L. WEISS

U. S. DEPARTMENT OF COMMERCE

WEATHER BUREAU

KEY TO METEOROLOGICAL RECORDS DOCUMENTATION NO. 1.11

A KEY TO CLIMATOLOGIC OBSERVATIONS IN HAWAII

U. S. DEPARTMENT OF COMMERCE
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A KEY TO CLIMATOLOGIC OBSERVATIONS IN HAWAII

A resume of types, histories and locations
of climatologic observations in Hawaii

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PURPOSE

The Key to Meteorological Records Documentation Series has been established to provide guidance information to research personnel making use of climatological data.

It is hoped that the presentation of this series will not only conserve valuable time but will also improve the accuracy of research results.

PREFACE

A unique situation exists in Hawaii concerning climatological observations. Nowhere else in the world has such a dense network of observations been maintained within an area of several thousand square miles. With respect to rainfall observations, which comprise more than ninety percent of all climatologic observations taken, there is an average of one observational point every five square miles.

It has been difficult, however, to utilize these data because of incomplete or inaccurate information pertaining to station locations, instrumentation, and availability of the observational data.

This paper brings together for the first time all available information on the types, histories, and locations of climatologic observations in Hawaii. It is hoped that the resulting compilation will prove useful in carrying out basic and applied research and in planning for developmental operations of many kinds.

ACKNOWLEDGMENTS

The author is immeasurably indebted to the many companies, organizations, agencies and individuals participating in the climatologic program for their contributions to the tables, maps and indexes.

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Island of Maui

Island of Molokai

Island of Lanai

Island of Oahu (except Honolulu area)

City of Honolulu & environs

Island of Kauai

I. GENERAL INTRODUCTION

In 1948 "A Key to Rain Gages in Hawaii"[1] was published under the joint auspices of the Hawaiian Sugar Planters' Association and the Pineapple Research Institute. Here, for the first time, was a compilation of data on rainfall records and gage locations in the Hawaiian Islands which quickly became an invaluable reference tool outside as well as inside the sugar and pineapple industries.

During the past decade there has been a growing requirement for some kind of compact index not only to rainfall but to all climatologic observations in Hawaii - an index which would both up-date and enlarge the scope of "A Key to Rain Gages in Hawaii". Specifically, there was need for a climatologic inventory which would achieve the following results:

1. Provide a revised rainfall key to encompass not only the stations active in 1948 but all stations, active or discontinued, established prior or subsequent to 1948;

2. Include other climatologic elements to make the survey of the observational program in Hawaii as complete as possible;

3. Give locations of all climatologic stations as precisely as possible;

4. Provide information as to where the observational data and data summaries can be obtained; and

5. Present a set of maps designed to show (a) the areal distribution of stations on each of the major islands, and (b) the type and current status of observations available.

In an expanding and increasingly complex economy such as ours it has been apparent that if this wealth of climatologic material could be collected and made available in an organized, convenient form, it would be highly useful to a great many diverse interests - to organizations and agencies concerned with problems of water supply, agriculture, land use and economic planning, as well as to the Weather Bureau and other agencies actually engaged in observing or forecasting the weather or in research in the field of meteorology.

"A Key to Climatologic Observations in Hawaii" is an attempt to provide an inventory of more than one hundred years of observational locations and records.

The problems involved in making such an inventory have been legion. The commonest of these - confusion regarding the names of stations and errors in station location - were singled out by the authors of the 1948 publication; but additionally there are the related problems of station history (including instrumental relocations, types of instrumentation and name changes), location of records, determination of the geographic coordinates and elevations of stations discontinued as far back as a century ago, and difficulties with topographic maps, which are either inaccurate or obsolete in many important respects and of too small a scale to permit precise location of stations. In view of these and other problems, it appears inevitable that there will be a certain percentage of errors of commission and omission in the tables and maps which follow. It is hoped, however, that errors are minimal and that users of the present compilation will call attention to any which may be discovered. If it appears warranted, an Errata will be issued at a later date.

No attempt has been made to assess the observational network in terms of instrumental reliability and exposure or of observer competence. An attempt has been made, however, to identify instances in which data that appear to be from the same station over a period of years are in fact from two or more locations that are sufficiently different to make the records incompatible.

The format follows that of "A Key to Rain Gages in Hawaii" in two major aspects: (1) numbering system, and (2) sectioning of the inventory (tables and alphabetical cross-indexes) by islands.[2] There are two tables for each of the six major islands.[3] Table One includes general station information (key number, name, observer, location and elevation) followed by specific information on rainfall observations. Table Two repeats only the station key number listed in Table One and includes specific information on the following observations:

Air Temperature	Relative Humidity	Surface Wind Direction	Solar Radiation
Evaporation	Sunshine Duration	Surface Wind Speed	Soil Temperature[4]

The principal headings to the tables are considered individually and in some detail in the next section. Notes on the alphabetical cross-indexes and the location maps comprise Sections III and IV. To utilize quickly and effectively the various tabular and cartographic materials presented, it is suggested that each of the introductory sections be read with care. Space limitations preclude repeating certain assumptions, generalizations, and procedures which are applicable to the tables, indexes, and maps for all of the islands.

II. NOTES ON THE TABLES

TABLE ONE

State Key Number

The numerical system for station identification devised by the authors of "A Key to Rain Gages in Hawaii" has been retained with three modifications:

1. The name "State Key Number" has been adopted.

2. The decimal system replaced the use of letters for stations located within blocks in which whole numbers have all been assigned. For example, 54.1 identifies the same station listed in the 1948 publication as 54A; 178.3 corresponds to 178C; etc.

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[1] "A Key to Rain Gages in Hawaii" - Leopold, Luna B., Burn, South, & Stidd, C.K. (The Hawaiian Planters' Record, Vol. 52, Nos. 3 & 4, 1948). [2] Maps of each island showing the locations of all stations will be found in the back. [3] Hawaii, Maui, Molokai, Lanai, Oahu and Kauai. The scanty information available for the islands of Kahoolawe and Niihau appears in the Supplementary Tables of the Appendix. [4] A large percentage of soil temperature observations have been taken for relatively brief periods in connection with specialized studies rather than on a routine basis. Consequently, the tables do not include information on all of the fragmentary soil temperature data extant. For additional records, consult the Pineapple Research Institute and the Hawaiian Sugar Planters' Association.

3. The key numbers are no longer simply a "key to rain gages". They have been assigned to all stations regardless of the climatic element observed. If, as occurs in a relatively few instances, several types of observations are taken and reported or recorded under the same name but cannot be considered as the same station because of substantial differences in elevation or geographic location, separate numbers have been assigned.

Concerning the numbering system itself, the following explanation is quoted from "A Key to Rain Gages in Hawaii": "The numbering system provides a way of locating a gage geographically. The numbers run from one to 1145, proceeding from south to north up the island chain. Within each five-minute latitude band, however, numbers proceed from west to east."

The block numbers assigned to each island are as follows:

Island	State Key Number
Hawaii	1 - 223
Maui	248 - 497[1]
Molokai	500 - 563
Lanai	650 - 696
Oahu	700 - 912
Kauai	925 -1145[2]

For stations which have been assigned numbers since the original list was published in 1948, inspection of the island maps will reveal that the block assignments remain unchanged, although there are a few exceptions to the latitudinal and longitudinal system described above. Using the new list as a guide, it is anticipated that in the future newly-established stations will be assigned numbers corresponding to their island, latitude and longitude. Whenever a station is discontinued, the state key number for that station will be withdrawn from circulation and may be used again only in the event that the station is re-activated at the same location. In this manner it is hoped that duplication of numbers will be avoided.

U. S. Weather Bureau Index Number

Many of the stations appearing in the present compilation have two numbers. Since 1949 the Weather Bureau has assigned an index number to each of the stations in the official Weather Bureau climatological network. These four-figure numbers precede the station name in the Hawaii Climatological Data published monthly and annually. However, the absence of a Weather Bureau index number in Table One does not necessarily mean that the station listed is unofficial and that data for the station have not been published by the Weather Bureau. There are published data for many stations that were discontinued prior to the assigning of index numbers in 1949. Some of these discontinued stations were subsequently assigned four-figure index numbers followed by the letter "W".

It should be noted, too, that in many instances the Weather Bureau publishes only rainfall data for stations which may take other climatologic observations as well. If an index number is shown in Table One, it indicates only that rainfall data are published. For information on other observational elements for which data may also be published, it is necessary to refer to the column headed Location of Data. This column will be discussed in a later part of this section.

Station Name or Number

One of the most confusing aspects of preparing an inventory of climatologic stations is the multiplicity and duplication of names. Many stations have changed names through the years without changing locations; others have been relocated under the same name. One station may be listed by the observer under the same name used by another observer for a second station; and this second station may or may not be in the same general area as the first station (e.g., Waimanalo, a station maintained by Ewa Plantation on leeward Oahu and likewise a station maintained by the Hawaii Water Authority on windward Oahu). Including alternate and former designations, one may be concerned with a station identified by as many as five or six names.

In general, ranches identify their climatologic stations by geographical names which appear in most instances on the larger topographic maps. Plantations, on the other hand, may use geographical names but frequently resort to field, station or gage numbers (not to be confused with the state key numbers or Weather Bureau index numbers). Occasionally the name or number is preceded or followed by the word "Upper" or "Lower", indicating a difference in elevation from a station bearing the same name or number, or by the Hawaiian words "Mauka" ("toward the mountains") or "Makai" ("toward the sea"), also used for purposes of differentiation. Individual observers may refer to their station by a geographical name, by a descriptive name - Hawaiian or otherwise - which may have no geographical connotations, or by their own name. Finally, it is not unusual to find a station which is (a) published under one name by the Weather Bureau, (b) listed in plantation records under another name, and (c) popularly known to the observer in the field under yet a different name.

Because of the many inconsistencies involved in identifying stations by name or number, the following rules have been established for entries in this column of Table One:

1. If the station is included in the official Weather Bureau network, it is identified by the name published in Climatological Data. Alternate or former names are listed in the last column headed Other Names, Relocations, Remarks.

2. If the station is unofficial - one for which data are not published by the Weather Bureau but are on file with the Weather Bureau, H.S.P.A., P.R.I., H.W.A. or some other collection agency or organization - the station is identified by the name used on the reporting form. Alternate or former names are handled as in (1) above.

3. If the station is one for which data are not reported to anyone outside the observer's own organization, it is identified by the name used in the observer's records. Alternate or former names are handled as in (1) above.

4. If more than one station has the same name, only one of these is identified solely by that name, preference being given to those stations the data for which are published by the Weather Bureau. For other stations bearing the same name, a distinction is made by listing the name followed in parentheses by a qualifying name or number. The parenthetical entry (not necessarily used by the observer) may be the elevation of the station, the name of the organization or individual maintaining the station, or a geographical name.

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[1] The key number "499" and appropriate decimals have been assigned to the handful of stations on Kahoolawe. [2] The key number "1150" has been assigned to the only known station on Niihau.

Maintained By

In general, the name used in this column is that of the organization or individual responsible for taking the observation at the present time or at the time the observational program was discontinued, even though one or more previous observers may have taken observations at the site for much longer periods of record.

In the case of a discontinued station maintained by an organization or individual subsequently changing names (e.g., C.A.A. to F.A.A.), the current name will be entered in this column.

In a relatively few instances observations are being or have been taken by an organization or individual other than the one listed as maintaining the station. Such situations are covered in the Remarks column.

Limitations of space sometimes preclude listing the full name of the organization. The abbreviated name or initials of the organization is appropriately identified in the Appendix.

Geographic Coordinates

Latitude and Longitude are given in whole degrees, minutes and, wherever possible, tenths of minutes. Locations of all stations are shown on the island maps. Those stations for which the locations could be determined to tenths of minutes are also plotted by state key number on U.S.G.S. topographic maps[1], on file at the Pacific Supervisory Office, U.S. Weather Bureau, Honolulu.

The coordinates of those stations the locations of which are believed to be accurate to within half a minute are likewise given in degrees, minutes, and tenths of minutes but are shown in parentheses.

The coordinates of stations which can be located only to the nearest minute are given in degrees and minutes. Finally, the coordinates of stations the locations of which may be in error by two or more minutes are given in degrees and minutes but are shown in parentheses. In addition, for each of the few stations comprising this last category, the notation "location doubtful" appears in the Remarks column.

Although not all of the stations included in the inventory have been visited for the specific purpose of determining or verifying their locations, field trips were made to approximately eighty percent of the more easily accessible current stations, to at least twenty percent of the more remote current stations, and to forty or fifty sites of discontinued stations.

Elevation

Station elevations are given in feet (msl) and have been rounded off to the nearest 5 feet. With the exception of a relatively small number of stations for which the elevations have been determined by barometry comparisons - including all stations maintained by the Weather Bureau, U.S. Coast Guard, Hawaiian Airlines and Aloha Airlines, some stations maintained by the military services, and a scattering of others - elevations were taken from U.S.G.S. topographic maps. For most stations within 500 feet of sea level, elevations can be considered accurate to within 5 feet; for stations above 500 feet and for a relatively few stations below 500 feet where the gradient is especially steep, accuracy is generally within 50 feet.

Elevations are shown in parentheses for those stations of doubtful location or where the determination of elevation may be in error by more than 50 feet.

Many of the elevation figures given do not agree with those in "A Key to Rain Gages in Hawaii". These discrepancies may be accounted for by a relocation of the station since 1948 or by a re-determination of the elevation by means of either barometry or of more precise plotting of the station on the latest topographic map.

Year Established/Discontinued

The source for entries in these columns is, in general, either the observer or, in the case of many of the discontinued stations, the station history files of the Weather Bureau.

In most instances the year of establishment and/or discontinuance coincides with the earliest and/or latest year for which data are available. Where this is not the case, an explanatory note has been included in the Remarks column. Notes are likewise included to indicate significant breaks in the period of record. Occasional missing or incomplete months of data generally are not indicated.

If the year of establishment or discontinuance is uncertain, parentheses have been used.

Frequency of Reading

Information concerning the frequency of observations for non-recording instrumentation was supplied by the observer for most active stations and extracted from Weather Bureau and other records for most discontinued stations. The entry in this column pertains to the current observational program and may not necessarily apply to past records. When other time intervals (weekly, bi-weekly, monthly, etc.) for reading were previously employed, the earlier frequency is listed as a footnote provided the period of record can be determined and is considered significant in length.

Many ranches and some plantations take rainfall readings only after a measurable amount of precipitation is believed to have occurred rather than at any fixed time intervals. Where such a procedure is followed, the entry "After Rain" is used.

Location of Data

This refers to data on either the original observational form, on copies made from such forms, or as published by the Weather Bureau or by some other agency or organization. Weather Bureau publications include the Hawaii Climatological Data, published since 1905, and the Local Climatological Data and Supplement to Local Climatological Data for Weather Bureau first order stations, published since 1950. A complete file of these publications is available at the Pacific Supervisory Office, Honolulu.

For practical reasons - brevity in the tables and accessibility of the data - only the Weather Bureau is listed in this column provided the data for the entire period of record have either been published or are on file. Otherwise, all of the sources are indicated together with the period for which data are available.

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[1] For the islands of Maui, Molokai and Oahu and for sections of the island of Hawaii, the maps used are the 1:24,000-scale series (1" equals 2,000 ft.). For the islands of Kauai and Lanai and for the remainder of the island of Hawaii, the maps used are the 1:62,000-scale series (1" equals approximately 5,000 ft.).

The intent in this column (and likewise in the adjoining column headed Location of Summaries and in the three columns in Table Two concerned with the location of data, summaries and charts) is two-fold:

(a) To list sources which, taken in toto, will account for the maximum period of record for which data are available (omitting duplication except where overlap periods are involved); and

(b) To include in all applicable cases one or more of the four principal data-collecting agencies in Honolulu (Weather Bureau, H.S.P.A., P.R.I. and H.W.A.).

Location of Summaries

Most rainfall and temperature observations have been summarized by months for the period of record or a portion thereof. For official Weather Bureau stations both means and extremes have been computed; for unofficial stations it is customary to find the means (as well as medians for rainfall observations only) and, much more infrequently, the extremes computed. A considerably larger percentage of rainfall as against temperature observations has been summarized for unofficial stations.

Rainfall summaries have been published by the Weather Bureau in Bulletin W (from the earliest known records through those of 1918) and in the Climatic Summary of Hawaii - Supplement for 1919 through 1952. Temperature means and extremes are also included in these publications but monthly and annual data are not included. For this reason reference to temperature data in the afore-mentioned two publications has been omitted in the Location of Summaries column.

Evaporation data have largely been summarized by the Hawaii Water Authority. There is a very limited amount of summaries available for humidity, wind, sunshine duration, solar radiation, and soil temperature observations. Many of these records exist only in the form of charts. Consequently, anyone interested in hourly, daily, weekly, or monthly values must be prepared to extract the required information directly from the charts.

Because of the diversity, both in type and in time period used, of available summaries for the various climatic elements, it was not deemed practicable in this publication to distinguish among different kinds of summaries.

Other Names, Relocations, Remarks

This column includes supplementary information on:

1. Any alternate or former designations for the station;

2. Distance, direction, and change in elevation where station relocations are involved; and

3. Missing or doubtful data, location of rainfall charts, doubtful dates of period of record, observers differing from those shown in the "Maintained By" column, etc.

Space limitations may preclude inclusion in this column of additional information of value. In such instances appropriate footnotes are appended. Information of this type includes publication or location of data which cannot be conveniently indicated in the Location of Data or Location of Summaries column (or the Location of Charts column in Table Two) - e.g., observational forms on file at the National Weather Records Center, Asheville, N.C.

TABLE TWO

The format used in this table closely resembles that of Table One but has been abridged to avoid repetition of the general station information. Except for the state key number column, all of the entries in Table Two have to do with non-rainfall climatic elements. It is necessary to discuss briefly only the two column headings in Table Two listed below.

Element(s) Observed

For each island a key to the climatic elements entered in this column appears at the bottom of the first page of Table Two. Air temperature observations refer to maximum and minimum values unless otherwise noted in the Remarks column (e.g., if a station has a thermograph as well as max/min thermometers, the notation "Also thermograph" will appear; if a station has only a thermograph, the notation "Thermograph only" will appear). The Remarks column also identifies wind speed observations (total miles of wind only) taken at pan evaporation level.

Instrumentation, Relocations, Remarks

Included under this heading is supplementary information concerning:

1. Type of observational equipment, including type of recorder used in conjunction with recording instrument; however, because the great majority of temperature stations are equipped with maximum and minimum thermometers, mention of these has been omitted in this column;

2. Distance, direction, and change in elevation where station relocations of non-rainfall instrumentation only are involved; and

3. Other considerations already covered in discussing the Remarks column in Table One.

Alternate or former names, even though they may apply only to non-rainfall instrumentation sites, are listed in the Remarks column of Table One rather than of Table Two.

III. NOTES ON THE ALPHABETICAL INDEXES

These cross-references to stations listed numerically in Table One incorporate many alternate and former names or numbers in addition to those listed in Table One under the column heading Station Name or Number. Consequently, there are far more entries in the indexes than there are actual stations.

In certain instances where there may not be a clear-cut choice in the spelling of the station name (e.g., Waikamoi versus Waiakamoi), the alphabetical index will carry the alternate spelling in addition to the one used in Table One.

IV. NOTES ON THE MAPS

The station location maps for each island are based on the U.S.G.S. 1:125,000-scale topographic series. The station symbols, identified in the accompanying legend on each map, are intended to tell the reader at a glance (1) whether the station is active or discontinued, and (2) what climatic elements are being (or have been) observed.

There are single maps for the islands of Kauai, Maui, Molokai and Lanai, two maps for the island of Oahu, and five maps for the island of Hawaii. Employing the same scale for all islands, it was found necessary to divide Hawaii into a number of sections because of the considerably greater area of this island relative to the areas of the other islands. In the case of Oahu, the dense network of stations in the Honolulu area made it mandatory to omit entries in this area on the 1:125,000-scale map of the island and to add a larger scale map for delineation of the stations in the city of Honolulu and environs.

Obviously the geographic coordinates shown in Table One more precisely define the locations of stations than do these location maps. The maps are useful chiefly as a representation of the station distribution on each island.

ISLAND: HAWAII

TABLE ONE

State Key No.	USWB Index No.	Station Name or Number	Maintained By	Geographic Coordinates Latitude ° '	Longitude ° '	Elev. (ft.)	Year Established	Year Discontinued	Frequency of Reading	Location of Data	Location of Summaries	Other Names Relocations Remarks
1	2880W	Ka Lae*	U.S.C.G.	18 54.9	155 41.0	35	1925	1949	Daily	(1)	(1)	
1.1		Morse Field*	U.S. Air Force	18 55	155 41	(40)	(1939)	(1941)	"	[1](2)40-41	[2](3)39-41	
1.2		Ka Lae (South Pt Tracking Station)*	Space Tech. Laboratory	18 56.5	155 41.0	305	1959		"	(2)	(3)	
2	6134	Manuka	State Div. of Forestry	19 06.7	155 49.7	1750	1928		Monthly	(1)42- (6)	(1)29-52 (2)	Reloc. 3/60 50' W
2.1		Pahipa	Kahuku Ranch	(19 14.3)	(155 42.3)	7000						No data avbl.
2.2		Kahuku Shed 3	" "	19 10.4	155 41.4	5100	1920		Monthly & After Rain	(7)49-	(3)20-36, 53- (4)36-52	#3 Mauka Watershed; data msg 2/47-12/48
2.3		Hoopuloa Upper*	R.V.S. Domkowicz	(19 12.8)	(155 51.3)	(2425)	1903	1912	Daily	(1)05-	(1)	Na Ohia
2.4		Hoopuloa Lower	E.H. Edwards	(19 12.0)	(155 52.3)	1650	1897	1905	"	(1)05	(1)	
2.5		Kapua	Kahuku Ranch	19 12.4	155 45.7	6000	1953		Monthly & After Rain	(7)	(3)	
2.6		Five Mile Paddock	" "	19 04.8	155 45.6	2000	1954		Monthly & After Rain	(7)	(3)	
2.7		Kahuku Plantation	W.H.G. Arnemann	19 14	155 52	2400	1909	1910	Unknown		(1)	
2.8		Top Coffee-Papa	Holualoa Ranch	19 11.9	155 51.5	2050	1956	1957	After Rain	(6)	(3)	
2.9		Kapulepo	" "	19 11.1	155 51.5	1900	1956	1956	" "	(6)	(3)	
2.11		Bottom of 1916 Flow	" "	19 11.2	155 50.3	2770	1956	1957	" "	(6)	(3)	
2.12		Top of Terr. Boundary (1916)	" "	19 11.4	155 49.5	3430	1956	1957	" "	(6)	(3)	
2.13		100 Acres	" "	(19 12.2)	(155 48.6)	4200	1956		" "	(6) (7)58-	(3)	
2.14		Kapua Mauka	" "	19 11.3	155 47.5	4620	1956	1957	" "	(6)	(3)	
2.15		Pa Hanalei Pen	" "	19 12.4	155 49.0	4000	1956	1957	" "	(6)	(3)	
2.16		Castle Paddock Tank	" "	19 13.0	155 47.5	5050	1956	1957	" "	(6)	(3)	
2.17		Okoe	" "	19 10.1	155 52.0	1590	1956		" "	(6) (7)58-	(3)	
2.18		Kole Pen	" "	(19 08.5)	(155 52.7)	920	1956		" "	(6) (7)58-	(3)	
2.19		Halepiula (1670)	" "	19 08.6	155 50.9	1670	1956		" "	(6) (7)58-	(3)	
2.21		Papa (Coffee Land)	" "	(19 13.2)	(155 51.1)	(2600)	1959		" "	(7)	(3)	
2.22[3]		Furlka	" "	(19 11.1)	(155 49.7)	3200	1958		" "	(7)	(3)	
2.23[4]		Bill Jack	" "	19 11.1	155 51.2	2060	1957	1957	" "	(6)	(3)	
3	8675	South Point Corral	Hutchinson Sug.	18 57.2	155 40.8	400	1948		Weekly or After Rain	(1)53- (7)	(2)	
3.1		Kahuku 2 Makai	Kahuku Ranch	19 08.4	155 42.2	4300	1949		Monthly	(7)	(3)	#3 Makai Watershed
3.2		Kahuku Shed 1	" "	19 06.9	155 42.0	3500	1914		"	(7)49-	(3)14-36, 53- (4)36-52	#1 Watershed; data msg 2/47-12/48
3.3		Keolakoa Forest	" "	(19 07.2)	(155 38.2)	3100	1954		"	(7)	(3)	

Key to symbols for columns headed Location of Data and Location of Summaries:
(1) USWB-published; (2) USWB-not published; (3) HWA; (4) HSPA; (5) PRI; (6) on file with observer (company, agency, individual, etc.) maintaining and/or reading instrument; (7) PRI-HSPA reporting form in use from Jan., 1948, & available at both HWA and HSPA.

* Also has other weather instrumentation - see same key number in Table Two. [1] Military surface observational forms on file NWRC. [2] 1939 data taken from USAAF publication, "Weather Conditions in Hawaii" (The Air Corps Tactical School, Maxwell Field, Ala., 1942). [3] Published as 2.20 in "Rainfall of the Hawaiian Islands" (1959). [4] Published as 2.10 in "Rainfall of the Hawaiian Islands" (1959).

TABLE ONE (CONT.)

State Key No.	USWB Index No.	Station Name or Number	Maintained By	Geographic Coordinates Latitude ° '	Longitude ° '	Elev. (ft.)	Year Established	Year Discontinued	Frequency of Reading	Location of Data	Location of Summaries	Other Names Relocations Remarks
4	3047	Kamaoa (Gouveia)	John Gouveia	19 00.7	155 39.7	1070	1945	1952	Daily	(1)	(1)	
4.1		Kahuku Ranch House	Kahuku Ranch	19 03.5	155 41.7	2000	1914		After Rain	(7)49-	(3)14-36, 53- (4)36-52	Data msg 2/47-12/48
4.2		Keaa Homesteads	Mrs. F. Bartels	(19 02.8)	(155 39.7)	1680	1901	1906	Daily	(1)05-	(1)	Kahuku Ranch
4.3		Kaalualu Bay	Hutchinson Sug.	18 58.4	155 37.0	20	1956		Weekly or After Rain	(3),(7)	(3)	
4.4		Kamaoa (1000)	Kahuku Ranch	19 00.0	155 39.8	1000	1954		Monthly	(7)	(3)	
4.5		Kaemio	Collier C. & C. Corp.	19 00	155 41	1000	1957	1957	After Rain	(3)	(3)	
5	3048	Kamaoa 2	Hutchinson Sug.	19 01.6	155 40.2	1375	1925		Weekly	(1)54- (6)39- (7)48-	(2)54- (3)25-49, 53- (4)39-52	Kamaoa Ranch House; Kaalualu Ranch Hq.; annual totals only avbl. 1925-38
6	4625	Kiolakaa (A&F)	State Div. of Forestry	19 04.4	155 38.2	1925	1929		Monthly	(1)42- (6)	(1)29-52 (2)	
6.1		Kau*	W.H. Hayselden	(19 04.7)	(155 37.5)	1850	1904	1913	Daily	(1)05-	(1)05- (2)	
7	4620	Kiolakaa*	C.H. Hayselden	(19 03.2)	(155 37.5)	1050	1914	1953	"	(1)	(1)14-52 (2)	
7.1		Field 8	Hutchinson Sug.	19 04.4	155 36.0	1400	1953		Weekly	(6)	(6)	Fld 140
9		Punaluu Kahawai	State Div. of Forestry	19 15.0	155 36.5	6200	1928		4 times Yearly	(6) (7)48-	(3)28-41, 53- (4)28-52	Punaluu
9.1		Mauna Loa	Kahuku Ranch	19 14.8	155 36.8	6200	1959		Monthly	(7)	(3)	
10		Mountain House	Hutchinson Sug.	19 08.8	155 36.8	3065	1920		"	(6)25- (7)48-	(3)26-29, 34-49, 53- (4)30-52 (6)25-	Ann. totals only avbl. 1925-29; data msg prior to 1925
11		Makino*	" "	19 05.6	155 36.1	2120	1939 1952	1952	After Rain Recorder	(3)50-54 (6) (7)48-	(2)50-54 (3)39-49, 53- (4)39-52	Fld 20; Fld 240; 10/52-8/54 charts on file HWA, subseq. charts on file plant.
11.1		Field 14**	" "	19 05.4	155 36.6	2200						
12	2249	Kaala Iki	" "	19 07.7	155 33.9	1340	1939		Daily	(1)	(1)39-52 (2)	
12.1	1460W	Hilea	" "	19 08.2	155 32.3	330	1885	1938	"	(1)05-	(1)	
12.2		Field 61	" "	19 08.6	155 33.1	1350	1953 1953	1954	After Rain Recorder	(6)	(6)	Makanau; 2/53-8/54 charts on file HWA
12.3		Field 64*	" "	19 09.9	155 34.6	1825	1955		"	(6)	(6)	Fld 58; Fld 64 makai; Fld 750; charts on file plant.
12.4		Waterfall*	" "	19 10.6	155 35.6	2325	1953	1955	Weekly	(6)	(6)	Replaced by #12.3
12.5		Field 740**	" "	19 09.3	155 34.2	1740						
12.6		Field 64 Mauka**	" "	(19 10.2)	(155 35.4)	2100						Fld 63
13		Waiubata*	" "	19 05.9	155 34.2	1375	1939		After Rain	(6) (7)48-	(3)39-46, 53- (4)39-52	Fld 370
13.1		Field 35*	" "	19 05.2	155 35.2	1675	1953		Weekly	(6)	(6)	Fld 330
13.2		Field 49	" "	19 06.5	155 34.7	1800	1953		"	(6)	(6)	Fld 420
13.3		Field 51*	" "	19 07.4	155 34.6	1740	1952		Recorder	(6)	(6)	Fld 630; 10/52-2/53 charts on file HWA, subseq. charts on file plant.

* Also has other weather instrumentation - see same key number in Table Two. ** Non-rainfall instrumentation only - see same key number in Table Two.

State Key No.	USWB Index No.	Station Name or Number	Maintained By	Geographic Coordinates Latitude ° '	Longitude ° '	Elev. (ft.)	Established	Discontinued	Frequency of Reading	Location of Data	Location of Summaries	Other Names Relocations Remarks
13.4		Field 56	Hutchinson Sug.	19 08.2	155 34.8	1760	1953		Weekly	(6)	(6)	Fld 660
13.5		Field 640**	" "	19 08.0	155 34.3	1650						
13.6		Field 53**	" "	(19 07.9)	(155 34.5)	1720						
14	6588	Naalehu*	" "	19 03.8	155 35.3	675	1890		Daily++	(1)05- (6)	(1)90-52 (2)	
14.1		Honuapo (25)	" "	19 05	155 33	25	1895	1907	Unknown	(1)05-	(1)	
14.2		Naalehu (Hewitt)	G.C. Hewitt	19 04	155 35	1250	1896	1900	"		(1)	
14.3		Naalehu (1725)	" "	19 05	155 36	1725	1898	1900	"		(1)	
14.4		Pasture**	Hutchinson Sug.	19 03.7	155 35.1	660						
15		Honuapo	" "	19 05.6	155 33.0	20	1939		After Rain	(3)*** (6)	(3)	
16		Moaula Tunnel	Haw'n Ag.	19 13.1	155 32.8	3000	1923	1954	" "	(6) (7)48-	(4)	Data msg 4/35-12/41
17		Moaula Reservoir*	" "	19 12.1	155 31.8	1950	1911		" "	(3)49- (6) (7)48-	(2)11-30, 42- (3)11-42, 53- (4)30-52	
17.1		Moaula (Wills)	T.C. Wills	19 12	155 31	1700	1898	1902	Unknown		(1)	
17.2		Higashi Camp	Haw'n Ag.	19 12.1	155 30.8	1610	1949	1958	After Rain	(6),(7)	(4)49-57 (6)	
18	6407	Moaula	Kapapala Ranch	19 11.0	155 29.7	600	1920		Monthly	(1)	(1)20-52 (2)	Moaula Station
20		Alili Tunnel[1]	Haw'n Ag.	19 13.7	155 31.2	2800	1942 1952	1954 1954	After Rain Recorder	(6) (7)48-	(4)43-	Alili (2800); charts on file plant.
20.1		Alili Tunnel (3500)	" "	19 14.4	155 31.7	3500	1923	1934	After Rain	(6)	(4)	
20.2		Alili*	" "	19 13.4	155 31.4	2830	1954 1955		" " Recorder	(6),(7)	(3)	Alili (Fld 8); replaced #20 7/54; charts on file plant.
20.3		Field 8*	" "	19 13.3	155 31.1	2700	1952	1955	"	(6)	(6)	Charts on file plant.
21	7421	Pahala*	" "	19 12.1	155 28.8	860	1885		Daily	(1)05- (6)	(1)92-52 (2)92- (4)85-52	Reloc. 1/48 90' N & 170' W; prob. reloc. twice previously
21.1		Field 150*	" "	19 12.2	155 29.1	1000	1952		Recorder	(6)	(6)	Lwr Kauhane; Fld 16; charts on file plant.
22		Keaiwa	" "	19 14.3	155 28.8	1650	1920	1952	After Rain	(3)49- (6) (7)48-	(3)	Keaiwa Camp (1650)
22.1		Keaiwa Camp*	" "	19 14.3	155 28.9	1700	1952		Recorder	(3),(6) (7)	(3)	Fld 351; charts on file plant.
24	6942	Ohia Lodge	Mrs. A. Redfearn	19 16.0	155 52.5	1320	1948	1950	Daily	(1)	(2)	
24.1	7166	Opihihale 2*	Miss C. Leonard	19 16.3	155 52.6	1300	1955		"	(1)56- (6)	(2)56- (3)55-57	
25	7541W	Pahoehoe	L.P. Lincoln	19 20.8	155 52.6	1000	1930	1947	"	(1)	(1)	
25.1		Kalahiki (750)	G.W. McDougall	(19 24.8)	(155 53.5)	750	1895	1907	"	(1)05-	(1)00-07 (2)	
25.2		Kalahiki (1500)	" "	19 23	155 52	1500	1904	1907	"	(1)05-	(1)	

* Also has other weather instrumentation - see same key number in Table Two. ** Non-rainfall instrumentation only - see same key number in Table Two. *** Current but original date unknown. ++ Except weekends. [1] Shown as Alili in "Rainfall of the Hawaiian Islands" (1959) - data erroneously combined with that of #20.2.

TABLE ONE (CONT.)

State Key No.	USWB Index No.	Station Name or Number	Maintained By	Geographic Coordinates Latitude ° '	Longitude ° '	Elev. (ft.)	Year Established	Year Discontinued	Frequency of Reading	Location of Data	Location of Summaries	Other Names Relocations Remarks
25.3		Hookena	Carolyn Endo	(19 23.0)	(155 53.0)	850	1926	1929	Daily	(1)	(2)	
25.4		Kalahiki (1800)	G.W. McDougall	(19 24.9)	(155 52.5)	1800	1901	1903	Unknown		(1)	
25.5		McCandless Office	McCandless Ranch	19 22.8	155 52.8	860	1956		After Rain	(6) (7)58-	(3)	
25.6		Kahauko Pen	" "	19 22.8	155 53.8	230	1957		" "	(6) (7)58-	(3)	
25.7		Pahoehoe Ranch	Magoon Estate	19 20.5	155 52.5	1100	1953		" "	(6),(7)	(3)	
26		Takashiba*	Kona Exp. Sta.	19 29.6	155 53.9	2100	1937		Weekly	(3)*** (6) (7)48-	(3)	Reloc. circa 1952 approx. 100 yds SSW
26.1		Tank Field	Kealakekua Ranch	19 29.9	155 53.3	2640	1953		Monthly & After Rain	(6) (7)58-	(3)	Data msg 1956
26.2	3977	Kealakekua*	Miss A. Greenwell	19 29.6	155 54.9	1450	1901 1960		Daily Recorder	(1)05-41, 56-	[1](1)01-41 (2)01-41, 56- (3)54-55	No data 1942-53; old gage maint. by N. Wallace; charts on file PSO
27	1665	Honaunau	Mrs. M.W. Hua	19 26.6	155 52.9	1090	1938		Daily	(1)	(1)38-52 (2)	Reloc. 1/43 approx. ½ mi. N
27.1		Uyeda-Honaunau	Bishop Estate	19 26.1	155 53.4	690	1956		"	(3)	(3)	
27.2		Honaunau Forest 1	" "	19 24.9	155 51.6	2240	1954		Monthly & After Rain	(3)	(3)	
27.3		Honaunau Forest 2	" "	19 25.2	155 50.3	3450	1957		Monthly & After Rain	(6)	(6)	
28	6697	Napoopoo*	Kona Exp. Sta.	19 28.3	155 54.5	400	1938		Daily	(1)39- (6)	[2](1)39-52 (2)39- (3)	Takahara-Napoopoo; reloc. 6/39 from 600' elev.
28.1		Napoopoo (16)*	American Factors	19 28.6	155 55.3	15	1901	1938	"	(1)05-	[3](1)	Reloc. 7/20 approx. ¼ mi. N, reloc. 11/37 300 yds N
28.2		Keei Middle Road*	E.E. Glass	19 27.9	155 54.0	680	1955		"	(3),(6)	(3)	Reloc. 4/58 80' E
28.3		Kahauloa 2	Bishop Estate	19 28.0	155 52.9	1520	1956 1955	1956	After Rain Recorder	(3)56- (6)56-	(3)56-	Charts on file HWA
28.4		Keei Makai 2	" "	19 26.9	155 53.8	580	1954		After Rain	(3),(6)	(3)	
29	2327	Kaawaloa	Capt. Cook Coffee Co.	19 29.7	155 55.2	1340	1942		Daily	(1)	[4](1)42-52 (2)	Reloc. 12/59 250' SSW
29.1		Kealakekua (Davis)*	Rev. S.H. Davis	19 30.6	155 55.2	1580	1891	1915	"	(1)05-	(1)	
29.2		Kalukalu	E.C. Greenwell	19 30.7	155 55.4	1500	1920	1929	Unknown		(3)	
29.3		Konawaena (Buttles)	W. Buttles	19 30.7	155 55.2	1580	1955		Daily	(6) (7)58-	(3)	
29.4		Konawaena School	Konawaena Sch. Ag. Dept.	19 30.7	155 55.0	1670	1957		"	(6) (7)58-	(3)	
29.5		Kanakamelae	W.H. Greenwell Estate	19 32.2	155 53.0	3120	1956		Monthly	(6),(7)	(3)	
29.6		Onouli	Dr. J. Mitchell	19 30.2	155 55.4	1350	1958		Daily	(6) (7)59-	(3)59-	
29.7		Kua Pehu	Mrs. R. Vitousek	19 29.8	155 55.2	1390	1960		"	(6)	(6)	
29.8		Onouli (1600)	W.H. Greenwell Estate	(19 30.3)	(155 55.0)	1600	1960		Monthly	(7)	(3)	

* Also has other weather instrumentation - see same key number in Table Two. *** Current but original date unknown. [1] 1919-41 data pub. erroneously as Kaawaloa (#29). [2] 1919-38 data pub. erroneously for this station - should be for #28.1. [3] 1919-38 data pub. erroneously for #28. [4] 1919-41 data pub. under this name - should be for #26.2.

ISLAND: HAWAII

TABLE ONE (CONT.)

State Key No.	USWB Index No.	Station Name or Number	Maintained By	Geographic Coordinates Latitude ° '	Longitude ° '	Elev. (ft.)	Year Estab-lished	Year Discon-tinued	Frequency of Read-ing	Location of Data	Location of Summaries	Other Names Relocations Remarks
30	4762	Komakawai	McCandless Ranch	19 24.1	155 46.3	6150	1944		Monthly	(1)44-51 (6)56- (7)58-	(1)44-50 (3)	No data 2/51-6/56; reinstalled approx. 1/5 mi. N
30.1		Big Hill	" "	19 24.1	155 48.8	4660	1957		"	(6) (7)58-	(3)	
30.2		Palipakika	" "	19 23	155 51	(3100)	1958		"	(6),(7)	(3)	
30.3		Kiilae Stream	U.S.G.S.	19 25.0	155 51.0	2800	1958		Weekly-R	(6)	(6)	Charts on file U.S.G.S.
31	1240	Hapuu	McCandless Ranch	19 25.0	155 48.8	4560	1944	1952	Monthly	(1)	(1)44-50 (2)	
31.1		Honaunau Forest 3	Bishop Estate	19 25.2	155 48.8	4650	1957		Monthly & After Rain	(6)	(6)	
35		Wood Valley Tunnel	Haw'n Ag.	19 16.4	155 29.9	3400	1923	1954	After Rain	(6) (7)48-	(3)23-34 (4)43- (6)	Noguchi Tunnel; data msg 1935-41
35.1		Keaiwa Reservoir	" "	19 15.1	155 30.2	3060	1954		" "	(6),(7)	(3)	Replaced #35 7/54
35.2		Wood Valley Camp*	" "	19 16.3	155 28.4	2150	1949	1955	" "	(3),(6) (7)	(3)	Wood Valley (2150); Wood Valley Reservoir (2150); Camp Kai
35.3		Wood Valley (2000)	" "	19 15	155 29	2000	1911	1919	" "	(6)	(3)	
35.4		Wood Valley Reservoir	" "	19 16.5	155 29.3	2470	1948	1949	" "	(6)	(6)	
35.5		Mudflow*	" "	19 15.4	155 28.5	1900	1952	1955	Recorder	(6)	(6)	Fld 40-1; charts on file plant.
35.6		Wood Valley*	" "	19 16.4	155 28.6	2200	1955		After Rain	(3),(6) (7)	(3)	
36	3300	Kapapala Ranch	Kapapala Ranch	19 16.8	155 27.2	2140	1886		Daily++	(1)05-	(1)86-52 (2)	Reloc. 3/60 300' S
36.1		Field 481*	Haw'n Ag.	19 18.2	155 28.3	3250	1955		Recorder	(6)	(6)	Charts on file plant.
37	7643	Pakao	Kapapala Ranch	19 22.3	155 28.0	5155	1928		Monthly	(1)	(1)28-52 (2)	
37.1		Mauna Anu	" "	19 21	155 31	6600	1922	1928	"	(1)	(2)	
38		Ainapo	" "	19 21.6	155 25.5	3675	1924		"	(6) (7)48-	(3)37-42, 53- (4)24-52	
38.1		Mauna Loa Seismo. Sta.*	Hawaii Volcano Observatory	19 29.8	155 23.0	6600	1948		After Rain	(6),(7)	(3)	Truck Trail until 1951, reloc. from 6750'; data msg 8/49-8/51
38.2		Halina Pali	Hawaii Vol. Obs.	19 18.0	155 18.5	2350	1958		" "	(6),(7)	(3)	Hilina Pali[1]
38.3		Halape	" " "	19 16.4	155 15.3	10	1958		1 or 2 times yrly	(6),(7)	(3)	
38.4		Desert	" " "	(19 19.0)	(155 23.4)	(2520)	1958		After Rain	(6),(7)	(3)	
39	6198	Mauna Loa Slope Observatory*	U.S.W.B.	19 32.3	155 34.7	11145	1956		Daily-R	(1)	(2)	Charts on file PSO
39.1	6198	Mauna Loa Upper*	"	19 32.5	155 34.5	10960	1955	1956	" "	(1)	(2)	Charts on file PSO
39.2		Mauna Loa Summit*	"	19 29	155 36	13455	1951	1953	Recorder	(2)	(2)	Charts on file PSO; many msg periods
43.1		Mauna Iu	Kapapala Ranch	19 25.9	155 22.0	4500	1925		Monthly	(6) (7)48-	(3)37-42, 53- (4)25-52	
43.2	7546W	Pahua Mini	" "	19 25.1	155 25.1	5140	1922	1944	"	(1)	(1)	

* Also has other weather instrumentation - see same key number in Table Two. ++ Except weekends. [1] A number of temporary gages were maint. by Hawaii Nat. Pk between 1943 & 1944. These gages are listed below alphabetically but have not been assigned state key numbers because of insufficient info. concerning locations. Monthly data for these gages are on file with HWA. Bird Park*, Cone Peak, Devil's Throat, Hilina Pali Shelter*, Kamakaia Hills, Lava Flow*, Lava Tube, Makaopuhi, Mauna Iki, Puu Huluhulu, Puu o Hale. Those gages followed by an asterisk may have been located at or near the sites of gages currently maintained by Hawaii Nat. Pk or Hawaii Volcano Observatory.

TABLE ONE (CONT.)

State Key No.	USWB Index No.	Station Name or Number	Maintained By	Geographic Coordinates Latitude ° '	Longitude ° '	Elev. (ft.)	Year Established	Year Discontinued	Frequency of Reading	Location of Data	Location of Summaries	Other Names Relocations Remarks
44		Ohaikea	Kapapala Ranch	19 24.4	155 20.7	3460	1924		Monthly	(6) (7)48-	(3)37-42, 53- (4)24-52	
44.1		Ohaikea (3750)*	U.S.D.A. Fruit Fly Laboratory	19 25.5	155 19.8	3750	1951	1952	Weekly		(6)	
45		Kekekaniho	Kapapala Ranch	(19 27.4)	(155 20.0)	4700	1925	1949	Monthly	(6) (7)48-	(4)	
45.1		Mauna Loa (5550)	Hawaii Vol. Obs.	19 28.5	155 22.0	5550	1944		After Rain	(6)48- (7)48-	(3)48-	Lava Flow; data msg prior to 1948
45.2		Mauna Loa Truck Trail (5100)*	U.S.D.A. Fruit Fly Laboratory	19 28.0	155 21.2	5100	1951	1952	Weekly		(6)	Fire Cache 2
45.3		Mauna Loa Truck Trail (5900)**	U.S.D.A. Fruit Fly Laboratory	19 28.9	155 22.3	5900						
51		Kilauea North Rim*	C.K. Wentworth	19 26.4	155 16.4	4050	1945		Daily	(6) (7)48, 52-	(3)48, 52- (4)45-57	Wentworth; reloc. 1952 from 4025' elev.
51.1		Keauhou	W.H. Shipman	19 26.5	155 16.9	4000	1938	1952	After Rain	(6)48- (7)48-	(3)48-	Data msg prior to 1948
51.2		Kilauea Camp	Hawaii Nat. Pk	19 24.5	155 15.6	3765	1934	1938	Daily	(1)	(2)	
51.3		Olaa (29 Miles)*	W.M. Giffard	19 26	155 15	3800	1917	1921	"	(1)	(2)	
51.4		Volcano House*	Volcano House	19 25.9	155 15.7	3975	1888	1916	"	(1)05-	(1)99- (2)	Data msg 5/94-12/98
51.5		Volcano Farm Lots	W.R. Galbraith	19 28.1	155 15.1	3850	1955		"	(3)56- (6)56-	(3)56-	Data msg prior to 1956
51.6		Castle Farm Lots	N.H. Castle	19 28.0	155 15.5	3975	1955		"	(6)	(6)	
51.7		Mauna Loa Truck Trail (4000)*	U.S.D.A. Fruit Fly Laboratory	19 26.5	155 18.5	4000	1952	1956	Weekly		(3)52-53	Data msg 1954-56
51.8		Mauna Loa Truck Trail (4250)*	U.S.D.A. Fruit Fly Laboratory	19 26.8	155 19.2	4250	1949	1951	"		(6)	Kipuka Ki
52	1033	Halemaumau	Hawaii Vol. Obs.	19 24.3	155 17.0	3650	1932		Monthly	(1)39- (6)	(1)32-52 (2)	
52.1		Uwekahuna	" " "	19 25.3	155 17.7	4050	1948		After Rain	(6),(7)	(3)	Observatory
54	1303	Hawaii Nat. Pk Headquarters*	Hawaii Nat. Pk	19 26.0	155 15.6	3970	1913		Daily	[1](1)15- (6)	[2](1)13-52 (2)	Volcano Observatory; reloc. 5/43 approx. 400' NE
54.1		Ohialani Dairy	Miss M. English	19 26.2	155 14.4	3780	1934		"	(6) (7)48-51	(3)52-57 (4)34-51 (6)	Reloc. 4/53 1/3 mi. SE
54.2	0740W	Glenwood (Helbush)*	X.L. Helbush	(19 29.6)	(155 09.6)	2300	1916	1929	"	(1)	(1)	
54.3		Glenwood*	Puna Sugar	19 31.4	155 08.3	2150	1951	1959	After Rain	(6)	(3)51-57 (6)	
54.4		26 Miles	W.H. Shipman	19 26.5	155 12.7	3400	1951		Monthly	(6),(7)	(3)	
54.5		Haunani Road	Eugene Horner	19 26	155 15	3900	1954		Daily	(6)	(3)54-58 (6)	
58		Ainahou	W.H. Shipman	19 20.7	155 13.7	2975	1942		After Rain	(6)48- (7)48-	(3)52- (4)42-57	
58.1		Ainahou Makai	" "	19 20.3	155 13.4	2750	1944		Monthly	(6)48- (7)48-	(3)52- (4)45-51	Ainahou 2; data msg prior to 1945
65	7457	Pahoa*	Puna Sugar	19 29.7	154 56.9	670	1902		Daily	(1)05-07, 29- (6)	(1)02-52 (2)	No data 1908 & 1917-21; 4 relocations - details unknown
65.1		Waiakaheula	W. Goudie	(19 30.2)	(154 56.3)	750	1894	1898	Unknown		(1)	

* Also has other weather instrumentation - see same key number in Table Two. ** Non-rainfall instrumentation only - see same key number in Table Two. [1] 1913-48 data pub. as Volcano Observatory. [2] 1913-1918 data pub. as Volcano Observatory.

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TABLE ONE (CONT.)

State Key No.	USWB Index No.	Station Name or Number	Maintained By	Geographic Coordinates Latitude ° '	Longitude ° '	Elev. (ft.)	Year Established	Year Discontinued	Frequency of Reading	Location of Data	Location of Summaries	Other Names Relocations Remarks
65.2		Lower Pahoa*	Puna Sugar	19 31.4	154 55.5	380	1951	1959	After Rain	(2),(6)	(3)	Pahoa Makai
65.3		Upper Pahoa*	" "	19 27.7	154 58.4	1170	1951	1959	" "	(2),(6)	(3)	Pahoa Mauka
66	3370	Kapoho Upper*	" "	19 29.5	154 52.6	440	1934	1955	Daily	(1)50- (6)	(1)34-52 (2)	Kapoho Mauka
66.1		Lava Tree Park	State Div. of Forestry	19 29.2	154 54.4	650	1956		Daily++	(3),(6)	(3)	
67	3043	Kamaile*	Puna Sugar	19 26.2	154 56.0	560	1921	1955	Daily	(1)50- (6)	(1)29-52 (2)29- (6)	Kamaili
67.1		Kalapana (Wilson)	W.E. Wilson	(19 21.3)	(154 58.6)	10	1897	1900	Unknown		(1)	
67.2		Kaueleau*	A.R. Henderson	(19 27.3)	(154 56.5)	1000	1908	1917	Daily	(1)	(1)	
67.3	3455W	Kaueleau 2*	J.S. Green	(19 26.6)	(154 54.5)	350	1917	1927	"	(1)	(1)19- (2)	
67.4		Pohoiki	R. Rycroft	(19 27.8)	(154 51.0)	10	1891	1900	Unknown		(1)	
67.5		Hayhalekai	G. Hay	19 28.5	154 50.1	15	1946		Weekly or After Rain	(6) (7)58-	(3)	
67.6		Kupaahu*	U.S.D.A. Fruit Fly Laboratory	19 21.4	154 59.7	100	1950	1956	Weekly		(3)50-53	Kalapana; 1954-56 data on hygrotherm. charts only
67.7		Opihikao*	H.A.E.S.	19 26.8	154 54.4	360	1956	1957	Daily	[1](6)		
68[2]	1562	Holualoa Beach	Holualoa Ranch	19 36.5	155 58.7	10	1918		"	(1)28- (6)	(1)21- (2)	Reloc. 10/38 approx. 2½ mi. SSE
68.1[3]	2684	Middle Holualoa	" "	19 36.6	155 57.8	485	1930		After Rain	(1)50- [4](6)40- (7)48-	(1)43-52 (2)40-	Kailua Mauka; Holualoa Loading Chute; reported by Kona Exp. Sta.; reloc. circa 1942 to 600'; data msg prior to 1940
68.2[3]	5330	Lanihau	Kona Exp. Sta.	19 39.9	155 57.7	1530	1930		Daily	(1)50- (6)38- (7)48-	(1)43-52 (2)43- (3)38-	Data msg prior to 1938
68.3	4764	Kona Airport*	H.A.L.	19 38.8	156 00.6	15	1949 1956	1957	Daily+ Recorder	(1)	(2)	Charts on file PSO
68.4		Kailua-Kona*	G. Parker[5]	19 38.5	155 59.6	20	1956	1959	Daily	[6](2)56-56, 59-		Reloc. 1956 1/6 mi. NE; reloc. 1959 1/5 mi. WNW
68.5		Holualoa (1450)*	Kona Dev. Co.	(19 37.1)	(155 57.2)	1450	1901	1928	"	(1)05-	(1)01-18 (2)	
68.6		Lanihau (Bartels)	F.W. Bartels	19 40	155 58	1540	1895	1900	Unknown		(1)	
68.7		Lanihau Mauka	Kona Exp. Sta.	19 40.1	155 57.2	1930	1958		Weekly & After Rain	(6),(7)	(3)	Lanihau Mauka 1 until 5/60, maint. by HWA
68.8		Lanihau Mauka 2	H.W.A.	19 40.1	155 56.6	2440	1958	1960	Weekly	(6),(7)	(3)	
68.9		Lanihau Mauka 3	"	19 40.2	155 56.0	2900	1958	1960	"	(6),(7)	(3)	
69		Kahaluu Beach	Holualoa Ranch	19 34.5	155 58.0	40	1938		After Rain	(2)*** (6)47- (7)48-	(2)47- (3)47-	Data msg prior to 1947
69.1		Ohia Liilii	Huehue Ranch	19 43.3	155 56.0	4500	1935		Monthly	(7)58-	(3)	Reloc. circa 1950 160' W
69.2		Kahaluu[7]	Kona Exp. Sta.	19 35.6	155 57.0	1080	1930		Daily	(3)44- (6)38- (7)48-	(3)38-	Data msg prior to 1938; reloc. circa 1944 approx. 1/5 mi. ESE from Tay residence

* Also has other weather instrumentation - see same key number in Table Two. *** Current but original date unknown. + Beginning & ending of precipitation reported on WB Form WBAN-10 (CAA). ++ Except weekends. [1] On file Plant Physiology Dept., University of Hawaii. [2] Old location shown as 68A in "A Key to Rain Gages in Hawaii" (1948). [3] Shown as 68B & 68C respectively in "A Key to Rain Gages in Hawaii" (1948). [4] On file Kona Exp. Station. [5] Kona Inn 1956, Kona Palms 1956-59. [6] 2/56-12/56 & 1/59-4/59 data reported on WB Form 1130, on file PSO, WB & Federal Records Center, Honolulu. [7] Incorrectly shown as Kaholu in "A Key to Rain Gages in Hawaii" (1948).

State Key No.	USWB Index No.	Station Name or Number	Maintained By	Geographic Coordinates Latitude ° '	Longitude ° '	Elev. (ft.)	Year Established	Discontinued	Frequency of Reading	Location of Data	Location of Summaries	Other Names Relocations Remarks
69.3		Honokohau Ranch	E.C. Greenwell	19 41.2	155 58.6	1275	(1910)	1919	Unknown		(3)10-	
69.4		Kohanaiki	American Factors	19 42.6	155 58.7	1580	1956		Daily	(6) (7)58-	(3)	
69.5		Kaiolu	J.C. Tyler, Sr.	19 37.3	155 59.2	30	1954		"	(6) (7)58-	(3)	
69.6		Kuona Olu	D. Ednie	19 36.5	155 59.0	10	1954		Weekly	(6)	(3)54-57 (6)	
69.7		Kailua (Yowell)	W.S. Yowell	19 39	155 58	950	1880	1902	Unknown		(1)	
69.8		Lion Grass	Holualoa Ranch	(19 37.5)	(155 57.5)	(1000)	1958		After Rain	(6),(7)	(3)	
69.9		Keopu (McWayne)	" "	(19 38.8)	(155 58.2)	(800)	1958		Monthly	(6),(7)	(3)	
69.11		Laaloa**	C.D. Miller	(19 35.8)	(155 57.3)	800						
70	1557	Holualoa	State Div. of Forestry	19 38.1	155 54.8	3220	1929		"	(1)42- (6)	[1](1)29-52 (2)	
70.1		Halepiula Shed	Dillingham Ranch	19 44.1	155 51.6	4500	1921		Twice Weekly	(3)*** (6)38- (7)48-	(2)38- (3)38-	Data msg prior to 1938; orig. loc. approx. 2 mi. W of present site
70.2		Kaalapuali	Honokohau Ranch	19 37.6	155 51.8	4500	1937		Monthly	(6)39- (7)48-	(3)39-	Data msg prior to 1939
70.3		Holualoa (Twigg-Smith)	Mrs. Twigg-Smith	19 36.9	155 57.1	1210	1948		Daily	(6),(7)	(3)	Reloc. 1956 50' W; data msg 6/48-12/53
70.4		Holualoa Mauka Camp	Huehue Ranch	19 38.8	155 53.2	4440	1958		After Rain	(7)	(3)	
70.5		Waiaha Stream	B.W.S.	19 38.1	155 57.0	1540	1953		" "	(6)	(3)53-57	
70.6		Waiaha Stream (USGS)	U.S.G.S.	19 38.2	155 56.4	2060	1958		Weekly-R	(6)	(6)	Charts on file USGS
71	2047	Honuaula*	State Div. of Forestry	19 40.4	155 52.7	6250	1928		Monthly	(1)42- (6)	(1)28-52 (2)	
71.1		Waihou 1	Dillingham Ranch	19 45.6	155 51.4	3340	1921		Twice Weekly	(3)*** (6)40- (7)48-	(3)40-	Data msg prior to 1940
72	2151	Hualalai	State Div. of Forestry	19 41.5	155 52.4	8190	1929		Monthly	(1)42- (6)	(1)29-52 (2)	
73	8460	Puu Lehua*	W.H. Greenwell Estate	19 34.0	155 48.5	4850	1922		"	(1)	(1)22-52 (2)	
73.1	4163	Keauhou 73A	Bishop Estate	19 33.6	155 55.5	1890	1927		After Rain	[2](1)27-56 (2)56-	[2](1)27-52 (2)27-56	Keauhou 2 (1890); Macadamia Nut Rd; charts on file HWA
							1955	1957	Recorder		(3)	
73.2	2751	Kainaliu*	Kona Exp. Sta.	19 32.2	155 55.6	1500	1931 1958		Daily Recorder	(1)	(1)31-52 (2)	Charts on file Kona Exp. Sta.
73.3		Mokuaikaua Road	Bishop Estate	19 34.8	155 55.7	1980	1954		After Rain	(3),(6)	(3)	Keauhou (1980)
73.4		Keauhou Test Site*	H.W.A.	19 34.8	155 55.6	2040	1958		Weekly-R	(3),(7)	(3)	Keauhou HWA site; charts on file HWA
73.5		Keauhou 2	Bishop Estate	19 33.8	155 55.1	2100	1954		After Rain	(3),(6)	(3)	
73.6		Honalo 2*	C.H. Wodehouse (Poho Kala Ranch)	19 33.3	155 55.6	1800	1954		Daily	(6) (7)59-	(3)	Poho Kala 2
73.7		Lehuula	Wall Ranch	19 32.3	155 55.8	1410	1956		After Rain	(6) (7)58-	(3)	Kawanui 2; reloc. 4/59 approx. 200 yds SW & name changed to Lehuula
73.8		Hokukano Makai	Ackerman Ranch	19 31.6	155 56.7	500	1955		Once or twice wkly	(6) (7)58-	(3)	
73.9		Hokukano Mauka	" "	19 31.6	155 55.6	1410	1955		After Rain	(6) (7)58-	(3)	

* Also has other weather instrumentation - see same key number in Table Two. ** Non-rainfall instrumentation only - see same key number in Table Two. *** Current but original date unknown. [1] 1919-28 data pub. erroneously for this station - should be for #68.5. [2] Pub. as Keauhou 2 - not the same gage as #73.5.

