



# Imprint on the Land

50 Years of Conservation  
**HAWAII**

Soil and Water Conservation  
Districts in Hawaii  
1948-1998

# Imprint on the Land

## 50 Years of Conservation

# HAWAII

erosion control

watershed planning

reforestation

wildlife habitat

flood control

water quality

conservation education



Gully erosion forces a damaging course through sugar cane rows on the Big Island (1953).



Students scope out the slope of the land during a land judging contest on Oahu (1976).



## Introduction

On April 2, 1948, the Secretary of the territory of Hawaii issued a certificate of organization to the land users of Olinda-Kula, Maui to organize a soil conservation district (later renamed soil and water conservation districts). The Olinda-Kula soil conservation district was the first in Hawaii to be organized under the provisions of the Hawaii Soil Conservation District Law, which was adopted by the territorial legislature in May 1947. As districts organized in Hawaii, they soon realized the need for a territorial organization that would help them focus on matters of mutual interest. In 1954, they formed the Hawaii Association of Conservation Districts (HACD).

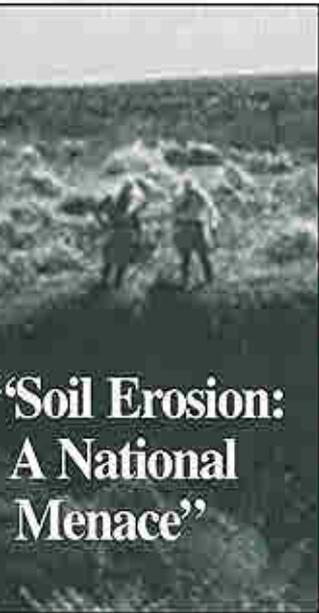
Today, there are sixteen soil and water conservation districts (SWCDs) in Hawaii, covering most of the non-federal land. The districts are self-governing sub-units of State government. Although the majority of the districts were organized between 1948 and 1957, expansion continued until 1990.



Since 1967, the Department of Land and Natural Resources (DLNR) has provided the State's SWCD program with administrative and funding support. A board of five directors, three elected by farmers and ranchers and two appointed by DLNR, provides leadership for each district. These directors volunteer their time and services. Each board also has the authority to appoint associate directors to assist with soil and water conservation program planning and activities.

In addition to the traditional mission of soil and water conservation, the districts are active in a wide variety of related areas, including watershed planning, flood prevention, reforestation, erosion control plan reviews on agricultural land, control of nonpoint source pollution, wildlife habitat preservation, conservation education, and youth work.

Soil and Water Conservation Districts are key members of a statewide and national conservation partnership. In Hawaii, the conservation team includes over a hundred government agencies, private organizations, and military installations.



# 'Soil Erosion: A National Menace'



Deep gullies ran through fields on Molokai and Maui. (1933)



The Hawaii Association of Conservation Districts has played a major leadership role since its founding in September 1954. Among Federal agencies, the HACD and individual districts work closely with the Natural Resources Conservation Service (NRCS, formerly the Soil Conservation Service) and the Farm Service Agency (FSA) of the U.S. Department of Agriculture (USDA), and the U.S. Environmental Protection Agency (EPA). The districts also cooperate with many State agencies in addition to the DLNR, particularly the Department of Agriculture, the Department of Health, the Coastal Zone Management Program, and the University of Hawaii College of Tropical Agriculture and Human Resources Cooperative Extension Service. Over the years, districts have also developed close ties with various county government offices.



Through membership in the National Association of Conservation Districts (NACD), the HACD and its districts work with a national network of conservation professionals and volunteers. Hawaii district leaders have served on the NACD Council and have been effective in voicing their concerns on conservation issues that affect Hawaii. With almost 3,000 member districts, the NACD and its Hawaii affiliates are looking to the difficult challenges of the 21st century with confidence and optimism.



## Origins of the Conservation District Movement in Hawaii

At the behest of the Secretary of the Interior, Harold Ickes, the Soil Erosion Service (SES) was established in the Interior Department in late September 1933. Ickes selected Hugh Hammond Bennett, the man who was to become known as the "father of soil conservation," to head the fledgling service and develop its agenda. A graduate of the University of North Carolina, Bennett had joined the USDA's Bureau of Soils in 1903. During his soil survey assignments in the South, Bennett quickly recognized the costly damage to farms produced by unchecked soil erosion. In the late 1920s, Bennett's USDA article, *Soil Erosion: A National Menace*, brought national attention to his campaign.



An untiring proponent of proper land management, Hugh Hammond Bennett (left) became the "father of soil conservation."

1935

In early 1935, following a White House meeting with Bennett, President Franklin D. Roosevelt transferred the SES to USDA, where it was soon renamed the Soil Conservation Service (SCS). The Soil Conservation Act of April 27, 1935 transformed the temporary Service into a permanent agency within the U.S. Department of Agriculture. Establishing SCS allowed Bennett to demonstrate that soil conservationists can work with farmers in a partnership effort to use the land productively while protecting it from degradation. SCS established watershed-based demonstration projects of soil and water conservation on private land.



Once productive fields are stripped by wind erosion. (1930's)

Five hundred tons of soil was lost on this freshly plowed field during a deluge of 10" of rain in six hours and 100 mph winds. (1959)



In its early years SCS did not locate a demonstration in the territory of Hawaii. Convinced that the agricultural sector of the territory would benefit from a conservation presence, the director of the University of Hawaii Agricultural Experiment Station, the director of the Cooperative Extension Service, and the president of the Pineapple Producers Cooperative Association contacted Chief Bennett in early 1938 and requested that he assign someone from his agency to study the extent of erosion damage in the territory. Samuel Wilder King, territorial delegate to Congress and a champion of Federal support for agriculture, also joined the call for SCS work in the Islands.

## 1938



Dr. Nathaniel Winters investigates soil erosion on the Islands.



