

STATE LAND USE DISTRICT BOUNDARY REVIEW

Executive Summary

MAUI MOLOKAI LANAI



Michael T. Munekiyo Consulting, Inc.



Office of the Governor

OFFICE OF STATE PLANNING

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EXECUTIVE CHAMBERS
HONOLULU

JOHN WAIHEE
GOVERNOR

FOREWORD

The State Land Use District Boundary Review takes a bold step toward defining what kind of Hawaii we want to leave as our legacy for future generations. The growth and protection of our precious islands must be planned, and planned carefully.

This review sets forth the direction for urban growth that is needed for housing and economic development in our fair State. Rather than reacting to proposals by landowners and developers, this review has allowed the State to plan for development well into the next century. It provides for an adequate supply of urban lands in locations which can be efficiently serviced by infrastructure and other public facilities and which will not have adverse impacts on our environmental, cultural and agricultural resources.

While economic development is essential, it simply must not threaten our fragile environment. This review identifies the unique and special areas that are part of our heritage. Our native forest, wetland and stream ecosystems and rare flora and fauna habitats must be protected. Significant historic sites, coastal areas and scenic and open space resources are other treasures which must be safeguarded for future generation.

The protection of our watersheds is also critical to assure that we have the groundwater resources to support the growth of our population.

While the final decisions for the reclassification of lands identified in this report are left to the Land Use Commission, the information provided in this review will be the standard by which land use decisions will be judged in the future.

JOHN WAIHEE



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PREFACE

The most recent Five-Year Boundary Review began in 1990 and concluded in 1992. It was an opportune time to conduct an assessment of our State Land Use District boundaries. Hawaii was emerging from a period of intense development pressures and many areas that residents thought were "safe" from development, in fact, were not.

Many were saying that it was time to step back and reassess our lands and their designations before the next wave of investment hit. Many questioned whether we wanted every square inch of these islands developed and asked whether anything would be left for future generations.

Agriculture was changing; a way of life disappearing. The old, large-scale sugar and pineapple plantations were downsizing or closing. The projected outlook for diversified agriculture was mixed. The visitor industry was the State's dominant industry and was largely dependent on Hawaii's natural scenic beauty.

In conducting the boundary review, we turned to the Constitution:

"For the benefit of present and future generations,
the State ... shall conserve and protect Hawaii's
natural beauty and all natural resources ..."

Article XI, Sec. 1
Hawaii State Constitution

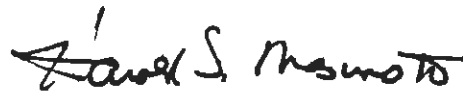
Therefore, a major focus of the review was to protect Hawaii's special areas before they were placed in jeopardy or irretrievably lost.

When we examined the actual lands in the districts, we found that many sensitive environmental resources were in the Agricultural District which left them vulnerable to development. Many of the lands in the Agricultural District were agricultural in name only. The boundary review has recommended that sensitive environmental areas be reclassified to the Conservation District or be protected by other means.

The review has also sought to direct growth and provide lands to meet long-range needs for housing and economic development. Some of this has already been addressed in the extensive statewide urbanization of land over the last five years. More land was urbanized during the last five years than during the prior ten-year period, primarily for affordable housing. However, the review has identified areas which are desirable and suitable for urbanization in order to direct growth to these areas.

Finally, we have worked to retain sufficient agricultural lands to meet the industry's changing needs and to provide open space.

The Office of State Planning is deeply appreciative of the many individuals, organizations and agencies that helped in this process and thanks them for their time, advice and concern for Hawaii's limited land resources.

A handwritten signature in black ink, reading "Harold S. Masumoto". The signature is written in a cursive style with a prominent initial "H" and "M".

Harold S. Masumoto
Director

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I. INTRODUCTION

Purpose of the Five-Year Boundary Review

The purpose of the Five-Year Boundary Review is to conduct a statewide, comprehensive, policy-oriented examination of State land use district classifications. It provides the Land Use Commission the opportunity to review urbanization proposals from a broad, comprehensive and long-range viewpoint rather than incrementally on a case-by-case basis. It also provides an opportunity to identify conservation or agricultural resources which are not in the appropriate land use district and should be reclassified.

Section 205-18, HRS, of the State Land Use Law, requires the Office of State Planning (OSP) to undertake a review of the classification and districting of all land in the State every five years. Upon completion of the Five-Year Boundary Review, a report of findings and recommendations will be submitted to the State Land Use Commission. OSP may then initiate petitions for boundary amendments to implement the report.

The Legislature reinstated the Five-Year Boundary Review in 1985 in order to emphasize long-range planning in the land use decision-making process. The boundary review report provides the basis for recommending changes to existing land use district boundaries during the Five-Year Boundary Review and provides guidance for future land use decisions.

This report summarizes the boundary review for the islands of Maui, Molokai and Lanai. Kahoolawe is in the Conservation District and no changes have been proposed for that island. Separate reports have been prepared for Oahu, Hawaii and Kauai.

1991-92 Review - Direction and Scope

The 1969 Five-Year Boundary Review was conducted with the philosophy that "the elements of land, air and sea are resources to be managed for the welfare of present and future generations." The 1991-92 boundary review has been conducted with the same philosophy in mind. Specifically, the Five-Year Boundary Review has been guided by Article XI, Section 1, of the Hawaii State Constitution which states: "For the benefit of present and future generations, the State ... shall conserve and protect Hawaii's natural beauty and all natural resources ..."

Factors that shaped the direction and scope of the 1991-92 Five-Year Boundary Review were:

- (1) Statutory provisions which require the review to focus on the Hawaii State Plan and County Plans;
- (2) Continuing discussion of constitutional provisions relating to important agricultural lands and the finding that there are significant acreages in the Agricultural District which contain conservation resources;

- (3) The need to revise boundaries based on new information and growing public awareness and support for protection of Hawaii's natural resources; national attention which has been focused on Hawaii's native species extinction crisis; and Act 82, SLH 1987, which calls for reclassifying high quality native forests and the habitat of rare native species of flora and fauna into the Conservation District;
- (4) Recommendations in the Hawaii Water Resources Protection Plan that call for increased protection of watersheds; and
- (5) The need to provide urban land to meet population and economic growth needs and promote infrastructure planning.

A. Statutory Provisions

The Land Use Law provides that OSP shall focus its review on the Hawaii State Plan and County General Plans and County Development and/or Community Plans. The Hawaii State Planning framework includes the State Plan itself as well as State Functional Plans. Seven State Functional Plans relating to physical resource needs and development were approved in 1991. The major theme for these physical resources Functional Plans was "balanced growth" and focused on the promotion of a balanced growth approach in the use of our limited resources. This theme provided direction for the boundary review and weighed heavily in the decision to conduct a physical resources-oriented assessment rather than an administrative or organizational review and to focus on the protection of natural resources.

The County General, Development/Community Plans and specific regional plans were closely examined for policy direction, particularly for the location of urban growth areas. In addition, a technical study was conducted to identify differences between existing State land use districts and County Plan designations. An assessment of these areas of inconsistency was conducted in order to recommend the appropriate State land use designation.

B. Continuing Discussions Over LESA

There have been a number of proposals put forward to implement Article XI, Section 3, of the Hawaii State Constitution which calls for the identification and protection of important agricultural land. One of these proposals recommended by the Land Evaluation and Site Assessment (LESA) Commission would have taken all non-important agricultural land out of the Agricultural District and placed these lands and Urban District lands into a new district under County jurisdiction. Of the approximately 1.9 million agriculture acres in the existing Agricultural District, 700,000 acres would be retained as important agricultural land while 1.2 million acres would go into this new district. The State would still have land use responsibilities in regulating conservation land and important agricultural land. For these conservation and important agricultural lands, the existing dual land management system would apply since both State and County approvals would be required for development.

However, there were a number of reservations regarding the LESA Commission proposal. A major reservation included the concern that there were conservation resources in the Agricultural District which should not go into an urban-type district but instead should be reclassified to the Conservation District. A pilot study undertaken by OSP in 1987 found that there were significant acreages in the Agricultural District with potential conservation value. Thus, it was felt that the Five-Year Boundary Review should specifically examine areas in the Agricultural District which merit reclassification to the Conservation District.

C. Need to Revise Boundaries Based on New Information and Growing Support for Protection of the Environment

The general trend is that lands have been slowly taken out of the Conservation District. There were 2,009,087 acres in Conservation in 1969 and 1,960,976 in 1990. At the same time, there has been a growing awareness of and support for the need to protect Hawaii's natural resources. Further, there has been new information which has been developed since the last boundary review, for example, on the location of rare and endangered species. Rare and endangered species were not specifically addressed during previous reviews. There has also been data and information collected as a result of statewide recreation and water resources planning, stream studies and other studies which serve to identify conservation resources. The Five-Year Boundary Review provides an opportunity to assess this new information and propose areas for reclassification to the Conservation District.

In addition, Hawaii's native species extinction crisis has received national attention. Approximately 75 percent of species extinctions recorded in the U.S. have occurred in Hawaii. Currently, 25 percent of all rare and endangered plants and animals in the U.S. are found in Hawaii. Proper classification of conservation resources is one of many steps which must be taken to affirmatively address this crisis.

Act 82, SLH 1987, states that the Legislature finds that Hawaii has several rare species of plants, animals, and fish that are found nowhere else in the world. The Legislature also finds that Hawaii has sizable areas of high quality native forests which are not in the Conservation District. The Act further states that to the maximum extent practicable, it is the intention of the Legislature to preserve Hawaii's unique native flora and fauna by reclassifying such areas as Conservation Districts.

D. Water Resources Protection Plan

The 1978 Hawaii State Constitutional Convention proposed and the electorate approved a new section on water resources which became Article XI, Section 7. This section in part states that the State has an obligation to protect, control and regulate the use of Hawaii's water resources for the benefit of its people. The State Water Code, Act 45-87, was adopted pursuant to Article XI, Section 7, of the Hawaii State Constitution. The Hawaii Water Plan and its component Water Resources Protection Plan were prepared as required by the Water Code.

The plan calls for increased protection of watersheds. Therefore, a Watershed Protection Study was conducted for the Five-Year Boundary Review to identify areas which should be protected as important watersheds. High priority areas were identified for study as budgetary limitations precluded a study of the entire State.

E. Urban Land Needs and Infrastructure Planning

Infrastructure is a major limiting factor affecting growth and development in all Counties of the State. In addition, new wastewater rules do not allow individual wastewater systems for developments exceeding 50 dwelling units. As such, infrastructure planning among landowners/developers and between the public and private sector will become even more critical in the years ahead. The Land Use Commission (LUC) can play a major role in promoting infrastructure planning and development by delineating future areas of growth consistent with County and regional plans so that landowners and developers can make long-range commitments for the provision of infrastructure.

In addition, the Land Use Law and Land Use Commission Administrative Rules provide that the Urban District contain sufficient land to meet a ten-year projection. As a result, the boundary review looked at urban land requirements with respect to meeting population and economic needs for the next ten years. A 25 percent surplus factor was added on to account for lands which may be held out of the market for various reasons. The projections are also on the high side because existing densities and a 5 percent vacancy factor were used; household size was projected to decrease significantly and the redevelopment of existing urban areas at higher densities was not taken into account.

The boundary review has recommended the reclassification of lands to the Urban District to meet population and economic growth needs for the next ten years and to assure predictability in infrastructure planning.

Background of the Boundary Review

The 1969 Review

There are no readily available statistics on acreages reclassified during the 1969 boundary review. However, the review found that there was sufficient vacant urban land to meet projected growth for the next ten years on Oahu and Maui County. Additions to the Urban District were primarily made to refine district boundaries to include areas of existing urban use or accommodate public facilities. For Hawaii County, the study found that available vacant urban lands could accommodate three times the anticipated growth of resident population. Changes were made primarily to refine district boundaries. Many resort area proposals were submitted for Hawaii County. Available growth projections did not substantiate the need for redistricting most of the areas at the time of the review. However, some changes were made in response to detailed requests. For Kauai County, although the present Urban Districts were sufficient to accommodate

foreseeable growth, the location and distribution of these areas did not necessarily provide for specific locational needs determined in the County General Plan. Adjustments were made for residential areas, and the proposed resort areas at Princeville and Keoniloa Bay at Poipu were urbanized.

One of the major contributions of the 1969 review was to add certain lands along the shoreline to the Conservation District. The original land use boundaries were based heavily on forest reserve boundaries and steep slopes, although some shoreline/coastline areas were included. The 1969 review specifically examined the shoreline, river valleys and areas of steep topography. Many areas with scenic resources were also added to the Conservation District.

With respect to the Agricultural District, there were relatively minor additions to the Agricultural District on all islands.

The 1974 Review

During the 1974 boundary review, 4,731 acres were reclassified from the Agricultural to Urban District (significantly less than the 13,104 acres that landowners and developers proposed for urbanization).

Areas urbanized included Waipio, Ewa Town and Oneula on Oahu; Waikoloa, Kaupulehu and Kealakehe on Hawaii; Wailuku and Wailuku Heights on Maui; and Kapaa and Nukolii on Kauai.

Approximately 33,278 acres were reclassified from Conservation to Agriculture (primarily from the mauka Kona area in the Keauhou ahupuaa). There were 23,871 acres reclassified from Agriculture to Conservation (15,000 acres of which were in Kapapala, Hawaii). Over 3,000 acres went from Urban to Agriculture (1,680 acres were at Kaluakoi and planned for hotel use) and 679 acres were reclassified from Urban to Conservation. The Urban to Conservation reclassifications included lands at Kahaluu, Heeia Fishpond, and Hawaii Kai on Oahu for open space and at Hapuna and Keei, South Kona in Hawaii for open space.

On Molokai, three areas planned for hotel use, Puaahala, Paialoa, and Kaluakoi were reclassified from the Urban District to the Agricultural and Conservation Districts.

II. STUDY METHODOLOGY

The Five-Year Boundary Review process included reviews of the Hawaii State Plan, State Functional Plans, County General Plan and County Development and/or Community Plans, baseline studies, resource mapping through the State's Geographic Information System, a Public Information and Participation Component, and extensive coordination with State, County and Federal agencies and other public and private organizations and individuals.

Baseline Studies

The following are baseline studies conducted for the State Land Use District Boundary Review:

- County Plans and State Land Use District Review and Mapping Study, PBR, Hawaii, addresses the requirement to review County General Plans and County Development and/or Community Plans. The study examines the relationship between existing State land use district boundaries and County plan designations.

Development or Community Plan maps were overlaid onto State land use district boundary maps and guidelines were developed to show which classifications were consistent with each of the State's Urban, Rural, Agricultural or Conservation Districts. Areas of inconsistency between State and County land use designations were identified and highlighted so that these areas could be further examined to determine the appropriate State land use classification.

- The Urban Land Requirements Study, Wilson Okamoto & Associates, Inc., examined urban land in the State to determine how much urban zoned land is required to accommodate population and economic growth for the next five, ten and twenty years. Key components of this analysis include determining the existing supply of vacant urban lands in each County, assessing the general suitability of these lands for development, relating the supply to anticipated future demands for urban lands including residential, industrial, commercial, resort and public uses and identifying urban land requirements.
- Infrastructure Constraints and Opportunities Study, Eugene P. Dashiell, AICP, Planning Services, assesses infrastructure constraints and opportunities by County and planning area. Major infrastructure systems including airports, harbors, highways, water systems, sewerage and solid waste are examined.
- Agricultural Resources Study, Deloitte & Touche, analyzes issues and trends in the State's major agricultural industries and assesses their outlook.
- Watershed and Water Recharge Areas, University of Hawaii Water Resources Research Center, identifies high priority watershed and water recharge areas that should be reclassified to the Conservation District. The Hawaii Water Code and Hawaii Water Plan call for increased protection of

our watershed and water recharge areas. The Water Resources Protection Plan recommends that minimum areas of conservation lands for watershed as protected infiltration areas should be set aside. This study serves to address these concerns.

- Proceedings of the Native Ecosystems and Rare Species Workshops records the information gathered from a series of workshops conducted by OSP with the assistance of The Nature Conservancy of Hawaii. The purpose of these workshops was to identify areas that are known or suspected to contain significant biological resources including native forests and shrub lands, rare and endangered species, and unique or important habitats. The report does not contain recommendations and serves primarily as a resource study which identifies the location of these resources like other planning or resource studies which have identified important agricultural lands, historic sites, steep slopes, flood hazard zones, etc. The areas identified were assessed by OSP with the assistance of State and Federal agencies.
- David L. Callies provided overall land use and planning assistance.

Public Information and Participation

A Land Use Stakeholder Survey was conducted by Sunderland Smith Research Associates, Inc., to obtain input on land use issues from individuals and organizations involved in land use throughout the State. In-depth interviews were conducted with 150 community and government leaders and other "stakeholders" to delineate priority goals for land use planning, identify stakeholders' opinions on land use and growth policies and areas that should be protected in the Agricultural and Conservation Districts.

Highlights of the Land Use Stakeholder Survey include the following:

- The major land use concerns and priorities of participants in the survey varied according to the interests and organizational affiliations of the individuals involved. For example, developers and landowners were most concerned with reducing the burden of land use regulations and streamlining the review process, while environmentalists were most interested in protecting natural resources.

There was a consensus that truly prime agricultural land should continue to be protected.

Opinions were more divided on the extent to which other land currently classified as agriculture should be made available for housing and other development, maintained as open space or retained for diversified agriculture or other uses.

A number of individuals expressed a desire to make unused non-prime agricultural land available for urban purposes, especially for housing development.

Other survey participants, however, were more interested in ensuring that undeveloped lands receive protection from urban encroachment. They feared that with the phasing out of sugar, pressures to develop agricultural land would become very great. Environmentalists in particular felt that keeping land in its natural state and ensuring open space should be a basic policy objective.

- Respondents were asked to prioritize the most important goals for land use in the State of Hawaii today. The priority "Guide and direct development to make sure it serves Hawaii's needs" ranked first place overall. By affiliation, the development interests ranked in first place "guide and direct development ..." and in a tie for second "Assure adequate infrastructure" and "Provide land for jobs and economic growth." The two goals of guide and direct development and assure infrastructure were the two picks of the government sector.

Environmental organization representatives think that keeping Hawaii's air and water clean and pollution-free, and preserving shorelines, coastal areas and open space are the two priority goals.

Civic organizations put preservation of Hawaii's scenic beauty at the top, followed by guide and direct development to serve Hawaii's needs.

The preservation of agricultural land was pretty low on the lists of all segments except environmental groups. The only issue that was ranked lower to some groups was preservation of historic and cultural sites.

While most participants agreed that government policy should provide direction, there was not a consensus on what that direction should be. As discussed earlier, the group's priority goals was to "Guide and direct development to make sure it serves Hawaii's needs." Developers, however, interpreted that objective to mean that growth should continue at a fairly rapid pace to meet expanding needs, whereas environmentalists saw it more as a mandate to slow down and stabilize the rate of growth and development.

- A majority or near majority of every segment except environmental organizations, would like to see some growth and development in Hawaii over the next decade. "Some growth" was the usual choice from the roster of four possibilities that was offered to respondents: "a lot of growth"; "some growth"; "a little growth"; and "no growth at all."

Public informational meetings were conducted in March and April 1991 to solicit general comments and proposals for changes to land use district boundaries from the general public, special interest groups, community organizations, landowners and developers. As a result of this request for input, a number of recommendations for boundary changes were received-- approximately 11 on Kauai, 42 on Maui (including Molokai and Lanai), 32 on Hawaii and 41 on Oahu. These were evaluated by OSP within the context of the overall review and baseline studies. Those that have been recommended are included in this report.

Public informational meetings were also conducted statewide from March-June 1992 to solicit comments on the draft report. The Office of State Planning also met with a number of organizations and community groups to present the draft proposals and obtain public input.

Resource Mapping/State Geographic Information System

One of the objectives of the review is to build up long-term capabilities in land use planning. The emphasis on a physical resources-oriented review led to use of the State Geographic Information System for this project.

Data layers added to the system to assist in the boundary review included State land use districts, vegetation maps which identify areas of native vegetative growth, State forest reserves, State natural area reserves, marine life conservation districts, national wildlife refuges and parks, rare and endangered species from the Heritage Program of The Nature Conservancy, native bird habitats, lands in sugar cane and pineapple cultivation and lava flow hazard zones. Overlays of resource information were prepared and examined to identify areas for potential reclassification.

The State Geographic Information System was an invaluable land use planning tool which assisted greatly in the analysis and presentation of complex information.

III. APPROACH

This boundary review places high priority on the protection of Hawaii's conservation resources. Watersheds, habitats of rare and endangered species, wetlands, special streams, historic sites, and coastal, open space and scenic resources are all heritage resources which require protection for the benefit of future generations.

However, there will be opposition to placing lands into the Conservation District. Landowners who have had plans for more intensive use of their properties will object because only certain types of uses are allowed in the Conservation District. Some land use options which would greatly increase the value of these lands may be foreclosed.

Other landowners who may only want to continue existing uses object to the additional regulations and paperwork which may be involved to obtain permits to expand or change uses in the Conservation District.

Objections may also be raised because lands which could have been used to provide some community benefit as a trade-off for urban zoning would already be protected through Conservation districting.

In addition, the Counties raise homerule concerns. Conservation lands fall under the jurisdiction of the Board of Land and Natural Resources rather than the County. The Counties would prefer to retain regulatory control over these lands.

Nonetheless, despite potential opposition, the statute requires that the review be conducted. Further, it is in the long-term interest of the State that these valuable assets be reclassified into the Conservation District.

The reclassification of lands requires review and approval by the Land Use Commission under quasi-judicial proceedings.

Because it can be expected that some petitions to reclassify lands to the Conservation District will be contested, the justification for initiating a petition to reclassify land into the Conservation District must be strong. Therefore, there are two types of Conservation District recommendations in the report. Priority #1 Areas have been identified as top priority recommendations for Conservation reclassification which OSP will initiate petitions for. These are recommendations which have strong justification and can withstand the scrutiny of contested case proceedings.

Priority #2 Conservation recommendations include areas which OSP recommends but will not be initiating petitions because of budgetary constraints. Priority #2 also includes areas which have been identified as containing conservation resources, but documentation of these resources is not strong enough to defend a petition under contested case proceedings. It further includes areas where other methods have been agreed to, to prevent changes in use or in certain instances, to even enhance identified conservation values.

The purpose of identifying Priority #2 Conservation recommendations is to alert State and County agencies, the Land Use Commission, and the public that the land contains certain conservation values which should be considered in any petition for reclassification. It should also alert the landowner as to the State's position in the event that these areas are proposed for development.

During the review, the question of whether to submit proposed legislation to amend the Land Use Law to allow the Land Use Commission (LUC) to conduct the boundary review under quasi-legislative rather than quasi-judicial proceedings arose. Under the quasi-legislative process, the LUC would hold hearings on the report and proposed amended land use maps. After the hearing, the LUC would adopt or reject the proposed map amendments.

Under quasi-judicial proceedings, the State would submit a petition to the LUC; the LUC holds a hearing; the landowner may request to intervene; and the LUC may approve, approve with modifications or deny the petition.

The advantage of the quasi-legislative proceedings would be that changes would be more directly based on public input and more policy-oriented in nature. Quasi-judicial proceedings are heavily fact-based. Further, because of the amount of information needed to support a reclassification and the procedures involved, the number of reclassifications that can be considered are limited. Reclassifications under these procedures are also site-specific rather than broad-brush proposals.

The decision was to retain the contested case process as it provides for careful scrutiny of all petitions--urban, agricultural and conservation--and allows the landowner or other affected parties to intervene under contested case procedures. Therefore, no amendments to the statute to change the proceedings have been proposed.

However, because the Five-Year Boundary Review is a comprehensive, overall review, petitions under the Five-Year Boundary Review should be reviewed in the same broad fashion, and OSP may request that the Land Use Commission review petitions by region or subject area, e.g., watersheds.

Land Use Commission Petition Stage

The Office of State Planning will file petitions to reclassify Priority #1 areas with the Land Use Commission. In this case, OSP and the respective County planning departments are mandatory parties to the petition. Landowners, as well as any other parties with standing, may intervene in the proceedings by filing an application with the LUC.

The procedures of the Land Use Commission are guided by Chapter 205, HRS, and the LUC Administrative Rules. The petitioner is required to serve copies of the petition to affected landowners. Public notice of the hearing on the proposed boundary amendment is also required.

The Land Use Commission will conduct a hearing on the proposed boundary amendment. Six affirmative votes are necessary to approve any boundary amendment.

IV. CONSERVATION, AGRICULTURAL, RURAL AND URBAN DISTRICT ISSUES

Conservation District Issues

Management of Conservation Resources. Landowners and environmental groups have both raised the point that proper management is needed to protect Hawaii's rare and endangered species. They contend that zoning is not enough. It is true that zoning is only one element of an array of actions needed to protect conservation resources. Zoning is the allocation of land resources to meet certain desirable community goals, but other things also need to take place to achieve those goals. Just as zoning lands Urban does not guarantee that these lands will be developed and provide houses and jobs, zoning lands Conservation does not guarantee that rare and endangered species will be preserved. For example, reclassification into the Conservation District may not solve the problems of pigs, banana poka and fire.

However, although Conservation designation does not address these natural forces which are so destructive to Hawaii's wildlife, it can protect these lands from man-made intrusions, e.g., construction and development which have also historically eliminated many natural areas. Placing limitations on intensive use of these lands can help to assure that there is a resource left to protect.

If lands remain in the Agricultural District, the potential for more intensive use of the land exists. Within the Agricultural District, agricultural subdivisions and golf courses (C, D and E lands) are permissible uses.

There are more restrictions on uses within the Conservation District and an environmental assessment is required before lands can be reclassified out of the Conservation District. Therefore, where high quality conservation resources were present, it was determined that the best course of action was to recommend that they be classified in the Conservation District.

Uses Within the Conservation District. From a landowner's perspective, there are too many restrictions on uses in the Conservation District. The permits that are required for uses in the Conservation District are disincentives and cause landowners to object to lands going into the Conservation District. It is acknowledged that restrictions on uses are needed in the Conservation District to protect fragile resources. However, it can be argued that not all uses should have to go through the same scrutiny. For example, why should conservation-oriented organizations such as the U.S. Fish and Wildlife Service have to obtain Conservation District Use Applications (CDUA) for fencing, laying pipes or similar uses in the Conservation District. If taro farming is a compatible use in wetlands because it keeps areas open for waterbirds, or aquaculture a compatible use in fish ponds, should a CDUA be required for these uses?

From an environmentalist's perspective, Conservation District rules may not be restrictive enough. For example, residences and golf courses may be permitted in certain subzones within the Conservation District.

To address the concern that lands will be reclassified to the Conservation District but not protected, e.g., that residences or golf courses will be permitted, OSP is generally recommending as Priority #1 areas which meet the criteria for the protective, resource or limited subzones. The Office of State Planning will support designation of these areas into the protective, resource or limited subzones.

Existing statutes grandfather non-conforming uses in the Conservation District. Thus, if lands are reclassified to the Conservation District, existing uses are allowed to continue. A CDUA will only be required for an expansion of an existing use or a new use. Grandfathering of existing uses when lands are reclassified to the Conservation District is a way to not adversely impact current landowners while preventing additional harm to the resource and limiting more intensive use of the property. For the County of Maui, there may be areas within proposed stream corridors which are used for grazing or taro cultivation where the "grandfather" provision would apply.

Both landowners and environmental groups have pointed to a need for examination of Conservation District rules. It may be worthwhile to begin such an examination before the Five-Year Boundary Review is completed.

Scenic, Open Space and Wilderness Resources. The Land Use Law recognizes scenic, open space and wilderness areas as conservation resources. The original delineation of boundaries and the 1969 review included these areas in the Conservation District.

Open space and scenic resources were identified as important topics during the existing boundary review largely because of the debate over LESA and important agricultural lands. Agricultural lands are an open space resource. One of the initial objectives of the review was to identify open space and scenic resources in the Agricultural District which should be reclassified to the Conservation District. This proved to be very difficult to do and has been accomplished only to a very limited extent. The report does contain recommendations to reclassify some of the more outstanding scenic and open space areas in the State to the Conservation District, e.g., Olomana. However, there are many other scenic and open space resources which potentially should be in the Conservation District but have not been recommended for reclassification. This is because such resources are measured and valued qualitatively rather than quantitatively and further studies are needed to determine the significance of specific resources and to justify reclassification by the LUC. It is recommended that such studies be pursued because scenic resources are so important to Hawaii's visitor industry.

Wilderness areas should also be considered. The term wilderness here is not meant to denote Federally designated wilderness areas. The term refers to areas which may not contain rare or endangered plants or animals, may not have watershed value or contain steep slopes, etc., but have value primarily as natural areas. These may, for

example, include areas which are heavily vegetated with non-native species. These natural areas contribute to the overall landscape and are part of what makes Hawaii an attractive and special place. Care needs to be taken that these areas are not incrementally lost and reclassified to urban or agriculture simply because they do not contain rare and endangered species or are not of watershed value.

However, as with open space resources, OSP did not identify and recommend areas for reclassification during the review solely on wilderness values because the evaluation would have been qualitative in nature and difficult to support before the Land Use Commission.

Retention of Conservation District Boundaries. The review found that with the exception of Oahu and Kauai, large acreages of additional urban lands were not needed. Moreover, urban growth for the next ten years on all islands can be accommodated by the redistricting of agricultural land not needed to sustain sugar, pineapple or diversified agricultural operations. Sufficient important agricultural land will remain to meet agricultural production goals. Redesignation of Conservation District land is not needed to meet urban land requirements for the next ten years or to meet agricultural production goals.

Therefore, except for one area in Hawaii County, the review did not recommend that Conservation land be reclassified out of the Conservation District.

In general, it is recommended that lands be retained in the Conservation District unless the Land Use Law is changed to establish an Open Space District, and that any future proposals to reclassify Conservation District land continue to be carefully assessed. If an Open Space District is established, lands which have low value as conservation or agricultural resources but which have open space value and are not needed for urban uses could be included in this district.

Coastal Conservation Issues. At several of the public informational meetings, participants proposed that a continuous greenbelt strip along the coastline be placed into the Conservation District. The Office of State Planning has not included this as a boundary review recommendation because this type of blanket statewide change should be addressed through legislation or by the Counties. OSP proposed legislation in 1991 to increase the shoreline setback to 40 feet in the Urban District and 150 feet in non-Urban Districts with exceptions for small lots. This bill did not pass. However, the Counties already have the authority under Chapter 205A to establish setbacks greater than the minimum established in that Chapter and thus a more immediate solution to this issue may rest with the County governments.

The boundary review does identify specific areas along the coastline which should be reclassified to conservation because of their resources or to conform to County plans.