State Key No.	USWB Index No.	Station Name or Number	Maintained By	Geographic Coordinates Latitude °	'	Longitude °	'	Elev. (ft.)	Year Established	Discontinued	Frequency of Reading	Location of Data	Location of Summaries	Other Names Relocations Remarks
73.11		Kahaluu Forest	Bishop Estate	19	35.4	155	53.9	3300	1958		After Rain	(2),(6)	(3)	
73.12		Kainaliu Beach	Wall Ranch	19	31.9	155	57.4	15	1959		Monthly	(6),(7)	(3)	
73.13[1]		Honalo 1	C.H. Wodehouse (Poho Kala Ranch)	19	33.2	155	55.9	1480	1958		After Rain	(6) (7)59-	(3)	Poho Kala 1
73.14		Keauhou Bay	J. Giacometti	19	33.7	155	58.0	20	1959		" "	(6)	(6)	
73.15		Kaipoai	R. Spalding	19	33.9	155	58.0	20	1959		" "	(6)	(6)	
73.16		Halewalea	Mrs. H. Hahn	19	34.5	155	56.7	1160	1959		" "	(6)	(6)	
73.17		Puu O Hau	W.H. Greenwell Estate	19	30.6	155	57.2	10	1960		Monthly	(6),(7)	(3)	
73.18		Pineapple	W.H. Greenwell Estate	19	30.4	155	56.2	800	1960		"	(6),(7)	(3)	
74	3095	Kanahaha	W.H. Greenwell Estate	19	35.5	155	47.7	5060	1922		"	(1)	(1)22-52 (2)	
74.1		Kaukahoku	Wall Ranch	19	34.5	155	51.7	4030	1956		Monthly & After Rain	(6) (7)58-	(3)	
75	0040	Ahua Umi	W.H. Greenwell Estate	19	38.2	155	46.9	5220	1922		Monthly	(1)	(1)22-52 (2)	Umi Temple
76	5018	Kulani Mauka*	U.S.W.B.	19	35.2	155	27.3	8300	1950 1952		Weekly Recorder	(1)	(2)	Charts on file PSO
77		Papaloa*	Kealakekua Ranch	19	30.5	155	47.8	5120	1932		Monthly & After Rain	(6) (7)58-	(3)	No data 1956; reloc. 5/60 350' E & 20' higher
77.1		Papai Clark	" "	19	30.4	155	46.2	5900	1958		Monthly	(6),(7)	(3)	
77.2		Pauahi	" "	19	30.2	155	49.6	4320	1952		"	(6) (7)58-	(3)	No data 1956
77.3		Pump 4	" "	19	30.3	155	50.2	4055	1953		"	(6) (7)58-	(3)	Oiki Heifer Paddock; no data 1956
77.4		J. P.	" "	19	29.7	155	51.4	3550	1952		"	(6) (7)58-	(3)	No data 1956
77.5		Hoohui Makani	" "	19	30.4	155	42.5	8100	1958		3 or 4 times yrly	(6),(7)	(3)	No data 4/59-4/60
77.6		Kanekini	" "	19	30.0	155	44.1	7100	1959		Monthly	(6),(7)	(3)	
78	5021	Kulani School Site	State Dept of Social Services	19	35.1	155	20.2	5710	1947		Weekly	(1)	(1)47-52 (2)	
79	5011	Kulani Camp*	State Dept of Social Services	19	33.1	155	18.2	5170	1947 1954		Daily Recorder	(1)	(1)47-52 (2)	Reloc. 12/59 300' SSE; charts on file PSO
80		Kaleieha*	Parker Ranch	19	42.2	155	27.8	6710	1914		After Rain	[2](6) (7)48-	(3)15-36, 53- (4)36-52 [2](6)	
80.1		Hummula*	S. Parker, Jr.	19	43	155	28	6685	1905	1914	" "	(1)	(1)	Data msg 12/06-11/07
80.2		Puu Omaokoili	State Div. of Forestry	19	42.8	155	29.5	6720	1950		Monthly	(6),(7)	(3)	
81		Kulani Ditch	State Dept of Social Services	19	31.5	155	17.9	5120	1947	1952	After Rain	(6),(7)	(3)	Kulani Cone
82	8550W	Puu Oo	W.H. Shipman	19	43.6	155	23.3	6300	1907		" "	(1)10-35 (7)48-	(1)19-35 (2)10-35 (3)52- (4)33-51	Data msg prior to 1910; prob. reloc. 3/4 mi. SW - date unknown
84	8590	Saddle Road	B.W.S.	19	41.8	155	12.2	2340	1948		Weekly	(1)49-	(2)49-	Data msg prior to 1949
85[3]	1488	Hilo (A&F)*	State Div. of Forestry	19	42.5	155	04.5	35	1926		Daily++	(1)48- (6)	(1)26-52 (2)	Hilo Tree Nursery; Hilo Insectory

* Also has other weather instrumentation - see same key number in Table Two. ++ Except weekends. [1] Pub. as 73.10 in "Rainfall of the Hawaiian Islands" (1959). [2] Annual totals only through 1935. [3] Shown as 94 in "A Key to Rain Gages in Hawaii" (1948).

TABLE ONE (CONT.)

State Key No.	USWB Index No.	Station Name or Number	Maintained By	Geographic Coordinates Latitude ° '	Longitude ° '	Elev. (ft.)	Year Established	Year Discontinued	Frequency of Reading	Location of Data	Location of Summaries	Other Names Relocations Remarks
86.1	1484	Hilo*	C. Chaves	19 43.7	155 05.4	40	1880		Daily	(1)05-	(1)80-52 (2)	Data msg 1887-92; reloc. 8/18 from Hilo Boarding School
86.2		Kaumana (1960)	Puna Sugar	19 41.0	155 11.0	1960	1921	1947	After Rain	(1)42- (6)	(2)	
86.3		Ponahawai	State Div. of Forestry	19 41.2	155 11.3	2150	1950	1951	Monthly	(6),(7)	(3)	
86.4		Hilo (Coan)	Rev. Titus Coan	19 44	155 05	(50)	1846	1847	Unknown		(1)	
86.5		Kaumana (2000)*	U.S.D.A. Fruit Fly Laboratory	19 41.1	155 11.1	2000	1950	1951	Weekly		(3)	
87	1492	Hilo Airport*	U.S.W.B.	19 43.4	155 03.6	30	1939 1950		o Recorder	(1)49- [1](2)	(2)49- (3)	Charts on file NWRC
87.1	9020W	Waiakea Mill	Waiakea Mill Co.	19 42.9	155 04.7	50	1891	1948	Daily	(1)05-	(1)	Reloc. circa 1943 short dist. - no info. dist. & dir.
87.2		Hilo Breakwater	U.S. Engineers	(19 43.8)	(155 02.7)	15	1911	1916	Monthly		(1)	
88	9014	Waiakea	Puna Sugar	19 38.5	155 10.2	1920	1930	1952	Weekly or After Rain	(1)42- (6)	(1)	Middle Flume House
88.1	3510	Kaumana	S. Masuya (Hilo Sugar)	19 41.2	155 08.6	1125	1896 1949		After Rain Recorder	(1)05-08, 49- [2](6)27-39, 49-	(1)96-08 (2)96-08, 49- (3)27-39	Kaumana 3; data msg 1909-26 & 1940-48; charts on file U.S. Army Engineers; prob. reloc. 1/49 - dist. & dir. unkn; reloc. 7/58 3/4 mi. WSW
88.2	9025	Waiakea SCD	Shuzo Kaneoka	19 39.5	155 07.4	940	1953 1953	1954	Daily Recorder	(1)	(2)	Reloc. 11/58 ½ mi. NNW; charts on file FRC
88.3		Piihonua (1000)	Hawaiian Mill	19 43	155 08	1000	1906	1918	Daily		(1)	
88.4		Piihonua Camp 5	Hilo Sugar	19 43.3	155 09.3	1250	1951		"	(6),(7)	(3)	Piihonua Camp 4; reloc. 2/56 to Camp 5
88.5		Kaumana 2	Hilo Country Club	19 40.4	155 10.0	1720	1932	(1939)	"	[3](6)32-39	(3)32-39	Country Club
88.6		Waiakea Camp 8	Waiakea Mill	19 39.1	155 07.4	1050	1913	(1939)	Daily[4]	[5](6)13-39	(3)15-39	
88.7		Piihonua Mauka	U.S.G.S.	(19 43.6)	(155 10.8)	1900	1911	1912	Irreg.	[6](6)		
89	8051	Piihonua	State Div. of Forestry	19 44.0	155 10.2	1730	1925		Monthly	(1)	(1)25-52 (2)	
89.1		Waiakea Camp 6	Waiakea Mill	19 40.1	155 06.1	615	1913	1948	Daily[7]	[5](6)13-39	(3)15-	
89.2	4632	Kipa	Hilo Sugar	19 44.3	155 08.9	1280	1953		Weekly-R	(1)	(2)	Reloc. 6/53 approx. 1/3 mi. E; charts on file PSO
89.3		Mauka Amauulu Camp 4	" "	19 43.7	155 06.7	450	1932	1948	After Rain	(6)	(4)	
89.4		Kaiwiki	" "	19 45.2	155 07.9	1100	1948		Daily	(6),(7)	(3)	
89.5		Amauulu Camp 4	" "	19 44.2	155 07.8	900	1948	1958	"	(6),(7)	(3)	
89.6		Dairy	" "	19 44.6	155 09.3	1500	1952	1953	"	(6),(7)	(3)	
89.7		Lower Piihonua	W.N. Flagg	19 42.9	155 08.0	815	1950	1957	"	(3)		
89.8		Field 14**	Hilo Sugar	19 44.2	155 09.1	1350						

* Also has other weather instrumentation - see same key number in Table Two. ** Non-rainfall instrumentation only - see same key number in Table Two. o Weather Bureau first order station taking 6-hourly observations daily - beginning & ending of precipitation, hourly amounts.
[1] 1939-48 surface observations on file NWRC. [2] 1927-39 data not avbl. at plantation but included in B.W.S. publication, "Rainfall Data for the Wailoa Stream Basin and Its Tributary Basins" (1940). [3] Data not available at plantation but included in B.W.S. publication, "Rainfall Data for the Wailoa Stream Basin and Its Tributary Basins" (1940). [4] Weekly or monthly prior to 1930. [5] 1913-14 data pub. in Water-Supply Papers 373 & 430, 1915-39 data included in B.W.S. publication, "Rainfall Data for the Wailoa Stream Basin and Its Tributary Basins" (1940).
[6] Pub. in Water-Supply Papers 318 & 336. [7] Monthly prior to 1922.

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TABLE ONE (CONT.)

State Key No.	USWB Index No.	Station Name or Number	Maintained By	Geographic Coordinates Latitude ° '	Longitude ° '	Elev. (ft.)	Year Established	Discontinued	Frequency of Reading	Location of Data	Location of Summaries	Other Names Relocations Remarks
89.9		Piihonua 2	Hilo Sugar	19 43.0	155 08.2	900	1933	(1939)	Daily	[1](6)33-39	(3)33-39	
90		Office*	" "	19 44.4	155 05.6	100	1893		Daily++	(6) (7)48-	(3)94-40, 48- (4)93-57	Manager's Res.; reloc. 1954 across street
90.1		Hawaii Sub-station Office*	H.S.P.A.	19 43.8	155 05.9	220	1934		" "	(4) (7)52-	(3)51-	Ag Office; also reported by Hilo Sugar
90.2		Mauna Kea (200)	U.S.G.S.	(19 45.2)	(155 05.7)	200	1911	1913	Irreg.	[2](6)		
91	6552	Mountain View*	Puna Sugar	19 33.1	155 06.7	1530	1901		Daily	(1)05-	[3](1)01-52 (2)	Olaa 17 Miles; reloc. 1/40 ½ mi. S; reloc. 9/50 across highway
91.1		Keaau	W.H. Shipman	19 38.7	154 59.1	15	1920		"	(6)48- (7)48-	(3)48-	Data msg prior to 1948
91.2		Olaa (1650)	Dr. N. Russell	(19 32.3)	(155 07.4)	1650	1893	1902	Unknown		(1)	
91.3	7026W	Olaa (Kurtistown)	T.A. Dranga	(19 35.8)	(155 04.2)	645	1904	1926	Daily	(1)06-	(1)	
91.4		Kurtistown*	Puna Sugar	19 34.7	155 04.2	920	1951		After Rain	(6) (7)60-	(3)51-57, 60-	
91.5		Orchid Land Estate	B.W.S.	19 33.5	154 59.6	430	1960		" "	(2),(6)	(3)	
92	7023	Olaa*	Puna Sugar	19 37.8	155 02.0	250	1901		Daily	(1)05-	[4](1)01-52 (2)	Olaa Mill; reloc. circa 1/39 from mill
92.1	2156	Huehue*	Huehue Ranch	19 45.3	155 58.5	1960	1903		"	(1)05-	(1)03-52 (2)	Reloc. 2/58 90' NE
92.2		Keaau Orchard*	Keaau Orchard (Castle & Cooke)	19 38.7	155 00.8	90	1949		Daily++	(6),(7)	(3)	
93	3367	Kapoho*	Puna Sugar	19 30.6	154 50.6	110	1891	1960	Daily	(1)05-23, 29- (6)21-	(1)91-52 (2)	Kapoho Lwr; reloc. circa 4/23 300' SE
93.1	8346	Puu Anahulu	Dillingham Ranch	19 48.9	155 50.7	2150	1942		After Rain	(1)50- (6) (7)48-	(2)48- (3)	
93.2	0298	Cape Kumukahi*	U.S.C.G.	19 31.0	154 49.3	65	1957	1960	Daily	(1)	(2)	
93.3		Panika	Dillingham Ranch	19 49.7	155 51.0	2080	1957		Monthly	(6) (7)58-	(3)	
93.4		Eben Low	" "	19 49.3	155 50.9	2150	1957		"	(6) (7)58-	(3)	
93.5		Kapoho Landing Strip	B.W.S.	19 30.4	154 51.8	290	1960		After Rain	(2),(6)	(3)	
94.1	8555	Puu Waawaa	Dillingham Ranch	19 46.6	155 50.7	2750	1894		Daily	(1)05- (6)	(1)03-52 (2)03- (3)	Reloc. 1932 & 1948 short distances
94.2		Kaumana (500)*	J. Matsunaga	19 42.0	155 06.9	500	1905	1940	"	[5](1)	[6](1)05-18 (2)	Ponahawai (500)
94.3		Mamane Paddock	Dillingham Ranch	19 46.4	155 49.8	3450	1956		Monthly	(6) (7)58-	(3)	Hill
95		Puuhinei 2 Grass Field	Parker Ranch	19 53.0	155 43.4	2560	1941		After Rain	(6) (7)48-	(3)53- (4)41-52	
95.1	8186	Puako	Ichiro Goto	19 58.6	155 50.0	5	1939		" "	(1)	(1)39-52 (2)	
95.2		Puuhinei Paddock	Parker Ranch	19 54	155 46	1500	1914	1917	Monthly		(1)	

* Also has other weather instrumentation - see same key number in Table Two. ++ Except weekends. [1] Data not available at plantation but included in B.W.S. publication, "Rainfall Data for the Wailoa Stream Basin and Its Tributary Basins" (1940). [2] Pub. in Water-Supply Papers 318, 336 & 373. [3] 1901-18 data pub. as Olaa 17 Miles. [4] Pub. as Olaa Mill. [5] Pub. as Ponahawai through 7/26. [6] Pub. as Ponahawai.

TABLE ONE (CONT.)

State Key No.	USWB Index No.	Station Name or Number	Maintained By	Geographic Coordinates Latitude ° '	Longitude ° '	Elev. (ft.)	Year Established	Year Discontinued	Frequency of Reading	Location of Data	Location of Summaries	Other Names Relocations Remarks
95.3		Puako (Parker Ranch)	Parker Ranch	19 57.5	155 50.1	40	1954		After Rain	(6)	(6)	
96		Puuhinei 1	" "	19 53.6	155 44.4	2000	1936		" "	(6) (7)48-	(3)53- (4)36-52	
96.1		Keamoku Grass Plot	" "	19 53	155 43	(2600)	1941	1943	" "	(6)	(6)	
97		Keamoku	" "	19 50.6	155 43.2	3120	1908		" "	[1](6) (7)48-	(3)24-36, 53- (4)36-52 [1](6)	Keamuku
100		Waikii	" "	19 51.6	155 39.2	4700	1895		" "	[1](6) (7)48-	(3)96-36, 53- (4)36-52	
100.1		Waikii (4675)*	U.S.D.A. Fruit Fly Laboratory	19 51.7	155 39.2	4675	1949		Weekly		(6)	No data 1/51-4/59
102		Puu Anuanu	Parker Ranch	(19 51.4)	(155 37.0)	5900	1936		After Rain	(6) (7)48-	(3)53- (4)36-52	No data 3/56-3/59
102.1	8452	Puu Laau*	State Div. of Forestry	19 50.1	155 35.7	7440	1932		Monthly	(1)42- (6)	(1)32-52 (2)	
102.2		Kemoli House	Parker Ranch	19 53.9	155 33.6	5420	1914	1917	"		(1)	Pub. as Kemole House
102.3		Puu Anuanu Paddock	" "	(19 50)	(155 35)	(7500)	1914	(1915)	"	[2](6)14-15		Location uncertain
103		Makahalau	" "	19 58.6	155 33.1	3820	1910		After Rain	[1](6) (7)48-	(3)10-35, 53- (4)36-52	
104		Kemoli 2	" "	19 54.8	155 33.8	4920	1936		" "	(6) (7)48-	(3)53- (4)36-52	
105		Kemoli 1	" "	19 56.1	155 32.1	4680	1936		" "	(6) (7)48-	(3)53- (4)36-52	
106		Old Dairy	" "	19 58.2	155 31.9	4160	1909		" "	[1](6) (7)48-	(3)09-36, 53- (4)36-52	Paleihookapapa; Palihooukapapa
107	8063	Pohakuloa*	State Div. of Forestry	19 45.1	155 31.7	6510	1938		" "	(1)42- (6)	(1)38-52 (2)	Charts on file PSO
							1955		Recorder			
107.1		Pohakuloa (USMC)*	U.S.M.C.	19 45.6	155 32.3	6375	1956[3]		Daily-R	[4](2)56, 57-58		8/56-9/56 & 1/57-7/58 charts on file PSO
107.2		Pohakuloa (5700)	Parker Ranch	(19 47)	(155 36)	(5700)	1914	(1915)	Monthly	[2](6)14-15		Location uncertain
110		Puunoho 1	" "	19 58.6	155 30.8	4210	1936		After Rain	(6) (7)48-	(3)53- (4)36-52	
110.1		Puunoho Paddock	" "	19 59	155 31	4200	1914	1917	Monthly		(1)	Pub. as Punohu Paddock
111	1065	Halepohaku*	State Div. of Forestry	19 45.8	155 27.5	9220	1939		"	(1)42- (6)	(1)39-52 (2)	
111.1		Hopukane Springs	State Div. of Forestry	19 47.2	155 30.2	10380	1952		"	(6),(7)	(3)	Hopukani Springs
112		Hanaipoe	Parker Ranch	19 56.8	155 27.6	5120	1910		After Rain	[1](6) (7)48-	(3)53- (4)36-52 [1](6)	
113	8515	Puu Mali	Kukaiau Ranch	19 54.6	155 26.4	6960	1932		3 times monthly	[5](1)	(1)32-52 (2)	Puu Ulaula; reloc. 3/51 100' NE
113.1		Puuhala	" "	19 55	155 26	6500	1914	1918	Monthly		(1)	

* Also has other weather instrumentation - see same key number in Table Two. [1] Annual totals only through 1935. [2] Pub. in Water-Supply Paper 430. [3] Intermittent program of observations. [4] Surface observational forms WBAN 10A & 10B on file PSO, WB. [5] Pub. as Puu Ulaula through 1940.

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TABLE ONE (CONT.)

State Key No.	USWB Index No.	Station Name or Number	Maintained By	Geographic Coordinates Latitude ° '	Longitude ° '	Elev. (ft.)	Year Estab-lished	Year Discon-tinued	Frequency of Read-ing	Location of Data	Location of Summaries	Other Names Relocations Remarks
114	2141	Hope-A	Kukaiau Ranch	19 58.6	155 25.0	3980	1909		3 times monthly	(1)19-	(1)09-52 (2)	Hope-A Lwr; Hope-A Tanks
115	8710	Stone Corral	" "	19 56.8	155 25.1	5240	1902		3 times monthly	(1)14- [2](6)02-15	[1](1)14-52 (2)14-	Hope-A Upper; Hapea Mauka
116		Papa	" "	19 57.2	155 23.6	4750	1944		3 times monthly	(6) (7)48-	(3)48- (4)44-57	
117	1060	Halepiula	" "	19 55.9	155 23.6	5770	1914		3 times monthly	(1)19-	(1)14-52 (2)	
118	8780	Umikoa	" "	19 59.0	155 22.9	3420	1894		Daily	(1)19-	(1)94-52 (2)	Reloc. 3/55 approx. 40' SSE, reloc. 7/59 20' SSE
118.1		Field 127	Hamakua Mill	20 00.1	155 21.2	2180	1952		After Rain	(6)55- (7)59-	(3)55-	Data msg prior to 1955
118.2		Field 139	" "	20 01	155 22	1770	1951	1952	" "			Data msg; replaced by #118.1
120	8393	Puu Kihe	Kukaiau Ranch	19 53.9	155 23.7	7750	1903		3 times monthly	(1)19- [2](6)03-15	(1)15-52 (2)15-	
120.1		Puu Kea	" "	19 53.7	155 24.6	8540	1914	1932	Monthly	(1)23-	(1)14-18 (2)	
121		Iolehaehae Tanks	" "	19 54.6	155 21.7	6300	1933		3 times monthly	(6) (7)48-	(3)53- (4)33-57	
121.1		Kukaiau (7850)	Unknown	19 54	155 22	7850	1903	1905	Unknown		(1)	
122		Laaumaia	Parker Ranch	19 46.2	155 21.5	6580	1914	1947	After Rain	[3](6)	(4)36-47 [3](6)	
123	2238	Kaala	Kukaiau Ranch	19 55.5	155 21.4	5460	1913		3 times monthly	(1)19-	(1)14-52 (2)14-	Reloc. 4/56 60' SSW; reloc. circa 1958 125' SW; data msg prior to 1914
123.1		Keanakolu (5500)	S. Parker, Jr.	19 55	155 21	5500	1905	1914	Daily	(1)08-	(1)	
123.2		Kukaiau (5000)	Unknown	19 56	155 21	5000	1902	1905	"		(1)	
124	4096	Keanakolu*	State Div. of Forestry	19 55.2	155 20.5	5280	1929		Monthly	(1)42- (6)	(1)29-52 (2)	
124.1		Keanakolu (Parker Ranch)	Parker Ranch	19 55.1	155 20.3	5280	1914		After Rain	[3](6) (7)48-	(3)15- [3](6)	Possibly same as #123.1 - may have been reloc.
125		Hopuwai	" "	19 51.0	155 20.3	6425	1934	1947	" "	[3](6)	(4)36- [3](6)	
125.1	8175W	Puakala	W.H. Shipman	19 47.4	155 20.0	6300	1907		" "	(1)19-35 (6)48- (7)48-	(1)19-35 (3)52- (4)48-51	Pua Akala; data msg 1907-18 & 1936-47
125.2		Mauna Kea (5000)	U.S.G.S.	(19 47.2)	(155 17.3)	(5000)	1911	1913	Irreg.	[4](6)		
125.3		Mauna Kea (4500)	"	(19 47.0)	(155 16.4)	(4500)	1911	1913	"	[4](6)		
125.4		Mauna Kea (4000)	"	(19 46.7)	(155 15.4)	(4000)	1911	1913	"	[4](6)		
125.5		Mauna Kea (3500)	"	(19 46.5)	(155 14.2)	(3500)	1911	1913	"	[4](6)		
125.6		Mauna Kea (3000)	"	(19 46.3)	(155 12.8)	(3000)	1911	1913	"	[4](6)		
125.7		Mauna Kea (2650)	"	(19 46.0)	(155 11.8)	2650	1911	1913	"	[4](6)		
125.8		Mauna Kea (2000)	"	(19 45.7)	(155 10.2)	(2000)	1911	1913	"	[4](6)		
125.9		Mauna Kea (1500)	"	(19 45.3)	(155 09.2)	(1500)	1911	1913	"	[4](6)		

* Also has other weather instrumentation - see same key number in Table Two. [1] Pub. as Hope-A Upper 1914-18. [2] Pub. in Water-Supply Papers 318, 336, 373 & 430. [3] Annual totals only through 1935. [4] Pub. in Water-Supply Papers 318, 336 & 373.

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TABLE ONE (CONT.)

State Key No.	USWB Index No.	Station Name or Number	Maintained By	Geographic Coordinates Latitude ° '	Longitude ° '	Elev. (ft.)	Year Established	Year Discontinued	Frequency of Reading	Location of Data	Location of Summaries	Other Names Relocations Remarks
126	6175	Maulua	Kukaiau Ranch	19 53.5	155 18.6	5140	1918		Variable	(1)19-60 (6)48-	(1)19-52 (2)18-60 (3)48-	Maulua Makai
126.1		Maulua Mauka	" "	19 52.6	155 20.4	6180	1953		3 times monthly	(6),(7)	(3)	
127	8480W	Puu Loa	" "	19 59.2	155 20.0	2550	1918		Daily++	(1)19-26 (2)*** (7)48-	(1)19-26 (2)18-35 (3)53- (4)33-52	Data msg 1927-28
127.1		Humuula (3600)	State Div. of Forestry	19 57.1	155 18.9	3600	1950	1950	Monthly	(6),(7)	(3)	
127.2		Kukaiau (3400)	Unknown	19 59	155 20	3400	1895	1905	Unknown		(1)	
127.3		Keanakolu Trail	U.S.D.A. Fruit Fly Laboratory	19 58.1	155 22.1	3800	1951	1951	Weekly	(6)	(6)	
128	6725	Nauhi Gulch*	State Div. of Forestry	19 51.5	155 18.0	5160	1925	1953	Monthly	(1)	(1)25-52 (2)	
130		Ookala Mauka*	Laupahoehoe Sug.	19 59.2	155 17.7	1780	1928		After Rain	(3)*** (6) (7)48-	(3)50- (4)28-52	Ookala (1750); reloc. circa 1939 from 1750'
130.1		Field 6	" "	19 59.9	155 16.5	900	1951		" "	(6) (7)53-	(3)	
130.2		Field 39	" "	20 01.2	155 19.5	900	1951		" "	(6) (7)53-	(3)	
132		Kihalani*	" "	19 57.7	155 14.7	1500	1943		" "	(3)*** (6) (7)48-	(3)48- (4)43-57	
133		Papaaloa*	" "	19 58.8	155 13.4	290	1905		" "	(1)05-13 (3)*** (6) (7)48-	(1)05-13 (3)53- (4)05-52	Papaaloa Office
133.1		Laupahoehoe (10)	E.W. Barnard	19 59	155 14	10	1892	1897	Unknown		(1)	
133.2	5430W	Laupahoehoe	T.R. Rhea	20 00	155 15	30	1891	1928	Daily	(1)05-	(1)	Reloc. 10/24 from 110' elev.
134	5776	Makahanaloa 2	State Div. of Forestry	19 49.2	155 11.7	2675	1934	1953	Monthly	(1)42- (6)	(1)34-52 (2)	Makahanaloa Mauka
135	0910	Hakalau Mauka*	Hakalau Plant.	19 53.2	155 10.1	1150	1905		Daily	(1)	(1)05-52 (2)	
136		Honomu	State Div. of Forestry	19 50.5	155 09.8	1750	1926		Monthly	(6) (7)48-	(3)	
137	1701	Honohina*	Hakalau Plant.	19 55.5	155 09.4	300	1894		Daily	(1)05-	(1)94-52 (2)	Reloc. 5/57 350' WNW
137.1		Puuohua (Macey)	B.B. Macey	(19 55.6)	(155 11.8)	1050	1902	1905	Unknown		(1)	
137.2		Waikaumalo	" "	(19 56.3)	(155 10.0)	275	1905	1912	Daily	(1)	(1)	
138	1960	Honomu Mauka*	Pepeekeo Sugar	19 51.1	155 08.6	1100	1939		"	(1)	(1)39-52 (2)	
138.1		Honomu Mauka (1200)	" "	19 51	155 09	1200	1911	1938	"	(1)	[1](1)	Reloc. to #138
140	8018	Pepeekeo (A&F)	State Div. of Forestry	19 50.0	155 09.1	1550	1926		Monthly	(1)42- (6)	(1)26-52 (2)	
140.1	7721	Papaikou Mauka*	Onomea Sugar	19 47.4	155 08.5	1400	1913		Daily	(1)26-	(1)26-52 (2)26-	Data msg prior to 1926
140.2		Papaikou (A&F)	State Div. of Forestry	19 47.0	155 08.7	1425	1926	1927	Monthly	(6)	(6)	
141		Pepeekeo Mauka*	Pepeekeo Sugar	19 50.7	155 07.5	870	1947		After Rain	(3)52- (6) (7)49-	(3)53- (4)47-52	

* Also has other weather instrumentation - see same key number in Table Two. *** Current but original date unknown. ++ Except weekends.
[1] 1939-52 data pub. erroneously for this station - should be for #138.

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TABLE ONE (CONT.)

State Key No.	USWB Index No.	Station Name or Number	Maintained By	Geographic Coordinates Latitude ° '	Longitude ° '	Elev. (ft.)	Year Established	Discontinued	Frequency of Reading	Location of Data	Location of Summaries	Other Names Relocations Remarks
142	0905	Hakalau*	Hakalau Plant.	19 54.1	155 07.8	175	1892		Daily	(1)05-	(1)92-52 (2)	Reloc. 5/57 175' WSW
143	1955	Honomu Makai*	Pepeekeo Sugar	19 52.4	155 07.0	350	1921		"	(1)	(1)21-52 (2)	Honomu 2
144	8000	Pepeekeo Makai*	" "	19 50.8	155 05.3	100	1890		"	(1)05-	(1)90-52 (2)	Pepeekeo; reloc. 6/07 - dist.& dir. unkn
144.1	7711	Papaikou*	Onomea Sugar	19 47.2	155 05.7	200	1899		"	(1)05-	(1)99-52 (2)	Papaikou Makai; reloc. circa 10/33 from 250' elev. - dist.& dir. unkn
144.2		Honomu (300)	Honomu Sugar	19 52	155 07	300	1892	1899	Unknown		(1)	
144.3		Honomu (950)	" "	19 52	155 08	950	1892	1898	"		(1)	
144.4		Papaikou (Rogers)	W.H. Rogers	19 47	155 06	(350)	1886	1889	"		(1)	
144.5		Honomu Seaside*	Pepeekeo Sugar	19 52.1	155 06.1	130	1948		After Rain	(3)*** (6)	(3)53- (4)48-57	
144.6		Pepeekeo (Andrade)*	" "	19 50.4	155 06.7	650	1948		" "	(3)52- (6)	(3)52- (4)48-57	
144.7		Onomea	Onomea Sugar	19 49.1	155 06.2	460	1950	1950	" "	(6)		
144.8		Paukaa	" "	19 46.0	155 05.7	230	1950	1951	" "	(6)		
144.9		Mauna Kea (1000)	U.S.G.S.	(19 45.9)	(155 07.8)	(1000)	1911	1913	Irreg.	[1](6)		
145		Wainaku Camp 2	Hilo Sugar	19 44.7	155 06.6	500	1948		After Rain	(6),(7)	(3)	Ditchman's Stable
147		Beach	Kahua Ranch	20 04.6	155 51.7	10	1931		" "	(6) (7)48-	(3)53- (4)31-52	
147.1		Middle Pen	" "	20 06.2	155 50.1	1380	1931		" "	(6) (7)48-	(3)53- (4)31-52	
148		Kawaihae	" "	20 02.7	155 50.2	50	1937		" "	(6) (7)48-	(3)53- (4)37-52	
148.1		Puu Hanae	" "	20 03.6	155 48.6	1290	1936		" "	(6) (7)48-	(3)53- (4)37-52 (6)	Puu Kanae
148.2		Kawaihae (C. of E.)	U.S. Army Engineers	20 03	155 51	(10)	1957	1958	" "	(3)	(3)	
159	5720	Mahukona*	Agent, Mahukona Terminal	20 11.2	155 54.2	10	1912	1955	Daily	(1)	(1)12-52 (2)	Reloc. circa 7/48 approx. 300' N
159.1		Honoipu	Kahua Ranch	20 14.8	155 53.0	260	1942		After Rain	(6) (7)48-	(3)53- (4)42-57	
159.2	8830	Upolu Point*	U.S.C.G.	20 15.2	155 53.3	40	1956		4 times daily	(1)	(2)	
159.3		Station 23	Kohala Sugar	20 15.3	155 53.1	100	1948	1952	After Rain	(6)	(6)	Upolu 19
160		Station 3*	" "	20 15.5	155 52.5	200	1940		" "	(6) (7)48-	(3)53- (4)40-52	Upolu 5
160.1	8828	Upolu Pt Airport*	H.A.L.	20 16.1	155 51.6	90	(1939)	1957	Daily+	(1)49- [2](2)39-41	(2)49- (3)39-41	Suiter Fld
160.2		Station 28*	Kohala Sugar	20 14.7	155 52.5	430	1950	1957	After Rain	(6)	(3)	Upolu 21
161	8181W	Puakea	Parker Ranch	20 14.1	155 52.4	570	1902		" "	[3](1)05-34 [4](6)32- (7)48-	(1)02-34 (3)32-36, 53- (4)36-52	Puakea Ranch
162		Station 2*	Kohala Sugar	20 15.4	155 51.8	300	1941	1952	" "	(6) (7)48-	(4)	Upolu 7
162.1		Kokoiki	Kahua Ranch	20 14.6	155 51.4	570	1942		" "	(6) (7)48-	(3)53- (4)42-57	

* Also has other weather instrumentation - see same key number in Table Two. *** Current but original date unknown. + Beginning & ending of precipitation reported on WB Form WBAN-10 (CAA). [1] Pub. in Water-Supply Papers 318, 336 & 373. [2] Data taken from USAAF publication, "Weather Conditions in Hawaii" (The Air Corps Tactical School, Maxwell Field, Ala., 1942). [3] Pub. as Puakea Ranch. [4] Annual totals only through 1935.

TABLE ONE (CONT.)

State Key No.	USWB Index No.	Station Name or Number	Maintained By	Geographic Coordinates Latitude ° '	Longitude ° '	Elev. (ft.)	Year Established	Year Discontinued	Frequency of Reading	Location of Data	Location of Summaries	Other Names Relocations Remarks
162.2		Station 25	Kohala Sugar	20 14.5	155 50.8	625	1950		After Rain	(6)	(3)50-57 (6)	Camp 17
162.3		Waikane Reservoir**	" "	20 15.6	155 51.9	240						
163		Station 15*	" "	20 13.7	155 51.7	850	1925		" "	(3)*** (6) (7)48-	(3)25-42, 53- (4)25-52	Puakea Reservoir 2
164		Station 9*	" "	20 12.8	155 50.4	1390	1912		" "	[1](6)12-15, 25- (7)48-	(3)25-42, 53- (4)25-52	Kaauhuhu Homesteads; no data 1916-24
165		Station 4*	" "	20 15.4	155 50.6	300	1940		" "	(6) (7)48-	(3)53- (4)40-52	Upolu 13
166		Station 14	" "	20 15.9	155 50.5	125	1925		" "	(3)*** (6) (7)48-	(3)25-42, 53- (4)25-52	Hoea Mill
167	8548	Puuokumau*	" "	20 11.9	155 50.2	1800	1925		Daily	(1)42- (6)	(1)28-52 (2)28- (3)25-27	Puuokumau Reservoir; Station 10
168	1339	Hawi*	" "	20 14.4	155 49.8	600	1888		Daily++	(1)05- (6)	[2](1)99-52 (2)99- (3)88-99	Hawi Mill; Station 1; reloc. 1937 from mill
168.1		Station 26*	" "	20 14.0	155 49.0	650	1950	1952	After Rain	(6)	(3)	Honomakau 3
168.2		Hawi Reservoir**	" "	20 14.0	155 49.7	670						
170		Puuhue	Parker Ranch	20 10.4	155 50.1	1890	1932		" "	[3](6) (7)48-	(3)32-36, 53- (4)36-52	
171		Station 5*	Kohala Sugar	20 14.8	155 49.6	425	1940	1952	" "	(6) (7)48-	(4)	Alaalae 2 & 3
172		Station 17	" "	20 12.6	155 50.2	1450	1923	1949	" "	(3)42- (6) (7)48-	(4)	Nunulu Nui; Union Uka; data msg 1/31-9/37
173		Station 16	" "	20 14.4	155 49.1	450	1892		" "	(3)*** (6)96- (7)48-	(3)92-42, 53- (4)96-52	Union Office; data msg 1895, 1911-22, 1931-36
174		Station 6*	" "	20 15.3	155 48.6	190	1923		" "	(6) (7)48-	(3)53- (4)23-30, 38-52 (6)	Union Station
174.1		Kohala Parsonage	Rev. A. Ostrom	20 15	155 49	350	1890	1900	Unknown		(1)	
174.2		Station 27**	Kohala Sugar	20 14.7	155 47.7	275						
175.1	4680	Kohala Mission*	C.S. Bond Est. (Kohala Sugar)	20 13.7	155 47.7	535	1890		Daily	(1)05-	(1)90-52 (2)	Station 22; reloc. 1/05 from 585' elev.
176	4675	Kohala Maulili*	Kohala Sugar	20 12.7	155 47.3	960	1908		Daily++	(1)	(1)08-52 (2)	Kohala Mauka; Station 11
176.1	4250	Kehena Reservoir	Kohala Ditch	20 10.0	155 48.2	2520	1942		" "	(1)	(1)42-52 (2)	
176.2	1602W	Homestead Plantation	H.C. Austin	(20 12.7)	(155 49.8)	1350	1919	1929	Daily	(1)	(1)	
177		Station 8*	Kohala Sugar	20 14.6	155 46.5	100	1941	1952	After Rain	(6) (7)48-	(4)	Kohala Old RR Station
178		Headquarters	Kahua Ranch	20 07.6	155 47.4	3240	1931		" "	(6) (7)48-	(3)53- (4)31-52	Kahua Ranch
178.1		Station 21*	Kohala Sugar	20 11.7	155 48.5	1850	1946	1952	" "	(6) (7)48-	(4)	Iole 10
178.2		Twin Reservoir	" "	20 11.2	155 47.4	1880	1940		" "	(6) (7)48-	(3)53- (4)40-52	Station 29

* Also has other weather instrumentation - see same key number in Table Two. ** Non-rainfall instrumentation only - see same key number in Table Two. *** Current but original date unknown. ++ Except weekends. [1] 1912-15 data pub. in Water Supply Papers 336, 373 & 430 - gage maintained by W.S. May. [2] 1899-1918 data pub. as Hawi Mill. [3] Annual totals only through 1935.

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TABLE ONE (CONT.)

State Key No.	USWB Index No.	Station Name or Number	Maintained By	Geographic Coordinates Latitude ° '	Longitude ° '	Elev. (ft.)	Year Established	Year Discontinued	Frequency of Reading	Location of Data	Location of Summaries	Other Names Relocations Remarks
178.3		Kalope	Kahua Ranch	20 04.7	155 46.0	3400	1937		After Rain	(6) (7)48-	(3)53- (4)37-52	
178.4		Halawa	Mrs. W.H. Patton	20 14	155 46	450	1904	1908	Daily	(1)05-	(1)	
178.5		Puuhue Ranch	S.P. Woods	(20 10.5)	(155 50.2)	1845	1902	1907	"	(1)05-	(1)	Possibly same loc. as #170
178.6		Waikanonoula	Kahua Ranch	20 07.7	155 46.7	3830	1957		After Rain	(6),(7)	(3)	
179	6806	Niulii*	Kohala Sugar	20 13.5	155 44.8	75	1884		Daily++	(1)05- (6)	(1)85-52 (2)85- (3)84	Station 13; reloc. 1/20 from 200' - dist. & dir. unkn
179.1	4670	Kohala*	" "	20 14.0	155 46.9	310	1889		" "	(1)05- (6)	[1](1)96-52 (2)96- (3)89-95	Kohala Mill; Station 7; reloc. 1/02 from 234' elev., reloc. 1/16 from 270' elev., reloc. 8/54 300' ENE
179.2		Station 24**	" "	20 12.9	155 44.8	400						
180.1		Station 18	" "	20 13.1	155 46.1	425	1933		After Rain	(3)*** (6) (7)48-	(3)33-42, 53- (4)33-52	Halawa Mill
181[2]	5792	Makapala Nursery	State Div. of Forestry	20 11.2	155 45.9	1620	1925	1952	Twice monthly	(1)	(1)	Station 20; reported by Kohala Sugar
181.1	1864	Honokane	Kohala Ditch	20 08.9	155 44.0	800	1905		Daily	(1)	(1)05-52 (2)	Reloc. 4/20 approx. 500' N - old elev. 1042'
181.2	4245	Kehena	" "	20 07.3	155 45.1	3840	1912		Wkly-irreg.	(1)42- (6)	(1)19-52 (2)	Puu Lalau[3]
182		Station 12*	Kohala Sugar	20 11.9	155 45.2	1000	1942		After Rain	(3)*** (6) (7)48-	(3)53- (4)42-52	Niulii 15; Waiapuka; Weir
182.1	0190	Awini	Kohala Ditch	20 10.3	155 42.9	1870	1905		Wkly-irreg.	(1)	(1)05-52 (2)	Reloc. 5/55 40 yds W
183		Station 19	Kohala Sugar	20 11.9	155 45.0	940	1933	1952	After Rain	(6) (7)48-	(4)	Niulii Mauka
183.1		Puu Ahia	Kahua Ranch	20 05.7	155 44.9	4360	1937		" "	(6)42- (7)48-	(3)53- (4)42-57	Data msg prior to 1942
183.2	0450	East Honokane	Kohala Ditch	20 06.6	155 42.8	4240	1925		Wkly-irreg.	(1)42- (6)	(1)25-52 (2)	
183.3		Station 30	Kohala Sugar	20 12.4	155 45.6	790	1954		After Rain	(6),(7)	(3)	Niulii 23
183.4		Kawaihae Uka Mauka	Parker Ranch	20 05	155 44	(4500)	1923	1928	Unknown	[4](6)	[4](6)	
183.5		Kohala Mountains Summit	Haw'n Irrig.	20 05.3	155 43.2	5505	1917	(1947)	Annually		(3)17-41 (4)17-47	
184		Kawaihae Uka 2	Parker Ranch	20 03.3	155 45.8	2640	1923		After Rain	[4](6) (7)48-	(3)53- (4)36-52 [4](6)	Kawaihae Uka Makai; data msg 1928-34
184.1	3465	Kaukini	Kohala Ditch	20 09.7	155 41.7	2040	1924		Wkly-	(1)42- (6)	(1)24-52 (2)	
184.2		Awini Ranch	Awini Ranch	20 11	155 43	1100	1896	1905	Unknown	(1)05	(1)	Data msg 6/01-2/03
185	3775W	Kawainui Upper	Haw'n Irrig.	20 05.2	155 40.8	4080	1907	1948	After Rain	(1)19- (6)	(1)	
185.1		Kaimu	U.S.G.S.	20 08.4	155 39.7	2440	1939	1952	Several times yrly	(6) (7)48-	(3)48- (6)	
185.2		Waiilikahi	"	20 07.5	155 39.8	2970	1952	1960	Several times yrly	(6) (7)	(3)	Waiilikahi Cabin

* Also has other weather instrumentation - see same key number in Table Two. ** Non-rainfall instrumentation only - see same key number in Table Two. *** Current but original date unknown. ++ Except weekends. [1] 1896-1918 data pub. as Kohala Mill. [2] Same station shown also as #177A in "A Key to Rain Gages in Hawaii" (1948). [3] Also reported by Kahua Ranch as Puu Lalau. [4] Annual totals only through 1935.

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TABLE ONE (CONT.)

State Key No.	USWB Index No.	Station Name or Number	Maintained By	Geographic Coordinates Latitude °	'	Longitude °	'	Elev. (ft.)	Year Established	Year Discontinued	Frequency of Reading	Location of Data	Location of Summaries	Other Names Relocations Remarks
185.3		Honokane (Parker)	Parker Ranch	20	08	155	38	(750)	1936	1938	Unknown		(4)	
187.1		Waimanu	U.S.G.S.	(20	07.0)	(155	39.6)	(3220)	1939	1952	Several times yrly	(6) (7)48-	(3)48- (6)	
187.2		Waiilikahi Mauka	"	20	06.7	155	40.7	3850	1952	1960	Several times yrly	(6),(7)	(3)	
190	0137W	Alakahi Upper	Haw'n Irrig.	20	04.3	155	40.3	3875	1913	1948	Daily	(1)19- (6)	[1](1)	Alakahi Waipio Upper
191	3078	Kamuela Airport*	H.A.L.	20	00.0	155	40.6	2665	1953		Daily+	(1)	(2)	Reloc. 4/59 150' SSW
192	9557	Waimea*	L.F. Pinho	20	01.7	155	39.7	2750	1891	1950	Daily	(1)05-	[2](1)	Kamuela; Central; reloc. circa 7/09 - dist & dir. unknown
192.1	8383	Puu Kapu	State Div. of Forestry	20	02.0	155	38.6	2870	1932		Monthly	(1)42- (6)	(1)32-52 (2)	
192.2	3077	Kamuela*	Parker Ranch	20	01.4	155	40.2	2670	1909		Daily	(1)50- [3](6) (7)48-	(2)50- (4)36-52 [3](6)	Office; replaced #192 10/50 as official WB station
192.3		Puu Pa	" "	20	00	155	43	(2300)	1936	1945	After Rain	(6)	(4)	Range
192.4		Holoholoku 1	" "	19	58.6	155	38.3	3265	1936	1943	" "	(6)	(4)	
192.5		Puu Pa (2400)	" "	19	58.7	155	41.7	2400	1952		" "	(6)	(6)	
192.6		Waimea Reservoir	H.W.A.	20	03.1	155	37.5	2970	1957		Weekly	(3) (7)60-	(3)	
193	3770	Kawainui Lower	Haw'n Irrig.	20	05.2	155	38.8	1080	1910		Wkly-irreg.	(1)19- (6)	(1)10-52 (2)	
194	0134	Alakahi Lower	" "	20	04.6	155	38.5	840	1910		Weekly[4]	(1)19- (6)	[5](1)10-52 (2)	Alakahi Waipio Lower
194.1		Waikoloa	U.S.G.S.	20	03.3	155	40.0	3580	1947		Several times yrly	(6) (7)48-	(3)48- (6)	
194.2		Kohala Mountain Pipe Line	Parker Ranch	20	05	155	39	3700	1914	1917	Monthly	(6)	(1)	
195	4690W	Koiawe Upper	Haw'n Irrig.	20	03.3	155	38.8	3350	1912	1948	Wkly-irreg.	(1)19- (6)	(1)	
196	4685	Koiawe Lower	" "	20	04.7	155	37.9	720	1910		Weekly	(1)19- (6)	(1)10-52 (2)	
197	9510	Waima Lower	" "	20	04.1	155	37.6	980	1913		"	(1)19- (6)	[6](1)13-52 (2)	Waima
198		Muliwai	State Div. of Forestry	20	08.1	155	37.0	1290	1931		4 times yrly	(6) (7)48-	(3)31-41, 52- (4)31-51	
199	4928	Kukuihaele (HIC)*	Honokaa Sugar	20	07.1	155	35.1	980	1909		Daily	(1)11- (6)	(1)11-52 (2)	Kukuihaele Main Weir
200	8236W	Puu Alala	Haw'n Irrig.	20	03.7	155	37.3	2880	1915	1948	"	(1)	(1)	
201	8385W	Puu Kapu Reservoir 3	" "	20	02.4	155	36.1	2820	1921	1948	"	(1)42- (6)	(1)	
202		Lalakea	Honokaa Sugar	20	05.5	155	35.4	1955	1910		After Rain	(6)17- (7)48-	(3)17-25, 53- (4)26-52 (6)17-	Data msg prior to 1917
202.1		Field 114*	" "	20	06.1	155	34.4	1565	1952		Weekly	(6),(7)	(3)	Fld 14
203		Second Gate	Parker Ranch	20	02.5	155	35.4	2860	1910		After Rain	[3](6)19- (7)48-	(3)10-36, 53- [3](4)36-52 (6)19-	Reloc. circa 1954 approx. 2 mi. W from 2750' elev.

* Also has other weather instrumentation - see same key number in Table Two. + Beginning & ending of precipitation reported on WB Form WBAN-10 (CAA).
[1] 1913-18 data pub. as Alakahi Waipio Upper. [2] 1919-50 data pub. as Kamuela; data from 10/50 to 12/52 are for #192.2. [3] Annual totals only through 1935. [4] Daily prior to 1958. [5] 1910-18 data pub. as Alakahi Waipio Lower. [6] 1913-18 data pub. as Waima.

State Key No.	USWB Index No.	Station Name or Number	Maintained By	Geographic Coordinates Latitude ° '	Longitude ° '	Elev. (ft.)	Year Established	Year Discontinued	Frequency of Reading	Location of Data	Location of Summaries	Other Names Relocations Remarks
204		Puu Kikoni	Parker Ranch	20 00.5	155 34.8	3120	1919	1949	After Rain	[1](6) (7)48-	(3)20-36 (4)36- [1](6)	
205		Kukuihaele Village	Honokaa Sugar	20 07.2	155 34.2	750	1890		Daily	(6)91- (7)48-	(3)91-	Data msg prior to 1891 & 1911-16
206	4938	Kukuihaele Mill*	" "	20 07.7	155 33.7	280	1891		Daily++	(1)05- (6)	[2](1)91-52 (2)	Kukuihaele
207	0033W	Ahualoa Homesteads	Haw'n Irrig.	20 03.3	155 30.8	2550	1912	1948	Daily	(1)19- (6)	(1)	
210		Kapulena	Honokaa Sugar	20 06.2	155 31.3	920	1890		After Rain	(6)17- (7)48-	(3)17-25, 53- (4)26-57	Data msg prior to 1917
211		Reservoir 13	" "	20 05.3	155 31.0	1515	1910		" "	[3](6)13- (7)48-	(3)17-25, 53- (4)26-57	Data msg prior to 1913 & 1914-16
212		Kamaka Gate	Parker Ranch	20 03.1	155 31.0	2530	1910		" "	[1](6) (7)48-	(3)10-36, 53- (4)36-52	First Gate
213		Kawela	Honokaa Sugar	20 06.5	155 30.0	390	1890		" "	(6)17- (7)48-	(3)17-25, 53- (4)26-57	Data msg prior to 1917
214	0840	Haina*	" "	20 05.7	155 28.1	460	1885 1955		Daily++ Recorder	[4](1)05- (6)	[5](1)90-52 (2)90- (3)85-86	Honokaa; data msg 11/86-12/89; charts on file PSO
215	1856	Honokaa Town*	" "	20 05.0	155 28.2	1070	1910		Daily++	(1)19- [3](6)13-	(1)19-52 (2)19- (3)17-18	Honokaa Village; data msg prior to 1913 & 1914-16; reloc. circa 6/46 1 mi. NW
215.1[6]	1850W	Honokaa Mauka	Haw'n Tel. Co.	20 04.6	155 27.7	1180	1902	1939	Daily	(1)05-	(1)	Honokaa Central
215.2		Honokaa (Richart)	Miss N. Richart	20 05	155 30	1900	1897	1901	Unknown		(1)	
216		Paauhau (Parker)	Parker Ranch	20 03.5	155 28.0	1860	1909		After Rain	[1](6) (7)48-	(3)10-36, 53- (4)36-52 [1](6)	
216.1		Paauhau (Grieg)	T.W. Grieg	20 04	155 27	1200	1890	1901	Unknown		(1)	
216.2		Paauhau Mauka (1150)	Paauhau Sugar	(20 04.3)	(155 26.9)	1150	1905	1910	Daily	(1)	(1)	
216.3		Airport*	" "	20 02.7	155 27.0	2075	1955		"	(3)59- (6) (7)57-	(3)	
217	7204	Paauhau*	" "	20 05.2	155 26.4	400	1890		"	(1)05- (6)	(1)90-52 (2)	Reloc. circa 3/07 from 300' elev. - dist & dir. unkn
217.1		Paauhau Mill**	" "	20 05.4	155 26.3	200						
218		Hamakua Mill	Hamakua Mill	20 03.2	155 21.7	180	1900		Daily++	(3)*** (6)48- (7)48-	(3)53- (4)36-52	Warehouse; data msg prior to 1936
218.1		Paauilo (Crusher)	" "	20 04	155 23	270	1915	1923	Unknown	(1)	(1)15-18 (2)	
218.2		Field 28	" "	20 03.8	155 23.4	345	1948		After Rain	(6) (7)59-	(3)	1952-54 data msg
220		Paauhau Mauka*	Paauhau Sugar	20 04.3	155 26.8	1160	1917		Daily	(3)*** (6)39- (7)50-	(3)53- (4)39-52	Mgr's House; data msg prior to 1939
220.1		Kalopa (900)	" "	(20 03.3)	(155 24.4)	900	1906	1913	After Rain	(1)	(1)	

* Also has other weather instrumentation - see same key number in Table Two. ** Non-rainfall instrumentation only - see same key number in Table Two. *** Current but original date unknown. ++ Except weekends. [1] Annual totals only through 1935. [2] 1891-1918 data pub. as Kukuihaele. [3] 1913 data pub. in Water-Supply Paper 373. [4] Pub. as Honokaa through 6/49. [5] 1890-1918 data pub. erroneously as Honokua. [6] Pub. as 215.3 in HWA publication, "Rainfall of the Hawaiian Islands" (1959).

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TABLE ONE (CONT.)

State Key No.	USWB Index No.	Station Name or Number	Maintained By	Geographic Coordinates Latitude ° '	Longitude ° '	Elev. (ft.)	Year Established	Year Discontinued	Frequency of Reading	Location of Data	Location of Summaries	Other Names Relocations Remarks
220.2		Pohakea	C.R. Blacow	(20 02.4)	(155 25.2)	1600	1904	1907	Daily	(1)05-	(1)	
220.3		Kalopa	Paauhau Sugar	20 03.3	155 24.5	900	1955		"	(2)59- (6) (7)57-	(3)	Possibly same location as #220.1
220.4		Field 14*	" "	20 04.6	155 25.2	430	1960		Recorder	(6)	(3)	Charts on file plant.
221	7312	Paauilo*	Hamakua Mill	20 02.5	155 22.3	800	1903		Daily	(1)05-	(1)03-52 (2)	Reloc. circa 1936 from 400' - dist. & dir. unknown
221.1		Field 9*	" "	20 01.8	155 21.8	1000	1950		After Rain	(6)55- (7)59-	(3)55-	Data msg prior to 1955
221.2		Field 30	" "	20 02.2	155 23.7	1455	1950		" "	(6)55- (7)59-	(3)55-	Data msg prior to 1955
221.3		Hamakua Makai Variety Station*	H.S.P.A.	20 02.7	155 22.6	750	1934		Daily	(4) (7)52-	(3)48-	
222	4815	Kukaiau	Hamakua Mill	20 01.8	155 20.7	840	1895		"	(1)21-	[1](1)95-52 (2)	Kukaiau Plant. Co. Office; Kukaiau Store; reloc. circa 1/20 from 800' elev.; reloc. 3/47 from 950' elev. - dist. & dir. unkn; reloc. circa 5/53 - dist. & dir. unknown
222.1		Coffee Plantation	Kukaiau Ranch	20 01	155 21	1600	1895	1905	Unknown		(1)	
222.2		Kainehe*	C.R. Blacow	(20 01.6)	(155 21.8)	1475	1894	1907	Daily	(1)06-	(1)	
222.3	4775W	Korean Camp	Hamakua Mill	(20 00.7)	(155 20.8)	1750	1920	1938	After Rain	(1)	(1)	
222.4		Paauilo (Notley)	C. Notley	20 03	155 22	250	1892	1902	Unknown		(1)	
222.5	8705W	Station 39	Hamakua Mill	(20 00.2)	(155 19.8)	1900	1920	1938	After Rain	(1)	(1)	
222.6	8718W	Sugahara Camp	" "	(20 02.5)	(155 20.4)	260	1892	1941	" "	(1)05-	[2](1)	Kukaiau Mill
222.7		Field 116	" "	20 01.9	155 19.7	440	1951		" "	(6)55- (7)59-	(3)	Kukaiau Makai; data msg prior to 1955
223	7131	Ookala*	Laupahoehoe Sug.	20 01.0	155 17.2	430	1891		Daily	(1)05-	(1)91-52 (2)	

* Also has other weather instrumentation - see same key number in Table Two. [1] 1895-1918 data pub. as Kukaiau Plantation Co. Office.
[2] 1892-1918 data pub. as Kukaiau Mill.

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TABLE TWO

State Key No.	Element(s) Observed	Year Established	Year Discontinued	Frequency of Reading	Location of Tabular Data	Location of Summaries	Location of Charts	Instrumentation, Relocations, Remarks
1	a	1936	1946	Daily	(2)			
	d	1924	1947	"	(2)			No wind data 1926-35
1.1	a,c,d,e	(1940)	(1941)	oooo	[1](2) 40-41			Also psychrometer
1.2	a,c,d,e	1959		Daily	(2)			Also psychrometer
2.3	a	1908	1912	"	(1)	(2)		
6.1	a	1905	1909	"	(1)			
7	a	1916	1953	"	(1)	(2)		
11	a	1952		Recorder	(6)	(6)	(6)	Hygrothermograph only; actinometer;
	c	1952		"			(6)	soil thermograph; 1953-55 soil temp. data
	g	1953		"	(6)	(6)	(6)	for field 20 at 2150' elev.
	h	1953		"	(3)53-55 (6)	(6)	(6)	
11.1	g	1948	1950	Weekly	(4)			Photochemical integrator
12.3	a	1955		Recorder	(6)	(6)	(6)	Hygrothermograph only; soil thermograph;
	c	1955		"			(6)	soil temp. data for Fld 58 & Fld 64 makai
	h	1953	1953	"	(3),(6)		(6)	at 2000' elev.
12.4	a	1954	1955	"	(6)	(6)	(6)	Hygrothermograph only
	c	1954	1955	"			(6)	
12.5	a	1953	1954	"	(6)	(6)	(6)	Hygrothermograph only
	c	1953	1954	"			(6)	
12.6	h	1953	1954	"	(3),(6)		(6)	Soil thermograph
13	a	1954		Weekly or twice wkly	(6)	(6)		
	g	1948	1950	Weekly	(4)			Photochemical integrator - located approx. 500' WNW of rain gage
13.1	a	1954		Weekly or twice wkly	(6)	(6)		
13.3	a,g	1954		Recorder	(6)	(6)	(6)	Hygrothermograph only; actinometer
	c	1954		"			(6)	
	h	1954		"	(6)	(3)54-55 (6)	(6)	Soil thermograph
13.5	a	1952	1953	"	(6)	(6)	(6)	Hygrothermograph only
	c	1952	1953	"			(6)	
13.6	h	1952	1953	"	(3),(6)		(6)	Soil thermograph
14	a	1900		Daily++	(1)54- (2)51- (4)50- (6)	(2)51- (6)		Also hygrothermograph
		1948		Recorder			(6)	
	b	1911	1911	Irregular	(3),[2](6)	(3)		
	c	1948		Recorder			(6)	
	e	1948		Daily++	(2), (6)			
14.4	g	1948	1950	Weekly	(4)			Photochemical integrator
17	a	1950		Daily	(2)55- (6)	(6)		
	h	1955		Recorder	(6)	(6)	(6)	Soil thermograph
20.2	a,c,g,h	1955		"	(6)	(6)	(6)	Hygrothermograph only; actinometer; soil thermograph
20.3	a,c,g	1952	1955	"	(6)	(6)	(6)	Hygrothermograph only; actinometer
	h	1952	1955	"	(6)	(3)53- (6)	(6)	Soil thermograph
21	a	1905		Daily	(1)	(2),(4)		
	b,e	1931	1945	"	(1)	(2)30-44 (3)		Anemometer at pan level - total miles of wind only

Key to symbols for column headed Element(s) Observed:
a - air temperature (maximum & minimum thermometers unless otherwise noted); b - evaporation; c - relative humidity; d - wind direction; e - wind speed f - sunshine duration; g - solar radiation; h - soil temperature.
See Table One for key to number symbols in columns headed Location of Tabular Data, Location of Summaries & Location of Charts.

++ Except weekends. oooo Military station taking more than one observation daily. [1] 1/40-12/41 military surface observational forms on file NWRC.
[2] Published in Water-Supply Paper 318.

TABLE TWO (CONT.)