The agricultural industry that Winters found upon arriving in Hawaii in March 1938 consisted of large sugar and pineapple companies, a thriving cattle industry, and over 5,000 small farmers. Winters completed his survey by mid-June and presented his findings at the University of Hawaii to specialists and business leaders called together by Professor L. A. Henke, acting director of the agricultural experiment station. At the June 22 meeting, Winters told the audience at Agriculture Hall that the extent of soil erosion in the territory was not as advanced as in many areas on the mainland. However, he identified serious cases of soil loss on each of the islands he visited, especially on Maui and Molokai, and proposed a program of soil conservation.

Serious soil loss was identified on each island Winters visited, especially Maui and Molokai.



After Winters' presentation, the guests prepared a resolution offered by a representative of Castle & Cooke, one of Hawaii's "Big Five" business firms. The resolution appealed to SCS to open an office in Hawaii and called for a more complete soil erosion survey, research on erosion control measures applicable to Hawaii, and the establishment of demonstration projects on the principal islands. Henke forwarded the document to SCS headquarters in Washington. H. H. Warner and W. Norman King of the Extension Service were among those who signed the resolution. Winters' account of the Hawaii trip appeared

Major pineapple and sugar growers were encouraged to work with the Territorial Soil Conservation Advisory Committee. (1939)



1939



A small staff, assigned to the SCS territorial office in Hawaii in 1939, begins working with farmers in the field.

in the *Soil Conservation* magazine (October 1938). In this article, Winters expressed his belief that Hawaii's "leaders were fully awake to the menace of erosion and are ready to cooperate in a control program of well-planned and practical research and field operations."

The appeal was effective and Bennett assigned a small staff to Hawaii in February 1939. The SCS territorial office that opened in April consisted of Winters, two administrative specialists, three conservation surveyors, an agricultural engineer, and an agronomist.

Initially, Winters concentrated on organizational and promotional matters. He launched the Territorial Soil Conservation Advisory Committee (TSCAC) and invited the directors of the Experiment Station and the Extension Service to join him. SCS and the Extension Service agreed to cooperate in contacting farmers to arrange for soil conservation demonstrations. Also, the Extension Service assigned W. Norman King to assist SCS with radio and newspaper publicity, public appearances, and work with vocational agricultural students in the high schools.



Hawaii cooperators at different levels began working together to coordinate conservation planning activities through the Territorial Soil Conservation Advisory Committee.



From 1939 to 1941, SCS coordinated conservation planning and activities. In early 1940, the TSCAC began encouraging the creation of voluntary conservation districts. Winters built a cooperative effort involving all parties crucial to the success of the conservation movement. The cooperators at the Federal, territorial, and private level included the Agricultural Adjustment Administration, Farm Security Administration, the Extension Service, the territorial Board of Forestry and Agriculture, major sugar and pineapple growers, the experiment stations of the sugar and pineapple industries, ranch operators, and small farmers.

An area of disappointment for Winters was the Board of Forestry and Agriculture's refusal to assign Civilian Conservation Corps (CCC) camps to the SCS/Extension Service demonstration areas and farms. The labor of the young enrollees in the camps would certainly have furthered the conservation work and its acceptance. The Board had been supervising the work of CCC primarily in the forested areas of Kauai, Oahu, Maui, Molokai, and Hawaii.

The conservation ethic was publicized through various media outlets by SCS and the Extension Service.



SCS and the Extension Service promoted conservation through a variety of activities, including publicizing conservation through newspaper articles and radio broadcasts; organizing and implementing demonstration projects; preparing almost 70 conservation farm plans; collaborating on numerous Extension Circulars; and working with high school vocational agriculture students.

1937



President Roosevelt created a "Standard State Soil Conservation Districts Law" in 1937.



In 1937, SCS began promoting soil conservation districts nationwide. President Franklin D. Roosevelt created a "Standard State Soil Conservation Districts Law" that was distributed to all state governors on February 23, 1937. The President encouraged each state to pass a law based on the standard law that would set forth a procedure whereby communities could establish a district through local referendum. The directors and supervisors would be locally elected. After the state law had been passed and the districts established, each district could then sign an agreement with USDA. Then USDA through SCS and other departmental agencies could provide assistance—predominantly in the form of assigning trained conservationists to work with the districts.



Having built the conservation movement for two years, Winters and his cooperators in early 1941 attempted to get the territorial legislature to pass a conservation districts law. As Hawaii's lawmakers assembled in February 1941, the TSCAC asked Winters to lead the effort to pass a soil conservation district bill. He chaired a committee composed of land owners, land users, and various University of Hawaii specialists to examine the standard district law. By March, the group had completed a preliminary review, which Winters handed to the President of the Senate, who agreed to have a soil conservation district bill presented in the upper house.

1941

A number of influential groups supported the bill, including the Honolulu Chamber of Commerce's legislative committee, the Engineering Association of Hawaii, and the Territorial Planning Board. When Senator Harold W. Rice of Wailuku, Maui, introduced Senate Bill 505 in the legislature on April 14, 1941, 38 states already had adopted a conservation district law. Across the United States there were already more



Field demonstrations by SCS in Hawaii were becoming popular with both large and small land operators and owners.

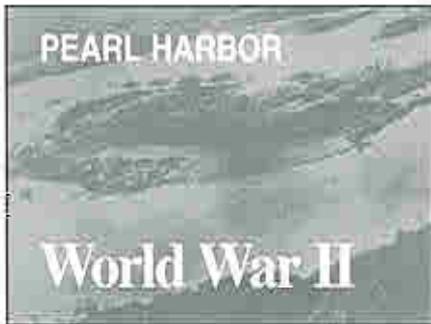
On-site tours were used to educate the general public and land users about the need to implement soil protection measures. (1941)



than 500 districts. Winters continued to publicize the Hawaii Senate Bill through conversations with reporters. He also emphasized the democratic aspects of the legislation, including the petition process for district formation; election and appointment of five district directors for each local district; issuance of a district charter; voluntary agreements with SCS and other government agencies; and local control of conservation planning, programs, and activities.