Agricultural District Issues

The existing Agricultural District contains lands with soils which are only marginally good for agriculture as well as lands with good soils. The reasons for this go back to the initial delineation of land use district boundaries. After the Land Use Law was adopted in 1961, the LUC adopted temporary boundaries. Generally, the LUC renamed the forest and water reserve zones as Conservation Districts and divided the remainder of the land into "urban" and "non-urban," temporarily classifying the non-urban as "agriculture."¹

Upon further and more detailed analysis, permanent boundaries were recommended by the Commission's consultants, Harland Bartholomew and Associates.² The Urban District was expanded to include a liberal allocation of land for anticipated population growth. The boundaries of the interim Conservation District were also modified considerably. State land leased for Agriculture was included in the Agricultural District as were lands in the original forest reserve suitable for agriculture. In other locations, the Conservation boundaries were extended to include areas subject to erosion, wilderness areas, unique examples of lava flows, areas of outstanding scenic quality, recreational and historic sites. Agricultural District boundaries were based on the soil classification, existing agricultural land uses, topography, rainfall and consultation with experts.

The Commission conducted meeting and public hearings and modified and subsequently adopted land use district boundaries.

The consultants encountered certain special problems during the course of their study, problems which are still applicable today. One of these problems was the appropriate disposition of so-called "waste lands" which are neither suitable for high-grade agricultural nor urban development, also called "residual" lands. They noted that 1) under the provisions of Act 187, the Land Use Law, there are no unidentifiable land uses or residual lands, 2) "residual" areas are sometimes viewed as land to be considered waste but such areas are also identified as wilderness and may contain plant or animal life, making them appropriate for Conservation designation, 3) the resources at the peripheral boundaries of the Agricultural and Conservation Districts may approach a line of diminishing positive identification, and 4) there is a need for the exercise of value judgements in the delineation of Conservation and Agricultural District boundaries in many parts of the State.³

¹ Harland Bartholomew and Associates, Land Use Districts for the State of Hawaii, Recommendations for the Implementation of the State Land Use Law, Act 187, SLH 1961, January 11, 1963, pp. 9-10.

² Ibid.

³ Ibid., pp. 17-19.

The question of what to do with lands in the Agricultural District that are not suitable for high-grade agricultural use still exists. Moreover, while it is the State's intention to protect important agricultural land pursuant to the Hawaii State Constitution, the future will bring further questions and concerns relating to the entire Agricultural District because of the changing face of agriculture in Hawaii.

Overall, acreages in sugarcane and pineapple are declining and are projected to decline further although there are individual plantations that remain very healthy. Diversified agriculture is growing and over the years, significant acreages have been planted in macadamia nuts. However, diversified agriculture is not expected to be able to utilize all of the lands taken out of sugar and pineapple.

Agricultural use has been one means of keeping areas in open space and providing related open space benefits. Fields of sugarcane, for example, have enhanced the scenic beauty of the islands. However, there is uncertainty as to the nature and strength of the sugar industry in Hawaii. Proponents of open space will no longer be able to rely on sugar or pineapple to provide open space as companies continue to shrink the size of their plantations. Some landowners of former sugar and pineapple lands have gone into alternative crops such as oats and coffee and this should be encouraged.

However, there is a growing recognition that open space is a valuable resource in its own right and should be protected and managed. Open space enhances the value of surrounding communities, provides buffer areas, scenic vistas, and facilitates efforts to manage and direct urban growth.

As stated earlier, this review initially looked at the issue of agriculture and open space but in many ways found it difficult to address under the existing land use categories. The establishment of a new district, an Open Space District, and a tightened-up Agricultural District containing only important agricultural lands has been under discussion by the Legislature and provides a solution to the agriculture/open space dilemma.

Rural and Urban District Issues

The boundary review recommends that certain lands be urbanized to meet urban land requirements for the next ten years and include a 25 percent surplus. Questions have been raised as to whether this land will actually be developed and specifically whether it will be developed to address the need for affordable housing. It has been suggested that taxation be used as an incentive. It has also been proposed that the provisions on agricultural dedication which allows lands in the Urban District to be dedicated to agriculture be reviewed to determine whether this provision has been facilitating the "holding" of lands rather than the development of urbanized lands.

The recently enacted "use it or lose it" provision can also be utilized to promote development of urbanized lands. Affordable housing requirements can be addressed during the petition process.

Expediting the permit process has also been raised as a concern. To facilitate implementation of the review and expedite development in areas which the review has determined are appropriate, the Office of State Planning will be requesting the Land Use Commission to change some of its detailed requirements on the form and content of petitions during the boundary review.

V. TYPES OF RECOMMENDATIONS

The following explains the types of recommendations included in this report.

Reclassifications to the Conservation or Agricultural District

Priority 1. These are areas that OSP will likely petition for in FY 92-93 and beyond. These include areas which require protection, i.e., conservation resources for which there is sufficient documentation and justification to support a petition under contested case proceedings.

Priority 2. These are areas that are recommended as lower priority. They include, for example, conservation resources: a) which are already protected because of government or non-profit ownership with conservation objectives such as national parks; b) that are significant but not of as high quality or abundance as other areas or not as critical to meeting a specific conservation objective such as protecting endangered birds; c) which are believed or known to contain conservation resources but further survey work is necessary to either verify resources or determine appropriate boundary lines; d) which are of high quality but resource constraints limit the number of petitions which can be prepared; e) but other methods are available to protect the identified conservation values.

Reclassifications to the Urban and Rural Districts

Recommendations for areas appropriate for reclassification to the Urban and Rural Districts are identified. OSP may initiate petitions for certain State, County and private lands which are recommended in the State Land Use District Boundary Review reports for reclassification to the Urban and Rural Districts. The decision as to which petitions OSP will initiate will be based on policy considerations, additional information, conditions on development and the availability of manpower and financial resources.

Department of Hawaiian Home Lands (DHHL)

DHHL lands containing conservation resources and lands proposed for urbanization have been identified in the report. However, these lands are not subject to the State Land Use Law according to the Hawaiian Homes Commission Act of 1920, and action will not be taken on these lands.

VI. SUMMARY OF MAUI COUNTY RECOMMENDATIONS

A. Conservation District

Conservation District designation serves to protect Hawaii's unique and fragile environmental resources. Assuring that these precious resources are included in the Conservation District also helps to reduce future land use conflicts by confirming that it is the State's intent that these resources be protected. For example, conflicts over Heeia Marsh on Oahu may have been avoided if this important wetland and waterbird habitat had been in the Conservation District rather than the Urban District.

The examination of State land use districts in Maui County found the need to address the following critical areas:

1. East Maui Watershed
2. Intact native forest areas
3. Rare plant habitats
4. Wetlands and endangered waterbird habitat
5. Special Streams

EAST MAUI WATERSHED

An expansion of the Conservation District in East Maui is recommended to protect the watershed based upon a study by the Water Resources Research Center, University of Hawaii.

A forested area, former forest reserve lands, between Opana and Honopou gulches which receives rainfall of 120 inches per year, is recommended for inclusion in the Conservation District.

INTACT NATIVE FOREST

Kaapahu. Approximately 795 acres of high quality montane wet forest with hapuu understory located in Kaapahu adjacent to Conservation District lands at Kipahulu Valley are recommended for reclassification from the Agricultural to Conservation District. Kaapahu has been reported to be one of the best examples of koa and ohia forest on Maui outside of Kipahulu Valley.

Kekaalaau. Approximately 240 acres in the West Maui Mountains are recommended for reclassification from the Agricultural to Conservation District. Kekaalaau contains four types of native natural communities and is one of the last lowland virgin koa tracts in West Maui.

RARE PLANT COMMUNITIES

Puu O Kali. Located above Kihei, roughly between the 500-foot and 2,000-foot elevation contours, this area (1,660 acres) contains an abundance of rare plants. Seven rare plant species are found here. Puu O Kali is one of the best remaining examples of lowland dry vegetation on Maui. However, action will not be taken on this site since it is under the jurisdiction of the Department of Hawaiian Home Lands (DHHL). DHHL lands are not subject to the State Land Use Law.

WETLANDS

A number of wetlands not in the Conservation District which have been identified in the State Conservation Lands Functional Plan, State Recreation Functional Plan, State and Federal Recovery Plans, County Community Plans, or by State and County agencies have been recommended for inclusion in the Conservation District. A buffer area around the wetland is recommended in order to regulate uses, e.g., construction of structures adjacent to the wetland which may potentially impact waterbirds.

On Maui, wetlands include Paukukalo and Waihee Wetlands and portions of Kealia Wetland.

On Molokai, these include Kakahaia Wetland and Paialoa Pond and Wetland.

SPECIAL STREAMS

Streams that have been identified in the Hawaii Stream Assessment as containing outstanding aquatic resources or riparian values that include waterbird recovery habitat, or based on new aquatic information provided by DLNR or the U.S. Fish and Wildlife Service and are in the Agricultural District, have been recommended for inclusion in the Conservation District. These streams provide irreplaceable habitat for aquatic and riparian flora and fauna which are much less abundant now than in the past. Hawaii's streams are simple in structure and are absolutely dependent upon runoff from relatively natural areas. A disturbance at any point in a stream may echo through the ecosystem, causing the ecosystem to collapse. The optimal recommendation is the protection of entire watersheds from activities that lead to increased sediment load, pollution and other harmful changes to the stream. A ridge-to-ridge approach would stabilize these ecosystems and offer native species the greatest chance of survival and has been recommended for streams where possible. However, in cases where ridge-to-ridge protection is not feasible given existing land use activities, e.g., residences, a 100-foot Conservation District corridor on both sides of the stream as measured from the bank is recommended. Conservation designation would provide for the regulation of uses adjacent to the stream (e.g., grading and construction of structures) to help assure stream protection.

On Maui, these streams are Honokohau, Kahakuloa, Makamakaole, Waihee, Waikapu, Piinaau, Wailuanui, Makapipi, Kawakoe, Kapia, Waieli, Kakiweka, Hahalawe, Puaaluu, Kukuiula and Alelele.

On Molokai, these streams are Papiro, Honouliwai, Waialua, Honomuni and Kawela.

OTHER AREAS

Other areas recommended for inclusion in the Conservation District include the Waihee Sand Dunes and Shoreline on Maui and the Moomomi Dunes, Ililiopae Heiau and Wailau Trail and the Kaunakakai and Kamiloloa and Makakupaia Gulch Systems on Molokai.

On Lanai, the southeast coast contains alternating bands of Urban and Rural District lands. These areas are designated Open Space in the Lanai Community Plan. In addition, they are not suitable for urban development given the lack of infrastructure and distance from other urban areas. These areas are also not of high agricultural value. Conservation designation is recommended.

The northeast coast is designated Rural and contains many of the characteristics of the southwest coast. However, there are a number of existing houses there. Therefore, the recommendation is to retain the Rural designation except for Shipwreck Beach. Shipwreck Beach should be in Conservation to preserve this wilderness coastline.

The northeast and southeast slopes of Lanai are designated Agricultural but are steeply sloped, have poor soils and low rainfall. They contain native grasslands, shrub land and native trees. Conservation designation would be more appropriate than the current Agricultural designation. In addition, a small area in the northeast mountains is designated Rural. It is surrounded by Conservation land. Again, Conservation designation would be more appropriate given its lack of infrastructure, isolation and location in the midst of Conservation land.

However, all of the Lanai recommendations are Priority #2 level recommendations because of the need for further documentation for the proposed changes.

B. Agricultural District

There are more than enough agricultural lands in the County to meet agricultural production goals. Important agricultural lands should be maintained in the Agricultural District to assure the viability of the sugar, pineapple, macadamia and diversified agricultural industries. Agricultural District lands shall also be maintained to provide open space and scenic vistas. However, Agricultural District lands with high conservation resources have been recommended for reclassification to the Conservation District. The only area recommended for reclassification into the Agricultural District is a 22-acre site in Waihee. This recommendation is being made to be consistent with a Land Use Commission Decision and Order (Docket No. A89-650) affecting Waihee Oceanfront Hawaii Inc.'s properties in this area.

C. Urban and Rural Districts

Very limited urbanization is recommended for Maui County because 1) an analysis of urban land requirements found that Maui County has sufficient urban land available to meet requirements to the year 2000, 2) the County of Maui has just initiated an update of their community plans, and 3) there are major infrastructure constraints on further development in the County.

Urban Land Requirements

The Urban Land Requirements Study, Wilson Okamoto & Associates, Inc., 1991, examined the need for urban land based upon a comparison of available developable urban land and projected urban land requirements.

Urbanization Trends

As of January 1990, Maui County had 22,867 acres in the Urban District. Between 1976 and 1990, 4,249 acres were reclassified to the Urban District. Over two-thirds of these reclassified lands were in two districts--Lahaina and Wailuku-Kahului. Kihei also experienced fairly high urban conversions. During the past five years (1986-90), more lands were reclassified to Urban than during the previous ten-year period, 1976-1985.

Developable Urban Land

The study assessed lands in the Urban District to identify developable urban land. These lands were defined as lands which do not contain any permanent development, are relatively level with a slope of less than 20 percent and is otherwise free of readily identifiable environmental constraints. Also excluded from the definition of developable lands were existing golf courses, parks and roadways.

In the final analysis of urban land requirements, urban land zoned by the County as preservation or conservation was not included in the supply figure for urban land. The study found that in Maui County, there are 5,806 acres of developable urban lands.

DEVELOPABLE URBAN LAND¹
COUNTY OF MAUI

Wailuku-Kahului	1,745
Kihei-Makena	1,126
Lahaina ²	258
Hana	44
Makawao-Kula	463
Paia-Haiku	172
Maui Subtotal	3,808
Molokai	637
Lanai	1,361
Total	5,806

1 Excludes lands zoned preservation or conservation.

2 Does not include 500 acres reclassified in 1991 for HFDC Lahaina project.

Source: Wilson Okamoto & Associates, Inc., Urban Land Requirements Study, 1991.

Demand for Urban Land

Future demands for urban land were determined through population and employment projections and through estimated urban land area requirements by Wilson Okamoto & Associates, Inc. The M-K Series of Population and Economic Projections were utilized. The Office of State Planning is currently evaluating these projections, particularly the visitor industry projections. There are concerns that the visitor industry projections are too high, reflect an over-reliance on that industry and may become a self-fulfilling prophecy. However, these projections are still recommended for planning purposes.

Residential area requirements assumed existing densities, declining household size, and no redevelopment of existing urban areas. Census data on household size was not available when the study was conducted and the census data shows a higher household size than that reflected in the study. Revision of the projections will be needed for the next five-year boundary review. A 25 percent flexibility factor was added to the total urban land requirement figure to account for lands which may be held out of use. Such a flexibility factor allows for unanticipated choices of individuals and firms who may acquire land in excess of the estimated need, and it allows for land which may be held out of use because of personal preferences of property owners, unfavorable market conditions or legal complications which make the land unavailable for immediate development.

Urban Land Requirements

Urban requirements to the year 2000 were projected because of the Land Use Law and LUC rules which provide that the Urban District shall include sufficient reserve areas for urban growth in appropriate locations based on a ten-year projection.

Based on the above-mentioned assumptions and comparisons of available developable urban lands with projections of urban land needs, Maui County has sufficient urban lands available to meet urban land requirements to 2000 with a surplus of 1,597 acres available to meet demands beyond 2000. The majority of this surplus is on Molokai and Lanai, while Maui island's supply and demand is expected to be virtually in balance. Maui island will need 108 acres of urban land to meet needs to 2000.

URBAN LAND REQUIREMENTS COUNTY OF MAUI

	<u>2000</u>
Wailuku-Kahului	612
Kihei-Makena	263
Lahaina ¹	(465)
Hana	(5)
Makawao-Kula	223
Paia-Haiku	57
Maui 25% Flexibility Factor	(783)
Maui Subtotal	(108)
Molokai 25% Flexibility Factor	(20)
Molokai	537
Lanai 25% Flexibility Factor	(39)
Lanai	1,169
TOTAL	1,597

¹ Does not account for 500 acres approved for HFDC Lahaina project.

Surplus (Deficit) in Acres

Source: Wilson Okamoto & Associates, Inc., Urban Land Requirements Study, 1991.

Another reason for recommending only limited urbanization for Maui County is the fact that the County has just initiated an update of their community plans. It may be premature at this point to reclassify large areas into the Urban District when County growth and land use policies and directions are being reviewed and revised.

Finally, Maui County has infrastructure constraints which hamper further development. These include problems related to wastewater treatment in Central Maui and Kihei-Makena, water supply in the Central Maui region, and roads and wastewater in West Maui.

A modest amount of urbanization is being recommended for mill expansion at Paia (16 acres) and Puunene (47 acres) and for proposed residential use adjacent to the Urban District near the Doris Todd Memorial School in Paia (29 acres). Urbanization of these areas is consistent with the Community Plans for these areas and the type and scale of the proposed uses are not anticipated to adversely impact infrastructure systems or agricultural resources. Urbanization of 210 acres is also being recommended at Kahului Airport. This additional urban acreage will allow for extension of the main runway to 9,600 feet as well as for expansion of airport facilities.

In the Kihei-Makena region, approximately 19 acres at the Wailea Resort are being recommended for urbanization. This area is zoned for urban use by the County and portions of the site are already in golf course use. Reclassification of the existing Ohukai subdivision, 24 acres, developed by Maui County under Section 359G-4.1, HRS, from the Agricultural to Urban District is also recommended.

Urbanization of a site for an affordable housing project to be developed by Amfac/JMB Hawaii at either Wainee or Puukolii is recommended. The Wainee site is designated on the Lahaina Community Plan but development of that site has been delayed due to flooding and drainage problems. If Wainee cannot be developed in a timely manner, the Puukolii site is recommended as an alternate site. It should be noted that Amfac/JMB Hawaii, Inc., will be processing this development under the provisions of Act 15 which will expedite the approval process.

There are no recommendations for Urban reclassifications for Molokai or Lanai. Portions of Ualapue, a rural community now in the Urban District, are recommended for reclassification to Rural. Reclassification is consistent with the Molokai Community Plan designation.

VII. PRIORITY LISTING

<i>Site</i>	<i>Change</i>	<i>Acres</i>	<i>Map Code</i>
<i>Priority 1 Conservation and Agricultural Recommendations</i> <i>(OSP intends to initiate reclassification petitions)</i>			
<i>Island of Maui</i>			
1-1. Kaapahu	A to C	795	21
1-2. E. Maui Watershed	A to C	1,271	12
1-3. Waihee River	A to C	148	2
1-4. Addition to Kealia Wetlands	A to C	615	25
1-5. Paukukalo Wetlands	U to C	34	7
1-6. Waikapu Stream	A to C	140	26
1-7. Waieli, Kakiweka Hahalawe and Puaaluu Streams	A to C	321	18
1-8. Alelele Stream	A to C	278	20
1-9. Makamakaole Stream	A to C	236	1
1-10. Wailuanui Stream (State-owned por.)	A to C	50	14
1-11. Kawakoe Stream	A to C	61	16
1-12. Kukuiula Stream	A to C	30	19
<i>Island of Molokai</i>			
1-13. Kakahaia Wetland	A to C	16	12
1-14. Paialoa Pond and Wetland	A to C	31	9
1-15. Moomomi Dunes (non-DHHL por.)	A to C	203	16
1-16. Papio Stream	A to C	151	3
1-17. Honouliwai Stream	A to C	250	4
1-18. Waialua Stream	A to C	375	5
1-19. Honomuni Stream	A to C	209	6
1-20. Kawela Stream	A to C	386	11
<i>Priority 2 Conservation and Agricultural Recommendations</i>			
<i>Island of Maui</i>			
2-1. Honokohau Stream	A to C	87	30
2-2. Piinaau Stream	A to C	58	14
2-3. Wailuanui Stream (privately-owned por.)	A to C	26	14
2-4. Kapia Stream	A to C	54	17
2-5. Makapipi Stream	A to C	56	15
2-6. Waihee Dunes	A to C	80	3

2-7. Waihee Shoreline	A to C	10	4 5
2-8. Waihee Agricultural Area	U to A	22	6
2-9. Kekaalaau	A to C	240	29
2-10. Portion of Waikamoi Preserve	A to C	665	13
2-11. Kahakuloa Stream	A to C	3	31
2-12. Portions of La Perouse Bay / Ahihi-Kinau NAR	A to C	42	22
2-13. Waihee Wetland	A to C	37	4
<i>Island of Molokai</i>			
2-14. Kamiloloa-Makakaupaia	A to C	761	13
2-15. Kaunakakai Gulch System (non-DHHL por.)	A to C	214	14
2-16. Palaau Clifftops	A to C	565	2
2-17. Kalaupapa NHP and Kauhako Crater (non-DHHL por.)	A to C	1,917	1
2-18. Wailau Trail/Iliiopae Heiau	A to C	200	7
2-19. Moomomi Preserve	A to C	809	15
2-20. Waiakuilani Gulch	A to C	332	10
<i>Island of Lanai</i>			
2-21. Southeast Coast	U,R to C	1,077	4
2-22. Rural area in northeast mountains	R to C	86	1
2-23. Northeast and Southeast Slopes	A to C	11,000	3
2-24. Shipwreck Beach	R to C	160	2
<i>Urban and Rural Recommendations</i>			
<i>Island of Maui</i>			
U/R-1. Puunene Sugar Mill	A to U	47	8
U/R-2. Paia Sugar Mill	A to U	16	10
U/R-3. Paia (Doris Todd Memorial School Site)	A to U	29	11
U/R-4. Wainee Affordable Housing Site	A to U	100	27
U/R-5. Puukolii Affordable Housing Site	A to U	100	28
U/R-6. Kahului Airport Expansion	A to U	210	9
U/R-7. Wailea Resort Urban Expansion	A to U	19	23

U/R-8. Ohukai Subdivision	A to U	24	24
<i>Island of Molokai</i>			
U/R-9. Ualapue	U to R	203	8

TOTAL ACREAGES
BY PRIORITY AND ACTION

Priority 1	A to C	5,566
Priority 1	U to C	34

Priority 2	U to A	22
Priority 2	A to C	17,156
Priority 2	R to C	435
Priority 2	U to C	888

Rural	U to R	203
Urban*	A to U	445

*Either Wainee or Puukolii will be developed for affordable housing. Therefore, these two recommendations account for only 100 acres between them.

VIII. LISTING OF RECOMMENDATIONS

MAUI ISLAND

1. Makamakaole Stream (236.3 acres) (A to C) Priority 1

This stream contains an abundance of native aquatic species.

2. Waihee River Valley (148 acres) (A to C) Priority 1

Waihee River contains an abundance of native aquatic species and the presence of Lentipes (oopu alamoo) has been reported. A steep ridge borders the stream and reclassification of Agricultural land from ridge to ridge is recommended to protect stream resources.

- 3 to 5. Waihee Dunes, Wetland and Shoreline (A to C) Priority 2
(Dunes-80 acres; Shoreline-10 acres; Wetland-37 acres)

This area includes dunes, coastal dry herb lands/shrub lands and a wetland providing habitat for endangered and migratory waterbirds.

6. Waihee Urban to Agricultural Area (22 acres) (U to C) Priority 2

Reclassification of this area is consistent with the Decision and Order reclassifying the Waihee Dairy site from the Agricultural to Urban District. These lands were planned for clubhouse and other urban-type uses but under revised designs are no longer needed for such purposes. Therefore, these lands should revert back to the Agricultural District.

7. Paukukalo Wetlands (34 acres) (U to C) Priority 1

The site encompasses a wetland and is within the coastal high hazard area. It is also designated as Open Space on the Wailuku Community Plan.

8. Puunene Sugar Mill Expansion (47 acres) (A to U)

Reclassification of this area is proposed for expansion of mill operations. Specific uses intended for this area include electrical generation and by-product enhancement operations. The proposed expansion of mill operations will enhance the viability of the sugar industry. Reclassification is consistent with the Wailuku-Kahului Community Plan which designates the site for Heavy Industrial and Agriculture use.

9. Kahului Airport Expansion (210 acres) (A to U)

Reclassification of this area is proposed to allow for extension of the airport's main runway to 9,600 feet as well as for construction of other airport facilities. The proposed improvements would serve Maui's present and future air transportation needs and would increase the efficiency of moving passengers and cargo into and out of Maui.

10. Paia Sugar Mill Expansion (16 acres) (A to U)

Reclassification of this area is proposed for expansion of mill operations including electrical generation and by-product enhancement operations. The proposed expansion of mill operations will enhance the viability of the sugar industry. Reclassification is consistent with the Paia-Haiku Community Plan which designates the site as Heavy Industrial and Agriculture.

11. Paia (Doris Todd Memorial School), (29 acres) (A to U)

Reclassification is proposed for the development of single-family residential units by A&B Hawaii and for the potential expansion of the existing school facilities. The reclassification is consistent with the Paia-Haiku Community Plan which designates the area as Single Family and Public-Quasi/Public. Given the scale of the proposed use of the area, the development is not anticipated to have adverse impacts on infrastructure and public services.

12. East Maui Watershed (1,271 acres) (A to C) Priority 1

This site is a forested area located between Opana and Honopou gulches adjacent to the existing Conservation District. It receives annual average rainfall of 120 inches. It has been recommended for inclusion in the Conservation District for watershed protection in the Watershed Protection Study, Water Resources Research Center, University of Hawaii.

13. Portion of Waikamoi Preserve (665 acres) (A to C) Priority 2

The proposed reclassification would place parts of the Waikamoi Preserve which are not currently in the Conservation District into that district. The Nature Conservancy's Waikamoi Preserve contains native shrub lands and forests that provide habitat to endangered forest birds and at least six rare plants.

14 to 20. Piinaau Stream, Wailuanui Stream, Makapipi Stream, Kawakoe Stream, Kapia Stream, Waieli, Kakiweka, Hahalawe and Puaaluu Streams, Kukuiula Stream and Alelele Stream (A to C)

These streams contain an abundance of native aquatic species and also have been reported to contain Lentipes (oipu alamoo).

Piinaau Stream (Priority 2); Wailuanui Stream--State-owned portion (Priority 1), Privately-owned portion (Priority 2); Makapipi Stream (Priority 2); Kawakoe Stream (Priority 1); Kapia Stream (Priority 2); Waieli, Kakiweka, Hahalawe and Puaalua Streams (Priority 1); Kukuiula Stream and Alelele Stream (Priority 1)

21. Kaapahu (795 acres) (A to C) Priority 1

Kaapahu contains high-quality montane wet forest with hapuu understory. It is adjacent to Conservation District lands at Kipahulu Valley. Kaapahu is reported to be one of the best examples of koa and ohia forest on Maui outside of Kipahulu Valley. Discussions with the landowner regarding participation in the Forest Stewardship Program and a perpetual conservation easement as an alternative means of protection for the site are underway.

22. Portions of La Perouse Bay/Ahihi-Kinau Natural Area Reserve (NAR) (42 acres) (A to C) Priority 2

The proposed reclassification would place portions of the NARs which are in the Agricultural District into the Conservation District to be consistent with the NARs designation.

23. Wailea Resort Urban Expansion (19 acres) (A to U)

The proposed reclassification would allow for the expansion of resort activities and would bring the State land use district designation into conformance with County zoning. A portion of the site is already in golf course use.

24. Ohukai Subdivision (24 acres) (A to U)

Ohukai subdivision already contains 106 single-family homes. Reclassification is intended to conform the State land use designation to the existing use.

25. Addition to Kealia Wetland (+615 acres) (A to C) Priority 1

The proposed reclassification would place portions of Kealia Wetland and a protective buffer area which are in the Agricultural District into the Conservation District. Much of Kealia Wetland is already in the Conservation District. Kealia Wetland is a recovery habitat for endangered Hawaiian waterbirds.

26. Waikapu Stream (140 acres) (A to C) Priority 1

Waikapu Stream feeds into Kealia Pond which is an endangered waterbird recovery habitat. It has been identified as a Special Stream. The stream and a 100-ft. corridor extending from both sides of the stream bank are recommended for inclusion into the Conservation District for stream protection.

27. Wainee Affordable Housing Site (100 acres) (A to U)

Reclassification is recommended for the development of an affordable housing project by Amfac/JMB Hawaii. However, should flooding and drainage problems delay development of this site, the substitution of an alternate site at Pukolii is recommended. Reclassification is consistent with the Lahaina Community Plan which designates the site as Single and Multi-Family.

28. Puukolii Affordable Housing Project (100 acres) (A to U)

Reclassification is recommended for the development of an affordable housing project by Amfac/JMB Hawaii in the event that flooding and drainage problems delay development of the Wainee site. The Puukolii site would be substituted for the Wainee site.

29. Kekaalaau (240 acres) (A to C) Priority 2

Kekaalaau contains four types of native natural communities and is one of the last lowland virgin koa tracts in West Maui.

30. Honokohau Stream (87 acres) (A to C) Priority 2

Honokohau Stream contains an abundance of native aquatic species. The stream and a 100-ft. corridor extending from both sides of the bank are recommended for inclusion in the Conservation District for stream protection.

31. Kahakuloa Stream (3 acres) (A to C) Priority 2

Kahakuloa Stream contains all four native aquatic species, indicating that it is a good aquatic environment.

MOLOKAI

1. Kalaupapa National Historical Park and Kauhako Crater (2,405 acres; non-DHHL portion-1,917 acres) (A to C) Priority 2

Kalaupapa National Historical Park has historic, cultural and scenic significance. In addition, the Kauhako Crater contains an anchialine pool and remnant native forest. A lava tube system containing native cave animals runs from the crater to the coast. Part of this site is DHHL land and is not recommended for action. DHHL lands are not subject to the State Land Use Law.

2. Palaaau Clifftops (565 acres) (A to C) Priority 2

Reclassification would provide an open space buffer to enhance the scenic and open space value of the adjoining cliffs. The proposed reclassification areas border Palaaau State Park.

- 3 to 6. Papio Stream, Honouliwai Stream, Waialua Stream and Honomuni Stream (A to C) Priority 1

These streams and a protective corridor are recommended for reclassification to Conservation because of the presence of Lentipes (oopu alamoo).

7. Ililipae Heiau and Wailau Trail (200 acres) (A to C) Priority 2

Ililipae Heiau is the largest heiau on Molokai and is considered the oldest on the island. The area and surrounding lands including the portions of the Wailau Trail are characterized by a rugged and mountainous terrain. The Molokai Community Plan designates the Heiau site as Park with the surrounding lands which encompass the Wailau Trail as Agriculture.

8. Ualapue (203 acres) (U to R)

Ualapue is a rural community. The area consists of small individual lots ranging in size from one-half acre to 4.0 acres or more. The majority of lots in this area are between 1 to 2 acres, reflecting its rural atmosphere. Reclassification would be consistent with the Molokai Community Plan which designates most of the subject area as Rural. Lots less than one-half acre in size would be grandfathered in as non-conforming uses.

9. Paialoa Pond and Wetlands (31 acres) (A to C) Priority 1

The Paialoa Pond and Wetlands area contains a fishpond designated as Conservation. The surrounding wetlands which are designated Agricultural provide a habitat for endangered Hawaiian stilts and indigenous black-crowned night herons. Reclassification of the wetlands and a buffer area are recommended to protect Hawaiian waterbirds.

10. Waiakuilani Gulch (332 acres) (A to C) Priority 2

Reclassification is consistent with the Molokai Community Plan which designates this area as Conservation. The site is surrounded by Conservation District land on three sides.

11. Kawela Stream (386 acres) (A to C) Priority 1

This stream contains a diversity of aquatic species including Lentipes (oopu alamoo).