State Key No.	Element(s) Observed	Year Estab-lished	Year Discon-tinued	Frequency of Reading	Location of Tabular Data	Location of Summaries	Location of Charts	Instrumentation, Relocations, Remarks
21.1	a,c,g	1952		Recorder	(6)	(6)	(6)	Hygrothermograph only; actinometer
	h	1952		"	(6)	(3)53-55 (6)	(6)	Soil thermograph
22.1	a	1952		Daily	(6)	(6)		Also hygrothermograph
		1955		Recorder			(6)	
	c	1955		"			(6)	
	g,h	1955		"	(6)	(6)	(6)	Actinometer; soil thermograph
24.1	a	1956		Daily	(1)	(2)57-		
26	a	1938		Weekly	(2)*** [1](6)41-			Also thermograph
		1938	1945	Recorder			[1](6)	
	g	1938	(1942)	"		(3)38-42		Black bulb thermograph
26.2	a	1954		Daily	(2)56-			Data msg prior to 1956
	d,e	1959		"	(2)			
28	a	1938		"	(2)*** [1](6)	(3)38-42		Also thermograph
		1938	1945	Recorder			[1](6)	
	g	1939	(1942)	"		(3)39-42		Black bulb thermograph
28.1	a	1918	1938	Daily	(1)	(2)		
28.2	a,c	1955		"	(2)			Also hygrometer
29.1	a	1893	1915	"		[2](1)93-99 (2)05-		Data msg 1900-04
35.2	a	1949	1955	"	(2),(6)	(6)		
35.5	a,c,g	1952	1955	Recorder	(6)	(6)	(6)	Hygrothermograph only; actinometer
	h	1952	1955	"	(6)	(3)53- (6)	(6)	Soil thermograph
35.6	a	1955		Daily	(2),(6)	(6)		
36.1	a,h	1955		Recorder	(6)	(6)	(6)	Thermograph only; soil thermograph
38.1	a	1951	1955	"		(3)51-53	(2)	Hygrothermograph only
	c	1951	1955	"			(2)	
	h	1951	1954	"			(2)	Soil thermograph
39[3]	a	1956		Daily-R	(1)	(2)	(2)	Also hygrothermograph & psychrometer
	c	1956		" "	(2)		(2)	
	d,e	1956		" "[4]	(2)		(2)	Esterline-Angus recorder
	f,g	1957		Recorder	(2)		(2)	Sunshine switch; pyrheliometer
39.1	a	1951	1956	Daily-R	(1)	[5](2)	(2)	Also hygrothermograph & psychrometer; msg
	c	1951	1956	" "	(2)		(2)	periods between 1951 & 1954
39.2	a	1951	1957	Recorder	(2)		(2)	Also hygrothermograph & psychrometer;
	c	1951	1957	"			(2)	sunshine switch; Esterline-Angus recorder;
	d,e	1951	1953	"			(2)	many msg periods; no temp. & humidity data
	f	1951	1953	"			(2)	after 1953 except 9/56-1/57
44.1	a	1951	1952	"		(3)	(2)	Hygrothermograph only
	c	1951	1952	"		(6)	(2)	
45.2	a	1951	1956	"		(3)51-53	(2)	Hygrothermograph only
	c	1951	1956	"		(6)51-53	(2)	
45.3	a	1952	1956	"		(3)52-53	(2)	Hygrothermograph only - inoperative part
	c	1952	1956	"		(6)52-53	(2)	of period
51	a	1952		Daily	(6),(7)			
51.3	a	1912	1921	"		(2)		
51.4	a	1893	1916	"	(1)05-	[2](1)93 (2)05-		No data 1894-1904
51.7	a	1952	1956	Recorder		(3)52-53	(2)	Hygrothermograph only
	c	1952	1956	"		(6)52-53	(2)	
51.8	a	1949	1958	"		(3)49-53	(2)49-55 (6)56-	Hygrothermograph only
	c	1949	1958	"		(6)49-53	(2)49-55 (6)56-	
	h	1954	1956	"	(6)		(2)	Soil thermograph

*** Current but original date unknown. [1] On file Plant Physiology Dept., University of Hawaii. [2] Pub. in Lyons & Lydecker volume "Weather Record for Honolulu and Hawaiian Islands". [3] Also short hygrothermograph records 6/54-9/54 for following elevations on Mauna Loa slope: 1800, 3700, 5735, 7030, 9300 & 10020 - charts on file PSO, WB. [4] No charts prior to 1957. [5] 1/55-4/56 data included with data for #39.

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TABLE TWO (CONT.)

State Key No.	Element(s) Observed	Year Established	Year Discontinued	Frequency of Reading	Location of Tabular Data	Location of Summaries	Location of Charts	Instrumentation, Relocations, Remarks
54	a	1913		Daily	[1](1)	(2)		Also thermograph
		1913	1938	Recorder			(3)	
54.2	a	1916	1928	Daily	(1)	(2)		
54.3	a	1951	1959	"	(4),(6)	(6)		
65	a	1921		"	(2)*** (4)50- (6)	(6)		
65.2	a	1951	1959	"	(2),(4) (6)	(6)		
65.3	a	1951	1959	"	(2),(4) (6)	(6)		
66	a	1934	1955	"	(2)50- (4)50- (6)	(6)		
67	a	1921	1955	"	(2)*** (4)50- (6)	(6)		
67.2	a	1907	1917	"	(1)	(2)		
67.3	a	1917	1927	"	(1)	(2)		
67.6	a	1950	1956	Recorder		(3)50-53	(2)	Hygrothermograph only; 1954-56 charts for
	c	1950	1956	"		(6)50-53	(2)	elev. of 50'
67.7	a	1956	1957	"		[2](6)	(6)	Hygrothermograph only
	c,g	1956	1957	"			(6)	Actinometer
68.3	a	1949		oo	(1)	(2)		Psychrometer only from 1/57
	c,d,e	1949		oo	(2)			
68.4	a,c	1956	1959	Daily	[3](2)			Also psychrometer; data msg 1957-58; wind
	d,e	1956	1960	Twice daily	[3](2)			readings at Kona Inn 1956, at Kailua-Kona pier 1959-60
68.5	a	1893	1928	Daily	(1)05-	[4](1)93 (2)05-		No data 1894-1904
69.11	a	1893	(1895)	"		[4](1)93-95		
71	a	1928		Monthly	(6)			
73	a	1959		"	(7)			
73.2	a	1931		Daily	(1)	(2)		Also hygrothermograph; also thermograph;
		1937	1945	Recorder			[2](6)	actinometer from 1957; black bulb thermograph;
		1954		"	[5](6)		(2)54-57 [5](6)57-	no solar radiation data 1943-56
	c	1954		"			[5](6)	
	g	1938		"	(3)38-42	(3)38-42	[2](6)57-	
73.4	a,c	1958		Weekly-R	(3)		(3)	Also hygrothermograph; also psychrometer
	b	1958		Weekly	(3)	(3)		Anemometer at pan level - total miles of
	e	1958		"	(3)			wind only
73.6	a	1954		Daily	(6)	(6)		
76	a	1951		Daily-R	(1)55- (2)	(2)55-	(2)56-	Also hygrothermograph; also psychrometer; msg periods between 1951 & 1955
	c	1951		" "			(2)56-	
77	a	1960		Weekly-R	(6),(7)	(6)	(3)	Also thermograph
79	a	1951		Daily	(1)	(2)		Also hygrothermograph; data msg 7/53-12/56;
		1951		Recorder			(2)	charts msg for periods between 1951 & 1956
	c	1951		"			(2)	

*** Current but original date unknown. oo Airport station taking more than one observation daily - reported on WB Form WBAN-10 (CAA).
[1] 1913-48 data pub. as Volcano Observatory. [2] On file Plant Physiology Dept., University of Hawaii. [3] 2/56-12/56 & 1/59-4/59 temp. & humidity data, 2/56-12/56 wind data reported on WB Form 1130 on file PSO, WB & FRC, Honolulu. [4] Pub. in Lyons & Lydecker volume, "Weather Record for Honolulu and Hawaiian Islands". [5] On file U.S.D.A. Fruit Fly Laboratory, Hilo, Hawaii.

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TABLE TWO (CONT.)

State Key No.	Element(s) Observed	Year Established	Year Discontinued	Frequency of Reading	Location of Tabular Data	Location of Summaries	Location of Charts	Instrumentation, Relocations, Remarks
80	a	1936[1]		Daily	(6)			
80.1	a	1905	1913	"	(1)	(2)		Data msg 1906-07
85	a	1946	1952	Monthly	(6)			Also hygrothermograph
		1949		Recorder	[2](6)	(3)49-53	(2)49-56 [2](6)56-	
	c	1949		"		[2](6)49-53	(2)49-56 [2](6)56-	
86.1	a	1903		Daily	(1)05-	[3](1)03 (2)05-		Data msg 1904
	e	1933	1942	"	(1)	(2)		
86.5	a	1949	1951	Recorder		(3)	(2)50-	Hygrothermograph only
	c	1949	1951	"		(6)	(2)50-	
87	a	1943		o	(1)49- [4](2)	(2)49-		Also hygrothermograph; also psychrometer
		(1949)	1953	Recorder			[5](2)49-53	
	b	1955		Daily	(1)	(3)		Also anemometer at pan level
	c	1943		o	(2)43-47, 49-	(1)50- (2)44-45, 47		
		(1949)	1953	Recorder			[5](2)49-53	
	d,e	1943		o	(2)43-45, 48-	(1)50-		
	f	1951		Daily	(2)	(2)		Sunshine switch
89.8	a	1950	1951	Recorder			(3)	Thermograph only
90	a	1949		Daily++	(4)			
90.1	a	1934		" "	(4)			
	f	1944		Recorder			(4)	Blueprint recorder
	g	1953		"	(4)		(4)	Actinometer
91	a	1914		Daily	(1)40- (6)21-	(2)14- (6)21-		Also thermograph; data doubtful prior to 1934
		1952		Recorder			(6)	
91.4	a	1951		Daily	(4),(6)	(6)		
92	a	1905		"	(1)	(2)08-		Also thermograph
		1952	1957	Recorder		(4)	(6)	
92.1	a	1905	1912	Daily	(1)	(2)		
92.2	a	1949		Daily++	(4)50- (6)			
	g	1950		Weekly	(4)			Photochemical integrator
93	a	1905	1960	Daily	(1)05-23 (2)*** (4)50- (6)08-	(2)05-23 (3)05-39 (6)08-		
93.2	a	1957	1960	ooo	(1)	(2)		Also psychrometer
	c,d,e	1957	1960	ooo	[6](2)			
94.2	a	1906	1939	Daily	(1)08-	(2)		Pub. as Ponahawai through 7/26; data msg 1937-38
100.1	a	1949		Recorder		(3)49-50	(2)50 (6)59-	Hygrothermograph only; no data 1951-58
	c	1949		"		(6)	(2)50 (6)59-	
102.1	a	1932		Monthly	(6)			
107	a	1938		"	(6)	(2)55-60		Also hygrothermograph
		1949	1951	Recorder		(3)	(2)50-	
	c	1949	1951	"		[2](6)	(2)50-	
107.1	a,c,d,e	1956[7]		oooo	(2)56			Also psychrometer
111	a	1939		Monthly	(6)			Also hygrothermograph
		1950	1951	Recorder		(3)50-51	(2)	
	c	1950	1951	"		[2](6)50-51	(2)	

*** Current but original date unknown. ++ Except weekends. o Weather Bureau first order station taking 24 hourly observations daily - reported on WB Forms WBAN-10 & 10A. ooo Coast Guard station taking more than one observation daily - reported on WB Form 610-7. oooo Military station taking more than one observation daily - reported on WB Forms WBAN-10A & 10B. [1] Probably earlier - data may be obtained from ranch diaries. [2] On file U.S.D.A. Fruit Fly Laboratory. [3] Pub. in Lyons & Lydecker volume, "Weather Record for Honolulu and Hawaiian Islands". [4] Military surface observational forms for 4/43-12/43 & 5/44-12/45 on file NWRC, WB forms 1009 for 1943-48 on file FRC, Honolulu. [5] On file NWRC. [6] Surface observational forms on file PSO, WB and FRC, Honolulu. [7] Intermittent program of observations.

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TABLE TWO (CONT.)

State Key No.	Element(s) Observed	Year Established	Year Discontinued	Frequency of Reading	Location of Tabular Data	Location of Summaries	Location of Charts	Instrumentation, Relocations, Remarks
124	a	1929		Monthly	(6)			Also hygrothermograph
		1949	1950	Recorder		(3)49-50	(2)	
	c	1949	1950	"		[1](6)49-50	(2)	
128	a	1925	1953	Monthly	(6)			
130	a	1951[2]		Daily	(2),(6)	(6)51-		
132	a	1950		"	(2),(4),(6)	(6)		
133	a	1950		"	(2),(4),(6)	(6)		
135	a	1900		"	(2)*** (4)50- (6)08-			Data msg prior to 1908
137	a	1954		"	(2),(4),(6)			
138	a	1939		"	(1)40- (6)	(2)		
	g	1948		Weekly	(4)			Photochemical integrator
140.1	a	1938		Daily	(2)*** (4)50- (6)	(6)		
141	a	1947		"	(2)*** (4),(6)			
142	a	1905		"	(1)19-39 (2)*** (4)50- (6)08-	(2)05-39 (4)05-39, 50-		
143	a	1947		"	(2)*** (4),(6)			
144	a	1893		"	(1)05-	[3](1)93-03 (2)05- (4)05-		Data msg 1904
	d,e	1958[4]		"	(6)			Wind equipment at factory - 50' elev.
	g	1948		Weekly	(4)			Photochemical integrator
144.1	a	1934		Daily	(2)*** (4)50- (6)	(6)		
144.5	a	1948		Recorder	(2)*** (4)		(4)	Thermograph only
	g	1948		Weekly	(4)			Photochemical integrator; also actinometer but
	h	1953	1957	Recorder			(6)	inoperative; soil thermograph
144.6	a	1948		Daily	(2)*** (4),(6)			
159	a	1912	1955	"	(1)	(2)		Reloc. circa 7/48 approx. 150' N
159.2	a	1956		ooo	(1)	(2)		Also psychrometer
	c,d,e	1956		ooo	[5](2)			
160	a	1940		Daily	(6)	(6)		
	b	1960		Weekly	(6)	(4)		
	g	1948	1950	"	(4)			Photochemical integrator
160.1	a	(1939)		oo	(1)49-55 [6](2)40-41, 46-47, 49-	(2)49-55		Psychrometer only from 1/57; data msg prior to 1940
	c	(1939)		oo	[6](2)40-41, 46-47, 49-			
	d,e	(1939)		oo	[6](2)40-41, 49-			
160.2	a	1952	1953	Recorder	(6)	(6)	(6)	Hygrothermograph only
	c	1952	1953	"			(6)	
162	a	1941	1952	Daily	(6)	(6)		
162.3	g	1948	1948	Weekly	(4)			Photochemical integrator

*** Current but original date unknown. oo Airport station taking more than one observation daily - reported on WB Form WBAN-10 (CAA). ooo Coast Guard station taking more than one observation daily - reported on WB Form 610-7. [1] Data on file U.S.D.A. Fruit Fly Laboratory. [2] Established sometime prior to 1936 but data lost. [3] Pub. in Lyons & Lydecker volume, "Weather Record for Honolulu and Hawaiian Islands". [4] Established earlier but data lost. [5] Surface observational forms on file PSO, WB and FRC, Honolulu. [6] 8/40-10/40 & 3/41-4/41 military surface observational forms on file NWRC.

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TABLE TWO (CONT.)

State Key No.	Element(s) Observed	Year Estab-lished	Year Discon-tinued	Frequency of Reading	Location of Tabular Data	Location of Summaries	Location of Charts	Instrumentation, Relocations, Remarks
163	a	1948	1949	Daily	(6)	(6)		
164	a	1942		"	(2)*** (6)	(6)		
165	a	1940		"	(6)	(6)		
167	a	1942		"	(6)	(6)		
168	a	1925		Daily++	(2)*** (6)	(6)		
	d,e	1917		" "	(6)59-	(1)17-38 (2)17-38		Wind readings discontinued 1938, resumed 1959
	g	1948		Weekly	(4)			Photochemical integrator
168.1	a	1950	1952	Recorder	(6)	(6)	(3)50-51 (6)51-52	Hygrothermograph only
	c	1950	1952	"			(3)50-51 (6)51-52	
168.2	g	1948	1948	Weekly	(4)			Photochemical integrator
171	a	1940	1952	Daily	(6)	(6)		
174	a	1940		"	(6)	(6)		
	b	1960		Weekly	(6)	(4)		
174.2	a	1950	1951	Recorder	(6)	(6)	(3)	Hygrothermograph only
	c	1950	1951	"			(3)	
175.1	a	1893		Daily	(1)05- (6)	(2)05- [1](1)93-03		Data msg 1904
176	a	1942		Daily++	(2)*** (6)	(6)		
	g	1948	1950	Weekly	(4)			Photochemical integrator
177	a	1941	1952	Daily	(6)	(6)		
178.1	a	1948	1949	Recorder	(6)	(6)	(6)	Hygrothermograph only
	c	1948	1949	"			(6)	
	g	1948	1950	Weekly	(4)			Photochemical integrator
179	a	1905		Daily++	(1)	(2),(4)		
	g	1948	1950	Weekly	(4)			Photochemical integrator
179.1	a	1905		Daily++	(1)	(2),(4)		
179.2	a	1948	1949	Recorder	(6)	(6)	(6)	Hygrothermograph only
	c	1948	1949	"			(6)	
182	a	1942		Daily	(2)*** (6)	(6)		
191	a	1953		oo	(1)	(2)		Also psychrometer
	c,d,e	1953		oo	[2](2)			
192	a	1899	1950	Daily	(1)07-	[1](1)99-03 (2)07-49		Data msg 1904-06
192.2	a	1936[3]		"	(1)50- (6)	(2)51-		
199	a	(1931)		"	(2)*** (4)50- (6)50-	(3)36-42 (6)50-		Data msg prior to 1936 & 1943-49
202.1	a,c	1957		Recorder			(2)	Hygrothermograph only
206	a	1916		Daily++	(1)	(2),(4)		
214	a	1905		" "	[4](1)	(2),(4)		Also thermograph
		1953		Recorder			(2)	
	d,e,f	1920	1951	Daily++	(6)21-	(2)20-43 (6)21-		
215	a	1950[5]		" "	(2),(4),(6)	(6)		

*** Current but original date unknown. ++ Except weekends. oo Airport station taking more than one observation daily - reported on WB Form WBAN-10 (CAA). [1] Pub. in Lyons & Lydecker volume, "Weather Record for Honolulu and Hawaiian Islands". [2] Surface observational forms on file PSO, WB and FRC, Honolulu. [3] Probably earlier - data may be obtained from ranch diaries. [4] Pub. as Honokaa through 6/49. [5] Established earlier but data lost.

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TABLE TWO (CONT.)

State Key No.	Element(s) Observed	Year Estab-lished	Year Discon-tinued	Frequency of Reading	Location of Tabular Data	Location of Summaries	Location of Charts	Instrumentation, Relocations, Remarks
216.3	a	1959		Daily	(2),(6)			
217	a	1921		"	(2)*** (6)	(2)21-24		
217.1	a	1956	1958	Daily++	(6)			
	d,e	1956		" "	(6)			
220	a	1959		Daily	(2),(6)			
220.4	b	1960		Weekly	(6)	(4)		
	d,e	1960		Recorder	(6)	(4)	(6)	Esterline-Angus recorder
221	a	1938		Daily	(2)*** (6)			
	d,e	1959		"	(6)			Taylor windscope
221.1	a	1950	1951	"	(4),(6)			
221.3	a	1934		"	(4),(6)			
	f	1945		Recorder	(4)		(4)	Blueprint recorder
222.2	a	1906	1907	Daily		(2)		
223	a	1905		"	(1)	(2),(4)		
	d,e	1953		"	1(2)*** (6)			Equipment located on top garage

*** Current but original date unknown. ++ Except weekends. 1 On file PSO, WB & FRC.

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ISLAND: MAUI

TABLE ONE

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248		Kanahena	Ulupalakua Ranch	20 37.8	156 24.9	850	1925		Twice wkly	(6) (7)48-	(3)36-43, 52- (4)25-51	
248.1		Papaka	" "	20 37.1	156 24.1	980	1955		Twice wkly	(6),(7)	(3)	
250	8760	Ulupalakua Ranch	" "	20 39.0	156 24.0	1900	1905		Daily	[1](1)05-10, 55- (6)22-	[1](1)05-10, 55- (3)24-43, 52- (4)22-51	Raymond Ranch; no data 1911-21
252		Auwahi	" "	20 37.4	156 19.9	2060	1925		Twice wkly	(6) (7)48-	(3)36-43, 52- (4)25-51	Auwahi II Paddock
254		Kahikimui	" "	20 37.4	156 16.3	1400	1925		Twice wkly	(6) (7)48-	(3)36-43, 52- (4)25-51	
254.1		Manukahi	" "	20 38.6	156 17.6	3300	1955		Twice wkly	(6),(7)	(3)	Manukani
256	9765	Waiopai Ranch	Haleakala Ranch	20 38.0	156 12.4	220	1920		Twice wkly	(1)	[2](1)20-52 (2)	Replaced #256.2
256.1		Puu Kao	" "	20 40.2	156 13.3	3800	1953		Monthly	(6),(7)	(3)	
256.2		Waiopai Ranch (620)	" "	20 38.1	156 12.9	620	1897	1919	Daily	(1)05-	(1)	
257		Nuu	Kaupo Ranch	20 37.8	156 10.6	25	1930		After Rain	(6)50- (7)59-	(3)50-57, 59-	Data msg prior to 1950
257.1		Nakula	" "	20 39.5	156 11.7	1570	1958		" "	(6) (7)59-	(3)	
257.2		Keeki	" "	20 39.0	156 10.4	850	1958		" "	(6) (7)59-	(3)	
257.3		Red Tank	" "	20 38.2	156 08.9	515	1958		" "	(6) (7)59-	(3)	
258	4634	Kipahulu*	Ulupalakua Ranch	20 39.4	156 03.5	260	1909		Daily	(1)	(1)09-52 (2)	
258.1		Kipahulu (Gross)	Kipahulu Sugar	(20 39.5)	(156 03.5)	310	1898	1906	"	(1)05-	(1)	
258.2		Kaupo (Mokulau)	J.S. Garnett	(20 38.8)	(156 06.6)	285	1897	1905	"	(1)05	(1)	
258.3		Kaupo (500)	U.S.D.A. Fruit Fly Laboratory	(20 38.9)	(156 06.6)	500	1954		Irregular	(6)	(3)54-59 (6)	
259		Kaupo Ranch House	Kaupo Ranch	20 39.1	156 08.3	1020	1930		After Rain	(6)50- (7)59-	(3)50-57, 59-	Kaupo; Naholoku (1020); data msg prior to 1950
259.1		Naholoku	" "	20 39.9	156 08.5	2300	1958		" "	(6) (7)59-	(3)	
259.2		Paneleihulu	" "	20 40.7	156 08.3	3570	1960		" "	(6),(7)		Naholoku Mauka
259.3		Paliku Cabin	U.S.G.S.	20 43.2	156 08.6	6360	1941	(1941)	Irregular		(3)41	
260		Keawakapu	Haleakala Ranch	20 43.2	156 25.8	370	1948		After Rain	(6),(7)	(3)	
260.1		Kamaole Height	C.W. Bram	(20 42.7)	(156 26.6)	128	1947	1955	" "	(3)	(3)	
260.2		Keawakapu (Corell)	A.L. Corell	20 41.9	156 26.8	20	1951		Daily	(3)51-57 (6) (7)59-	(3)	
261		Puu Loa	Ulupalakua Ranch	20 41.0	156 24.8	1100	1925		Twice wkly	(6)27- (7)48-	(3)36-43, 52- (4)27-51	Data msg prior to 1927
261.1		Wailea*	Bartholomew Associates	20 41.3	156 26.8	5	1959		Weekly	(3),(6)	(6)	Read by HC&S

Key to symbols for columns headed Location of Data and Location of Summaries:
(1) USWB-published; (2) USWB-not published; (3) HWA; (4) HSPA; (5) PRI; (6) on file with observer (company, agency, individual, etc.) maintaining and/or reading instrument; (7) PRI-HSPA reporting form in use from Jan., 1948, & available at both HWA and HSPA.

* Also has other weather instrumentation - see same key number in Table Two. [1] 1905-10 data pub. as Raymond Ranch. [2] 1897-1919 data are for #256.2.

ISLAND: MAUI

TABLE ONE (CONT.)

State Key No.	USWB Index No.	Station Name or Number	Maintained By	Geographic Coordinates Latitude ° '	Longitude ° '	Elev. (ft.)	Year Established	Discontinued	Frequency of Reading	Location of Data	Location of Summaries	Other Names Relocations Remarks
261.2		Wailea Mauka*	Bartholomew Associates	20 41.6	156 26.5	105	1959		Weekly	(6)	(6)	Read by HC&S
261.3		Twin Gates	Kaonoulu Ranch	20 45.5	156 22.8	1310	1955		After Rain	(6) (7)59-	(3)	
262		Kamaole Pen	Haleakala Ranch	(20 42.2)	(156 23.5)	1720	1945		" "	(6) (7)48-	(3)48- (4)45-51	
263		Kamaole Ah Mee	" "	(20 42.1)	(156 23.2)	1980	1936		" "	(6) (7)48-	(3)36-43, 52- (4)36-51	Kamaole Makai
264		Waihou	Ulupalakua Ranch	20 40.1	156 22.2	3600	1930		Twice wkly	(6)34- (7)48-	(3)36-43, 52- (4)34-51	Data msg prior to 1934
265		Kamaole Mauka	Haleakala Ranch	20 42.2	156 22.0	2690	1936		After Rain	(6) (7)48-	(3)36-43, 52- (4)36-51	
267	5006	Kula Sanatorium*	Kula Sanatorium	20 42.2	156 21.5	3005	1916		Daily	(1)	(1)16-52 (2)	
267.1		Kula Cabin	Bd of A. & F.	20 41.5	156 20.3	5240	1955		Monthly	(6),(7)[1]	(3)	
267.2		Polipoli Spring	" " "	20 40.9	156 19.9	6150	1955		"	(6),(7)[1]	(3)	
267.3		Kula House	Kaonoulu Ranch	20 44.0	156 20.3	3090	1955		After Rain	(6) (7)59-	(3)	
267.4		Kaonoulu*	C.M. Cooke III	20 44.1	156 20.2	3150	1957		Daily	(6) (7)60-	(3)	Waiakoa (Cooke)
267.5		Kula Farm**	U.S.D.A. Fruit Fly Laboratory	20 42.6	156 21.6	2850						
280		Hahalawe	U.S.G.S.	20 40.8	156 02.8	885	1930		3 or 4 times yrly	(6) (7)48-	(3)	Kahalawe
281	1148	Hanahuli	George Butler	20 41.5	156 01.2	380	1947		Daily	(1)	(1)47-52 (2)	Reloc. 7/57 from 325' elev. 1/4 mi. SE
282[2]	1100	Hamoa	Harold Ashworth	20 42.9	155 59.8	105	1895	1949	"	(1)	[3](1)	Reciprocity Mill; no data 5/02-9/36
296	7059	Olowalu	Pioneer Mill	20 48.7	156 37.5	5	1916		After Rain	(1)	(1)16-52 (2)	Reloc. circa 1933 200 yds SE; reloc. early 1959 150' NW
296.1		Field 12*	Pioneer Mill	20 48.9	156 37.3	25	1950		" "	(6) (7)60-	(6)	
296.2		Olowalu (Haneburg)	A. Haneburg	(20 48.8)	(156 37.5)	15	1891	1899	Unknown		(1)	
301	8750	Ukumehame	Pioneer Mill	20 48.4	156 35.4	75	1929		Daily++	(1)42- (6)	(1)29-52 (2)	
307	8577	Reservoir 9*	Wailuku Sugar	20 49.3	156 31.0	300	1915	1953	" "	(1)16-	(1)19-52 (2)16- (3)	Reloc. 7/47 from Reservoir 8 1 mi. ENE
307.1		Puuhele	" "	(20 48.3)	(156 30.6)	90	1913	1932	After Rain	(1)16-22 (6)	(1)16-18 (2)16-22 (6)	Maalaea 1913-22; no data 1923-26
307.2	8060	Pohakea Bridge*	" "	20 49.0	156 30.6	165	1953		Daily	(1)	(2)	Fld 99; replaced #307
310		Village 7*	H. C. & S.	20 48.9	156 29.9	85	1900		"	(6)10- (7)48-	(1)10-18, 32-35 (3)31-36, 52- (6)10-	Camp 7; Maalaea; Fld 913; data msg prior to 1910; also gage since 1954 at evap. pan site
310.1		Field 906*	H.S.P.A.	20 49.5	156 30.0	160	1957		Recorder	(4)	(4)	Charts on file HSPA; gage maint. by HC&S

* Also has other weather instrumentation - see same key number in Table Two. ** Non-rainfall instrumentation only - see same key number in Table Two. ++ Except weekends. [1] On monthly forms only through 1958. [2] Shown as 281.1 in "Rainfall of the Hawaiian Islands" (1959).
[3] 1895-1902 data pub. as Reciprocity Mill.

TABLE ONE (CONT.)

State Key No.	USWB Index No.	Station Name or Number	Maintained By	Geographic Coordinates Latitude °	'	Longitude °	'	Elev. (ft.)	Year Established	Year Discontinued	Frequency of Reading	Location of Data	Location of Summaries	Other Names Relocations Remarks
311	4489	Kihei*	H. C. & S.	20	47.3	156	27.2	85	1903		Daily	(1)05-10, 43- (6)03-10, 29-	(1)03-10, 31-52 (2)03-10, 31- (6)03-10, 29-	Kihei Village 1; Fld 817; data msg 1/11-10/29; 1903-10 station 3/8 mi. SW at 60'; reloc. 1941 approx. 1 mi. SE of Fld P
311.1		Field 908	"	20	48.3	156	28.2	20	1951		After Rain	(6),(7)	(3)	
311.2		Kihei (USDA)**	U.S.D.A. Fruit Fly Laboratory	(20	47.1)	(156	27.5)	(40)						
312	8547	Puunene Airport*	F.A.A.	20	49.9	156	27.7	130	1939	1958	Daily+	(1)49-	(2)49- (4)47-51	Data msg prior to 1947
312.1		Airport Village	H. C. & S.	20	49.5	156	27.5	125	1949		Daily	(6),(7)	(3)	
313	0260	Camp K-3*	"	20	48.8	156	26.2	270	1922		"	(1)43- (6)	(1)25-52 (2)25- (6)	Kihei Camp 3
313.1		Field 815*	"	20	49.1	156	26.2	285	1954	1960	Weekly	(6)	(4)	
314		Field 408	"	20	49.2	156	24.4	530	1940		Daily	(6) (7)48-	(3)52- (6)	Station 8
315	8275	Pulehu	"	20	49.6	156	24.5	465	1925		"	(1)38- (6)	(1)25-52 (2)	Reloc. 3/59 200' N
316		Field 405*	"	20	49.6	156	23.7	665	1940		"	(6) (7)48-	(3)52- (6)	Station 6; charts on file HC&S; also gage at evap. pan site from 1954
									1957		Recorder			
316.1		Field 506	"	20	50.3	156	24.3	455	1953			(6),(7)	(3)	
316.2		Field 405 (HSPA)**	H.S.P.A.	20	49.6	156	23.7	670						
317		Field 401	H. C. & S.	20	49.0	156	23.1	825	1940		Daily	(6) (7)48-	(3)52- (6)	Station 7
317.1		Field 408 M.A.S.I.*	H.S.P.A.	20	48.9	156	23.4	780	1958		Daily-R	(6)	(4)	Read by HC&S; charts on file HC&S
318		Waiakoa	Haleakala Ranch	20	46.8	156	22.7	1125	1937		After Rain	(6) (7)48-	(3)37-42, 52- (4)37-57	Waiakoa Makai
318.1		Field 150	Maui Pine	(20	46.4)	(156	21.9)	(1540)	(1933)	(1935)	" "		(4)33-35	
320		Gage 22	Libby	20	49.4	156	19.9	1850	1934		" "	(6) (7)49-	(3)52- (6)	Fld 228; data msg 1939-44; Fld 230 prior to 7/55 at 1250' elev.
320.1		Field 47	"	20	49.8	156	21.5	1100	1934	1937	" "		(3)	
320.2		Gage 27	"	20	49.2	156	19.3	2040	1949		" "	(6),(7)	(3)	Fld 227 (upper part)
321		Puu Ka Kae	Haleakala Ranch	20	47.6	156	21.4	1600	1946		" "	(6) (7)48-	(3)48- (6)	
321.1		Field 60	Maui Pine	(20	49.0)	(156	21.7)	(1210)	1928	1938	" "		[1](6)	
321.2		Field 58	" "	(20	48.6)	(156	20.4)	(1860)	1933	1936	" "		(4)	
321.3		Omaopio	Haw'n Pine	(20	48.5)	(156	21.2)	(1550)	1935	(1935)	" "		(3)35	
322		Erehwon Makai	Ulupalakua Ranch	20	46.8	156	20.9	1840	1930		Twice weekly	(6) (7)48-	(3)36-43, 52- (4)30-57	
322.1		Field 100	Maui Pine	(20	47.7)	(156	22.1)	(1280)	1933	1939	After Rain		(4)	
323		Garcia	Haleakala Ranch	20	47.0	156	19.7	2490	1946		" "	(6) (7)48-	(3)48- (4)46-57	
323.1		Field W	Maui Pine	(20	48.0)	(156	19.7)	(2300)	1933	1945	" "		(4)	
323.2		Kula Heights	Ken Willey	20	47.3	156	19.4	2520	1950		Daily	(6) (7)51-	(3)51-	Reported by HC&S

* Also has other weather instrumentation - see same key number in Table Two. ** Non-rainfall instrumentation only - see same key number in Table Two. + Beginning & ending of precipitation reported on WB Form WBAN-10 (CAA). [1] On file EMI.

TABLE ONE (CONT.)

State Key No.	USWB Index No.	Station Name or Number	Maintained By	Geographic Coordinates Latitude ° '	Longitude ° '	Elev. (ft.)	Year Established	Year Discontinued	Frequency of Reading	Location of Data	Location of Summaries	Other Names Relocations Remarks
324		Erehwon Mauka	Ulupalakua Ranch	20 45.4	156 18.6	3750	1930		Daily	(6) (7)48-	(3)36-43, 52- (4)30-57	Isobe
324.1		Kula (Waiakoa)	F.G. Correa	(20 44.8)	(156 20.4)	2700	1901	1907	"	(1)05-	(1)	
324.2		Kula*	U.S.D.A. Fruit Fly Laboratory	20 45.4	156 18.7	3750	1949	1956	After Rain	(6)	(3)	Kula Insectory
324.3		Kula (Lightner)*	U.S.D.A. Fruit Fly Laboratory	20 44.6	156 19.2	3650	1949	1950	Weekly	(6)49		Data msg 1950
325		Field 50	Maui Pine	20 48.8	156 19.8	1960	1933		After Rain	(6) (7)48-	(3)52- (4)33-57	Kula
325.1		Kalialinui	Haleakala Ranch	20 48.6	156 20.2	1950	1913		" "	(6) (7)49-	(3)	Omaopio 1913-15; data msg 1916-47
326		Nolle-Smith	Mrs. C. Nolle-Smith	20 45.8	156 18.8	3440	1948	1949	Daily	(7)	(3)	
327		Field X	Maui Pine	20 48.3	156 19.1	2620	1933		After Rain	(6) (7)48-	(3)52- (4)33-57	
327.1		Kula Camp	" "	20 48.5	156 19.6	2200	(1927)	(1938)	Unknown		(3)27-38	
328	5001	Kula (Erehwon)	M. Isobe	20 45.3	156 18.4	3850	1890	1953	Daily	(1)05-	(1)90-52 (2)	
328.1		5000 Road*	U.H. Exp. Sta.	20 45.6	156 17.0	5220	1957		Weekly	(6)	(6)	
328.2		Haleakala (5500)*	U.S.D.A. Fruit Fly Laboratory	20 45.5	156 16.8	5500	1952	1955	"		(3)52-53	Data msg 1954-55
329		Olinda Nursery	Bd of A. & F.	20 48.3	156 17.0	3770	1937		Daily	(6) [1](7)49-	(3)	
329.1		Olinda (3500)*	U.H. Exp. Sta.	20 48.7	156 17.1	3520	1931		Monthly	(6)37- (7)50, 57-	(3)	
330		Alelani	Haleakala Ranch	20 47.0	156 18.1	3500	1900		After Rain	(6) (7)48-	(3)00-13, 36-42, 52- (4)36-57	Cornland 1900-12[2]; no data 1913-35
330.2		Kula Lodge	F.L. James	20 46.8	156 18.6	3210	1958		" "	(6)		
331		Mountain	Haleakala Ranch	20 47.1	156 15.5	5500	1946		Monthly	(6)47- (7)48-	(3)48- (4)46-51	
331.1		5000 Trail*	U.H. Exp. Sta.	20 47.4	156 16.1	4900	1957	1959	Weekly	(6)	(6)	
331.2		Mountain Paddock	Unknown	(20 46.9)	(156 15.7)	(5500)	1931	(1937)	Unknown		(3)31-37	
332	7040	Olinda	Maui County Water	20 48.1	156 16.6	4125	1910		After Rain	(1)19-	(1)10-52 (2)	Olinda 1; Olinda Reservoir; data msg 1938-42
333	8744	Ukulele	Haleakala Ranch	20 47.7	156 15.3	5230	1904		Monthly	(1)05- (6)	(1)04-52 (2)	
334		Olinda 2	Maui County Water	20 48.5	156 15.6	4210	1938		After Rain	(7)48-	(3)48-	Data msg prior to 1948
335		Intake	Haleakala Ranch	20 47.7	156 14.2	5250	1934		4 times yearly	(6)	[3](3)34-38, 52- (4)38-52	
335.1		Haleakala Ranch (4900)	" "	20 48.1	156 14.5	4960	1934	1940	Unknown	(6)	(3)34-37 (6)	Haleakala Ranch Pipe Line; read by EMI
336	9335	Waikamoi Dam*	Maui County Water	20 48.6	156 14.0	4320	1910		Monthly	(1)19-	(1)10-52 (2)	Waikamoi Gulch; Waiakamoi Dam; Waiakamoi Gulch
336.1		Opana	East Maui Irrig.	(20 48.9)	(156 14.7)	4175	1938	1942	After Rain	(6)	(6)	
338	1004	Haleakala Ranger Station*	Hawaii Nat. Pk	20 45.7	156 14.9	7030	1939		Daily	(1)	(1)39-52 (2)	

* Also has other weather instrumentation - see same key number in Table Two. [1] On monthly forms only through 1958. [2] Separate number assigned to Cornland (330.1) in "Rainfall of the Hawaiian Islands" (1959). [3] Ann. totals only 1934-37.

TABLE ONE (CONT.)

State Key No.	USWB Index No.	Station Name or Number	Maintained By	Geographic Coordinates Latitude ° '	Longitude ° '	Elev. (ft.)	Year Established	Year Discontinued	Frequency of Reading	Location of Data	Location of Summaries	Other Names Relocations Remarks
338.1		Honomanu Gulch Upper	E.M.I.	20 45.6	156 13.7	7550	1939	1943	After Rain	(1)	(2)	Honomanu (7550); pub. in annual CD only
338.2		Waikamoi (6725)	Bd of A. & F.	20 46.3	156 14.1	6725	1938 1952	1942	" " Recorder	(6) [1](7)52-54, 59-	(3)38-57, 59- (6)52-	Waiakamoi (6725); maint. by Hal. R. 1938-42; no data 1943-51; charts on file Bd of A&F
338.3	0992W	Haleakala*	U.S.N.	(20 43.0)	(156 15.2)	9750	1935	1944	Daily	(1)	(1)	Maint. by Hawaii Nat. Pk 1935-43
338.4[2]	1008	Haleakala Summit*	Smithsonian Institute	20 42.6	156 15.6	10025	1957		Daily-R	(1)	(2)	Satellite Haleakala; reloc. 11/59 SSW 900'; charts on file FSO
338.5	4725	Kole Kole*	Grote Reber	20 42.6	156 15.5	10020	1952	1958	Daily	(1)	(2)	
338.7		Haleakala (9200)*	U.S.D.A. Fruit Fly Laboratory	20 44.3	156 14.4	9200	1950	1951	Weekly		(3)	
340		Waikamoi (5800)	Haleakala Ranch	20 47.2	156 13.8	5760	1933	1955	Monthly	(6)	(3)	Waiakamoi (5800)
341	1935	Honomanu Gulch	" "	20 46.8	156 13.6	6150	1933		"	(1)39- (6)	(1)33-52 (2)	
341.1		Waikamoi Runoff 1	Bd of A. & F.	20 46.7	156 14.1	6350	1949		Weekly	(6) [3](7)49-54	(3)49-57 (6)	Waiakamoi Runoff 1; reloc. 4/51 from 6600' elev.
341.2		Waikamoi Runoff 2	" " "	20 46.0	156 13.8	7080	1949		"	(6) [3](7)49-54	(3)49-57 (6)	Waiakamoi Runoff 2; reloc. 4/51 from 6300' elev.
341.3		Waikamoi Runoff 3	" " "	20 46.6	156 14.6	6520	1951		"	(6) [3](7)51-54	(3)51-57 (6)	Waiakamoi Runoff 3
341.4		Waikamoi Runoff 4	" " "	20 46.9	156 14.6	6290	1951		"	(6) [3](7)51-54	(3)51-57 (6)	Waiakamoi Runoff 4
341.5		7000 Elevation*	U.H. Exp. Sta.	20 46.3	156 14.4	6720	1956		"	(6)	(6)	
341.6		Puu Nianiau	Unknown	(20 46.7)	(156 14.6)	(6400)	1931	(1937)	Unknown		(3)31-37	
342		Puohakamoa	Maui County Water	20 48.4	156 13.4	4300	1911		Weekly	(1)12-29 [5](6)11-13	(1)12-24 (2)12-29 (3)12-29, 48- (4)12-30, 49-51	Haipuena[4]; data msg 1931-37 & 1942-48
343	8336	Puohakamoa 2	E.M.I.	20 49.8	156 12.9	2980	1922		Monthly	(1)23- (6)	[6](1)29-52 (2)	Puohakamoa Mauka
344	1940	West Honomanu	"	20 49.4	156 12.7	3000	1923		"	(1)23-49 (3)50-	[7](1)29-49 (2)23-49 (6)	Pub. as Honomanu Mauka; disc. 1949, resumed 1950 as West Honomanu[8]
345[9]	0452	East Honomanu	"	20 48.9	156 12.1	3200	1950		"	(1)	(2)	
346	4091	Keanae*	"	20 49.8	156 10.0	970	1904 1949		Weekly Recorder[10]	(1)05-	(1)04-52 (2)	Charts from 1955 on file EMI, earlier charts msg
346.1		Keanae Valley	"	(20 49.3)	(156 11.0)	1960	1938	1943	After Rain	(6)	(6)	
348		Wailua Iki 6	"	20 47.8	156 09.2	2630	1937		4 times yearly	(6) (7)60-	(3)38-57 (6)	
348.1		Wailua Iki 7	"	20 47.7	156 09.2	2660[11]	1949	1960	4 times yearly	(6)	(6)	Wailua Iki Mauka
348.2		Wailua Iki 5	"	20 48.5	156 08.7	2000	1949		4 times yearly	(6) (7)60-	(6)	Wailua Iki Makai

* Also has other weather instrumentation - see same key number in Table Two. [1] On monthly forms only. [2] Shown as 338.6 under name Satellite Haleakala in "Rainfall of the Hawaiian Islands" (1959). [3] Mo. amts on annual forms only. [4] Shown as 336.1 in "Rainfall of the Hawaiian Islands" (1959). [5] Pub. in Water-Supply Papers 336 & 373. [6] 1919-24 data pub. as Puohakamoa 2 - should be listed for #342. [7] Includes 1950 but 1950 data are for #345. [8] 344.2 in "Rainfall of the Hawaiian Islands" (1959). [9] 344.1 in "Rainfall of the Hawaiian Islands" (1959). [10] Weekly computations only. [11] Probably reloc. from 3000' but year unknown - data suspect.

TABLE ONE (CONT.)

State Key No.	USWB Index No.	Station Name or Number	Maintained By	Geographic Coordinates Latitude ° '	Longitude ° '	Elev. (ft.)	Year Established	Discontinued	Frequency of Reading	Location of Data	Location of Summaries	Other Names Relocations Remarks
348.3		Wailua Iki 8	E.M.I.	20 48.9	156 08.5	1650	1950		4 times yearly	(6) (7)60-	(6)	
350	7194	Paakea*	"	20 48.9	156 07.2	1280	1904		Daily	(1)05- (6)	[1](1)04-52 (2)	Nahiku; Kopiliula; reloc. 5/53 500' SE
350.1		Nahiku (Cabral)*	Nahiku Rubber	(20 48.9)	(156 05.8)	740	1900	1916	"	(1)05-	(1)	
350.2		Nahiku Mauka	W.F. Pogue	(20 47.8)	(156 06.0)	1600	1902	1907	"	(1)05-	(1)	
350.3		Nahiku (120)	R.H. Woerall	20 49.6	156 05.6	120	1898	1901	Unknown		(1)	
351		Kuhiwa Gulch	E.M.I.	(20 46.8)	(156 06.8)	(2760)	1933	1948	Monthly	[2](1)39- (6)	(2)	
352		Puu Paki	"	20 45.5	156 03.7	3170	1942		4 times yearly	(6) (7)60-	(3)42-57 (6)	Data msg 1947-48
352.1	1920W	Honomaele Mauka	Kaeleku Sugar	20 45.9	156 03.4	2500	1937	1945	Daily	(1)42-	(1)	
352.2		Mokulehua	Bd of A. & F.	(20 47.8)	(156 03.5)	660	1937	1951	After Rain	(6)37-42 [3](7)49-51	(3)	Data msg 1942-49; maint. by EMI prior to 1942
354	1122	Hana*	Hana Ranch	20 45.1	155 59.4	130	1907		Daily	(1)	(1)07-52 (2)	No data 9/56-2/59; reloc. approx. 1941 40 yds N; reloc. 3/57 1000' S; reloc. 3/59 200' N
354.1	1211W	Hana Mauka	Kaeleku Sugar	20 45.3	156 01.6	1720	1937	1945	"	(1)42-	(1)	
354.2		Hana Plantation	K.S. Gjerdrum	(20 44.5)	(155 59.5)	200	1894	1897	Unknown		(1)	
354.3		Hana Iuka	" "	(20 44.5)	(156 01.2)	1800	1894	1897	"		(1)	
354.4		Waihoi	U.S.G.S.	(20 43.5)	(156 01.7)	2200	1910	1911	Weekly	[4](6)		
355	1125	Hana Airport*	Haw'n Airlines	20 47.8	156 01.0	60	1951		Daily+	(1)	(2)	
355.1	2398W	Kaeleku	Kaeleku Sugar	(20 47.2)	(156 01.5)	300	1927	1945	Daily	(1)	(1)	
360		Field I-3*	Pioneer Mill	20 54.6	156 40.9	200	1933		After Rain	(6) (7)48-	(3)52- (4)33-51	#23
361	5177	Lahaina*	" "	20 52.8	156 40.6	45	1913 1955		Daily Recorder	(1)	(1)13-52 (2)	Reloc. 2/27 800' NE; reloc 4/55 50' WNW; 8" gage reloc. 2/60 25' SSW; charts on file PSO & FRC
361.1		Lahainaluna*	" "	(20 53.6)	(156 39.7)	(525)	1912	1921	Daily	(6)	(6)	
362		Frank Lua	" "	20 52.4	156 40.1	75	1939		After Rain	(6) (7)48-	(3)52- (4)39-51	#21; "B" Pump Reservoir
363		Field F-1	" "	20 54.8	156 39.7	900	1933		" "	(6) (7)48-	(3)48- (4)33-51	#22
363.1		Field F-2**	" "	20 54.6	156 39.7	850						
364	8955	Wahikuli	" "	20 54.0	156 39.9	580	1912		Daily++	(1)42- (6)	(1)21-52 (2)21- (3)12-20	Wahikuli Camp
365		Field MD-1	" "	20 51.8	156 39.9	75	1941		After Rain	(6) (7)48-	(3)52- (4)41-51	#33
365.1		Field MC-1	" "	20 51.9	156 39.5	275	1941		" "	(6) (7)60-	(6)	Data msg 1947-49
365.2		Field MA-1	" "	20 52.0	156 38.8	650	1941		" "	(6) (7)60-	(6)	Data msg 1947-49
366		Field LB-2	" "	20 53.1	156 39.5	570	1927		" "	(6) (7)48-	(3)52- (4)27-51	#18
367		Joe Lua	" "	20 52.5	156 39.7	275	1931		" "	(6) (7)48-	(3)52- (4)31-51	#20; "A" Pump Reservoir

* Also has other weather instrumentation - see same key number in Table Two. ** Non-rainfall instrumentation only - see same key number in Table Two. + Beginning & ending of precipitation reported on WB Form WBAN-10 (CAA). ++ Except weekends. [1] Pub. as Kopiliula 1904-18. [2] Pub. in annual CD only. [3] Monthly amts on annual forms only. [4] Pub. in Water-Supply Paper 318.

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TABLE ONE (CONT.)

State Key No.	USWB Index No.	Station Name or Number	Maintained By	Geographic Coordinates Latitude ° '	Longitude ° '	Elev. (ft.)	Year Established	Discontinued	Frequency of Reading	Location of Data	Location of Summaries	Other Names Relocations Remarks
370		Field E-1	Pioneer Mill	20 54.6	156 39.2	1280	1941		After Rain	(6) (7)48-	(3)52- (4)41-51	#32
371		Field LB-7	" "	20 52.4	156 39.2	525	1931		" "	(6) (7)48-	(3)52- (4)31-57	#19
372	5408	Launiupoko Village	" "	20 51.3	156 38.9	250	1918		Daily++	(1)42- (6)	(1)20-52 (2)20- (3)18-20	Hirai Camp; Fld MC-6
372.1		Field MC-7	" "	20 51.0	156 39.1	100	1927		After Rain	(6) (7)60-	(3)52-57 (4)27-51	Data msg 1947-49
373		Field LA-5*	" "	20 52.9	156 38.9	975	1927		" "	(6) (7)48-	(3)52- (4)27-51	#17
374	2552	Kahoma Intake	" "	20 54.2	156 37.5	2000	1910		" "	(1)19- (6)	(1)10-52 (2)	Kahoma Reservoir
375	3433	Kauaula Intake	" "	20 52.8	156 37.5	1580	1912		" "	(1)22- (6)19-	(1)19-52 (2)19-	Data msg prior to 1919
376	5404	Launiupoko Intake	" "	20 51.4	156 37.1	1280	1913		Daily++	(1)16- (6)	(1)13-52 (2)	
377	7066	Olowalu Gulch	" "	20 50.6	156 35.7	760	1911		Monthly	(1)19- [1](6)11-13	(1)12-52 (2)12-	Olowalu Mauka
378		Power House 2	" "	20 52.6	156 38.6	1000	1919		Daily	(3)*** (6) (7)60-	(3)20-38 (6)	Kauaula Power-House
380	4887	Kukui	Baldwin Pkrs	20 53.6	156 35.3	5790	1928		Monthly	(1)39- (6)	(1)28-52 (2)	Puu Kukui; Mt. Kukui
380.1		Iao Valley (USGS)	U.S.G.S.	(20 53.0)	(156 34.0)	1720	1910	1914	Irregular	[2](6)	(1)11-	Iao Cave
386		Wailuku Office*	Wailuku Sugar	20 53.8	156 30.0	180	1887		Daily++	(1)08-16 (6) (7)48-	[3](1)87-16 (3)	Wailuku Stable; Wailuku Mill[4]; reloc. 1917 from 175' to 250'; reloc. 2/53 approx. 400 yds E
386.1		Wailuku (Penhallow's Residence)	" "	20 53.2	156 30.6	390	1896	1931	Daily	(6)	(1)96-18 (6)	
386.2		Wailuku (Alexander)	W.P. Alexander	(20 53.2)	(156 30.3)	250	1879	1883	"		(1)	
386.3		Puuohala**	Wailuku Sugar	20 53.9	156 30.6	355						
387		Hopoi Reservoir	" "	20 52.8	156 30.5	380	1933		After Rain	(6) (7)48-	(3)	Hopoi Camp
387.1		Iao Valley	" "	20 53.2	156 32.3	720	1949		" "	(6),(7)	(3)	
387.2		Iao Needle	U.S. Corps of Engineers	20 53.0	156 33.0	1250	1949		Weekly-R	(6)	(3)49-57 (6)	Iao Valley (USCE); charts on file USCE
387.3		Field 70**	Wailuku Sugar	20 52.3	156 30.5	445						
387.4		Iao Valley Stream	U.S.G.S.	(20 52.9)	(156 32.6)	830	1910	1914	Irregular	[2](6)		
387.5		Iao Valley Tableland	U.S.G.S.	(20 53.0)	(156 33.6)	1500	1910	1914	"	[2](6)		
390	9376	Waikapu Village*	Wailuku Sugar	20 51.5	156 30.5	470	1895		Daily	(1)18- (6)	(1)95-52 (2)	Waikapu Stables; Waikapu Overseer's Res.; reloc. sometime prior to 1932 approx. ½ mi. ESE; reloc. 1957 1/5 mi. ENE; data msg 1907-11

* Also has other weather instrumentation - see same key number in Table Two. ** Non-rainfall instrumentation only - see same key number in Table Two. *** Current but original date unknown. ++ Except weekends. [1] Pub. in Water-Supply Papers 318, 336 & 373. [2] Pub. in Water-Supply Papers 318, 336, 373 & 430. [3] Pub. as Wailuku Mill. [4] 1887-16 data shown as 392.1 under Wailuku Mill in "Rainfall of the Hawaiian Islands" (1959).

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TABLE ONE (CONT.)

State Key No.	USWB Index No.	Station Name or Number	Maintained By	Geographic Coordinates Latitude ° '	Longitude ° '	Elev. (ft.)	Year Established	Discontinued	Frequency of Reading	Location of Data	Location of Summaries	Other Names Relocations Remarks
390.1		Reservoir 1	Wailuku Sugar	20 51.3	156 31.6	1100	1949		After Rain	(6),(7)	(3)	Fld 86
390.2		Waikapu (Everett)	T.W. Everett	(20 51.5)	(156 30.3)	250	1887	1894	Daily		(1)	Elev. too low for location
390.3		Waikapu Tunnels	U.S.G.S.	(20 51.5)	(156 33.0)	1535	1910	1915	Irregular	[1](6)		Waikapu Gulch
391		Hayashi	Wailuku Sugar	20 50.4	156 30.5	340	1932		After Rain	(6) (7)48-	(3)	Hayashi Camp
392	9484	Wailuku*	Wailuku Boys' School	20 53.7	156 30.0	200	1901		Daily	(1)05-	(1)01-52 (2)	Wailuku Boys' School
393		Field 719	H. C. & S.	20 51.1	156 28.7	150	1927		After Rain	(6) (7)48-	(3)31-37, 48- (6)	Fld H; reloc. 7/59 to along Waikapu Rd
393.1		Herbicide Plant	"	20 51.4	156 27.5	100	1950		" "	(6),(7)	(3)	Cade Plant
394		Village 6*	"	20 50.3	156 28.3	105	1929		" "	(6) (7)48-	(3)	Camp 6
395		Dairy	"	20 53.3	156 27.6	20	1933		" "	(6) (7)48-	(3)52- (6)	Puunene Dairy
395.1		Kahului	Kahului Railroad Company	20 53.7	156 28.0	10	1892	1924	Daily	(1)05-	(1)92-18 (2)	
396	8543	Puunene*	H. C. & S.	20 52.5	156 27.4	60	1899		"	(1)05- (6)01-	(1)01-52 (2)	Puunene Mill; Fld 713; data msg prior to 1901; no data 11/11-12/13
397		Field 606	"	20 52.3	156 26.0	145	1927		After Rain	(6) (7)48-	(3)48- (6)	Fld D
397.1		Maui Variety Sta.*	H.S.P.A.	20 52.5	156 25.9	130	1948	1953	Daily	(4)	(4)	
398	2572	Kahului FAA Airport	F.A.A.	20 53.7	156 26.3	40	(1944)		Every 6 hrs+	(1)54-	(2)52-	Maint. by USN (1944)-47[2], by HAL 1/52-12/58; no data 1944, 6/47-12/51
398.1		Kahului Nursery	Bd of A. & F.	20 53.6	156 26.9	20	1953		Daily++	(6),(7)[3]	(3)	
398.2		Naska**	U.S.D.A. F.F.L.	20 53.6	156 27.0	20						
400	8688	Spreckelsville*	H. C. & S.	20 54.0	156 25.0	65	1883		Daily	(1)43- (6)	(1)83-52 (2)	Village 1; Camp 1; no data 1/92-12/09, 1/19-12/24
400.1		Central Power Plant	"	20 53.4	156 27.1	20	1931	1937	Unknown		[4](6)	
400.2		Research Lab.*	"	20 53.8	156 24.7	85	1952		Daily	[5](6) (7)60-	[5](6)	
401		Field 806	"	20 50.5	156 24.9	385	1929		After Rain	(6)31- (7)48-	(3)48- (6)31-	Fld 3; data msg prior to 1931
401.1		Village 13	"	20 50.2	156 26.1	275	1949		" "	(6),(7)	(3)	Camp 13
402	0280	Camp 10*	"	20 51.7	156 24.4	355	1900		Daily	(1)43- (6)22-	(1)25-52 (2)25- (4)22-24	Village 10; Pukulani; data msg prior to 1922
403		Field 607	"	20 54.0	156 23.8	140	1929		After Rain	(6)35- (7)48-	(3)48- (6)35-	Fld A; data msg prior to 1935
404		Village 11	"	20 52.6	156 23.4	360	1927		" "	(6) (7)48-	(3)52- (4)31-51 (6)	Camp 11
404.1		Pump 9*	"	20 52.7	156 24.5	205	1950		" "	(6)51- (7)51-	(3)51-	Data msg prior to 1951

* Also has other weather instrumentation - see same key number in Table Two. ** Non-rainfall instrumentation only - see same key number in Table Two. + Beginning & ending of precipitation reported on WB Form WHAN-10 (CAA). ++ Except weekends. [1] Pub. in Water-Supply Papers 318, 336, 373 & 430. [2] 4/45-5/47 military surface observational forms on file NWRC. [3] On monthly forms only through 1958. [4] On file EMI. [5] On file Research Lab., H.C.&S.

TABLE ONE (CONT.)

State Key No.	USWB Index No.	Station Name or Number	Maintained By	Geographic Coordinates Latitude ° '	Longitude ° '	Elev. (ft.)	Year Estab-lished	Year Discon-tinued	Frequency of Read-ing	Location of Data	Location of Summaries	Other Names Relocations Remarks
404.2		Upper Village 3	H. C. & S.	20 53.2	156 25.2	115	1949		After Rain	(6),(7)	(3)	Upper Camp 3
405		Field 212	"	20 54.4	156 23.1	120	1940		" "	(6) (7)48-	(3)52- (6)	
406	7566	Paia	"	20 54.5	156 22.6	165	1894		Daily	(1)05-06, 38- (6)	(1)94-52 (2)94-16, 24- (6)	No data 6/06-7/09; reloc. 1909 - dist. & dir. unknown
406.1		Paia (T)**	"	20 54.2	156 22.7	215						
407		Field 209	"	20 53.0	156 22.6	400	1946		After Rain	(6) (7)48-	(3)48- (6)	Fld 76
410	3910	Keahua*	"	20 51.7	156 23.0	510	1908		Daily	(1)42- (6)10-	(1)25-52 (2)	Fld 80; Fld 22; no data 1917-24; reloc. 1/40 825' NNE
411		Field 305*	"	20 50.9	156 22.8	655	1940		After Rain	(6) (7)48-	(3)52- (6)	
412		Gage 24	Libby	20 50.3	156 22.1	850	1947	1957	" "	(6) (7)48-	(3)52- (6)	
413		Kaheka*	H. C. & S.	20 53.7	156 22.0	395	1946		" "	(6) (7)48-	(3)48- (4)46-51	Fld 205; reloc. 12/54 300' SE; reloc. 12/58 1100' WSW; also gage at evap. pan site
413.1		Paia Bell House	"	20 54.1	156 22.3	280	1955		" "	(6),(7)	(3)	
413.2		Field 205 (HSPA)*	H.S.P.A.	20 53.6	156 21.9	410	1957		Recorder	(4)	(4)	Charts on file HSPA
414		Kailua (HC&S)	H. C. & S.	20 52.3	156 21.9	695	1930		After Rain	(6)46- (7)48-	(3)48- (4)46-51	Kailua Camp; data msg prior to 1946
415		Field 306*	"	20 52.2	156 22.2	655	1940		" "	(6) (7)48-	(3)52- (6)	Fld 77; Station 4; Fld 304
416		Field 102*	"	20 54.5	156 21.2	320	1940		" "	(6) (7)48-	(3)48- (6)	Fld 8; Fld 10; Station 1
417		Field 201*	"	20 53.0	156 21.3	715	1940		" "	(6) (7)48-	(3)52- (6)	Fld 53; Station 2
419		Field 301	"	20 51.1	156 21.2	1075	1928		" "	(6)40- (7)48-	(3)52- (6)40-	Fld 92; Station 9; data msg prior to 1940
420		Gage 25	Libby	20 50.1	156 21.1	1210	1946		" "	(6) (7)48-	(3)52- (6)	Fld 233; Fld 245 through 12/58
421		Field 206	Maui Pine	20 54.0	156 20.6	660	1948		" "	(6),(7)	(3)	
421.1		Field 201	" "	20 53.7	156 21.2	610	1957		" "	(6)	(6)	
421.2		Field 205	" "	20 54.4	156 20.1	660	1941		" "	(6)	(6)	No data 1946-53; re-estab. 1954 at diff. loc. same fld
421.3		Field 209**	" "	20 53.6	156 20.2	890						
422		Paholei	H. C. & S.	20 52.8	156 20.8	855	1923		" "	(6)47- (7)48-	(3)48- (4)46-51	Data msg prior to 1946
423		Station*	Maui Pine	20 52.2	156 20.6	1070	1928 1941	 1948	" " Recorder	(6) (7)48-	(3)28-36, 52- (4)33-57	Haliimaile; charts on file HWA
423.1		Field 227	" "	20 52.6	156 21.1	860	1950		After Rain	(6)	(3)50-57 (6)	
423.2		Garage	" "	20 52.1	156 20.6	1100	1944	1948	" "	(6)	(6)	Field 221
424		Field 22	" "	20 51.1	156 20.6	1290	1933		" "	(6) (7)50-	(3)52- (4)33-57 (6)	Field 21

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TABLE ONE (CONT.)