On April 19, Hawaii's Senate Committee on Ways and Means recommended passage of the bill, noting that "field demonstrations by the Soil Conservation Service in Hawaii, in cooperation with both large and small land operators and land owners, is demonstrating the efficiency and practicability of this field program." Two days later, the Senate sent the bill to the House, where it remained until the end of the legislative session. In May, *Hawaii Farm and Home* used much of the main editorial to level sharp criticism at the lawmakers for their failure to pass the district bill. The *Farm and Home* editor worried that the bill's death "may prove to be a setback to the valuable soil conservation work in the territory."

## 1942



World War II interrupted SCS activity in Hawaii.



With the setback on the Senate Bill still fresh in his mind, Winters applied new energy to the ongoing campaign to educate the general public and land users about the need to implement soil protection measures, and the value of the organization through conservation districts. His commentary appeared regularly in the *Honolulu Advertiser*, the *Honolulu Star-Bulletin*, and the *Hawaii Farm and Home*. As concern increased about the Nation's possible involvement in World War II, Winters linked the role of agriculture to the preparedness effort. America's entry into World War II interrupted SCS activity in Hawaii. In the upheaval that followed the Japanese attack on Pearl Harbor, Winters continued to urge farmers and ranchers to support the war effort by using modern conservation farming methods. Several staff of the SCS office transferred to the mainland during this time.

Winters and those who remained were reassigned in August 1942 to the Real Estate Division of the U.S. Army Corps of Engineers, where their expertise would be used to process crop and land damage claims filed against the Federal Government. Except for a brief period in 1944-1945, the SCS office in Hawaii remained closed until 1946.

A time to restore ravaged lands.



1944

## First Volunteer Conservation District



Assessments were made on eroded cropland in 1945. Local leaders called for Federal assistance in restoration of Hawaii's damaged lands.



W. Norman King, head of the Agricultural Adjustment Administration since the summer of 1941, and newly named chairman of the USDA War Board in Hawaii, took up the cause of soil conservation and kept the campaign alive during the war years. *Hawaii Farm and Home* featured his commentary on a regular basis. Under King and R.M. Lindsay, the Farm Security Administration's territorial director, employees of the two agencies provided information on soil conservation practices to interested land users. Before the end of the war, columnist Jared Smith of the *Honolulu Advertiser*, who had come to the Islands in 1901 to establish the USDA experiment station, also publicized the need for conservation districts in his editorials.

Across the territory, Extension Service agents encouraged farmers to form voluntary soil conservation districts (VCD). Frank Murphy promoted the concept in the Olinda-Kula area of Maui where, in 1944, twenty Olinda farmers formed the territory's first VCD without the umbrella of territorial legislation. In the following year, recently arrived County Extension agent Bunki Kumabe steered neighboring Kula land users to the district.

In January 1945, Winters left Hawaii for a new assignment with the USDA's Office of Foreign Agricultural Relations. During most of the war, his duty with the Army Corps of Engineers prevented an active role in soil conservation. When the SCS was reactivated in the middle months of 1944, Winters paid visits to some of the old demonstration sites. For the most part, he was disappointed with what he saw, because "practically all of the [SCS/Extension] work had been permitted to deteriorate and much of it had been destroyed by military operations."



Hawaii's conservation district movement, sidetracked by World War II, faced major challenges in the post-1945 era. Although the wartime staff of the Agricultural Adjustment Administration, the Extension Service, and other agencies provided valuable guidance and assistance to many land users, it was recognized that there was still a pressing need for the return of SCS. Hawaii's landowners faced the enormous task of restoring large tracts of agricultural land that had been taken over by armed forces for combat maneuvers during the war. Before the departure of Winters, Alexander & Baldwin, one of Hawaii's Big Five business firms, emerged as a leader in the call for a Federal role in the restoration of damaged cropland, pasture, and forest. But, the territory still did not have a conservation district law.



Bunki Kumabe, (pictured in 1993) who was assigned to the Olinda-Kula VCD, championed the early conservation message for SCS Hawaii.

1946



In the early post-war years, Bunki Kumabe, who was assigned to Olinda-Kula VCD, and other extension agents were finding it difficult to perform their regular duties amid the growing number of urgent requests for the specialized technical assistance associated with soil and water conservation. When Kumabe learned that SCS had not returned to the territory, he dashed a letter off to the SCS regional office and alerted the regional office to the pressing need for SCS in Hawaii. The regional office staff reviewed Kumabe's letter and before the end of 1946, SCS reopened its office in Honolulu. Walter E. Sykes, who had been in Hawaii in 1941 to conduct a major inspection of SCS work, was named territorial conservationist for Hawaii.

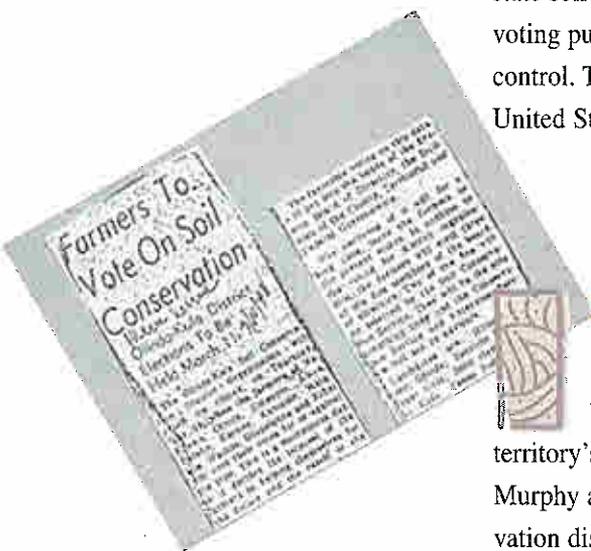


The Hawaii State Legislature approved a conservation district law in 1947.