12. Kakahaia Wetland (16 acres) (A to C) Priority 1

This site includes Kakahaia National Wildlife Refuge, seasonally flooded wetland areas and a buffer area. Reclassification is recommended to protect endangered Hawaiian waterbirds and migratory waterbirds.

13. Kamiloloa-Makakupaia (761 acres) (A to C) Priority 2

The subject area forms an extension to the east of the Kaunakakai Gulch System area. It runs between the 1,000-foot elevation contour at its lower extent, to the mauka Molokai Forest Reserve line. The gulch contains native forest and other native shrub land communities. Reclassification is recommended to protect native vegetation.

14. Kaunakakai Gulch System (1,400 acres; non-DHHL portion-214 acres)
(A to C) Priority 2

The Kaunakakai Gulch System encompasses the rugged East Molokai slopes between the Kahuaawi Gulch and Kapaakea Gulch. Although the ridge tops are no longer dominated by native plants, there are large pockets of native vegetation in the gulches, including some sandalwood, wiliwili and koaia. There have been recent fires in the area. However, certain native plants have quick regenerative powers in the aftermath of burnouts. Reclassification is recommended to protect native plant species. Part of this site is DHHL land and is not recommended for action.

15. Moomomi Preserve (808.45 acres) (A to C) Priority 2

Reclassification of The Nature Conservancy's Moomomi Preserve is recommended consistent with its ecological significance.

16. Moomomi Dunes (203 acres) (A to C) Priority 1

This site, like the adjacent Nature Conservancy Preserve, is noted for having the best remaining sand dune ecosystem in the main Hawaiian Islands. The area contains native coastal shrub lands and grasslands and a high density of rare native plants. Action will not be taken on the portion of this site which is owned by DHHL. DHHL lands are not subject to the State Land Use Law. The landowner for the privately-owned portions of the site has proposed a perpetual conservation easement as an alternative to conservation districting. Discussions are underway on this alternative.

LANAI

1. Rural Area in Northeast Mountains (86 acres) (R to C) Priority 2

This is an area of Rural designated land surrounded by Conservation District lands. Reclassification of the area is consistent with the Lanai Community Plan which designates the area as Open Space. There are no utilities extending to the subject area.

2. Shipwreck Beach (160 acres) (A to C) Priority 2

Shipwreck Beach is a significant recreational resource. Reclassification to the Conservation District would serve to protect this wilderness coastline. Portions of this area are designated Open Space on the Lanai Community Plan.

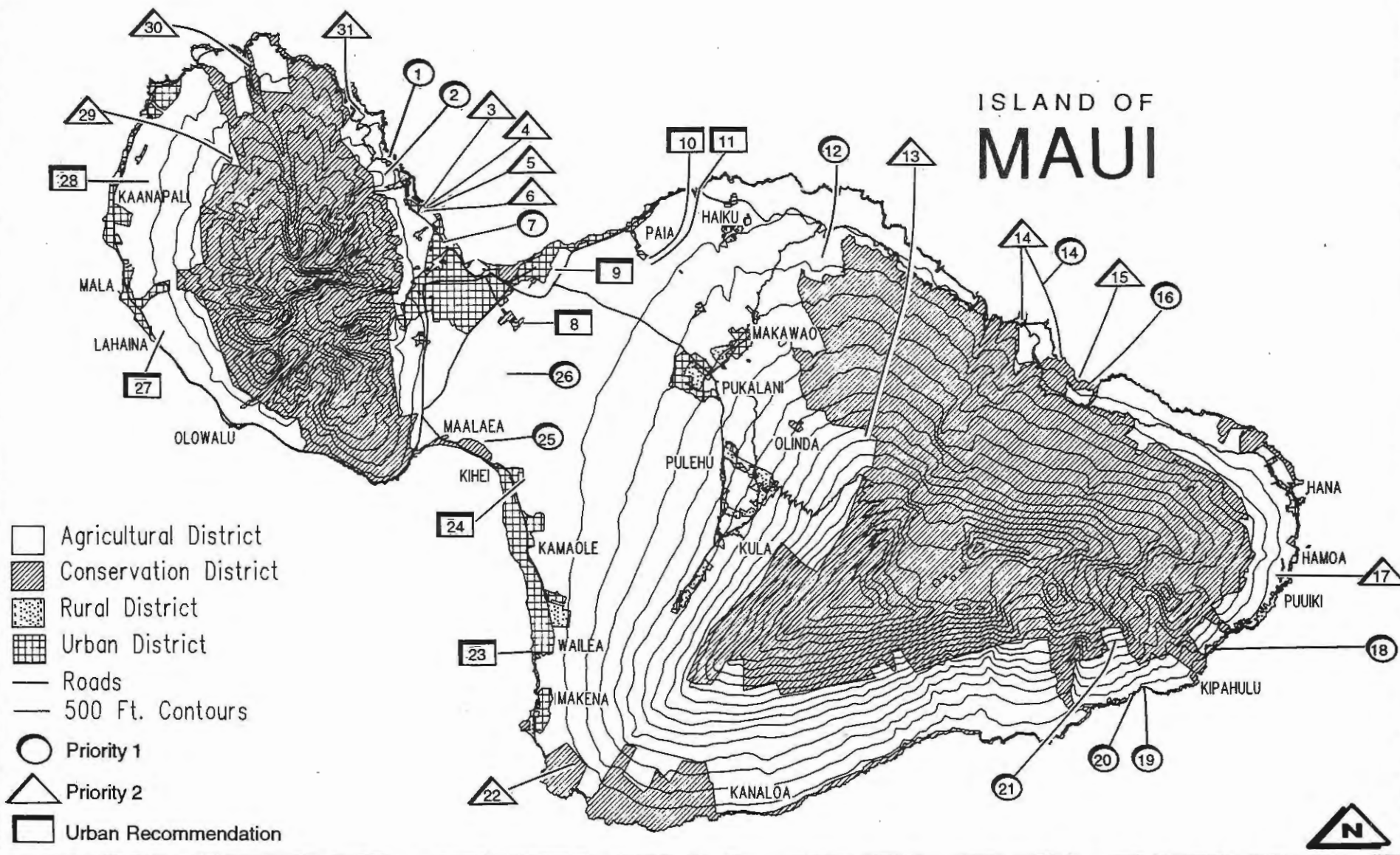
3. Northeast and Southeast Slopes (11,000 acres) (A to C) Priority 2

This area contains native grassland and shrub land. It is not of high agricultural value as it contains poor soils and steep slopes.

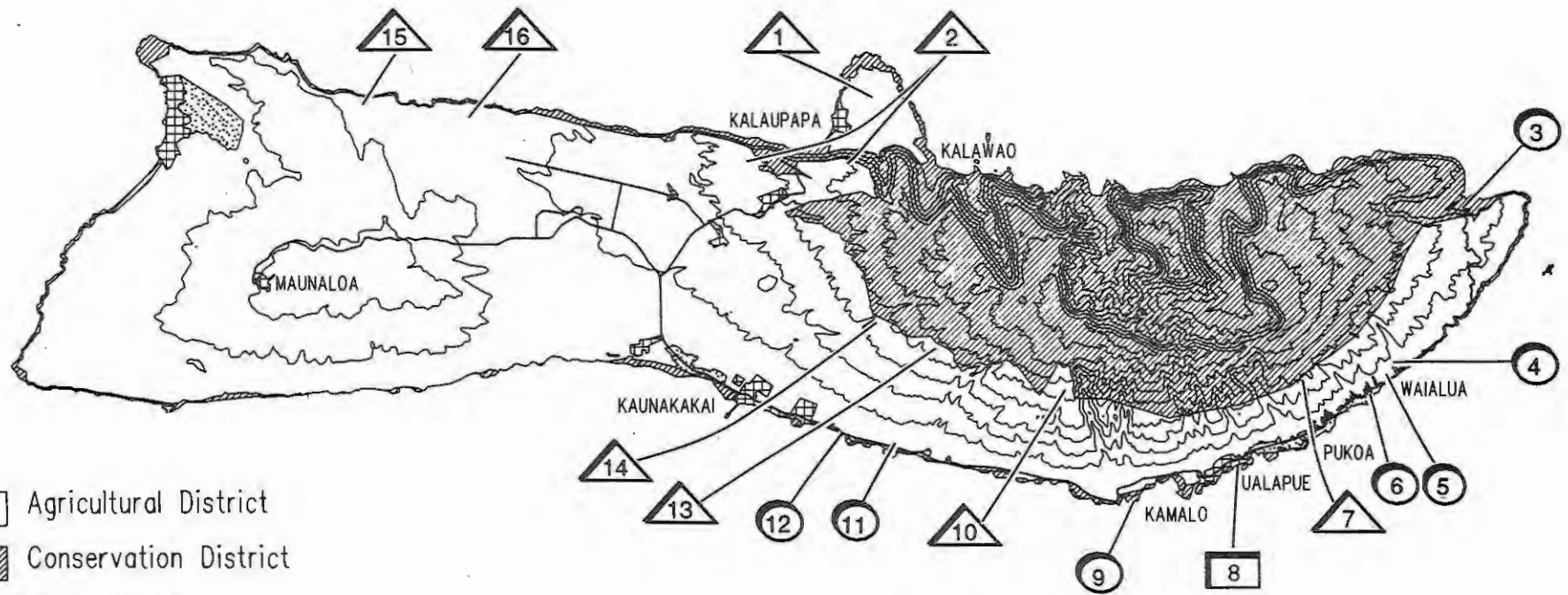
4. Southeast Coast (1,077 acres) (U, R to C) Priority 2

Reclassification is consistent with the Lanai Community Plan which designates these areas as Open Space to maintain continuity with the adjoining Conservation District lands which band the coastal areas of this portion of the island. Development of the area is not desirable because of the lack of infrastructure, lack of water and distance from other urbanized areas.

FIVE-YEAR BOUNDARY REVIEW RECOMMENDATIONS



FIVE-YEAR BOUNDARY REVIEW RECOMMENDATIONS



-  Agricultural District
-  Conservation District
-  Rural District
-  Urban District
-  Roads
-  500 Ft. Contours
-  Priority 1
-  Priority 2
-  Rural Recommendation

ISLAND OF
MOLOKAI



FIVE-YEAR BOUNDARY REVIEW RECOMMENDATIONS

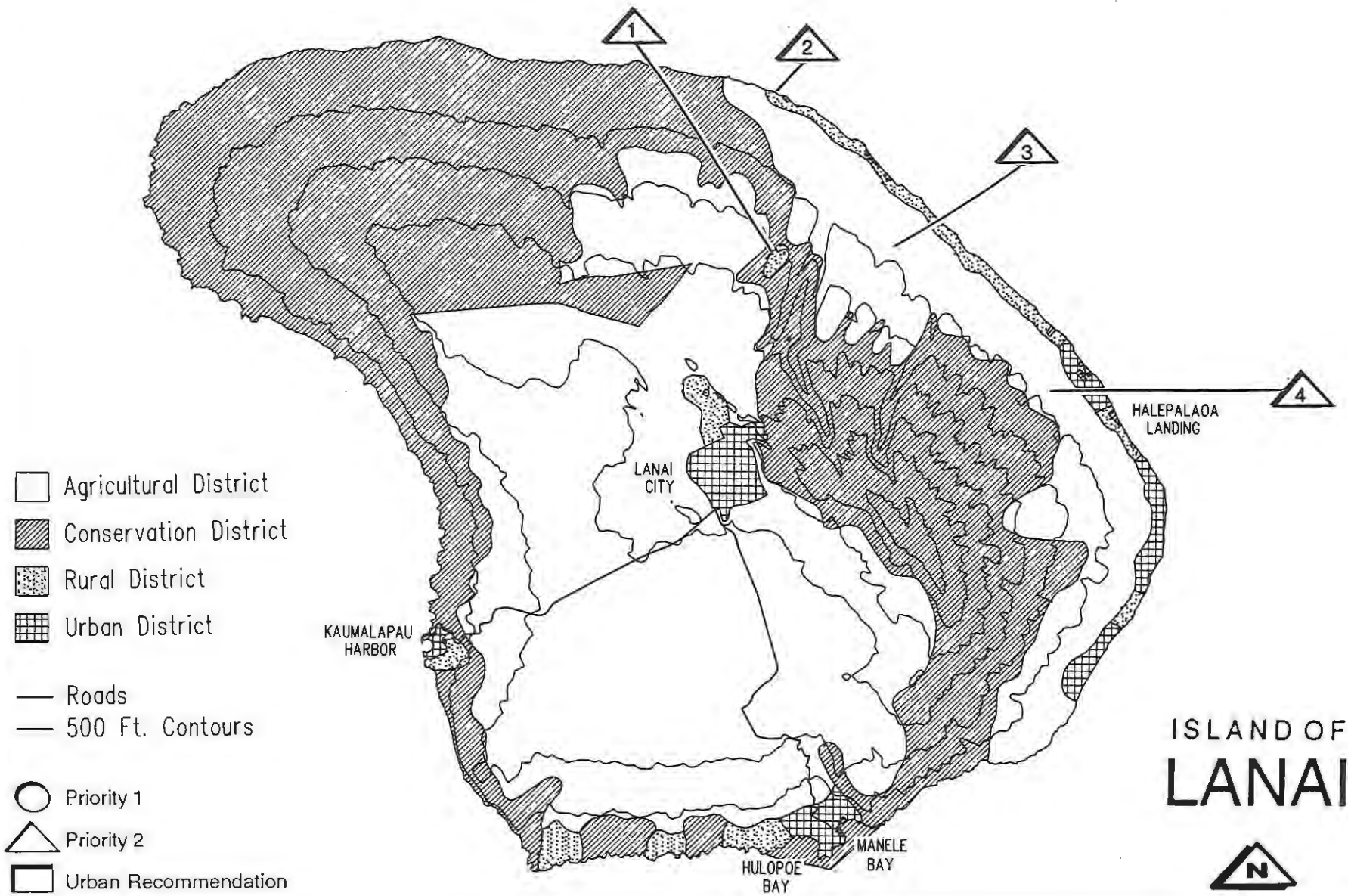
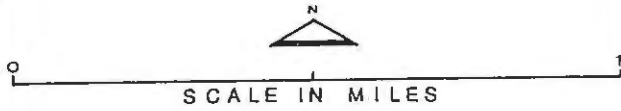
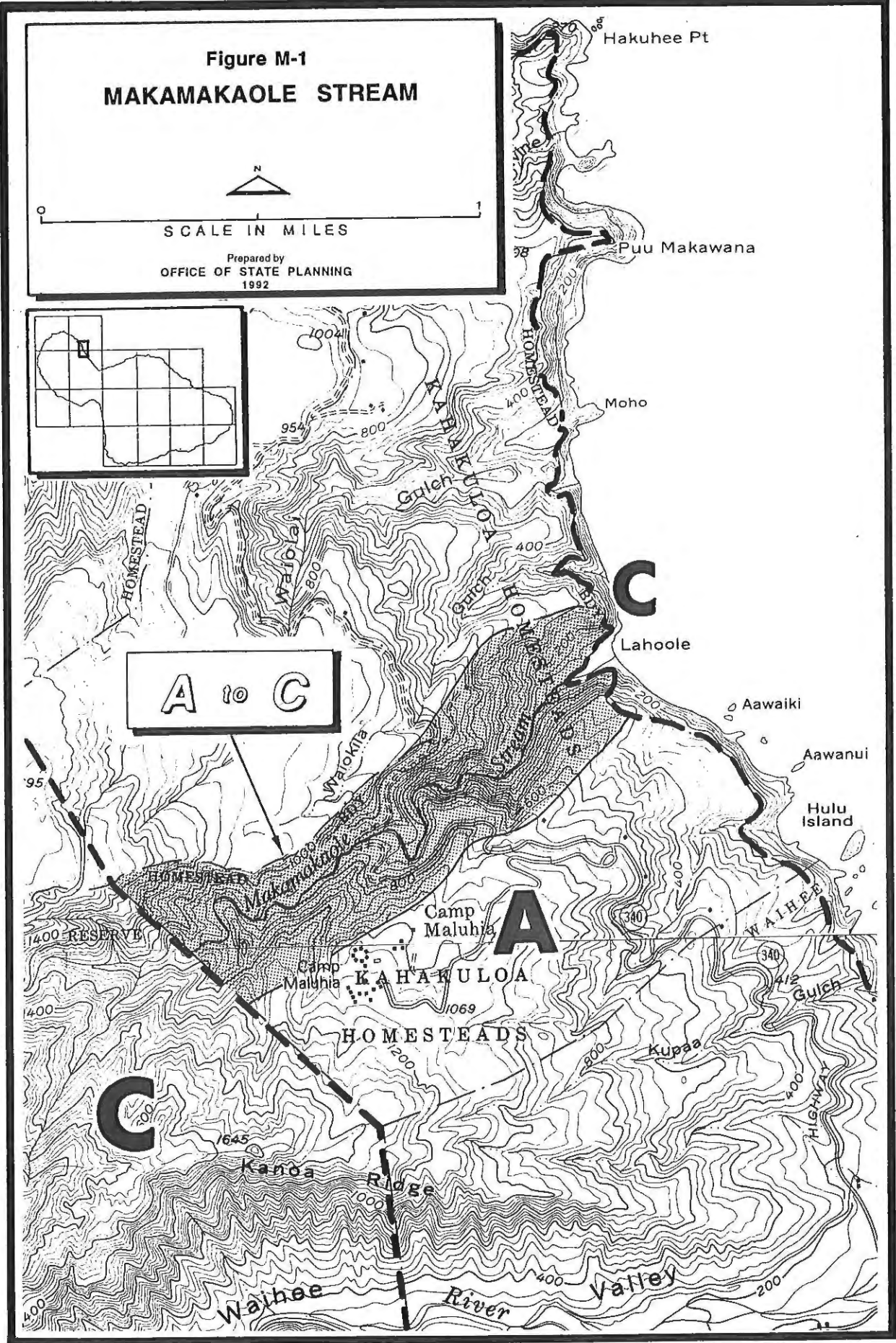
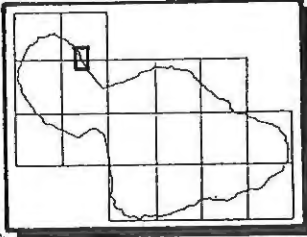


Figure M-1
MAKAMAKAOLE STREAM



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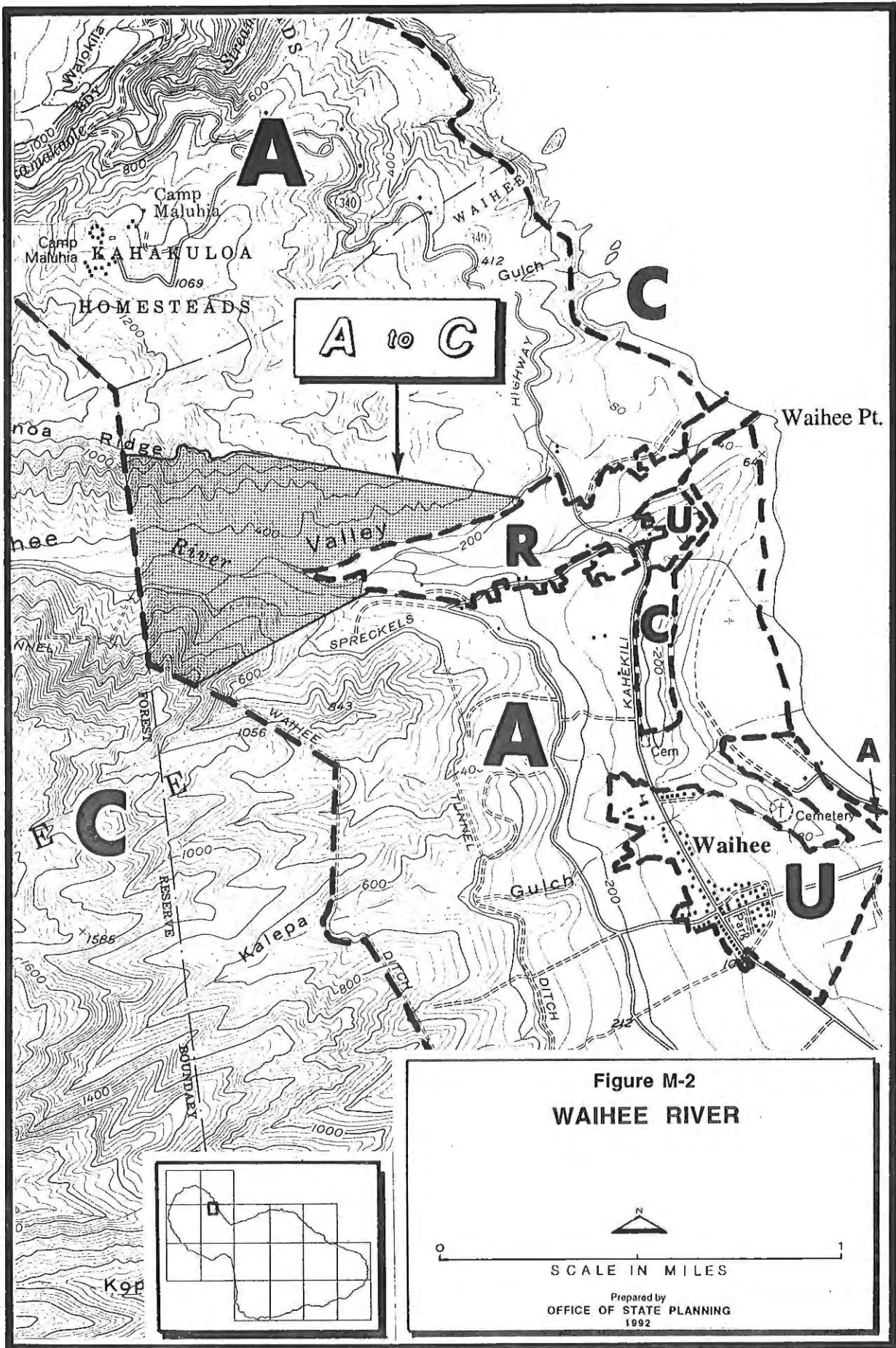


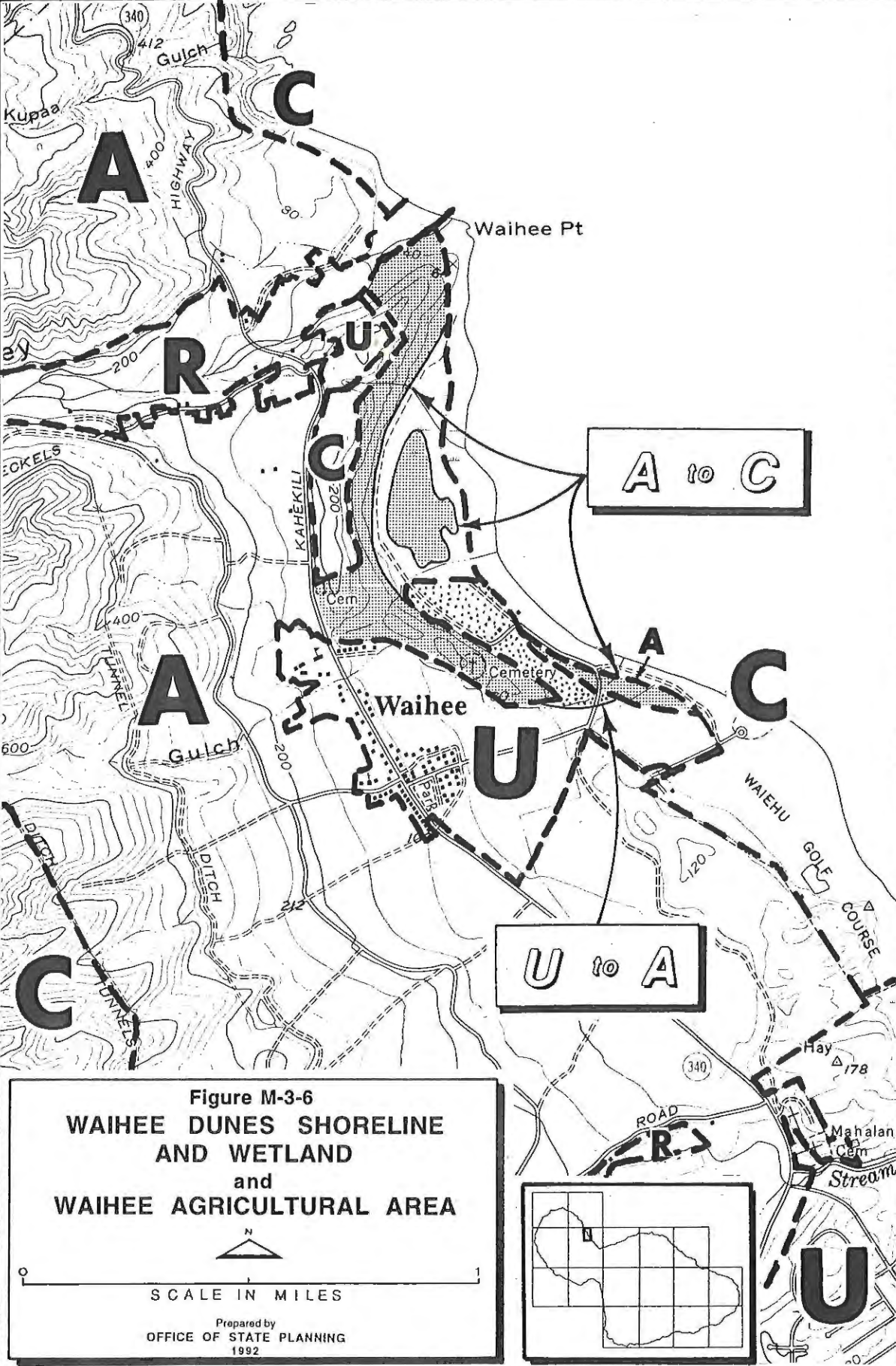
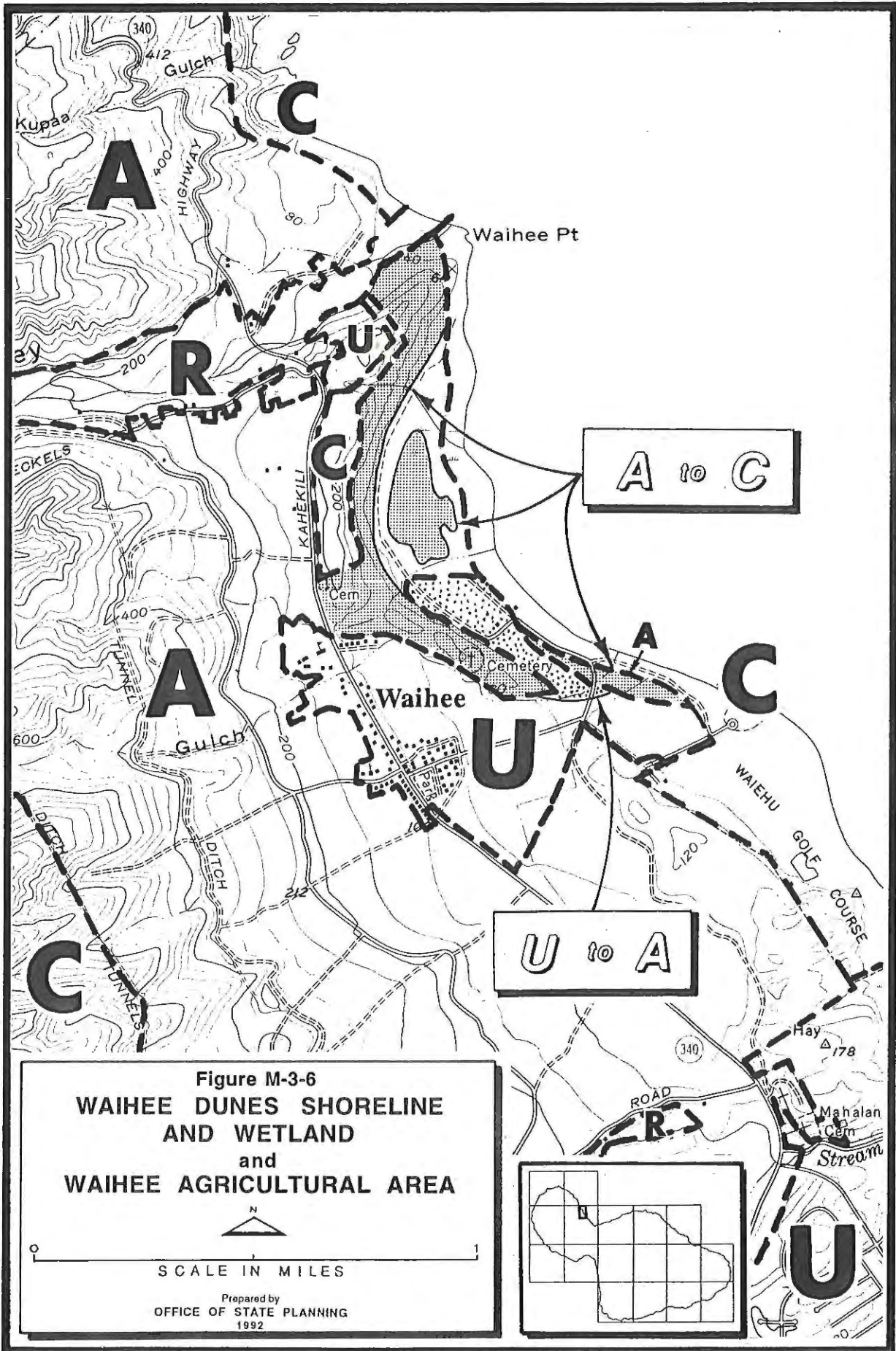
Figure M-2
WAIHEE RIVER