State Key No.	USWB Index No.	Station Name or Number	Maintained By	Geographic Coordinates Latitude ° '	Longitude ° '	Elev. (ft.)	Year Established	Year Discontinued	Frequency of Reading	Location of Data	Location of Summaries	Other Names Relocations Remarks
424.1		Field 30**	Maui Pine	20 51.1	156 21.1	1100						
425		Field 218*	" "	20 52.1	156 20.0	1200	1939		After Rain	(6) (7)48-	(3)52- (4)39-57 (6)	
425.1		Grove Ranch	Maui Ag.	20 52.5	156 19.8	1220	1925	1931	" "		(3)	
425.2		Kaluanui	Harry Baldwin	20 52.4	156 19.4	1320	1909	(1916)	Unknown		(3)09-16	
425.3	8559W	Puuomalei	Libby	20 52.6	156 19.0	1410	1895	1937	Daily	(1)05-	(1)	Gage 17; Aiken; prob. reloc. 4/25
425.4		Kokomo	Island Pine	20 52.3	156 18.6	1470	(1926)	1929	Unknown		(3)26-	
426		Gage 21	Libby	20 50.0	156 20.3	1610	1933		After Rain	(6) (7)48-	(3)52- (6)	Fld 232; Fld 236A prior to 1945
426.1		Gage 19	"	20 50.2	156 20.9	1250	1931	1940	" "	(6)	(3)	Fld 234; Makawao Fld 48
426.2		Field 46	"	20 50.1	156 20.2	1625	1933	1937	" "	(6)	(3)	
426.3		Gage 20	"	20 51.1	156 20.6	1325	1933	1937	" "	(6)	(3)	Fld 45
426.4		Makawao (Libby)**	"	20 50.1	156 20.5	1480						
427		Field 26*	Maui Pine	20 50.2	156 19.9	1700	1927 1941	 1948	" " Recorder	(6)33- (7)48-	(3)27-36, 52- (4)33-57	Pukalani; charts on file HWA
430		Field 210	" "	20 53.0	156 19.7	1160	1934		After Rain	(6) (7)48-	(3)52- (4)34-57	
430.1		Lilikoi	Island Pine	20 53.1	156 19.2	1225	(1923)	1935	Unknown		(3)23-	
431		Gage 23	Libby	20 51.1	156 19.8	1490	1938		After Rain	(6) (7)48-	(3)52- (6)	Fld 239; no data 1941-44
431.1		Field 220	Maui Pine	20 51.6	156 20.3	1290	1950		" "	(6)	(3)50-57 (6)	
432	0999	Haleakala Ranch	Haleakala Ranch	20 50.2	156 19.1	1850	1891		Daily	(1)05- (6)	(1)91-52 (2)	Kapalaea; reloc. 1/54 100 yds NW
432.1	5832W	Makawao (Hardy)	J.E. Tavares	(20 51.1)	(156 18.9)	1700	1904	1928	"	(1)05-	(1)	
432.2		Makawao (Clark)	F.L. Clark	20 52	156 19	(1500)	1874	1877	Unknown		(1)	Data msg 1875-76
432.3		Makawao (Rogers)	W.H. Rogers	20 51	156 19	(1800)	1879	1886	"		(1)	Makawao (Lyons)
433		Piiholo	Maui Pine	20 51.4	156 18.2	1780	1928		After Rain	(6) (7)48-	(3)28-36, 52- (4)33-57	Fld 301
433.1		Maluhia	Kaonoulu Ranch	20 50.8	156 18.7	1830	1952		Daily	(6) (7)59-	(3)52-57, 59-	
433.2		Maluhia (Baldwin)	Mrs. A. Baldwin	20 50.7	156 18.7	1860	1949		"	(6)	(3)49-59 (6)	
434	0995	Haleakala B E S*	U.H. Exp. Sta.	20 50.7	156 17.7	2100	1921		"	(1)39- (6)	(1)21-52 (2)	Haleakala Branch
434.1		P-112	" " "	20 50.5	156 17.9	2120	1938		Monthly	(6) (7)50, 57-	(3)	Haleakala Branch Sta. P-112
434.2		Waiale	" " "	20 49.9	156 18.4	2270	1941	1948	"	(6)	(3)	
435		Opana Gulch	E.M.I.	20 53.2	156 16.4	1330	1937		4 times yearly	(6) (7)60-	(3)37-57 (6)	
435.1		Kaupakuloa School 9	"	20 53.3	156 17.8	1200	1950		Monthly	(6) (7)60-	(6)	
435.2		Kaupakuloa Flat 10	"	20 51.6	156 16.4	2120	1950	1959	"	(6)	(6)	
436	2630	Kailiili*	"	20 50.7	156 16.3	2520	1925 1949	1949 	" Recorder	(1)	(1)25-52 (2)	Rec. gage replaced non-rec. gage 1949; charts on file EMI

* Also has other weather instrumentation - see same key number in Table Two. ** Non-rainfall instrumentation only - see same key number in Table Two.

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TABLE ONE (CONT.)

State Key No.	USWB Index No.	Station Name or Number	Maintained By	Geographic Coordinates Latitude ° '	Longitude ° '	Elev. (ft.)	Year Established	Year Discontinued	Frequency of Reading	Location of Data	Location of Summaries	Other Names Relocations Remarks
440	7155	Opana Mauka	E.M.I.	20 50.2	156 15.2	3150	1922		Monthly	(1)29- (6)	(1)29-52 (2)	
441		Hoolawa	"	20 54.7	156 14.9	640	1936		3 or 4 times yrly	(6) (7)60-	(3)36-57 (6)	Read by USGS
442	5665	Lupi Upper	"	20 53.3	156 14.8	1240	1897		Weekly	(1)19- (6)	(1)97-52 (2)	Lupi
443	2685	Kailua Mauka	"	20 50.1	156 14.1	3170	1922		Monthly	(1)	(1)29-52 (2)	
443.1		Hoolawa Gulch	"	(20 51.5)	(156 14.8)	2250	1937	1941	After Rain	(6)	(6)	
443.2		Waikamoi Pump	Maui County Water	20 49.8	156 13.5	3180	1949		" "	(6),(7)	(3)	Waiakamoi Pump
444		Waipio	E.M.I.	20 54.2	156 14.0	725	1938		4 times yearly	(6) (7)60-	(3)38-57 (6)	
444.1		Gage 19	Libby	(20 54.7)	(156 13.6)	(500)	1927	1930	After Rain	(6)	(3)27-29 (6)	Huelo
445		Kailua Mauka (USGS)	U.S.G.S.	20 52.8	156 13.2	1230	1937		Monthly	(6)	(3)37-57 (6)	Read by EMI
446	2679	Kailua*	E.M.I.	20 53.6	156 12.9	700	1904		Daily	(1)05- (6)	(1)04-52 (2)	
446.1		Kailua (720)	Haw'n Pine	(20 53.6)	(156 13.0)	(720)	1924	1928	After Rain		(3)	
447	8300	Punaluu	E.M.I.	20 52.9	156 11.7	720	1906		Weekly	(1)	(1)06-52 (2)	Reloc. 1947 750' NW
449	9332	Waikamoi*	"	20 51.9	156 11.6	1200	1906 1949		" Recorder[1]	(1)	(1)06-52 (2)	Waiakamoi; reloc. approx. 1937 ½ mi. NE; charts on file EMI
450	1930	Honomanu*	"	20 51.2	156 11.0	1280	1938		Weekly	(1)	(1)38-52 (2)	
450.1		Keanae Taro Patch	"	(20 51.7)	(156 09.0)	25	1934	1940	Irregular	(6)	(6)	
450.2		Kuo Stream	"	(20 50.6)	(156 09.8)	1260	1938	1943	"	(6)	(6)	
450.3		Puohakamoa Gulch 1	"	(20 51.2)	(156 11.7)	1610	1930	1933	After Rain	(6)	(3)	
450.4		Oopuola Gulch 1	"	(20 52.1)	(156 12.4)	1375	1930	1937	" "	(6)	(3)30-36 (6)	
450.5		Alo Gulch	"	(20 50.4)	(156 12.4)	2200	1937	1941	" "	(6)	(6)	
450.6		Oopuola Gulch 2	"	(20 51.6)	(156 12.6)	1800	1930	1936	" "	(6)	(3)	
450.7		Oopuola Gulch 3	"	(20 51.3)	(156 12.8)	2000	1937	1943	Irregular	(6)	(6)	
450.8		Puohakamoa Gulch 2	"	(20 50.8)	(156 12.1)	1930	1930	1933	After Rain	(6)	(3)	
450.9		Kupau Camp	U.S.G.S.	(20 51)	(156 09)	(300)	1911	1911	Monthly	[2](6)		Location doubtful
451		Honomanu (USGS)	"	20 50.1	156 11.3	1790	1937		3 or 4 times yrly	(6) (7)48-	(3)	
451.1		Honomanu Valley*	E.M.I.	20 50.5	156 11.2	1700	1904	1938	Daily	(1)05- (6)	(1)	
453	2317	Kaanapali*	Pioneer Mill	20 55.8	156 41.8	10	1892		Daily++	(1)05-	(1)92-52 (2)	Kaanapali Landing; no data 4/98-10/04
454		Field C-8	" "	20 55.1	156 41.4	90	1933		After Rain	(6) (7)48-	(3)52- (4)33-51	Fld D-7; #27
455		Field D-1	" "	20 56.9	156 41.3	40	1930		" "	(6) (7)48-	(3)30, 52- (4)31-51	Fld D-4; #26

* Also has other weather instrumentation - see same key number in Table Two. ++ Except weekends. [1] Weekly computations only. [2] Pub. in Water-Supply Paper 318. [3] Pub. as Honomanu 1919-38.

ISLAND: MAUI

TABLE ONE (CONT.)

State Key No.	USWB Index No.	Station Name or Number	Maintained By	Geographic Coordinates Latitude ° '	Longitude ° '	Elev. (ft.)	Year Established	Discontinued	Frequency of Reading	Location of Data	Location of Summaries	Other Names Relocations Remarks
456		Field C-7	Pioneer Mill	20 55.5	156 41.1	325	1927		After Rain	(6) (7)48-	(3)52- (4)27-51	#25
457	8398	Punkolii*	" "	20 55.9	156 40.8	360	1912		Daily++	(1)19- (6)	(1)15-52 (2)15- (3)12-15	Reloc. 10/54 100' E
458		Kahana Camp*	" "	20 58.5	156 40.7	70	1927		After Rain	(6)31- (7)48-	(3)52- (4)27-51	Fld 32-B; #12
460		30 Lua	" "	20 57.0	156 40.5	300	1938		" "	(6) (7)48-	(3)52- (4)38-51	Honokowai Lua; #28
461		Field C-1	" "	20 56.4	156 40.4	325	1941		" "	(6) (7)48-	(3)52- (4)41-51	#31
462		Pedro Camp*	" "	20 57.8	156 40.2	450	1929		" "	(6)31- (7)48-	(3)52- (4)29-51	Fld 31-A; #13
462.1		Field 34	" "	20 58.2	156 39.2	725	1953		" "	(6) (7)60-	(6)	
462.2		Field 33	" "	20 57.9	156 39.4	680	1950		" "	(6) (7)60-	(3)52-57 (6)	
463		Field B-8	" "	20 55.3	156 39.9	675	1941		" "	(6) (7)48-	(3)52- (4)41-51	#30
464		Field B-2	" "	20 56.4	156 39.4	825	1933		" "	(6) (7)48-	(3)52- (4)33-51	#24
465		Field 104	Baldwin Pkrs	20 57.5	156 39.5	725	1935		Daily	(3)*** (6) (7)48-	(3)52- (4)35-51	Honokowai Mahinahina Weir
466	5715	Mahinahina*	Pioneer Mill	20 57.1	156 39.5	715	1914		Daily++	(1)19- (6)	(1)14-52 (2)	
467		Field A-2*	" "	20 55.5	156 39.2	1200	1941		After Rain	(6) (7)48-	(3)52- (4)41-51	Fld A-3; #27
470		Field 33	Baldwin Pkrs	20 59.7	156 39.2	340	1937		Daily	(3)*** (6),(7)	(3)52- (4)37-51	G.D.R.
471		Field 28	" "	20 58.5	156 39.1	750	1944		Monthly	(6)48- (7)48-	(3)48- (4)46-51	Data msg prior to 1946
472	8444	Puu Kukui Makai	Pioneer Mill	20 55.4	156 37.9	2500	1911		"	(1)19- (6)	(1)11-52 (2)	Puu Kukui (lwr slope)
472.1		Honokowai Gulch	" "	20 56	156 38	1500	1911	1917	"		(1)	
472.2		Honokowai Power House	" "	20 57	156 39	1200	1911	1918	"		(1)	
473	5705	Mahana	Baldwin Pkrs	20 58.4	156 37.6	1400	1896	1954	"	(1)07- (6)	(1)96-52 (2)	
475[1]	6521	Mokupea	" "	20 58.7	156 37.3	1400	1899		Weekly	(1)07- (6)	(1)99-52 (2)	
476	1892	Honokowai Intake	Pioneer Mill	20 55.9	156 37.4	1560	1914		After Rain	(1)42- (6)19-	(1)20-52 (2)20- (3)19-20	Data msg prior to 1919
477	0790	Haelaau	Baldwin Pkrs	20 56.2	156 37.1	2980	1932		Irregular	(1)	(1)32-52 (2)	Puu Ua; Fleming's Mtn House
477.1		Honokohau Ridge	Pioneer Mill	(20 57.7)	(156 36.2)	2300	1913	1932	Monthly	(1)19-	[2](1)	
480	1882	Honokohau	Baldwin Pkrs	20 58.1	156 35.5	810	1907		Irregular	(1)19- (6)	(1)07-52 (2)	
481	6635	Nakalalua	" "	20 55.1	156 35.6	4450	1933		"	(1)	(1)33-52 (2)	
481.1		Puu Kukui Upper 1	Pioneer Mill	(20 53.9)	(156 36.0)	4450	1923	1939	Monthly	(1)	(2)	
481.2		Puu Kukui Upper 2	" "	20 54.5	156 35.5	5000	1911	1923	"	(1)19-	(1)11-18 (2)	Puu Kukui (upper slope)

* Also has other weather instrumentation - see same key number in Table Two. *** Current but original date unknown. ++ Except weekends.
[1] Same station as #474, Field 44 Mauka, listed in "A Key to Rain Gages in Hawaii". [2] Pub. as Haelaau 1919-32.

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TABLE ONE (CONT.)

State Key No.	USWB Index No.	Station Name or Number	Maintained By	Geographic Coordinates Latitude ° '	Longitude ° '	Elev. (ft.)	Year Established	Year Discontinued	Frequency of Reading	Location of Data	Location of Summaries	Other Names Relocations Remarks
481.3	0460W	Eke	Baldwin Pkrs	(20 55.4)	(156 34.6)	4600	1913	1933	Irregular	(1)16- (6)	(1)	Replaced by #481
481.4		Mount Eke	Honolua Ranch	20 55	156 35	4500	1913	(1918)	Monthly		(1)13-18	
481.5		Waihee Tunnels	U.S.G.S.	(20 54.6)	(156 33.7)	1550	1910	1915	Irregular	[1](6)		Waihee Gulch
482	9315	Waihee Valley	Wailuku Sugar	20 56.6	156 31.7	300	1913		Daily	(1)42- (6)	(1)15-52 (2)15- (3)13-15	Waihee Upper
482.1	2450W	Kahakuloa	Libby	(20 58.7)	(156 33.4)	1000	1922	1932	After Rain	(1)23-	(1)	Gage 18
483	9303	Waihee*	Wailuku Sugar	20 55.9	156 31.1	215	1898		Daily++	(1)17- (6)	(1)99-52 (2)99- (3)98-99	Waihee Village; Waihee Stable; Fld 10; reloc. 3/54 600' W & 100' higher
484	9275	Waiehu Camp*	" "	20 55.1	156 30.7	320	1910		" "	(1)42- (6)	(1)10-52 (2)	Waiehu; Waiehu Village; Fld 25 Res.; reloc. 5/53 200' NW
485	1086	Hamakuapoko*	H. C. & S.	20 55.1	156 20.9	320	1898		Daily	(1)42- (6)	(1)19-52 (2)	Reloc. from #485.2
485.1		Field 105	"	20 55.6	156 21.7	135	1951		After Rain	(6),(7)	(3)	
485.2		Hamakuapoko (Goodale)	W.W. Goodale	20 53	156 20	800	1884	1897	Daily		(1)85-90 (2)	
486		Field 202	Maui Pine	20 55.7	156 20.6	300	1938		After Rain	(6) (7)48-	(3)52- (4)38-57 (6)	
486.1		Field K	" "	20 55.3	156 19.5	460	1956		" "	(6)	(6)	
486.2		Haiku (Atwater)*	Mrs. L.B. Atwater	(20 54.6)	(156 19.4)	700	1897	1919	Daily	(1)05-	(1)97-18 (2)	
486.3		Haiku Old Camp	Bd of A. & F.	20 54.9	156 19.5	540	1953		"	(6),(7)[2]	(3)	
487		Field B-C	Maui Pine	20 55.9	156 19.5	300	1942		After Rain	(6) (7)48-	(3)52- (4)42-57	Haiku
487.1		Field E	" "	20 56.1	156 18.8	290	1955		" "	(6)	(6)	
487.2		Field C**	" "	20 56.2	156 19.8	200						
488		Haiku Nursery*	Bd of A. & F.	20 55.4	156 19.4	450	1937	1953	Daily	[3](6) (7)49-	(4)	Haiku (A&F)
488.1		Haiku (825)	Island Pine	20 54.2	156 19.5	825	(1923)	1939	Unknown		(3)23-	Haiku Stable
488.2		Field 6-RD	" "	20 54.3	156 17.1	900	(1929)	1935	"		(3)29-	Ulumalu Mauka
488.3		Ulumalu	" "	20 54.5	156 17.2	825	(1923)	1938	"		(3)23-	
488.4	3556W	Kaupakalua	E.M.I.	20 54.0	156 17.5	1050	1920	1938	Daily	(1)	(1)	
488.5		Haiku (Baldwin)	Dwight Baldwin	20 55	156 21	500	1956	1959	"	(6)	(6)	
490	7857	Pauwela*	Libby	20 55.4	156 18.6	485	1916		Daily++	(1)	(1)16-52 (2)	Haiku; Haiku Exp. Sta.; Fld 307; Gage 16; reloc. 1/26 3/8 mi. NW
490.1		Kuiaha	"	20 55.5	156 18.6	455	1925	1940	After Rain		[4](6)	Gage 16
490.2		Pauwela (360)	Island Pine	20 56.0	156 19.4	360	(1928)	1934	Unknown		(3)28-	
490.3		Field 31	H. C. & S.	20 53.7	156 18.9	1050	1948	1950	Weekly	(6),(7)	(3)	
490.4		Kaupakaloa (1200)	U.H. Exp. Sta.	20 53.2	156 18.0	1200	1941	1944	"	(6)	(6)	Kaupakulua (1200)
490.5		Camp Maui	" " "	20 53.8	156 18.8	1020	1957		Monthly	(6)	(6)	
491		Gage 26	Libby	20 55.4	156 17.4	550	1947		After Rain	(6) (7)48-	(3)52- (6)	Opana-Haiku

* Also has other weather instrumentation - see same key number in Table Two. ** Non-rainfall instrumentation only - see same key number in Table Two. ++ Except weekends. [1] Pub. in Water-Supply Papers 318, 336, 373 & 430. [2] On monthly forms only through 1958. [3] On monthly forms only. [4] On file EMI.

ISLAND: MAUI

TABLE ONE (CONT.)

State Key No.	USWB Index No.	Station Name or Number	Maintained By	Geographic Coordinates Latitude ° '	Longitude ° '	Elev. (ft.)	Year Established	Year Discontinued	Frequency of Reading	Location of Data	Location of Summaries	Other Names Relocations Remarks
491.1		Field 7-OG	Island Pine	20 55.6	156 17.8	520	1926	1930	Unknown		(3)	
492		Kapalaalaea	E.M.I.	20 55.4	156 15.5	400	1936		4 times yearly	(6)37- (7)60-	(3)37-57 (4)36-51 (6)	
492.1		Field 30	H. C. & S.	20 55.3	156 16.0	600	1948	1950	Weekly	(6),(7)	(3)	
492.2		Halehaku 1	U.H. Exp. Sta.	20 55.1	156 17.2	700	1950	1954	Monthly	(6)	(6)	
492.3		Halehaku 2	" " "	20 55.4	156 16.3	570	1955	1958	"	(6)	(6)	
492.4		Field 4-OG[1]	Island Pine	20 55	156 18	(650)	1935	(1935)	Unknown		(3)35-35	
493	1887	Honokohua*	Baldwin Pkrs	21 00.2	156 39.5	125	1912		Daily	(1)28- (6)	(1)28-52 (2)28- (6)	Fld 38; data msg 1914-19; reloc. 10/56 approx. 200' W & 15' lwr elev.
494	1914	Honolua Field 49	" "	21 00.8	156 38.2	200	1893		Monthly	[2](1)07-20, 41- (6)94-	(1)93-52 (2)	Honolua Ranch prev. to 1937 at 25' elev.
495		Field 64	" "	21 00.3	156 36.2	760	1940		Weekly	(3)*** (6) (7)48-	(3)40-43, 52- (4)40-51	
495.1		Honokohau Gulch	Pioneer Mill	(20 59.0)	(156 35.9)	760	1907	1915	Daily	[3](6)10-	(1)07-13	
496		Field 62	Baldwin Pkrs	21 00.9	156 36.3	530	1937		Weekly	(3)*** (6) (7)48-	(3)38-43, 52- (4)37-51	Mauka Corral
497	6645	Nakalele*	" "	21 01.7	156 36.2	340	1937		"	(1)42- (6)	(1)38-52 (2)38- (3)37, 51-	Fld 60

* Also has other weather instrumentation - see same key number in Table Two. *** Current but original date unknown. [1] Rainfall records also available HWA for following two gages maintained by Haw'n Pine (Haiku Division), the locations of which are unknown: Field 10-QA (1931-1934) & Ulupalakua (1930-32). Key numbers have not been assigned to these gages. [2] Incorrect data pub. 9/20-12/40. [3] Pub. in Water-Supply Papers 318, 336, 373 & 430.

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TABLE TWO

State Key No.	Element(s) Observed	Year Established	Year Discontinued	Frequency of Reading	Location of Tabular Data	Location of Summaries	Location of Charts	Instrumentation, Relocations, Remarks
258	a	1916	1929	Daily	(1)	(2)		
261.1	a	1959		Weekly	(6)	(6)		Also hygrothermograph from 9/59
		1959		Recorder			(6)	
	c	1959		"			(6)	
	d,e	1959		"	(6)	(6)	(6)	Esterline-Angus recorder
261.2	a	1959		Weekly	(6)	(6)		Also hygrothermograph until 9/59
		1959	1959	Recorder			(6)	
	c	1959	1959	"			(6)	
	d,e,f	1959		"	(6)	(6)	(6)	Esterline-Angus recorder
267	a	1916		Daily	(1)	(2)		
267.4	a	1960		Weekly	(6),(7)			
267.5	a	1949	1949	Recorder		(3)	(6)	Hygrothermograph only
	c	1949	1949	"			(6)	
296.1	a,c	1953	1959	"	(6)	(6)	(6)	Hygrothermograph only
	g	1956	1958	"			(6)	Actinometer
307	a	1939	1953	Daily++	(4)50- (6)	(6)		
307.2	a	1953		" "	(4),(6)	(6)		
	g	1953		Recorder	(6)	[1](6)	(6)	Actinometer
310	a	1950		Daily	(4)	(6)		Also thermograph 1951-55, replaced by
		1951		Recorder			(6)	hygrothermograph
	b	1954		Twice Weekly	(3)54-59 (4),(6)	(3),(4)		Also anemometer at pan level
	c	1955		Recorder	(6)	(4)	(6)	
	d,e	1953		"	(6)	(4)	(6)	Esterline-Angus recorder
	g	1949		"	(6)	(4)	(6)	Actinometer
		1949	1954	Weekly	(4),(6)			Photochemical integrator
310.1	a	1957		Daily-R	(4)	(4)	(4)	Also hygrothermograph
	b	1957		Recorder	(4)	(3),(4)	(4)	Also anemometer at pan level
	c,d,e,g	1957		"	(4)	(4)	(4)	Actinometer; Esterline-Angus recorder
	h	1957	1957	"	(4)		(4)	Soil thermograph
311	a	1905	1910	Daily	(1)	(2)		
311.2	a,c	1951	1951	Recorder			(6)	Hygrothermograph only
312	a	1939	1958	oo	(1)49-	(2)49-		Also psychrometer; direct reading wind
	c	1939	1958	oo	[2](2)43,49-	(2)45, 47-54		equip. from 1949; data msg prior to 1943
	d,e	1939	1958	oo	[2](2)43-44, 49-	(2)43-44, 47		
313	a	1939		Recorder	(2)*** (4)51- (6)	(4)51- (6)	(6)	Thermograph only until 1953, replaced by hygrothermograph
	b	1960		Twice Weekly	(6)	(3),(4)		Also anemometer at pan level
	c	1953		Recorder	(6)	(4)	(6)	
	d,e	1957		"	(6)	(4)	(6)	Esterline-Angus recorder
	g	1949		"	(6)	(4)	(6)	Actinometer
		1949	1954	Weekly	(4),(6)			Photochemical integrator
313.1	b	1954	1960	"	(3)54-59 (4),(6)	(3),(6)		Anemometer at pan level - total miles of wind only; reloc. to #313
316	a	1940		Recorder	(6)	(6)	(6)	Thermograph only until 1953, replaced by hygrothermograph
	b	1954		Twice Weekly	(3)54-59 (4),(6)	(3),(4)		Also anemometer at pan level
	c	1953		Recorder	(6)	(4)	(6)	
	d,e	1951		"	(6)	(4)	(6)	Esterline-Angus recorder
	g	1950		"	(6)	(4)	(6)	Actinometer
		1950	1954	Weekly	(4),(6)			Photochemical integrator
316.2	a	1957		Daily-R	(4)	(4)	(4)	Also hygrothermograph
	b	1957		Recorder	(4)	(3),(4)	(4)	Also anemometer at pan level
	c,d,e,g,h	1957		"	(4)	(4)	(4)	Esterline-Angus recorder; actinometer; soil thermograph
317.1	a	1958		Daily-R	(6)	(4)	(6)	Also hygrothermograph
	b	1958		Daily	(6)	(3),(4)	(6)	Also anemometer at pan level
	c,d,e,g	1958		Recorder	(6)	(4)	(6)	Esterline-Angus recorder; actinometer

Key to symbols for column headed Element(s) Observed:
a - air temperature (maximum & minimum thermometers unless otherwise noted); b - evaporation; c - relative humidity; d - wind direction; e - wind speed; f - sunshine duration; g - solar radiation; h - soil temperature.
See Table One for key to number symbols in columns headed Location of Tabular Data, Location of Summaries & Location of Charts.

*** Current but original date unknown. ++ Except weekends. oo Airport station taking more than one observation daily - reported on WB Form WBAN-10 (CAA). [1] Graphically summarized. [2] 1943-44 military surface observational forms on file NWRC, WB surface observational forms from 1949 on file PSO, WB and FRC, Honolulu

TABLE TWO (CONT.)

State Key No.	Element(s) Observed	Year Estab-lished	Year Discon-tinued	Frequency of Reading	Location of Tabular Data	Location of Summaries	Location of Charts	Instrumentation, Relocations, Remarks
324.2	a	1949		Recorder	(6)	(3)49-53 (6)	(6)	Hygrothermograph only; irregular program of observations
	c	1949		"			(6)	
324.3	a,c	1949	1950	"			(6)50	Hygrothermograph only; 1949 charts mgs
328.1	a,c,h	1957		"			[1](6)	Hygrothermograph only; soil thermograph
328.2	a	1952	1955	"		(3)52-53	(6)	Hygrothermograph only
	c	1952	1955	"			(6)	
329.1	a	1940	1943	"			[2](6)	Thermograph only
		1954		"			[3](6)	Hygrothermograph only
	c	1954		"			[3](6)	
331.1	a,c,h	1957	1959	"			[1](6)	Hygrothermograph only; soil thermograph
336	a	1949	1951	"		(3)	[4](6)	Hygrothermograph only
	c	1949	1951	"			[4](6)	
338	a	1939		Daily	(1)	(2)		Also hygrothermograph
		1950	1960	Recorder			[5](6)	
	c	1950	1960	"			[5](6)	
	h	1950	1960	"		(3)50-52	[5](6)	Soil thermograph
338.3	a	1940	1941	Daily	(1)	(2)		
338.4	a	1957		"	(1)	(2)		Also hygrothermograph & psychrometer
		1957	1960	Recorder			(2)	
	c	1957		Daily	(2)			
		1957	1960	Recorder			(2)	
	d,e	1957		"	(2)		(2)	Triple register recorder
	f	1957	1959	"			(2)	
338.5	a	1952	1958	Irregular-R	(1)52-54	(2)	(2)52-54	Also thermograph; no data 10/54-10/57
338.7	a	1950	1951	Recorder		(3)	(6)	Hygrothermograph only
	c	1950	1951	"			(6)	
	h	1950	(1950)	"			(6)50	Soil thermograph
341.5	a	1960		Weekly-R			[1](6)	Also hygrothermograph
	c,h	1960		Recorder			[1](6)	Soil thermograph
346	a	1905	1929	Daily	(1)	(2)		
350	a	1905	1958	"	(1)05-29, 46- (6)12-	(2)05-29, 46-		Reloc. 5/53 1000' ESE
350.1	a	1907	1916	"	(1)	(2)		
354	a	1907		"	(1)	(2)		No data 9/56-2/59
355	a	1950		oo	(1)	(2)		Also psychrometer
	c	1950		oo	[6](2)	(2)52-55		
	d,e	1950		oo	[6](2)			
360	a	1941		Daily++	(4)50- (6)	(6)		
361	a	1928		Daily	(1)42- (6)	(2)42- (6)		Also psychrometer; also hygrothermograph; shelter reloc. 2/60 55' SSW
		1953		Recorder			(6)	
	c	1928		Daily	(2)42- (6)	(6)	(6)	
		1953		Recorder			(6)	
	d,e	1960		"	(6)	(6)	(6)	Single register recorder
	g	1956		"			(6)	Actinometer
361.1	a	1844	1845	Unknown		(2)		
363.1	a	1941		Daily++	(4)50- (6)	(6)		Also hygrothermograph
		1953	1959	Recorder			(6)	
	c	1953	1959	"	(6)	(6)	(6)	
	g	1956	1958	"			(6)	Actinometer
373	a	1941		Daily++	(4)50- (6)	(6)		

++ Except weekends. oo Airport station taking more than one observation daily - reported on WB Form WBAN-10 (CAA). [1] On file Agronomy Dept., Univ. of Hawaii. [2] On file Plant Physiology Dept., Univ. of Hawaii. [3] 1954-55 charts on file U.S.D.A. Fruit Fly Lab., Maui, charts from 1956 on file Agronomy Dept., Univ. of Hawaii. [4] On file U.S.D.A. Fruit Fly Lab. [5] 1957-60 charts on file Agronomy Dept., Univ. of Hawaii, 1950-55 hygrotherm. charts & 1950-52 soil therm. charts on file U.S.D.A. Fruit Fly Lab., Maui & Honolulu. No T-H data 1956, no ST data 1953-56. [6] Surface observational forms on file PSO, WB & FRC.

TABLE TWO (CONT.)

State Key No.	Element(s) Observed	Year Established	Year Discontinued	Frequency of Reading	Location of Tabular Data	Location of Summaries	Location of Charts	Instrumentation, Relocations, Remarks
386	a,c	1956	1957	Recorder			[1](6)	Hygrothermograph only
	d,e	1953		Daily++	(6)			
386.3	a	1935	1938	Daily	(6)	(6)		
387.3	a	1939		"	(4)50- (6)	(6)		
390	a	1935	1938	"	(6)	(6)		Reservoir 5
392	a	1905		"	(1)	(2),(4)		
394	a	1939		Daily-R	(4)51- (6)	(6)	(6)	Also thermograph until 8/58, replaced by hygrothermograph
	c	1958		Recorder	(6)	(4)	(6)	
396	a	1913	1954	Daily	(2)*** (6)	(6)25-		Data msg prior to 1925
		1953		Recorder	(2),(6)	(4)	(6)	Hygrothermograph only since 1954
	b	1954		Twice Weekly	(3)54-59 (4),(6)	(3),(4)		Also anemometer at pan level
	c	1953		Recorder	(6)	(4)	(6)	
	d,e	1934		"	(6)	(4)	(6)	Esterline-Angus recorder
	g	1949		"	(6)	(4)	(6)	Actinometer
		1949	1954	Weekly	(4),(6)			Photochemical integrator
397.1	a	1948	1953	Daily	(4)	(6)		
	f	1945	1952	Recorder			(4)	Blueprint recorder
398	a	(1944)		oo	(1)54- [2](2)44-47, 52-54	(2)52-		Also psychrometer; data msg 1948-51
	c,d,e	(1944)		oo	[2](2)44-47, 52-			
398.2	a,c	1952	1958	Recorder	(6)53-	(6)53-	[1](6)	Also hygrothermograph
400	a	1913		Daily-R	(2)*** (4)51- (6)	(6)	(6)	Hygrothermograph only since 9/57; also thermograph 1939-57; data msg 1921-38
	c	1957		Recorder	(6)	(4)	(6)	
	g	1954	1954	Weekly	(4),(6)			Photochemical integrator - located at ballpark
400.2	a	1954		Recorder	(6)	(6)	(6)	Thermograph only
	g	1954		"	(6)	(6)	(6)	Actinometer
		1953	1957	Weekly	(4),(6)			Photochemical integrator
402	a	1939		Daily-R	(2)*** (6)	(6)	(6)	Also thermograph until 1/58, replaced by hygrothermograph
	c	1958		Recorder	(6)		(6)	
	d,e	1953		"	(6)	(4)	(6)	Esterline-Angus recorder
404.1	a	1951		Daily-R	(6)	(6)	(6)	Also thermograph
	g	1950		Recorder	(6)	(4)	(6)	Actinometer
406.1	a	1924	1934	Daily	(6)	(6)		Thermograph only 1940-53, replaced by
		1940		Recorder	(6)	(6)	(6)	hygrothermograph; no data 1935-39; instrumenta-
	c	1953		"	(6)	(4)	(6)	tion 2400' SSW of #406 gage
	d,e	1951		"	(6)	(4)	(6)	Esterline-Angus recorder
	g	1950		"	(6)	(4)	(6)	Actinometer
		1950	1954	Weekly	(4),(6)			Photochemical integrator
410	g	1948	1954	"	(4),(6)			Photochemical integrator
411	a	1941		Recorder	(4)51- (6)	(6)	(6)	Thermograph only
413	b	1954		Weekly	(3)54-59 (4),(6)	(3),(4)		Anemometer at pan level - total miles of wind only
413.2	a	1957		Daily-R	(4)	(4)	(4)	Also hygrothermograph
	b	1957		Recorder	(4)	(3),(4)	(4)	Also anemometer at pan level
	c,d,e	1957		"			(4)	Esterline-Angus recorder
	g	1957		"	(4)	(4)	(4)	Actinometer
	h	1957	1957	"			(4)	Soil thermograph
415	a	1940		Daily-R	(4)51- (6)	(6)	(6)	Also thermograph until 8/57, replaced by hygrothermograph
	c	1957		Recorder	(6)		(6)	
	g	1948		"	(6)	(4)	(6)	Actinometer
		1949	1954	Weekly	(4),(6)			Photochemical integrator

*** Current but original date unknown. ++ Except weekends. oo Airport station taking more than one observation daily - reported on WB Form WBAN-10 (CAA). [1] On file U.S.D.A. Fruit Fly Lab., Maui & Honolulu. [2] 2/44-5/47 military surface observational forms on file NWRC.

TABLE TWO (CONT.)

State Key No.	Element(s) Observed	Year Estab-lished	Year Discon-tinued	Frequency of Reading	Location of Tabular Data	Location of Summaries	Location of Charts	Instrumentation, Relocations, Remarks
416	a	1924	1934	Daily	(6)	(6)		Thermograph only 1940-59, replaced by
		1940		Recorder			(6)	hygrothermograph
	c	1959		"	(6)	(4)	(6)	
	d,e	1959		"	(6)	(4)	(6)	Esterline-Angus recorder
	g	1949		"	(6)	(4)	(6)	Actinometer
		1949	1954	Weekly	(4),(6)			Photochemical integrator
417	a	1941		Recorder	(4)51- (6)	(6)	(6)	Thermograph only
421.3	a	1951		Weekly-R	(6)	[1](6)	(6)	Also thermograph
423	a	1939	1945	Recorder		(5)39-45	(3)40-40	Thermograph only 1939-45; also thermograph
		1951	1952	Weekly-R	(6)	[1](6)	(6)	1951-52
	f	1939	1945	Recorder			(3)40-40	Black bulb thermograph
	g	1939	1945	+++		(5)		
424.1	a	1951		Weekly-R	(6)	[1](6)	(6)	Also thermograph
425	a	1951		" "	(6)	[1](6)	(6)	Also thermograph
	f	1939	1951	Recorder			(5)	Black bulb thermograph
426.4	a	1952		"	(6)		(6)	Thermograph only
	h	1960		"			(6)	Soil thermograph
427	a	1951		Weekly-R	(6)	[1](6)	(6)	Also thermograph; instrumentation approx. 1700' SE of gage
	f	1939	1951	Recorder			(5)	Black bulb thermograph
434	a	1943		Daily	(1)	(2)		Thermograph only 1939-43; also thermograph
		1939	1945	Recorder			[2](6)	1943-45; also hygrothermograph from 10/59
		1959		"			[3](6)	
	c	1959		"			[3](6)	
	h	1956		"			[3](6)	Soil thermograph
436	a	1925	1949	Daily	(1)	(2)		
446	a	1905		"	(1)	(2)		
	d,e	1947		Twice Daily	[4](2)*** (6)			
449	a	1912	1915	Daily	(6)			
450	a	1938	1945	"	(1)	(2)		
451.1	a	1905	1938	"	(1)	(2)		
453	a	1905		Daily++	(1)	(2),(4)		
457	a	1928		" "	(2)*** (4)50- (6)	(6)		Also psychrometer until 1959
	c	1928	1959	" "	(2)*** (6)	(6)		
458	a	1941		Daily	(4)50- (6)	(6)		
462	a,c	1953	1959	Recorder			(6)	Hygrothermograph only
	g	1956	1958	"			(6)	Actinometer
466	a	1939		Daily++	(1)56- (4)50- (6)	(2)56- (6)41-		Also psychrometer until 1956
	c	1939	1956	" "	(6)	(6)		
467	a	1941		" "	(4)50- (6)	(6)		
483	a	1939		" "	(4)50- (6)	(6)		
484	a	1935		" "	(4)50- (6)	(6)		Fld 37 Res; Fld 40 Res; reloc. 2/39 5000' S from Waiehu Camp to Fld 37 Res. 130' higher;
	g	1953		Recorder	(6)	[5](6)	(6)	reloc. 12/49 1500' ENE to Fld 40 Res. 200' lwr; reloc. 5/53 5000' NW to Fld 25 Res. 70' higher; actinometer
485	a	1940	1940	"		(5)	(3)	Thermograph only 1940-40
	f	1940	1940	"			(3)	Black bulb thermograph
	g	1940	1940	+++		(5)		

*** Current but original date unknown. ++ Except weekends. +++ Values derived from black bulb thermograms. [1] Weekly mean temperatures only.
[2] On file Plant Physiology Dept., U. H., Honolulu. [3] On file Agronomy Dept., U. H., Honolulu. [4] On file PSO, WB & FRC. [5] Graphically summarized.

ISLAND: MAUI

TABLE TWO (CONT.)

State Key No.	Element(s) Observed	Year Estab-lished	Year Discon-tinued	Frequency of Reading	Location of Tabular Data	Location of Summaries	Location of Charts	Instrumentation, Relocations, Remarks
486.2	a	1897	1919	Daily	(1)05-	(2)05-		Data msg prior to 1905
487.2	a	1951		Weekly-R	(6)	[1](6)	(6)	Also thermograph
488	a,c	1950	(1951)	Recorder				Hygrothermograph only
490	a	1916		Daily++	(1)	(2)		Also thermograph; also hygrothermograph 1956-57 only
		1952		Recorder	(6)	(5)	[2](5)	
		1956	1957	"			[2](6)	
	c	1956	1957	"			[2](6)	
	e	1916	(1919)	Unknown	[3](1)18-19	(2)16-19		
	h	1959	1960	Recorder			(6)	Soil thermograph 8/59-3/60 only; reloc. to #426.4
493	a	1930		Daily	(2)*** (6)	(6)		
	d,e	1930	1956	"	(6)			
497	a	1938	1945	Recorder		(5)	(3)38-44	Thermograph only
	f	1938	1945	"			(3)38-44	Black bulb thermograph
	g	1938	1945	+++		(5)		

*** Current but original date unknown. ++ Except weekends. +++ Values derived from black bulb thermograms. [1] Weekly mean temperatures only.
[2] On file U.S.D.A. Fruit Fly Lab., Maui. [3] Pub. in annual CD only.

ALPHABETICAL INDEX OF STATIONS

Name or Number	State Key No.
Aiken	425.3
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Camp 6 (HC&S)	394
Camp 7 (HC&S)	310
Camp 10 (HC&S)	402
Camp 11 (HC&S)	404
Camp 13 (HC&S)	401.1
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Central Power Plant	400.1
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East Honokane	345
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Field 7-OG (Island Pine)	491.1
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Field 10 (HC&S)	416
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Field 12 (Pioneer Mill)	296.1
Field 21 (Maui Pine)	424
Field 22 (HC&S)	410
Field 22 (Maui Pine)	424
Field 25 Reservoir (Wailuku Sug.)	484
Field 26 (Maui Pine)	427
Field 28 (Baldwin Pkrs)	471
Field 30 (HC&S)	492.1
Field 30 (Maui Pine)	424.1
Field 31 (HC&S)	490.3
Field 31-A (Pioneer Mill)	462
Field 32-B (Pioneer Mill)	458
Field 33 (Baldwin Pkrs)	470
Field 33 (Pioneer Mill)	462.2
Field 34 (Pioneer Mill)	462.1
Field 38 (Baldwin Pkrs)	493
Field 40 Reservoir (Wailuku Sgu.)	484
Field 45 (Libby)	426.3
Field 46 (Libby)	426.2
Field 47 (Libby)	320.1
Field 50 (Maui Pine)	325
Field 53 (HC&S)	417
Field 58 (Maui Pine)	321.2
Field 60 (Baldwin Pkrs)	497
Field 60 (Maui Pine)	321.1
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Field 64 (Baldwin Pkrs)	495
Field 70 (Wailuku Sugar)	387.3
Field 76 (HC&S)	407
Field 77 (HC&S)	415
Field 80 (HC&S)	410
Field 86 (Wailuku Sugar)	390.1
Field 92 (HC&S)	419
Field 99 (Wailuku Sugar)	307.2
Field 100 (Maui Pine)	322.1
Field 102 (HC&S)	416
Field 104 (Baldwin Pkrs)	465
Field 105 (HC&S)	485.1
Field 150 (Maui Pine)	318.1
Field 201 (HC&S)	417
Field 201 (Maui Pine)	421.1
Field 202 (Maui Pine)	486
Field 205 (HC&S)	413
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Field 209 (HC&S)	407
Field 209 (Maui Pine)	421.3
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Field 212 (HC&S)	405
Field 218 (Maui Pine)	425
Field 220 (Maui Pine)	431.1
Field 221 (Maui Pine)	423.2
Field 227 (Maui Pine)	423.1
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Field 228 (Libby)	320
Field 230 (Libby)	320
Field 232 (Libby)	426
Field 233 (Libby)	420
Field 234 (Libby)	426.1
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Field 239 (Libby)	431
Field 245 (Libby)	420
Field 301 (HC&S)	419
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Field 306 (HC&S)	415
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Field 713 (HC&S)	396
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Field I-3 (Pioneer Mill)	360
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Gage 19 (Libby)	444.1
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Gage 21 (Libby)	426
Gage 22 (Libby)	320
Gage 23 (Libby)	431
Gage 24 (Libby)	412
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Gage 26 (Libby)	491
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Name or Number	State Key No.
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ISLAND: MOLOKAI

TABLE ONE

State Key No.	USWB Index No.	Station Name or Number	Maintained By	Geographic Coordinates Latitude ° '	Longitude ° '	Elev. (ft.)	Year Established	Year Discontinued	Frequency of Reading	Location of Data	Location of Summaries	Other Names Relocations Remarks
500		Kamakaipo	Molokai Ranch	21 07.5	157 18.0	40	1933		After Rain	(6) (7)48-	(3)	
500.1		Frear's Flat	" "	21 06.4	157 15.6	405	1950		" "	(6),(7)	(3)	
500.2[1]		Pokohola	" "	21 06.8	157 16.3	390	1928		" "	(6)33- (7)48-	(3)33-	Data msg prior to 1933; reloc. 1950 approx. ½ mi. NE
500.3		Kolo Makai	" "	21 05.7	157 10.6	20	1950		" "	(6),(7)	(3)	Kolo
500.4		Waikane	" "	21 05.8	157 09.2	20	1950		" "	(6),(7)	(3)	
500.5		Iloli	" "	21 07.2	157 06.3	30	1950		" "	(6),(7)	(3)	
501		Gage 31	Libby	(21 07.7)	(157 16.0)	275	1947	1954	" "	(6) (7)48-	(3)48- (6)	
502		Gage 30	"	(21 08.7)	(157 15.8)	250	1947	1954	" "	(6) (7)48-	(3)48- (6)	
502.1		Puukaae	Molokai Ranch	21 08.5	157 15.9	230	1950		" "	(6),(7)	(3)	
503		Gage 22*	Libby	21 07.1	157 15.3	490	1927		" "	(6) (7)48-	(3)27-45, 52- (6)	Kaupoa Gate; Fld 29; Lighthouse Gate; reloc. 9/59 100' S
503.1		Gage 21	"	(21 07.1)	(157 14.6)	645	1927	1940	" "	(6)	(3)	Fld 3B
504		Gage 32	"	(21 06.5)	(157 15.0)	440	1947	1954	" "	(6) (7)48-	(3)48- (6)	
505		Gage 14	"	21 08.7	157 14.8	450	1923		" "	(6)25- (7)48-	(3)	Goatskin Gate
505.1		Gage 20	"	(21 08.3)	(157 14.1)	580	1927	1940	" "	(6)	(3)	Camp 3
505.2		Gage 28	"	(21 08.6)	(157 13.7)	(700)	1933	1940	" "	(6)	(3)35-40 (6)	Fld 38A Middle
511	6190	Maunaloa*	"	21 08.2	157 12.9	1030	1923 1940[2]		" " Recorder	(1)	(1)24-52 (2) (3)23-43	Gage 4; Papohaku; Camp 1; charts at FSO & FRC
511.1		Gage 41	"	21 07.7	157 13.8	860	1954		After Rain	(6),(7)	(3)	Fld 26
511.2		Gage 1	"	(21 07.5)	(157 12.6)	1060	1923	1940	" "	(6)25-	(3)	Fld 34B; 3rd Gate
511.3		Field 25**	"	21 07.6	157 12.8	1100						
513		Gage 5	"	21 10.0	157 12.8	520	1923		" "	(6)25- (7)48-	(3)	Fld 9; Apalu Pens; Cooke's Corral; LWR Flds 5-6; no data 1941-46; re-est. 9/47 100 yds unk. dir.
513.1		Gage 39*	"	21 09.5	157 13.5	560	1948		" "	(6),(7)	(3)	Fld 15
513.2		Gage 10	"	(21 09.7)	(157 12.2)	(750)	1931	1933	" "	(6)	(6)	
513.3		Gage 2	"	(21 09.1)	(157 12.3)	680	1923	1940	" "	(6)25-	(3)	Fld 13; W end Fld 1
514		Gage 40	"	21 08.3	157 12.4	1180	1942		" "	(6)47- (7)48-	(3)47-	Fld 12; data msg prior to 1947
517		Gage 27	"	21 09.4	157 10.8	800	1933		" "	(6) (7)48-	(3)35-45, 52- (6)	Fld 3
517.1		Gage 38	"	21 09.3	157 09.8	1040	1948		" "	(6),(7)	(3)	Fld 32
517.2		Gage 42	"	21 08.9	157 11.2	1050	1954		" "	(6),(7)	(3)	Fld 6
517.3		Field 2**	"	21 09.8	157 11.1	710						
517.4		Field 1**	"	21 08.9	157 09.8	1220						

Key to symbols for columns headed Location of Data and Location of Summaries:
(1) USWB-published; (2) USWB-not published; (3) HWA; (4) HSPA; (5) PRI; (6) on file with observer (company, agency, individual, etc.) maintaining and/or reading instrument; (7) PRI-HSPA reporting form in use from January, 1948, and available at both HWA and HSPA.

* Also has other weather instrumentation - see same key number in Table Two. ** Non-rainfall instrumentation only - see same key number in Table Two. [1] 500A in "A Key to Rain Gages in Hawaii" (1948). [2] No recorder 3/47-4/55.

TABLE ONE (CONT.)

State Key No.	USWB Index No.	Station Name or Number	Maintained By	Geographic Coordinates Latitude ° '	Longitude ° '	Elev. (ft.)	Year Established	Year Discontinued	Frequency of Reading	Location of Data	Location of Summaries	Other Names Relocations Remarks
518		Gage 33*	Libby	21 08.2	157 10.8	1360	1947		After Rain	(6) (7)48-	(3)	Fld 5
518.1		Field 38B*	P.R.I.	(21 08.4)	(157 14.4)	(550)	1938	1940	Weekly	(6)	(3)	
519		Puupili	Molokai Ranch	21 07.7	157 09.1	1260	1946		After Rain	(6) (7)48-	(3)	Kaana prior to 9/57
519.1		Kaihuloa	" "	21 06.8	157 12.8	715	1950		" "	(6),(7)	(3)	
519.2		Kakaako	" "	21 07.8	157 11.5	1310	1950		" "	(6),(7)	(3)	
520		Mahana	" "	21 08.8	157 07.9	470	1933		" "	(6) (7)48-	(3)	
521		Pipika	C.P.C.	21 09.0	157 06.5	350	1940		Monthly & After Rain	(6) (7)48-	(3)40-43, 52- (6)	Reloc. 9/58 approx. 200 yds E
522		Gage 35	Libby	21 09.1	157 07.3	400	1947		After Rain	(6) (7)48-	(3)	Fld 408
523		Gage 26*	"	21 09.7	157 06.5	450	1931		" "	(6) (7)48-	(3)52- (6)	Fld 407
524	6534	Molokai Airport*	Aloha Airlines	21 09.5	157 05.7	445	1939		Daily+	(1)49- (2)39-46	(2)49- (3)39-45	Hoolehua Airport; Homestead Fld; USAAF 39-46[1]; no data 2/46-5/49
525		Green Flat	C.P.C.	21 08.3	157 05.7	300	1943		Monthly & After Rain	(6) (7)48-	(3)52- (6)	
526		Field 315	"	21 08.3	157 04.7	350	1934		Daily or After Rain	(3)*** (6) (7)48-	(3)	
526.1		Field 315A	"	(21 08.2)	(157 04.1)	450	1949	1954	Monthly & After Rain	(6),(7)	(3)	
526.2		South-Exp. "B" Station	"	(21 07.8)	(157 04.0)	(300)	1928	1933	Monthly & After Rain	(6)	(6)	
527		Gage 24*	Libby	21 09.8	157 04.4	600	1929		After Rain	(6)32- (7)48-	(3)29-31, 52- (6)32-	Hoolehua (Libby)
527.1	2100	Hoolehua	B.A. Hussey, Jr.	21 09.9	157 03.0	840	1926	1955	Daily	(1)	(1)26-52 (2)	
528		Field 322*	C.P.C.	21 08.8	157 04.3	570	1928 1943	 1954	Daily or After Rain Recorder	(3)*** (6) (7)48-	(3)	Kanaio; charts on file PSO & FRC
528.1		Block 2	"	21 09.3	157 04.7	500	1956		Monthly & After Rain	(6),(7)	(3)	
528.2		Field 324**	"	21 08.6	157 04.4	500						
529		Field 325	"	21 07.7	157 03.9	320	1929		Monthly & After Rain	(6) (7)48-	(3)	
529.1		Field 325T**	"	21 08.2	157 04.3	350						
530		Field 302	"	21 09.6	157 03.4	770	1933		Monthly & After Rain	(6)36- (7)48-	(3)52- (6)36-	Data msg prior to 1936
530.1		Gage 37	Libby	21 09.9	157 03.2	790	1948		After Rain	(6),(7)	(3)	Fld 403
530.2		Field 307**	C.P.C.	21 09.4	157 04.0	630						
530.3		Field 302T**	"	21 09.2	157 02.8	800						
531		Field 305	"	21 09.1	157 03.1	875	1940 1940	 1954	Monthly & After Rain Recorder	(6) (7)48-	(3)52- (6)	Rec. gage called Kualapuu; charts on file PSO & FRC
532		Field 312	"	21 08.1	157 03.4	475	1933		Monthly & After Rain	(6) (7)48-	(3)52- (6)	
533		Field 309	"	21 08.0	157 02.7	550	1928		Monthly & After Rain	(6) (7)48-	(3)	Manawaimui (CPC)

* Also has other weather instrumentation - see same key number in Table Two. ** Non-rainfall instrumentation only - see same key number in Table Two. *** Current but original date unknown. + Beginning & ending of precipitation reported on WB Form WBAN-10 (CAA). [1] 1940-46 on file NWRC, 1939-41 data in USAAF pub., "Weather Conditions in Hawaii" (The Air Corps Tactical School, Maxwell Field, Alabama, 1942).

State Key No.	USWB Index No.	Station Name or Number	Maintained By	Geographic Coordinates Latitude ° '	Longitude ° '	Elev. (ft.)	Year Estab-lished	Year Discon-tinued	Frequency of Read-ing	Location of Data	Location of Summaries	Other Names Relocations Remarks
533.1		Field 308	C.P.C.	21 08.4	157 01.7	820	1953		Monthly & After Rain	(6),(7)	(3)	
534	4778	Kualapuu*	"	21 09.3	157 02.2	870	1899 1955		Daily Recorder	(1)	(1)00-52 (2)	CPC main office; reloc. 200' NE 5/55; charts at PSO & FRC
535		Field 304	"	21 08.7	157 02.1	750	1929		Monthly & After Rain	(3)*** (6) (7)48-	(3)38-45, 52- (6)	Pekeo
536	3541	Kaunakakai	Molokai Ranch	21 05.6	157 01.4	10	1931		After Rain	(1)55- (6)33- (7)48-	(2)33- [1](3)31-32, 38-45, 53-	
536.1		Kanoa	" "	21 04.3	156 57.7	40	1950	1957	" "	(6),(7)	(3)	
536.2		Manawainui	" "	21 06.9	157 05.0	20	1957		" "	(6),(7)	(3)	
536.3		Oliwai	" "	21 06.7	157 04.3	75	1950		" "	(6),(7)	(3)	
536.4		Kaunakakai Wharf**	U. S. Army Engineers	21 05.0	157 01.8	20						
537		Poholua	Molokai Ranch	21 08.6	156 58.4	2150	1930		Weekly & After Rain	(6)33- (7)48-	(3)33-	Data msg prior to 1933
537.1		Kakalehale	" "	21 08.1	156 59.9	1230	1957		Weekly & After Rain	(6),(7)	(3)	
537.2		Makakupaia	" "	21 06.6	156 56.8	2400	1957		After Rain	(6),(7)	(3)	
540		Waikolu	" "	21 07.8	156 55.4	3550	1930		Weekly & After Rain	(6) (7)48-	(3)	
540.1		Waikolu (USGS)	U.S.G.S.	21 08.7	156 55.3	900	1957		3 or 4 times yrly	(6),(7)	(6)	
541		Kawela	Molokai Ranch	21 06.7	156 54.3	3650	1946		Weekly & After Rain	(6) (7)48-	(3)	
541.1		Pepeopae	U.S.G.S.	21 07.2	156 54.2	4200	1956		3 or 4 times yrly	(6),(7)	(6)	
542	6138	Mapulehu*	H.S.P.A.	21 04.2	156 48.4	20	1892		Daily	(1)	(1)92-52 (2)	Experiment Station HSPA; Pukoo (Conradt); Molokai Substation; data msg 1900-05, 13-20; reloc. 5/59 30' E
542.1	8549	Puuohoku Ranch	Puuohoku Ranch	21 09.0	156 44.1	710	1933		"	(1)55-56, 59- (2)33-42 (6)57-	(2)33-42, 55-56, 59- (3)43-45, 57-	Data msg 1946-55
542.2		Halawa	D.K. Kalaau	(21 10.0)	(156 45.0)	200	1930	1934	"	(1)	(2)	
542.3		Mapulehu Mauka	C.C. Conradt	(21 04.3)	(156 49.6)	650	1907	1912	Monthly	(1)	(1)	
542.4	3045W	Kamalo	F.H. Foster	(21 03.6)	(156 52.0)	60	1923	1928	Daily	(1)	(1)	
542.5		Puu Kahea	Puuohoku Ranch	21 08.2	156 46.9	2340	1933	(1934)	Wkly-irreg.	(3)33-34	(3)33-34	Keahuoku; 12/33-2/34 only
543		Pelekuna	U.S.G.S.	21 08.2	156 52.7	550	1939	1957	3 or 4 times yrly	(6) (7)48-	(3)	
544		Puu Lua Wailau	"	21 06.6	156 49.1	2900	1922		3 or 4 times yrly	(1)22-27 (6) (7)48-	(2)22-27 (3)	
550		Kepuhi	Molokai Ranch	21 11.4	157 14.9	40	1933		After Rain	(6) (7)48-	(3)	Data msg 1953-54
550.1		Kalae Oka Ilio	" "	21 12.6	157 13.2	530	1933		" "	(6) (7)50-	(3)	Data msg 1934-49
551		Keonelele Pens	" "	21 11.8	157 12.4	560	1933		" "	(6) (7)48-	(3)	Keonelele Makai

* Also has other weather instrumentation - see same key number in Table Two. ** Non-rainfall instrumentation only - see same key number in Table Two. *** Current but original date unknown. [1] Ann. totals only for 1931-32.

TABLE ONE (CONT.)