1947

Sykes found that the work of N. E. Winters and the pre-war SCS staff provided him with the foundation to renew the campaign for a conservation district law. In order to study post-war conditions on the neighboring islands, Sykes visited Kauai and Hawaii (the "Big Island") in November 1946. He told the *Honolulu Advertiser* that he planned to visit Maui and Molokai in December. From the time he returned to Hawaii until the time the legislature convened, Sykes campaigned for support for a new conservation district bill. The legislature assembled on April 14, 1947 and Thomas T. Sakakihara of Hilo and Chairman of the House Agriculture, Forestry and Manufactures Committee, introduced the bill. The legislation was readily approved in both houses and became Act 191 on May 19, 1947.

Act 191 created the Territorial Soil Conservation Committee (TSCC) and authorized the formation of soil conservation districts. The Act followed the standard state soil conservation districts law in many aspects, but had one major exception. For voting purposes, a land user was entitled to one vote for every 100 acres under his or her control. The 100-acre voting feature, favorable to large landholders, was unique in the United States.



### Creation of Districts

The land users of Olinda-Kula VCD were in the best position to organize the territory's first soil conservation district (SCD) under Act 191. Extension agents Frank Murphy and Bunki Kumabe, along with SCS's Rex Wickham, promoted the soil conservation district among the local farmers. The TSCC received the petition in December 1947, held an inspection of the proposed district and held a public hearing on January

Three of the "pioneers" in the SCD movement were honored at a 1993 celebration. Fr. John Hashimoto, Teichi Yamada, Bunki Kumabe



Conservation practice demonstrations provided an opportunity to become acquainted with conservation districts.

15, 1948. Impressed with the turnout and the lack of opposition to the district, the Committee set the referendum for March 1. Absent from the meeting, however were representatives of the nearby large plantations.

In the referendum, 84 land users cast ballots on March 11 and brought the territory's first SCD into existence with an overwhelming pro-district result. The land users also elected farmers John Hashimoto, Hiroshi Fujimoto, and Teichi Yamada to the board of directors. Two days later, the TSCC appointed Joe Texeira and E. Stanley Elmore, both of Kula, to serve on the first board. On April 3, in a special ceremony to mark the historic occasion, Governor Ingram M. Stainback presented the territory's first SCD certificate of organization, dated April 2, to the TSCC chairman. Hiroshi Fujimoto served as the district's first chairman.

- Olinda-Kula
- Hana
- West Maui
- Central Maui
- Waimanalo
- West Oahu
- Koolau
- South Oahu
- Molokai



Between the formation of the Olinda-Kula SCD and the end of the territorial period in 1959, the land users on Maui (the "Valley Island") created three more districts: Hana (September 3, 1953), West Maui (November 15, 1954), and Central Maui (June 6, 1957). Kahoolawe, a part of Maui County, was beyond the reach of the district movement because the island remained under control of the U. S. Navy, which since the early days of World War II, used it for gunnery and bombing practice.

In mid-June 1948, the Waimanalo SCD became the first district established on Oahu, the second overall in the territory. From January 1950 to November 1952, Oahu's land users organized three more soil conservation districts: West Oahu (January 4, 1950), Koolau (March 4, 1950), and South Oahu (November 19, 1952). Walter Sykes of SCS and the Extension Service's Merrill K. Riley provided guidance to district organizers on Oahu.

The conservation district movement was especially strong on Molokai, where the ranchers, growers, and small farmers organized the territory's third SCD. By mid-1948, movement leaders on Molokai had collected almost 1,400 signatures in favor of an SCD. The petition for a single district settled the issue of whether more than one SCD would be formed on Molokai (the "Friendly Island"). Most of the petitioners cast ballots on August 2, leaving little doubt that the Molokai district would be approved. The district's organizational paperwork was completed in mid-August.

During cane fill-in planting operations, #1 seed pieces were hauled into fields by mules. The nose bags are to prevent the animals from grazing cane. (1959)



Waiakea  
Puna  
Kau

Kona

Mauna Kea

At this stage, the district movement had not yet taken hold on neighboring Lanai (the “Pineapple Island”). In the late 1940s and early 1950s, Lanai residents and land users were in the middle of a heated debate about their political future in Maui County. On Lanai, some activists were attempting to rally support for an independence movement that would split the Island from Maui County.

Between September 1949 and May 1955, the leaders of the conservation district movement on the island of Hawaii organized five SCDs: Waiakea (September 6, 1949), Puna and Ka’u (October 3, 1950), Kona (June 18, 1953), and Mauna Kea (May 15, 1955). As on the other islands, the SCS-Extension partnership provided valuable support to district organizers. A key figure in this area was extension agent Clarence Lyman, who helped organizers in Waiakea, Puna, and Ka’u.

Although some land users on Kauai (the “Garden Island”) developed plans to establish SCDs on the island soon after the 1947 law was adopted, the island’s two districts were not organized until mid-1953. At the public hearing held in March 1948, the TSCC decided not to hold a vote when the necessary support for districts failed to materialize at the forum.



A farmer checks out damage to his orchard on Kauai.

1953

West Kauai

East Kauai



By early 1953, district backers were ready to launch another effort in Kauai County. Except for one large landholder, Gay & Robinson, the leading growers and ranchers had thrown their support behind the new campaign for SCDs. At the public hearing of April 17, 1953, the TSCC heard from speakers who unveiled their plans for two districts, one for East Kauai and the other for the western half of the island.



Kahuku, one of the sugar mills on Oahu that processed cane.

Niihau, the private island controlled by Gay & Robinson, was not included in the proposed West Kauai SCD. On June 19, Kauai’s land users voted Hawaii’s eleventh and twelfth SCDs into existence. By December 1959, Hawaii’s sixteen conservation districts contained about 3,470,000 acres. In mid-August 1959, when Lanai was accepted as part of the Molokai SCD, the conservation district partnership covered six of Hawaii’s eight major islands. Within the boundaries of the districts, there were more than 4,500 farms, plantations, and ranches.

