was very useful in identifying areas of key wildlife habitat in American Samoa. These areas, referred to by DMWR as Priority Habitat Preservation Areas, are consistent with the types of lands noted by this CELC Plan as areas of high conservation potential.

III. State Process for Implementing the CELCP

A. Identification of Lead State Agency

The agency responsible for coordinating the establishment and implementation of the CELC Plan in American Samoa is the American Samoa Coastal Management Program. ASCMP is administered by the American Samoa Government's Department of Commerce (DOC). ASCMP has been working to protect and preserve the natural resources of American Samoa since 1980. This preservation and protection is balanced with development needs of the American Samoa people and the Samoan way of life, the *fa'asamoa*. ASCMP works with other natural resources agencies, such as the American Samoa Environmental Protection Agency (ASEPA), Department of Marine and Wildlife Resources (DMWR), American Samoa Community College Land Grant, National Park of American Samoa (NPSA) and others, and will continue to do so for conservation planning and identification of projects.

B. Eligible Land Holding Agencies

The majority of the land in American Samoa is communal village land that cannot be sold. This is a major problem for agencies attempting to acquire land for conservation. Most of the potential project areas will occur on communal land, which an agreement will have to be reached between the agency and the village. However, small areas are available for purchase and these areas will be available for an agency to purchase and hold title to. All potential conservation areas are included in the American Samoa CELC Plan, regardless of whether an area is communal or free hold land. As part of the review process ASCMP will determine whether or not a proposed project can be protected through the CELCP at that time.

The American Samoa Coastal Management Program, American Samoa Environmental Protection Agency, Department of Marine and Wildlife Resources, and the National Park

of American Samoa are the main natural resource management agencies for the territory. These agencies are the eligible recipients to hold title to conservation land in perpetuity.

C. State Nomination Process

a. Solicitation of Projects

The first step is notification from NOAA that a competitive grant application period is open. ASCMP will then distribute a request for proposals to both the general public and to known interested parties. ASCMP may focus project solicitations towards specific areas or priorities as identified in this CELCP. The announcement will include guidelines and timelines for proposal submission and review. ASCMP will provide applicants with the necessary information and requirements for preparing and submitting proposals.

Applicants will be required to submit their proposals to ASCMP by a specific deadline and then ASCMP will turn in the selected proposals for review by NOAA. Applicants will be informed whether or not their proposals are selected for submission to NOAA and whether or not they were selected by NOAA for funding. Proposals that are not selected or funded may be resubmitted in subsequent years.

b. State Review and Prioritization

i. Proposal Acceptance

ASCMP will determine whether a proposal should be accepted for consideration. ASCMP will reviews applications to ensure completeness, and will notify applicants whether or not their proposal is complete. If the application is incomplete, ASCMP can choose to provide additional time for the applicant to submit missing information, if the overall NOAA deadline for submission allows for the additional time. Only project applicants that can document the ability to match funds and other in-kind contributions as defined in NOAA's CELCP guidelines will be accepted for consideration. It is recommended that applicants notify ASCMP prior to submission so that ASCMP can provide the necessary documents and guidance for proposals.

ii. Proposal Review and Ranking

ASCMP will be the main agency responsible for the evaluations of projects, and will convene a review panel, consisting of ASCMP staff and individuals from other agencies. ASCMP will seek to incorporate a range of expertise relevant to coastal conservation issues. The review panelists will examine all complete and eligible applications that are received by the published deadline.

Project proposals will be ranked according to the degree to which they meet American Samoa's CELC Plan criteria. The following rubric will be used during the review process:

<u>Scoring Category</u>	<u>Percent of Total Points</u>
Social and Ecological Values	40%
Project Areas	40%
Other Specified Factors	20%

Social and Ecological Values (40%)

Does the project reflect the social and ecological values of the CELC Plan, as described in Section II, Part B?

Is the project consistent with the goals of the American Samoa Coastal Management Program?

Does the area exhibit a high quality conservation area that will enhance the social and ecological values?

Is the area an archaeological site or possess other historical or cultural significance?

Are endemic species found with the project site?

Is it a rare habitat or other ecologically important area?

Project Areas (40%)

Does the project geographically located with one of the project areas, as described in Section II, Part C of the CELC Plan?

Other Specified Factors (20%)

Is the land currently in the desired state consistent with the goals of the CELC Plan or will the area require active management and restoration to achieve the desired state?

Does this project have the support of the local community?

Is this project supported by other agencies?

Are the project costs realistic and consistent with fair market value?

The final step of the review process is to submit the list of prioritized projects to NOAA for consideration at the national level.

IV. Coordination and Public Involvement

A. Interagency Coordination during Plan Development

The American Samoa CELC Plan was developed with support from a number of individuals in the natural resource field in American Samoa. Consulting meetings with various agencies were conducted and input was garnered early on in the development phase of the CELC Plan. These key individuals also participated in the project review phase.

Agencies that participated in meetings, received copies of the draft plan and/or provided input include:

American Samoa Environmental Protection Agency
National Park of American Samoa
Department of Marine and Wildlife Resources
U.S. Department of Agriculture
Coral Reef Advisory Group

Each of these agencies has an active role in the management of natural resources in American Samoa. Each individual participating from these agencies has considerable knowledge about the ecological significance of American Samoa's coastal resources.

B. Public Involvement in Plan Development

A public scoping period was held during the months of March and April 2008. An announcement was made at the local Project Notification and Review System (PNRS) Board meeting to encourage public participation. A website was developed for the public to read the draft CELCP and to provide comments. Several newspaper advertisements were placed directing the public to comment either via the website or in person in the Department of Commerce office. Following the review period, public comments were reviewed and taken into account as the final Plan was completed.

V. Certification and Approval

A. Certification of Consistency

This plan was prepared by the American Samoa Coastal Management Program and is consistent with the federally approved coastal management program, as defined by the Coastal Zone Management Act.

B. Approval of Plan

Faleseu Eliu Paopao
Director, American Samoa Department of Commerce

Gene Brighthouse
Director, American Samoa Coastal Management Program

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