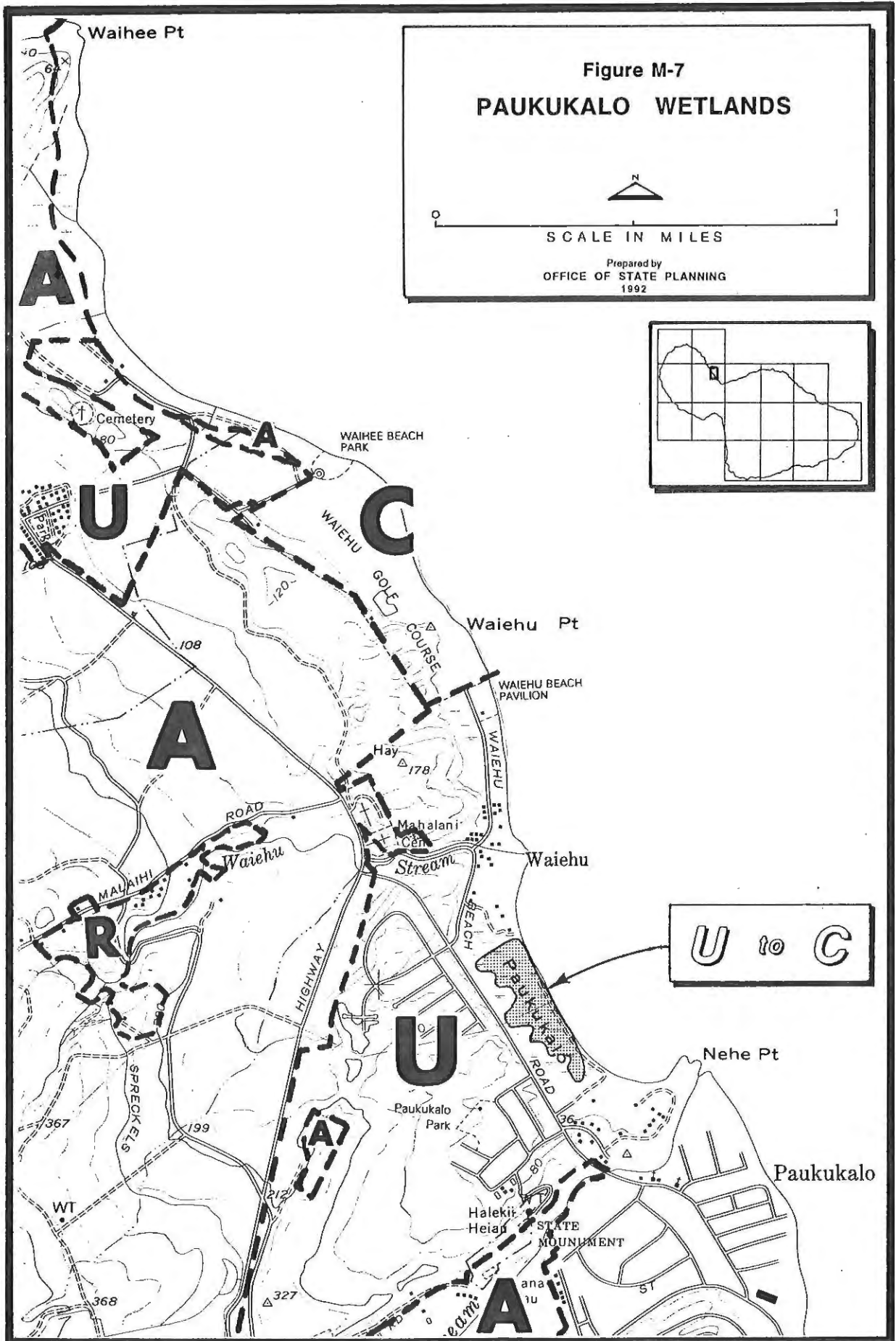
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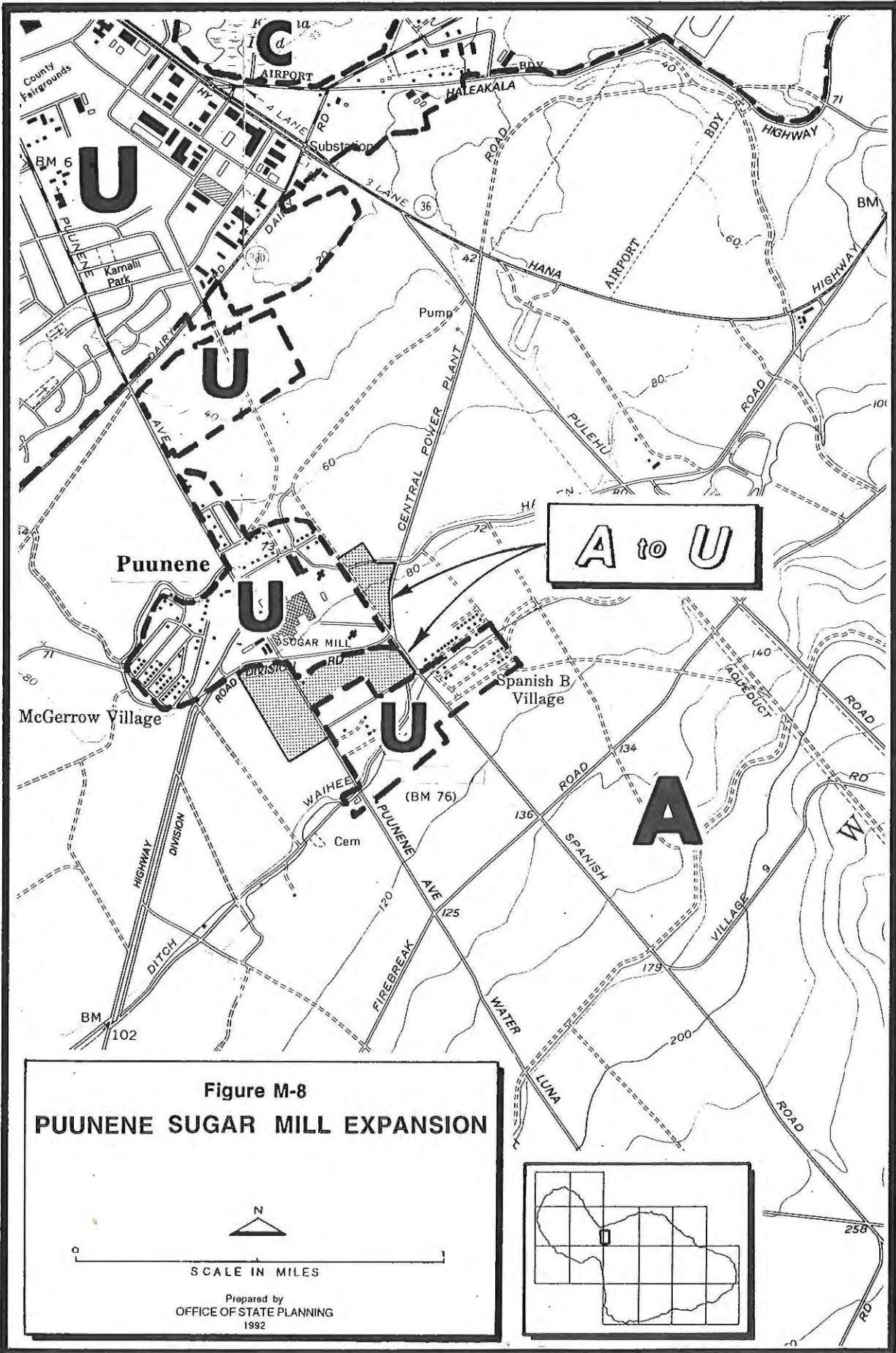


Figure M-8
PUUNENE SUGAR MILL EXPANSION

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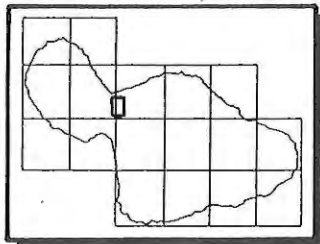
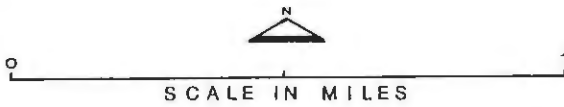


Figure M-9
KAHULUI AIRPORT



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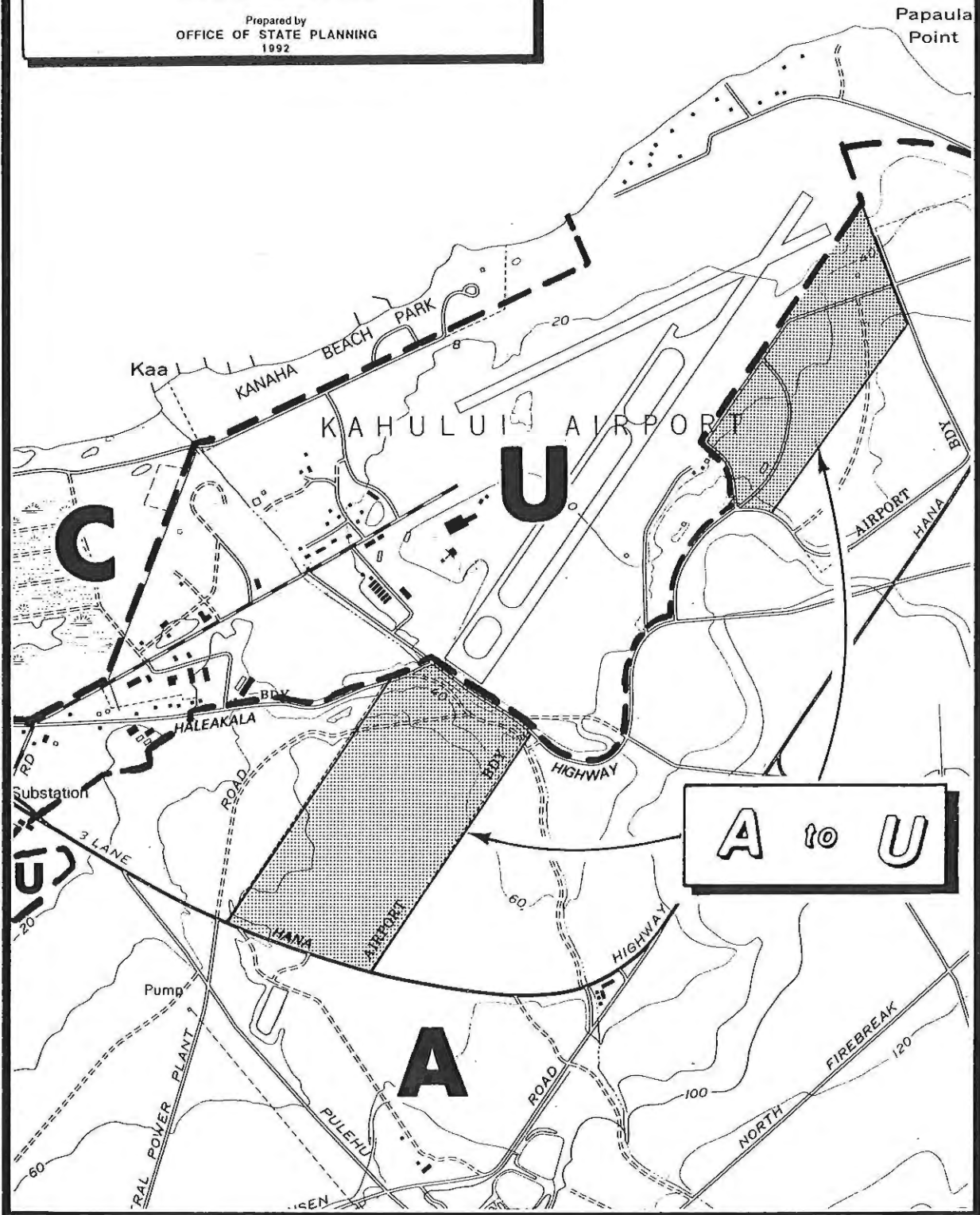
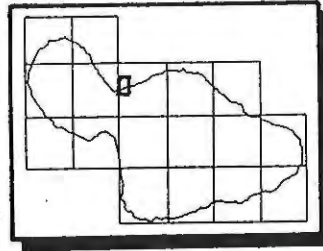
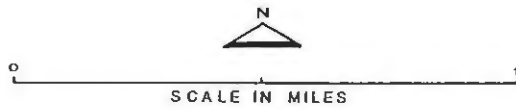
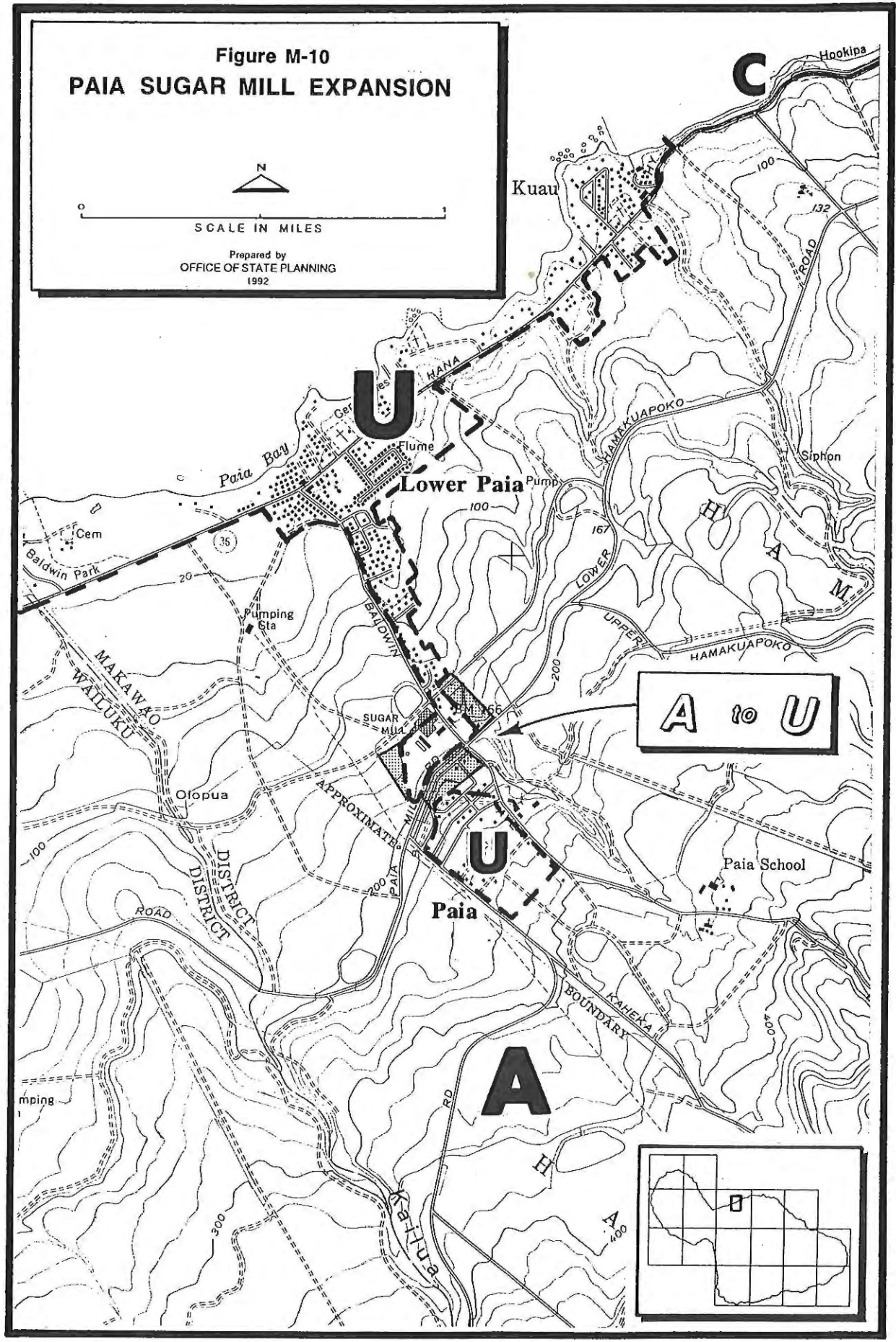


Figure M-10 PAIA SUGAR MILL EXPANSION



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A to U

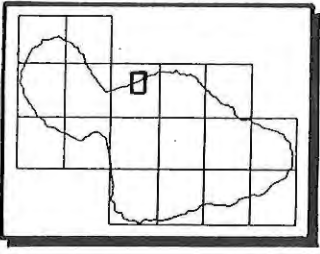


Figure M-11
PAIA - DORIS TODD
MEMORIAL SCHOOL



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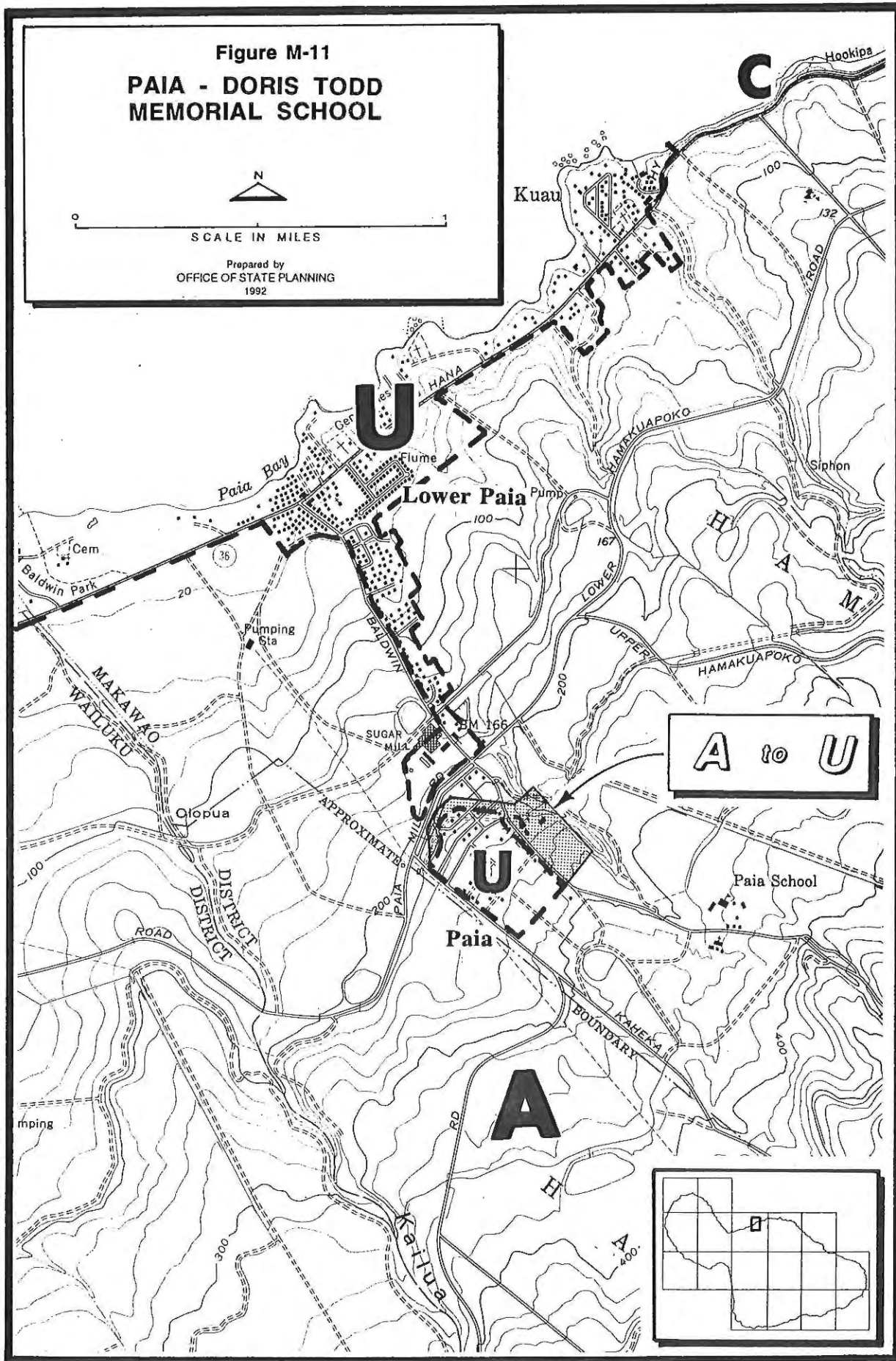
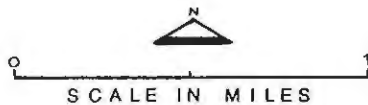
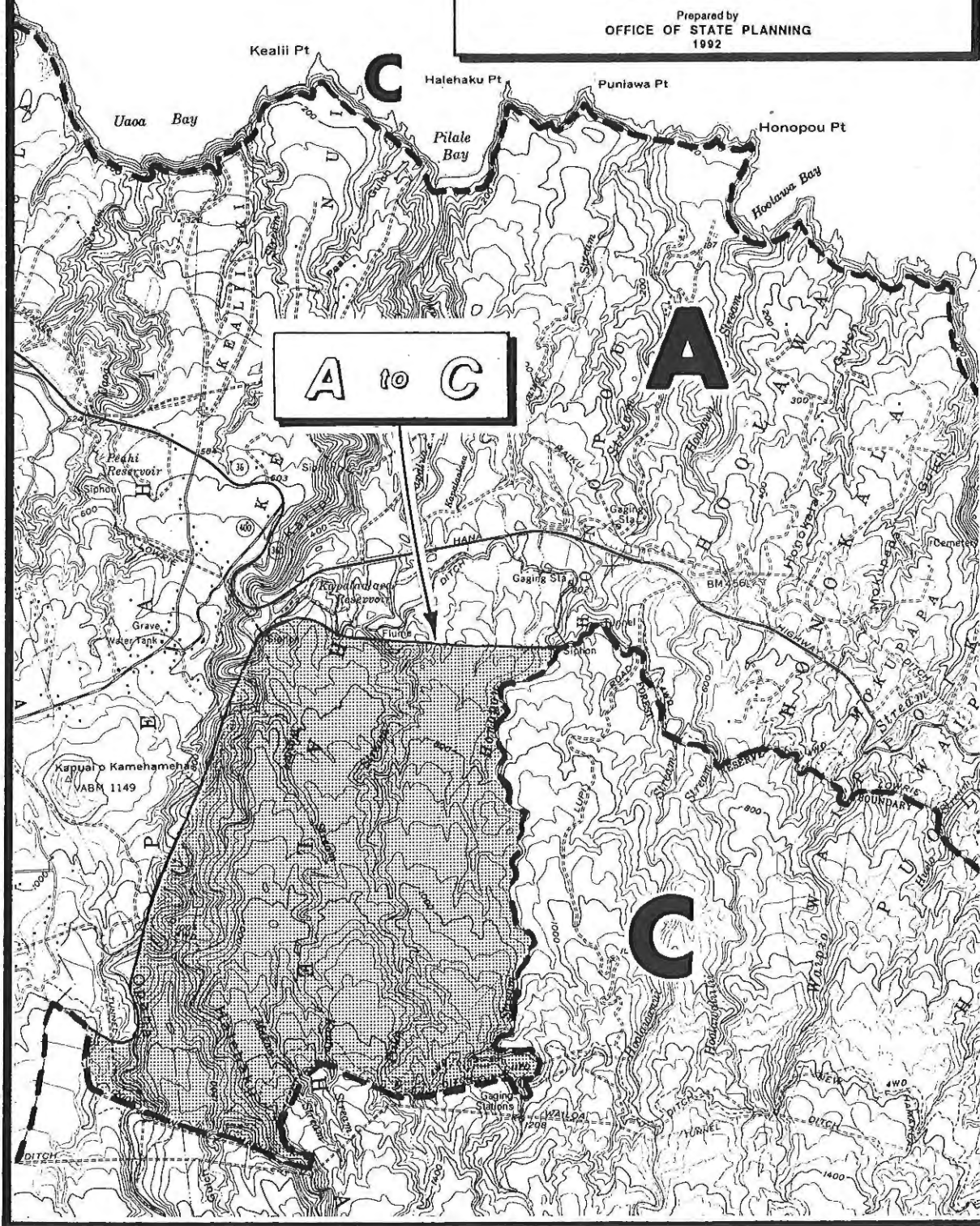


Figure M-12
EAST MAUI WATERSHED AREA



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1992



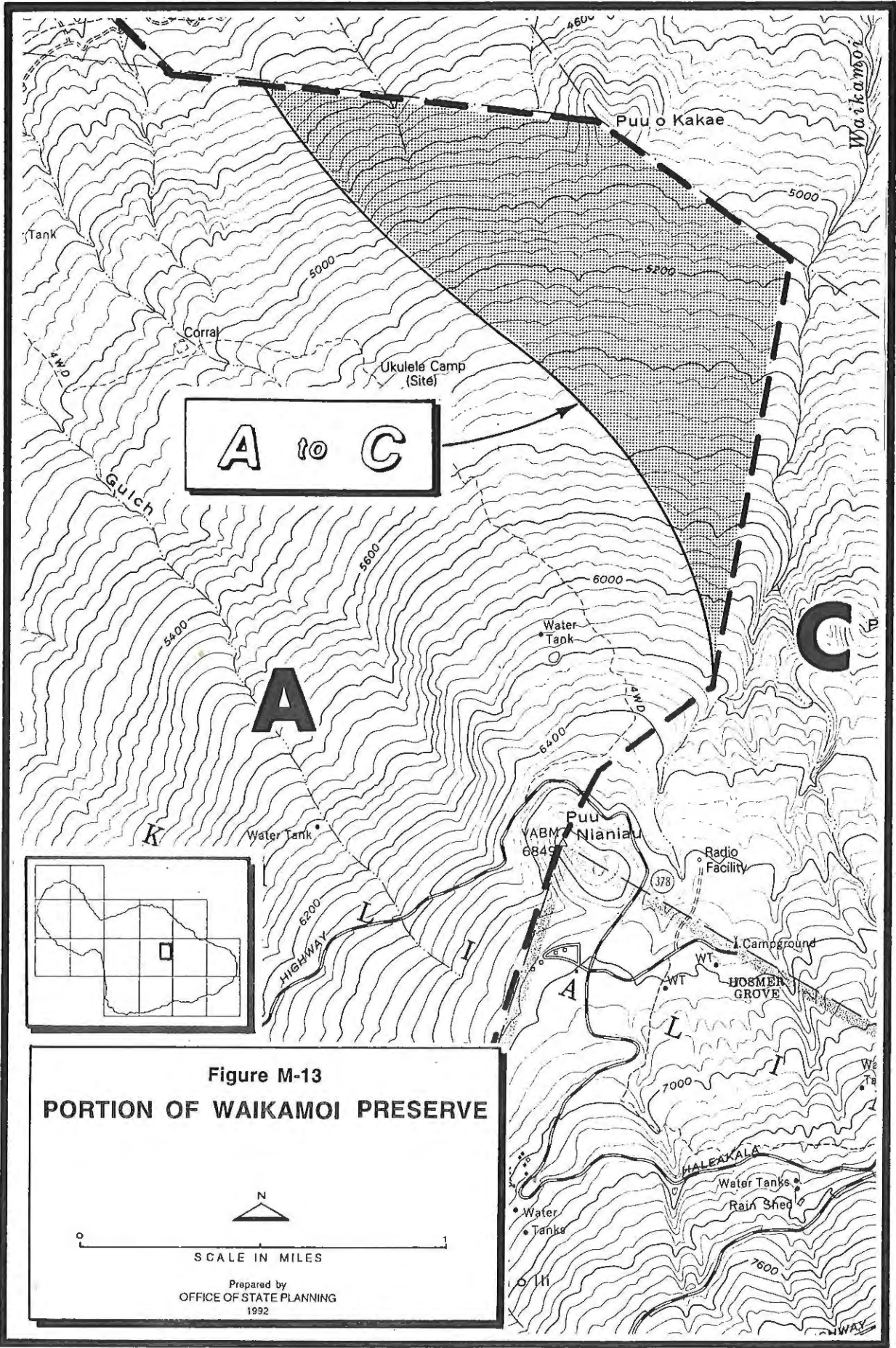
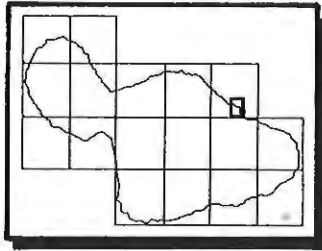


Figure M-13
PORTION OF WAIKAMOI PRESERVE



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Figure M-14
PIINAU AND WAILUANUI STREAMS



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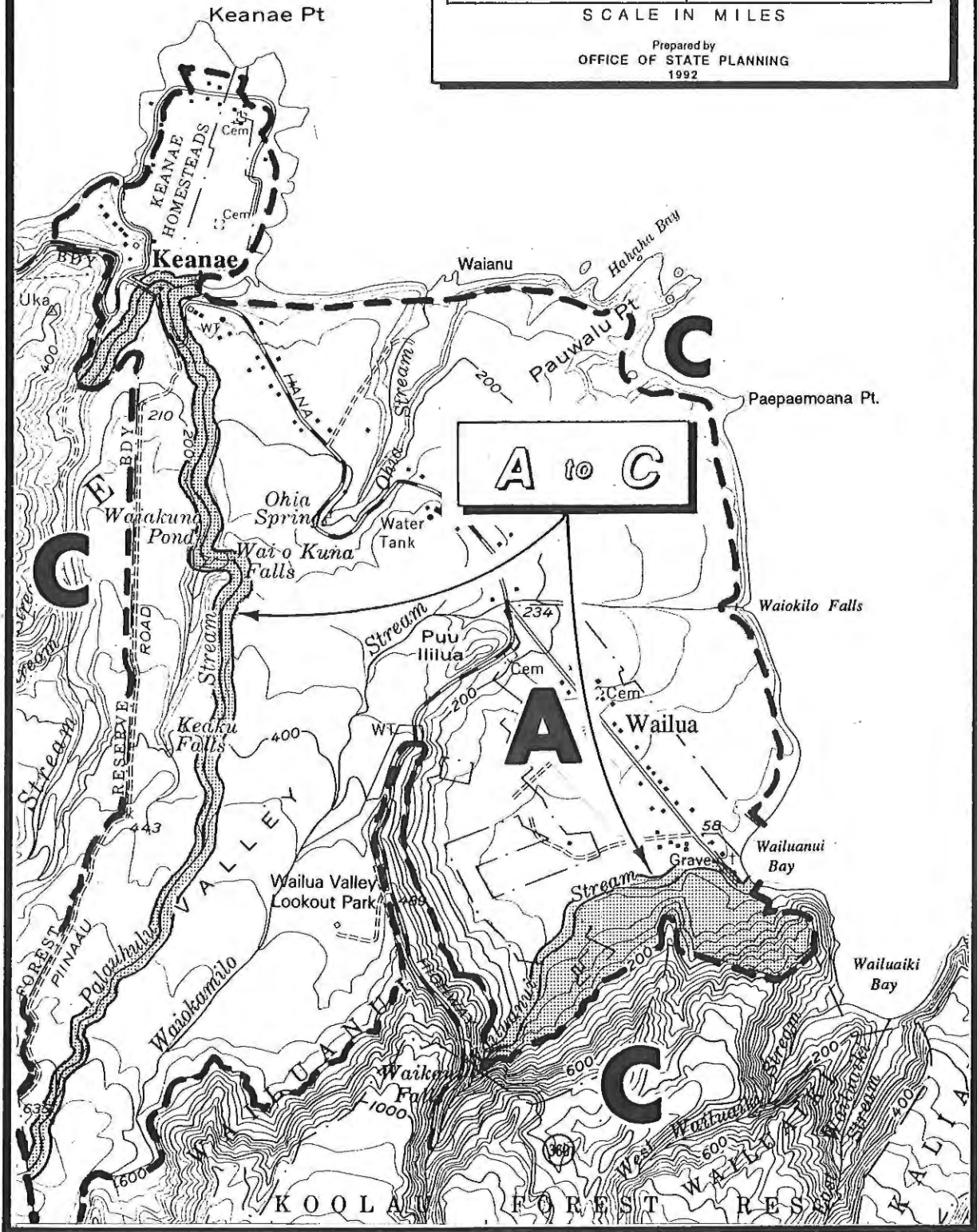
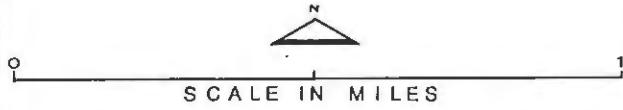
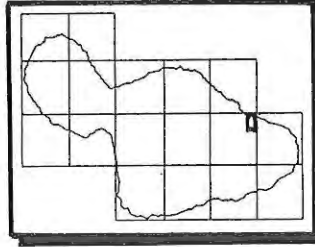