## Windward Oahu

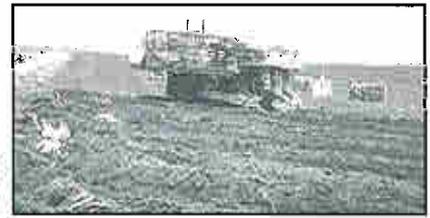
## Hamakua

1954

District tours remained a popular way of communicating conservation between HACD, SCS, and interested farmers, ranchers and other visitors.



Cane planting machine in a field near Hilo. (1959)



In 1962, the number of districts was reduced from 16 to 15 when the Windward Oahu SCD was created by consolidating the Waimanalo and the Koolau districts. In 1976, Niihau at last became part of West Kauai SCD. Niihau, because it has been privately controlled since the 19th century, has long been isolated from the rest of Hawaii. One of the directorships was reserved for a member of the Robinson family—owners of Niihau.

In 1990, the Hamakua SCD on the Big Island was formed, and the number of SCDs returned to sixteen for the first time since 1962. The soil and water conservation district movement now covers the eight main islands.

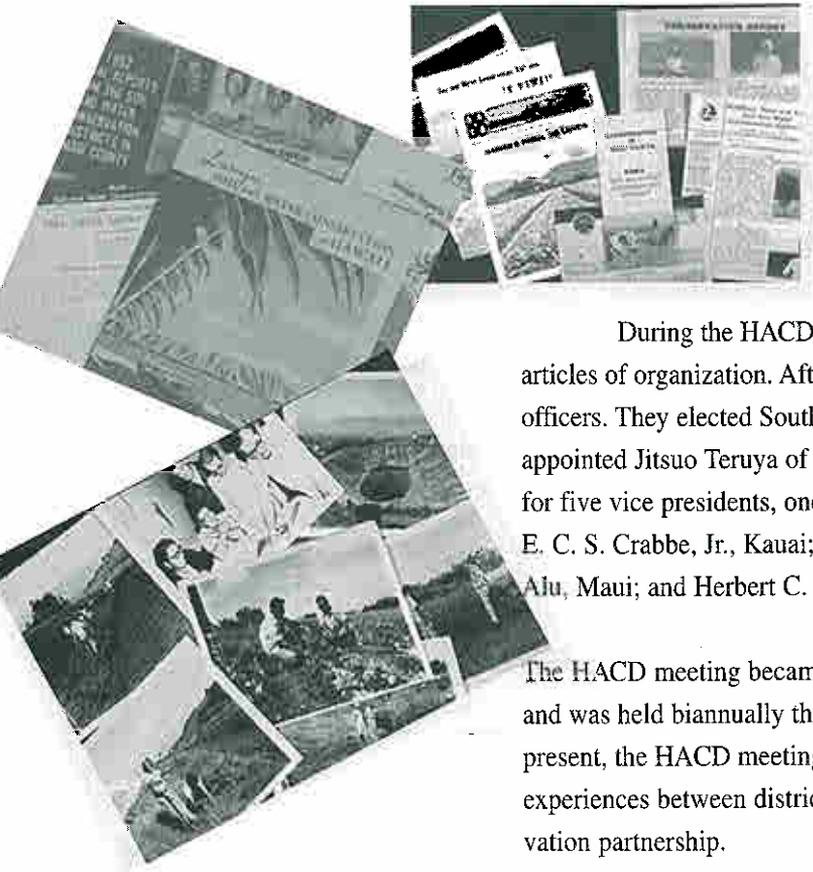


## The Organization of Hawaii Association of Conservation Districts

The Hawaii Association of Conservation Districts (HACD) was organized in September 1954, the result of more than a year of planning and the tireless efforts of Walter Sykes of SCS, Alan Thistle and other members of the TSCC, various district directors, supporters in the territorial legislature, and Waters S. Davis, Jr., president of the National Association of Conservation Districts (NACD). In 1954, the territory's lawmakers funded a two-day SCD director's conference in Honolulu. The TSCC and district directors decided to use the meeting as the occasion to launch a territorial organization. Edward Hiroki, South Oahu chairman and one of the leaders for a territorial body, invited Waters S. Davis to attend the first territory-wide conference.

On September 16, 1954, the TSCC, 41 directors from Hawaii's thirteen SCDs, Waters S. Davis from NACD, representatives of the sugar and pineapple companies, interested farmers and ranchers, and other invited guests gathered in Honolulu for the opening day of the conference. The day was dedicated to a tour of local SCDs (West Oahu and Koolau), private operations (the California Packing Corporation plantation, a Laie farm, and the Kualoa Ranch in Kaaawa), and the University of Hawaii's Poamoho Experiment Station.

Governor Samuel W. King, who helped bring SCS to Hawaii in the late 1930s, opened the second day of the conference with a welcome address at Agee Hall, Hawaiian Sugar Planters Association (HSPA) Experiment Station. Waters S. Davis delivered the keynote speech, "Soil Conservation Districts in the United States."



During the HACD organizational meeting, local directors reviewed the proposed articles of organization. After adopting the articles, the directors took up the election of officers. They elected South Oahu's Edward Hiroki as the first HACD president and appointed Jitsuo Teruya of Oahu, as secretary-treasurer. The directors also cast ballots for five vice presidents, one for each of the five major islands, and elected the following: E. C. S. Crabbe, Jr., Kauai; Desmond Fletcher, Oahu; Norman McGuire, Molokai; Alfred Aiu, Maui; and Herbert C. Shipman, Hawaii.

The HACD meeting became a major event on Hawaii's conservation leadership calendar, and was held biannually throughout the 1950s. From the earliest gatherings to the present, the HACD meeting has provided a lively forum for the exchange of ideas and experiences between district leaders and other members of the natural resources conservation partnership.