State Key No.	USWB Index No.	Station Name or Number	Maintained By	Geographic Coordinates Latitude ° '	Longitude ° '	Elev. (ft.)	Year Established	Year Discontinued	Frequency of Reading	Location of Data	Location of Summaries	Other Names Relocations Remarks
551.1		Apalu	Molokai Ranch	21 10.6	157 13.1	500	1950		After Rain	(6),(7)	(3)	
551.2		Keonelele Trees	" "	21 10.6	157 10.9	680	1950		" "	(6),(7)	(3)	Keonelele Mauka
551.3		Moomomi	" "	21 10.4	157 09.3	370	1934		" "	(6) (7)50-	(3)	Data msg 1935-49
551.4		Moomomi Makai	" "	21 11.7	157 09.8	20	1959		" "	(6),(7)	(3)	
552		Gage 29	Libby	21 10.6	157 11.4	700	1947		" "	(6) (7)48-	(3)	Fld 31
554		Moomomi (CPC)	C.P.C.	21 10.7	157 08.0	300	1936		Monthly & After Rain	(6) (7)48-	(3)52- (6)	Momomi
555		Gage 36	Libby	21 10.2	157 06.8	410	1947		After Rain	(6) (7)48-	(3)	Fld 406
556	2110	Hoolehua (CPC)	C.P.C.	21 10.2	157 06.5	420	1930		Weekly & After Rain	(1)	(1)30-52 (2)	Lot 122; Homestead
556.1		Block 13**	"	21 10.7	157 06.6	470						
557		Gage 23	Libby	21 10.4	157 05.1	600	1928		After Rain	(6) (7)48-	(3)	Fld 402
557.1		Block 7*	C.P.C.	21 10.4	157 05.4	550	1956		Monthly & After Rain	(6),(7)	(3)	
558		Gage 34	Libby	21 10.7	157 04.2	725	1947		After Rain	(6) (7)48-	(3)	Fld 401
558.1		Block 3	C.P.C.	21 11.0	157 05.1	530	1949		Monthly & After Rain	(6),(7)	(3)	
558.2		Field 402T**	Libby	21 10.9	157 05.1	540						
559		Maalehua	Molokai Ranch	21 09.8	157 01.4	1250	1933		After Rain	(6) (7)48-	(3)	
559.1		Mimo	" "	21 10.7	157 01.7	1230	1950		" "	(6),(7)	(3)	
559.2		Field 452	C.P.C.	(21 10.5)	(157 00.5)	(1450)	1949	1956	Monthly & After Rain	(6),(7)	(3)	
559.3		Field 454	"	21 09.9	156 59.9	1720	1949		Monthly & After Rain	(6),(7)	(3)	
559.4		Meyer Lake*	U.S.G.S.	(21 10.0)	(156 59.0)	2020	1931	1932	Monthly	(2),(3)	(3)	
560		Field 301*	C.P.C.	21 10.2	157 02.3	1000	1928		Monthly & After Rain	(6) (7)48-	(3)	
561		Field 501	"	21 11.0	157 01.5	1250	1932		Monthly & After Rain	(6)33- (7)48-	(3)	
562	4645	Kipu	"	21 10.0	157 01.3	1230	1930		Monthly & After Rain	(1)	(1)30-52 (2)	Charts at PSO & FRC
							1943	1954	Recorder			
562.1		Field 455	"	(21 10.6)	(157 01.5)	(1200)	1929	1933	Monthly & After Rain	(6)	(3)29-30 (6)	Kalaupapa (CPC)
562.2		Field 450	"	(21 09.6)	(157 01.0)	(1350)	1928	1932	Monthly & After Rain	(6)	(6)	Kalae
563	2896	Kalaupapa*	Civil Air Patrol	21 11.5	156 59.0	30	1933	1959	Daily	(1)	(1)33-52 (2)	
563.1	2905W	Kalawao*	Father Martin	(21 10.8)	(156 57.0)	70	1905	1932	"	(1)	(1)	

* Also has other weather instrumentation - see same key number in Table Two. ** Non-rainfall instrumentation only - see same key number in Table Two. NOTE: A number of gages were maintained by the Pacific Pineapple Co. from 1946 to 1955. These gages have not been assigned state key numbers because of insufficient information concerning locations. 1949-1955 data for these gages are on file with HWA.

ISLAND: MOLOKAI

TABLE TWO

State Key No.	Element(s) Observed	Year Established	Year Discontinued	Frequency of Reading	Location of Tabular Data	Location of Summaries	Location of Charts	Instrumentation, Relocations, Remarks
503	a	1959		Recorder	(6)		(6)	Thermograph only
511	a	1924 1952		Daily Recorder	(1)24-54 (2)55- (6)	(2)24-54 (6)	(5)	Also thermograph
511.3	a	1959		"	(6)		(6)	Thermograph only
513.1	a	1959		"	(6)		(6)	Thermograph only
517.3	a	1959		"	(6)		(6)	Thermograph only
517.4	a	1959		"	(6)		(6)	Thermograph only
518	a	1959		"	(6)		(6)	Thermograph only
518.1	a,g	1938	1940	"	(6)			Thermograph only; black bulb thermograph
523	a	1959		"	(6)		(6)	Thermograph only
524	a	1940		oo	(1)49- (2)40-46	(2)49-		Also psychrometer; 1940-46 tab. data on file NWRC
	c	1940		oo	[1](2)40-47, 49-	(2)46-47		1946-47 humidity data on file PSO; sfc.
	d,e	1940		oo	[1](2)40-46, 49-			observational forms from 1949 on file PSO & FRC; no data avbl. 1948
527	a	1952		Recorder	(6)	(6)	(5)	Thermograph only
528	f	1957		"	(6)	(6)	(6)	Black bulb thermograph only
528.2	f	1957	1958	"	(6)	(6)	(6)	Black bulb thermograph only
529.1	a	1952 1959		" "	(6)		(6) (5)	Thermograph & hygrothermograph only
	c	1959		"			(5)	
530.2	a	1958		"	(6)	(6)	(6)	Thermograph only
530.3	a	1952		"	(6)	(6)	(6)	Hygrothermograph only; black bulb thermograph
	c	1952		"			(6)	
	f	1957	1957	"	(6)	(6)	(6)	
534	a	1905		Daily	(1)05-54 (2)55- (6)	(2)05-54 (6)		
536.4	d,e	1960		Recorder	(6)		(6)	Esterline-Angus recorder
542	a	1906		Daily	(1)06-25 (2)*** (4)31-	(2)06-25		Data msg 1913-20
556.1	a	1958		Recorder	(6)	(6)	(6)	Thermograph only
557.1	a	1957		"	(6)	(6)	(6)	Thermograph only
558.2	a	1959		"	(6)		(6)	Thermograph only
559.4	b	1931	1932	Daily	(2)	(3)		
560	a	1958		Recorder	(6)	(6)	(6)	Thermograph only
563	a	1933	1959	Daily	(1)	(2)		
563.1	a	1905	1932	"	(1)	(2)		

Key to symbols for column headed Element(s) Observed:
a - air temperature (maximum & minimum thermometers unless otherwise noted); b - evaporation; c - relative humidity; d - wind direction; e - wind speed; f - sunshine duration; g - solar radiation; h - soil temperature.
See Table One for key to number symbols in columns headed Location of Tabular Data, Location of Summaries & Location of Charts.

*** Current but original date unknown. oo Airport station taking more than one observation daily - reported on WB Form WBAN-10 (CAA). [1] Surface observational forms from 1949 on file PSO, WB and FRC, Honolulu.

ALPHABETICAL INDEX OF STATIONS

Name or Number	State Key No.
Apalu	551.1
Apalu Pens	513
Block 2 (CPC)	528.1
Block 3 (CPC)	558.1
Block 7 (CPC)	557.1
Block 13 (CPC)	556.1
CPC Main Office	534
Camp 1 (Libby)	511
Camp 3 (Libby)	505.1
Cooke's Corral	513
Experiment Station H.S.P.A.	542
Field 1 (Libby)	517.4
Field 2 (Libby)	517.3
Field 3 (Libby)	517
Field 3B (Libby)	503.1
Field 5 (Libby)	518
Field 6 (Libby)	517.2
Field 9 (Libby)	513
Field 12 (Libby)	514
Field 13 (Libby)	513.3
Field 15 (Libby)	513.1
Field 25 (Libby)	511.3
Field 26 (Libby)	511.1
Field 29 (Libby)	503
Field 31 (Libby)	552
Field 32 (Libby)	517.1
Field 34B (Libby)	511.2
Field 38A Middle (Libby)	505.2
Field 38B (PRI-Libby)	518.1
Field 301 (CPC)	560
Field 302 (CPC)	530
Field 302T (CPC)	530.3
Field 304 (CPC)	535
Field 305 (CPC)	531
Field 307 (CPC)	530.2
Field 308 (CPC)	533.1
Field 309 (CPC)	533
Field 312 (CPC)	532
Field 315 (CPC)	526
Field 315A (CPC)	526.1
Field 322 (CPC)	528
Field 324 (CPC)	528.2
Field 325 (CPC)	529
Field 325T (CPC)	529.1
Field 401 (Libby)	558
Field 402 (Libby)	557
Field 402T (Libby)	558.2
Field 403 (Libby)	530.1
Field 406 (Libby)	555
Field 407 (Libby)	523
Field 408 (Libby)	522
Field 450 (CPC)	562.2
Field 452 (CPC)	559.2
Field 454 (CPC)	559.3
Field 455 (CPC)	562.1
Field 501 (CPC)	561
Frear's Flat	500.1
Gage 1 (Libby)	511.2
Gage 2 (Libby)	513.3
Gage 4 (Libby)	511
Gage 5 (Libby)	513
Gage 10 (Libby)	513.2
Gage 14 (Libby)	505
Gage 20 (Libby)	505.1
Gage 21 (Libby)	503.1
Gage 22 (Libby)	503
Gage 23 (Libby)	557
Gage 24 (Libby)	527
Gage 26 (Libby)	523
Gage 27 (Libby)	517
Gage 28 (Libby)	505.2
Gage 29 (Libby)	552
Gage 30 (Libby)	502
Gage 31 (Libby)	501
Gage 32 (Libby)	504
Gage 33 (Libby)	518
Gage 34 (Libby)	558
Gage 35 (Libby)	522
Gage 36 (Libby)	555
Gage 37 (Libby)	530.1
Gage 38 (Libby	517.1
Gage 39 (Libby)	513.1
Gage 40 (Libby)	514
Gage 41 (Libby)	511.1
Gage 42 (Libby)	517.2
Goatskin Gate	505
Green Flat	525
Halawa	542.2
Homestead	556
Homestead Field	524
Hoolehua	527.1
Hoolehua (CPC)	556
Hoolehua (Libby)	527
Hoolehua Airport	524
Iloli	500.5
Kaana	519
Kaihuloa	519.1
Kakaako	519.2
Kakalehale	537.1
Kalae	562.2
Kalae Oka Ilio	550.1
Kalaupapa	563
Kalaupapa (CPC)	562.1
Kalawao	563.1
Kamakaipo	500
Kamalo	542.4
Kanaio	528
Kanoa	536.1
Kaunakakai	536
Kaunakakai Wharf	536.4
Kaupoa Gate	503
Kawela	541
Keahuoku	542.5
Keonelele Makai	551
Keonelele Mauka	551.2
Keonelele Pens	551
Keonelele Trees	551.2
Kepuhi	550
Kipu	562
Kolo	500.3
Kolo Makai	500.3
Kualapuu	534
Lighthouse Gate	503
Lot 122	556
Lower Fields 5-6	513
Maalehua	559
Mahana	520
Makakupaia	537.2
Manawainui	536.2
Manawainui (CPC)	533
Mapulehu	542
Mapulehu Mauka	542.3
Maunaloa	511
Meyer Lake	559.4
Mimo	559.1
Molokai Airport	524
Molokai Substation	542
Momomi	554
Moomomi	551.3
Moomomi (CPC)	554
Moomomi Makai	551.4
Oliwai	536.3
Papohaku	511
Pekeo	535
Pelekuna	543
Pepeopae	541.1
Pipika	521
Poholua	537
Pokohola	500.2
Pukoo (Conradt)	542
Puukaae	502.1
Puu Kahea	542.5
Puu Lua Wailau	544
Puuohoku Ranch	542.1
Puupili	519
South-Exper. "B" Station	526.2
Third Gate	511.2
Waikane	500.4
Waikolu	540
Waikolu (USGS)	540.1
West End Field 1 (Libby)	513.3

ISLAND: LANAI

TABLE ONE

State Key No.	USWB Index No.	Station Name or Number	Maintained By	Geographic Coordinates Latitude ° '	Longitude ° '	Elev. (ft.)	Year Established	Year Discontinued	Frequency of Reading	Location of Data	Location of Summaries	Other Names Relocations Remarks
650		R-8	Hawaiian Pine	20 46.0	156 58.0	1125	1914		After Rain	(6)24- (7)48-	(3)	Palikoholo; no data 1920-23
651		549	" "	20 47.3	156 57.8	1140	1937		" "	(6) (7)48-	(3)52- (6)	
652		R-6	" "	20 49.1	156 58.0	1075	1914		Monthly	(6)24- (7)48-	(3)	Kamoku; Woolshed; no data 1920-23; reloc. 1/24 3/4 mi. SW
653		538	" "	20 49.9	156 58.0	1200	1935		After Rain	(6) (7)48-	(3)52- (6)	
654		529*	" "	20 49.4	156 57.6	1255	1941		" "	(6) (7)48-	(3)52- (6)	57 Road
655		546*	" "	20 47.7	156 57.3	1270	1936		" "	(6) (7)48-	(3)52- (6)	1240 Road
656	5275	Lanai Airport*	Haw'n Airlines	20 47.4	156 57.2	1300	1946	1956	Daily+	(1)49- 1(2)	(2)49-	
657		552	Hawaiian Pine	20 47.3	156 56.8	1275	1952		After Rain	(6),(7)	(3)	
658		556*	" "	20 47.4	156 59.6	30	1948		" "	(6),(7)	(3)	Kaumalapau Harbor
660		548*	" "	20 46.2	156 57.2	1240	1934		" "	(6) (7)48-	(3)52- (6)	
661		537	" "	20 49.9	156 57.3	1460	1936 1942		" " Recorder	(6) (7)48-	(3)52- (6)	Fld 5315-16; 24-hr charts[2]
662		539*	" "	20 49.3	156 56.8	1540	1926		After Rain	(6)34- (7)48-	(3)26-33, 52- (6)	Exp. Plot L-3
663		528	" "	20 48.3	156 56.6	1425	1939		" "	(6) (7)48-	(3)52- (6)	
664		Field 5519*	" "	20 48.1	156 56.3	1360	1940 1940		" " Recorder	(6)42- (7)48-	(3)52- (6)42-	Gage 531; Miki Rd; 24-hr charts[3]; tab. data msg prior to 1942
665		545	" "	20 47.6	156 56.0	1240	1926		After Rain	(6)36- (7)48-	(3)26-31, 52- (6)36-	Puu Masada; Exp. Plot L-4; data msg 1932-35
666		547*	" "	20 46.8	156 56.1	1225	1934		" "	(6) (7)48-	(3)48- (6)	Miki Basin
667		532	" "	20 49.8	156 56.1	1520	1952		" "	(6),(7)	(3)	
668		557*	" "	20 50.6	156 57.0	1450	1949		" "	(6),(7)	(3)	North End
669		558	" "	20 47.5	156 55.3	1100	1949		" "	(6),(7)	(3)	
670		536	" "	20 49.1	156 55.5	1500	1937		" "	(6) (7)48-	(3)52- (6)	
670.1		Field 5223**	" "	20 49.1	156 56.1	1550						
671		Laboratory*	" "	20 49.6	156 55.3	1600	1948		Daily	(6),(7)	(3)52- (6)	Research Lab.
672	5286	Lanai City*	" "	20 49.8	156 55.2	1620	1930		"	(1)	(1)30-52 (2)	Reloc. 3/47 1400' SW
673		544	" "	20 46.2	156 55.0	1225	1936		After Rain	(6) (7)48-	(3)	Manele
673.1		Field 5425**	" "	20 46.2	156 54.5	1240						
674		541	" "	20 48.6	156 54.8	1340	1936		" "	(6) (7)48-	(3)52- (6)	Kapano
675		542*	" "	20 47.8	156 54.5	1145	1934		" "	(6) (7)48-	(3)52- (6)	Palawai Basin

Key to symbols for columns headed Location of Data and Location of Summaries:
(1) USWB-published; (2) USWB-not published; (3) HWA; (4) HSPA; (5) PRI; (6) on file with observer (company, agency, individual, etc.) maintaining and/or reading instrument; (7) PRI-HSPA reporting form in use from Jan. 1948 & available at both HWA & HSPA.

* Also has other weather instrumentation - see same key number in Table Two. ** Non-rainfall instrumentation only - see same key number in Table Two. + Beginning & ending of precipitation reported on WB Form WBAN-10(CAA). [1] 1946-48 observational forms on file NWRC. [2] 10/42-4/49, 7/56-3/57 on file HWA; 11/48-1/55 on file FRC; 5/55-7/56 & from 12/57 on file Hapco, Lanai. [3] 10/40-5/49, 7/56-3/57 on file HWA; 11/48-4/55 on file FRC; 5/55-7/56 & from 12/57 on file Hapco, Lanai.

ISLAND: LANAI

TABLE ONE (CONT.)

State Key No.	USWB Index No.	Station Name or Number	Maintained By	Geographic Coordinates Latitude ° '	Longitude ° '	Elev. (ft.)	Year Established	Year Discontinued	Frequency of Reading	Location of Data	Location of Summaries	Other Names Relocations Remarks
676		R-3	Hawaiian Pine	20 45.9	156 54.6	1135	1914		Monthly	(6)24- (7)48-	(3)	Malauea; no data 1920-23
677		559*	" "	20 46.3	156 56.0	1270	1950 1950	1959	After Rain Recorder	(6),(7)	(3)	Fld 5511-12; 24-hr charts 3/50-5/59 on file Hapco, Lanai; rec. gage reloc. to #684
678		560*	" "	20 48.3	156 55.3	1250	1950		After Rain	(6),(7)	(3)	Fld 5415-16
680		540	" "	20 49.3	156 54.4	1750	1937		" "	(6) (7)48-	(3)52- (6)	
681		543	" "	20 46.4	156 54.2	1310	1936		" "	(6) (7)48-	(3)52- (6)	
682		550	" "	20 47.6	156 53.8	1240	1937		" "	(6) (7)48-	(3)52- (6)	
682.1		Field 5409**	" "	20 47.3	156 53.7	1260						
683		555	" "	20 48.5	156 53.6	1855	1944		" "	(6) (7)48-	(3)52- (6)	
684		R-4	" "	20 49.0	156 52.6	3370	1924 1959		Weekly Recorder	(6) (7)48-	(3)	Lanai Hale; 24-hr charts on file Hapco, Lanai; rec. gage reloc. from #677
684.1		Waiopaa	" "	20 48.8	156 53.0	2125	1914	1919	Unknown		(3)	
685	9021	Waiakeakua*	" "	20 47.7	156 52.2	2040	1939 1948		Weekly Recorder	(1)55- (6) (7)48-	(2)55- (3)	Gage 551; charts on file Hapco, Lanai; rec. gage reloc. from #692
686		533	" "	20 51.8	156 57.5	1555	1952		After Rain	(6),(7)	(3)	
687		R-10*	P.R.I.	20 49.5	156 53.4	2750	1955	1958	Recorder	(5)		Fog Drip Sta.; charts on file PRI
688		R-11	Hawaiian Pine	20 47.3	156 52.1	1900	1957		Monthly	(6),(7)	(3)	
689		R-12	" "	20 50.3	156 53.0	2700	1957		"	(6)	(6)	
690	3130	Kanepuu	" "	20 52.6	156 59.8	1640	1914		"	(1)55- (6)24- (7)48-	(2)55- (3)	R-7; Kaena; no data 1920-23
691		534	" "	20 51.3	156 56.3	1575	1935		After Rain	(6)37- (7)48-	(3)	
692		535*	" "	20 50.5	156 55.8	1560	1934 1948	1948	" " Recorder	(6) (7)48-	(3)52- (6)	Hillside; 6/48-10/48 charts on file Hapco, Lanai; rec. gage reloc. to #685
693	4660	Koele*	" "	20 50.3	156 55.1	1745	1892		Daily	(1)11-	(1)92-52 (2)	R-2; elev. 1600' 1892-98; data msg 1899-04 & 1907-10; reloc. 10/54 200' SW
694	5704	Mahana	" "	20 52.8	156 55.1	1430	1934		Monthly	(1)55- (6) (7)48-	(2)55- (3)	R-9
695		R-1	" "	20 52.3	156 52.6	750	1938	1950	"	(6) (7)48-	(3)	Wawaeku
696		R-5	" "	20 51.1	156 49.8	10	1914	1950	"	(6)24- (7)48-	(3)	Keomoku; no data 1920-23
697		R-13	" "	20 51.3	156 54.3	1500	1958		"	(6)	(6)	
697.1		Field 5392	" "	20 51.7	156 55.2	1850	1928	1939	Unknown		(3)	
698		R-14	" "	20 50.8	156 54.5	1750	1958		Monthly	(6)	(6)	

* Also has other weather instrumentation - see same key number in Table Two. ** Non-rainfall instrumentation only - see same key number in Table Two.

ISLAND: LANAI

TABLE TWO

State Key No.	Element(s) Observed	Year Established	Year Discontinued	Frequency of Reading	Location of Tabular Data	Location of Summaries	Location of Charts	Instrumentation, Relocations, Remarks
654	a	1942		Recorder	(6)	(6)	(6)	Thermograph only
	f	1943		"			(6)	Black bulb thermograph
	g	1943	1953	+++	(6)			
655	a	1938		Recorder	(6)	(6)	(6)	Thermograph only
	f	1943	1953	"			(6)	Black bulb thermograph
	g	1943	1953	+++	(6)			
656	a	1946		oo	(1)49-56 [1](2)	(2)49-56		Psychrometer only since 12/56
	c,d,e	1946		oo	[1](2)			
658	a	1941		Daily	(6)	(6)		
660	a	1938		Recorder	(6)	(6)	(6)	Thermograph only
	f	1943		"			(6)	Black bulb thermograph
	g	1943	1953	+++	(6)			
662	a	1938		Recorder	(6)	(6)	(6)	Thermograph only
	f	1943	1953	"			(6)	Black bulb thermograph
	g	1943	1953	+++	(6)			
664	a,c	1933	1934	Recorder			(3)	Hygrothermograph only; many msg periods
		1948	1948	"				
666	a	1938		"	(6)	(6)	(6)	Thermograph only
	f	1952	1953	"			(6)	Black bulb thermograph
	g	1952	1953	+++	(6)			
668	a	1949		Recorder	(6)	(6)	(6)	Thermograph only
		1949	1949	"			(6)	Hygrothermograph 1/49-5/49
	c	1949	1949	"			(6)	
670.1	a	1949		"	(6)	(6)	(6)	Thermograph only
671	a	1946	1949	"			(6)	Hygrothermograph only; 1948 charts on file HWA;
		1949		Daily-R	(6)	(6)	(6)	also thermograph
	c	1946	1949	Recorder			(6)	
	f	1946		"			(6)	Black bulb thermograph
	g	1946	1953	+++	(6)			
672	a	1930		Daily	(1)	(2)		Reloc. 1947 to #671 but pub. as Lanai City
673.1	a	1949		Recorder	(6)	(6)	(6)	Thermograph only
675	a	1938		"	(6)	(6)	(6)	Thermograph only
		1946	1949	"			(6)	Hygrothermograph
	c	1946	1949	"			(6)	
	f	1943		"			(6)	Black bulb thermograph
	g	1943	1953	+++	(6)			
677	a	1950		Recorder	(6)	(6)	(6)	Thermograph only
678	a	1950		"	(6)	(6)	(6)	Thermograph only
682.1	a	1952		"	(6)	(6)	(6)	Thermograph only
685	a	1940		"	(6)	(6)	(6)	Thermograph only
		1946	1949	"			(6)	Hygrothermograph
	c	1946	1949	"			(6)	
	f	1943		"			(6)	Black bulb thermograph
	g	1943	1953	+++	(6)			
687	a	1955	1958	Recorder	(5)		(5)55-57 (6)58	Hygrothermograph only
	b	1956	1958	Weekly	(5)	(5)		Also anemometer at Pan lvl.- total miles of wind
	c	1955	1957	Recorder	(5)		(5)	Humidity element inoperative from 8/57
	d,e	1955	1958	"	(5)		(5)	Esterline-Angus recorder
	g	1955	1955	"	(5)		(5)	Actinometer 7/55-12/55 only
692	a	1938		"	(6)	(6)	(6)	Thermograph only
		1948	1949	"			(6)	Hygrothermograph
	c	1949	1949	"			(6)	
	f	1942	1953	"			(6)	Black bulb thermograph
	g	1942	1953	+++	(6)			
693	a	1905	1929	Daily	(1)	(2)		
		1950	1950	Recorder			(6)	Hygrothermograph; located in Koele greenhouse
	c	1950	1950	"			(6)	

Key to symbols for column headed Element(s) Observed:
a - air temperature (maximum & minimum thermometers unless otherwise noted); b - evaporation; c - relative humidity; d - wind direction; e - wind speed; f - sunshine duration; g - solar radiation; h - soil temperature.
See Table One for key to number symbols in columns headed Location of Tabular Data, Location of Summaries & Location of Charts.

+++ Values derived from black bulb thermograms. oo Airport station taking more than one observation daily - reported on WB Form WBAN-10 (CAA).
[1] 1946-48 observational forms on file NWRC.

ISLAND: LANAI

ALPHABETICAL INDEX OF STATIONS

Name or Number	State Key No.	Name or Number	State Key No.	Name or Number	State Key No.
Exper. Plot L-3	662	Miki Road	664	532	667
Exper. Plot L-4	665	North End	668	533	686
Field 5223-24	670.1	Palawai Basin	675	534	691
Field 5315-16	661	Palikaholo	650	535	692
Field 5392	697.1	Puu Masada	665	536	670
Field 5409-10	682.1	R-1	695	537	661
Field 5415-16	678	R-2	693	538	653
Field 5425-26	673.1	R-3	676	539	662
Field 5511-12	677	R-4	684	540	680
Field 5519-20	664	R-5	696	541	674
57 Road	654	R-6	652	542	675
Fog Drip Station	687	R-7	690	543	681
Hillside	692	R-8	650	544	673
Kaena	690	R-9	694	545	665
Kamoku	652	R-10	687	546	655
Kanepuu	690	R-11	688	547	666
Kapano	674	R-12	689	548	660
Kaumalapau Harbor	658	R-13	697	549	651
Keomoku	696	R-14	698	550	682
Koele	693	Research Lab.	671	551	685
Laboratory	671	1240 Road	655	552	657
Lanai Airport	656	Waiakeakua	685	555	683
Lanai City	672	Waiopaa	684.1	556	658
Lanai Hale	684	Wawaeku	695	557	668
Mahana	694	Woolshed	652	558	669
Malauea	676	528	663	559	677
Manele	673	529	654	560	678
Miki Basin	666	531	664		

ISLAND: OAHU

TABLE ONE

State Key No.	USWB Index No.	Station Name or Number	Maintained By	Geographic Coordinates Latitude ° '	Longitude ° '	Elev. (ft.)	Year Estab-lished	Year Discon-tinued	Frequency of Read-ing	Location of Data	Location of Summaries	Other Names Relocations Remarks
700		Waimanalo (Ewa)	Ewa Plantation	21 19.9	158 05.6	75	1902		After Rain	(6) (7)48-	(3)05-34, 52- (4)36-46 (6)	Waimanalo Stable
701		Barber's Point*	U.S. Navy	21 18.8	158 04.3	30	1943[1]		Daily	[2](2) (7)48-	(3)	
702	8805	U.S. Magnetic Observatory*	U.S. Coast & Geodetic Survey	21 18.2	158 05.8	10	1900	1960	"	(1)05-	(1)01-52 (2)01-	Reloc. 1/47 3 mi. WSW; replaced 6/60 by #702.2; data msg prior to 1901
702.1		Ewa M.C.A.S.*	U.S.M.C.	21 19.7	158 03.0	40	1892	1949	"	[2](2)41- (7)48-	(3)41-	Data msg prior to 1941
702.2	8806	U.S. Magnetic Observatory 2*	U.S. Coast & Geodetic Survey	21 19.0	158 00.1	5	1960		"	(1)	(2)	Replaced #702 6/60
702.3		Ewa Beach	M.B. Harada	21 19.0	157 59.7	5	1948	(1948)	"		(3)48-48	
703	1919	Honolulu WB Airport*	U.S.W.B.	21 19.5	157 54.7	5	1947		o-R	(1)	(2)	Charts on file NWRC
704	1924	Honolulu Sub-station*	"	21 18.5	157 51.8	10	1904 1905		Daily Recorder	[3](1)05- (2)	(1)04-52 (2)	Honolulu WBO; triple register charts 1905-1951 on file NWRC; Esterline-Angus charts from 1951 on file PSO & FRC
704.1		Farrington High School*	Farrington H.S.	21 20.0	157 52.5	50	1955		Daily++[4]	(3)	(3)	
704.2		Bishop Museum Park	J.A. Dahlgren	21 20.0	157 52.3	50	1953		Daily	(7)	(3)	
704.3		Kapalama Basin**	Haw'n Pine	21 19.2	157 52.7	5						
704.4		Terr. Exec. Bldg**	U.S.G.S.	21 18.5	157 51.6	10						
704.5		Honolulu (Ellis)**	Rev. W. Ellis	21 18	157 52	(20)						
705	0211	Beretania Pumping Station	B.W.S.	21 18.5	157 51.3	20	1945		"	(1)58- (6)49- (7)49-	(2)58- (3)45 (6)49-	BWS Office; data msg 1946-48
705.1		Craigside	G.C. Davis	21 19.5	157 51.1	160	1947	1957	"	(7)49-	(3)49-	Data msg prior to 1949
705.2		Nuuanu Valley (Hall)	D. Stanley	(21 19.3)	(157 51.4)	50	1874	1914	"	(1)05-	(1)	Reloc. twice short distances
705.3		U.S. Experiment Station*	U.S. Experiment Station	21 19.5	157 51.0	120	1902	1910	"	(1)05-	(1)	Reloc. 1909 ½ mi. SSE from 350' elev.
705.4	8808W	U.S. Naval Station	U.S. Navy	21 18.4	157 51.9	5	1900	1937	"	(1)05-	(1)	
705.5		Honolulu (Kewalo)	F. Brown	21 18	157 51	15	1890	1901	Unknown		(1)	
705.6		Honolulu (Kalakaua near King)*	Capt. D. Smith	(21 18.0)	(157 50.4)	10	1860	1877	"		(1)73-	Data msg prior to 1873
705.7		Honolulu (Pauoa Valley)	Rev. S.E. Bishop	(21 18.9)	(157 51.3)	50	1890	1902	"		(1)	
705.8		Honolulu (Miller & Beretania)	Dr. R. McKibbin	21 18.6	157 51.6	50	1877	1894	"		(1)	

Key to symbols for columns headed Location of Data and Location of Summaries:
(1) USWB-published; (2) USWB-not published; (3) HWA; (4) HSPA; (5) PRI; (6) on file with observer (company, agency, individual, etc.) maintaining and/or reading instrument; (7) PRI-HSPA reporting form in use from Jan., 1948, & available at both HWA and HSPA.

* Also has other weather instrumentation - see same key number in Table Two. ** Non-rainfall instrumentation only - see same key number in Table Two. ++ Except weekends. o Weather Bureau first order station taking 6-hourly observations daily - beginning & ending of precipitation, hourly amounts. [1] Probably earlier but no data available. [2] Military sfc observational forms on file NWRC. [3] Hourly amounts pub. from 1953. [4] No observations during summer months & holiday periods.

ISLAND: OAHU

TABLE ONE (CONT.)

State Key No.	USWB Index No.	Station Name or Number	Maintained By	Geographic Coordinates Latitude ° '	Longitude ° '	Elev. (ft.)	Year Established	Year Discontinued	Frequency of Reading	Location of Data	Location of Summaries	Other Names Relocations Remarks
705.9		Honolulu (Nuuanu & Beretania)*	Dr. Rooke	21 18.8	157 51.7	20	1837	1838	Unknown		(1)	
706		Pacific Heights	B.W.S.	21 19.8	157 50.4	680	1926		Weekly	(6) (7)48-	(3)26-38, 52- (6)	
706.1		Punchbowl	H. Bess	21 19	157 51	140	1948	1948	Daily	(7)	(3)	
706.2		Honolulu (College Hill)	S.E. Bishop	21 19	157 50	175	1903	1908	"	(1)05-	(1)	
706.3		Kinau Street*	W.R. Castle	21 18.3	157 50.9	30	1884	1925	"	(1)05-	(1)84-18 (2)	Kulaokahua
706.4		Makiki Reservoir	J.M. Little	21 19.1	157 50.4	150	1891	1904	Unknown		(1)	
707	2146	H.S.P.A. Experiment Station*	H.S.P.A.	21 18.4	157 50.4	50	1918 1937		Daily Recorder	(1)47- (6)	(1)18-52 (2),(6)	Charts on file HSPA
707.1		Oahu College*	A.B. Lyons	21 18	157 50	80	1889	1895	Daily		(1)	
707.2		Honolulu (Punahou)*	R.C. Lydecker	21 18.5	157 50.0	45	1883	1906	"	(1)05- [1](6)92-03	(1)	Punahou; reloc. 1890 ½ mi. NNE from Alexander & Dole Sts
707.3		Alihilani	M.A. Pietschman	21 18.6	157 49.8	205	1950		"	(6),(7)	(3)	
708		Tantalus (Coulter)	B.W.S.	21 19.7	157 49.9	1050	1947	1955	"	(6) (7)48-	(6)	
709	8316	Punchbowl Crater*	National Memorial Cemetery	21 18.8	157 50.9	355	1950		"	(1)	(2)	
709.1		Honolulu (Spencer Street)*	U.S.G.S.	(21 18.6)	(157 50.9)	(120)	1910	1911	Irregular	[2](6)	(3)	
709.2		Pensacola Experiment Station*	H.A.E.S.	21 18.8	157 50.5	110	1937	(1944)	Weekly	(3)38-42	[3](3)38-43	
709.3		Punchbowl Reservoir**	U.S.G.S.	21 18.7	157 51.1	165						
710	6920	Nutridge*	Haw'n Macadamia Nut Co.	21 19.1	157 49.4	900	1927		Daily	(1)42- [4](6)	(1)27-52 (2) [4](6)	Reported to WB by BWS
710.1		Clements	H.R. Clements	21 19.4	157 48.6	300	1948		"	(6) (7)48	(6)	
711	8170	P.R.I. Dole St.*	P.R.I.	21 18.0	157 49.2	75	1937 1947	1952	Daily++ Recorder	(1)47-56 (6) (7)48-	(2)47-56 (3)	Tab data msg 1/47-5/47; charts on file HWA
711.1		Kaimuki Pumping Station	B.W.S.	21 17.4	157 48.9	30	1949		Daily	(6),(7)	(6)	
711.2	0627	Fort DeRussy*	Capital Investment	21 17.0	157 50.1	10	1958	1958	"	(1)		Estab. 1/58, disc. 7/58
711.3		Fort DeRussy (Army)**	U.S. Army	21 17	157 50	10						
711.4		Waikiki Beach**	Moana Hotel	21 16.7	157 49.8	10						Loc. on old pier
711.5		Stidd (Manoa)**	C.K. Stidd	21 19.2	157 48.7	260						
712	6122	Manoa	Dr. A.R. Keller	21 18.6	157 49.1	180	1919		"	(1)	(1)19-52 (2)	Reloc. 9/53 250' N from 210' elev.
712.1		Manoa (Beaumont)	Mrs. J.H. Beaumont	21 18.8	157 49.0	200	1947		"	(6),(7)	(3)	Reloc. 1953 approx. 3/8 mi. NE

* Also has other weather instrumentation - see same key number in Table Two. ** Non-rainfall instrumentation only - see same key number in Table Two. ++ Except weekends. [1] Pub. in Lyons & Lydecker vol., "Weather Record for Honolulu & Hawaiian Islands". [2] Pub. in Water-Supply Paper 318. [3] Annual total only 1943. [4] On file BWS.

State Key No.	USWB Index No.	Station Name or Number	Maintained By	Geographic Coordinates Latitude ° '	Longitude ° '	Elev. (ft.)	Year Established	Year Discontinued	Frequency of Reading	Location of Data	Location of Summaries	Other Names Relocations Remarks
712.2		Oahu Avenue	A. Korte	21 19.2	157 48.8	230	1946		Daily	(6) (7)48-	(3)	
712.3		Manoa Road	L. Sherretz	21 18.8	157 49.1	300	1957	1958	"	(3)	(3)	
712.4		Puuhonua	W.A. Mordy	21 18.9	157 49.1	320	1948	1949	"	(7)	(3)	
712.5		Liloa Rise	Unknown	21 18.5	157 49.3	190	(1939)	(1943)	"	(3)39-43	(3)39-43	
713	8815	Univ. of Hawaii*	Univ. of Hawaii Dept of Meteorology	21 18.2	157 49.1	80	1918 1958		" Recorder	(1)25-	[1](1)25-52 (2) (4)18-50	Univ. Farm; Univ. Dairy; reloc. 9/58 200 yds WSW; charts on file U.H. Met. Dept
713.1		Manini Way	O.C. McBride	21 17.5	157 47.6	425	1937	1942	Daily	(1)41-	(2)	
713.2		Mid-Pacific Institute*	H.A.E.S.	(21 18.3)	(157 49.2)	120	1952		Weekly	[2](6)		
714	8734	Tantalus*	S.J. Oborski	21 19.8	157 49.2	1400	1901	1957	Daily	(1)05-	(1)01-52 (2)	Three reloc. short dist. from elev. of 1360', 1400' & 1310'
714.1		Keahi	C.H. Spiegelberg	21 19.4	157 48.6	320	1947		"	(6) (7)48-	(3)	
714.2		Kaliula*	W.R. Castle	21 19.4	157 49.1	1180	1902	1926	"	(1)08-	(1)02-18 (2)	
715	9185	Waialae-Kahala	H.W. Butzine	21 16.6	157 47.4	50	1921		"	(1)	[3](1)21-51 (2)	Kaimuki; six reloc. from elev. of 210', 280', 230', 190', 170', 120'; no data 10/51-1/53
715.1		Waialae-Kahala (Anderson)	E.J. Anderson	21 16.6	157 47.4	40	1954	1955	"	(7)	(3)	
715.2		Stidd (Kaimuki)**	C.K. Stidd	21 16.8	157 48.2	210						
716	6130	Manoa Tunnel 2	B.W.S.	21 19.8	157 47.6	650	1927 1929		" Recorder	(1)42- (2)41- (6)	(1)27-52 (2)	Charts on file BWS
716.1		Woodlawn	Mrs. W. Carter	21 19.0	157 48.3	250	1947		Daily	(6)48- (7)48-	(3)48-	Data msg prior to 1948
716.2		Manoa (300)	C.S. Desky	(21 19.7)	(157 48.4)	300	1898	1918	"	(1)05-	(1)	Woodlawn Dairy
716.3		Manoa Upper	U.S.G.S.	21 19.6	157 48.1	340	1915	1922	Monthly		(1)15-18 (2)	
716.4		Manoa Valley (Kidwell)	J. Kidwell	(21 18.3)	(157 49.0)	100	1891	1896	Unknown		(1)	
716.5	6138W	Manoa Waena	Bishop Estate	21 19.2	157 48.6	220	1922	1931	Daily	(1)	(1)	
716.6		Rhodes Gardens	H.J. Rhodes	21 19.7	157 48.3	300	1902	1910	"	(1)05-	(1)	
716.7		Waahila	B.W.S.	21 18.8	157 47.8	1220	1926	1941	Weekly-Irregular	(6)	(3)26-37	
716.8		Manoa Woodlawn	"	21 19.5	157 47.5	1450	1927	1941	Weekly-Irregular	(6)	(3)27-37	
716.9		Woodlawn (Miles)	Mrs. G.W. Miles	21 19.3	157 48.2	275	1954		After Rain	(6)	(6)	
717	0232	Black Point	F.R. Van Brocklin	21 15.6	157 47.7	90	1919		Daily	(1)	(1)19-52 (2)	Reloc. 5/42 3/4 mi. E; no data 1/42-4/42
717.1		Kapiolani Park	H. McCallum	21 16.2	157 49.0	10	1890	1904	Unknown		(1)	
717.2		Waikiki Shell	J. Purinton	21 16.3	157 49.2	10	1957		Daily	(3),(6)	(3)	
717.3		Daimond Head 1	Hawaii Nat. Guard	21 16.0	157 48.1	200	1957	1957	"	(3)	(3)	D.H. Tunnel; 3/57-7/57 only

* Also has other weather instrumentation - see same key number in Table Two. ** Non-rainfall instrumentation only - see same key number in Table Two. [1] Pub. as University Farm. [2] Data on thermograms only 1952-55. [3] Pub. as Kaimuki.

TABLE ONE (CONT.)

State Key No.	USWB Index No.	Station Name or Number	Maintained By	Geographic Coordinates Latitude ° '	Longitude ° '	Elev. (ft.)	Year Established	Year Discontinued	Frequency of Reading	Location of Data	Location of Summaries	Other Names Relocations Remarks
717.4		Diamond Head 2	Hawaii Nat. Guard	21 15.8	157 48.5	10	1957	1957	Daily	(3)	(3)	D.H. Firing Range; 3/57-7/57 only
717.5		Fort Ruger**	U.S. Army	21 16	157 48	(100)						
718	7664	Palolo Valley	B.W.S.	21 19.5	157 46.4	995	1926 (1929)		" Recorder	(1)42-(6)	(1)27-52 (6)	Charts on file BWS
718.1		Olympus	"	21 20.3	157 46.8	2500	1910	1947	Monthly	[1](6)	(3)	Mt Olympus; maint. by USGS 1910-14; no data 1911-13, 1915-25; data msg 9/37-8/38
718.2		Kaau Crater*	U.S.G.S.	(21 19.9)	(157 46.5)	1700	1913	1914	Irregular	[2](6)	(3)	
720	6169	Matsonia Drive*	D. Engard	21 17.8	157 47.3	820	1938		Daily	(1)42-	(1)38-52 (2)	
720.1		New Collins	R.R. Owen	21 17.9	157 47.3	945	1948	1956	"	(7)	(3)	Collins; reloc. 6/54 approx. 1/5 mi. NNE from 810' elev.
720.2		Waiamao	C.C. Bitling	21 18.2	157 47.0	600	1910	1913	Daily-irregular		(1)	Waiomao
721	9980	Wilhelmina Rise	B.W.S.	21 18.0	157 47.2	1100	1927		Recorder	(1)38-(6)	(1)27-52 (2)	Reservoir 4; charts on file BWS
721.1		Palolo Valley (Gulick)	J. Gulick	21 18.0	157 48.0	190	1948	1950	Daily	(7)	(3)	
722		Kahala*	L.B. Leopold	21 15.9	157 47.3	10	1947	1949	"	(7)48-	(3)48-	Data msg prior to 1948
722.1		Thorne	P.R.I. (M.D. Thorne)	21 16.0	157 47.2	10	1948	1948	"	(7)	(3)	3/48-6/48 only
722.2		Kahala (Arnold)	Dr. H.L. Arnold, Jr.	21 16.4	157 46.8	5	1949		"	(6),(7)	(3)	
722.3		Pahoa Place	C. Leopold	21 16.4	157 47.0	10	1948	1949	"	(7)	(3)	
723	9492	Wailupe	B.W.S.	21 16.8	157 45.7	15	1925	1954	"	(1)26-(6)	(1)25-52 (2)	Reloc. 7/47 ½ mi. N; reloc. 9/48 5/8 mi. SSW; reloc. 8/53 1 mi. W
723.1	9493W	Wailupe Mauka	Hind-Clark Dairy	21 18.0	157 45.5	200	1926	1937	"	(1)	(1)	
723.2	9495	Wailupe Reservoir 170	B.W.S.	21 17.6	157 45.3	175	1954		Weekly	(1),(6)	(2)	Replaced #723
723.3		Aina Haina	Mrs. C. Ramage	21 17.1	157 45.2	30	1951		Daily	(3)57-(7)	(3)	No data 6/56-12/56
723.4		Paiko Drive	D.L. Grubb	21 17.0	157 43.8	10	1959		"	(3)	(3)	
723.5		Wiliwilinui Ridge*	U.S. Army	21 18	157 46	1200	(1944)	(1944)	Three times daily	(3)44-44		
724	5800	Makapuu Point*	U.S.C.G.	21 18.7	157 39.2	540	1907		Twice daily	(1)	(1)07-52 (2)	
724.1	0800W	Hahaione Valley*	Kamehameha Schools	21 17.8	157 42.8	25	1928	1935	Daily	(1)	(1)	
724.2	5675	Lunalilo Home*	Lunalilo Home	21 17.1	157 42.0	35	1956		"	(1)	(2)	
724.3		Maunalua	Bishop Estate	21 17.3	157 42.0	10	1922	1928	"	(1)	(2)	Reloc. 8/25 approx. 500' WNW; no data 5/23-7/25
724.4		Portlock Road	N. Barker	21 16.8	157 42.6	5	1954		"	(3)	(3)	Reloc. 6/59 approx. 100' SSE; no data 7/58-5/59

* Also has other weather instrumentation - see same key number in Table Two. ** Non-rainfall instrumentation only - see same key number in Table Two. [1] 1910 & 1913-14 data pub. in Water-Supply Papers 318, 373 & 430. [2] Pub. in Water-Supply Papers 373 & 430.

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TABLE ONE (CONT.)

State Key No.	USWB Index No.	Station Name or Number	Maintained By	Geographic Coordinates Latitude ° '	Longitude ° '	Elev. (ft.)	Year Established	Year Discontinued	Frequency of Reading	Location of Data	Location of Summaries	Other Names Relocations Remarks
724.5		PRI Koko Head*	P.R.I.	21 17.9	157 41.7	15	1941	1946	Weekly	[1](6)	(3)41-45	
725	6272W	Mikilua	Waianae Co.	21 24.7	158 09.2	60	1928	1947	After Rain	(1)42-	[2](1)	
725.1	7650W	Palehua	State Div. of Forestry	21 24.0	158 06.1	2460	1921	1932	Monthly	(1)	(1)	
725.2		Hakuloa	H.V. Von Holt	21 23.6	158 05.8	2220	1948		Weekly	(6) (7)49-	(3)	
725.3		Palehua (Johnston)	C.F. Johnston	21 22.9	158 06.2	1790	1955		After Rain-irregular	(6) (7)55-57	(6)	
726		D.P.D.	Ewa Plantation	21 20.7	158 07.5	10	1926		After Rain	(6) (7)48-	(3)52- (4)36-46 (6)	
727		Pump 10	" "	21 20.3	158 06.6	30	1911		" "	(6) (7)48-	(3)11-34, 52- (4)36-46 (6)	
728		Puu Manawahua	U.S. Army	21 23.3	158 06.5	2130						No data available
729		Field 85-86	C.P.C.	21 24.9	158 04.7	1040	1944		" "	(6) (7)48-	(3)52- (4)44-51 (6)	
729.1		Field 86	"	21 24.8	158 04.0	720	1926	1959	" "	(6)44- (7)48-	(3)52- (4)44-51 (6)	Data msg prior to 1944
730		Reservoir 6B	Ewa Plantation	21 20.5	158 04.7	115	1926		" "	(6) (7)48-	(3)52- (4)36-46 (6)	Kapolei
731		Field 151	C.P.C.	21 22.1	158 05.1	900	1924		" "	(3)41-45 (6) (7)48-	(3)24-35, 52- (4)24-51 (6)	Sanitarium Flats; Section 85
732		Reservoir 6	Ewa Plantation	21 20.9	158 03.9	90	1904		" "	(6) (7)48-	(3)05-34, 52- (4)36-46 (6)	
733		Field 29	Oahu Sugar	21 22.6	158 03.9	300	1919		" "	(3)41- (6) (7)48-	(3)19-42, 53- (4)36-46 (6)	
734		Gage 3	Libby	21 23.7	158 03.2	450	1939	1956	" "	(6) (7)48-	(4)39-51 (6)	Kupehau; Kunia B; data msg 1941-44
734.1		Gage 9	"	(21 24.2)	(158 03.4)	(560)	1922	1932	" "	(6)23-	(3)22-29 (6)23-	Kupehau Camp; Kunia Fld 43
734.2		Gage 10	"	(21 23.7)	(158 03.4)	(480)	1922	1932	" "	(6)23-	(3)22-29 (6)23-	Kunia Fld 44
734.3		Gage 11	"	(21 22.1)	(158 04.1)	(420)	1923	1931	" "	(6)	(3)23-29 (6)	Kunia Fld 48
734.4		Field 102	Oahu Sugar	21 23.7	158 04.1	650	1959		" "	(6)	(6)	
735		Field 43	Ewa Plantation	21 20.0	158 04.2	55	1926		" "	(6) (7)48-	(3)52- (4)36-46 (6)	Fld 46; Sisal 15C-16C; reloc. 1948 from Fld 46
736		Reservoir 8	" "	21 21.8	158 03.4	155	1903		" "	(6) (7)48-	(3)05-27, 52- (4)36-46 (6)	Res. 9 AB; 4 Houses
737		Reservoir 9	" "	21 22.6	158 03.0	210	1924		" "	(6) (7)48-	(3)52- (4)36-46 (6)	
738		Field 59	Oahu Sugar	21 24.8	158 03.5	600	1941		" "	(6) (7)48-	(3)53- (6)	
738.1		Field 57	" "	21 24.4	158 03.5	605	1945		" "	(6) (7)48-	(3)53- (6)	

* Also has other weather instrumentation - see same key number in Table Two. [1] Pub. in PRI Mo. News & Monthly Reports. [2] 1921-27 data pub. erroneously for this station - should be for #804.2.

TABLE ONE (CONT.)

State Key No.	USWB Index No.	Station Name or Number	Maintained By	Geographic Coordinates Latitude ° '	Longitude ° '	Elev. (ft.)	Year Established	Year Discontinued	Frequency of Reading	Location of Data	Location of Summaries	Other Names Relocations Remarks
738.2		Field 38B	Oahu Sugar	21 24.0	158 03.2	535	1929		After Rain	(6) (7)48-	(3)53- (6)	Data msg 1942-44
738.3		Field 115	" "	21 24.8	158 04.6	970	1960		" "	(6)	(6)	
739		Field 27A	" "	21 23.3	158 03.1	360	1945		" "	(6) (7)48-	(6)	
740		Reservoir 5	Ewa Plantation	21 21.4	158 02.9	120	1926		" "	(6) (7)48-	(3)52- (4)36-46 (6)	
740.1		Field 24	Oahu Sugar	21 24.5	158 02.5	490	1945		" "	(6) (7)48-	(6)	
740.2		Field 26	" "	21 23.3	158 02.4	285	1929		" "	(6) (7)48-	(3)53- (6)	Data msg 1942-44
740.3		Field 18*	" "	21 23.3	158 01.9	150	1955		" "	(6)	(6)	
741	0507	Ewa Plantation*	Ewa Plantation	21 20.6	158 02.2	40	1891		Daily	(1)05-	(1)91-52 (2)	
742		Pump 7	" "	21 22.0	158 02.1	45	1923		After Rain	(6) (7)48-	(4)36-46 (6)	Pump 5; reloc. 1948 from 40' elev.
742.1		Field 19	Oahu Sugar	21 23.8	158 01.9	375	1945		" "	(6) (7)48-	(6)	
742.2		Reservoir 3**	Ewa Plantation	21 22.0	158 02.4	115						
742.3		Honouliuli	Kahua Ranch	21 21.8	158 01.9	15	1950		Monthly	(6) (7)60-	(3)52-	
743		Reservoir 2	Ewa Plantation	21 22.5	158 01.8	60	1926		After Rain	(6) (7)48-	(3)52- (4)36-46 (6)	Pump 2; reloc. 1955 from 42' elev.
744		Field 74	" "	21 19.7	158 01.3	25	1927		" "	(6) (7)48-	(4)36-46 (6)	Fld 75; Windmill Road; reloc. 4/48 from 30' elev.
745		Pump 4	Oahu Sugar	21 23.8	158 01.2	45	1923		" "	(6) (7)48-	(3)53- (6)	
745.1		Field 15	" "	21 23.9	158 01.3	250	1947		" "	(6) (7)48-	(3)53- (6)	
746		Apokaa	Ewa Plantation	21 23.1	158 01.1	65	1902	1959	" "	(6) (7)48-	(3)05-34, 52- (4)36-46 (6)	
746.1		Field 32	Oahu Sugar	21 22.6	158 00.2	10	1958		" "	(6)	(6)	
747		Field 62	Ewa Plantation	21 21.3	158 00.7	35	1926		" "	(6) (7)48-	(3)52- (4)36-46 (6)	Reloc. 1940 from Fld 9
748		Field 12	Oahu Sugar	21 24.8	158 00.5	290	1948		" "	(6),(7)	(6)	
750	9738	Waipahu*	" "	21 23.4	158 00.6	60	1897 1955	1957	Daily++ Recorder	(1)05- (6)98-	(1)97-52 (2)	Charts on file FRC
750.1		Waipahu (HAES)*	H.A.E.S.	21 23	158 00	(40)	1939	(1941)	Weekly	(3)39-41	(3)39-41	
751		Field 79.1	Ewa Plantation	21 20.4	158 00.4	20	1923		After Rain	(6) (7)48-	(3)52- (4)36-46 (6)	Puuloa; reloc. 1951 75' W
751.1		Fort Weaver**	U.S. Army	21 20	157 59	10						
752		Waipio*	H.S.P.A. (Oahu Sugar)	21 23.5	157 59.8	50	1912 1940	1940	Daily Recorder	(4) (6)23-	(4) (6)23-	Charts on file HSPA
752.1		Field 34B	Oahu Sugar	21 21.6	157 59.2	25	1933		After Rain	(6) (7)48-	(3)53- (6)	Data msg 1942-44
752.2		Field 5	" "	21 23.9	157 59.3	110	1920		" "	(6) (7)48-	(3)53- (6)	Fld 5B; data msg 1938-47

* Also has other weather instrumentation - see same key number in Table Two. ** Non-rainfall instrumentation only - see same key number in Table Two. ++ Except weekends.

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TABLE ONE (CONT.)

State Key No.	USWB Index No.	Station Name or Number	Maintained By	Geographic Coordinates Latitude ° '	Longitude ° '	Elev. (ft.)	Year Established	Year Discontinued	Frequency of Reading	Location of Data	Location of Summaries	Other Names Relocations Remarks
752.3		Field 4	Oahu Sugar	21 24.8	157 59.3	240	1948		After Rain	(6),(7)	(6)	
752.4		Waipio (Clements)**	H.R. Clements	21 23.5	157 59.8	50						
752.5		Waipio Field L*	H.S.P.A.	21 23.8	157 59.9	85	1960		Recorder	(4)	(4)	Charts on file HSPA
753		Pump 6	Oahu Sugar	21 24.6	157 58.9	75	1919		After Rain	(6) (7)48-	(3)53- (6)	
753.1		Field 65.2	" "	21 24.5	157 58.7	80	1954		" "	(6)	(6)	
754		Field 65	" "	21 24.7	157 58.3	250	1931		" "	(6)44- (7)48-	(3)31-46, 53- (6)44-	Aiea Fld 2; Fld 6; reloc. 1944 2000' NNE
755	7954W	Pearl Harbor NAS*	U.S. Navy	21 21.8	157 57.9	20	1926	1949	Daily	(1)40-	[1](1)41- (2)	Ford Is. NAS
755.1		Luke Field *	U.S. Air Force	21 22	157 58	(10)	(1931)	(1935)	"	[2](2)31-35		
756	0100	Aiea Field 68	Oahu Sugar	21 24.1	157 57.5	200	1902		Daily++	(1)05-	[3](1)02-52 (2)	Waimalu; Waimalu Stable
756.1		Waimano Mauka*	H.S.P.A.	21 24.3	157 58.1	145	1950	1957	Daily	(4)		Waipio Mauka
757	1440W	Hickam Field *	U.S. Air Force	21 20.3	157 57.5	40	1931 (1931)	1949 1949	" Recorder	(1)41- [2](2)	(1)	Reloc. circa 1/42 approx. 1/5 mi. NNE; charts prob. on file NWRC
757.1		Pearl Harbor Naval Station	U.S. Navy (Public Wks Dept)	21 20.9	157 57.8	50	1913	1940	Daily	(1)18-	[4](1)	
757.2	8470W	Puuloa	Honolulu Plantation	21 20.8	157 57.1	15	1902	1940	"	(1)05-	(1)	
757.3		Fort Kamehameha**	U.S. Army	21 19	157 57	10						
758		Fleet Weather Central*	U.S. Navy	21 21.0	157 56.2	40	1948		"	(6),(7)	(3)	
758.1		Salt Lake	Honolulu Plantation	21 21.0	157 54.8	15	(1931)	1944	After Rain		(3)31-	Fld 87
760		Field 80	Oahu Sugar	21 23.3	157 56.8	75	1947		" "	(6) (7)48-	(6)	Aiea Fld 41
761	0111	Aiea Field 75	" "	21 24.5	157 56.6	455	1907		Daily++	(1)	[5](1)07-52 (2)	Aiea Fld 35; Waimalu (500)
762		Field 78	" "	21 24.5	157 55.9	660	1932		After Rain	(3)*** (6)42- (7)48-	(3)38-46, 53- (6)42-	Aiea Fld 34; data msg prior to 1938
763		Field 83*	" "	21 24.0	157 55.8	500	1927		" "	(6) (7)48-	(3)31-46, 53- (6)	Aiea Fld 44; McCandless Weir
764		Aiea*	" "	21 23.1	157 55.9	100	1902	1947	Daily++	(1)05-	[6](1)	
764.1	0115	Aiea Field 84	" "	21 23.0	157 55.8	120	1920		" "	(1)49- (6)	[7](1)48-52 (2)48- (6)	Aiea Fld 49; replaced #764 as official WB Station
764.2		Field 85	" "	21 23.5	157 55.5	415	1949		After Rain	(6),(7)	(6)	
764.3		Field 85 Mauka	" "	21 23.8	157 54.9	720	1954		" "	(6)	(6)	
765		Field 87	" "	21 22.2	157 55.8	60	1930		" "	(6) (7)48-	(3)53-	Aiea Fld 71; So. Halawa; data msg 1946-47

* Also has other weather instrumentation - see same key number in Table Two. ** Non-rainfall instrumentation only - see same key number in Table Two. *** Current but original date unknown. ++ Except weekends. [1] 1919-40 data erroneously pub. for this station - should be for #757.1. [2] Military surface observational forms on file NWRC. [3] 1902-18 data pub. as Waimalu. [4] 1919-40 data erroneously pub. as Pearl Harbor NAS (#755). [5] 1907-18 data pub. as Waimalu (500). [6] 1919-47 data erroneously pub. as Aiea Fld 84. [7] 1919-47 data erroneously pub. for this station - should be for #764.

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TABLE ONE (CONT.)

State Key No.	USWB Index No.	Station Name or Number	Maintained By	Geographic Coordinates Latitude ° '	Longitude ° '	Elev. (ft.)	Year Established	Year Discontinued	Frequency of Reading	Location of Data	Location of Summaries	Other Names Relocations Remarks
766	0119	Aiea Field 86	Oahu Sugar	21 23.0	157 55.2	310	1907		Daily++	(1)	[1](1)07-52 (2)	Aiea (500); Fld 86
767		Field 89	" "	21 22.7	157 54.8	140	1927		After Rain	(6) (7)48-	(3)53- (6)	Aiea Fld 66
768		Red Hill	K. Stewart	21 22.1	157 53.5	440						No data available
768.1		Moanalua 301B	Haw'n Pine	21 22	157 54	(450)	1929	1933	" "	(6)		Fld 4903-4
768.2		Moanalua 305A	" "	21 22	157 54	(450)	1929	1931	" "	(6)		Fld 4909-10
768.3		Tripler*	U.S.D.A. Fruit Fly Laboratory	21 22.1	157 53.1	675	1950	1953	Weekly	(6)50-51	(3)50-51	Data msg after 1951
770	6395	Moanalua	J.A. Roxburgh	21 21.0	157 53.8	15	1901		Daily	(1)05-	(1)01-52 (2)	
771		North Halawa	B.W.S.	21 23.7	157 53.6	300	1929		Recorder	(6) (7)48-	(3)29-35, 52- (6)	Halawa North Uka; no data 7/33-4/35; charts on file BWS
771.1		Halawa-Uka	Honolulu Plantation	21 24	157 54	480	1902	1907	Daily	(1)05-	(1)	
771.2		Halawa Shaft	B.W.S.	21 23.0	157 54.4	170	1955		Weekly	(6)	(6)	
771.3		Waimalu (HSPA)[2]	H.S.P.A.	(21 25.0)	(157 54.3)	420	1927	1945	Monthly	(6)	[3](3)28-42	HSPA Forestry 1; Waimalu 1
771.4		Halawa 2[2]	"	(21 23.9)	(157 52.6)	(1250)	1936	1941	"	(6)	(3)36-38	HSPA Forestry 3
771.5		Halawa 2A[2]	"	(20 24.3)	(157 50.8)	(2020)	1936	1941	"	(6)	(3)36-38	HSPA Forestry 22
771.6		Aiea Heights	R. Fricke	21 23.7	157 54.8	700	1949	1957	Daily	(7)	(3)	
771.7		Waimalu 2[2]	H.S.P.A.	(21 25.9)	(157 52.2)	(1250)	1927	1935	Monthly	(4)	[4](3)	
772		Moanalua (USGS)	U.S.G.S.	21 22.8	157 52.3	340	1926		Recorder	(1)42-44 (6)	(2)26-44 (3)52- (6)	Charts on file USGS
							1959		[5]Weekly			
773	3268	Kapalama	Kamehameha Schools	21 20.5	157 51.5	615	1922		Daily++	(1)	(1)22-52 (2)	Reloc. 4/26 from old HSPA Exp. Sta.; reloc. 1/60 345' E from 540' elev.
773.1		Kalihi Underground Shaft	B.W.S.	21 20.8	157 52.5	155	1949		Weekly	(6),(7)	(6)	
773.2		Kalihi Valley (330)	B.E. Olson	21 21.0	157 51.5	330	1948	(1948)	Daily	(7)48	(3)48	
774		Kalihi (USGS)	B.W.S.	21 22.0	157 50.8	500	1927		Weekly	(6) (7)48-	(3)27-38, 52- (6)	
774.1		Jack Lane Nursery	J.M. Warne	21 20.2	157 50.8	300	1948		Daily	(6) (7)49-	(3)	Nuuanu Orchid Garden; reloc. 6/56 130' SE
774.2	2225W	Insane Asylum*	Insane Asylum	21 19.9	157 52.4	30	1892	1929	"	(1)05-	(1)	
774.3		Kalihi Valley*	W.H. Newman	21 21.3	157 51.6	300	1901	1941	"	(1)17-19, 38-	[6](1)01-07 (2)	Kalihi-Uka; reloc. 3 times from elev. of 480', 520' & 430'; no data 5/07-9/14
774.4		Kalihi Duncan	B.W.S. (J.W. Duncan)	21 21.8	157 51.3	480	1952		"	(6),(7)	(3)	
774.5		Wyllie Street	E.W. Jordan	21 19.9	157 50.9	235	1891	1924	"	(1)05-	(1)91-18 (2)	
774.6		Oahu Country Club	Oahu Country Club	21 20.6	157 50.6	410	1953		"	(3)	(3)	Msg periods

* Also has other weather instrumentation - see same key number in Table Two. ++ Except weekends. [1] 1907-18 data pub. as Aiea (500). [2] For additional info., see file on HSPA forestry gages, Dept. of Geophysics, Experiment Station HSPA. [3] Annual totals only 1929 & 1939-42 except data msg 1941. [4] Annual totals only 1927-28. [5] BWS standard 8" gage few ft from recording gage. [6] Pub. as Kalihi-Uka.