Figure M-15
MAKAPIPI STREAM



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1992

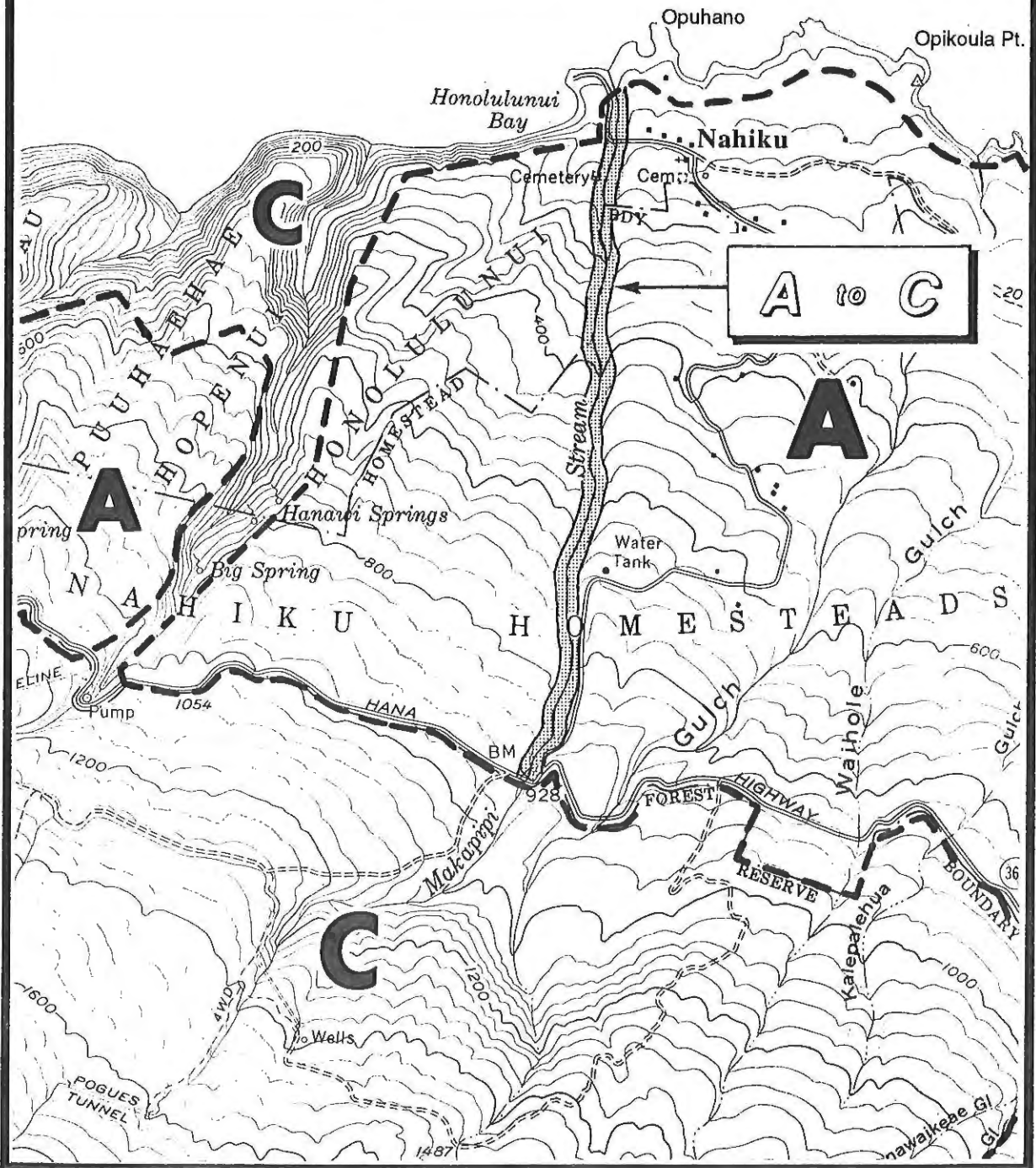
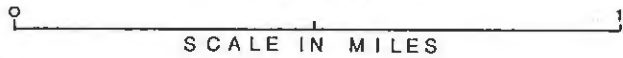
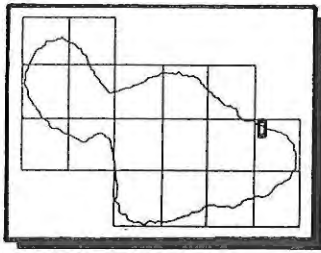


Figure M-16

KAWAKOE AND MOKULEHUA STREAMS



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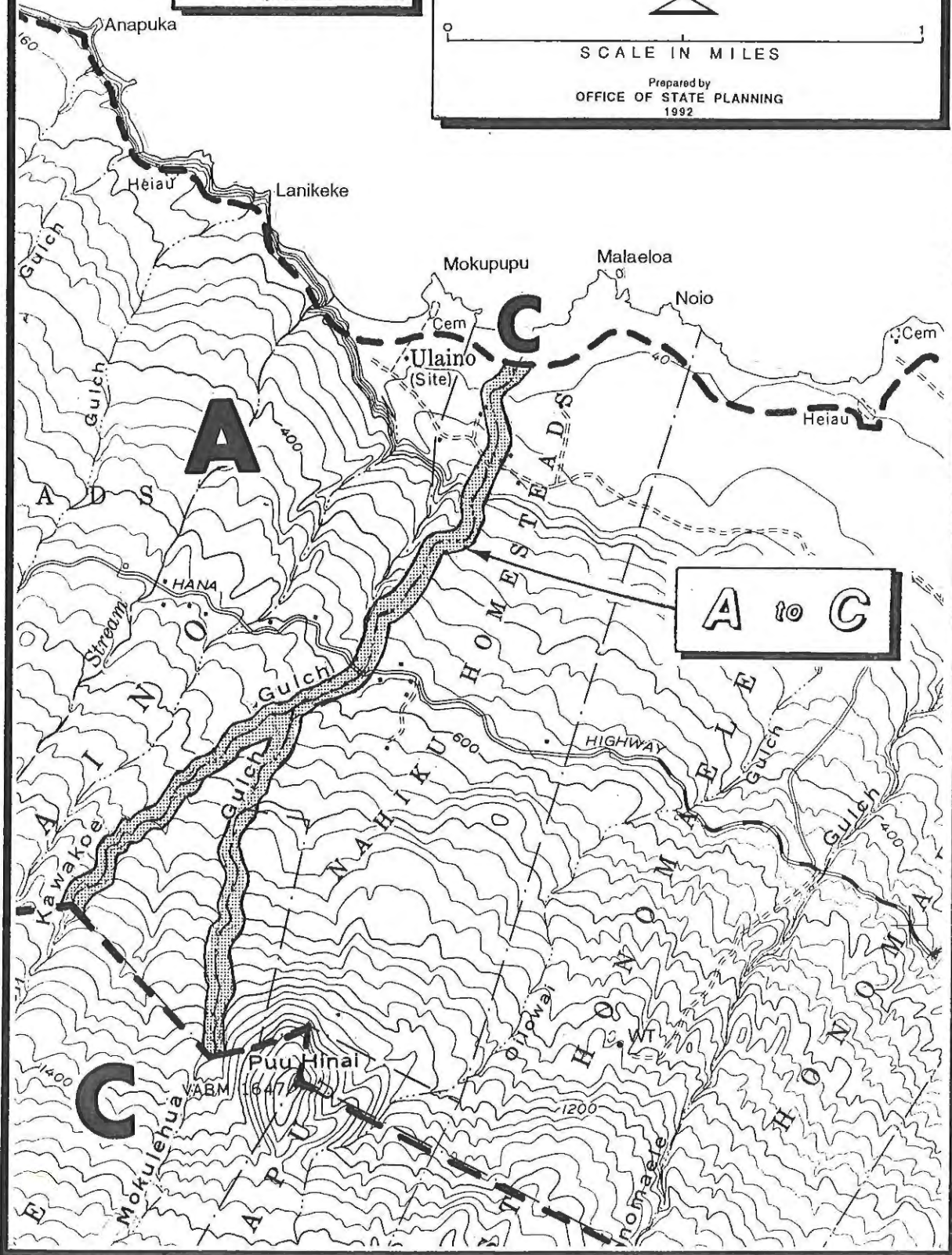
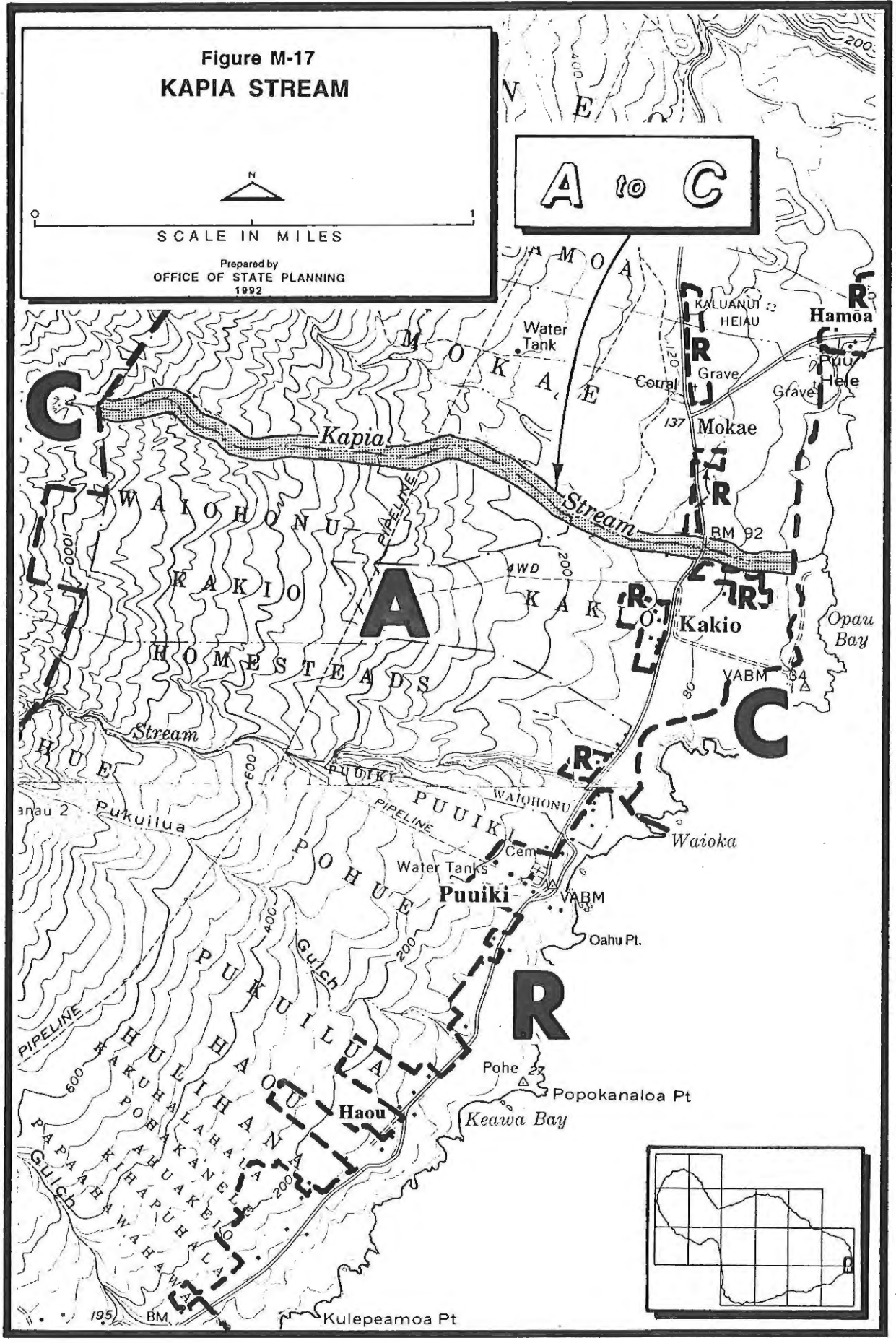


Figure M-17
KAPIA STREAM



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1992

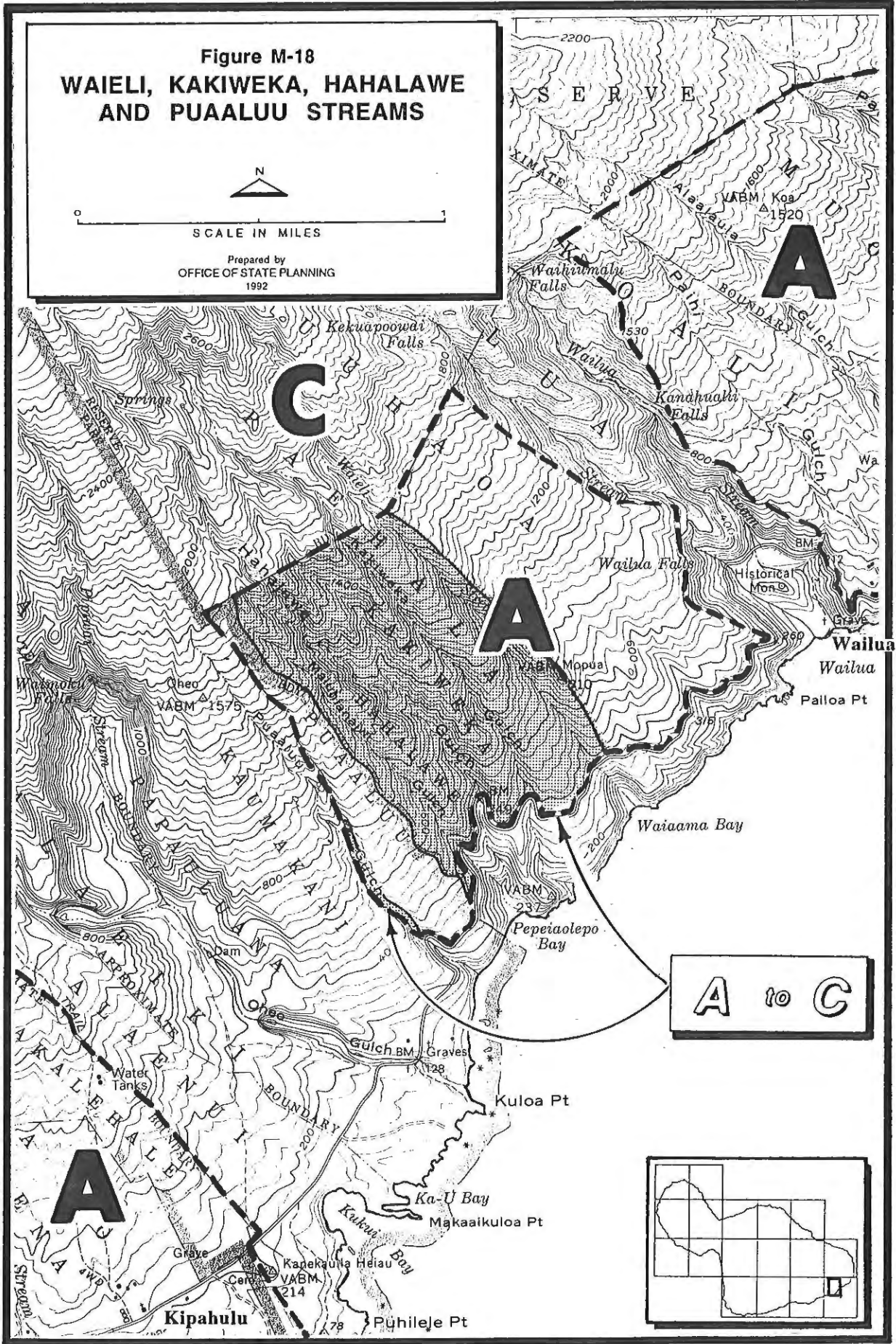
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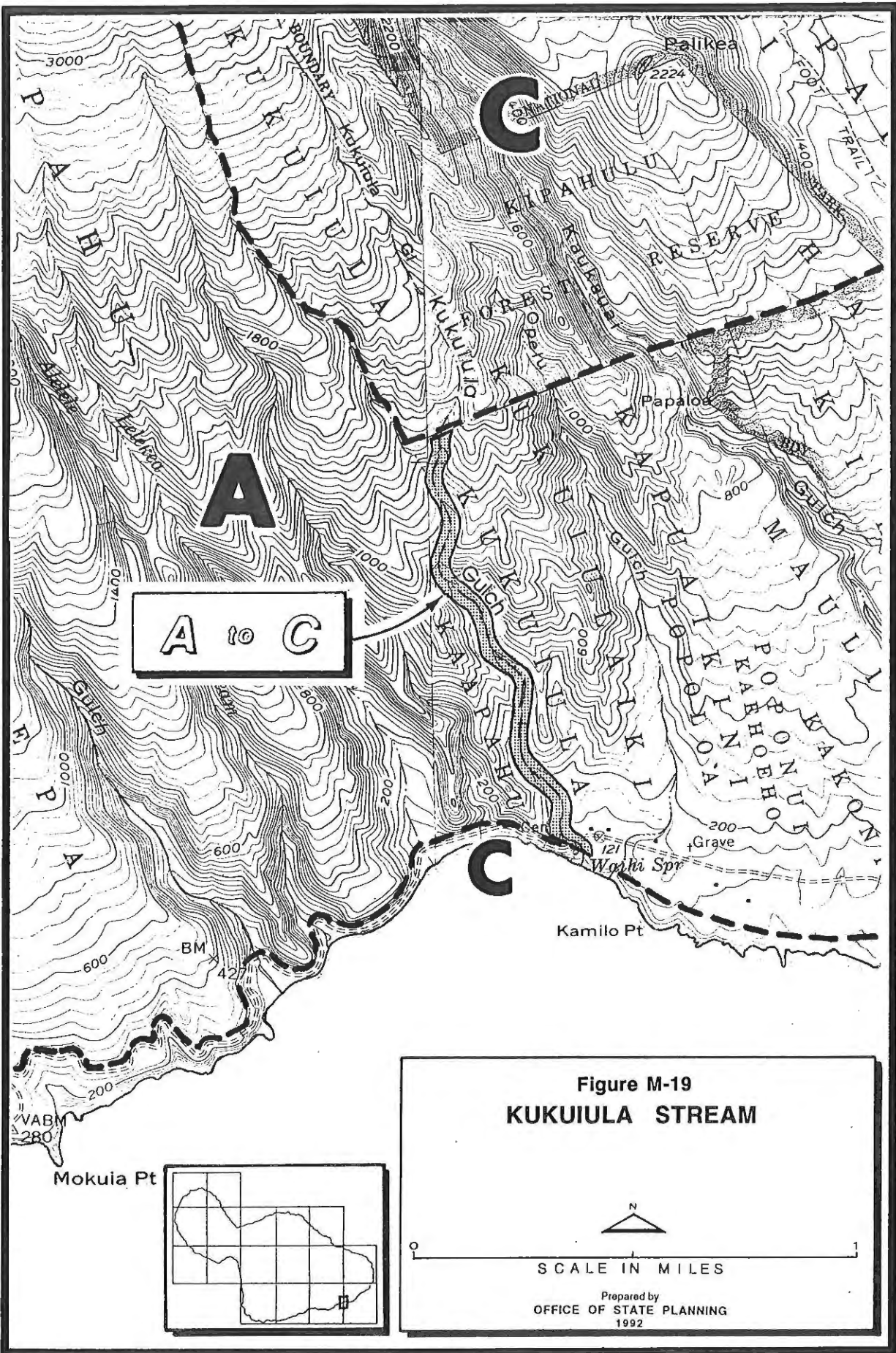


**Figure M-18
WAIELI, KAKIWEKA, HAHALAWE
AND PUAALUU STREAMS**



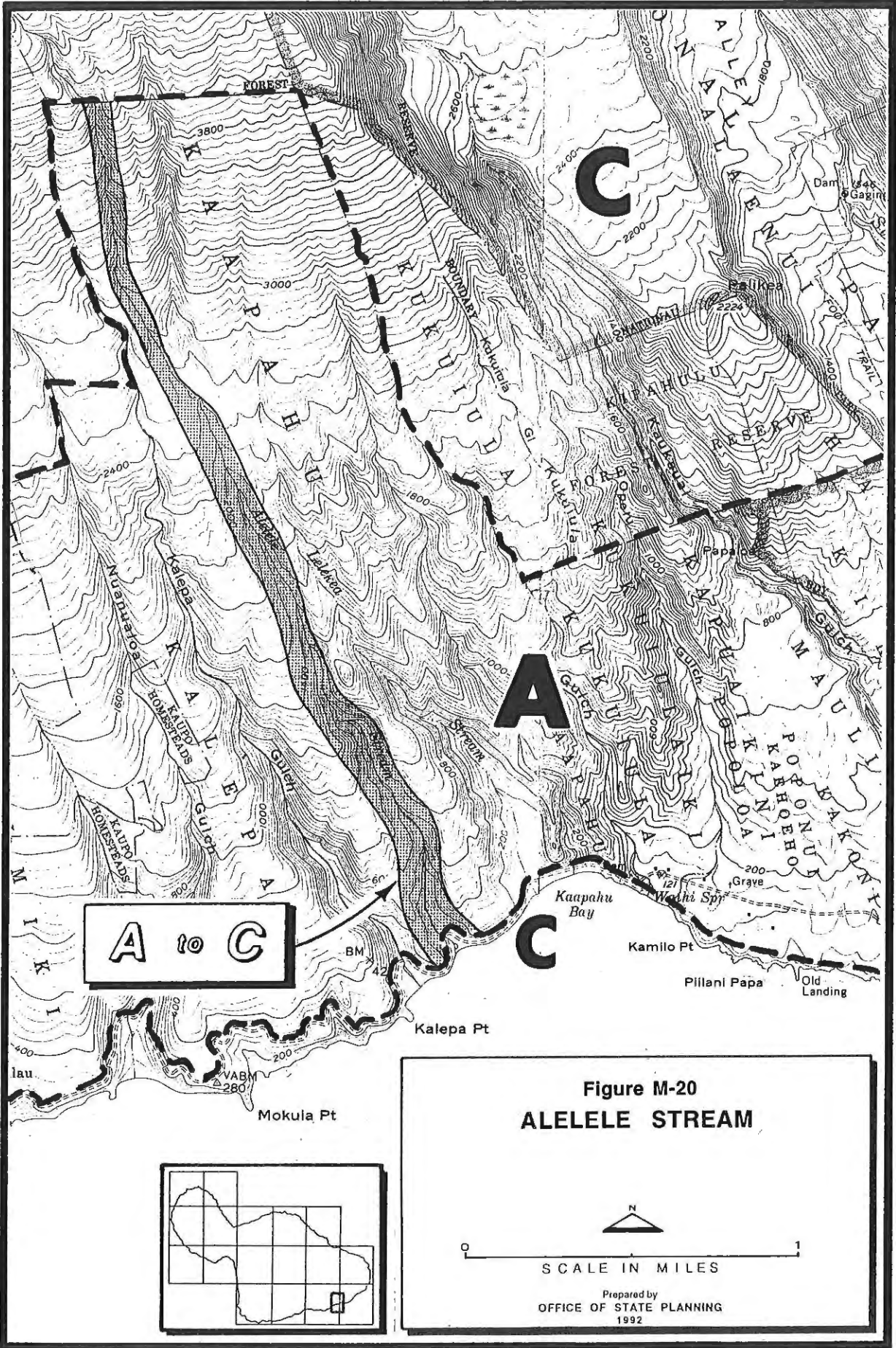
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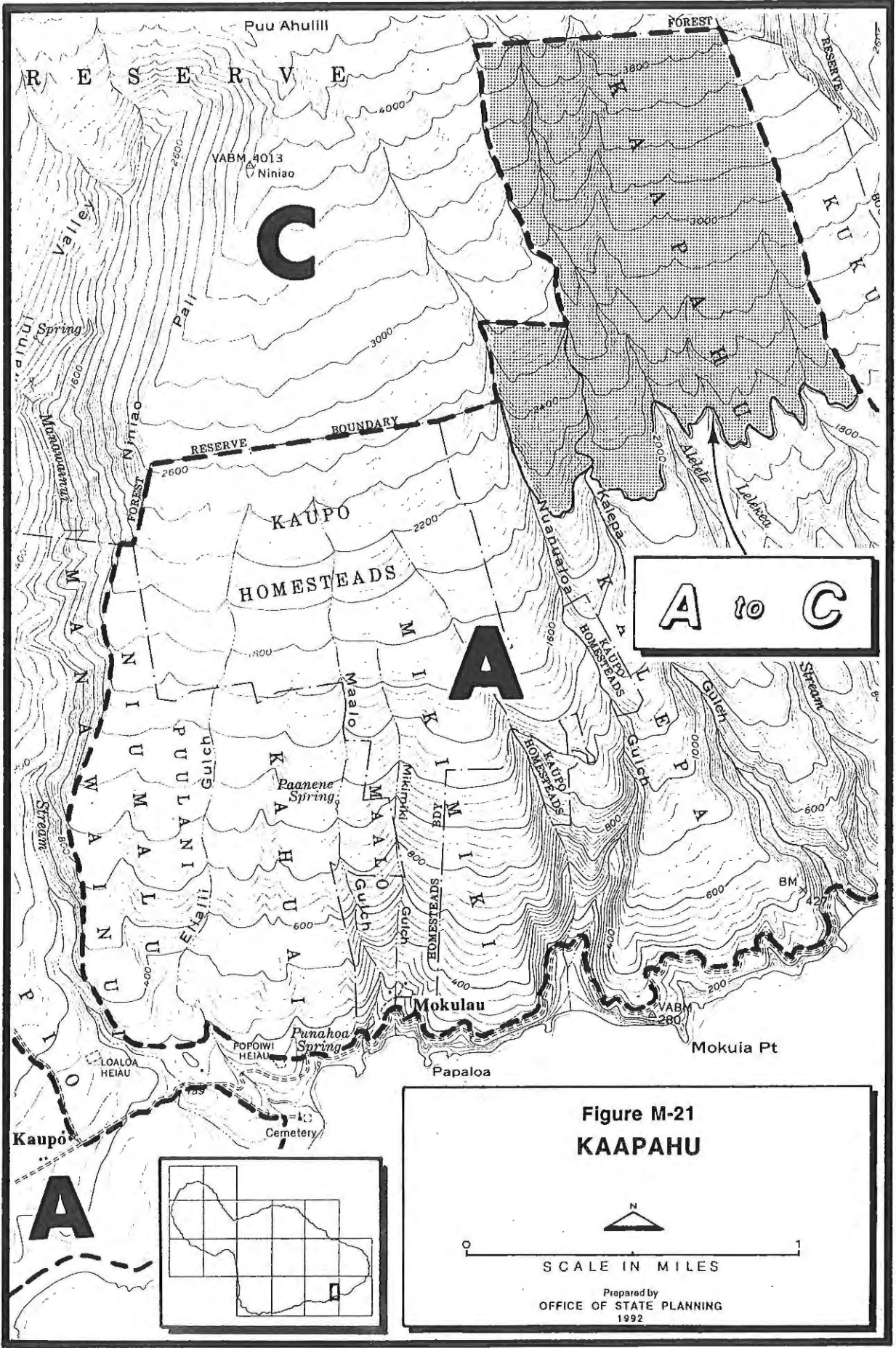




**Figure M-19
KUKUIULA STREAM**

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1992





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**Figure M-21
KAAPAHU**

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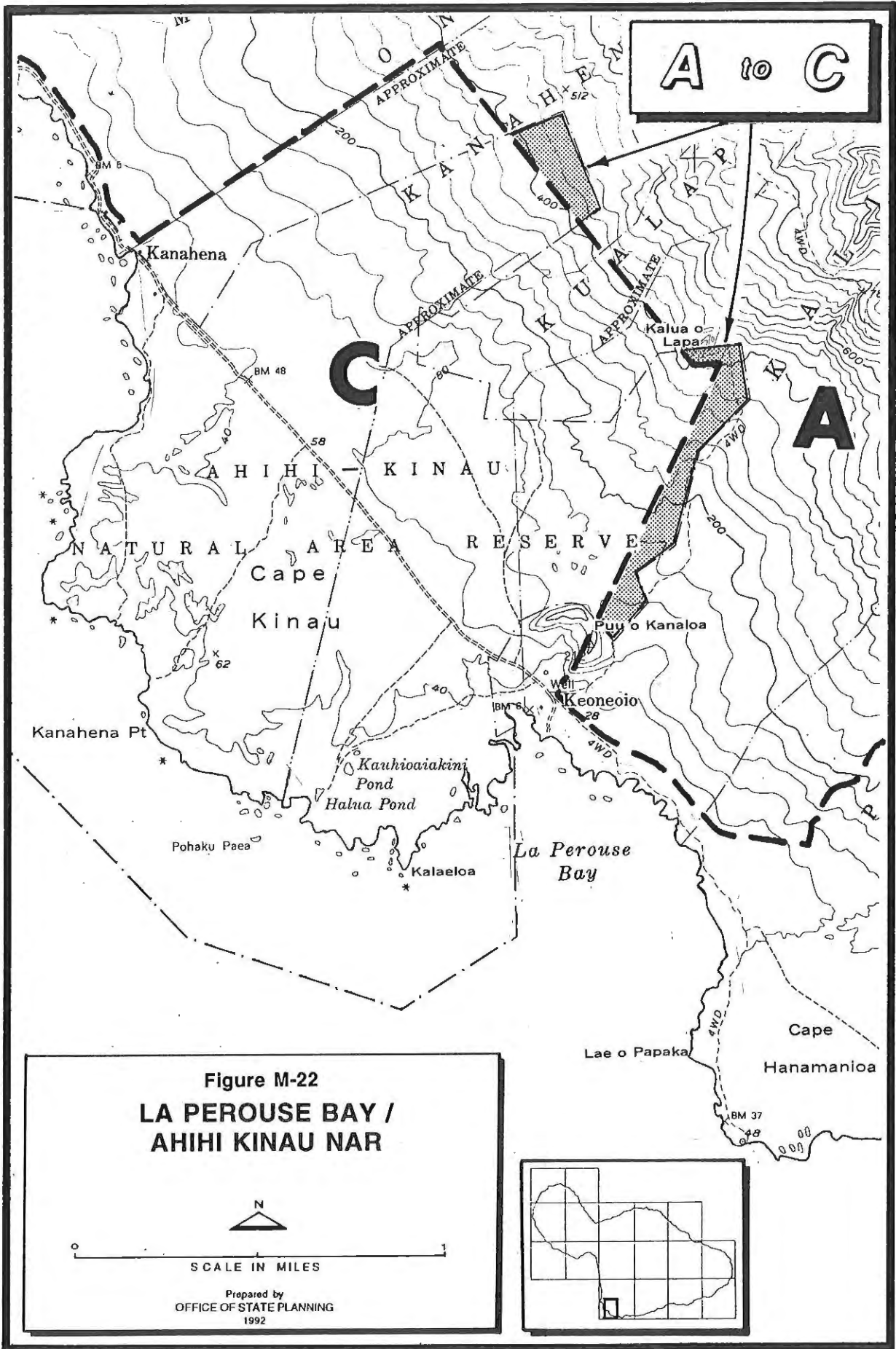