## 1959



The number of active SCS cooperators passed the 500 mark as early as June 1952. A little over four years later, in July 1956, the number of those who had prepared conservation plans approved by SCS had climbed to over 900. By the time Hawaii achieved statehood in 1959, the number of SCS district cooperators was at least 1,100. During the 1960s about 100 new district cooperators signed up each year, bringing the total to more than 1,980 cooperators by mid-1969. During the 1990s, the number of cooperators passed the 4,000 mark.



Hawaii's districts and the HACD have participated in the full range of programs and awards offered by the National Association of Conservation Districts such as the annual Goodyear conservation awards, Soil Stewardship Week, and Soil Judging Contest. In 1974, HACD expanded its award program and began recognizing accomplishments under the larger umbrella of Environmental Awards. The Soil Judging competition was changed to Land Appreciation in 1977. HACD also recognizes the Conservation Teacher of the Year.

At least 1,100 cooperators were working with the districts and SCS when Hawaii achieved statehood.



Soil judging became just one in a full range of conservation education programs offered through HACD.



HACD also has created the position of Emeritus Directors and has elected the following: Herbert Horner (Mauna Kea), Sadao Inazu (West Kauai), Hisa Kimura (Mauna Kea), Alfred Lee (Windward Oahu), William "Billy" Paris (Kona), Dick Penhallow (Mauna Kea), Monty Richards (Mauna Kea), George Shimizu (Kona), August Souza (East Kauai), and Richard Tanaka (Kona).



## Conservation Progress in the 1940s and 1950s

The conservation partnership produced important benefits for Hawaii's people and economy. The adoption of modern conservation practices resulted in impressive soil savings, substantial reduction in sediment runoff, and increased crop and livestock production.

In the 11 years following the organization of Olinda-Kula SCD in April 1948, the HACD's local directors and cooperators developed into valued members of the conservation partnership. In the vital areas of formulating district action plans and the application of conservation practices, local district members worked most closely with the staffs of the SCS, the Production and Marketing Administration (PMA, formerly the Agricultural Adjustment Administration), the Extension Service, and the Farmers Home Administration (FmHA).

After World War II, a number of district directors, such as those in Olinda-Kula, Hana, and East Kauai, arranged for the acquisition of bulldozers and tractors, which were leased to cooperators, who used the equipment for clearing brush, building terraces, and installing other erosion control practices. District members helped to carry the message of modern soil and water conservation beyond the SCD-government agency partnership by reaching out to the various farmer cooperatives, the Farm Bureau, the Hawaii Cattlemen's Association, the business community, local media outlets, schools, youth groups, and churches. Hawaiian Airlines became a special friend of the district movement, providing transportation for inter-island travel and, on occasion, conducting aerial surveys of agricultural land. Most directors found that district-sponsored tours and demonstrations were effective teaching and promotional tools.



District directors arranged for cooperators to lease equipment to work their land.

Two children stand in a field of tomatoes where mulch has been applied to conserve moisture and reduce runoff. (1954)



Local SCD boards provided a framework through which SCS and other government agencies assisted farmers and ranchers with development of conservation plans. (1957)

The local SCD boards provided a framework through which SCS and other government agencies were able to assist district cooperators with the development of conservation plans, application of conservation practices, pasture and range management, and watershed planning. By 1959, at least seven SCD boards had appointed associate directors to assist them with conservation planning and programs. By the end of the decade, the SCS provided technical guidance and assistance to Hawaii's farmers and ranchers through eight field offices.

The PMA, headed by W. Norman King, provided cost-share assistance to cooperators who used conservation measures that fell within the guidelines of the Agricultural Conservation Program (ACP). Cooperators also could apply for soil and water conservation loans through the FmHA. SCS staff reviewed the technical sections of the FmHA applications. Through its traditional role in agricultural education, the Extension Service supported the programs of technical assistance, cost-share, and conservation loans.



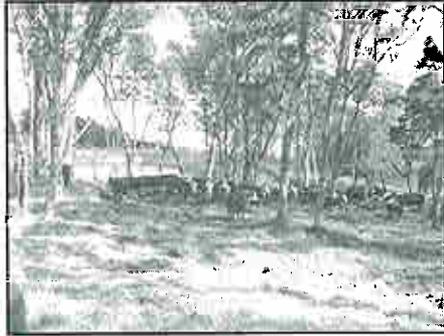
In 1957, SCS made another important contribution to the conservation district partnership when it opened the Plant Materials Center (PMC) at Kahului, Maui. To address the varied conservation needs of farmers and ranchers in the territory, the new PMC coordinated its work with the University of Hawaii Agricultural Experiment Station, the Extension Service, and the district boards. With the establishment of the PMC, an important advance was made in field testing of native and non-native species for erosion prevention work and forage improvement for pasture and range.

Through the relationship with SCS, PMA, and other government agencies, Hawaii's growers moved swiftly to implement new conservation practices such as planting on the contour, cross-slope farming, terracing, cover cropping, mulching and using crop residues. Farmers in the Puna SCD emerged as leaders in the conversion of lava beds into productive agricultural land. By 1959, more than 30,000 acres of farmland had been improved with the use of conservation practices. In the 1950s, the SCS and PMA jointly reviewed over 1,000 ACP applications.

Growers not only excelled in the adoption of conservation management practices, but from Kauai to the Big Island, district boards were able to report progress in the installation of structural conservation practices such as grassed waterways, diversions, irrigation systems, sediment basins and farm ponds. In 1959, the SCS produced a special



During the late 1950's, thousands of acres were preserved or enhanced for wildlife habitat. This young spike buck was typical of deer found on Lanai. (1959)



Cattle roam a paddock on a Big Island ranch. Pangolagrass is planted in the foreground and a stockwater pond has been constructed in the background. (1957)



Puukapu farm area shows windbreak pattern. Eucalyptus, paper bark, japanese sugi and cypress have been planted to protect the fields. (1963)

publication on the significant work completed on diversions for sugar plantations in the Ka'u and Mauna Kea SCDs.