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TABLE ONE (CONT.)

State Key No.	USWB Index No.	Station Name or Number	Maintained By	Geographic Coordinates Latitude ° '	Longitude ° '	Elev. (ft.)	Year Established	Year Discontinued	Frequency of Reading	Location of Data	Location of Summaries	Other Names Relocations Remarks
774.7		Country Club	Unknown	21 21	157 51	(450)	1929	1936	Unknown	(3)	(3)	Prob. located close to #774.6
774.8		Nuuanu (Osborne)	L.B. Osborne	21 20.4	157 50.5	360	1947	1949	Daily	(7)48-	(3)48-	Data msg prior to 1948
774.9		Puumui	M. Slover	21 20.3	157 50.8	300	1954	1954	"	(6)		Data on file BWS
774.11		Honolulu (Burbank)*	H.R. Auerbach	21 20.0	157 50.9	250	1960		"	(3)	(3)	
775	6933	Nuuanu Reservoir 5	B.W.S.	21 20.5	157 50.3	410	1890		Daily++	[1](1)05-	[2](1)90-52 (2)	Electric Light Station
775.1		Nuuanu Valley (Wilder)	J.K. Wilder	21 21	157 51	500	1879	1888	Unknown		(1)	
775.2		Kapalama Kamanaiki	B.W.S.	21 21.5	157 50.0	1600	1926	1939	Monthly	(6)	(3)	
776		Kalihi Tunnel 2	"	21 22.2	157 50.1	650	1926		Weekly	(6) (7)48-	(3)26-38, 52- (6)	
777	2960	Kalihi Reservoir Site	"	21 22.7	157 49.5	910	1927		Recorder	(1)42- (6)	(1)27-52 (2)	Charts on file BWS
780		Tantalus Peak	"	21 20.1	157 49.0	2000	1927		Weekly	(6) (7)48-	(3)27-38 (6)	
780.1		Tantalus Heights (Giffard)*	W.M. Giffard	21 20	157 49	1300	1907	1916	Daily	(1)	(1)	
780.2		Tantalus (Isenberg)	P.R. Isenberg	21 20	157 49	1665	1906	1916	"	(1)	(1)	
780.3	8736	Tantalus Mauka*	J.C. Mann	21 19.9	157 49.1	1600	1953		"	(1)57- (2),(6)	(2)	
780.4		Nuuanu Valley (554)	Unknown	21 21	157 49	555	1879	1884	Unknown		(1)	Data suspect
780.5		Tantalus Drive*	M. Newman	21 19.8	157 49.5	1300	1948		Daily	(3)	(3)49-	Reloc. 5/57 short dist.
780.6		Nuuanu (Fox)	B.W.S. (J.M. Fox)	21 20.7	157 49.7	600	1954	1956	"	(6),(7)	(3)	
780.7		Tantalus Experiment Station	B.W.S.	21 19.8	157 49.6	1200	1927	1938	Monthly	(6)	(3)	
780.8		Dowsett Highlands	J.L. Banning	21 20.7	157 49.8	565	1953		" [3]	[4](2)53-58 (6)56-		
781	3113	Kaneohe Mauka*	State Hospital	21 24.7	157 48.8	200	1928		Daily	(1)	(1)28-52 (2)	Charts on file FRC
							1940	1944	Recorder			
781.1		Halekou*	Mrs. C.R. Ashford	21 23.3	157 48.1	400	1957		Daily	(3)	(3)	
781.2		Kaneohe (Gowing)	D.P. Gowing	21 24.5	157 47.9	50	1951		"	(7)	(3)	Two reloc. short dist,
781.3		Kaneohe (Siler)	R.K. Siler	21 24.2	157 48.0	110	1957		"	(6)	(6)	
781.4		Kamooalii	U.S.G.S.	21 24.8	157 48.2	60	1959		Recorder	(6)		Charts on file USGS
781.5		Wilson Tunnel (Kaneohe Portal)	"	21 22.9	157 48.8	800	1959		Monthly & After Rain [5]	(3) (6)	(3)	
782	5637	Luakaha Lower*	B.W.S.	21 21.2	157 49.0	880	1890	1932	Daily	(1)05- (6)	(1)90-52 (2)	Charts on file USGS
							1932		Weekly-R			
782.1		Halfway House	W. Laa	(21 21.0)	(157 49.6)	680	1890	1897	Unknown		(1)	Nuuanu Valley (680)

* Also has other weather instrumentation - see same key number in Table Two. ++ Except weekends. [1] Pub. through 1937 as Electric Light Station. [2] 1890-1918 data pub. as Electric Light Station. [3] Daily until 1958. [4] On file FRC (Airport Mo. Rainfall Sheets). [5] Daily through 6/60.

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State Key No.	USWB Index No.	Station Name or Number	Maintained By	Geographic Coordinates Latitude ° '	Longitude ° '	Elev. (ft.)	Year Established	Year Discontinued	Frequency of Reading	Location of Data	Location of Summaries	Other Names Relocations Remarks
783	6928	Nuuanu Reservoir 4*	B.W.S.	21 21.3	157 48.6	1050	1905 1932	1932	Daily Weekly-R	(1)	[1](1)05-52 (2)	Upper Luakaha; Nuuanu Dam 4; charts on file USGS
783.1		Lanihuli	"	21 22.4	157 48.8	2700	1926	1945	Monthly	(6)	(3)	
783.2		Hillebrand Glen 2	Unknown	21 22	157 48	1200	1919	(1920)	Unknown		(2)19-20	
783.3		Old Pali Road	Mrs. R. Power	21 21.1	157 49.5	710	1955		Daily	(6)	(3)	Reloc. 7/60 400' NE
784	7810	Pauoa Flats	B.W.S.	21 20.3	157 48.8	1800	1926 (1929)		Weekly Recorder	(1)42- (6)	(1)26-52 (2)	Charts on file USGS
785	6126	Manoa HSPA*	H.S.P.A.	21 20.1	157 48.2	500	1919		Daily	(1)41- (6)	(1)19-52 (2)	
786		Nuuanu Pali*	B.W.S.	21 22.2	157 47.7	1150	1927 1947	1947	Weekly Recorder	(6) (7)48-	(3)27-38, 52- (6)	Charts on file HWA - rec. gage maint. by PRI
786.1		Nuuanu Pali (USGS)	U.S.G.S.	21 22.1	157 47.7	1135	1910	1921	Monthly	[2](1)19- (6)	(1)10-18 (6)	
787	6228W	Maunawili Ranch*	Kaneohe Ranch	21 21.4	157 46.0	250	1895 1946	1954	Weekly Recorder	(1)05-44 (6)54-	(1)95-44 (3)44-57 (6)54-	Reloc. 6/54 1/6 mi. SW; no data 5/44-7/44 & 3/53-1/54; charts on file U.S. Army Eng. & HSPA
787.1		Maunawili (HSPA)	H.S.P.A.	21 21.3	157 46.0	350	1951 1954		Weekly Recorder	(6)	(3)51-57	Charts on file HSPA; rec. gage reloc. prob. 6/54 from old #787 loc.
788	8600	St. Stephens Seminary	St. Stephens Seminary	21 22.1	157 46.9	490	1943		Daily	(1)46- [3](2)43-46	(1)43-52 (2)	
788.1		Pali Golf Course	U.S.G.S.	21 22.5	157 47.2	500	1959		"	(3),(6)	(3)	
789		Konahuanui*	B.W.S.	21 21.3	157 47.4	3105	1910	1948	Monthly-irregular	[4](6)	(3)26-37 (6)26-	No data 1914-25
790		Kawailoa Girls' School	Kawailoa Girls' School	21 22.8	157 45.2	155	1942 1942	1947	Daily Recorder	(6)48- (7)50-	(3)	Reloc. circa 11/59 ¼ mi. NNE from 220' elev.; data msg 7/47-5/49 & 7/49-4/50; charts on file HWA
790.1		Kailua (HSPA)*	H.S.P.A.	21 22.3	157 46.2	120	1928		Daily	(6) (7)60-	(3)	Kula; reloc. 11/39 ½ mi. SW from 80' elev.
790.2		Kailua (HAES)*	H.A.E.S.	(21 23.2)	(157 45.2)	105	1937	1944	Weekly	[5](3)38-43 [5](6)38-43	[5](3)38-43	1937 & 1944 data msg
790.3		Kailua (Clements)*	H.R. Clements	21 22.3	157 46.3	140	1938	1942	"	[6](3)		
790.4		Kahaluu Field 83	Libby	(21 22.9)	(157 45.5)	(140)	1924	1925	After Rain		(3)	Gage 15; Camp Kailua
791		Kailua Pump	Waimanalo Plantation	21 23.5	157 45.0	35	1924	1944	" "		(3)24-42	Data msg 1935 & after 1942
791.1		Kailua Hill	B. Nutter	21 23.4	157 45.0	90	1948	1957	Daily	(3)49-	(3)49-	Reloc. 5/49 1½ mi. W from 30' elev.; data msg prior to 1949
791.2		Kailua (Parry)	H.D. Parry	21 25.1	157 44.9	15	1957	1959	"	(3)	(3)	
791.3	2683	Kailua Fire Station	Kailua Fire Dept.	21 24.0	157 44.5	10	1958		"	(1)59- (2)	(2)	

* Also has other weather instrumentation - see same key number in Table Two. [1] 1905-18 data pub. as Upper Luakaha. [2] Pub. in annual CD only. [3] Surface observational forms on file FRC. [4] 1910-13 data pub. in Water-Supply Papers 318, 336 & 373. [5] Annual total only 1943. [6] Data on back of thermograms.

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TABLE ONE (CONT.)

State Key No.	USWB Index No.	Station Name or Number	Maintained By	Geographic Coordinates Latitude ° '	Longitude ° '	Elev. (ft.)	Year Established	Year Discontinued	Frequency of Reading	Location of Data	Location of Summaries	Other Names Relocations Remarks
791.4		Kalama	G. Costar, Jr.	21 24.4	157 44.7	10	1948	1949	Daily	(7)	(3)	
791.5		Kailua (Carson)	M.C. Carson	21 24.0	157 44.7	10	1952	1954	"	(3)	(3)	
792		Maunawili Reservoir*	H.W.A.	21 20.3	157 44.7	290	1929		"	(3)54- (7)55-	(3)	Data msg 1935; no data 1/47-7/54
792.1	9526	Waimanalo Mauka*	Mrs. E. Beveridge	21 20.3	157 44.5	190	1951	1953	"	(1)51-52		
793		Lagoon Pump	Waimanalo Plantation	21 21.6	157 43.6	40	1930	(1942)	After Rain		(3)30-34 (4)36-42	Data msg 1935
794	9521	Waimanalo*	H.W.A.	21 21.1	157 43.4	20	1894		Daily	(1)05-	(1)94-50 (2)	Authority Office Site; reloc. 1/55 across street; no data 1/51-12/54
794.1		Bellows Field*	U.S. Air Force	(21 21.3)	(157 42.8)	15	1942	1946	"	(1)	(2)	
794.2		Waimanalo (Gurney)	J.S. Gurney	21 21	157 43	(25)	1879	1882	Unknown		(1)	
795		Coral Hill	Waimanalo Plantation	21 20.0	157 42.5	80	1929	1944	After Rain		(3)29-34 (4)36-42	Fld 4; data msg 1935 & after 1942
795.1		Waimanalo Experiment Farm*	H.A.E.S.	21 20.3	157 42.8	60	1950		Daily	(6),(7)	(3)	
796	5766	Makaha Kai	Capital Investment	21 28.4	158 13.1	25	1921		"	(1)42-	(1)28-52 (2)	Makaha Makai; data doubtful prior to 1928
797		Kamaile Pump	Waianae Co.	21 27.7	158 12.0	20	1927	1956	After Rain	(7)48-	(3)28-37, 52- (4)27-51	
798	9231	Waianae*	Capital Investment	21 27.2	158 11.2	20	1891		Daily	(1)05-	(1)91-52 (2)	Waianae Mill; reloc. 1/48 3/8 mi. NNE
798.1		Waianae (Hidano Farm)*	H.A.E.S.	21 27.0	158 10.9	25	1956	1957	"	[1](6)		
800		Makaha	Capital Investment	21 29.2	158 11.6	440	1936		After Rain	(3)*** (7)48-	(3)52- (4)36-51	Makaha Ditch
800.1	5781	Makaha Valley*	Capital Investment	21 28.5	158 12.1	160	1958		Daily	(1)	(2)	
801		Waianae Valley (39)	Waianae Co.	21 27.3	158 10.9	40	1930	1951	After Rain	(1)30-47 (7)48-	[2](1)30-47 (3)48-	Waianae Flds
802	9245	Waianae Valley	Capital Investment	21 28.2	158 09.6	330	1932		Daily	(1)48-	[3](1)48-52 (2)	Powerhouse
802.1		Puhawai	U.S.G.S.	21 28.2	158 07.9	450	1930	1944	Recorder	(1)42- (6)	(2)31-	Charts on file USGS
803	9238	Waianae Mauka	Capital Investment	21 29.4	158 08.6	1575	1905 1955	1956	Weekly-irregular Recorder	(1)	(1)05-52 (2)	Waianae Uka; charts on file FRC
803.1	5650	Lualualei Water Tunnel	U.S. Navy	21 28.8	158 08.1	1500	1953		Weekly	(1)	(2)	
804	5647	Lualualei*	" "	21 25.5	158 08.3	115	1925		Daily	(1)	(1)25-52 (2)	Reloc. 1/40 from 200' elev. - dist. & dir. unkn; no data 1/28-12/39
804.1		Kolekole[4]	U.S. Army	21 28.5	158 07.1	1550	1934	1953	Monthly	(4)34-47 (7)49-	(3)	Kolekole Pass; HSPA Forestry 21; reloc 1949 from 1640' elev. - dist. & dir. unkn

* Also has other weather instrumentation - see same key number in Table Two. *** Current but original date unknown. [1] On file Plant Physiology Dept., Univ. of Hawaii. [2] 1948-52 data pub. erroneously for this station - should be for #802. [3] 1930-47 data pub. erroneously for this station - should be for #801. [4] For additional info., see file on HSPA forestry gages, Dept of Geophysics, Experiment Station HSPA.

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TABLE ONE (CONT.)

State Key No.	USWB Index No.	Station Name or Number	Maintained By	Geographic Coordinates Latitude ° '	Longitude ° '	Elev. (ft.)	Year Established	Year Discontinued	Frequency of Reading	Location of Data	Location of Summaries	Other Names Relocations Remarks
804.2		Yamaguchi	Waianae Co.	21 26.3	158 10.0	40	1921	1941	After Rain		(1)21-27 (3)27-30 (4)35-	Lualualei Camp; data msg 1931-34
804.3		Nanakuli	C.A. Reichelt	21 23	158 09	5	1938	(1938)	Daily	(3)38-38		
805		Leilehua*	C.P.C.	21 29.1	158 04.8	980	1924 1942	 1957	After Rain Recorder	(3)41- (6) (7)48-	(3)24-35, 52- (6)	Leilehua Camp; Fld 66; charts on file HWA
806		Kunia	"	21 27.6	158 03.7	860	1923		After Rain	(3)41-45 (6)24- (7)48-	(3)23-35, 52- (4)24-51 (6)	Kunia Camp
806.1		Field 1*	"	21 28.0	158 02.9	790	1939		" "	(6)51-	(3)39-45 (6)51-	Kunia I; data msg 1946-50
807	0300	Camp 84 CPC*	"	21 25.4	158 03.6	680	1924 1942		" " Recorder	(1)56- (2)41- (6) (7)48-	(2)56- (3)24-35, 52- (4)24-51 (6)	Fld 84; charts on file PSO & FRC
807.1		PRI Kunia*	P.R.I.	21 25.3	158 03.4	690	1937	1946	Weekly	[1](5)	(3)37-45	
808		Field 32	C.P.C.	21 26.8	158 04.3	970	1944		After Rain	(6)48- (7)48-	(3)52- (4)44-51 (6)48-	
809		Field 33	"	21 26.7	158 03.6	810	1935		" "	(3)41-45 (6) (7)48-	(3)52- (4)35-51 (6)	Fld 34
809.1		Field 56	Oahu Sugar	21 25.0	158 03.1	610	1945	1957	" "	(6) (7)48-	(3)53- (6)	
810	9800W	Wheeler Field*	U.S. Air Force	21 29.2	158 02.4	845	1909 1934	1949 1949	Daily Recorder	[2](1)	[3](1)	Schofield Barracks; reloc. 1940 approx. 1-1/5 mi. ESE; charts on file NWRC
811		Field 54	Oahu Sugar	21 25.9	158 02.8	650	1919		After Rain	(3)41- (6)20- (7)48-	(3)19-42, 53- (4)36-46 (6)20-	Fld 49
812		Robinson Camp 2	Hawaiian Pine	21 26.0	158 02.7	610	1924		" "	(6) (7)48-	(3)24-26, 52- (4)27-46 (6)	Fld 4309-10; Robinson 2
812.1		Field 50	Oahu Sugar	21 25.5	158 02.6	600	1945		" "	(6) (7)48-	(3)53- (6)	
812.2		Van 6A	Hawaiian Pine	21 26	158 03	(600)	1925	1936	" "	(6)	(3)	Fld 65; Fld 4313-14
813	1527W	Robinson Camp 1*	" "	21 27.0	158 02.6	705	1908		" "	[4](1)08-48 (6)24- (7)48-	[4](1)08-48 (3)52- (6)24-	Robinson 1; Hoaeae Upper; Fld 4303-4
813.1		Field 60	Oahu Sugar	21 26.6	158 02.3	650	1945		" "	(6) (7)48-	(3)53- (6)	
813.2		Field 4307-8	P.R.I. (Thorne)	21 27	158 03	(700)	1948	1949	" "	(7)	(3)	
814		PRI Wahiawa (880)*	P.R.I.	21 29.9	158 02.3	880	1926	1954	Daily++	[5](5)28- (7)48-	(3)37- (5)28-	PRI Fld 8; data msg prior to 1928 & 1/47-7/48
814.1		Deep Well	U.S. Army (Post Eng'n'rs, Schofield Barracks)	21 29.5	158 01.8	865	1938		Daily	(3)*** (6)48- (7)48-	(3)52- (4)45-51	Data msg prior to 1945
814.2		PRI Wahiawa Mauka (865)	P.R.I.	21 29.7	158 02.4	865	1948	1948	Daily++	(7)	(3)	PRI Fld 10
814.3		PRI Wahiawa (Field 3)**	"	21 29.9	158 02.2	875						

* Also has other weather instrumentation - see same key number in Table Two. ** Non-rainfall instrumentation only - see same key number in Table Two. *** Current but original date unknown. ++ Except weekends. [1] Pub. in PRI Monthly News & Monthly Reports. [2] 1909-39 data pub. as Schofield Barracks. [3] 1909-18 data pub. as Schofield Barracks. [4] Pub. as Hoaeae Upper. [5] Data prior to 1947 pub. in PRI Mo. News & Mo. Reports.

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TABLE ONE (CONT.)

State Key No.	USWB Index No.	Station Name or Number	Maintained By	Geographic Coordinates Latitude ° '	Longitude ° '	Elev. (ft.)	Year Established	Year Discontinued	Frequency of Reading	Location of Data	Location of Summaries	Other Names Relocations Remarks
815		Field 53*	Oahu Sugar	21 27.1	158 01.8	690	1922		After Rain	(6)23- (7)48-	(3)22-42, 53- (4)36-46 (6)	
816		Field 4111-12	Hawaiian Pine	21 24.8	158 01.6	400	1929		" "	(6) [1](7)48-	(3)33-42 (4)29-46 (6)	Fld 47 (Oahu Sugar)
816.1		Field 21	Oahu Sugar	21 24.5	158 01.6	380	1954		" "	(6)	(6)	
817		Kipapa Camp 1*	Hawaiian Pine	21 27.4	158 01.3	690	1925		" "	(6)	(3)25-26, 52- (4)27-46 (6)	Fld 4205-6
817.1		Field 4107-8	" "	21 26.8	158 00.6	600	1953		Daily++	(6),(7)	(3)	Waipahu (4107)
817.2		Kipapa Field*	U.S. Air Force	(21 26.6)	(158 01.2)	580	(1923)	1945	Daily		(3)23-42	No data available 1943-45
817.3[2]		Field 45	Oahu Sugar	21 26.5	158 01.5	600	1919	1942	After Rain	(6)20-41	(3)	
818		Field 4103-4*	Hawaiian Pine	21 25.3	158 01.9	480	1938		Daily++	[3](6) [4](7)48-	[3](6)	Fld 46 (Oahu Sugar); data msg 1938-41 & 1944
818.1		Field 23	Oahu Sugar	21 25.2	158 01.9	525	1954		After Rain	(6)	(6)	
819		Field 51	" "	21 26.6	158 00.8	580	1947	1952	" "	(6)48- (7)48-	(6)48-	Data msg prior to 1948
820		Gage 1	Libby	21 27.8	158 01.1	680	1939	1959	" "	(6) (7)48-	(3)52- (4)39-51 (6)	Waipio A
820.1		Kipapa 1	Hawaiian Pine	21 27.4	158 00.3	690	1953		Daily++	(6),(7)	(6)	Fld 4207-8
820.2		PRI Wahiawa*	P.R.I.	21 28.0	158 01.3	700	1953 1954		" " Recorder	(5),(7)	(3),(5)	PRI Waipio; charts on file PRI
820.3		PRI Wahiawa Mauka*	"	21 28.5	158 00.8	760	1954		Daily++	(5),(7)	(3),(5)	PRI Waipio Mauka
820.4		Gage 13	Libby	21 27.5	157 59.1	730	1923	(1929)	After Rain		(3)23-29	Waipio B Fld 114
820.5		Waipio A Field 5**	"	21 28.1	158 00.0	765						
821		Pine Spur	Hawaiian Pine	21 29.0	158 00.9	845	1933		Daily++	(6) (7)48-	(3)52- (4)33-46	Pine Spur Camp; Fld 4523-4
821.1		PRI Pine Spur*	P.R.I.	21 29.2	158 00.4	940	1954		Weekly	(6),(7)	(3)	Fld 4524 (Haw'n Pine)
822		Gage 5	Libby	21 25.9	158 03.6	770	1922	1958	After Rain	(6)23- (7)48-	(3)22-29 (6)23-	Kunia A Lwr; Kunia Fld 40
822.1		Field 90	C.P.C.	21 25.8	158 03.9	790	1953		" "	[5](6),(7)	(3)	Gage 6 (Libby); Kunia A Upper
822.2		Field 95	"	21 25.8	158 04.7	1150	1959		" "	(6),(7)	(3)	
823		Kipapa Camp 5	Hawaiian Pine	21 28.6	158 00.1	820	1925		Daily++	(6) (7)48-	(3)25-26, 52- (4)27-46 (6)	Fld 4217-18
823.1		Field 4219-20**	" "	21 28.8	157 59.7	890						
824		Field 13	Oahu Sugar	21 25.0	158 00.1	360	1934		After Rain	(6)35- (7)48-	(3)34-42, 53- (4)35-46 (6)35-	
825		Kipapa	" "	21 27.0	158 00.1	375	1916	1950	" "	(6)17- (7)48-	(3)16-42 (4)25-46 (6)17-	

* Also has other weather instrumentation - see same key number in Table Two. ** Non-rainfall instrumentation only - see same key number in Table Two. ++ Except weekends. [1] Fld 47 (Oahu Sugar) prior to 7/53. [2] Shown as 760.1 in "Rainfall of the Hawaiian Islands" (1959). [3] On file Oahu Sugar 1938-53, Haw'n Pine from 1939. [4] Fld 46 (Oahu Sugar) prior to 11/53. [5] Gage 6 (Libby) prior to 9/59.

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TABLE ONE (CONT.)

State Key No.	USWB Index No.	Station Name Or Number	Maintained By	Geographic Coordinates Latitude ° '	Longitude ° '	Elev. (ft.)	Year Established	Discontinued	Frequency of Reading	Location of Data	Location of Summaries	Other Names Relocations Remarks
825.1		Field 4109-10	Hawaiian Pine	21 26.2	157 59.9	515	1929		Daily++	(6) [1](7)48-	(6)	Fld 39 (Oahu Sugar); data msg 1941-47
825.2		Waipio C Field 137**	Libby	21 26.3	157 59.5	540						
826		Field 4101-2*	Hawaiian Pine	21 27.1	157 59.8	680	1928		" "	(3)41-52 (6) [2](7)48-	(3)28-37, 41-42 (6)	Fld 42 (Oahu Sugar)
827		Kipapa 5	" "	21 29.2	157 59.3	1005	1925		" "	(6) (7)48-	(3)25-26, 52- (4)27-46 (6)	Kipapa Pump; Fld 4221-22; Fld 4223-24
830		Field 92*	C.P.C.	21 27.3	157 59.3	740	1916		After Rain	[3](5)38-46 [4](6)39- [4](7)48-	(3)37-45, 52- (4)39-40, 45-51 [5](6)39-	Gage 2 (Libby); Waipio B; Waipio B Fld 139; data msg prior to 1939
830.1		Field 41	Oahu Sugar	21 26.1	157 58.8	560	1929		" "	(6) (7)48-	(3)53- (6)	Data msg 1933-47
830.2		Gage 12	Libby	(21 27.6)	(158 01.0)	(700)	1923	1932	" "	(6)	(3)23-29 (6)	Waipio Fld 104
830.3		Gage 1 (Mink)	U.S.G.S.	21 28.0	157 57.6	1125	1957		Monthly	(6)		
830.4		Gage 2 (Mink)	"	21 28.0	157 57.2	1295	1957		"	(6)		
830.5		Gage 3A (Mink)	"	21 28.1	157 56.6	1440	1957		"	(6)		Also Gage 3B - approx. 100' NNE
830.6		Gage 4 (Mink)	"	21 28.2	157 56.2	1560	1957		"	(6)		
830.7		Gage 5 (Mink)	"	21 28.2	157 55.8	1560	1957		"	(6)		
830.8		Gage 6 (Mink)	"	21 28.3	157 55.5	1575	1957		"	(6)		
830.9		Gage 7 (Mink)	"	21 28.4	157 55.0	1720	1957		"	(6)		
830.11		Gage 9 (Mink)	"	21 28.7	157 54.4	1850	1957		"	(6)		
830.12		Gage 10 (Mink)	"	21 28.8	157 54.0	2050	1957		"	(6)		
830.13		Gage 11 (Mink)	"	21 29.0	157 53.8	2440	1957		"	(6)		
830.14		Gage 12 (Mink)	"	21 29.0	157 53.7	2675	1957		"	(6)		
830.15		Gage 13 (Mink)	"	21 29.1	157 53.6	2740	1957		"	(6)		
830.16		Gage 14 (Mink)	"	21 29.1	157 53.6	2785	1957		"	(6)		
830.17[6]		Gage 8 (Mink)	"	21 28.5	157 54.7	1720	1957		"	(6)		
831		Field 3C	Oahu Sugar	21 25.4	157 59.0	370	1929		After Rain	(6) (7)48-	(3)53- (6)	Data msg 1937-47
831.1		Ku Tree Dam	U.S. Army (Post Eng'n'rs Schofield Barracks)	21 29.9	157 59.0	1120	1925		Daily++	(6)48- (7)48-	(3)52- (4)39-51	Prob. reloc. 1945; data msg prior to 1939
831.2		Field 4113 Makai	Hawaiian Pine	21 25.6	157 58.9	390	1955		" "	(6),(7)	(3)	
832		Waikakalaua	Oahu Sugar	21 29.3	157 59.6	800	1916		After Rain	(6)17- (7)48-	(3)16-42, 53- (4)17-46 (6)17-	
832.1		Waiawa Ditch	A. Lister	21 28	157 58	1240	1907	1909	Daily	(1)	(1)	
832.2		Kipapa (USGS)	U.S.G.S.	21 28.2	157 57.8	690	1957		Recorder	(6)	(6)	Charts on file USGS
832.3		Kipapa (750)	Oahu Sugar	21 28	157 59	750	1925	1937	After Rain	(6)	(3)	
832.4		Gage 30 (Mink)	U.S.G.S.	21 28.2	157 57.6	720	1957		Monthly	(6)		

* Also has other weather instrumentation - see same key number in Table Two. ** Non-rainfall instrumentation only - see same key number in Table Two. ++ Except weekends. [1] Fld 39 (Oahu Sugar) prior to 7/53. [2] Fld 42 (Oahu Sugar) prior to 12/52. [3] Pub. in PRI Mo. News & Mo. Reports. [4] Gage 2 (Libby) prior to 9/59. [5] On file Libby 1939-59, CPC from 1959. [6] Shown as 830.10 in "Rainfall of the Hawaiian Islands" (1959).

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State Key No.	USWB Index No.	Station Name or Number	Maintained By	Geographic Coordinates Latitude ° '	Longitude ° '	Elev. (ft.)	Year Established	Year Discontinued	Frequency of Reading	Location of Data	Location of Summaries	Other Names Relocations Remarks
832.5		Gage 33 (Mink)	U.S.G.S.	21 28.5	157 56.7	870	1957		Monthly	(6)		
832.6		Gage 34 (Mink)	"	21 28.4	157 56.3	960	1957		"	(6)		
832.7		Koa Ridge 1	Koa Ridge Farms	21 27.8	157 58.2	1010	1959		Weekly	(6) (7)60-	(3)	Gate House
832.8		Koa Ridge 2	" " "	21 28.0	157 57.6	1160	1958		"	(6) (7)60-	(3)	Main House
833	4766	Koolau Dam	U.S. Army (Post Eng'n'rs Schofield Barracks)	21 29.9	157 58.4	1060	1914		Daily++	(1)19-	[1](1)14-52 (2)	Army Reservoir[2]
834		Gage 7	Libby	21 25.4	157 57.7	460	1946	1959	After Rain	(6) (7)48-	(3)52- (4)47-51 (6)	Pearl City
834.1		Field 3	Oahu Sugar	21 25.8	157 58.2	550	1919		" "	(6)20- (7)48-	(3)19-42, 53- (4)35-46 (6)20-	
834.2		Waiawa (675)*	Libby	(21 26.5)	(157 58.2)	675	1905	1935	" "	(1)	(1)05-18 (2)	Gage 25; Waipio C
834.3		Waimano 1	B.W.S.	21 25.7	157 55.9	1050	1949		Monthly	(6) (7)50-	(6)	Waimano Home
834.4		Waimano 2	"	21 26.2	157 54.2	1200	1949	1954	"	(6) (7)50-	(6)	
834.5		Waimano 3	"	21 26.4	157 53.8	1280	1949	1954	"	(6) (7)50-	(6)	
834.6		Gage 15	Libby	21 26	157 57	(480)	1925	1931	After Rain	(6)27-	(3)25-29 (6)27-	Pearl City Fld 51
834.7		Adit 8	Oahu Sugar	21 26.9	157 57.4	730	1948		" "	(6),(7)	(6)	
835		Field 71	" "	21 25.0	157 57.5	430	1947		" "	(6) (7)48-	(6)	Aiea Fld 18
836	9261	Waiawa	" "	21 27.6	157 55.6	800	1916		Weekly	(1)42- (6)17-	(1)19-52 (2)	
836.1		Waipio 1[3]	H.S.P.A.	(21 28.3)	(157 55.9)	(1500)	1928	1947	Monthly	(4)30-	[4](3)28-42 (4)30-	Waipio Lwr; HSPA Forestry 4
837	8964	Waiahole	Oahu Sugar	21 28.4	157 53.1	745	1916 1955		Daily Recorder	(1)42- (6)17-	(1)19-52 (2)	Upper Waiawa; reloc. 6/60 approx. 40' ENE; charts on file PSO & FRC
837.1		Waiawa-Waiahole Divide	U.S.G.S.	(21 28.3)	(157 53.5)	2150	1910	1914	Monthly	[5](6)	(3)	
837.2		Kaalaea	K. Hashimoto	21 28.1	157 51.4	120	1960		Daily	(3)	(3)	
838	3123	Kaneohe Ranch*	Kaneohe Ranch	21 22.7	157 46.9	365	1944		Daily++	(1)	(1)44-52 (2)	
838.1		Kaneohe	D.L. Ah You	21 25.6	157 48.4	60	1895	1924	Daily	(1)05-	(1)95-18 (2)	Reloc. 10/21 approx. ¼ mi. WNW
839		Kahaluu	U.S.G.S.	21 26.3	157 51.3	360	1935		Recorder	(1)42-44 (6) (7)48-	(2)36-45 (3)36- (6)	Charts on file USGS
839.1		Ahuimanu*	H.R. MacFarlane	21 26.2	157 50.5	350	1891	1914	Daily	(1)05-	(1)	
839.2	1370W	Heeia*	U.S. Navy	21 26.0	157 48.5	50	1906	1927	"	(1)	(1)	Reloc. 5/21 from 100' elev. - dist. & dir. unknown
839.3		Haiku	" "	21 24.5	157 50.0	630	1942		Weekly	[6](6) (7)52-58	[6](6)	Haiku Valley; reloc. 12/58 1/5 mi. SE from 600' elev.; read by BWS

* Also has other weather instrumentation - see same key number in Table Two. ++ Except weekends. [1] 1914-18 data pub. as Army Reservoir. [2] Shown as #827.1 (Army Reservoir) in "Rainfall of the Hawaiian Islands" (1959). [3] For additional info., see file on HSPA forestry gages, Dept. of Geophysics, Experiment Station HSPA. [4] Annual total only 1942. [5] Pub. in Water-Supply Papers 318, 336, 373 & 430. [6] On file BWS.

TABLE ONE (CONT.)

State Key No.	USWB Index No.	Station Name or Number	Maintained By	Geographic Coordinates Latitude ° '	Longitude ° '	Elev. (ft.)	Year Estab-lished	Year Discon-tinued	Frequency of Read-ing	Location of Data	Location of Summaries	Other Names Relocations Remarks
839.4		South Peak, Haiku	U.S. Navy	21 25	157 51	2785	1947	1947	Monthly	[1](6)		10/47-11/47 only
839.5		Luluku	J.P. Thomson	21 25	157 49	150	1916	1917	Daily	(1)		
839.6		Kahaluu Field 18	Libby	(21 27.7)	(157 50.9)	(20)	1923	1925	After Rain		(3)	Gage 7; Pali Camp
839.7		Waihee	B.W.S.	21 27.0	157 51.8	280	1956		Weekly	(6)	(6)	
840	3118W	Kaneohe MCAS*	U.S.M.C.	21 26.8	157 46.5	10	1941		Daily	(1)41-49 (6)52-	(1)41-49 (3)52-58 (6)52-	Kaneohe NAS; no data 4/49-7/52
840.1	0350	Coconut Island*	Univ. of Hawaii Marine Lab.	21 26.3	157 47.3	15	1949		Daily	(1)57- (2)55- (7)54-	(1)57- (3)	Hawaii Marine Lab.; no data 2/51-11/54
841	3734	Kawaihapai	Waialua Ag.	21 34.6	158 11.0	20	1930 1941	 1954	Daily++ Recorder	(1)42- (6)	(1)30-52 (2)	Charts on file HWA
841.1		Kawaihapai (T)**	" "	21 34.2	158 11.0	100						
841.2		Mokuleia Field *	U.S. Air Force	21 35	158 12	10	1942	(1945)				No data available
841.3		Kaena Point*	Lockheed Ballistic Missiles Division	(21 34.1)	(158 14.8)	(1120)	1959		Daily	(6)		
842	5756	Makaha Mauka	Capital Investment	21 30.7	158 10.5	1350	1911		Monthly	(1)23-	(1)12-52 (2)12-	Makaha Uka; data msg prior to 1912 & 1/48-8/50; prob. reloc. from 1300' elev. - date, dist. & dir. unknown
842.1		Makaha (USGS)	U.S.G.S.	21 30.3	158 10.9	970	1959		Recorder	(6),(7)		Charts on file USGS
843		Mokuleia	Waialua Ag.	21 34.1	158 09.8	80	1924		Daily++	(3)*** (6) (7)48-	(3)25-42, 52- (4)36-46 (6)	
844	6580W	Mount Kaala*	U.S. Army	21 30.6	158 08.6	4000	1931	1947	Monthly	(1)33-	(1) (4)32-	Data msg prior to 1932
844.1		Kaala Gulch	U.S.G.S.	(21 31)	(158 09)	(1700)	1910	1911	"		[2](6)	Location doubtful
845		Pump 16	Waialua Ag.	21 34.5	158 08.8	20	1947		Daily++	(6) (7)48-	(6)	Reloc. 7/8 mi. ESE - date unkn
846		Ranch	" "	21 33.5	158 08.4	190	1926		" "	(3)*** (6) (7)48-	(3)26-42, 52- (4)36-46 (6)	
846.1		Kaumoku	" "	21 33.1	158 07.7	300	1951	1954	Monthly	(6)	(6)	
847	9195	Waialua*	" "	21 34.6	158 07.4	15	1901 1936		Daily Recorder	[3](1)05- (6)	[4](1)01-52 (2)	Waialua Mill; Office; reloc. 1/60 600' N; charts on file plant.
848		Puu Iki	Kahua Ranch	21 32.5	158 07.5	1040	(1950)		Monthly	(6)50- (7)60-	(3)52- (6)50-	
849		Keeaumoku	" "	21 33.4	158 07.4	90	(1950)		"	(6)50- (7)60-	(3)52- (6)50-	
850		Kemoo 2	Wailua Ag.	21 33.7	158 07.1	45	1934		Daily++	(6) (7)48-	(3)52- (6)	Kemoo Camp 2
851		Kemoo 5	" "	21 33.5	158 06.4	285	1933		" "	(6) (7)48-	(3)52- (4)36-46 (6)	Kemoo Camp 5

* Also has other weather instrumentation - see same key number in Table Two. ** Non-rainfall instrumentation only - see same key number in Table Two. *** Current but original date unknown. ++ Except weekends. [1] On file BWS. [2] Pub. in Water-Supply Paper 318. [3] 1905-38 data pub. as Waialua Mill. [4] 1901-18 data pub. as Waialua Mill.

TABLE ONE (CONT.)

State Key No.	USWB Index No.	Station Name or Number	Maintained By	Geographic Coordinates Latitude ° '	Longitude ° '	Elev. (ft.)	Year Established	Year Discontinued	Frequency of Reading	Location of Data	Location of Summaries	Other Names Relocations Remarks
852		Helemano 4	Waialua Ag.	21 34.1	158 06.2	180	1934		Daily++	(6) (7)48-	(3)52- (4)36-46 (6)	Helemano Camp 4
853		Kaheeka	" "	21 33.3	158 05.5	520	1931		" "	(6) (7)48-	(3)52- (4)36-46 (6)	
854		Helemano 9	" "	21 34.7	158 05.3	310	1933		" "	(6) (7)48-	(3)52- (4)36-46 (6)	Helemano Camp 9
854.1		Opaeula 6 (440)	" "	21 34.8	158 04.7	440	1952	1960	" "	(6)	(6)	
855	4318	Kemoo Camp 8	" "	21 32.5	158 05.3	730	1924		" "	(1)42- (6)	(1)25-52 (2)25- (6)	Kemoo 8
855.1		Waialua Ranch	Hawaiian Pine	(21 32.6)	(158 06.3)	(160)	1944	1949	" "	(6)45- (7)48-	(6)45-	Data msg prior to 1945
855.2		Poamoho Farm*	H.A.E.S.	21 32.5	158 05.5	680	1938 1940	1953	Weekly & After Rain Recorder	(6)	(3)38-59	Tab. data msg 6/42-6/50; charts on file HWA - 1945-47 charts msg
856		Helemano 6	Waialua Ag.	21 34.0	158 05.1	470	1933		Daily++	(6) (7)48-	(3)52- (4)36-46 (6)	Helemano Res. 6; Helemano Res. 6B
857		Kemoo	C.P.C.	21 31.6	158 04.6	920	1933		After Rain	(3)41-45 (6) (7)48-	(3)52- (6)	Fld 208; Kemoo Farm
857.1		Maili Point[1]	H.S.P.A.	21 30.8	158 06.4	1600	1930	1942	Monthly	(4)33-	[2](3)30-38 (4)33-42	Maile Pt; HSPA Forestry 19
859		Field 201	C.P.C.	21 30.8	158 03.6	860	1933		After Rain	(3)41-45 (6)37- (7)48-	(3)52- (6)37-	Data msg prior to 1937
860		Brodie 4	Hawaiian Pine	21 33.0	158 03.7	800	1924		Daily++	(6) (7)48-	(3)24-26, 52- (4)27-46 (6)	Brodie Camp 4; Fld 4445-46; reloc. 5/51 approx. ½ mi. NE
860.1		Brodie 4 Field 83	" "	21 33	158 04	(800)	1927	1936	After Rain	(6)	(3)	Near #860
860.2		Brodie 4 Field 75A	" "	21 33	158 03	(800)	1930	1936	" "	(6)	(3)	Fld 4449-50
860.3		Brodie 2 Field 84	" "	(21 32.5)	(158 02.9)	(960)	1927	1936	" "	(6)	(3)	Fld 4401-2
860.4		Field 4447-48	P.R.I. (Thorne)	21 33	158 05	(820)	1949	1949	" "	(7)	(3)	Reloc. 7/49 from Fld 4307-8 (#813.2)
860.5		Brodie 4 (T)**	Hawaiian Pine	21 32.2	158 04.1	850						
861		Opaeula 8*	Waialua Ag.	21 34.8	158 03.7	690	1929 1943	1954	Daily++ Recorder	(3)*** (6) (7)48-	(3)29-42, 52- (4)36-46 (6)	Opaeula Camp 8; charts on file FRC
861.1		Opaeula 8 (ST)**	" "	21 34.9	158 04.3	560						
862		Kemoo Camp	Hawaiian Pine	21 31.5	158 03.5	850	1924		Daily++	(6) (7)48-	(3)24-26, 52- (4)27-46 (6)	Fld 4503-4
863	8945	Wahiawa Dam*	Waialua Ag.	21 30.0	158 03.1	855	1905 1955		Daily Recorder	(1)43- (6)	(1)19-52 (2)06- (6)	Wahiawa Dam Site; Wahiawa Reservoir; charts on file PSO & FRC

* Also has other weather instrumentation - see same key number in Table Two. ** Non-rainfall instrumentation only - see same key number in Table Two. *** Current but original date unknown. ++ Except weekends. [1] For additional info., see file on HSPA forestry gages, Dept. of Geophysics, Experiment Station HSPA. [2] Annual totals only 1931-32 & 1939-42.

TABLE ONE (CONT.)

State Key No.	USWB Index No.	Station Name or Number	Maintained By	Geographic Coordinates Latitude ° '	Longitude ° '	Elev. (ft.)	Year Established	Discontinued	Frequency of Reading	Location of Data	Location of Summaries	Other Names Relocations Remarks
863.1		Area BB	U.S. Army (Post Eng'n'rs Schofield Barracks)	21 29.5	158 06.0	1160	1926		Daily++	(6)48- (7)48-	(3)52- (4)45-51	Chemical Warfare; data msg prior to 1945
864		Opaeula Camp	Hawaiian Pine	21 34.7	158 02.7	880	1926		Weekly	(6) (7)48-	(3)26, 52- (4)27-46 (6)	Fld 4713-14
865		Pomoho*	C.P.C.	21 31.1	158 02.8	940	1922		After Rain	(3)41- (6) (7)48-	(3)23-28, 32-35, 52- (6)	Reloc. circa 1947 $\frac{1}{4}$ mi. WNW
865.1		Helemano (HAES)	H.A.E.S.	(21 31.2)	(158 01.8)	(980)	1950	1952	" "	(6)	(3)	
866		Brodie 2	Hawaiian Pine	21 31.7	158 02.5	980	1926 1942	1949	Daily++ Recorder	(6) (7)48-	(3)26, 52- (4)27-46 (6)	Brodie Camp 2; charts on file FRC
866.1		Kaukonahua Field 4407-8	" "	(21 32.2)	(158 03.3)	(940)	1927	1933	After Rain	(6)		
866.2		Brodie 2 (T)**	" "	21 32.5	158 02.5	1040						
867		Waialua Camp	" "	21 34.1	158 02.2	1000	1924		Daily++	(6) (7)48-	(3)24-26, 52- (4)27-46 (6)	Fld 4707-8
867.1		PRI Opaeula*	P.R.I.	21 34.3	158 00.7	1285	1939	1949	Weekly	[1](5)39-46 (7)48-	(3)39-45, 48-	Opaeula Variety Garden; loc. upper part Hapco Fld 4717-18; data msg 1947
870	7150	Opaeula*	Waialua Ag.	21 34.3	158 01.8	1060	1902 1941		Daily Recorder	(1)05- (6)	(1)05-52 (2)05- (6)	Opaeula 1 Reservoir; charts on file PSO & FRC - no charts 1954-55
871	1388	Helemano Reservoir	" "	21 31.8	158 01.9	1030	1918		Daily++	(1)42- (6)	(1)19-52 (2)	
872	8905	Wahiawa	C.P.C.	21 30.3	158 01.7	920	1900[2]		Daily	(1)05-	(1)00-52 (2)	Wahiawa Lab.; prob. reloc. 3/13; no data 1911-12
873		Kaukonahua	Hawaiian Pine	21 31.2	158 01.1	1000	1924		Weekly	(6) (7)48-	(3)24-26, 52- (4)27-46 (6)	Kaukonahua Camp; Fld 4553-54
873.1		Whitmore	" "	21 30.7	158 01.4	990	1948		Daily++	(6),(7)	(6)	Whitmore City
874		Wahiawa Office	" "	21 30.2	158 01.6	920	1943		" "	(6) (7)48-	(3)52- (4)43-46 (6)	Wahiawa Lab. (HAPCO); reloc. 3/51 short dist.
874.1		Wahiawa Botanical Gardens	T. Miyashiro	21 30.3	158 01.1	965[3]	1926		Daily	(4)27-48 (6)49- (7)49-53	(3)30-57 (4)27-48	Wahiawa Nursery; Central Wahiawa; HSPA Forestry 9; data msg prior to 1927; no data 6/53-4/55
874.3		Upper Wahiawa*	W.B. Rutherford	21 30.7	158 00.7	1115	1954		"	(3),(6)	(3)	
874.4		PRI - Eames	P.R.I. (I. Kern)	21 30.7	158 00.6	1130	1955		"	(6) (7)55	(6)	
874.5		PRI Kemoo*	P.R.I.	21 30.5	158 02.1	920	1937	1949	Weekly	[1](5)37-46 (7)48-	(3)37-45	Fld 206; data msg 1947
875		Helemano*	Hawaiian Pine	21 32.2	158 00.8	1160	1926		Daily++	(6) (7)48-	(3)52- (4)27-46 (6)	Helemano Camp; Fld 4423-24

* Also has other weather instrumentation - see same key number in Table Two. ** Non-rainfall instrumentation only - see same key number in Table Two. ++ Except weekends. [1] Pub. in PRI Mo. News & Mo. Reports. [2] 1900-10 data pub. erroneously as #874.2 Wahiawa (Kellogg) in "Rainfall of the Hawaiian Islands" (1959). [3] Reloc. from 1120' elev. but date, direction & distance unknown.

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TABLE ONE (CONT.)

State Key No.	USWB Index No.	Station Name or Number	Maintained By	Geographic Coordinates Latitude ° '	Longitude ° '	Elev. (ft.)	Year Established	Year Discontinued	Frequency of Reading	Location of Data	Location of Summaries	Other Names Relocations Remarks
875.1		Kaukonahua Mauka	Hawaiian Pine	21 32.1	158 00.2	1255	1937		Weekly	(6) (7)48-	(6)	Fld 4575-76
875.2		Helemano Field 24B	" "	(21 32.3)	(157 59.9)	(1320)	1927	1931	After Rain	(6)		Fld 4419-20
875.3		Helemano Field 4415-16	" "	21 33	158 01	(1100)	1931	1936	" "	(6)	(3)	
876		Waialua Mauka*	" "	21 33.0	158 00.8	1250	1926		Daily++	(6) (7)48-	(3)26, 52- (4)27-46 (6)	Fld 4725-26
877		Kamananui Intake[1]	Waialua Ag.	21 35.0	158 00.4	760	1932		Monthly	(6) (7)48-	[2](3)32-42, 52- (4)36-46 (6)	HSPA Forestry 20
877.1		Wahiawa (Naval Radio)	U.S. Navy	21 31.2	158 00.4	1170	1905		Daily	(6)48- (7)48-	(3)44-	Data msg prior to 1944
877.2		Upper Kamananui	Waialua Ag.	21 35.0	158 00.7	760	1946	1952	Recorder	(6)	(6)	Charts on file plant.
877.3		Kaukonahua Field 4409-10	Hawaiian Pine	21 31	158 00	(1200)	1927	1933	After Rain	(6)	(3)	Fld 19G
877.4		Helemano Field 4499	P.R.I. (Thorne)	21 31	158 00	1300	1948	1948	" "	(7)	(3)	
877.5		PRI Helemano Mauka	P.R.I.	21 32.8	158 00.1	1310	1948	1959	" "	(5)	(3)50-56	Helemano Fld 4499 Mauka; PRI Nursery
877.6		PRI Helemano	"	21 32.8	158 00.5	1220	1959		Weekly	(5),(7)	(3)	Replaced #877.5
878		Last Tunnel Outlet[3]	Wahiawa Water Co.	21 31.1	157 58.8	1170	1906	1953	Daily++	(7)48-	(3)	Wahiawa Domestic Reservoir; data msg 7/42-12/47
879[4]		Poamoho Tunnel[1]	Waialua Ag.	21 31.3	157 59.0	1430	1930	1958	Monthly	(4)30-47 (6)55-	(3)30-49	Poamoho; Poamoho Trail; HSPA Forestry 10; no data 1949-54
880	3739	Kawai Iki	" "	21 34.3	157 59.4	1180	1903	1954	Weekly	(1)10-	(1)03-52 (2)	Replaced by #880.2
880.1		Canon Dam[1]	U.S. Army (Post Eng'n'rs Schofield Barracks)	21 30.1	157 56.8	1180[5]	1927	1957	Monthly	(4)30-47 (6)41- (7)48-	[6](3)28-	So. Fork Kaukonahua; Waianae Iki; Waianae Uka 1; HSPA Forestry 6
880.2	3741	Kawai Iki Intake	Waialua Ag.	21 34.4	157 59.3	1180	1954		Weekly	(1)	(2)	Located approx. 200 yds E of #880
881	1384	Helemano Intake	" "	21 32.5	157 59.7	1275	1918 1957		Daily Recorder	(1)42- (6)	(1)19-52 (2)	Charts on file plant.
881.1		North Fork Kaukonahua (1250)	U.S.G.S.	21 31.1	157 56.8	1250	1941	1952	Irregular	(6)		
881.2		Helemano Field 4419-20	P.R.I. (Yanagihara)	21 32.5	157 59.6	1320	1950	1951	Weekly	(7)	(3)	
881.3		Opaeula 1[1]	H.S.P.A.	(21 33.3)	(157 57.9)	(1850)	1928	1941	Monthly	(4)30-	[7](3)	HSPA Forestry 12
881.4		Poamoho Trail (PRI)	P.R.I.	(21 32.2)	(157 58.6)	1670	1947	1948	Recorder			Charts on file HWA
882	8953	Wahiawa Mauka Intake	Waialua Ag.	21 31.0	157 56.9	1210	1906		Monthly	(1)22-	[8](1)19-52 (2)	Wahiawa WCI
882.1		North Fork Kaukonahua (1150)*	U.S.G.S.	21 31.0	157 56.9	1150	1931	1953	Irregular	(6)	(3)33-35	

* Also has other weather instrumentation - see same key number in Table Two. ++ Except weekends. [1] For additional info., see file on HSPA forestry gages, Dept. of Geophysics, Experiment Station HSPA. [2] Annual totals only 1939-42. [3] Erroneously listed as Wahiawa Reservoir (800' elev.) in "A Key to Rain Gages in Hawaii" (1948). [4] Data from 1955 pub. erroneously as 879.1 in "Rainfall of the Hawaiian Islands" (1959). [5] Prob. reloc. circa 1941 from approx. 1200' elev. approx. 5/8 mi. E. [6] Annual total only 1928, data msg 1929. [7] Annual totals only 1928-29. [8] Pub. as Wahiawa WCI.

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TABLE ONE (CONT.)

State Key No.	USWB Index No.	Station Name or Number	Maintained By	Geographic Coordinates Latitude ° '	Longitude ° '	Elev. (ft.)	Year Established	Year Discontinued	Frequency of Reading	Location of Data	Location of Summaries	Other Names Relocations Remarks
882.2		Wahiawa WCI (1200)	U.S.G.S.	21 32	157 57	1200	1913	1922	Monthly	[1](6)13-15	(1)14-18 (2)14-	
883	2462	Kahana	Oahu Sugar	21 30.8	157 54.1	800	1916		Daily++	(1)42- (6)17-	(1)19-52 (2)	Kahana 18
883.1		Marsh[2]	H.S.P.A.	21 32.1	157 55.5	2580	1931	1948	Monthly	(1)41-44 (4)	(3)	HSPA Forestry 11
883.2		Kaipapau[2]	"	(21 35.1)	(157 56.7)	(2500)	1931	1944	"	(1)42- (4)	(2)	HSPA Forestry 14
883.3		Malaekahana (HSPA)[2]	"	(21 36.0)	(157 57.7)	(2120)	1932	1944	"	(4)	(3)32-42	HSPA Forestry 15
883.4		Upper Marsh	Waialua Ag.	21 32.0	157 55.4	2440	1949		"	(6)	(3)49-57 (6)	
883.5		Lower Marsh	" "	21 32.1	157 55.5	2520	1950		"	(6)	(3)50-57 (6)	Located approx. 30' E of #883.1
883.6		Ohia	" "	21 32.0	157 56.8	1840	1949		"	(6)	(6)	
883.7		Bareface	" "	21 32.0	157 56.0	2050	1949		"	(6)	(6)	
883.8		Kahana (Igushi)*	Z. Igushi	21 33.5	157 52.9	10	1916	1923	Daily	(1)	(1)16-18 (2)	
883.9		Opaeula 2 HSPA (2750)[2]	H.S.P.A.	(21 32.9)	(157 55.3)	(2750)	1928	(1938)[3]	Monthly	(4)	[4](3)28-38	HSPA Forestry 13
883.11		Opaeula 2 HSPA (2800)[2]	"	(21 33.7)	(157 55.6)	(2800)	(1939)[5]	1944	"	(4)	[6](3)39-42	HSPA Forestry 13
884	8310	Punaluu*	Kahuku Plant.	21 34.7	157 53.5	20	1940		Daily++	(1)42- (6)41-	(1)40-52 (2)	
884.1		Punaluu Valley	U.S.G.S.	21 33.7	157 54.4	300	1915	1918	Monthly		(1)	
885	9340	Waikane	Oahu Sugar	21 30.2	157 53.4	800	1916		Daily++	(1)20- (6)17-	(1)19-52 (2)	
885.1		Kaaawa Mauka	Kualoa Ranch	21 31.7	157 51.6	160	1948		Weekly	(3),(6) (7)	(3)	
885.2		Waipio 2[2]	H.S.P.A.	(21 28.8)	(157 54.2)	(2190)	1928	1947	Monthly	(4)29-	(3)28-41 (4)30-	Waipio Upper; HSPA Forestry 5
885.3		Waianae Uka 2[2]	"	(21 30.6)	(157 54.6)	(2350)	1928	1946	"	(4)29-	(3)28-41	HSPA Forestry 7
885.4		Waianae Uka 3[2]	"	(21 30.6)	(157 54.3)	(2100)	1933	1942	"	(4)	(3)34-41	HSPA Forestry 8
886		Kahana 27	Oahu Sugar	21 31.4	157 54.6	800	1923		Daily++	(6)24- (7)48-	(3)23-42, 53- (4)24-46 (6)	
886.1		Hakipuu	Kualoa Ranch	21 30.7	157 51.4	45	1948		After Rain	(3),(6) (7)	(3)	
886.2		Kaaawa	" "	21 32.5	157 50.7	10	1948		" "	(3),(6) (7)	(3)	
886.3	4826W	Kualoa	" "	21 31.4	157 50.4	20	1926		" "	(1)26-41 (3)48- (6)48- (7)48-	(1)26-41 (3)48-	Reloc. circa 1931 approx. 300 yds NNE; no data 1942-47
886.4		Kahana (USGS)	U.S.G.S.	21 32.6	157 53.1	30	1958		3 or 4 times yrly	(6)	(6)	
886.5		Kualoa (Morgan)	F.S. Morgan	21 30.7	157 50.6	10	1958		Weekly or After Rain	(6)		
886.6		Waikane Stream	U.S.G.S.	21 30.0	157 51.9	80	1960		Recorder	(6)		Charts on file USGS
886.7		Waiahole Stream	"	21 28.5	157 52.4	240	1960		"	(6)		Charts on file USGS

* Also has other weather instrumentation - see same key number in Table Two. ++ Except weekends. [1] Pub. in Water-Supply Papers 373 & 430. [2] For additional info., see file on HSPA forestry gages, Dept. of Geophysics, Experiment Station HSPA. [3] Reloc. to #883.11 prob. between 1936 & 1939. [4] Annual totals only 1928-29. [5] Reloc. from #883.9 prob. between 1936 & 1939. [6] Annual totals only 1939-40.