Figure M-22
LA PEROUSE BAY /
AHIHI KINAU NAR



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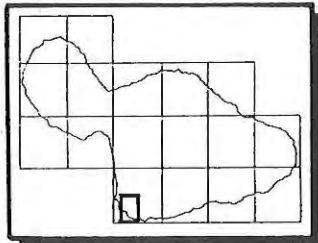
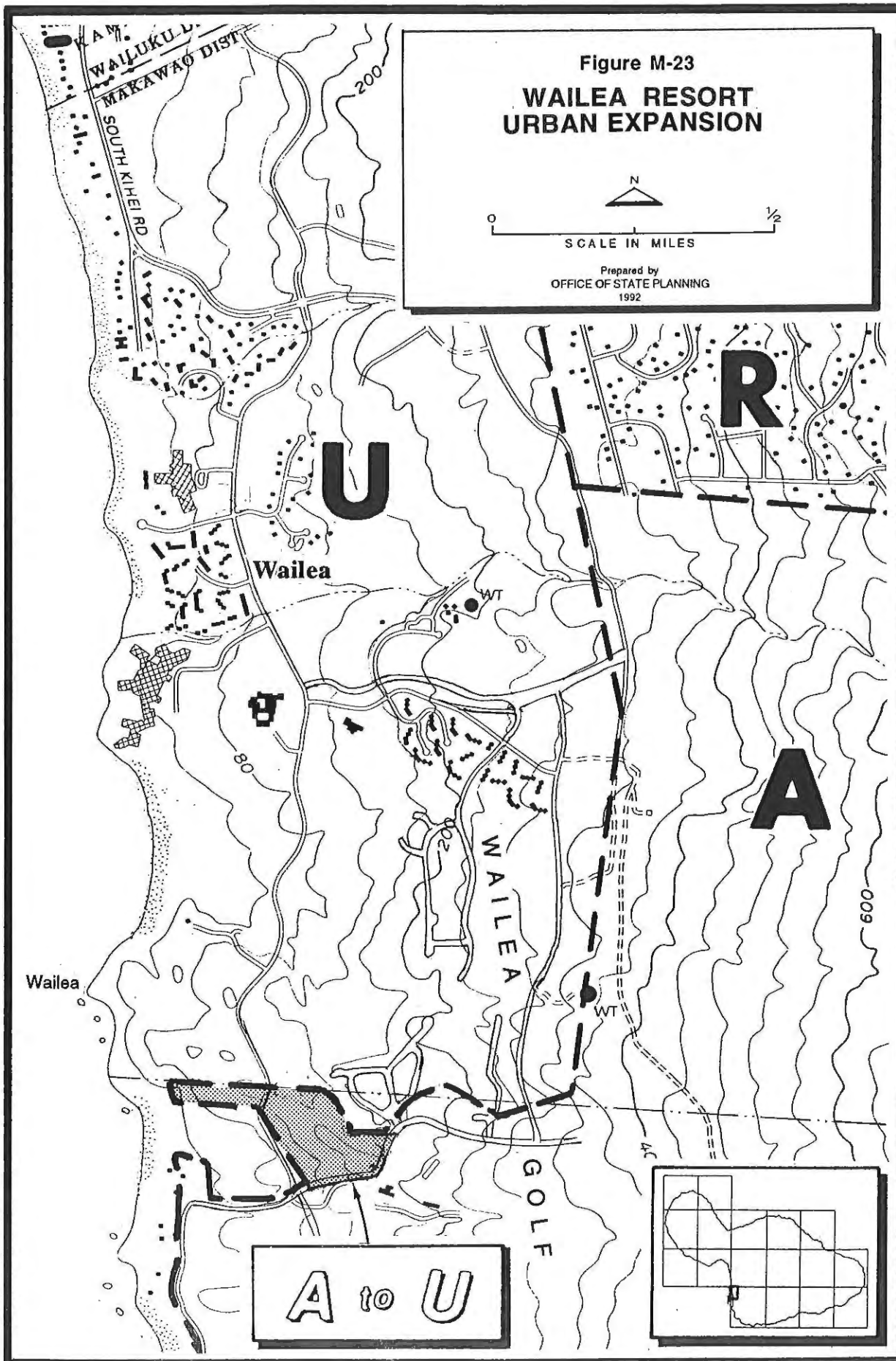


Figure M-23
**WALEA RESORT
URBAN EXPANSION**



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1992



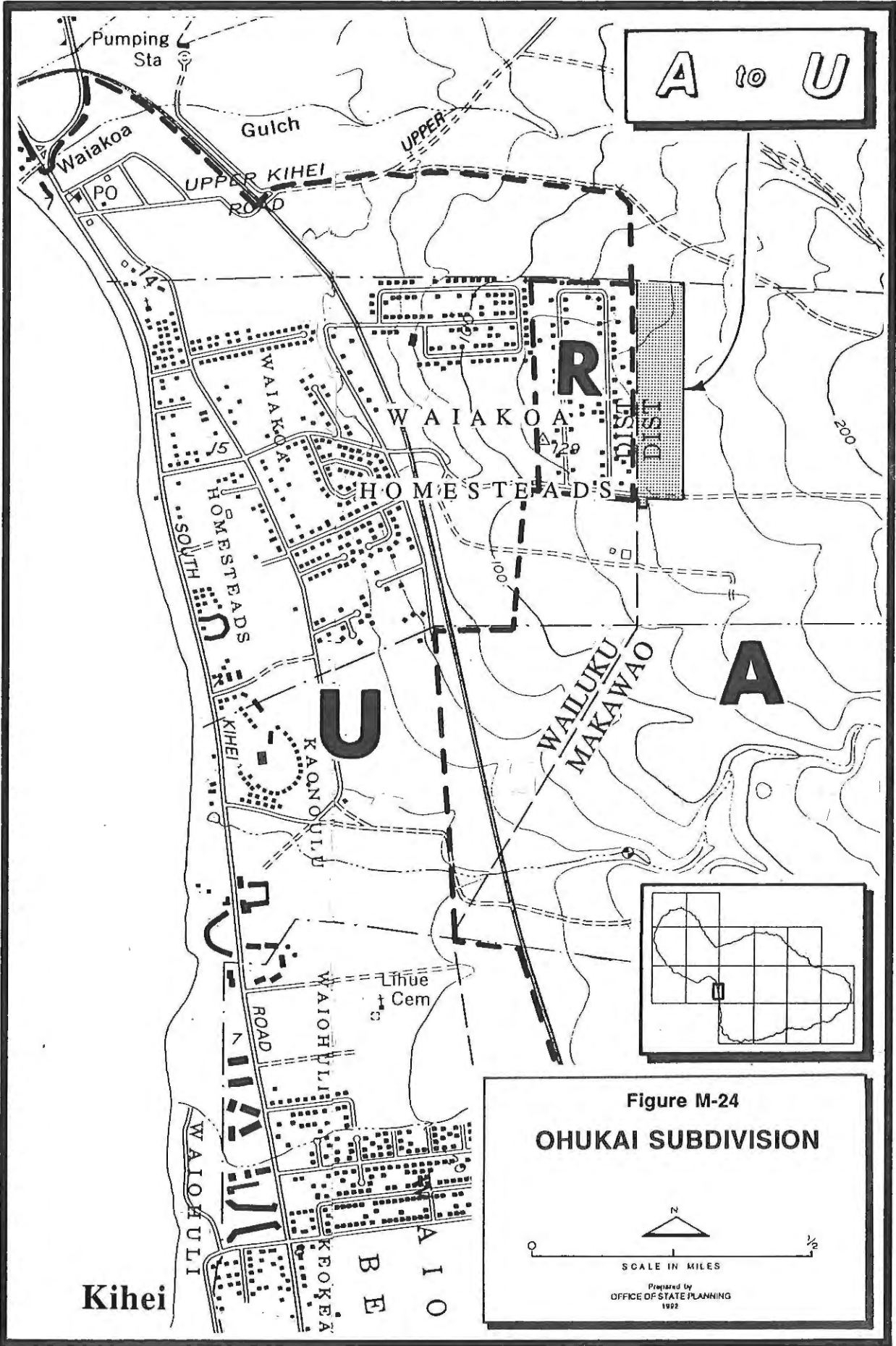
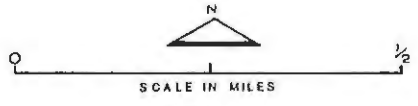


Figure M-24
OHUKAI SUBDIVISION



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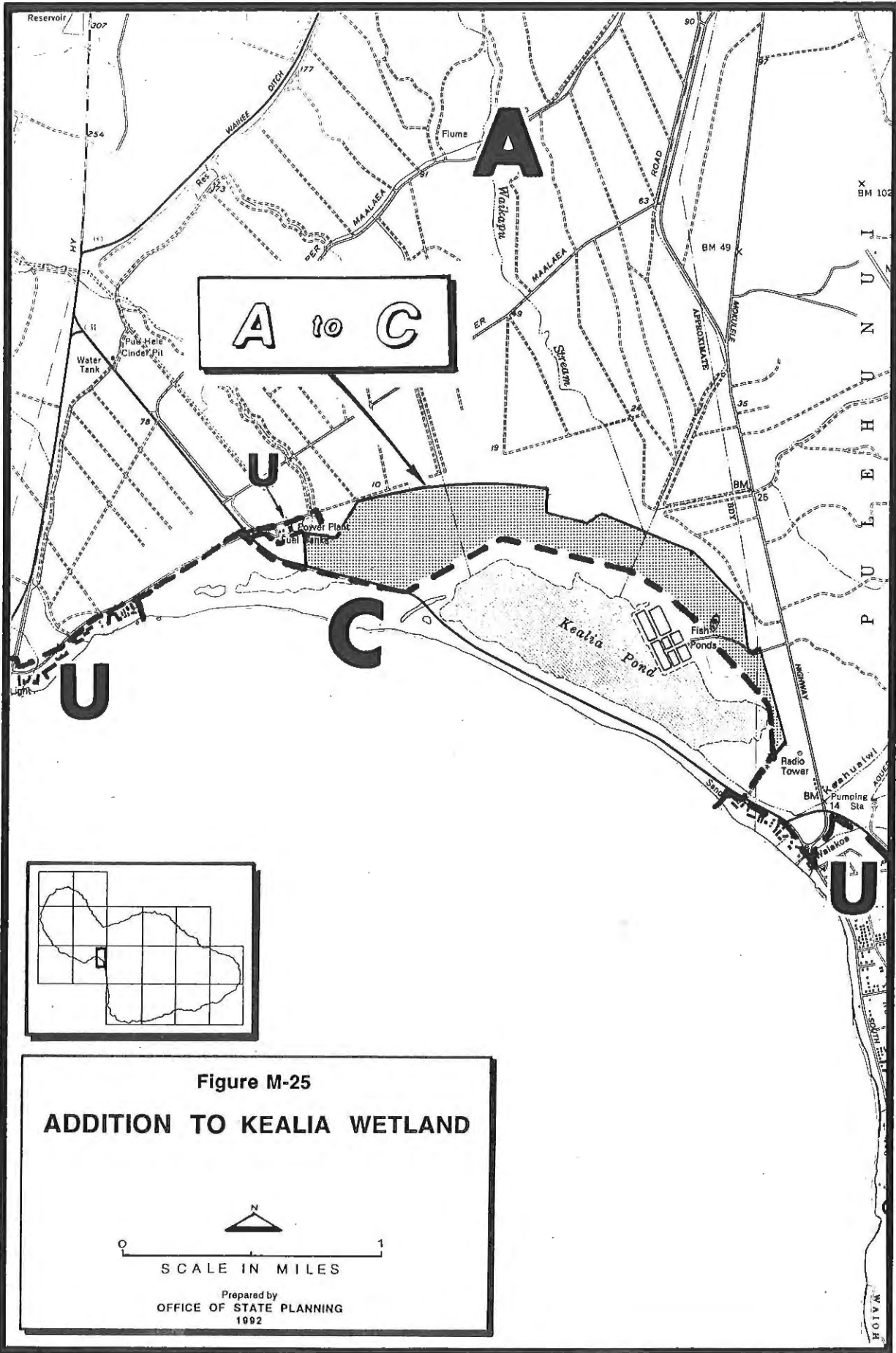
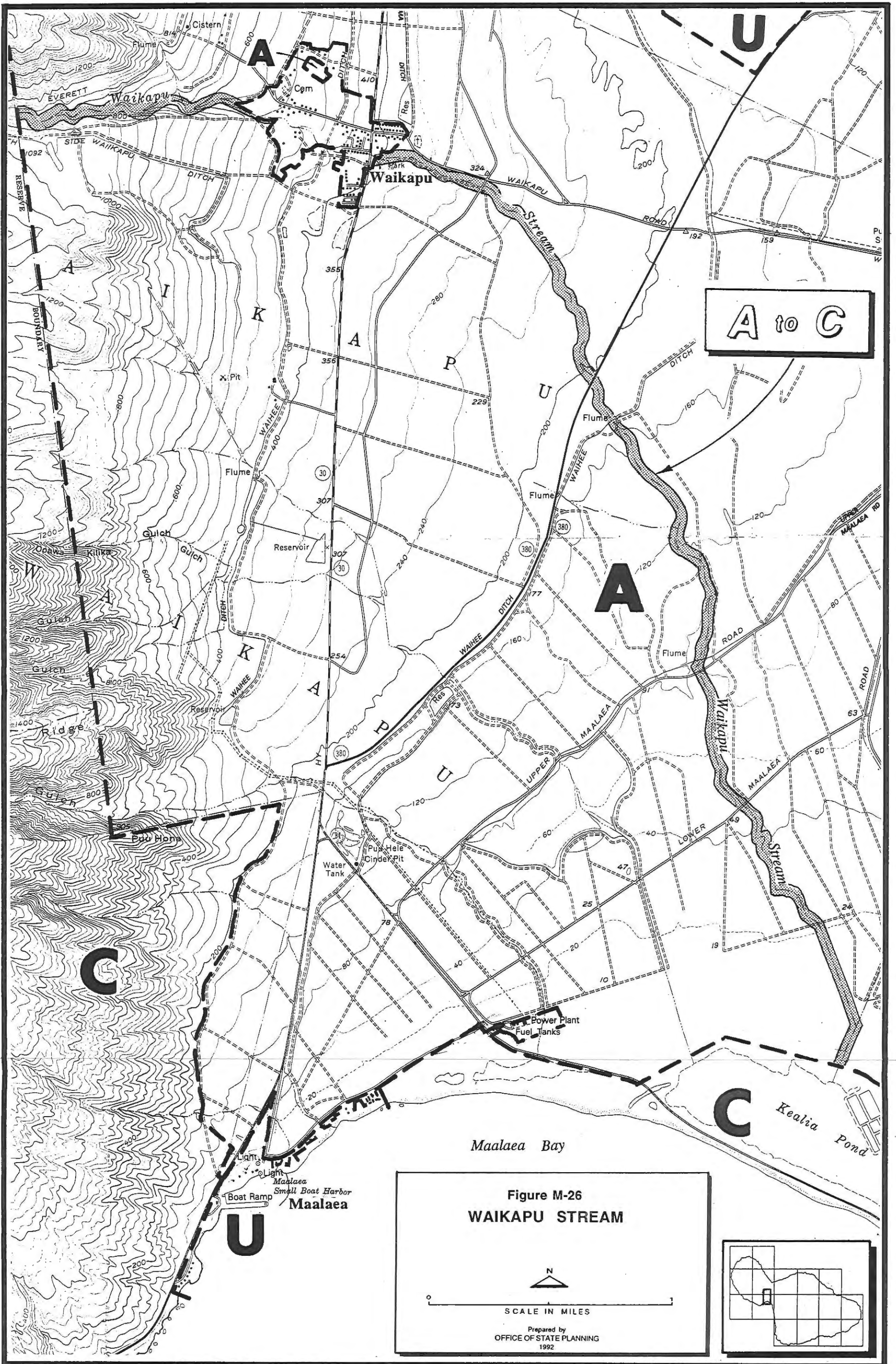


Figure M-25
ADDITION TO KEALIA WETLAND

SCALE IN MILES

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 1992



A to C

**Figure M-26
WAIKAPU STREAM**

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1992

SCALE IN MILES

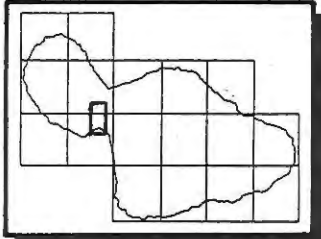
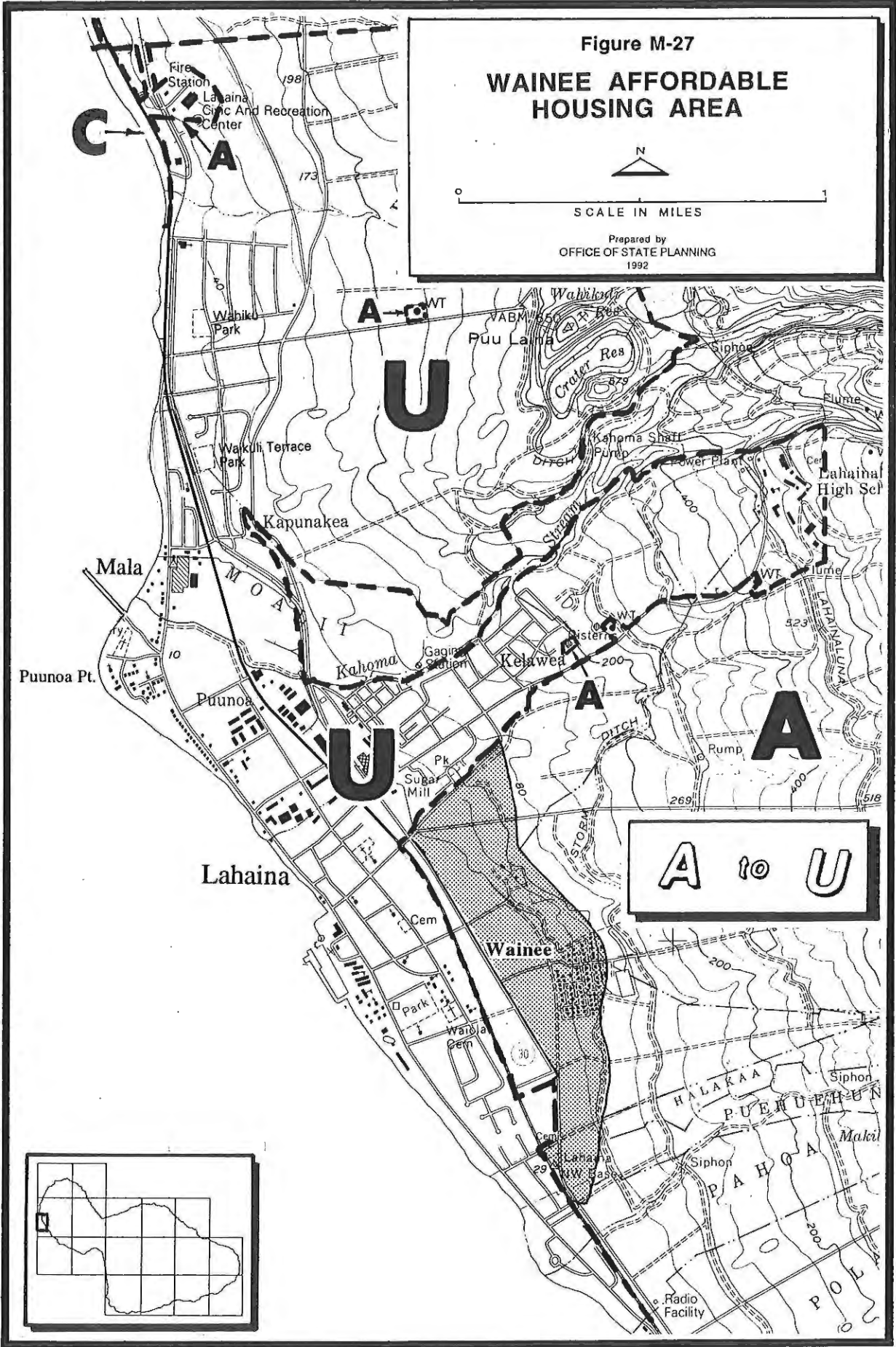


Figure M-27
WAINEE AFFORDABLE HOUSING AREA



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1992



A to U

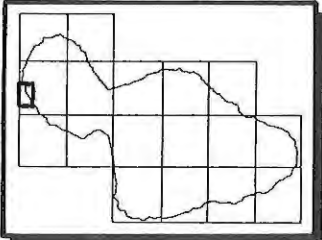
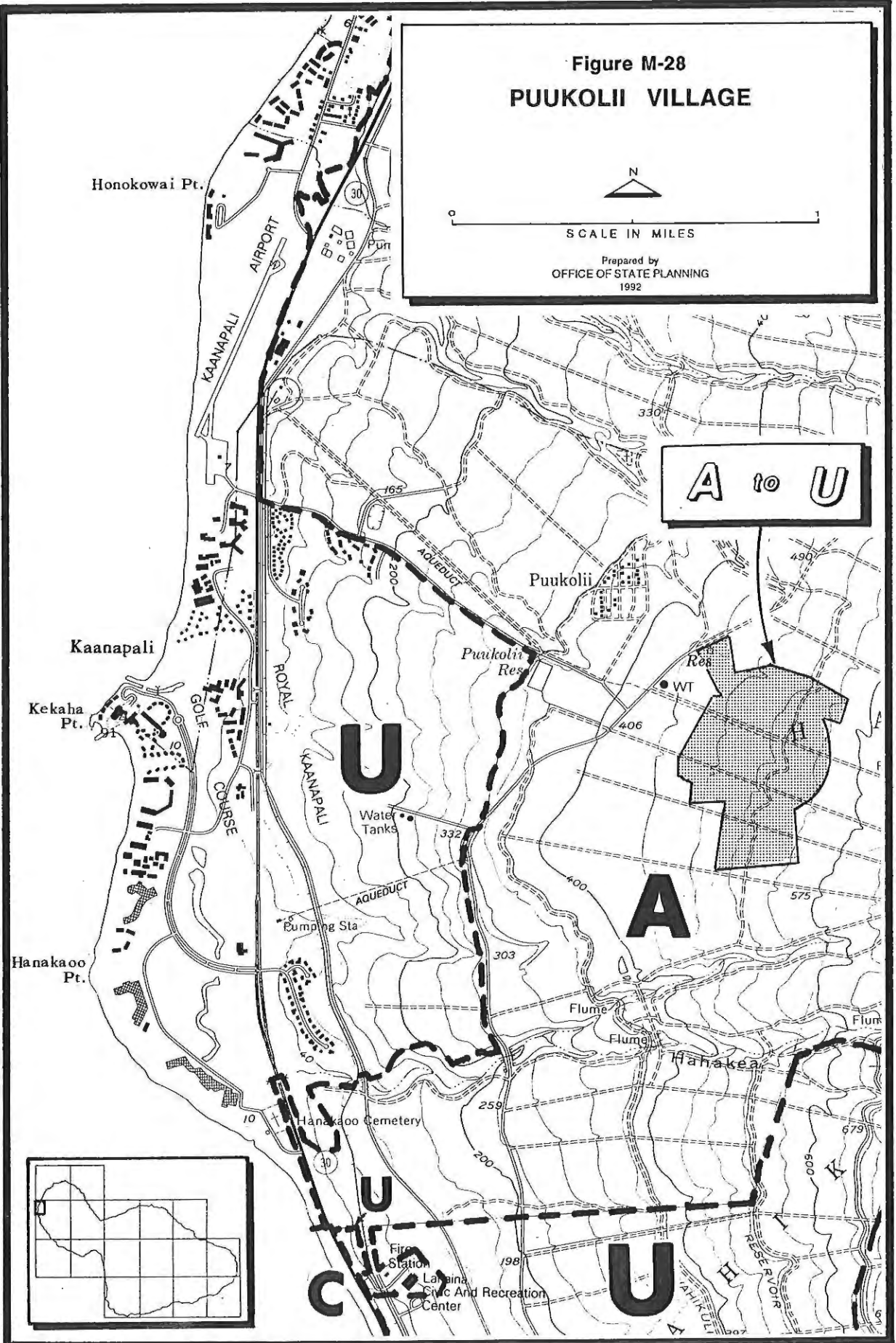