Hawaii's ranchers made many improvements to pasture and range lands to control erosion. With SCS and PMA assistance, ranchers cleared thousands of acres of brush, planted desirable forage species, built stock water ponds, implemented rotational grazing systems, and installed cross fencing and livestock water pipeline. SCS writers showcased Hawaii's ranches in a number of articles. During the post-war years, Edward Y. Hosaka of the Extension Service, highly respected in the field of pasture management, provided educational support to Hawaii's ranchers.

Outside the familiar range of activities on farms, plantations, and ranches, district members also participated in projects to reduce wind erosion, increase woodland acreage, and preserve wildlife habitat. In 1958 and 1959, for example, district cooperators helped with the planting of over 30 miles of field windbreaks. During the same time frame, over 1,000 acres of trees were planted. In the final territorial years, cooperators also preserved and enhanced over 7,900 acres of wildlife habitat.



## Administration of Districts by Department of Land and Natural Resources

Since Hawaii became a state in August 1959, two state government agencies have exercised administrative control over the soil and water conservation district program: the Department of Agriculture from 1960-1967, and the Department of Land and Natural Resources (DLNR) from 1967 to the present. The Government Reorganization Act (January 1960), divided the responsibilities of the old Board of Agriculture and Forestry (BAF) between the newly-established Department of Agriculture and DLNR. The BAF Soil Conservation Committee was discontinued and SCDs were placed under the Department of Agriculture. In keeping with a nationwide trend to highlight the importance of water as well as soil, lawmakers approved a bill in May 1961 to re-designate SCDs as soil and water conservation districts (SWCDs).

When the SWCDs operated under the Department of Agriculture, the department's Alan Thistle argued that the legislature should fund a full-time executive position for the SWCD program. Thistle also lobbied lawmakers for an increase in the



Elmer Cravalho, Speaker of the House during the early 1960's, helped to encourage an increase in HACD membership.

annual appropriation for the SWCD program. Although Thistle's goals were not fully realized in the Department of Agriculture era, his efforts on behalf of the conservation district movement impressed SWCD leaders such as Elmer Cravalho, the Olinda-Kula district chairman who also served as Speaker of the State House of Representatives. During the 1960s, HACD adopted a new constitution and witnessed a substantial increase in membership of large forest land holders.



DLNR assumed control over the program in 1967, with John Akamine as the departmental liaison to the HACD and the individual districts. David "Buddy" Nobriga, Francis Pacheco, and other district leaders kept alive the idea of State support for a full-time HACD executive director. After retirement, former SCS state conservationist Francis Lum also joined the effort to obtain funding for an HACD executive director. The effort was successful and Lum became the first person to serve in the position and has since been followed by Michael Tulang.

Lawmakers also increased funding to the program. For the first time, individual districts received money from the State for local operations and yearly NACD dues. The increased funding was the result of years of campaigning by Alan Thistle, Elmer Cravalho, David "Buddy" Nobriga, Northrup H. Castle, and others. Hawaii's state legislature continues to support the SWCDs.

A West Maui SWCD crew that just completed work on the scenic outlook at Papanalohoa. l-r: G. Paresa, D. Nobriga, D. 'Buddy' Nobriga, James Nobriga (kneeling) and two Olinda Honor Camp workers.



## NACD Meetings in Hawaii

Hawaii hosted its first NACD Pacific Region convention in Honolulu, December 10-12, 1963. HACD hosted the group again for its annual meeting in February 1976 and in 1985. The second meeting coincided with the 50th anniversary of SCS, which was celebrated as the 50th anniversary of the national conservation movement. Bunki Kumabe produced a *History of SCS and Soil Conservation Districts in Hawaii* for the celebration. In the mid-1970s, HACD began publication of the *Conservation Action* to improve communications and distribute information.



Honolulu hosted its first NACD Pacific Region conference in 1963. Through the years, Oahu and outer islands have continued to sponsor NACD and HACD annual conferences.



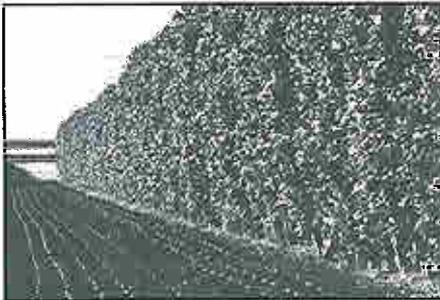
## Districts and Partnership Programs



Districts continue to be the key for the successful implementation of conservation programs in Hawaii. SWCDs also play a large role in state legislation on erosion control. The Standard State Soil Conservation Districts Law on which Hawaii's district laws are based recognizes that authorities and responsibilities pertaining to land, water and other natural resources rest at the State and local level. USDA, and other signatories to the agreement, may contribute trained personnel, funds, and equipment to the effort, but active involvement at the district level is necessary for success. Since the 1950s, Congress enacted a number of new programs to be implemented by USDA, EPA, and others. But the districts were crucial to getting the new programs on the land.



Contour farming and terracing were important conservation practices applied to major pineapple and sugar cane fields as well as smaller hillside crops. (1976)



A tall Erythrina windbreak protects lettuce fields on the Big Island. (1984)



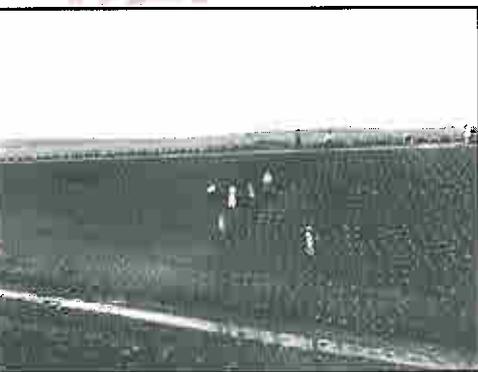
Proper pasture seeding protects rangeland. Stripcropping and field borders prevent runoff and create wildlife habitat.