State Key No.	USWB Index No.	Station Name or Number	Maintained By	Geographic Coordinates Latitude ° '	Longitude ° '	Elev. (ft.)	Year Established	Discontinued	Frequency of Reading	Location of Data	Location of Summaries	Other Names Relocations Remarks
886.8		Hakipuu Mauka	W. Judd	21 30.4	157 51.6	75	1960		Daily	(6),(7)	(3)	
887		Opaeula 2	Waialua Ag.	21 35.3	158 06.0	110	1933		Daily++	(6) (7)48-	(3)52- (4)36-46 (6)	Opaeula Camp 2; Opaeula 5
888		Opaeula 3	" "	21 35.2	158 05.4	245	1947		" "	(6) (7)48-	(6)	
888.1		Opaeula 6	" "	21 35.2	158 04.6	430	1960		" "	(6)	(6)	
890	3754	Kawailoa	" "	21 36.6	158 05.3	170	1916		" "	(1)17- (6)	(1)16-52 (2)	Kawailoa 3
891		Waimea 8	" "	21 36.8	158 04.4	320	1933		" "	(6) (7)48-	(3)52- (4)36-46 (6)	Waimea Camp 8; Kawailoa Camp 8
892	9593	Waimea*	" "	21 37.7	158 03.7	420	1916 1943		" " Recorder	(1)18- (6)	(1)16-52 (2)	Waimea 3; Waimea 9; Kawailoa Camp 9; charts from 1945 on file PSO & HWA
893		Kawailoa 15	" "	21 36.7	158 03.6	520	1935		Daily++	(6) (7)48-	(3)52- (4)36-46 (6)	Kawailoa Fld 15
894		Kawailoa 19	" "	21 35.7	158 03.6	660	1929		" "	(6)44- (7)48-	(3)52- (6)	Data msg prior to 1944
894.1		Kawailoa Forest	" "	21 35.4	158 03.2	710	1929		" "	(3)*** (6) (7)48-	(3)29-42 (6)	
894.2		Kawailoa 20 Makai	" "	21 35.6	158 02.1	950	1960		" "	(6)	(6)	
894.3		Kawailoa 20 Mauka	" "	21 35.7	158 01.6	1130	1960		" "	(6)	(6)	
895		Waimea Camp	Hawaiian Pine	21 36.7	158 03.4	565	1924		" "	(6) (7)48-	(3)24-26, 52- (4)36-44 (6)	
896	8345W	Pupukea Farm[1]*	H.S.P.A.	(21 38.9)	(158 02.7)	670[2]	1932	1948	Daily	(1)32-46 (7)48	(1)32-46, 48	Pupukea; data msg 1947
896.1	8340W	Pupukea (520)*	Libby	21 38.8	158 03.2	520	1906	1932	"	(1)	(1)	Gage 6
896.2		Paumalu Camp	Hawaiian Pine	21 40.2	158 02.1	440	1924	1949	Daily++	(6) (7)48-	(3)24-35 (6)	Paumalu Ranch Fld 4601-2
897		Waimea Mauka	" "	21 37.0	158 01.9	920	1926		Weekly	(6) (7)48-	(3)26-30, 52- (4)27-46 (6)	
898		Pupukea 1[1]	Kahuku Plant.	(21 38.4)	(158 00.3)	1090	1928		Monthly	(4)28-47 (6)49- (7)48-50, 54-	(3)	Pupukea Makai; HSPA Forestry 17; reloc. 2/47 from 1250' elev. 1/5 mi. NE; no data 1952
898.1		Anahulu[1]	H.S.P.A.	(21 35.7)	(157 58.4)	(1940)[3]	1936	1942	"	(4)	[4](3)	HSPA Forestry 16
898.2		Waimea (HSPA)[1]	"	(21 36.8)	(158 00.3)	(1250)	1928	1935	"	(4)	(3)	HSPA Forestry 16; replaced by #898.1
899		Pupukea 2[1]	Kahuku Plant.	(21 37.8)	(157 58.9)	1820[5]	1931	1949	"	(4)31-47 (6)49 (7)48-	[6](3)31-42, 48- (4)36-46	Pupukea Mauka; HSPA Forestry 18
899.1		Dry Land Malaekahana	" "	21 38.9	157 57.3	290	1947		Daily	(6) (7)48-	(3)	
899.2		Pineapple Field	" "	21 39.8	157 58.0	370	1947	1957	Monthly	(6) (7)48-	(3)	

* Also has other weather instrumentation - see same key number in Table Two. *** Current but original date unknown. ++ Except weekends.
[1] For additional info., see file on HSPA forestry gages, Dept. of Geophysics, Experiment Station HSPA. [2] May have been reloc. 7/48 from 790' elev. approx. ½ mi. ESE. [3] May have been relocated circa 1940 to approx. 1800' elev. 1½ mi. N. [4] Annual totals only from 1939. [5] May have been reloc. circa 1949 to 1505' elev. [6] Annual totals only 1939-40.

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TABLE ONE (CONT.)

State Key No.	USWB Index No.	Station Name or Number	Maintained By	Geographic Coordinates Latitude ° '	Longitude ° '	Elev. (ft.)	Year Established	Discontinued	Frequency of Reading	Location of Data	Location of Summaries	Other Names Relocations Remarks
900		Malaekahana*	C.P.C.	21 39.9	157 57.4	190	1917		After Rain	[1](3)41-45 (5)37-46 (6)24- (7)48-	(3)24-35, 37-45, 52- (6)24-	Malaekahana Camp; Fld 101 Kahuku; reloc. 1936 5/8 mi. from 280' elev.; reloc. circa 1946 from PRI site approx. 750' SW
901		Malaekahana (20)	Kahuku Plant	21 39.9	157 56.9	20	1941		Daily	(6) (7)48-	(3)48- (4)41-51 (6)	Pump 3; Fld 24
902		Field 28	" "	21 39.5	157 56.8	150	1946		"	(6) (7)48-	(3)52- (4)46-51 (6)	
903	5213	Laie*	" "	21 38.9	157 56.2	5	1910		"	(1)42-	(1)19-52 (2)	
904	1270W	Hauula*	" "	21 36.4	157 54.5	35	1907		"	(1)07-41 (6)41- (7)48-	(1)07-41 (3)41-	Reloc. 1941 ½ mi. SE from 80' elev.; prev. reloc. from 12' elev.; no data 1909-23
905		Papakoko	" "	21 35.3	157 53.8	35	1946		"	(6) (7)48-	(3)52- (4)46-51	
906		Kawela 1	C.P.C.	21 41.2	158 00.1	230	1922		After Rain	(3)41-45 (6)26- (7)48-	(3)26-35, 52- (6)26-	Data msg prior to 1926
906.1		Camp 22	"	21 41.1	157 59.2	280	1920		" "	(3)41-45 (6)26- (7)48-	(3)26-35, 52- (6)26-	Fld 22 Kahuku; reloc. circa 1936 1/5 mi. SE; data msg prior to 1926
906.2		Kawela 2	"	21 41.2	158 00.6	490	1928	(1945)	" "	(3)41-45	(3)28-35	
907	2580	Kahuku Pump 2*	Kahuku Plant.	21 41.9	157 59.1	5	1910		Daily	(1)42- (6)41-	(1)21-52 (2)	
907.1		Camp Kahuku	" "	21 40.4	157 59.0	570	1947	1951	Weekly	(6) (7)48-		
907.2		Kahuku Field*	U.S. Air Force	21 43	157 59	10	(1945)	1946	Daily	[2](2)45-		
908		Pump 4	Kahuku Plant.	21 41.7	158 00.2	40	1948		"	(6),(7)	(4)48-52 (6)	Pump A
910		Pump 10	" "	21 41.3	157 59.0	200	1946		"	(6) (7)48-	(3)52- (4)46-51 (6)	
911		Pump 5*	" "	21 41.2	157 58.2	40	1946		"	(6) (7)48-	(3)52- (4)46-51 (6)	Fld 12
912	2570	Kahuku*	" "	21 40.8	157 57.1	25	1891		Daily++	(1)05-	(1)91-52 (2)	Reloc. 1958 few ft

* Also has other weather instrumentation - see same key number in Table Two. ++ Except weekends. [1] Pub. in PRI Mo. News & Mo. Reports.
[2] Military surface observational forms on file NWRC.

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TABLE TWO

State Key No.	Element(s) Observed	Year Estab-lished	Year Discon-tinued	Frequency of Reading	Location of Tabular Data	Location of Summaries	Location of Charts	Instrumentation, Relocations, Remarks
701	a,c	1943		oooo	[1](2) (6)49-			Also psychrometer & hygrothermograph
		1952		Recorder			[1](2)	
	d,e	1943		oooo	[1](2) (6)49-			Also wind gust recorder from 1952 - charts on file NWRC
		1949		Recorder			[1](2)	Also triple register recorder 2/52-6/54 -
	f	1952	1954	"	(6)		[1](2)	charts on file NWRC
702	a	1902	1960	Daily	(1)05-	[2](2)		Data msg 1904
	b	1955	1960	"	(1)56- (2)56-	(3)56-		Anemometer at pan level - total miles of wind only - data msg prior to 1956
	c	1903	(1911)	"		[3](1)		Also probably psychrometer - data msg 1904
702.1	a,c	(1941)	1949	oooo	[1](2)41-			Also psychrometer
	d,e	(1936)	1949	oooo	[1](2)36-			Data msg 7/37-4/41
702.2	a	1960		Daily	(1)	(2)		
	b	1960		"	(1),(2)	(3)		Anemometer at pan level - total miles of wind only
703	a	1947		o	(1)	(2)		Also psychrometer & hygrothermograph
		1947	1956	Recorder			[1](2)	
	c	1947		o	(2)	(1)		
		1947	1956	Recorder			[1](2)	
	d,e	1947		o	(2)	(1)		Triple register recorder 1951-57
		1951		Recorder			[1](2)	Esterline-Angus recorder from 1957
	f	1951		"	(2)	(1)	[1](2)	Sunshine switch
	g	1956	1957	"			[1](2)	Pyrheliometer; normal incidence radiometer
704	a	1904		Daily-R	(1)05-	(2)	[1](2)	Also psychrometer & thermograph
	c	1904		Daily	(2)	(1)		
	d,e	1905		Recorder	(2)05-51	(1)05-51	[1](2)	Triple register recorder to 1951, replaced
	f	1905	1951	"	(2)	(2)	[1](2)	by Esterline-Angus recorder; sunshine switch
704.1	a	1955		Daily++[4]	(3)			
704.3	a	1942	1944	Recorder		(6)	(6)	Thermograph only
	f	1942	1944	"			(6)	Black bulb thermograph
	g	1942	1944	+++		(6)		
704.4	b	1910	1911	Irregular	[5](6)	(3)		Pan loc. in basement of bldg
704.5	a	1821	1822	Unknown		(1)		
705.3	a	1903	1910	Daily	[3](1)	(2)		1904 data msg
705.6	a	1873	1877	Unknown		(1)		
705.9	a	1837	1838	"		(1)		
706.3	a	1896	1903	Daily		[6](6)		
707	a	1918		"	(2)*** (4)	(4)		Also hygrothermograph
		1937		Recorder			(4)	
	b	1958		Daily	(4)	(3),(4)		
	c	1937		Recorder			(4)	
	d,e	1937		"	(4)	(4)40-	(4)40-	Esterline-Angus recorder
	f	1937		"	(4)		(4)	Sunshine switch
		1941		"			(4)	Blueprint recorder
	g	1932		"	(4)		(4)	Normal incidence radiometer; pyrheliometer
		1946	1952	Weekly	(4)			Photochemical integrator
707.1	a,c	1889	(1894)	Daily		[6](6)89-94		Also psychrometer; data msg 1890-93
	b	(1894)	(1894)	"		[6](6)94		
	f	(1894)	(1894)	"		[6](6)94		
707.2	a	1883	1904	"	(2)00- (6)92-03	(2)		Also psychrometer
	c,d,e	1892	1904	"	[6](6)92-03	[6](6)92-03		1904 data msg
709	a	1950	1955	"	(1)51-	(2)		
709.1	b	1910	1911	Irregular	[5](6)	(3)		

Key to symbols for column headed Element(s) Observed:
a - air temperature (maximum & minimum thermometers unless otherwise noted); b - evaporation; c - relative humidity; d - wind direction; e - wind speed; f - sunshine duration; g - solar radiation; h - soil temperature.
See Table One for key to number symbols in columns headed Location of Tabular Data, Location of Summaries & Location of Charts.

*** Current but original date unknown. ++ Except weekends. +++ Values derived from black bulb thermograms. o W.B. first order station taking 24 hourly observations daily - reported on WB forms WBAN-10A & 10B. oooo Military airport station taking more than one observation daily.
[1] On file NWRC. [2] 1902-03 data pub. in Lyons & Lydecker vol., "Weather Record for Honolulu & Hawaiian Islands." [3] 1903 data pub. in Lyons & Lydecker vol. [4] No observations during summer months & holiday periods. [5] Pub. in Water-Supply Paper 318. [6] Pub. in Lyons & Lydecker vol.

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TABLE TWO (CONT.)

State Key No.	Element(s) Observed	Year Estab-lished	Year Discon-tinued	Frequency of Reading	Location of Tabular Data	Location of Summaries	Location of Charts	Instrumentation, Relocations, Remarks
709.2	a	1937	1944	Recorder	(3)38-42	(3)38-42	[1](6)	Thermograph only
	g	(1939)	1944	"	(3)39-42	(3)39-42		Prob. black bulb thermograph - loc. of charts unknown; 1943-44 data msg
709.3	b	1910	1911	Irregular	[2](6)	(3)		Pan loc. under roof
710	a	1938	1944	Recorder	(3)38-42	(3)38-42	[1](6)	Thermograph only
	g	1938	1944	"	(3)38-42	(3)38-42		Prob. black bulb thermograph - loc of charts unknown; 1943-44 data msg
711	a	1937		Daily++	[3](5)	(5)		Data msg 1947-53; loc. in greenhouse from
		1937	1944	Recorder			(3)	1954; also thermograph
		1950	1955	"			(5)	Also hygrothermograph
	c	1950	1955	"			(5)	
	e	1941	1952	"			(3)	12/41 & 1/50-12/52 only
	f	1937	1946	"			(3)37-44	Black bulb thermograph - 1945-46 charts msg
	g	1937	1946	+++	[3](5)	(3)		
		1956	1957	Recorder	(5)	(5)	(5)	Actinometer
711.2	a,c	1958	1958	"	[4](2)		[4](2)	Hygrothermograph only; 1/58-7/58 only
711.3	a	1935	1936	"			[5](2)	Thermograph only; 3/35-1/36 only
711.4	a	1917	1937	Daily		(2)		Water temperatures only
711.5	a,c	1947	1948	Recorder			(3)	Hygrothermograph only; 8/47-2/48 only
713	a	1945		"			[6](6)	Thermograph only thru 1950; hygrothermograph
		1951		Daily++	(1),(6)	(2)		1945-46 & from 1958; no recorder 1953-57; also psychrometer from 1958
	b	1959		Twice Weekly	[7](6)	[7](6)		Atmometer; also evap. pans maint. by Prof. Van't Woudt but data not available
	c	1945		Recorder			[6](6)	No recorder 1947-57
		1958		Daily++	(6)			
	d	1925	1950	" "	[4](2)	(1)		
		1958		Daily++-R	(6)		(6)	Selsyn wind recorder
	e	1958		" " "	(6)		(6)	
	g	1957		Recorder			(6)	Actinometer - loc. in greenhouse
		1958		"	[7](6)	[7](6)	[7](6)	Pyrheliometer - loc. atop chemistry bldg
713.2	a,c	1952		"			[1](6)	Hygrothermograph only
	g	1956	1957	"	[7](6)	[7](6)	[1](6)	Actinometer
714	a	1905	1955	Daily	(1)	(2)		No data 1935-36 & 1944-46
714.2	a	1902	1925	"	(1)08-	(2)08-		Data msg prior to 1908
715.2	a,c	1948	1948	Recorder			(3)	Hygrothermograph only - 2/48-5/48 only
717.5	a	1935	1936	"			[5](2)	Thermograph only - 2/35-1/36 only
718.2	b	1914	(1914)	Monthly	(3)14	(3)14		
720	a	1942		Daily	(1)	(2)		
722	a,c	1947	1949	Recorder			(3)	Hygrothermograph only
	d	1948	1949	"			(3)	
723.5	a,c	(1944)	(1944)	oooo	(3)44-44			Also psychrometer
724	a	1950		ooo	(1)	(2)		Also psychrometer
	c,e	1950		ooo	(2)			
	d	1943		ooo	(2)			
724.1	a	1930	1935	Daily	(1)	(2)		
724.2	a	1957		"	(1)	(2)		
724.5	a	1941	1946	Recorder	[8](5)	(3)	(3)	Thermograph only
	f	1941	1946	"			(3)	Black bulb thermograph
	g	1941	1946	+++	[8](5)	(3)		
740.3	a	1955		Daily++	(6)	(6)		
	b	1955		Weekly	(6)	(3)		No evap. data 6/56-6/59
	h	1955		Recorder	(6)	(6)	(6)	Soil thermograph
741	a	1901		Daily	(1)05-	(2)05-		
					(6)	(4)		
	d,e	1957		Irregular[9]				No records maintained
	g	1943		Weekly	(4),(6)			Photochemical integrator
	h	1957		Daily	(6)			

++ Except weekends. +++ Values derived from black bulb thermograms. ooo Coast Guard station taking more than one observation daily - reported on WB form 610-7. oooo Military station taking more than one observation daily. [1] On file Plant Physiology Dept., Univ. of Hawaii. [2] Pub. in Water-Supply Paper 318. [3] 1937-46 data pub. in PRI Mo. News & Mo. Reports. [4] On file FRC. [5] On file NWRC. [6] 1945-52 thermograms & 1945-46 hygrothermograms on file Plant Physiology Dept., Univ. of Hawaii. [7] On file Land Study Bureau, Univ. of Hawaii. [8] Pub. in PRI Mo. News & Mo. Reports. [9] Read only during storm periods.

TABLE TWO (CONT.)

State Key No.	Element(s) Observed	Year Estab-lished	Year Discon-tinued	Frequency of Reading	Location of Tabular Data	Location of Summaries	Location of Charts	Instrumentation, Relocations, Remarks
742.2	e	1947	1951	Recorder			(6)	
750	a	1897		Daily	(1)05-54 (2)55-	(2)06-54 (4)06-		Also hygrothermograph
		1926		Recorder			(4)	
	c	1926		"		(4)51-	(4)	
	d,e	1926		"	(1)38-42 (4)51- (6)	(2)38-42 (4)	(6)	
	f	1926		"	(4)	(4)51-	(4)	
	h	1926	1959	"	(6)	(4)51- (6)	(6)	Soil thermograph
750.1	a,g	1939	1941	"	(3)	(3)		Thermograph only; prob. black bulb thermograph; loc. of charts unknown
751.1	a	1935	1936	"			[1](2)	Thermograph only; 2/35-1/36 only
752	a	1917	1960	Daily	(4),(6)	(6)		Also hygrothermograph
		1925	1960	Recorder			(4)	No recorder 1953-57
	b	1929	1930	Unknown		(3)		Also anemometer at pan level from 1960
		1960	1960	Daily	(4)	(3),(4)		
	c	1925	1960	Recorder			(4)	
	d,e	1940		"	(4)		(4)	Esterline-Angus recorder
	f	1942		"			(4)	Blueprint recorder
	g	1940		"			(4)	Actinometer
		1947	1952	Weekly	(4)			Photochemical integrator
752.4	a	1938	1947	Weekly-R	(6)	(3)38-42	(3)38-42	Also thermograph
	c	1943	1943	Recorder			(3)	Hygrograph
	f	1938	1947	"			(3)42-44	Black bulb thermograph; 1938-41 & 1945-47 charts msg
	g	1938	1947	+++	(6)			
	h	1943	1947	Recorder	(6)		(6)	Soil thermograph
752.5	a	1960		Daily-R	(4)	(4)	(4)	Also hygrothermograph
	b	1960		Recorder	(4)	(3),(4)	(4)	Also three non-rec. pans
	c	1960		"			(4)	
755	a,c,d,e	1926	1949	oooo	[2](2)			Also psychrometer
755.1	a,d,e	(1931)	(1935)	oooo	[2](2)			
756.1	a	1950	1957	Daily	(4)			
757	a	(1939)	1949	oooo	[2](2)39-	(2)41-		Also psychrometer
	c,d,e	(1939)	1949	oooo	[2](2)39-	(1)39-		
757.3	a	1935	1936	Recorder			[1](2)	Thermograph only; 2/35-1/36 only
758	a	1948		oooo	[3](2),(6)	(6)		Psychrometer & hygrothermograph (1/52-6/52) only
		(1952)	(1952)	Recorder			[1](2)52-52	
	c	1948		oooo	[3](2),(6)	(6)		
		(1952)	(1952)	Recorder			[1](2)52-52	
	d,e	1948		"	[3](2),(6)	(6)	[1](2)52-52 (6)	TMQ-5 recorder; also gust recorder 2/52-6/52 - charts on file NWRC
763	a	1955		Daily++	(6)	(6)		
	h	1955		Recorder	(6)	(6)	(6)	Soil thermograph
764	a	1905	1948	Daily++	(1)05-17 (6)28-	(2)05-17 (6)26-		No data 1918-25
	d	(1931)	(1941)	" "		(2)31-41		
	e	(1932)	(1941)	" "		(2)32-41		
768.3	a,c	1950	1953	Recorder			(6)	Also hygrothermograph
774.2	a	1892	1929	Daily	(1)05-	(2)05-		Data msg prior to 1905
774.3	a	1937	1941	"	(1)	(2)		
774.11	a	1960		"	(3)			
780.1	a	1907	1916	"	(1)			
780.3	a	1957		"	(1)	(2)		
780.5	a	1957		"	(3)			Current air temp. thermometer only
781	a	1928		"	(1)	(2)		
781.1	a	1957		"	(3)			

++ Except weekends. +++ Values derived from black bulb thermograms. oooo Military station taking more than one observation daily. [1] On file NWRC. [2] Military surface observational forms on file NWRC. [3] 1952 military surface observational forms on file NWRC.

TABLE TWO (CONT.)

State Key No.	Element(s) Observed	Year Established	Year Discontinued	Frequency of Reading	Location of Tabular Data	Location of Summaries	Location of Charts	Instrumentation, Relocations, Remarks
782	a	1934	(1936)	Weekly	[1](6)			
	b	1931	(1936)	"	[2](6)	(3)[2](6)		Anemometer at pan level - total miles of wind only
783	b	1910	1911	Irregular	[3](6)			
785	a	1919		Daily	(2)*** (4)	(4)		
	f	1942	1952	Recorder	(4)		(4)	Blueprint recorder
786	d,e	1960		Twice Daily	(2)			Approx. 50' NE of gage; read by Honolulu Police Dept.
787	a	1905	1944	Daily	(1)	(2)05-43		
	b	1920	1930	"	[4](2)	(3)		Anemometer at pan lvl - total miles of wind only
789	b	1914	1914	Irregular	[5](6)	(3)		
790.1	a	1927		Daily	(4)			
	f	1946		Recorder	(4)		(4)	Blueprint recorder
790.2	a	1937	1944	"	(3)38-42	(3)38-42	[6](6)	Thermograph only
	g	1937	1944	"	(3)38-42	(3)38-42		Prob. black bulb thermograph - loc. of charts unknown; data msg 1937 & 1943-44
790.3	a	1938	1942	"	(6)	(3)	(3)	Thermograph only
	c	1942	1942	"			(3)	Hygrograph
	f	1938	1942	"			(3)	Black bulb thermograph
	g	1938	1942	+++	(6)			
792	a	1959		Daily	(3),(7)			
792.1	a	1951	1953	"	(1)			
794	a	1905	1950	"	(1)	(2)		
	e	(1930)	(1934)	"		(2)30-34		
794.1	a	1942	1946	oooo	[7](2)	(2)		Also psychrometer
	c	1942	1945	oooo	[7](2)	(1)		
	d	1942	1946	oooo	[7](2)	(1)42-45		
	e	1942	1946	oooo	[7](2)	(1)42-45 (2)42-45		
795.1	a	1950		Daily	(3),(6)	(6)		Also hygrothermograph
		1956		Recorder			[6](6)	
	b	1957		Daily	(6)	(3)		Anemometer at pan lvl - total miles of wind only
	c	1956		Recorder			[6](6)	
	g	1956		"	[8](6)56-59	[8](6)56-59	[6](6)	Hygrotherm. & actinometer loc. approx. $\frac{1}{4}$ mi. W of gage at 90' elev.
798	a	1905	1947	Daily	(1)	(2)		
	b	1939	1947	"	[4](2)	(1) (2)39-44 (3)		Anemometer at pan lvl - total miles of wind only
798.1	a	1956	1957	Recorder		[6](6)	[6](6)	Hygrothermograph only; 5/56-2/57 only
	c,g	1956	1957	"			[6](6)	Actinometer
800.1	a	1958		Daily	(1)	(2)		Also hygrothermograph
		1958	1959	Recorder			(6)	
	c	1958	1959	"			(6)	
804	a	1940		Daily	(2)***			
805	a	1943		Recorder			(3)47 (6)51-	Thermograph only; charts destroyed prior to 1951
	f	(1947)	(1947)	"			(3)47	Black bulb thermograph
806.1	a	1938		"		(3)38-45 [9](6)38-49	(6)55-	Thermograph only; Kunia I 1938-49; no data 1950-54
	f	1938	1949	"				Black bulb thermograph
	g	1938	1949	+++		(3)38-45 [9](6)38-		
807	a	1943		Daily-R	(4)50-56		(6)51-	Also thermograph; charts destroyed prior to 1951

*** Current but original date unknown. +++ Values derived from black bulb thermograms. oooo Military station taking more than one observation daily. [1] Pub. in Hawaii Div. of Hydrography pub., Bulletin 5, "Supplement to the Geology & Ground-Water Resources of the Island of Oahu, Hawaii" (1940). [2] Pub. in Hawaii Div. of Hydrography pubs., Bulletin 1, "Geology & Ground-Water Resources of the Island of Oahu, Hawaii" (1935), & Bulletin 5, "Supplement to the Geology & Ground-Water Resources of the Island of Oahu, Hawaii" (1940). [3] Pub. in Water-Supply Paper 318. [4] On file FRC. [5] Pub. in Water-Supply Paper 430. [6] On file Plant Physiology Dept., Univ. of Hawaii. [7] Military surface observational forms on file NWRC. [8] On file Land Study Bureau, Univ. of Hawaii. [9] On file Hapco, Wahiawa.

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TABLE TWO (CONT.)

State Key No.	Element(s) Observed	Year Estab-lished	Year Discon-tinued	Frequency of Reading	Location of Tabular Data	Location of Summaries	Location of Charts	Instrumentation, Relocations, Remarks
807.1	a	1937	1946	Recorder	[1](5)	(3)37-45	(3)39-40, 47	Thermograph only
	f	1937	1946	"			(3)	Black bulb thermograph
	g	1937	1946	+++	[1](5)	(3)37-45		
810	a	1909	1949	oooo	(1)	(2)		Also thermograph & psychrometer
		(1946)	(1946)	Recorder			[2](2)46	
	c	1928	1949	oooo	[3](2)39- [1](5)28-46	(1)32-46 (2)37-46		
	d	1909	1949	oooo	[3](2)39- [1](5)28-46	(1)09-46		
	e	1938	1949	oooo	[3](2)39- [1](5)39-46	(1)38-46		
	f	1928	1946	oooo	[1](5)	(1)39-41		
813	a	1919		Daily	[4](1)19-48 (6)38-	(2)19-48 (6)38-		Also thermograph & hygrothermograph; reloc. 1938 3/8 mi. NNW of gage
		1938		Recorder			(6)	
		1946	1951	"			(6)	
	b	1911	1938	Weekly	[5](6)11-15	(1)19- (3)		Anemometer at pan lvl - total miles of wind only; no data 1916-18
	c	1946	1951	Recorder			(6)	
	f	1938		"			(6)	Black bulb thermograph
	g	1938		+++		(6)		
814	a	1930	1954	Daily-R	[6](5)	(3)37-45 (5)37-	(5)	Also hygrothermograph & thermograph; data msg 1947-48
		1938	1954	Recorder			(3)38-44 (5)44-	
	c	1930	1954	"			(5)	
	f	1937	1954	"			(3)37-44 (5)44-	Black bulb thermograph
	g	1937	1954	+++	[1](5)37-46	(3)37-45		No data from 1947
814.3	a	1949	1953	Recorder			(5)	Hygrothermograph & thermograph only
	c	1949	1953	"			(5)	
	f	1949	1953	"			(5)	Black bulb thermograph
815	a	1927		Daily++	(6)			
817	a	1938		Recorder		(6)	(6)	Thermograph only
	f	1938		"			(6)	Black bulb thermograph; both instruments
	g	1938		+++		(6)		loc. $\frac{1}{4}$ mi. NW of gage
817.2	a,c,d,e	1942	1945	oooo	[3](2)			Also psychrometer
818	a	1954		Recorder		(6)	(6)	Thermograph only
	f	1954		"			(6)	Black bulb thermograph
	g	1954		+++		(6)		
820.2	a	1954		Daily-R	(5)	(5)	(5)	Also hygrothermograph & thermograph; also
	b	1954		Recorder	(5)	(5)	(5)	anemometer at pan lvl from 1954; multiple
	c	1954		"	(5)	(5)	(5)	lvl anemometers 1956-58; Esterline-Angus
		1959		"			(5)	recorder; actinometer 1954-56; pyrheliometer
	e	1958		"	(5)	(5)	(5)	from 1956; normal incidence radiometer; soil
	g	1954		"	(5)	(5)56-	(5)	thermograph; hygrothermograph also loc. at
	h	1958		"	(5)	(5)	(5)	Block C-27, $\frac{1}{2}$ mi. NE, 12/53-2/54 - charts on file PRI
820.3	a	1954		Daily-R	(5)	(5)	(5)	Also thermograph
	g	1954	1955	Recorder			(5)	Actinometer
820.5	a,f	(1937)	(1937)	"			(3)37-37	Thermograph only; black bulb thermograph; charts for 2/37-7/37 only
821.1	a	1954	1956	"			(3) (5)54-55	Hygrothermograph & thermograph only; 1956 hygrotherm. charts msg
	c	1954	1956	"			(5)54-55	
	f	1954	1956	"			(3)	Black bulb thermograph
823.1	a	1943		"		(6)	(6)	Thermograph only
	f	1943		"			(6)	Black bulb thermograph
	g	1943		+++		(6)		Instruments loc. $\frac{1}{2}$ mi. ENE of #823 gage
825.2	a	1939	1940	Recorder		(3)	(3)	Thermograph only
	f	1939	1940	"			(3)	Black bulb thermograph
	g	1939	1940	+++		(3)		
826	a,b	1927	1952	Daily	(3)	(3)		Anemometer at pan lvl - total miles of wind only; instruments approx. $\frac{1}{4}$ mi. E of gage

++ Except weekends. +++ Values derived from black bulb thermograms. oooo Military station taking more than one observation daily. [1] Pub. in PRI Mo. News & Mo. Reports. [2] On file NWRC. [3] Military surface observational forms on file NWRC. [4] Pub. as Hoaeae Upper. [5] Pub. in Water-Supply Papers 318 & 430. [6] 1930-46 data pub. in PRI Mo. News & Mo. Reports.

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TABLE TWO (CONT.)

State Key No.	Element(s) Observed	Year Established	Year Discontinued	Frequency of Reading	Location of Tabular Data	Location of Summaries	Location of Charts	Instrumentation, Relocations, Remarks
830	a	1937	1949	Recorder	[1](5)37-46	(3)37-45	(3)	Thermograph only
	f	1937	1949	"			(3)	Black bulb thermograph
	g	1937	1949	+++	[1](5)38-46	(3)37-45		
834.2	a	1905	1932	Daily	(1)	(2)		
838	a	1944		Daily++	(1)	(2)		
839.1	a	1891	1914	Daily	(1)05-	(2)05-		Data msg prior to 1905
839.2	a	1916	1927	"	(1)	(2)		
840	a	1941		oooo	(1)41-49 (6)52-	(2)41-49		Also psychrometer & hygrothermograph; no data 5/49-7/52
		1952		Recorder			[2](2)	
	c	1941		oooo	[3](2)41-49 (6)52-			
		1952		Recorder			[2](2)	
	d,e	1941		oooo	(2)41-49 (6)52-			Also gust recorder from 1952; charts on file NWRC; wind dir. only 1941-49
840.1	a	(1957)		Daily	(1)57-	(2)57-		Also thermograph
		1955	(1956)	Recorder			(2)55-56	
841.1	a	1934		"	(6)40-	(6)40-	(6)40-	Thermograph only; data msg prior to 1940; instruments loc. 2100' SSW of #841 gage
	b	1960		Weekly	(4),(6)			
	g	1946		"	(4),(6)			Photochemical integrator
	h	1954		Recorder	(3)54-55 (6)		(6)	Soil thermograph
841.2	a,c,d,e	1942	1945	oooo	[4](2)			Also psychrometer
841.3	d,e	1959		Daily	(6)			
844	a,c	(1947)	(1947)	Recorder			(3)47	Hygrothermograph only; 8/47-10/47 only
847	a	(1905)		Daily	(1)05-	(2)05-		
	b	1960		"	(6)	(4)		
	d,e	1947		Recorder			(3)47-55 (6)55-	Triple register recorder
	f	1954		"			(6)	Sunshine switch
	g	1946		Weekly	(4),(6)			Photochemical integrator
855.2	a	1937		Recorder	(6)50-	(3)38-59	[5](6)	Thermograph only; data & charts msg 1943-49
	g	1938	(1942)	+++	(3)38-42	(3)38-42		Prob. black bulb thermograph - charts msg
860.5	a	1938		Recorder		(6)	(6)	Thermograph only
	f	1938		"			(6)	Black bulb thermograph
	g	1938		+++		(6)		
861	a	1940		Recorder	(6)	(6)	(6)	Thermograph only
	b	1960		Weekly	(6)	(4)		
	g	1946		"	(4),(6)			Photochemical integrator
861.1	h	1954		Recorder	(3)54-55 (6)		(6)	Soil thermograph; loc. 3200' WNW of #861 instrumentation
863	a	1930		Daily	(2)*** (6)	(6)		Also thermograph
		1955		Recorder			(6)	
865	a	1955		"			(6)	Thermograph only
866.2	a	1938		Daily-R	(6)	(4)50-56 (6)	(3)39, 44 (6)	Also thermograph & hygrothermograph
		1946		Recorder			(6)	
	c	1946		"			(6)	
	f	1938		"			(6)	Black bulb thermograph
	g	1938		+++		(6)		
867.1	a	1939	1949	Recorder	[1](5)39-46	(3)39-45 [6](6)40-	(3)39-44	Thermograph only
	f	1939	1949	"			(3)39-44	Black bulb thermograph; 1945-49 charts msg
	g	1939	1949	+++	[1](5)39-46	(3)39-45 [6](6)40-		
870	a[7]	1905		Daily	(1)	(2)		

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TABLE TWO (CONT.)

State Key No.	Element(s) Observed	Year Established	Year Discontinued	Frequency of Reading	Location of Tabular Data	Location of Summaries	Location of Charts	Instrumentation, Relocations, Remarks
874.3	a	1954		Daily	(3),(6)			Also thermograph
		1957		Recorder			(6)	
874.5	a	1937	1949	"	[1](5)37-46	(3)37-45 [2](6)38-	(3)37-44	Thermograph only
	f	1937	1949	"			(3)37-44	Black bulb thermograph; 1945-49 charts msg
	g	1937	1949	+++	[1](5)37-46	(3)37-45		
875	a	1937		Recorder	[1](5)37-46 (6)38-	(3)37-45 (6)38-	(3)37-44 (6)45-	Thermograph only
	f	1937		"			(3)37-44 (6)45-	Black bulb thermograph
	g	1937		+++	[1](5)37-46	(3)37-45 (6)38-		
876	a	1938		Recorder	(6)	(6)	(6)	Thermograph & hygrothermograph only
		1946		"			(6)	
	c	1946		"			(6)	
	f	1938		"			(6)	Black bulb thermograph
	g	1938		+++		(6)		
882.1	a	1933	1935	Weekly	[3](6)			
	b	1931	1935	"	[4](6)	(3);[4](6)		Anemometer at pan lvl - total miles of wind only
883.8	a	1916	1923	Daily	(1)	(2)		
884	a	1947		Daily++	(2)*** (6)54-			
892	a	1940		Daily-R	(6)	(6)	(6)	Also thermograph
	b	1960		Weekly	(6)	(4)		
	g	1946		"	(4),(6)			Photochemical integrator
	h	1954		Recorder	(3)54-55 (6)		(6)	Soil thermograph
896	a	1932	1946	Daily	(1)	(2)		
896.1	a	1917	1932	"	(1)	(2)		
900	a	1937	1946	Recorder	[1](5)	(3)37-45	(3)37-44	Thermograph only
	f	1937	1946	"			(3)37-44	Black bulb thermograph; 1945-46 charts msg
	g	1937	1946	+++	[1](5)	(3)37-45		
903	a	1947		Daily	(2)*** (6)54-			
904	a	1907	1909	"	(1)			
907	a	1947		"	(2)*** (6)54-			
907.2	a	1941	1946	oooo	[5](2)			Also psychrometer & thermograph
		(1946)	1946	Recorder			[6](2)46	
	c,d,e	1941	1946	oooo	[5](2)			
911	g	1949	1958	Weekly	(4),(6)			Photochemical integrator
912	a	1891		Daily++	(1)05-	(2)05-		Data msg prior to 1905
	d,e	1950		" "	(6)			
	g	1959		Weekly	(4),(6)			Photochemical integrator

*** Current but original date unknown. ++ Except weekends. +++ Values derived from black bulb thermograms. oooo Military station taking more than one observation daily. [1] Pub. in PRI Mo. News & Mo. Reports. [2] On file Hapco, Wahiawa. [3] Pub. in Hawaii Div. of Hydrography pub., Bulletin 5, "Supplement to the Geology & Ground-Water Resources of the Island of Oahu, Hawaii" (1940). [4] Pub. in Hawaii Div. of Hydrography pubs., Bulletin 1, "Geology & Ground-Water Resources of the Island of Oahu, Hawaii" (1935), & Bulletin 5, "Supplement to the Geology & Ground-Water Resources of the Island of Oahu, Hawaii" (1940). [5] Military surface observational forms on file NWRC. [6] On file NWRC.

Name or Number	State Key No.
Adit 8	834.7
Ahuimanu	839.1
Aiea	764
Aiea (500)	766
Aiea Field 2 (Oahu Sugar)	754
Aiea Field 18 (Oahu Sugar)	835
Aiea Field 34 (Oahu Sugar)	762
Aiea Field 35 (Oahu Sugar)	761
Aiea Field 41 (Oahu Sugar)	760
Aiea Field 44 (Oahu Sugar)	763
Aiea Field 49 (Oahu Sugar)	764.1
Aiea Field 66 (Oahu Sugar)	767
Aiea Field 68 (Oahu Sugar)	756
Aiea Field 71 (Oahu Sugar)	765
Aiea Field 86 (Oahu Sugar)	766
Aiea Heights	771.6
Aina Haina	723.3
Alihilani	707.3
Anahulu	898.1
Apokaa	746
Area BB	863.1
Army Reservoir	833
Authority Office Site	794
Barbers Point	701
Bareface	883.7
Bellows Field	794.1
Beretania Pumping Station	705
Bishop Museum Park	704.2
Black Point	717
BWS Office	705
Brodie 2	866
Brodie 2 (T)	866.2
Brodie 2 Field 84 (Haw'n Pine)	860.3
Brodie 4	860
Brodie 4 (T)	860.5
Brodie 4 Field 75A (Haw'n Pine)	860.2
Brodie 4 Field 83 (Haw'n Pine)	860.1
Brodie Camp 2	866
Brodie Camp 4	860
Camp 22 (CPC)	906.1
Camp 84 (CPC)	807
Camp Kahuku	907.1
Camp Kailua	790.4
Canon Dam	880.1
Central Wahiawa	874.1
Chemical Warfare	863.1
Clements	710.1
Coconut Island	840.1
Collins	720.1
Coral Hill	795
Country Club	774.7
Craigside	705.1
Deep Well	814.1
Diamond Head Firing Range	717.4
Diamond Head Station 1	717.3
Diamond Head Station 2	717.4
Diamond Head Tunnel	717.3
D.P.D.	726
Dry Land Malaekahana	899.1
Electric Light Station	775
Ewa Beach	702.3
Ewa Plantation	741
Farrington High School	704.1
Field 1 (CPC)	806.1
Field 3 (Oahu Sugar)	834.1
Field 3C (Oahu Sugar)	831
Field 4 (Oahu Sugar)	752.3
Field 4 (Waimanalo Plant.)	795
Field 5 (Oahu Sugar)	752.2
Field 5B (Oahu Sugar)	752.2
Field 6 (Oahu Sugar)	754
Field 9 (Ewa Plant.)	747
Field 12 (Kahuku Plant.)	911
Field 12 (Oahu Sugar)	748
Field 13 (Oahu Sugar)	824
Field 15 (Oahu Sugar)	745.1
Field 18 (Oahu Sugar)	740.3
Field 19 (Oahu Sugar)	742.1
Field 19G (Haw'n Pine)	877.3
Field 21 (Oahu Sugar)	816.1
Field 22 Kahuku (CPC)	906.1
Field 23 (Oahu Sugar)	818.1
Field 24 (Kahuku Plant.)	901
Field 24 (Oahu Sugar)	740.1
Field 26 (Oahu Sugar)	740.2
Field 27A (Oahu Sugar)	739
Field 28 (Kahuku Plant.)	902
Field 29 (Oahu Sugar)	733
Field 32 (CPC)	808
Field 32 (Oahu Sugar)	746.1
Field 33 (CPC)	809
Field 34 (CPC)	809
Field 34B (Oahu Sugar)	752.1
Field 38B (Oahu Sugar)	738.2
Field 39 (Oahu Sugar)	825.1
Field 41 (Oahu Sugar)	830.1
Field 42 (Oahu Sugar)	826
Field 43 (Ewa Plant.)	735
Field 45 (Oahu Sugar)	817.3
Field 46 (Ewa Plant.)	735
Field 46 (Oahu Sugar)	818
Field 47 (Oahu Sugar)	816
Field 49 (Oahu Sugar)	811
Field 50 (Oahu Sugar)	812.1
Field 51 (Oahu Sugar)	819
Field 53 (Oahu Sugar)	815
Field 54 (Oahu Sugar)	811
Field 56 (Oahu Sugar)	809.1
Field 57 (Oahu Sugar)	738.1
Field 59 (Oahu Sugar)	738
Field 60 (Oahu Sugar)	813.1
Field 62 (Ewa Plant.)	747
Field 65 (Haw'n Pine)	812.2
Field 65 (Oahu Sugar)	754
Field 65.2 (Oahu Sugar)	753.1
Field 66 (CPC)	805
Field 71 (Oahu Sugar)	835
Field 74 (Ewa Plant.)	744
Field 75 (Ewa Plant.)	744
Field 75 (Oahu Sugar)	761
Field 78 (Oahu Sugar)	762
Field 79.1 (Ewa Plant.)	751
Field 80 (Oahu Sugar)	760
Field 83 (Oahu Sugar)	763
Field 84 (CPC)	807
Field 84 (Oahu Sugar)	764.1
Field 85 (Oahu Sugar)	764.2
Field 85 Mauka (Oahu Sugar)	764.3
Field 85-86 (CPC)	729
Field 86 (CPC)	729.1
Field 86 (Oahu Sugar)	766
Field 87 (Honolulu Plant.)	758.1
Field 87 (Oahu Sugar)	765
Field 89 (Oahu Sugar)	767
Field 90 (CPC)	822.1
Field 92 (CPC)	830
Field 95 (CPC)	822.2
Field 101 Kahuku (CPC)	900
Field 102 (Oahu Sugar)	734.4
Field 115 (Oahu Sugar)	738.3
Field 151 (CPC)	731
Field 201 (CPC)	859
Field 206 (Haw'n Pine)	874.5
Field 208 (CPC)	857
Field 4101-2 (Haw'n Pine)	826
Field 4103-4 (Haw'n Pine)	818
Field 4107-8 (Haw'n Pine)	817.1
Field 4109-10 (Haw'n Pine)	825.1
Field 4111-12 (Haw'n Pine)	816
Field 4113 Makai (Haw'n Pine)	831.2
Field 4205-6 (Haw'n Pine)	817
Field 4207-8 (Haw'n Pine)	820.1
Field 4217-18 (Haw'n Pine)	823
Field 4219-20 (Haw'n Pine)	823.1
Field 4221-22 (Haw'n Pine)	827
Field 4223-24 (Haw'n Pine)	827
Field 4303-4 (Haw'n Pine)	813
Field 4307-8 (Haw'n Pine)	813.2
Field 4309-10 (Haw'n Pine)	812
Field 4313-14 (Haw'n Pine)	812.2
Field 4401-2 (Haw'n Pine)	860.3
Field 4419-20 (Haw'n Pine)	875.2
Field 4445-46 (Haw'n Pine)	860
Field 4447-48 (Haw'n Pine)	860.4
Field 4449-50 (Haw'n Pine)	860.2
Field 4503-4 (Haw'n Pine)	862
Field 4523-24 (Haw'n Pine)	821
Field 4524 (Haw'n Pine)	821.1
Field 4553-54 (Haw'n Pine)	873
Field 4575-76 (Haw'n Pine)	875.1
Field 4601-2 (Haw'n Pine)	896.2
Field 4707-8 (Haw'n Pine)	867
Field 4713-14 (Haw'n Pine)	864
Field 4717-18 (Haw'n Pine)	867.1
Field 4725-26 (Haw'n Pine)	876
Field 4903-4 (Haw'n Pine)	768.1
Field 4909-10 (Haw'n Pine)	768.2
Fleet Weather Central	758
Ford Island NAS	755
Fort DeRussy	711.2
Fort DeRussy (Army)	711.3
Fort Kamehameha	757.3
Fort Ruger	717.5
Fort Weaver	751.1
4 Houses	736
Gage 1 (Libby)	820
Gage 1 (Mink)	830.3
Gage 2 (Libby)	830
Gage 2 (Mink)	830.4
Gage 3 (Libby)	734
Gage 3A (Mink)	830.5
Gage 3B (Mink)	830.5
Gage 4 (Mink)	830.6
Gage 5 (Libby)	822
Gage 5 (Mink)	830.7
Gage 6 (Libby)	822.1
Gage 6 (Libby)	896.1
Gage 6 (Mink)	830.8
Gage 7 (Libby)	834
Gage 7 (Libby)	839.6
Gage 7 (Mink)	830.9
Gage 8 (Mink)	830.17
Gage 9 (Libby)	734.1
Gage 9 (Mink)	830.11
Gage 10 (Libby)	734.2
Gage 10 (Mink)	830.12
Gage 11 (Libby)	734.3
Gage 11 (Mink)	830.13
Gage 12 (Libby)	830.2
Gage 12 (Mink)	830.14
Gage 13 (Libby)	820.4
Gage 13 (Mink)	830.15
Gage 14 (Mink)	830.16
Gage 15 (Libby)	834.6
Gage 15 (Libby)	790.4
Gage 25 (Libby)	834.2
Gage 30 (Mink)	832.4
Gage 33 (Mink)	832.5
Gage 34 (Mink)	832.6
Gate House	832.7
Hahaione Valley	724.1
Haiku	839.3
Haiku Valley	839.3
Hakipuu	886.1
Hakipuu Mauka	886.8
Hakuloa	725.2
Halawa 2	771.4
Halawa 2A	771.5
Halawa North Uka	771
Halawa Shaft	771.2
Halawa Uka	771.1
Halekou	781.1
Halfway House	782.1
Haula	904
HSPA Experiment Station	707
HSPA Forestry 1	771.3
HSPA Forestry 2	771.7
HSPA Forestry 3	771.4
HSPA Forestry 4	836.1
HSPA Forestry 5	885.2
HSPA Forestry 6	880.1
HSPA Forestry 7	885.3

Name or Number	State Key No.
HSPA Forestry 8	885.4
HSPA Forestry 9	874.1
HSPA Forestry 10	879
HSPA Forestry 11	883.1
HSPA Forestry 12	881.3
HSPA Forestry 13	883.9
HSPA Forestry 13	883.11
HSPA Forestry 14	883.2
HSPA Forestry 15	883.3
HSPA Forestry 16	898.1
HSPA Forestry 17	898
HSPA Forestry 18	899
HSPA Forestry 19	857.1
HSPA Forestry 20	877
HSPA Forestry 21	804.1
HSPA Forestry 22	771.5
Hawaii Marine Lab.	840.1
Heeia	839.2
Helemano	875
Helemano (HAES)	865.1
Helemano 4	852
Helemano 6	856
Helemano 9	854
Helemano Camp	875
Helemano Camp 4	852
Helemano Camp 9	854
Helemano Field 24B (Haw'n Pine)	875.2
Helemano Field 4415-16 (Haw'n Pine)	875.3
Helemano Field 4419-20 (Haw'n Pine)	881.2
Helemano Field 4499 (Haw'n Pine)	877.4
Helemano Field 4499 Mauka (Haw'n Pine)	877.5
Helemano Intake	881
Helemano Reservoir	871
Helemano Reservoir 6	856
Helemano Reservoir 6B	856
Hickam Field	757
Hillebrand Glen 2	783.2
Hoaeae Upper	813
Honolulu (Burbank)	774.11
Honolulu (College Hill)	706.2
Honolulu (Ellis)	704.5
Honolulu (Kalakaua nr King)	705.6
Honolulu (Kewalo)	705.5
Honolulu (Miller & Beretania)	705.8
Honolulu (Nuuanu & Beretania)	705.9
Honolulu (Pauoa Valley)	705.7
Honolulu (Punahou)	707.2
Honolulu (Spencer Street)	709.1
Honolulu Sub-Station	704
Honolulu WB Airport	703
Honolulu WBO	704
Honouliuli	742.3
Insane Asylum	774.2
Jack Lane Nursery	774.1
Kaaawa	886.2
Kaaawa Mauka	885.1
Kaalaea	837.2
Kaala Gulch	844.1
Kaau Crater	718.2
Kaena Point	841.3
Kahala	722
Kahala (Arnold)	722.2
Kahaluu	839
Kahaluu Field 18 (Libby)	839.6
Kahaluu Field 83 (Libby)	790.4
Kahana	883
Kahana (USGS)	886.4
Kahana (Igushi)	883.8
Kahana 18	883
Kahana 27	886
Kaheeka	853
Kahuku	912
Kahuku Field	907.2
Kahuku Pump 2	907
Kailua (Carson)	791.5
Kailua (Clements)	790.3
Kailua (HAES)	790.2
Kailua (HSPA)	790.1
Kailua (Parry)	791.2
Kailua Fire Station	791.3
Kailua Hill	791.1
Kailua Pump	791
Kaimuki	715
Kaimuki Pumping Station	711.1
Kaipapau	883.2
Kalama	791.4
Kalihi (USGS)	774
Kalihi Duncan	774.4
Kalihi Reservoir Site	777
Kalihi Tunnel 2	776
Kalihi-Uka	774.3
Kalihi Underground Shaft	773.1
Kalihi Valley	774.3
Kalihi Valley (330)	773.2
Kaliula	714.2
Kamaile Pump	797
Kamananui Intake	877
Kamooalii	781.4
Kaneohe	838.1
Kaneohe (Gowing)	781.2
Kaneohe (Siler)	781.3
Kaneohe MCAS	840
Kaneohe Mauka	781
Kaneohe NAS	840
Kaneohe Ranch	838
Kapalama	773
Kapalama Basin	704.3
Kapalama Kamanaiki	775.2
Kapiolani Park	717.1
Kapolei	730
Kaukonahua	873
Kaukonahua Camp	873
Kaukonahua Field 4407-8 (Haw'n Pine)	866.1
Kaukonahua Field 4409-10 (Haw'n Pine)	877.3
Kaukonahua Field 4575-76 (Haw'n Pine)	875.1
Kaumoku	846.1
Kawaihapai	841
Kawaihapai (T)	841.1
Kawai Iki	880
Kawai Iki Intake	880.2
Kawailoa	890
Kawailoa 3	890
Kawailoa 15	893
Kawailoa 19	894
Kawailoa 20 Makai	894.2
Kawailoa 20 Mauka	894.3
Kawailoa Camp 8	891
Kawailoa Camp 9	892
Kawailoa Field 15 (Waialua Ag.)	893
Kawailoa Forest	894.1
Kawailoa Girls' School	790
Kawela 1	906
Kawela 2	906.2
Keahi	714.1
Keeaumoku	849
Kemoo	857
Kemoo 2	850
Kemoo 5	851
Kemoo 8	855
Kemoo Camp	862
Kemoo Camp 2	850
Kemoo Camp 5	851
Kemoo Farm	857
Kinau Street	706.3
Kipapa	825
Kipapa (USGS)	832.2
Kipapa (750)	832.3
Kipapa 1	820.1
Kipapa 5	827
Kipapa Camp 1	817
Kipapa Camp 5	823
Kipapa Field	817.2
Kipapa Pump	827
Koa Ridge 1	832.7
Koa Ridge 2	832.8
Kolekole	804.1
Kolekole Pass	804.1
Konahuanui	789
Koolau Dam	833
Kualoa	886.3
Kualoa (Morgan)	886.5
Kula	790.1
Kulaokahua	706.3
Kunia	806
Kunia I	806.1
Kunia A Lower	822
Kunia A Upper	822.1
Kunia B	734
Kunia Camp	806
Kunia Field 40 (Libby)	822
Kunia Field 43 (Libby)	734.1
Kunia Field 44 (Libby)	734.2
Kunia Field 48 (Libby)	734.3
Kupehau	734
Kupehau Camp	734.1
Ku Tree Dam	831.1
Lagoon Pump	793
Laie	903
Lanihuli	783.1
Last Tunnel Outlet	878
Leilehua	805
Leilehua Camp	805
Liloa Rise	712.5
Lower Marsh	883.5
Luakaha Lower	782
Lualualei	804
Lualualei Camp	804.2
Lualualei Water Tunnel	803.1
Luke Field	755.1
Luluku	839.5
Lunalilo Home	724.2
Maile Point	857.1
Maili Point	857.1
Main House	832.8
Makaha	800
Makaha (USGS)	842.1
Makaha Ditch	800
Makaha Kai	796
Makaha Makai	796
Makaha Mauka	842
Makaha Uka	842
Makaha Valley	800.1
Makapuu Point	724
Makiki Reservoir	706.4
Malaekahana	900
Malaekahana (HSPA)	883.3
Malaekahana (20)	901
Malaekahana Camp	900
Manini Way	713.1
Manoa	712
Manoa (300)	716.2
Manoa (Beaumont)	712.1
Manoa HSPA	785
Manoa Road	712.3
Manoa Tunnel 2	716
Manoa Upper	716.3
Manoa Valley (Kidwell)	716.4
Manoa Waena	716.5
Manoa Woodlawn	716.8
MCAS Ewa	702.1
Marsh	883.1
Matsonia Drive	720
Maunalua	724.3
Maunawili (HSPA)	787.1
Maunawili Ranch	787
Maunawili Reservoir	792
McCandless Weir	763
Mid-Pacific Institute	713.2
Mikilua	725
Moanalua	770
Moanalua (USGS)	772
Moanalua 301B	768.1

Name or Number	State Key No.
Moanalua 305A	768.2
Mokuleia	843
Mokuleia Field	841.2
Mount Kaala	844
Mount Olympus	718.1
Nanakuli	804.3
Naval Radio	877.1
New Collins	720.1
North Fork Kaukonahua (1150)	882.1
North Fork Kaukonahua (1250)	881.1
North Halawa	771
Nutridge	710
Nuuanu (Fox)	780.6
Nuuanu (Osborne)	774.8
Nuuanu Dam 4	783
Nuuanu Orchid Garden	774.1
Nuuanu Pali	786
Nuuanu Pali (USGS)	786.1
Nuuanu Reservoir 4	783
Nuuanu Reservoir 5	775
Nuuanu Valley (554)	780.4
Nuuanu Valley (680)	782.1
Nuuanu Valley (Hall)	705.2
Nuuanu Valley (Wilder)	775.1
Oahu Avenue	712.2
Oahu College	707.1
Oahu Country Club	774.6
Ohia	883.6
Old Pali Road	783.3
Olympus	718.1
Opaeula	870
Opaeula 1	881.3
Opaeula 1 Reservoir	870
Opaeula 2	887
Opaeula 2 HSPA (2750)	883.9
Opaeula 2 HSPA (2800)	883.11
Opaeula 3	888
Opaeula 5	887
Opaeula 6	888.1
Opaeula 6 (440)	854.1
Opaeula 8	861
Opaeula 8 (ST)	861.1
Opaeula Camp	864
Opaeula Camp 2	887
Opaeula Camp 8	861
Opaeula Variety Garden	867.1
Pacific Heights	706
Pahoa Place	722.3
Paiko Drive	723.4
Palehua	725.1
Palehua (Johnston)	725.3
Pali Camp	839.6
Pali Golf Course	788.1
Palolo Valley	718
Palolo Valley (Gulick)	721.1
Papakoko	905
Paumalu Camp	896.2
Paumalu Ranch	896.2
Pauoa Flats	784
Pearl City	834
Pearl City Field 51 (Libby)	834.6
Pearl Harbor NAS	755
Pearl Harbor Naval Station	757.1
Pensacola Experiment Station	709.2
Pineapple Field	899.2
PRI Dole Street	711
PRI - Eames	874.4
PRI Field 8	814
PRI Field 10	814.2
PRI Helemano	877.6
PRI Helemano Mauka	877.5
PRI Kemoo	874.5
PRI Koko Head	724.5
PRI Kunia	807.1
PRI Nursery	877.5
PRI Opaeula	867.1
PRI Pine Spur	821.1
PRI Wahiawa	820.2
PRI Wahiawa (880)	814
PRI Wahiawa (Field 3)	814.3
PRI Wahiawa Mauka	820.3
PRI Wahiawa Mauka (865)	814.2
PRI Waipio	820.2
PRI Waipio Mauka	820.3
Pine Spur	821
Pine Spur Camp	821
Poamoho	879
Poamoho Farm	855.2
Poamoho Trail	879
Poamoho Trail (PRI)	881.4
Poamoho Tunnel	879
Pomoho	865
Portlock Road	724.4
Powerhouse	802
Puhawai	802.1
Pump 2 (Ewa Plant.)	743
Pump 3 (Kahuku Plant.)	901
Pump 4 (Kahuku Plant.)	908
Pump 4 (Oahu Sugar)	745
Pump 5 (Ewa Plant.)	742
Pump 5 (Kahuku Plant.)	911
Pump 6 (Oahu Sugar)	753
Pump 7 (Ewa Plant.)	742
Pump 10 (Ewa Plant.)	727
Pump 10 (Kahuku Plant.)	910
Pump 16 (Waialua Ag.)	845
Pump A (Kahuku Plant.)	908
Punahou	707.2
Punaluu	884
Punaluu Valley	884.1
Punchbowl	706.1
Punchbowl Crater	709
Punchbowl Reservoir	709.3
Pupukea	896
Pupukea (520)	896.1
Pupukea 1	898
Pupukea 2	899
Pupukea Farm	896
Pupukea Makai	898
Pupukea Mauka	899
Puuhonua	712.4
Puu Iki	848
Puuloa	757.2
Puuloa (Ewa Plant.)	751
Puu Manawahua	728
Puumui	774.9
Ranch	846
Red Hill	768
Reservoir 2 (Ewa Plant.)	743
Reservoir 3 (Ewa Plant.)	742.2
Reservoir 4 (BWS)	721
Reservoir 5 (Ewa Plant.)	740
Reservoir 6 (Ewa Plant.)	732
Reservoir 6B (Ewa Plant.)	730
Reservoir 8 (Ewa Plant.)	736
Reservoir 9 (Ewa Plant.)	737
Reservoir 9AB (Ewa Plant.)	736
Rhodes Gardens	716.6
Robinson 1	813
Robinson 2	812
Robinson Camp 1	813
Robinson Camp 2	812
St. Stephens Seminary	788
Salt Lake	758.1
Sanitarium Flats	731
Schofield Barracks	810
Section 85	731
Sisal 15C-16C	735
South Fork Kaukonahua	880.1
South Halawa	765
South Peak, Haiku	839.4
Spiegelberg	714.1
Stidd (Kaimuki)	715.2
Stidd (Manoa)	712.5
Tantalus	714
Tantalus (Coulter)	708
Tantalus (Isenberg)	780.2
Tantalus Drive	780.5
Tantalus Experiment Station	780.7
Tantalus Heights (Giffard)	780.1
Tantalus Mauka	780.3
Tantalus Peak	780
Thorne	722.1
Tripler	768.3
U.S. Experiment Station	705.3
U.S. Magnetic Observatory 2	702.2
U.S. Magnetic Observatory	702
U.S. Naval Station	705.4
University Dairy	713
University Farm	713
University of Hawaii	713
Upper Kamananui	877.2
Upper Luakaha	783
Upper Marsh	883.4
Upper Wahiawa	874.3
Upper Waiawa	837
Van 6A	812.2
Waahila	716.7
Wahiawa	872
Wahiawa Botanical Gardens	874.1
Wahiawa Dam	863
Wahiawa Dam Site	863
Wahiawa Domestic Reservoir	878
Wahiawa Lab. (CPC)	872
Wahiawa Lab. (Haw'n Pine)	874
Wahiawa Mauka Intake	882
Wahiawa Nursery	874.1
Wahiawa Office	874
Wahiawa Reservoir	863
Wahiawa WCI	882
Wahiawa WCI (1200)	882.2
Waiahole	837
Waiahole Stream	886.7
Waialae-Kahala	715
Waialae-Kahala (Anderson)	715.1
Waialua	847
Waialua Camp	867
Waialua Mauka	876
Waialua Mill	847
Waialua Ranch	855.1
Waiamao	720.2
Waianae	798
Waianae (Hidano Farm)	798.1
Waianae Fields	801
Waianae Iki	880.1
Waianae Mauka	803
Waianae Mill	798
Waianae Uka	803
Waianae Uka 1	880.1
Waianae Uka 2	885.3
Waianae Uka 3	885.4
Waianae Valley	802
Waianae Valley (39)	801
Waiawa	836
Waiawa (675)	834.2
Waiawa Ditch	832.1
Waiawa-Waiahole Divide	837.1
Waihee	839.7
Waikakalaua	832
Waikane	885
Waikane Stream	886.6
Waikiki Beach	711.4
Waikiki Shell	717.2
Wailupe	723

Name or Number	State Key No.
Wailupe Mauka	723.1
Wailupe Reservoir	723.2
Waimalu	756
Waimalu (500)	761
Waimalu (HSPA)	771.3
Waimalu 1	771.4
Waimalu 2	771.7
Waimalu Stable	756
Waimanalo	794
Waimanalo (Ewa Plant.)	700
Waimanalo (Gurney)	794.2
Waimanalo Experiment Farm	795.1
Waimanalo Mauka	792.1
Waimanalo Stable	700
Waimano 1	834.3
Waimano 2	834.4
Waimano 3	834.5
Waimano Home	834.3
Waimano Mauka	756.1
Waimea	892
Waimea (HSPA)	898.2
Waimea 3	892
Waimea 8	891
Waimea 9	892
Waimea Camp	895
Waimea Camp 8	891
Waimea Mauka	897
Waiomao	720.2
Waipahu	750
Waipahu (HAES)	750.1
Waipahu Field 4107-8 (Haw'n Pine)	817.1
Waipio	752
Waipio (Clements)	752.4
Waipio 1	836.1
Waipio 2	885.2
Waipio A	820
Waipio A Field 5 (Libby)	820.5
Waipio B	830
Waipio B Field 114 (Libby)	820.4
Waipio B Field 139 (Libby)	830
Waipio C	834.2
Waipio C Field 137 (Libby)	825.2
Waipio Field 104 (Libby)	830.2
Waipio Field L	752.5
Waipio Lower	836.1
Waipio Mauka	756.1
Waipio Upper	885.2
Wheeler Field	810
Whitmore	873.1
Whitmore City	873.1
Wilhelmina Rise	721
Wiliwilinui Ridge	723.5
Wilson Tunnel (Kaneohe Portal)	781.5
Windmill Road	744
Woodlawn	716.1
Woodlawn (Miles)	716.9
Woodlawn Dairy	716.2
Wyllie Street	774.5
Yamaguchi	804.2

ISLAND: KAUAI

TABLE ONE

State Key No.	USWB Index No.	Station Name or Number	Maintained By	Geographic Coordinates Latitude ° '	Longitude ° '	Elev. (ft.)	Year Established	Year Discontinued	Frequency of Reading	Location of Data	Location of Summaries	Other Names Relocations Remarks
925[1]		Field 13*	Olokele Sugar	21 54.5	159 37.0	135	1939		Daily++	(6)42- (7)48-	(3)48- (4)39-52	
926	8111	Port Allen*	F.A.A.	(21 53.7)	(159 36.2)	30	(1939)	1950	Daily+	(1)49- [2](2)39-41	(3)39-41	Burns Fld; no data avbl. 1942-48
927	0470	Eleele*	McBryde Sugar	21 54.4	159 34.8	165	1901		Daily++	(1)05- (6)	(1)01-52 (2)	
928		Kalaheo Field K-1	Kauai Pine	21 55	159 32	750	1943	1949	Daily-R	(6)	(4)	Charts on file FRC
928.1		Kalaheo Field 3	" "	21 54.4	159 31.7	550	1949		" "	(6),(7)	(3)	Replaced #928; charts on file PSO & FRC
928.2		Kalaheo Field W*	" "	21 54.7	159 32.4	650	1951		Daily++	(6),(7)	(3)	
930	8941	Wahiawa*	McBryde Sugar	21 53.8	159 33.6	215	1904 1955		Daily Recorder	(1)05- (6)	(1)04-52 (2)	Reloc. 10/58 300' N; charts on file PSO & FRC
930.1		Kalaheo (McBryde)	" "	21 54.7	159 32.6	530	1951		Daily++	(3),(6) (7)	(3)	
930.2		Field 14E	" "	21 53.6	159 30.7	200	1960		Recorder			Charts on file plant.
931	9955	West Lawai*	" "	21 53.6	159 31.2	210	1902		Daily++	(1)05- (6)	(1)02-52 (2)	
931.1		Lawai Beach	W.D. McBryde	21 53.3	159 30.3	5	1904	1913	Daily	(1)05- (6)	(1)	
931.2		Lawai (Gov't Rd)	" "	21 54.3	159 31.1	410	1901	1910	"	(1)05- (6)	(1)	
933		Paanau*	Kauai Pine	21 54.1	159 29.1	450	1938		Daily++	(3)*** (6) (7)48-	(3)53- (4)38-52	Fld 34
934	0456	East Lawai*	McBryde Sugar	21 54.5	159 29.8	440	1902 1960		" " Recorder	(1)05- (6)	(1)02-52 (2)	Charts on file Plant.
935	4950	Kukuiula*	" "	21 53.5	159 29.5	105	1903		Daily++	(1)05- (6)	(1)03-52 (2)	Koloa (Kukuiula); reloc. 2/51 5/8 mi. W
935.1		Paanau (McBryde)	" "	21 53.7	159 28.5	135	1951		" "	(6),(7)	(3)	
936	4742	Koloa*	Grove Farm	21 54.6	159 27.9	240	1887 1955	 1960	Daily Recorder	(1)05- (6)	(1)87-52 (2)	Reloc. 4/55 1/8 mi. SSW; charts on file PSO & FRC
936.1		Field K-43	" "	21 54.4	159 28.9	240	1950		Daily++	(6),(7)	(3)	
936.2		Koloa Field O	Kauai Pine	21 54.7	159 28.5	275	1951		" "	(6),(7)	(3)	
936.3		Koloa (200)	Koloa Mill	21 54	159 28	200	1882	1886	Unknown		(1)	
937	4754	Koloa Mill	Grove Farm	21 53.8	159 26.8	155	1923		Daily++	(1)	(1)23-52 (2)	
940	8352	Puuhi*	" "	21 52.8	159 26.3	80	1907		" "	(1)	(1)07-52 (2)	
940.1	5785	Makahuena Pt*	U.S.C.G.	21 52.2	159 26.9	50	1956		Twice Daily	(1)58- [3](2)	(2)58-	
941	5710	Mahaulepu	Grove Farm	21 54.7	159 25.4	100	1904		Daily++	(1)05- (6)	(1)04-52 (2)	Reloc. 4/50 250' NNW
941.1		Field K-21	" "	21 54.0	159 25.4	80	1951		" "	(6),(7)	(3)	
942		Kaunalewa	Kekaha Sugar	21 59.7	159 44.5	10	1946		After Rain	(6)48- (7)48-	(3)48- (4)46-49	

Key to symbols for columns headed Location of Data and Location of Summaries:
(1) USWB-published; (2) USWB-not published; (3) HWA; (4) HSPA; (5) PRI; (6) on file with observer (company, agency, individual, etc.) maintaining and/or reading instrument; (7) PRI-HSPA reporting form in use from Jan., 1948, & available at both HWA and HSPA.