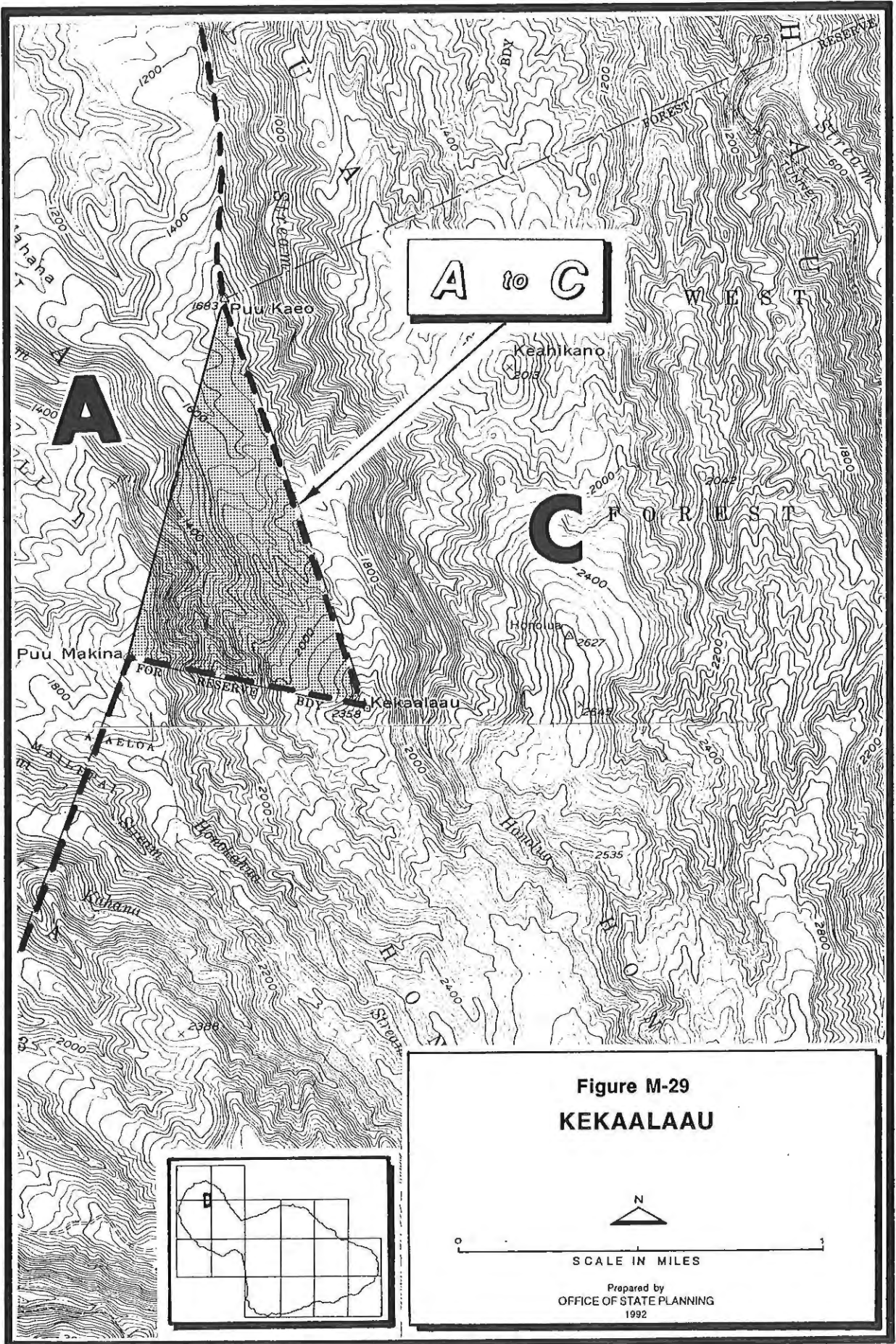
Figure M-28
PUUKOLII VILLAGE



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1992





**Figure M-29
KEKAALAAU**

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1992

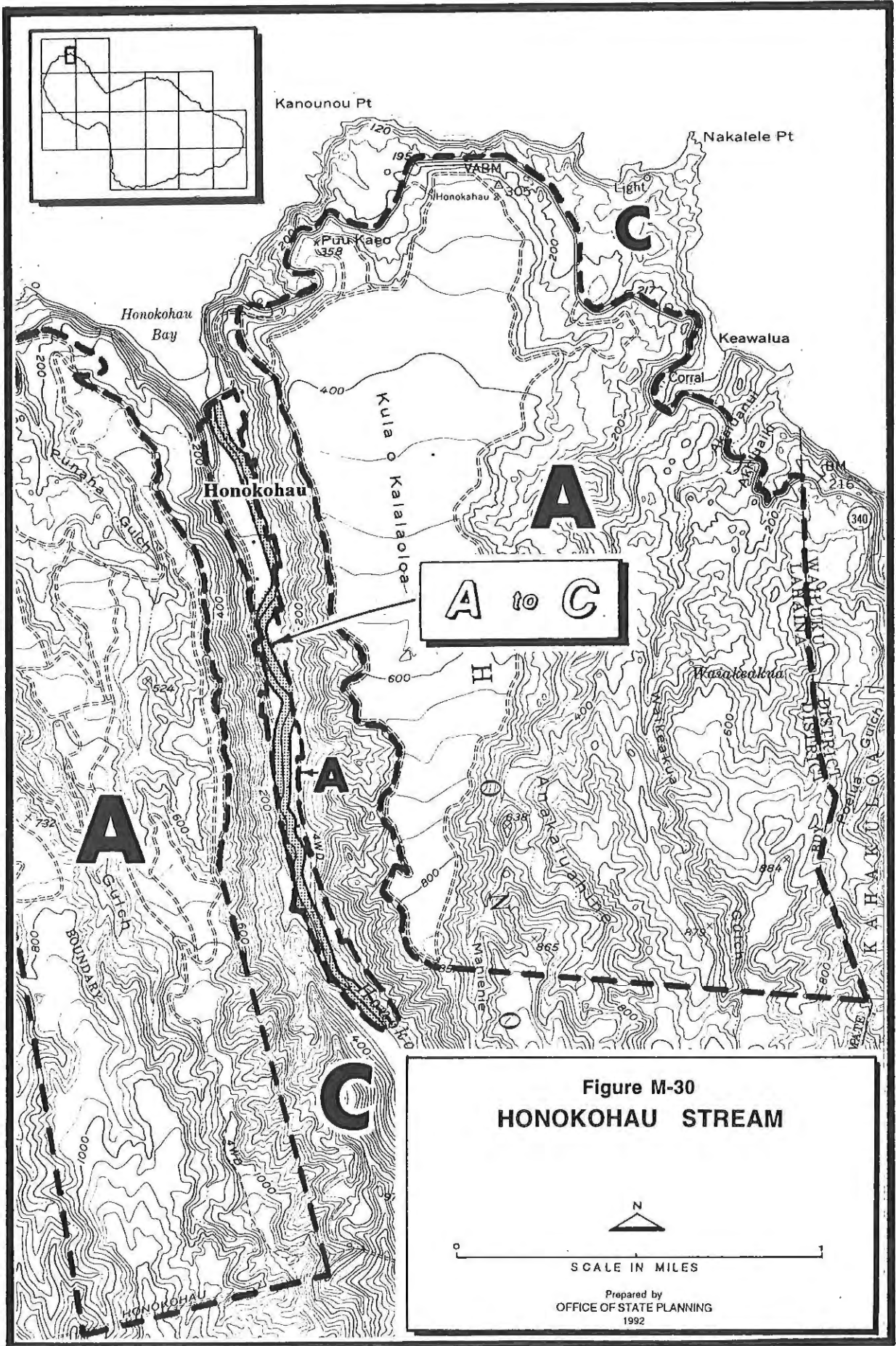


Figure M-30
HONOKOHAU STREAM

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 1992

Figure M-31
KAHAKULOA STREAM



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1982

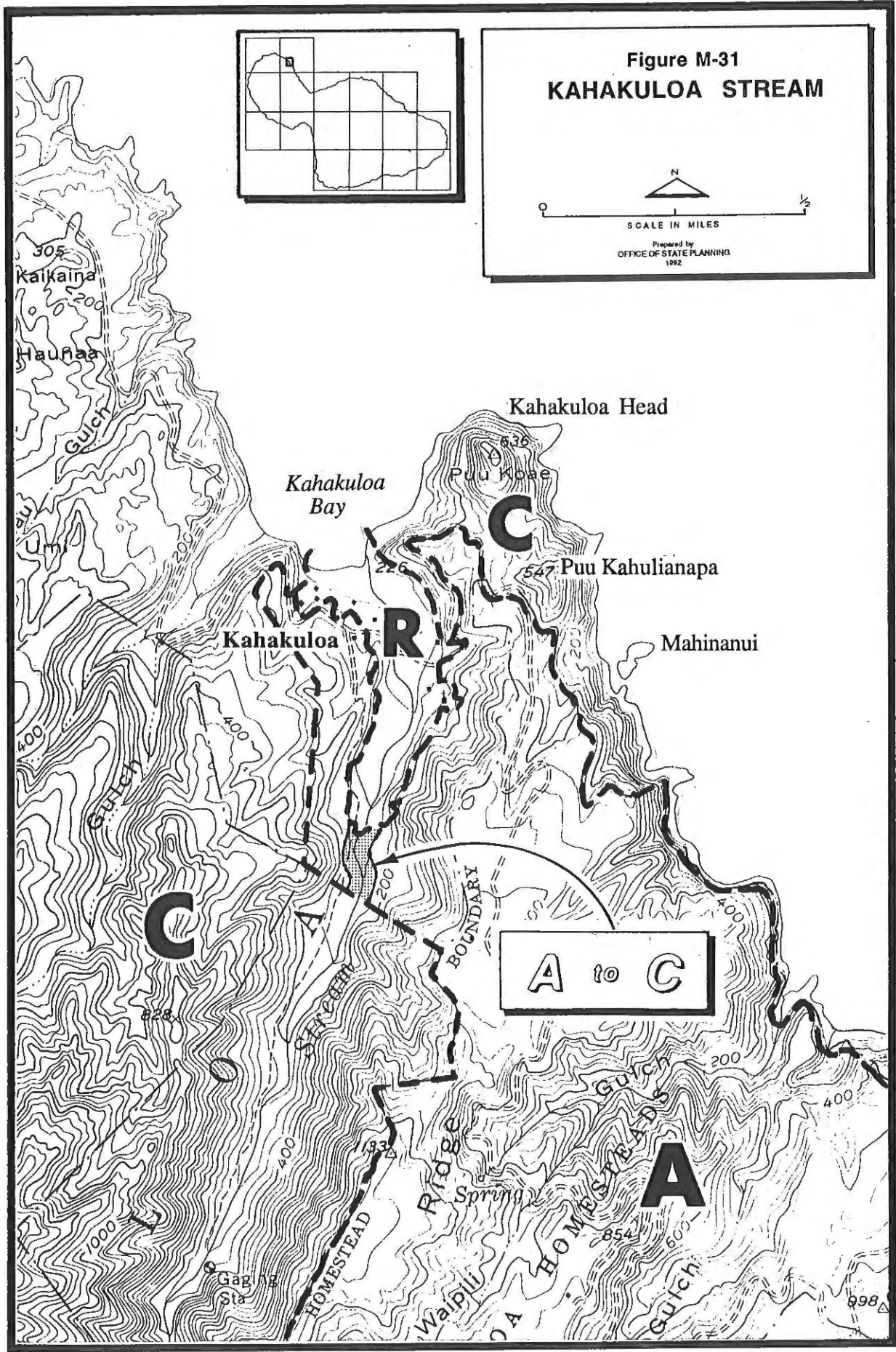
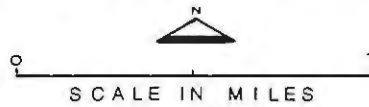
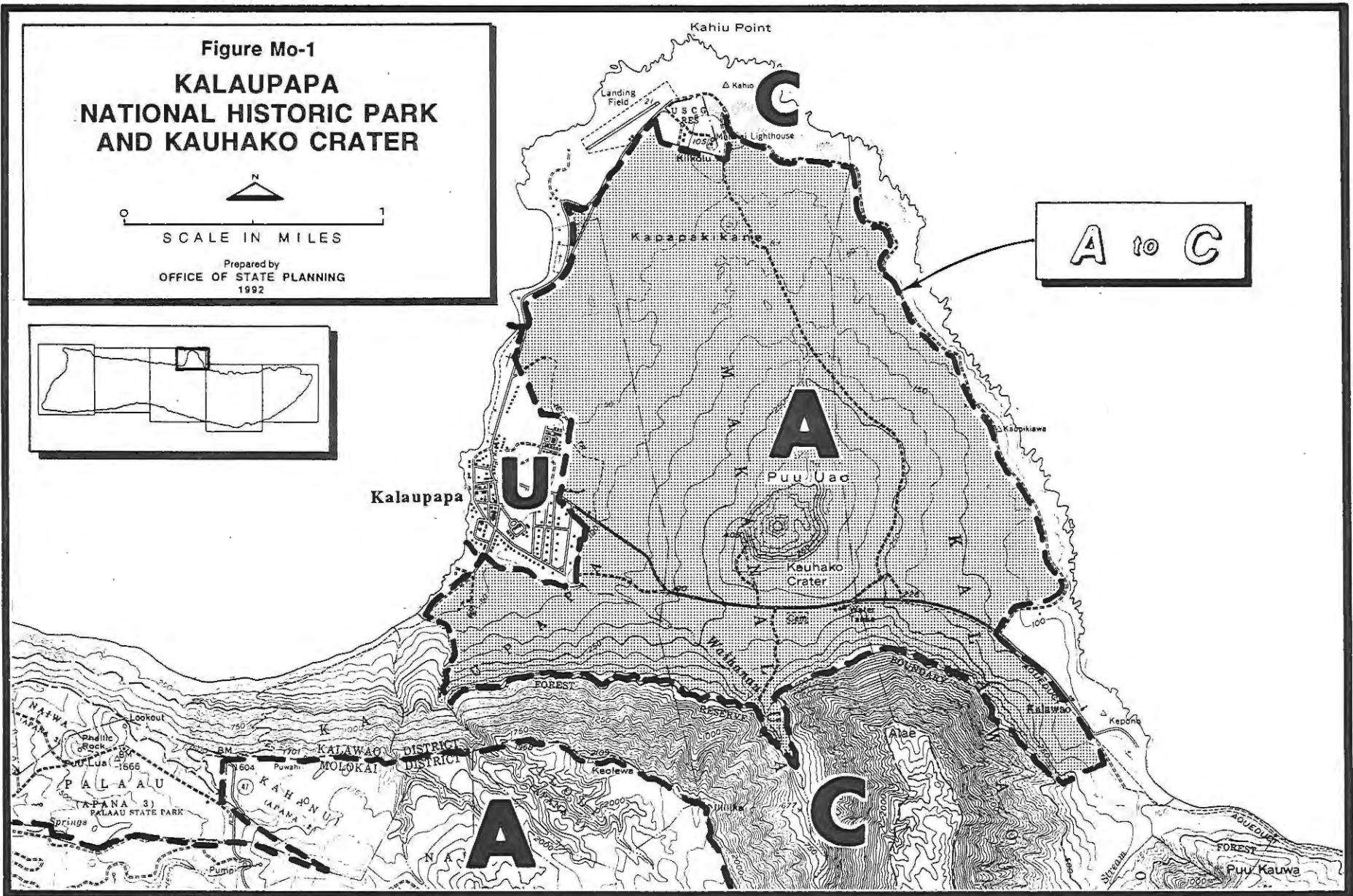
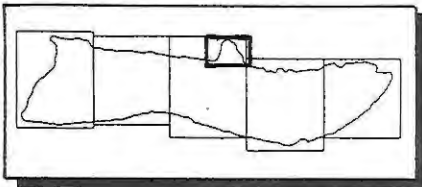


Figure Mo-1
KALAUPAPA
NATIONAL HISTORIC PARK
AND KAUHAKO CRATER



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Kalaupapa



A to C

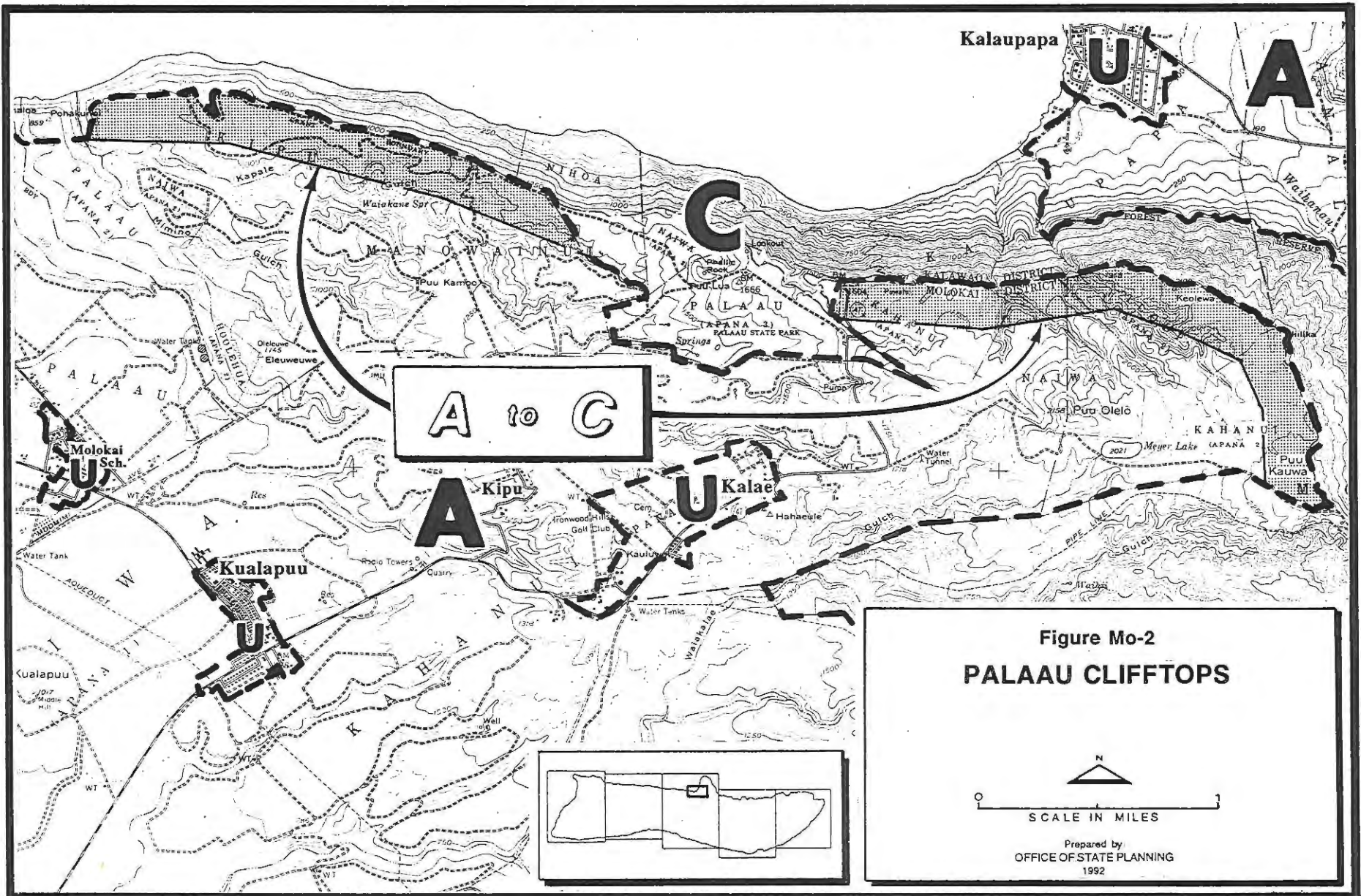
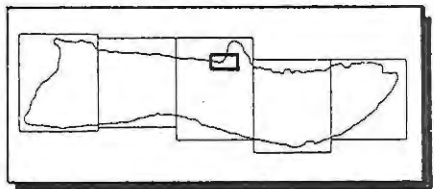


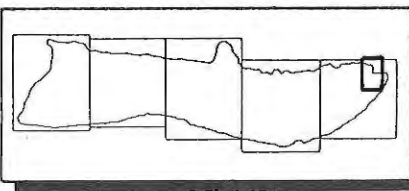
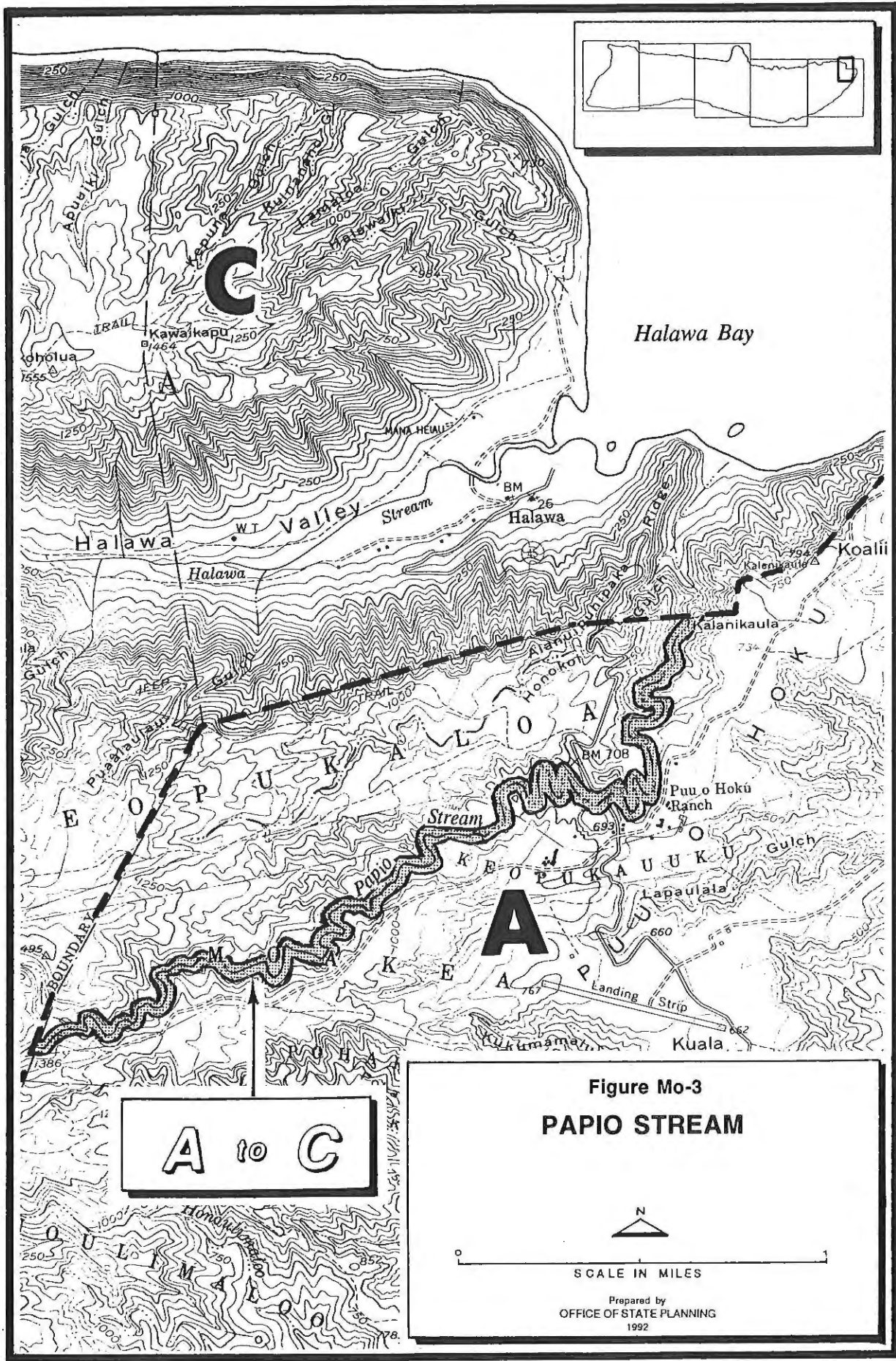
Figure Mo-2
PALAAU CLIFFTOPS



SCALE IN MILES

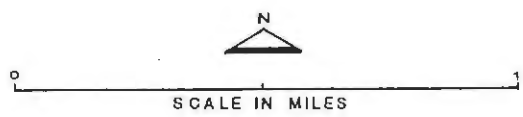
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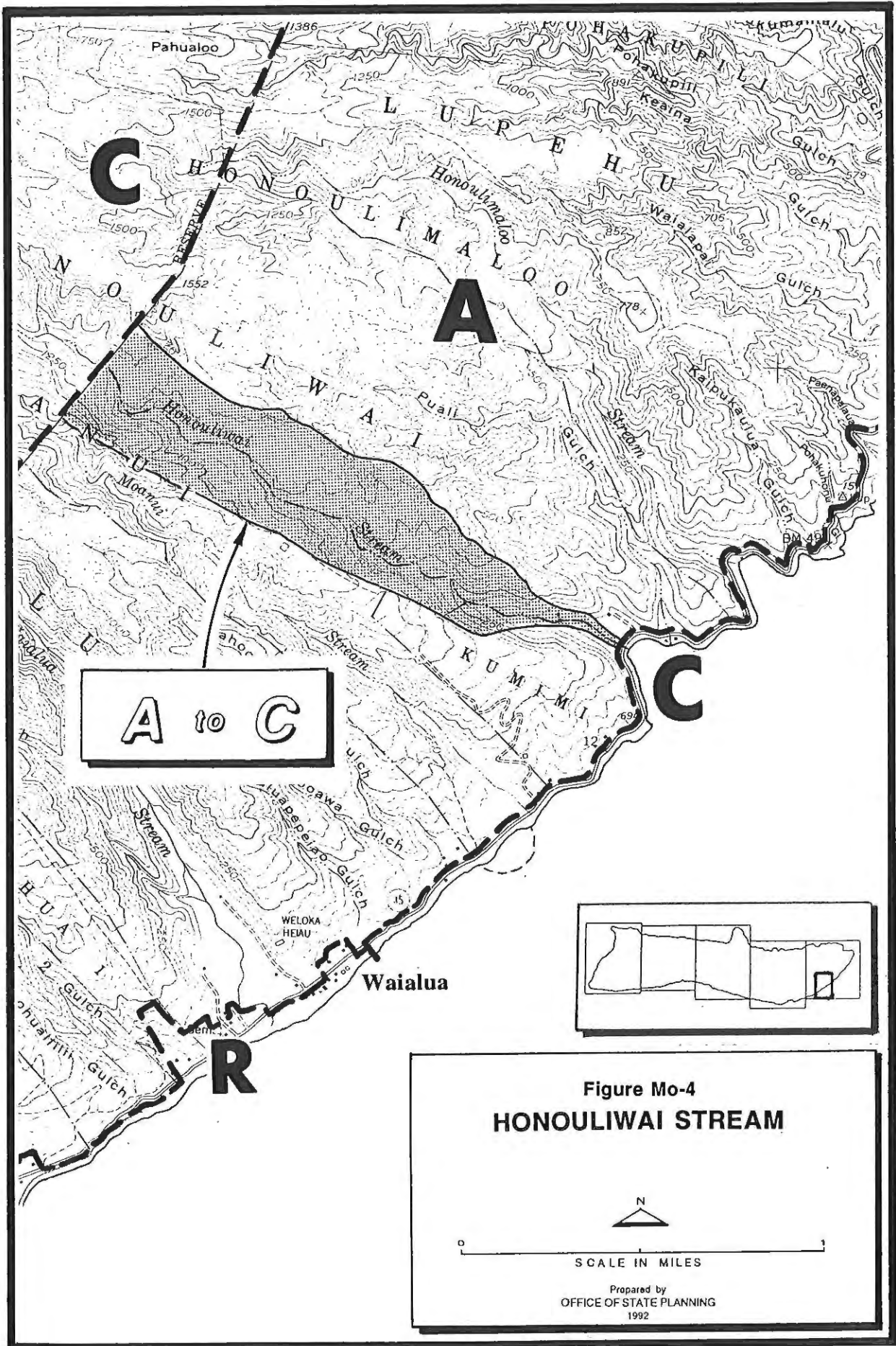


A to C

Figure Mo-3
PAPIO STREAM



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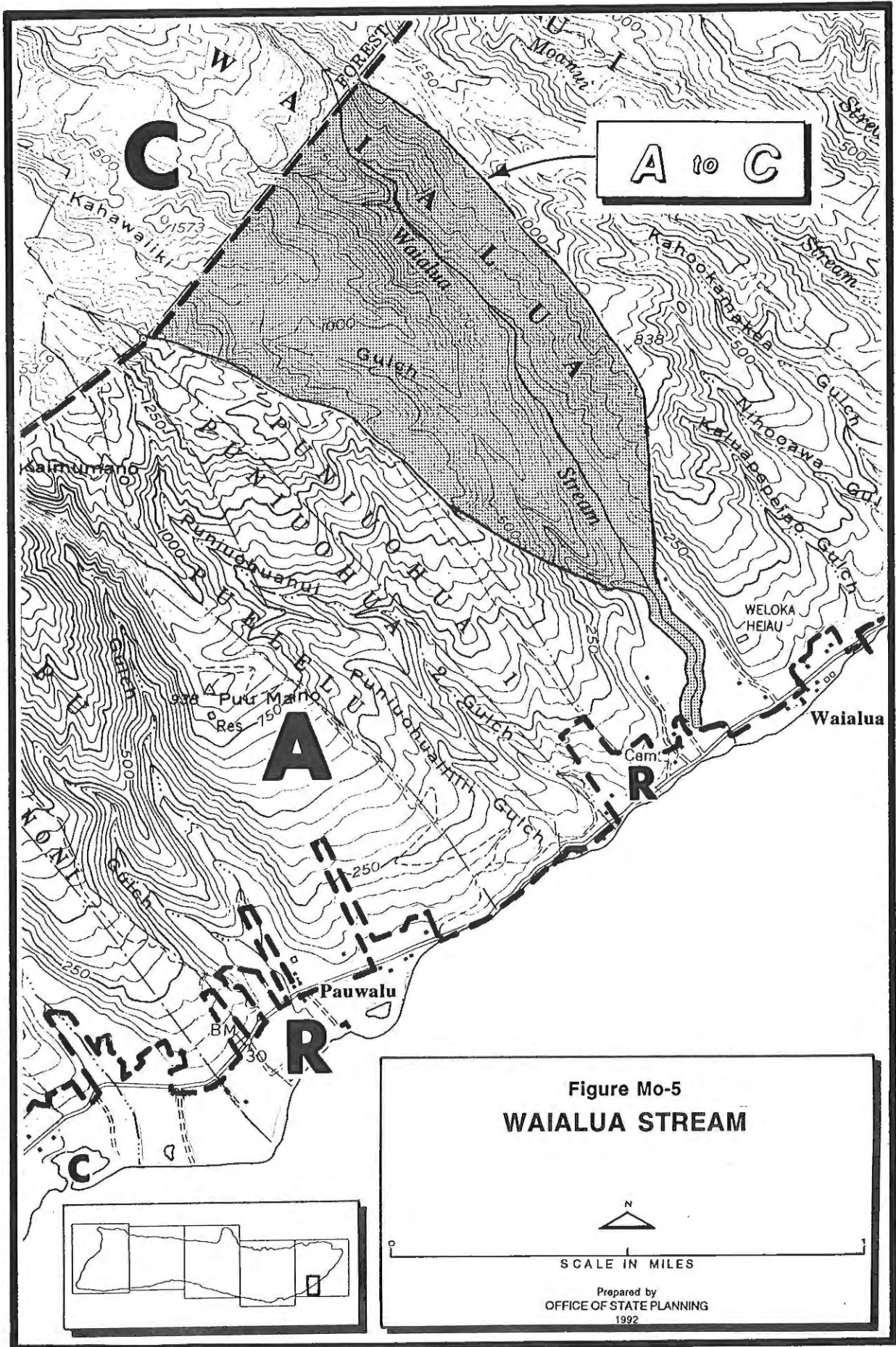
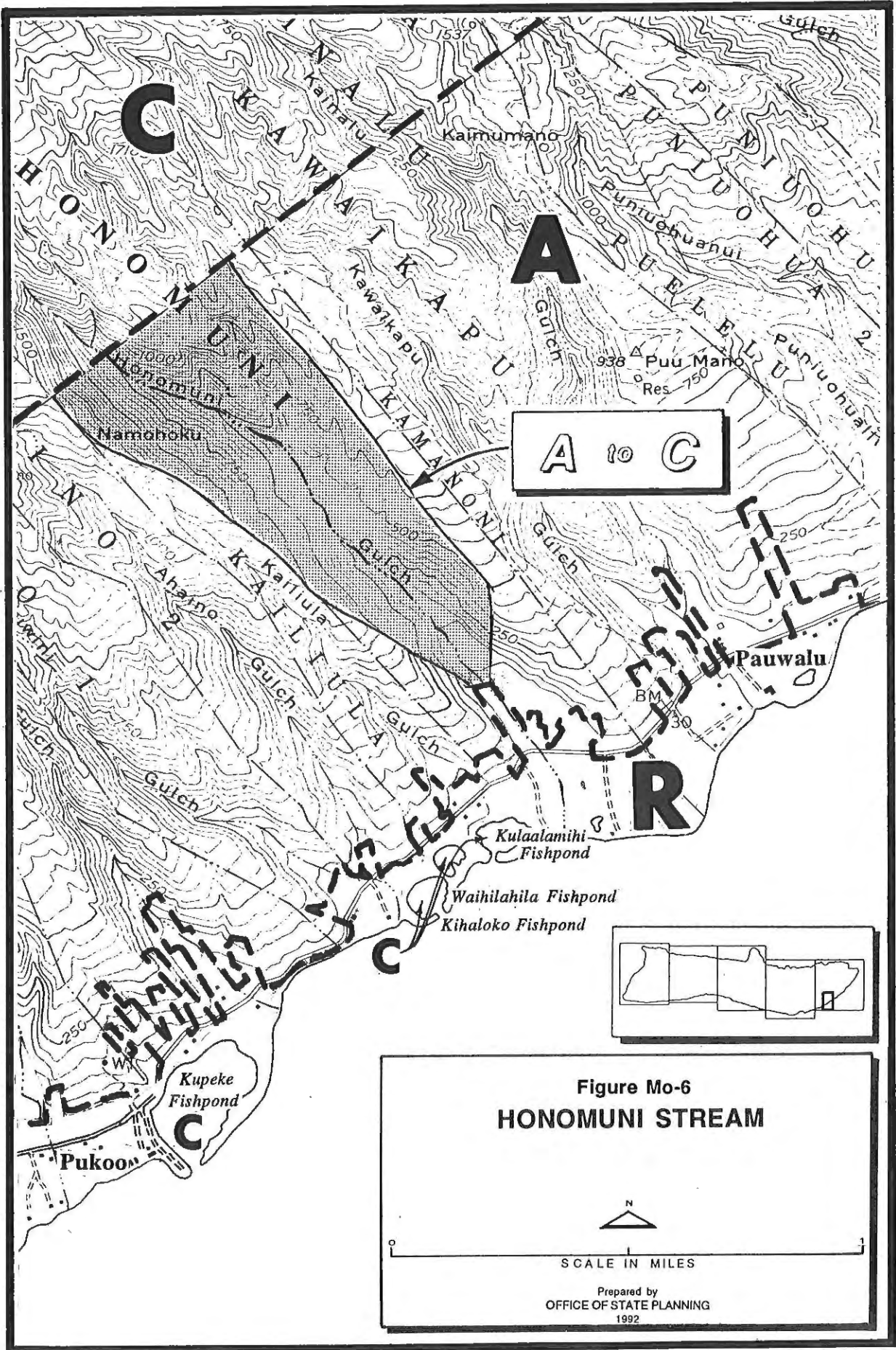
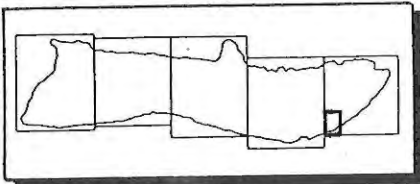
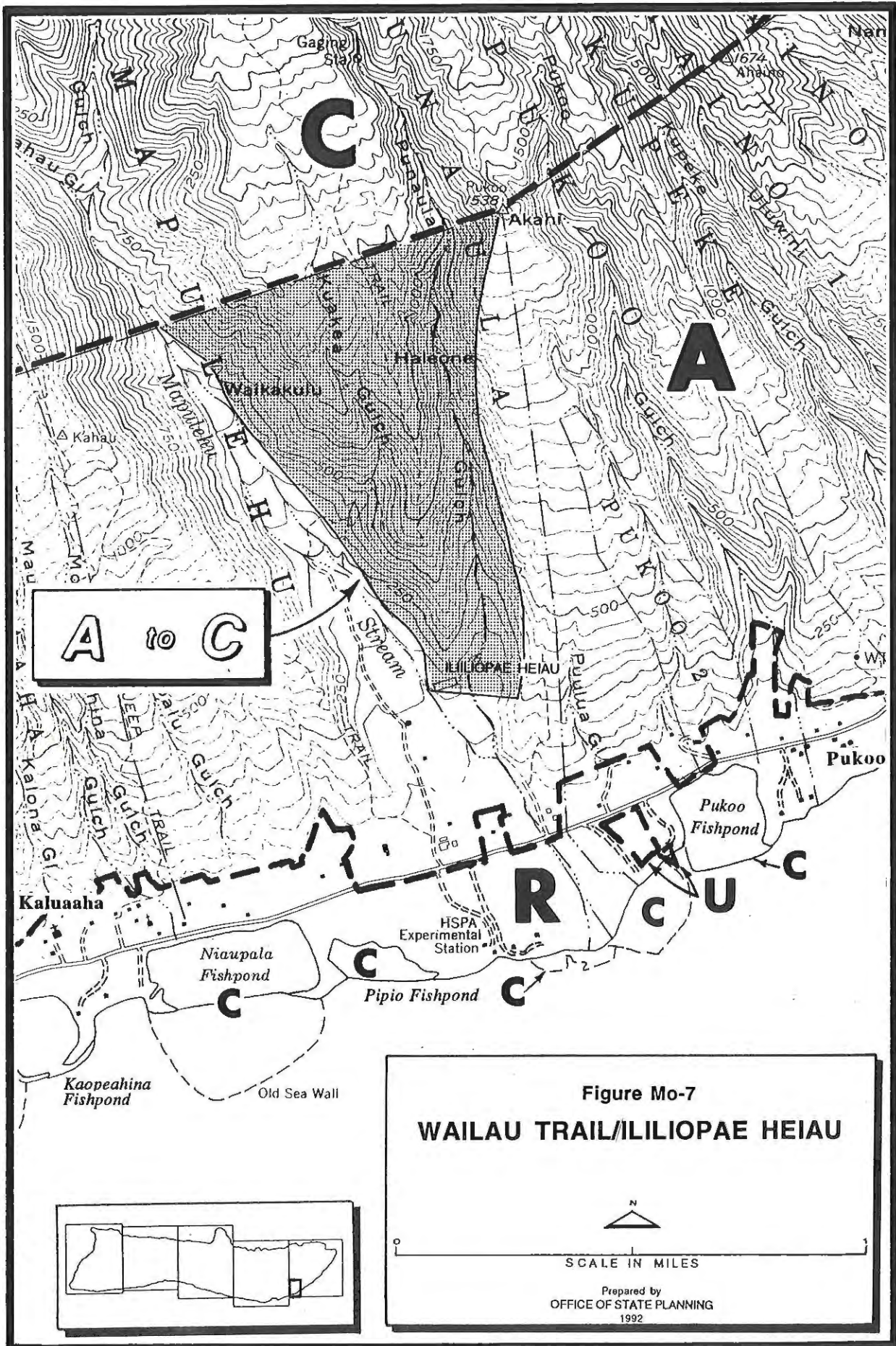