Early on, district cooperators often received cost-sharing through the Agricultural Conservation Program (ACP). Through the years, ACP has been administered by the Agricultural Adjustment Administration, PMA, and the Agricultural Stabilization and Conservation Service (ASCS), now known as the Farm Service Agency. Some SWCD leaders served on county committees where they reviewed applications for cost-sharing. In addition to funds made available through conservation programs such as ACP, it is estimated that land users spent more than \$2,000,000 of their own income on implementation of conservation practices in the 1960s. District cooperators installed the following kinds of conservation practices:

- Contour farming (more than 300,500 acres)
- Conservation cropping (more than 30,590 acres)
- Stripcropping (more than 16,600 acres)
- Seeding range and pasture (more than 27,200 acres)
- Tree planting (more than 9,200 acres)
- Irrigation
- Land leveling (more than 140 acres)
- Water management (over 95,500 acres)
- Wildlife habitat (more than 15,740 acres)
- Open drains (around 18 miles)
- Terracing (around 90 miles)
- Ponds (at least 58)
- Windbreaks (at least 14 acres)



Flooding destroyed a prawn pond and taro patch on this property on the Big Island in 1979.



Pineapple fields make way for suburban housing development. Workers plant kikuyugrass for bank protection on Oahu. (1975)

Survey crew member focuses on the Maialili Tributary in the Waianae Nui watershed. (1959)



In 1954, Congress approved the Watershed Protection and Flood Prevention Act. SCS was the primary federal agency working with local sponsors. Hawaii's districts assumed great responsibility in planning and implementing projects. Watershed projects authorized for construction were Waianae Nui (August 1960) and Waianae Iki (April 1961). The West Oahu Soil and Water Conservation District and the City and County of Honolulu sponsored these projects. As of 1998, 12 watershed projects have been authorized for construction. Sponsors and NRCS have completed the works of improvement for five watershed projects.

The Resource Conservation and Development (RC&D) program, first authorized in the 1962 Farm Bill, provides a means for areas to combine resource use and economic development. In Hawaii, the RC&D effort first focused on Maui, Molokai, and Lanai. A.B. Fernandez chaired a steering committee that produced the application for the Tri-Isle RC&D, which was approved in 1970. Five years later, USDA approved the Big Island RC&D application in December 1975. In 1991, the third RC&D area was approved—the Garden Island RC&D on Kauai.



During the 1960s, the disastrous results of sprawling urban and suburban development—particularly, the adverse effects of erosion and sedimentation from construction sites—was becoming apparent. In response, NACD in cooperation with USDA and other federal agencies wrote model erosion and sediment control laws. Hawaii was one of the early adopters of an erosion and sediment control law based on this model. In 1974, Gov. Ariyoshi signed Act 249, Soil Erosion and Sediment Control.

The SWCDs participated in drafting county grading ordinances and before 1980, Hawaii's counties had enacted grading ordinances delegating responsibility to the SWCDs to review and approve conservation plans on agricultural lands. Counties then granted exemptions to the grading ordinance for all farmers or ranchers with approved plans. Another reason for Hawaii's legislative attention to erosion and sediment control was the impetus provided by the Clean Water Act of 1972, which further highlighted the role nonpoint source pollution played in water pollution. Under section 208 of the act, the states had to formulate state-wide water quality plans. In Hawaii, the State Department of Health led the effort with contributions from the soil and water conservation districts, local government, military bases, SCS and EPA, to write the plan which was completed in November 1978.



Stories of Iniki's destruction filled Hawaii's newspapers for months following the devastating hurricane. (1992)

During the 1970s, SWCDs also became active with the State Department of Transportation's highway division in an effort to beautify roadsides and reduce roadside erosion. SCS's Plant Materials Center (headed by Earl Lewis and later by Robert Joy) assisted SWCDs with highway road cut test plantings in the State.



Hurricane Iniki swept through the Hawaiian islands in September 1992, leaving a wake of devastation that totaled millions of dollars in damages. Destruction to homes, businesses, and agriculture was extensive. Kauai, the most ravaged island, was slammed for six hours by the hurricane leaving a tremendous amount of debris and fallen trees in the streams and rivers in the Kokee area. This created huge removal and disposal problems for Kauai County. Acting through Kauai's SWCDs, the SCS obtained two million dollars in funding from the Emergency Watershed Protection Program to aid the county in its recovery effort. Hurricane Iniki devastated agriculture on Kauai resulting in tremendous economic loss and damages. With protective trees and ground cover gone, soil erosion problems alarmingly increased. With financial assistance from the government and the brave resourcefulness of the people of Kauai, the island was able to recover within a few years after the storm hit.



## Conservation Districts Today

By the late 1980s, HACD and SCS observers noted that many of the new cooperators were post-Vietnam War era immigrants. Increasingly, districts gained small farmers and operators as cooperators rather than the plantation operations of earlier decades. During the 1990s, more pineapple and sugar plantations closed, yet the number of cooperators passed 4,000. Across the State, SWCDs assist producers with the transition from plantation to diversified agriculture. Many of the new cooperators are farming land previously in plantation sugar or pineapple, and SWCD directors and the Natural Resources Conservation Service (formerly Soil Conservation Service) are assisting them in developing and implementing conservation plans.

50 Years  
of Growth  
and Progress



SWCDs in Hawaii have branched out far beyond the traditional focus on soil and water conservation. Today, they also are active in watershed planning and flood prevention, reviewing erosion control plans on agricultural land, controlling nonpoint source pollution, reforestation, wildlife habitat development and maintenance, community outreach and conservation education, and youth work. Through their dedication and efforts, the soil and water conservation districts have left us **their imprints on the land.**

The year 1998 marks fifty years of growth and progress; yet much remains to be done. As economic and social conditions continue to change in Hawaii, the people of the state can count on soil and water conservation districts to keep a sharp focus on Hawaii's precious natural resources. Hawaii's natural beauty and viability depends upon the conservation of these resources and the soil and water conservation districts.

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