Figure Mo-5
WAIALUA STREAM

SCALE IN MILES

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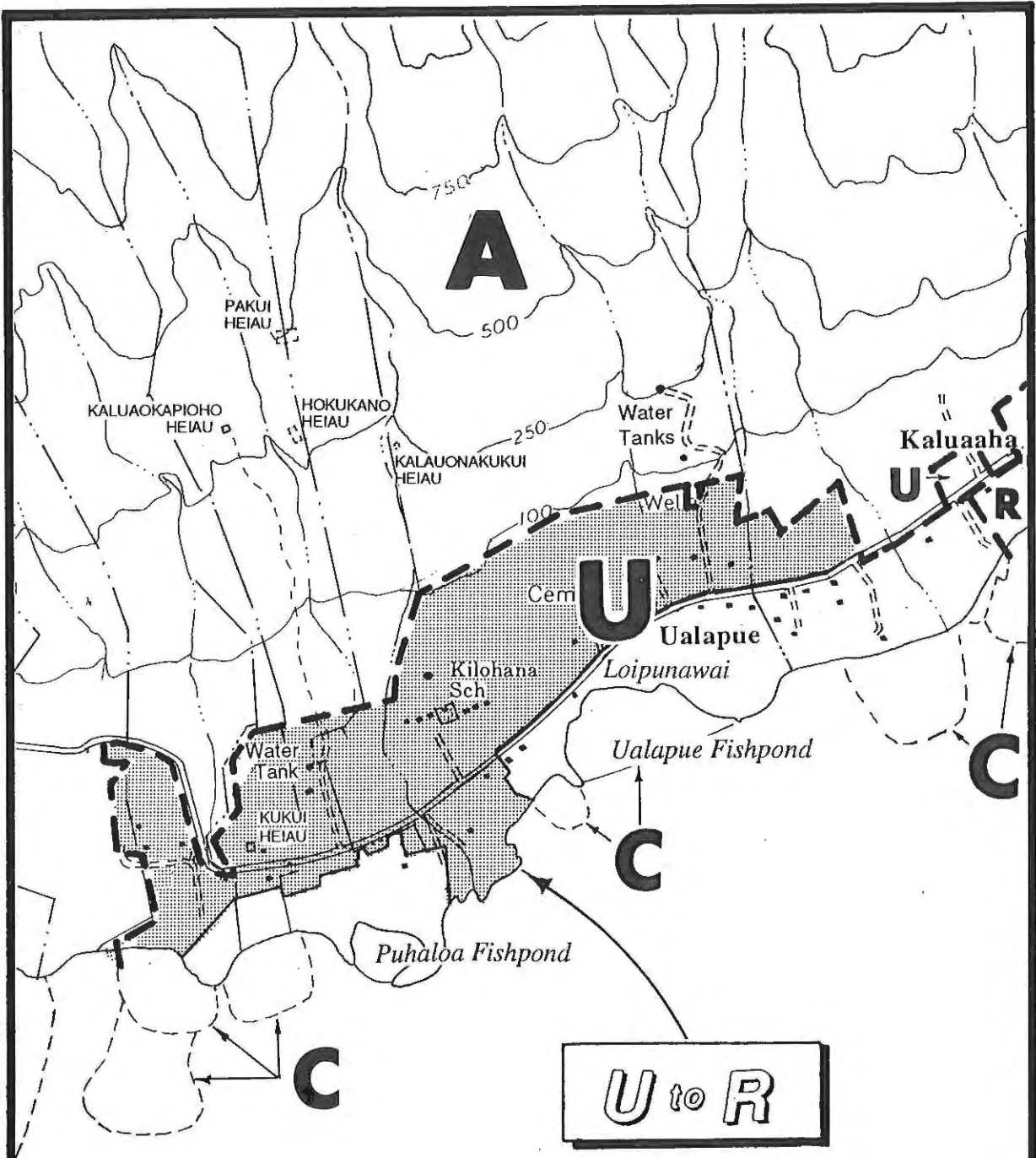


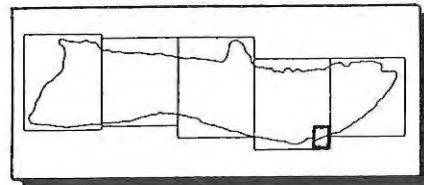
Figure Mo-8
UALAPUE

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SCALE IN MILES

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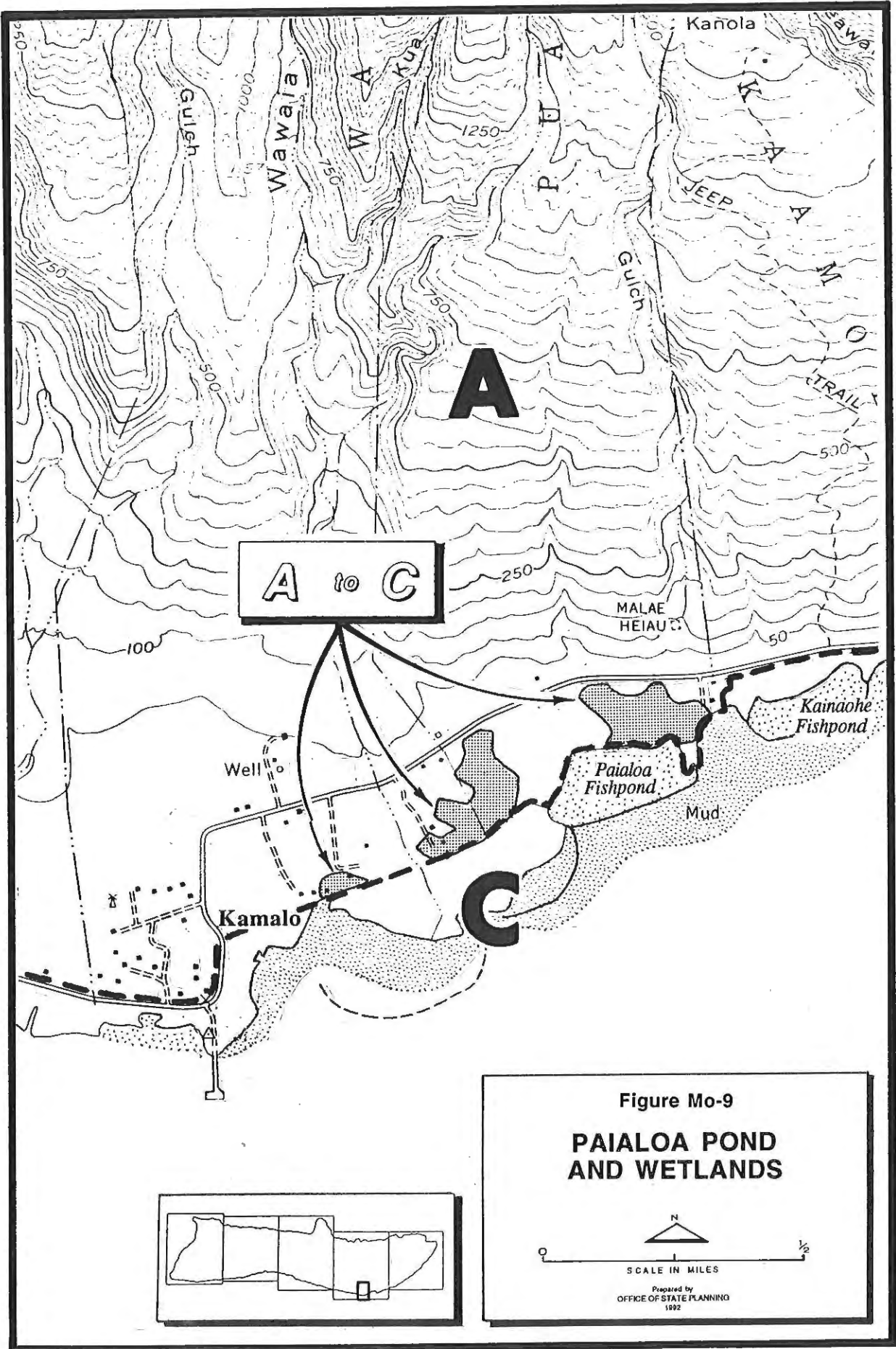
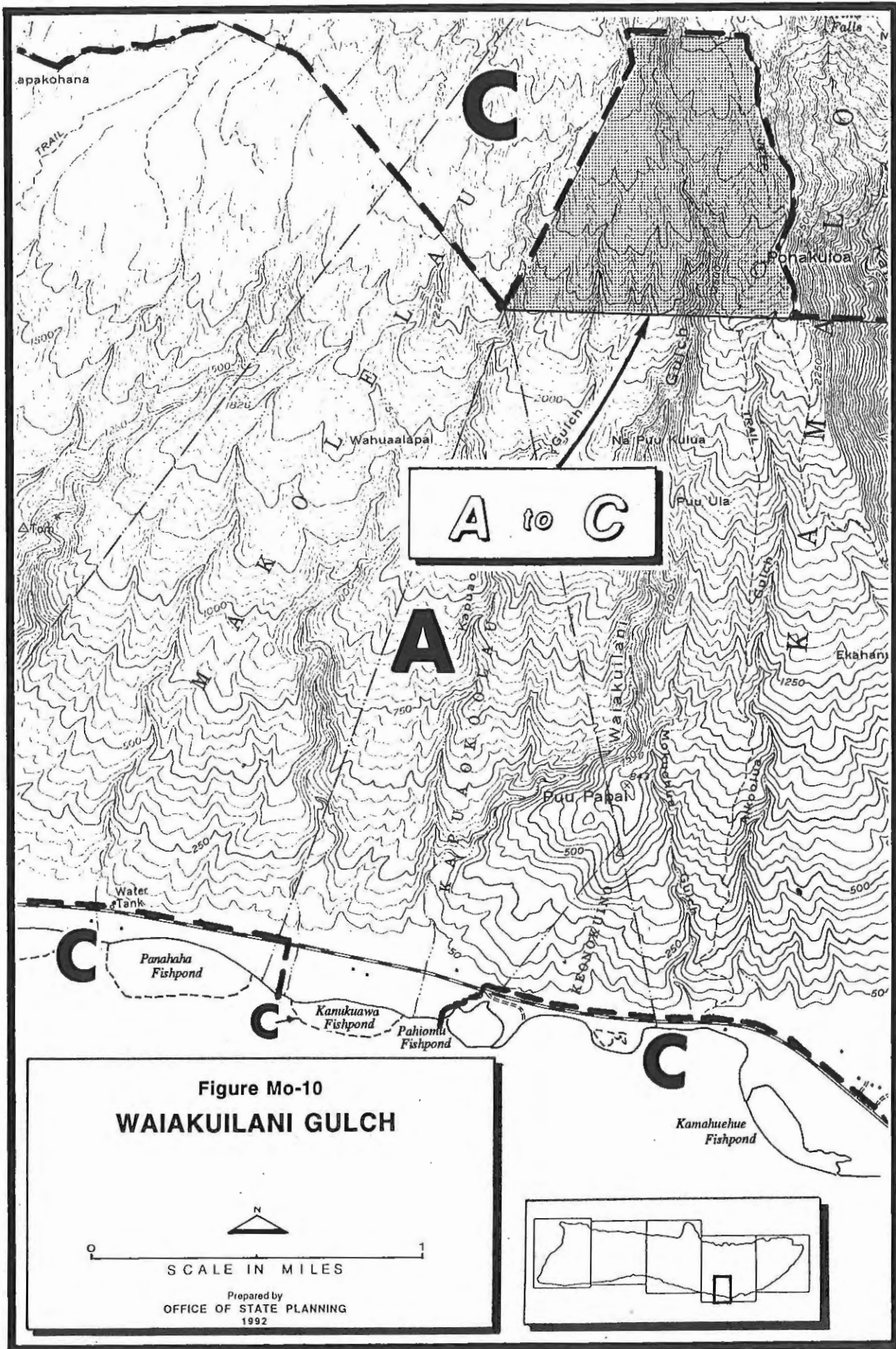


Figure Mo-9

**PAIALOA POND
AND WETLANDS**



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**Figure Mo-10
WAIAKUILANI GULCH**



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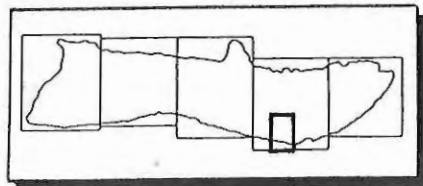
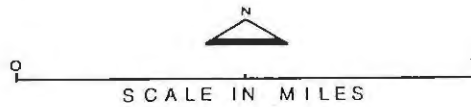
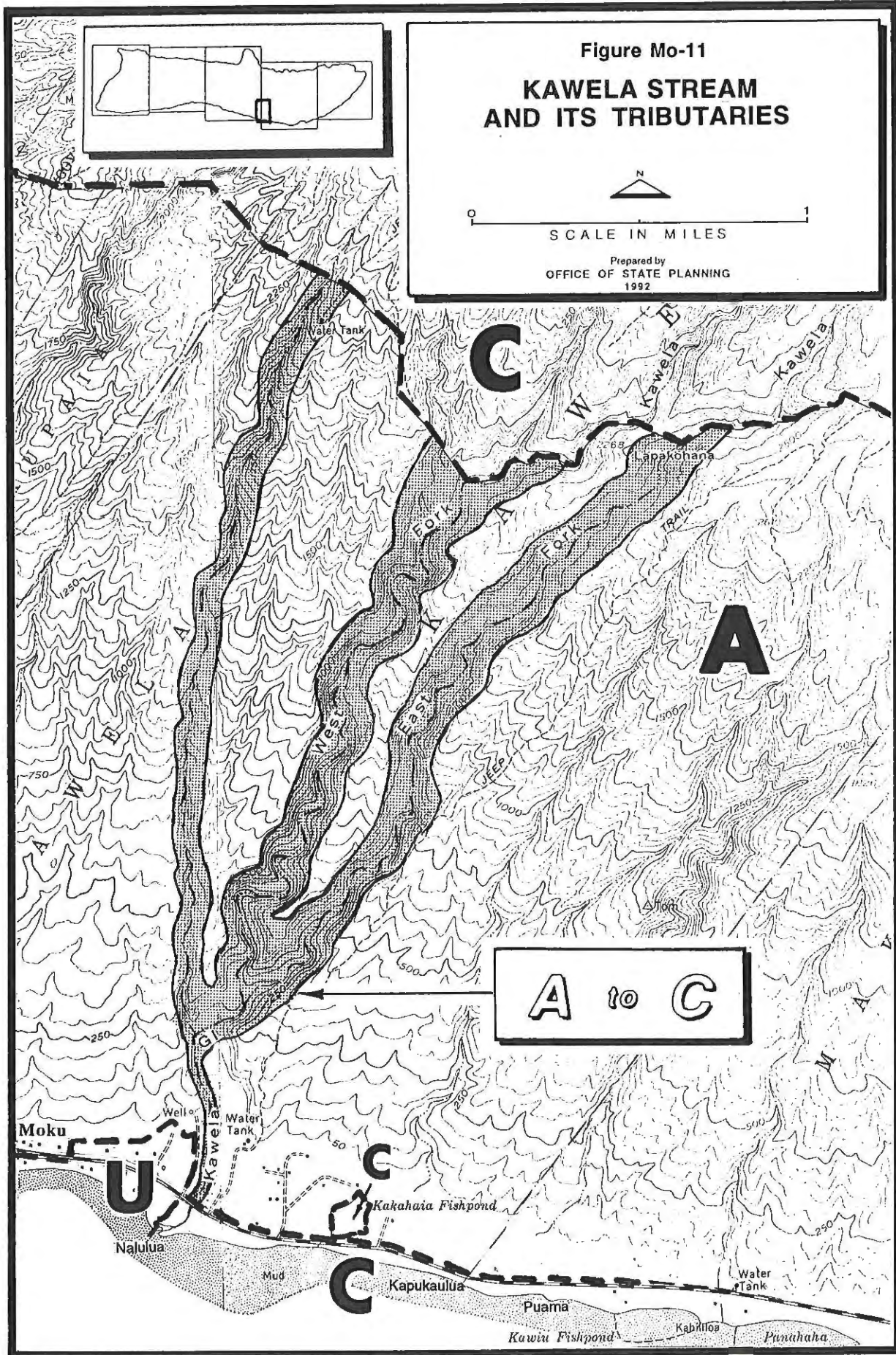


Figure Mo-11
**KAWELA STREAM
AND ITS TRIBUTARIES**



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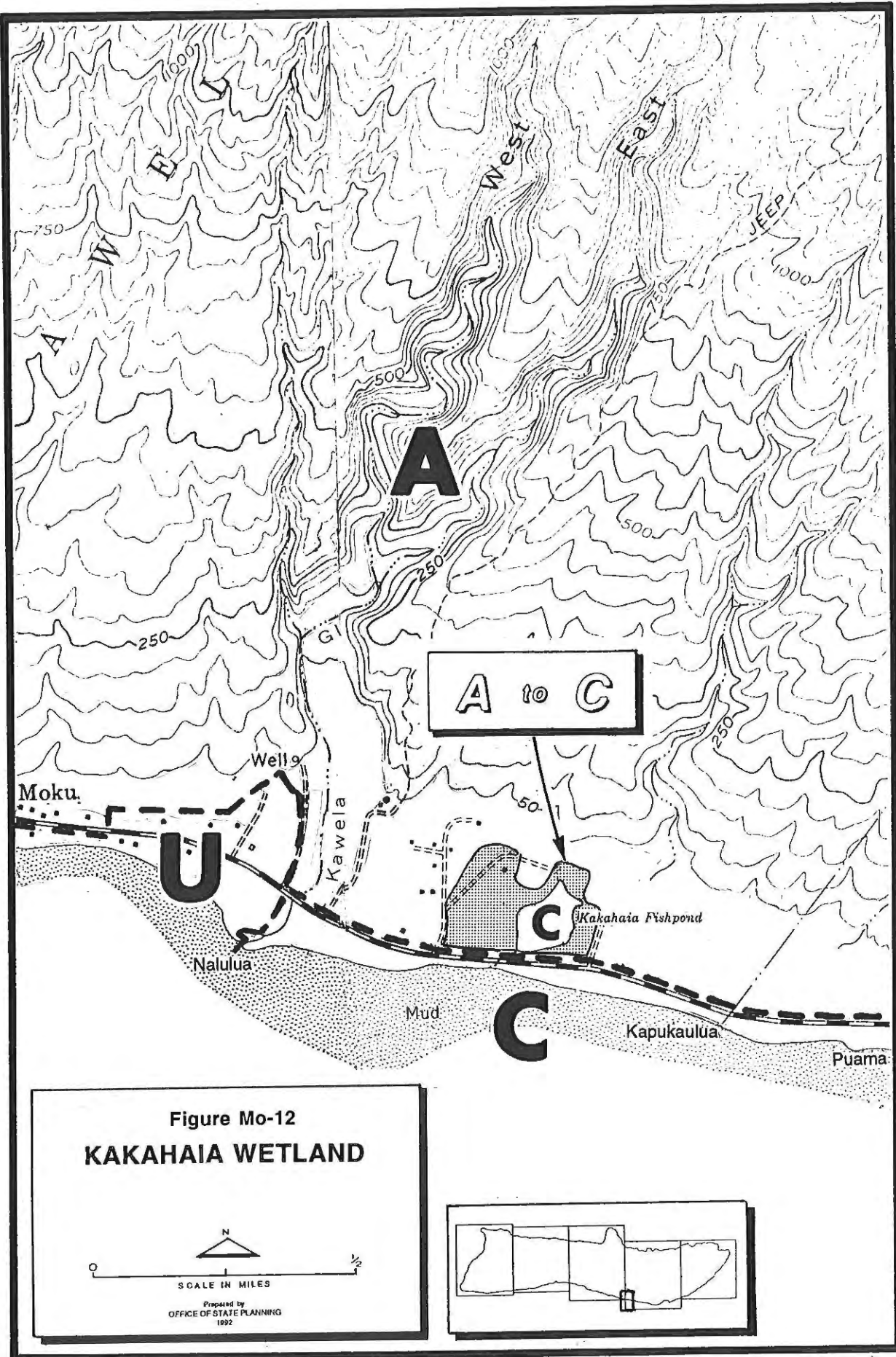
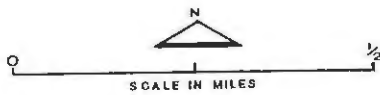
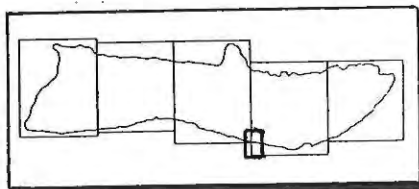


Figure Mo-12
KAKAHAIA WETLAND



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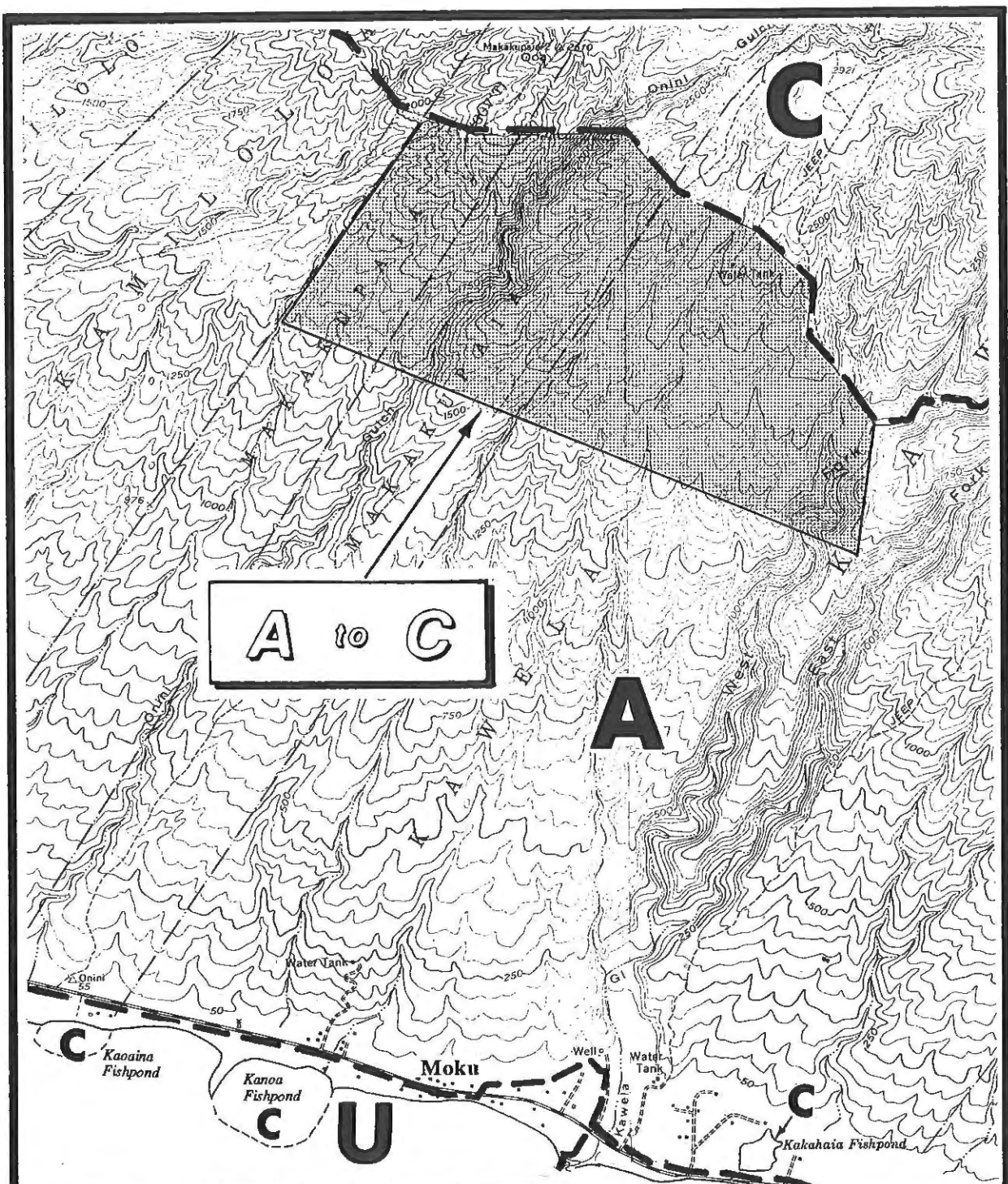



Figure Mo-13
KAMILOLOA - MAKAKUPAIA


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SCALE IN MILES

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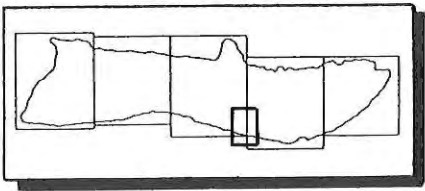


Figure Mo-14
KAUNAKAKAI GULCH SYSTEM



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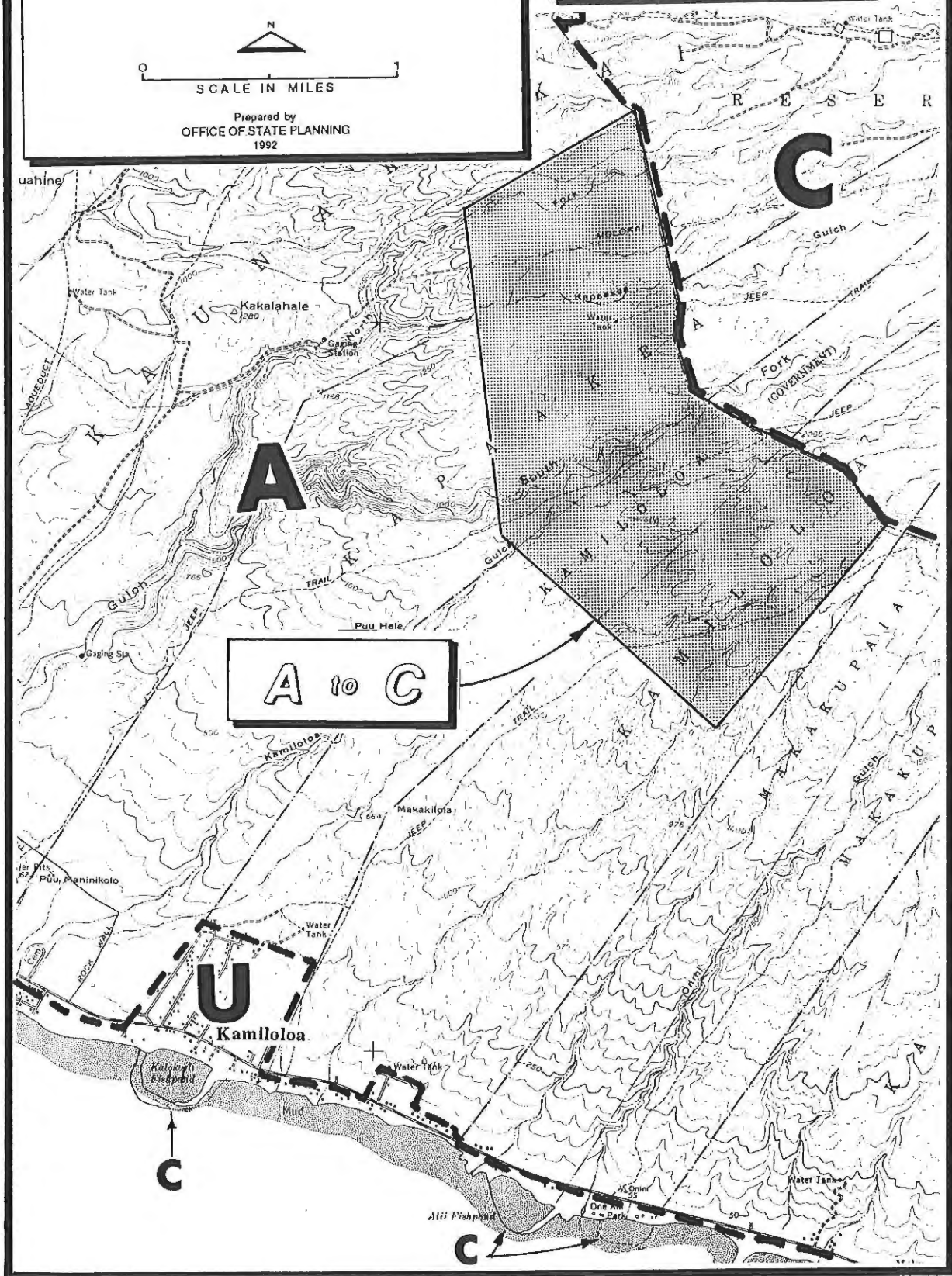
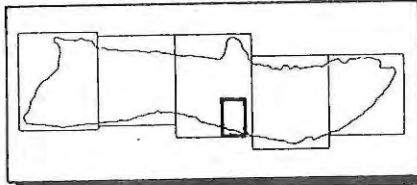
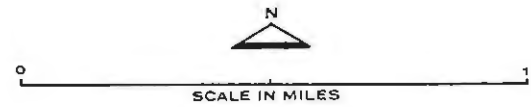


Figure Mo-15
MOOMOMI PRESERVE



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