* Also has other weather instrumentation - see same key number in Table Two. *** Current but original date unknown. + Beginning and ending of precipitation reported on WB Form WBAN-10 (CAA). ++ Except weekends. [1] Erroneously listed as 962 in "A Key to Rain Gages in Hawaii" (1948).
[2] 1939-41 data on file NWRC and in USAAF publication, "Weather Conditions in Hawaii" (The Air Corps Tactical School, Maxwell Field, Ala., 1942).
[3] On file PSO, WB & FRC.

TABLE ONE (CONT.)

State Key No.	USWB Index No.	Station Name or Number	Maintained By	Geographic Coordinates Latitude ° '	Longitude ° '	Elev. (ft.)	Year Established	Year Discontinued	Frequency of Reading	Location of Data	Location of Summaries	Other Names Relocations Remarks
943	9253	Waiawa*	Kekaha Sugar	21 58.5	159 43.4	10	1894		Daily	(1)05- (6)	(1)94-52 (2)	Reloc. 5/49 from 38' elev. approx. 1 mi. S; reloc. 12/59 296' SE
944	4272	Kekaha*	" "	21 58.2	159 42.7	10	1889		"	(1)05- (6)	(1)89-52 (2)	
945	2161	Hukipo*	" "	21 58.9	159 41.1	800	1940		"	(1)	(1)40-52 (2)	
945.1		Pali Trail	" "	21 58.5	159 40.2	850	1911	1918	Unknown		(1)	
945.2		Hukipo (400)	" "	(21 58.5)	(159 41.4)	400	1911	(1915)	After Rain	[1](6)13-15		Data msg prior to 1913
947	9629	Waimea*	Waimea Sugar	21 57.4	159 40.5	20	1911		Daily	(1)19- (6)13-	(1)13-52 (2)13-	Reloc. 4/19 & 1/23 - dist. & dir. unknown; data msg prior to 1913
950		Waikaia*	Gay & Robinson	21 58.0	159 39.1	250	1942		After Rain	(6)48- (7)48-	(3)48-	Data msg prior to 1948
950.1		Camp 7 Makaweli	Hawaiian Sugar	21 57.5	159 39.1	150	1904	1938	Unknown		(1)04-18 (3)	
951		Pakala	Gay & Robinson	21 56.0	159 39.0	30	1942		After Rain	(6)48- (7)48-	(3)48-	Data msg prior to 1948; also thermometers & wind equipment but no data
952		Nonopahu Reservoir*	" "	21 58.8	159 37.7	800	1942		After Rain	(6)48- (7)48-	(3)48-	Nonopahu 5; data msg prior to 1948
952.1		Powerhouse Camp 9	Hawaiian Sugar	21 59.6	159 37.4	945	1925	1938	Unknown		(3)	
952.2		Camp 8 Makaweli	" "	21 58.7	159 37.9	850	1918	1938	"		(3)	
953		Kaawanui*	Gay & Robinson	21 56.9	159 37.7	400	1942		After Rain	(6)48- (7)48-	(3)48-	Data msg prior to 1948
953.1		Camp 6 Makaweli	Hawaiian Sugar	21 56.9	159 37.6	370	1918	1938	Unknown		(3)	
954		Nonopahu 6	Gay & Robinson	22 00.0	159 37.4	1030	1942	1952	After Rain	(6)48- (7)48-	(3)48-	Data msg prior to 1948
954.1		Kekaha (USGS)	U.S.G.S.	(22 02.7)	(159 38.5)	530	1954	1956	Irregular	(6)	(6)	
955		Aaka*	Gay & Robinson	21 58.0	159 36.8	900	1942		After Rain	(6)48- (7)48-	(3)48-	Data msg prior to 1948
962[2]		Field 3*	Olokele Sugar	21 55.5	159 38.2	110	1947		Daily++	(6) (7)48-	(3)53- (4)47-52	
965	5864	Makaweli*	" "	21 55.0	159 37.8	140	1892		" "	(1)05- (6)	(1)92-52 (2)	Office; 50' elev. 1892-96
966		Field 36*	" "	21 56.2	159 36.4	470	1939		" "	(6) (7)48-	(3)53- (4)39-52	
966.1		Camp 2 Makaweli	Hawaiian Sugar	21 55.6	159 35.7	250	1905	1938	Unknown		(1)05-18 (3)	
966.2		Puulani	" "	21 56.4	159 36.1	435	1919	1938	"		(3)	
966.3		Hanapepe*	P.R.I.	21 55.0	159 35.6	160	1937	1947	Weekly	[3](5)	(3)37-45	Fld 39B (Kauai Pine); reloc. circa 1942 2500' SSW
981		Field 37*	Olokele Sugar	21 55.9	159 35.1	350	1930		Daily++	(6) (7)48-	(3)53- (4)30-52	
983		Alexander Reservoir	McBryde Sugar	21 57.3	159 31.7	1610	1926		" "	(6) (7)48-	(3)53- (4)30-52	Data msg prior to 1930

* Also has other weather instrumentation - see same key number in Table Two. ++ Except weekends. [1] Pub. in Water-Supply Paper 430. [2] Erroneously listed as 925 in "A Key to Rain Gages in Hawaii" (1948). [3] Pub. in PRI Mo. News & Mo. Reports.

TABLE ONE (CONT.)

State Key No.	USWB Index No.	Station Name or Number	Maintained By	Geographic Coordinates Latitude ° '	Longitude ° '	Elev. (ft.)	Year Established	Discontinued	Frequency of Reading	Location of Data	Location of Summaries	Other Names Relocations Remarks
985	0240	Brydeswood Station*	McBryde Sugar	21 55.7	159 32.2	720	1910		Daily++	(1)	[1](1)10-52 (2)	Homestead; Kalaheo; reloc. 2/51 ½ mi. WNW
985.1		McBryde Residence	W.D. McBryde	(21 56.2)	(159 32.1)	(825)	1901	1913	Daily	(1)05-	(1)	WB records show 900' elev. - prob. too high
986		Kalaheo Field Office	Kauai Pine	21 55.2	159 31.8	800	1925		Daily++	(6) (7)48-	(3)53- (4)25-52	
986.1		McBryde Variety Station*	H.S.P.A.	21 55.3	159 32.5	630	1956		" "	(4),(6)	(4)	
990	8949	Wahiawa Mountain	McBryde Sugar	21 58.3	159 30.6	2100	1901		Monthly	(1)05- (6)	(1)01-52 (2)	Marsh
990.1	1207W	Hanapepe Valley	Hawaiian Sugar	21 58.9	159 32.0	530	1905	1941	Unknown	(1)19-	(1)	
990.2	1489W	Hiloa-Manawaiopuna Divide	" "	22 00.5	159 31.2	2080	1910	1941	"	(1)19-	(1)	
990.3	7099W	Olokele	" "	(22 02.2)	(159 33.3)	1310	1904	1941	Monthly	(1)05-	(1)	Olokele Ditch
990.4	7106W	Olokele Mauka	" "	(22 03.4)	(159 31.1)	2100	1911	1941	"	(1)19-	(1)	
990.5		Kahana	U.S.G.S.	22 03.3	159 34.2	3750	1910	(1915)	Irregular	[2](6)10-15		Kahana-Makuone Divide
992		Omao Field M*	Kauai Pine	21 55.8	159 29.4	525	1941		Daily++	(6) (7)48-	(3)53- (4)41-52	
993		Puuohewa	Grove Farm	21 55.7	159 28.7	500	1923		" "	(6) (7)48-	(3)23-42, 53- (4)23-52	
994	4750	Koloa Mauka	" "	21 57.5	159 28.6	640	1904		" "	(1)05- (6)	[3](1)04-52 (2)	Wilcox Ditch
995	4746	Koloa Field 52	" "	21 56.5	159 28.3	600	1946		" "	(1)	(1)46-52 (2)	
996	3084W	Kamooloa	McBryde Sugar	21 58.3	159 28.5	720	1907	1949	Daily	(1)	[4](1)	Kumaloa Ditch; WB shows 835' elev.
996.1		Koloa Ditch	Lihue Plantation	21 58.4	159 28.5	700	1950		Daily++	(6)	(3)50-57 (6)	
997	7777	Papuaa	Grove Farm	21 58.3	159 28.0	550	1915		" "	(1)19- (6)	(1)15-52 (2)	Papuaa Reservoir; reloc. 6/52 600' NW
1000		Koloa Gap*	Kauai Pine	21 57.4	159 28.1	600	1947		" "	(6)48- (7)48-	(3)48-	Fld 22-D; data msg prior to 1948
1000.1		Knudsen*	P.R.I.	(21 57.1)	(159 28.2)	(625)	1938	1944	Weekly		(3)	
1001		M & M	Grove Farm	21 55.3	159 27.5	300	1924		Daily++	(6)27- (7)48-	(3)26-42, 53- (4)36-52 (6)27-	Data msg prior to 1926
1002		Wai Tah	" "	21 54.5	159 27.2	250	1926		" "	(6)27- (7)48-	(3)26-42, 53- (4)36-52 (6)27-	Kuewa
1003		Kaala	" "	21 55.0	159 28.0	400	1924		" "	(6)27- (7)48-	(3)26-42, 53- (4)36-52 (6)27-	Data msg prior to 1926
1004	8573	Reservoir 6	" "	21 57.2	159 26.8	420	1912		" "	(1)19- (6)14-	(1)14-52 (2)14-	Data msg prior to 1914; Fld 31
1005	3023	Kaluahonu	" "	21 55.0	159 26.5	330	1923		" "	(1)42- (6)	(1)23-52 (2)	

* Also has other weather instrumentation - see same key number in Table Two. ++ Except weekends. [1] Pub. as Homestead 1910-18. [2] Pub. in Water-Supply Papers 318, 336, 373 & 430. [3] Pub. as Wilcox Ditch 1904-18. [4] Pub. as Kumaloa Ditch 1907-18.

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TABLE ONE (CONT.)

State Key No.	USWB Index No.	Station Name or Number	Maintained By	Geographic Coordinates Latitude ° '	Longitude ° '	Elev. (ft.)	Year Established	Year Discontinued	Frequency of Reading	Location of Data	Location of Summaries	Other Names Relocations Remarks
1006	1038	Halenanaho	Grove Farm	21 57.8	159 26.3	490	1932		Daily++	(1)42- (6)	(1)32-52 (2)	Fld 25
1006.1	4937W	Kukaua	H. Isenberg	21 59.7	159 25.5	1055	1900	1942	Daily	(1)05-	(1)	Lihue, Kukaua
1007	0006	Aakukui	Grove Farm	21 56.7	159 25.8	345	1909		Daily++	(1)19- (6)	(1)09-52 (2)	Reloc. 3/52 100' S
1007.1		Kipu Stable	Kipu Ranch	21 56.6	159 25.4	340	1943		Daily	(6) (7)59-	(3)	Kipu 4; probably estab. circa 1900 but data lost
1007.2		Kipu 11	" "	21 56.2	159 23.9	275	1943		After Rain	(6) (7)59-	(3)	Probably estab. earlier but data lost
1007.3		Kipu Kai	Kipu Kai Ranch	21 55.1	159 23.3	25	1943		Daily	(6) (7)59-	(3)	Kipu Ranch prior to 1947; probably estab. earlier but data lost
1007.4		Field 32**	Grove Farm	21 56.2	159 25.8	400						
1011	8570	Reservoir 5*	" "	21 57.6	159 25.0	385	1935		Daily++	(1)42- (6)	(1)35-52 (2)	Fld 22-A
1012		Field 18-A	" "	21 57.0	159 24.0	260	1945		" "	(3)*** (6) (7)48-	(3)53- (4)45-52	Gage 18-A
1013	8217	Puhi*	" "	21 57.9	159 23.8	330	1935		" "	(1)	(1)35-52 (2)	New Office
1013.1		Field 39 Lihue	Lihue Plantation	21 58.4	159 24.3	375	1947		" "	(6)	(3)47-57 (6)	Station 39
1015	6537	Molokoa	Mrs. H. Isenberg	21 58.9	159 22.9	240	1893	1950	Daily	(1)05-	(1)	
1015.1	4615W	Kilohana (Lihue)	A.W. Duval	(21 58.2)	(159 23.7)	330	1903	1938	"	(1)05-	(1)	
1015.2		Field 11 Lihue	Lihue Plantation	21 59.4	159 23.0	275	1947		Daily++	(6)	(3)47-57 (6)	Station 4
1016		Field 4-A	Grove Farm	21 58.0	159 23.0	275	1940		" "	(3)*** (6)41- (7)48-	(3)41-42, 53- (4)41-52	Gage 4-A; data msg prior to 1941
1017	6055	Malumalu*	" "	21 57.2	159 23.0	250	1940		" "	(1)	(1)40-52 (2)	Fld 11; Fld 11-C
1020	5575	Lihue*	Lihue Plantation	21 58.5	159 22.3	205	1904		Daily	(1)05- (6)	(1)04-52 (2)	Reloc. 4/60 75' ENE to roof of vault
1020.1	5580	Lihue Airport*	U.S.W.B.	21 58.8	159 20.6	115	1950		o-R	(1)	(2)	Tipping bucket gage only; charts on file NWRC
1020.2		Field 36 Lihue	Lihue Plantation	21 59.4	159 20.5	75	1947		Daily++	(6)	(3)47-57 (6)	Station 36
1020.3		Field 32 Lihue	" "	21 58.0	159 20.2	50	1947		" "	(6)	(3)47-57 (6)	Station 30-A
1020.4		Field 24 Lihue	" "	21 58.0	159 21.0	125	1947		" "	(6)	(3)47-57 (6)	Station 24
1020.5		Field 20 Lihue	" "	21 58.8	159 21.5	175	1947		" "	(6)	(3)47-57 (6)	Station 20
1020.6		Field 21**	" "	21 59.0	159 21.4	220						
1021	0766	Grove Farm	Grove Farm	21 58.0	159 22.2	200	1885		" "	(1)05- (6)	(1)85-52 (2)	Old Office
1022	1195	Hanamaulu*	Lihue Plantation	21 59.7	159 21.5	175	1893		" "	(1)05- (6)	(1)93-52 (2)	Reloc. approx. 1/59 75' E; data msg 1899-1901

* Also has other weather instrumentation - see same key number in Table Two. ** Non-rainfall instrumentation only - see same key number in Table Two. *** Current but original date unknown. ++ Except weekends. o Weather Bureau first order station taking 6-hourly observations daily - beginning & ending of precipitation, hourly amounts.

TABLE ONE (CONT.)

State Key No.	USWB Index No.	Station Name or Number	Maintained By	Geographic Coordinates Latitude ° '	Longitude ° '	Elev. (ft.)	Year Established	Year Discontinued	Frequency of Reading	Location of Data	Location of Summaries	Other Names Relocations Remarks
1023	0197	Bonham ALF*	U.S.N.	22 01.9	159 47.2	10	(1942)	1950	Daily+	(1)49- [1](2)47, 49-	(2)49-	Barking Sands; maint. by FAA 1949-50, HAL earlier; data msg 1942-46 & 1948
1024		Field 242	Kekaha Sugar	22 01.3	159 47.1	10	1946		After Rain	(6)48- (7)48-	(3)54- (4)46-53	Mo. data only prior to 1948
1025		Field 246-2	" "	22 03.1	159 46.2	10	1946		" "	(6)48- (7)48-	(3)54- (4)46-53	Mo. data only prior to 1948
1026	6082	Mana*	" "	22 02.2	159 46.4	10	1904		Daily	(1)05- (6)	(1)04-52 (2)	Mana Pump; reloc. 5/49 approx. 3/4 mi. NW
1027		Limaloa	" "	22 00.6	159 46.6	10	1946		After Rain	(6)48- (7)48-	(3)54- (4)46-53	Mo. data only prior to 1948
1030		Field H	" "	22 02.7	159 45.9	45	1946		" "	(6)48- (7)48-	(3)54- (4)46-53	Mo. data only prior to 1948
1031		Saki Mana*	" "	22 03.5	159 45.8	10	1945		" "	(6)48- (7)48-	(3)54- (4)45-53	Mo. data only prior to 1948
1032		Field A	" "	22 01.8	159 45.6	35	1946		" "	(6)48- (7)48-	(3)54- (4)46-53	Mo. data only prior to 1948
1033	4735	Kolo*	" "	22 04.2	159 45.8	35	1936		Daily	(1)	(1)36-52 (2)	Fld U; reloc. 3/59 150' S
1034		Camp 3	" "	22 01.3	159 45.5	10	1946		After Rain	(6)48- (7)48-	(3)54- (4)46-53	Mo. data only prior to 1948
1035	6850	Niu Ridge*	" "	22 02.0	159 44.3	1250	1939		Daily	(1)42- (6)	(1)39-52 (2)	Puu Opae
1037		Puu Opae Garden*	" "	22 02.8	159 41.7	2250	1946	1955	After Rain	(6)48- (7)48-	(3)54- (4)46-53	Mo. data only prior to 1948
1037.1		Kitano*	" "	22 01.6	159 41.2	2150	1955		" "	(6)	(3)	Kitano Reservoir; reloc. from #1037
1040	8205	Puehu Ridge*	" "	22 01.2	159 41.5	1660	1939		Daily	(1)	(1)39-52 (2)	Fld G-1; reloc. from #1040.1
1040.1		Pokii Ridge	" "	22 00.7	159 41.3	1650	1936	1939	After Rain	(1)	(2)	
1042		Waialae	U.S.G.S.	22 04.9	159 35.8	3600	1911		3 or 4 times yrly	[2](6)10-15, 22- (7)48-	(1)11-16 (3)53- (4)22-34, 41-48 (6)22-	Data msg 1917-21 & 11/49-4/53
1042.1		Kaholuamanu	"	22 04	159 36	3650	1913	1915	Monthly-irregular	[3](6)		
1044	4101	Keanakua	"	22 04.4	159 32.8	4450	1910		1 or 2 times yrly	[4](1)19- [5](6)10-15	(2)	Data msg 1916-18
1047	6565	Mt. Waialeale	"	22 04.1	159 30.0	5075	1910 1949	1949	Annually Recorder	[4](1)11- [5](6)10-15	(1)11-17 (2)11-	Rec. gage replaced temporarily by non-rec. gage 1/54-10/55; charts on file USGS
1050	2222	Iliiliula Intake	Lihue Plantation	22 02.4	159 28.3	1070	1935		Daily[6]	(1)43- (6)	(1)35-52 (2)	
1051	6888	North Wailua Ditch	" "	22 03.6	159 27.9	1110	1928		" [6]	(1)43- (6)	(2)	No. Wailua Intake
1052	8966	Waiahi Upper	" "	22 01.4	159 28.0	780	1931		"	(1)42- (6)	(1)33-52 (2)33- (6)	New Powerhouse; replaced #1052.1
1052.1		Iliiliula Cut-Off	" "	22 01.4	159 28.1	1050	1927	1931	Monthly	(6)	(3)	

* Also has other weather instrumentation - see same key number in Table Two. + Beginning & ending of precipitation reported on WB Form WBAN-10 (CAA).
[1] Surface observational forms on file FRC, Honolulu. [2] 1910-15 data pub. in Water-Supply Papers 318, 336, 373 & 430. [3] Pub. in Water-Supply Papers 373 & 430. [4] Pub. in annual CD only through 1952, in June CD only from 1953. [5] Pub. in Water-Supply Papers 318, 336, 373 & 430. [6] Monthly until 1954.

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TABLE ONE (CONT.)

State Key No.	USWB Index No.	Station Name or Number	Maintained By	Geographic Coordinates Latitude ° '	Longitude ° '	Elev. (ft.)	Year Established	Year Discontinued	Frequency of Reading	Location of Data	Location of Summaries	Other Names Relocations Remarks *
1052.2		North Wailua	U.S.G.S.	(22 03)	(159 28)	1250	1912	1913	4 times yearly	[1](6)		Location doubtful
1053	1170	Hanalei Tunnel	Lihue Plantation	22 05.0	159 28.2	1220	1928		Monthly	(1)43- (6)	(2)	
1053.1	8775W	Summit Camp	Kauai Electric	22 06.1	159 26.9	1900	1910	1927	"	(1)19-	(1)	Summit Camp Hanalei
1053.2		Kapehuala	U.S.G.S.	22 06.7	159 25.1	3130	1910	1911	Irregular	[2](6)		
1053.3		Pohakupili	"	22 07.0	159 23.8	2590	1910	1913	4 times yearly	[3](6)		
1054	8958	Waiahi Lower*	Lihue Plantation	22 01.1	159 26.8	550	1910		Daily	(1)36- (6)28-33, 55-	(1)10-17, 36-52 (2)10-17, 36- (3)28-33 (6)28-33, 55-	Lower Powerhouse; elev. 600' 1910-17; reloc. 2/54 30' E; data msg 1918-27 & 1933-35
1054.1		Lihue Ditch	" "	22 01.5	159 25.5	550	1951		Daily++	(6)	(3)51-57 (6)	
1054.2		Field Lihue 10	Haw'n Canneries	22 00.7	159 25.5	800	1951		Monthly	(6),(7)	(3)	
1054.3		Field Lihue 8	" "	22 01.0	159 24.5	450	1951		"	(6),(7)	(3)	
1054.4		Field Lihue 9	" "	22 01.1	159 24.6	500	1951	1955	"	(6),(7)	(3)	
1055	6893	North Wailua River	Lihue Plantation	22 03.8	159 26.3	650	1915		"	(1)19-	(1)15-18 (2)	No. Fork Wailua; maint. by USGS prior to 1942; read irreg. prior to 1929
1055.1		Stable Storm Ditch	" "	22 03.5	159 26.7	740	1954 1950		" Recorder	(6)	(6)	Rec. gage called Stable Camp, charts on file U.S. Army Engineers, Honolulu
1055.2		Hanahanapuni	U.S.G.S.	(22 03.2)	(159 25.7)	910	1910	1914	Monthly	[3](6)10-13	(1)11-	
1057		Kanaha Ditch	Lihue Plantation	22 03.8	159 25.4	570	1935	1945	"	(1)	(2)	
1061		EKW 5	" "	22 03.6	159 24.2	475	1932		Daily++	(6) (7)48-	(3)32-42, 53- (4)32-52	Wailua Reservoir; reloc. 5/57 approx. 500' to top of dam, elev. 23' higher than previous location
1061.1		EKW 6	" "	22 03.9	159 24.9	475	1950	1959	" "	(6),(7)	(3)50-57	
1061.2		Fld 24	Haw'n Fruit Pkrs	22 03.7	159 24.6	475	1955		After Rain	(6),(7)	(3)	Fld 124; disc. 6/59, resumed 1/60
1062		Wailua Uka	Lihue Plantation	22 01.5	159 24.1	250	1924		Daily++	(6) (7)48-	(3)53- (4)24-52	Wailua Falls Stable
1062.1		Lihue Variety Station*	H.S.P.A.	22 01.5	159 23.3	340	1945		Daily	(4)	(4)	Kauai Variety Station
1062.2		Field 38A**	Lihue Plantation	22 01.8	159 24.4	425						
1063		Field 319	Haw'n Fruit Pkrs	22 04.5	159 21.8	300	1948		After Rain	(6),(7)	(3)	Wailua Fld 219; Crossley's
1063.1	6555W	Mount Nonou	Mrs. M.G. Sanches	22 03.2	159 22.5	350	1915	1933	Daily	(1)20-	(1)	
1064		Camp 9	Lihue Plantation	22 00.7	159 22.5	275	1924		Daily++	(6) (7)48-	(3)53- (4)24-52	
1065		Wailua Kai	" "	22 02.4	159 20.6	70	1924		" "	(6) (7)48-	(3)53- (4)24-52	

* Also has other weather instrumentation - see same key number in Table Two. ** Non-rainfall instrumentation only - see same key number in Table Two. ++ Except weekends. [1] Pub. in Water-Supply Papers 336 & 373. [2] Pub. in Water-Supply Paper 318. [3] Pub. in Water-Supply Papers 318, 336 & 373.

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TABLE ONE (CONT.)

State Key No.	USWB Index No.	Station Name or Number	Maintained By	Geographic Coordinates Latitude ° '	Longitude ° '	Elev. (ft.)	Year Established	Discontinued	Frequency of Reading	Location of Data	Location of Summaries	Other Names Relocations Remarks
1066		Field Makee 3C	Lihue Plantation	22 04.2	159 19.7	10	1934		Daily++	(6) (7)48-	(3)48- (4)34-52	Wailua Kai 2
1067		Lot 143	" "	22 04.7	159 23.7	340	1941		" "	(6) (7)48-	(3)	Sanchez
1070		Field P	Kekaha Sugar	22 05.3	159 45.2	10	1946		After Rain	(6)48- (7)48-	(3)54- (4)46-53	Mo. data only prior to 1948
1071		Makaha	Bd of A. & F.	22 07.7	159 43.2	1750	1947		Monthly	(6)48- (7)48-	(3)48-	Data msg prior to 1948
1072	2342W	Puu Hinahina*	" " "	22 06.1	159 40.9	3435	1930		Weekly & After Rain	(1)30-41 (6)48- (7)48-	(1)30-41 (3)54- (4)45-53	Kaana; Puu Kapele; 1930-41 data from Kaana gage SSW ½ mi. at 3407' elev.; data msg 1942-44
1072.1		Puu Lua*	U.S.G.S.	22 05.6	159 40.5	3500	1910	1921	Monthly	(1)19- [1](6)10-15	(1)12-16 (2)12-	
1072.2		Puu Loa	Kekaha Sugar	22 05.6	159 40.9	3350	1956		Daily++	(6)	(6)	
1075	3099	Kanalohuluhulu*	Bd of A. & F.	22 07.5	159 39.7	3600	1931		Daily	(1)31-41, 55- (6)48- (7)48-	(1)31-41 (2)31-42, 50- (4)45-53	Kokee Ranger Sta.; data msg 1942-44; reloc. circa 1944 approx. ½ mi. N
1075.1		Kokee*	U.S.G.S.	22 07.5	159 38.8	3550	1910	1935	Several times yrly	[2](1)19- [1](6)10-15	(1)11-16 (2)11-	Data msg 1917-18
1077		Kalalau	"	22 09.8	159 38.2	960	1936	1955	Several times yrly	(6) (7)48-	(3)37- (4)36-51	
1077.1		Lehuamakanoi	"	22 08.6	159 37.4	3930	1910	1936	Several times yrly	[2](1)19-33 [1](6)10-15	(2)19-	Data msg 1916-18
1080	7790	Paukahana	"	22 08.0	159 37.7	3725	1910		Several times yrly	[3](1)19- [1](6)10-15	(2)19-	Data msg 1916-18
1080.1		Kokee-Moir	John Moir, Jr.	22 08	159 38	3700	1952	1954	Monthly	[4](6)		
1082	9130	Waiakoali Camp*	U.S.G.S.	22 07.4	159 37.4	3450	1910		Several times yrly	[3](1)19- [1](6)10-15	(2)19-	Waiakoali; data msg 1916-18
1083	6433	Mohihi Upper Crossing	"	22 07.0	159 36.2	3500	1910		Several times yrly	[3](1)19- [1](6)10-15	(2)19-	Mohihi Crossing; data msg 1916-18 & 1933-38
1084	4610	Kilohana Alakai	"	22 09.3	159 35.9	4025	1910		Several times yrly	[3](1)19- (6)	(2)10-11,19- (6)	Kilohana
1085		Mohihi-Koaie Divide	"	22 06.8	159 35.2	3950	1910		Several times yrly	[2](1)19-32 [1](6)10-15 (7)48-	(2)19-36 (3)28-30, 47- (6)21-	Kohua Ridge; data msg 1916-18
1086	2227	Intake, Wainiha Power Canal	McBryde Sugar	22 09.1	159 34.2	700	1907		After Rain	(1)	(1)07-52 (2)	Wainiha Intake
1092		Kaneha Reservoir	Lihue Plantation	22 07.8	159 22.5	845	1946		Daily++	(6) (7)48-	(3)53- (4)46-52	Kaneha; reloc. from #1092.3
1092.1		Old Stable	" "	22 08	159 22	(500)	****	1916	Unknown	(6)		
1092.2		Field W-6	Haw'n Fruit Pkrs	22 07.8	159 21.8	450	1953		After Rain	(6),(7)	(3)	Fld W-4 prior to 1958, reloc. 1 mi. N
1092.3		Kaneha Reservoir (800)	Lihue Plantation	22 07.7	159 22.6	800	1909	1946	Daily++	(6)15-	[5](3)09-42 (4)15-	Kanaha Reservoir Camp; replaced by #1092
1094		EKW 3 (370)	" "	22 06.1	159 22.5	370	1932	1949	" "	(6) (7)48-	(4) (6)	Matsumura; replaced by #1094.1
1094.1		EKW 3	" "	22 05.6	159 22.2	350	1949		" "	(6),(7)	(3)	Upper Kapahi Reservoir; reloc. from #1094

* Also has other weather instrumentation - see same key number in Table Two. **** Unknown. ++ Except weekends. [1] Pub. in Water-Supply Papers 318, 336, 373 & 430. [2] Pub. in annual CD only. [3] Pub. in annual CD only through 1952, in June CD only from 1953. [4] Data on file Kekaha Sugar. [5] Annual totals only 1909-14.

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TABLE ONE (CONT.)

State Key No.	USWB Index No.	Station Name or Number	Maintained By	Geographic Coordinates Latitude ° '	Longitude ° '	Elev. (ft.)	Year Established	Year Discontinued	Frequency of Reading	Location of Data	Location of Summaries	Other Names Relocations Remarks
1095		Mimino	Lihue Plantation	22 06.7	159 20.9	280	1934		Daily++	(6) (7)48-	(3)34-42, 53- (4)34-52	
1095.1		Newlun's House	U.S.G.S.	22 06.6	159 22.5	650	1914	1919	Unknown		(1)14-18 (2)	Kealia (USGS)
1097		EKW 4	Lihue Plantation	22 05.1	159 21.7	335	1932		Daily++	(6) (7)48-	(3)53- (4)32-52	Miyoshi
1097.1		Field 317	Haw'n Fruit Pkrs	22 05.1	159 22.4	450	1950		After Rain	(6),(7)	(3)	Fld 117
1100		Kapahi	" " "	22 05.9	159 20.1	240	1947		Daily++	(6)48- (7)48-	(3)48-	Kapaa; data msg prior to 1948
1100.1		Kapahi (McKee)	McKee Sugar	(22 06.1)	(159 21.0)	305	1900	1916	Daily	(1)05-	(1)	
1101		Field Lihue 2*	Haw'n Canneries	22 07.4	159 19.8	400	1937	1950	Weekly	[1](5)37-46 (6)48- (7)48-	(3)37-45, 48-	Kealia (PRI); data msg 1947
1102		Field Makee 2B	Lihue Plantation	22 07.6	159 21.2	350	1921		Daily++	(6) (7)48-	(3)53- (4)21-52	Old Camp prior to 5/60
1102.1		Field Lihue 3	Haw'n Canneries	22 07.7	159 19.9	400	1949		Weekly	(6),(7)	(3)	
1102.2		Field A-7	Haw'n Fruit Pkrs	(22 07.8)	(159 19.4)	(350)	1956		After Rain	(6),(7)	(3)	Fld A-107; disc. 10/58, resumed 1/60
1104	3159	Kapaa Stables	Lihue Plantation	22 05.1	159 20.1	175	1940 1955		Daily++ Recorder	(1)	(1)40-52 (2)	Reloc. from #1104.1; reloc. 4/55 approx. 100' S; charts on file PSO & FRC
1104.1	8766W	Station 35	" "	22 04.9	159 20.4	80	1917	1940	Daily++	(1)	(1)	Camp 35; replaced by #1104
1107		EKW 1 (120)	" "	22 05.4	159 19.1	120	1932	1951	" "	(6) (7)48-	(4)	Replaced by #1107.3
1107.1		Kapaa	Unknown	(22 05.5)	(159 18.6)	(50)	1883	1886	Unknown		(1)	
1107.2		EKW 2	Lihue Plantation	22 05.7	159 19.6	190	1940	1947	Daily++	(6)	(6)	
1107.3		EKW 1	" "	22 05.3	159 19.4	60	1951		" "	(6),(7)	(3)	Takabayashi; reloc. from #1107
1110	0935	Halaula	" "	22 07.1	159 19.2	255	1902		" "	(1)05- (6)	(1)02-52 (2)	Fld Makee 8
1111	0145	Anahola	Haw'n Canneries	22 08.8	159 19.1	40	1930 1955		" " Recorder	(1)	(1)30-52 (2)	Reloc. 1958 100' N; charts on file PSO & FRC
1111.1		Section 5A	Lihue Plantation	22 07.4	159 19.3	300	1941	1955	Daily++	(6)	(3)	Station5A; Section 4B
1111.2		Field 18	Haw'n Canneries	22 09.8	159 19.4	150	1950		" "	(6),(7)	(3)	
1112	3982	Kealia*	Lihue Plantation	22 05.9	159 18.5	10	1899		" "	(1)05- (6)	(1)99-52 (2)	Reloc. between 11/53 & 3/56 approx. 400' NW
1113		Station 9	" "	22 06.8	159 18.5	150	1941		" "	(6) (7)48-	(3)53- (4)41-52	Section 9
1113.1		Field K-8	Haw'n Fruit Pkrs	22 06.6	159 18.5	100	1955		After Rain	(6),(7)	(3)	Fld K-6 to 12/57
1114		Field Makee 14A	Lihue Plantation	22 08.2	159 18.4	185	1934		Daily++	(6) (7)48-	(3)53- (4)34-52	Anahola-Lihue; reloc. 1955 100'S
1115	8155	Powerhouse Wainiha	McBryde Sugar	22 11.7	159 33.5	100	1907		Daily	(1)18- (6)	(1)07-52 (2)	

* Also has other weather instrumentation - see same key number in Table Two. ++ Except weekends. [1] Pub. in PRI Mo. News & Mo. Reports.

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TABLE ONE (CONT.)

State Key No.	USWB Index No.	Station Name or Number	Maintained By	Geographic Coordinates Latitude ° '	Longitude ° '	Elev. (ft.)	Year Established	Year Discontinued	Frequency of Reading	Location of Data	Location of Summaries	Other Names Relocations Remarks
1117	8165	Princeville Ranch	Princeville Ranch	22 12.8	159 28.5	295	1910		Daily	(1)19-	[1](1)10-52 (2)	Princeville; Princeville Plantation; Sanborn's House; reloc. 11/27 approx. 1/5 mi. WNW; reloc. 2/57 few ft WNW
1117.1		Hanalei (Deverill)	E.G.K. Deverill	(22 12.2)	(159 30.3)	10	1892	1909	"	(1)05-	(1)	
1117.2		Hanalei River	U.S.G.S.	22 07.1	159 28.0	625	1914	1955	Several times yrly	[2](1)19-26 [3](6)14-15, 21- (7)48-	(2)19-26 (3)34- (4)21-27, 33-51 (6)21-	Data msg 1916-18
1117.3		Waioli	"	(22 10.2)	(159 29.8)	(600)	1921	1932	Several times yrly	(6)	(6)	
1117.4		Field P-24	Haw'n Canneries	22 12.8	159 27.3	275	1957		Monthly	(6) (7)58-	(3)58-	Hanalei
1117.5		Hanalei	" "	22 12.6	159 27.7	250	1929	1939	After Rain	(3)29-31 (6)31-	(3)	
1117.6		Waioli (Johnson)*	Rev. E. Johnson	22 12	159 30	(20)	1845	1846	Daily		(1)	
1131	2974	Kalihiwai Reservoir	Kilauea Sugar	22 11.2	159 25.9	400	1930		Daily++	(1)42-51, 59- (6) (7)48-	(1)30-51, 59- (3)52-	Kalihiwai; no data 8/51-2/52
1131.1	3207W	Kapaka	McBryde Sugar	22 10.8	159 27.7	635	1910	1945	" "	(1)19- (6)	(1)	
1131.2		Kalihiwai	U.S.G.S.	22 08.5	159 26.6	700	1914	1923	Several times yrly	[3](1)19- (6)14-15, 21-	(2)19-	Data msg 1916-18
1131.3		Puu Eu	"	22 08.7	159 24.7	2785	1910	1913	Irregular	[4](6)		Pueo
1132		Field 12	Kilauea Sugar	22 12.6	159 25.7	290	1936	1951	After Rain	(6) (7)48-	(4)	Fld 1; replaced by #1132.1
1132.1	4564	Kilauea Field 3	" "	22 12.3	159 25.7	325	1951		Daily	(1)51-58 (6)	(2)51-58 (6)	Replaced #1132
1133	4568	Kilauea Point*	U.S.C.G.	22 13.9	159 24.2	180	1948		Twice daily	(1)49- [5](2)	(2)50- (3)49-56	
1134	4561	Kilauea*	Kilauea Sugar	22 12.7	159 24.6	315	1885		Daily++	(1)05- (6)	(1)85-52 (2)	Office; charts on file PSO
							1960		Recorder			
1134.1		Field 9B	" "	22 12.2	159 24.7	300	1956		After Rain	(6)	(6)	
1134.2		Field 14	" "	22 12.5	159 24.6	320	1956		" "	(6)	(6)	
1134.3		Field 8	" "	22 13.3	159 24.4	300	1956		" "	(6)	(6)	
1134.4		Field 2	" "	22 13.2	159 25.3	150	1956		" "	(6)	(6)	
1135	4566	Kilauea Field 17*	" "	22 11.3	159 24.2	415	1930		Daily++	(1)42- (6)	(1)30-52 (2)	Puu Ka Ele Reservoir; reloc. 10/51 1/4 mi. N; charts on file PSO & FRC
							1955	1957	Recorder			
1136		Field 23	" "	22 12.0	159 23.5	350	1936		Daily++	(6) (7)48-57	(3)53-57 (4)37-52 (6)	Morita
1136.1		Field 19	" "	22 11.9	159 23.9	330	1956		After Rain	(6)	(6)	
1136.2		Field 20	" "	22 12.6	159 23.3	250	1956		" "	(6)	(6)	

* Also has other weather instrumentation - see same key number in Table Two. ++ Except weekends. [1] Pub. as Sanborn's House 1910-18. [2] Pub. in annual CD only. [3] 1914-15 data pub. in Water-Supply Paper 430. [4] Pub. in Water-Supply Papers 318, 336 & 373. [5] On file PSO, WB & FRC, Honolulu.

TABLE ONE (CONT.)

State Key No.	USWB Index No.	Station Name or Number	Maintained By	Geographic Coordinates Latitude ° '	Longitude ° '	Elev. (ft.)	Year Estab-lished	Year Discon-tinued	Frequency of Read-ing	Location of Data	Location of Summaries	Other Names Relocations Remarks
1137	4758	Koloko Reservoir	Kilauea Sugar	22 10.7	159 22.9	735	1934		Daily++	(1)42- (6)	(1)34-52 (2)	Koloko; reloc. 6/58 50' SW
1137.1		Field 25	" "	22 11.3	159 23.2	500	1956		After Rain	(6)	(6)	
1137.2		Field 31	" "	22 11.3	159 22.5	525	1956		" "	(6)	(6)	
1137.3		Field 41	" "	22 10.8	159 22.2	480	1956		" "	(6)	(6)	
1140[1]		Field 27	" "	22 12.1	159 22.7	300	1936		" "	(6) (7)48-51	(4)36-51 (6)	Waikalua; Fld 27 since 7/56; no data 6/51-7/56
1141		Field 36*	" "	22 11.7	159 22.2	365	1936		Daily++	(6) (7)48-57	(3)53-57 (4)37-52 (6)	Pilaa; Koolau; Fld 35 prior to 8/52
1141.1		Field 28	" "	22 12.4	159 22.1	240	1956		After Rain	(6)	(6)	
1142		Camp 1*	Haw'n Canneries	22 10.7	159 20.5	275	1937		Daily	(6)48- (7)48-	(3)53- (4)37-52	Moloaa Camp 1
1143		Field 30*	Kilauea Sugar	22 12.1	159 21.0	230	1936		Daily++	(6) (7)48-57	(3)53-57 (4)37-52 (6)	Lepeuli; formerly located in Fld 31
1143.1		Field 45	" "	22 11.5	159 21.3	340	1956		After Rain	(6)	(6)	
1144		Field 7-A	Haw'n Canneries	22 11.2	159 19.3	200	1936		Daily	(6)48- (7)48-	(3)53- (4)36-52	Moloaa Fld 7-A; reloc. 1/58 approx. 100 yds E; mo. data msg 2/37-11/41
1145	6529	Moloaa*	" "	22 10.9	159 20.1	330	1926		"	(1)	(1)26-52 (2)	Fld 5

* Also has other weather instrumentation - see same key number in Table Two. ++ Except weekends. [1] Pub. as 1140.1 in "Rainfall of the Hawaiian Islands" (1959).

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TABLE TWO

State Key No.	Element(s) Observed	Year Estab-lished	Year Discon-timued	Frequency of Reading	Location of Tabular Data	Location of Summaries	Location of Charts	Instrumentation, Relocations, Remarks
925	a	1951		Daily	(4),(6)	(6)		
	b	1960		Weekly	(6)	(4)		
926	a	(1939)	1950	oo	(1)49- [1](2)40-41, 45-	(2)49-		Also psychrometer; data msg prior to 1940
	c	(1939)	1950	oo	[1](2)40-41, 45-	(2)47		
	d,e	(1939)	1950	oo	(2)40-41, 45-	(2)43-44		
927	a	1917		Daily++	(1)19- (6)	(2),(4)		
	b	1960	1960	Weekly	(6)	(4)		Evap. pan reloc. to #930
928.2	a	1951		Weekly-R	(6)		(6)	Also thermograph
930	a	1914		Daily++	(1)14-24 (4)51- (6)51-	(2)14-24 (6)26-		
	b	1960		Weekly	(6)	(4)		
931	a	1951		Daily++	(2),(4),(6)	(6)		
	b	1960		Weekly	(6)	(4)		
933	a	1938		Weekly-R	(6)41-	(3)38-45	(6)41-	Also thermograph
	g	1938	1945	+++		(3)		
934	a	1951		Daily++	(2),(4),(6)	(6)		
935	a	1951		" "	(2),(4),(6)	(6)		
936	a	1905		" "	(1)05-54 (2)54- (4)51-	(2)05-54 (4)		
	b	1910	1911	Weekly	[2](6)	(3)		Evap. pan may have been in diff. location
940	a	1948		Daily++	(2)*** (6)	(6)		
940.1	a	1956		ooo	(1)58- [3](2)	(2)58-		Also psychrometer
	c,d,e	1956		ooo	[3](2)			
943	a	1896		Daily	(2)*** (4)49- (6)35-	[4](6)96-97, 35-		No data 1898-1934
	b	1910	1911	Irregular	[2](6)	(3)		Evap. pan may have been in diff. location
	g	1949	1958	Weekly	(4),(6)			Photochemical integrator
944	a	1933		Daily	(2)*** (4)51- (6)	(6)		
	b	1960		Weekly	(6)	(4)		
945	a	1940		Daily	(2)*** (4)51- (6)	(6)		
947	a	1957		"	(2),(6)	(6)		
950	a	1951		Daily++	(4)			
952	a	1951		" "	(4)			
953	a	1951		" "	(4)			
955	a	1951		" "	(4)			
962	a	1951		" "	(4),(6)	(6)		
965	a	1905		" "	(1)	(2),(4)		
966	a	1951		" "	(4),(6)	(6)		
	b	1960		Weekly	(6)	(4)		
966.3	a	1937	1947	Recorder	[5](5)	(3)37-45	(3)	
	f	1937	1947	"			(3)	
	g	1937	1947	+++	[5](5)	(3)37-45		

Key to symbols for column headed Element(s) Observed:
a - air temperature (maximum & minimum thermometers unless otherwise noted); b - evaporation; c - relative humidity; d - wind direction; e - wind speed; f - sunshine duration; g - solar radiation; h - soil temperature.
See Table One for key to number symbols in columns headed Location of Tabular Data, Location of Summaries & Location of Charts.

*** Current but original date unknown. ++ Except weekends. +++ Values derived from black bulb thermograms. oo Airport station taking more than one observation daily - reported on WB Form WBAN 10 (CAA). ooo Coast Guard station taking more than one observation daily - reported on WB Form 610-7. [1] Military surface observational forms for 2/40-11/40 & 1/41-11/41 on file NWRC. [2] Pub. in Water-Supply Paper 318. [3] On file PSO, WB & FRC. [4] Pub. in Lyons & Lydecker Vol., "Weather Record for Honolulu & Hawaiian Islands". [5] Pub. in PRI Mo. News & Mo. Reports.

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TABLE TWO (CONT.)

State Key No.	Element(s) Observed	Year Established	Year Discontinued	Frequency of Reading	Location of Tabular Data	Location of Summaries	Location of Charts	Instrumentation, Relocations, Remarks
981	a	1951		Daily	(4),(6)	(6)		
985	a	1951		Daily++	(2)*** (4),(6)	(6)		
986.1	a	1956		" "	(4)	(6)		
	b	1960		Weekly	(6)	(4)		
992	a	1951		"	(6)			
1000	a	1951		Weekly-R	(6)		(6)	Also thermograph
1000.1	a	1938	1944	Recorder		(3)		Thermograph only - charts msg
	f	1938	1944	"				Black bulb thermograph - charts msg
	g	1938	1944	+++		(3)		
1007.4	g	1947	1949	Weekly	(4)			Photochemical integrator
1011	a	1949		Daily++	(4)51- (6)	(6)		
	g	1947	1949	Weekly	(4)			Photochemical integrator
1013	a	1935		Daily++	(1)	(2),(4)		
	c,d	***		" "	(6)			
1017	a	1949		" "	(2) (4)51- (6)	(6)		
	g	1947	1949	Weekly	(4)			Photochemical integrator
1020	a	1905		Daily	(1)	(2),(4)		
1020.1	a	1950		o	(1)	(1),(2)		Also psychrometer & hygrothermograph
		1950	1955	Recorder			[1](2)	
	b	1955		Daily	[2](2)	(1),(3)		Also anemometer at pan level
	c	1950		o	[2](2)	(1)		
		1950	1955	Recorder			[1](2)	
	d,e	1950		o-R	[2](2)	(1)	[1](2)	Triple register recorder
	f	1950		Recorder		(1)	[1](2)	Sunshine switch
1020.6	h	1953	1955	"	(3),(6)		(6)	Soil thermograph
1022	a	1896	1897	Unknown		[3](6)		
1023	a	(1942)		oooo	(1)49-50 [4](2)42-46 (6)59-	(2)49-50		Also psychrometer; no data 1951-58
	c	(1942)		oooo	[5](2)42-47 (6)59-	(2)46-47		
	d,e	(1942)		oooo	[4](2)42-46 (6)59-			
1026	a	1905		Daily	(1)	(2),(4)		
	g	1949	1957	Weekly	(4),(6)			Photochemical integrator
1031	a	1945		Daily	(4)51- (6)	(6)		
1033	a	1936		"	(2)*** (4)51- (6)	(6)		
1035	a	1939		"	(1)41- (6)	(2)41- (6)		
1037	a	1946	1955	"	(4)51- (6)	(6)		
1037.1	a	1955		"	(6)	(6)		
1040	a	1939		"	(2)*** (4)49- (6)	(6)		
	g	1949	1957	Weekly	(4),(6)			Photochemical integrator
1054	a	1955		Daily	(1)	(2)		
1062.1	a	1945		Recorder	(4)	(6)	(4)	Thermograph only
	f	1945	1952	"			(4)	Blue print recorder

*** Current but original date unknown. ++ Except weekends. +++ Values derived from black bulb thermograms. o W.B. first order station taking 24 hourly observations daily - reported on WB Forms WBAN-10A & 10B. oooo Military station operated by Haw'n Airlines 1946-50, reactivated by USN in 1959 on sporadic basis - all USN records at Barbers Pt; HAL observations reported on WB Form WBAN-10 (CAA). [1] On file NWRC. [2] On file PSO, WB & FRC. [3] Pub. in Lyons & Lydecker Vol., "Weather Record for Honolulu & Hawaiian Islands". [4] Military surface observational forms on file NWRC. [5] Military surface observational forms for 4/42-12/45 on file NWRC.

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TABLE TWO (CONT.)

State Key No.	Element(s) Observed	Year Estab-lished	Year Discon-tinued	Frequency of Reading	Location of Tabular Data	Location of Summaries	Location of Charts	Instrumentation, Relocations, Remarks
1062.2	h	1953	1954	Recorder	(3),(6)		(6)	Soil thermograph
1072	a	1930	1930	Daily	[1](1)			
1072.1	b	1910	1911	Irregular	[2](6)	(3)		
1075	a	1931	1942	Daily	(1)	(2)		
1075.1	a	1920	1924	"		(2)		
1082	b	1910	1911	Irregular	[2](6)	(3),(6)		
1101	a	1937	1946	Recorder	[3](5)	(3)37-45	(3)37-44	Thermograph only
	f	1937	1946	"			(3)37-44	Black bulb thermograph
	g	1937	1946	+++	[3](5)	(3)37-45		
1112	a	1905		Daily++	(1)	(2),(4)		
	b	1910	1911	Irregular	[2](6)	(3)		Evap. pan may have been in diff. location
1117.6	a	1845	1846	Daily		(1)		
1133	a	1948		ooo	(1)50- [4](2)	(2)50-		Also psychrometer
	c,d,e	1948		ooo	[4](2)			
1134	a	1895		Daily++	(1)05- [5](6)	(2)05- (4)05-		Also thermograph - operating only from 3/55-9/55 & 4/56-5/57; no data available 1900-04;
		1955	1957	Recorder			(6)	solar radiation charts for 3/55-10/55 &
	g	1955	1957	"			(6)	4/56-6/57 only
1135	a	1951		Daily++	(2),(4),(6)	(6)		
1141	a	1951		" "	(4),(6)	(6)		
1142	a	(1950)		" "	(2)*** (6)			
1143	a	1951		" "	(4),(6)	(6)		
1145	a	1938	(1945)	Recorder		(3)38-45		Thermograph only - charts msg
	f	1938	(1945)	"				Black bulb thermograph - charts msg
	g	1938	(1945)	+++		(3)38-45		Instrumentation not at same loc. as #1145 gage

*** Current but original date unknown. ++ Except weekends. +++ Values derived from black bulb thermograms. ooo Coast Guard station taking more than one observation daily - reported on WB Form 610-7 from 1950, WB form 1130A previously. [1] Pub. as Puu Kapele. [2] Pub. in Water-Supply Paper 318. [3] Pub. in PRI Mo. News & Mo. Reports. [4] On file PSO, WB & FRC, Honolulu. [5] 1895-99 data pub. in Lyons & Lydecker vol., "Weather Record for Honolulu & Hawaiian Islands".

Name or Number	State Key No.
Aaka	955
Aakukui	1007
Alexander Reservoir	983
Anahola	1111
Anahola-Lihue	1114
Barking Sands	1023
Bonham ALF	1023
Brydeswood Station	985
Burns Field	926
Camp 1 (Haw'n Can.)	1142
Camp 2 Makaweli (Haw'n Sug.)	966.1
Camp 3 (Kekaha Sug.)	1034
Camp 6 Makaweli (Haw'n Sug.)	953.1
Camp 7 Makaweli (Haw'n Sug.)	950.1
Camp 8 Makaweli (Haw'n Sug.)	952.2
Camp 9 (Lihue Plant.)	1064
Camp 35 (Lihue Plant.)	1104.1
Crossley's	1063
East Lawai	934
EKW 1	1107.3
EKW 1 (120)	1107
EKW 2	1107.2
EKW 3	1094.1
EKW 3 (370)	1094
EKW 4	1097
EKW 5	1061
EKW 6	1061.1
Eleele	927
Field 1 (Kilauea Plant.)	1132
Field 2 (Kilauea Plant.)	1134.4
Field 3 (Olokele Sugar)	962
Field 4-A (Grove Farm)	1016
Field 5 (Haw'n Can.)	1145
Field 7-A (Haw'n Can.)	1144
Field 8 (Kilauea Plant.)	1134.3
Field 9B (Kilauea Plant.)	1134.1
Field 10-2 (Kekaha Sugar)	943
Field 11 (Grove Farm)	1017
Field 11-C (Grove Farm)	1017
Field 11 Lihue (Lihue Plant.)	1015.2
Field 12 (Kilauea Plant.)	1132
Field 13 (Olokele Sugar)	925
Field 14 (Kilauea Plant.)	1134.2
Field 14E (McBryde Sug.)	930.2
Field 18 (Haw'n Can.)	1111.2
Field 18-A (Grove Farm)	1012
Field 19 (Kilauea Plant.)	1136.1
Field 20 (Kilauea Plant.)	1136.2
Field 20 Lihue (Lihue Plant.)	1020.5
Field 21 (Lihue Plant.)	1020.6
Field 22A (Grove Farm)	1011
Field 22D (Kauai Pine)	1000
Field 23 (Kilauea Plant.)	1136
Field 24 (Haw'n Fruit Packers)	1061.2
Field 24 Lihue (Lihue Plant.)	1020.4
Field 25 (Grove Farm)	1006
Field 25 (Kilauea Plant.)	1137.1
Field 27 (Kilauea Plant.)	1140
Field 28 (Kilauea Plant.)	1141.1
Field 30 (Kilauea Plant.)	1143
Field 31 (Grove Farm)	1004
Field 31 (Kilauea Plant.)	1137.2
Field 32 (Grove Farm)	1007.4
Field 32 Lihue (Lihue Plant.)	1020.3
Field 34 (Kauai Pine)	933
Field 35 (Kilauea Plant.)	1141
Field 36 (Olokele Sugar)	966
Field 36 (Kilauea Plant.)	1141
Field 36 Lihue (Lihue Plant.)	1020.2
Field 37 (Olokele Sug.)	981
Field 38A (Lihue Plant.)	1062.2
Field 39 Lihue (Lihue Plant.)	1013.1
Field 39B (Kauai Pine)	966.3
Field 41 (Kilauea Plant.)	1137.3
Field 45 (Kilauea Plant.)	1143.1
Field 52 (Grove Farm)	995
Field 117 (HFP)	1097.1
Field 124 (HFP)	1061.2
Field 242 (Kekaha Sug.)	1024
Field 246-2 (Kekaha Sug.)	1025
Field 317 (Haw'n Fruit Packers)	1097.1
Field 319 (Haw'n Fruit Packers)	1063
Field A (Kekaha Sug.)	1032
Field A-7 (Haw'n Fruit Packers)	1102.2
Field A-107 (HFP)	1102.2
Field G-1 (Kekaha Sug.)	1040
Field H (Kekaha Sug.)	1030
Field K-6 (Haw'n Fruit Packers)	1113.1
Field K-8 (Haw'n Fruit Packers)	1113.1
Field K-21 (Grove Farm)	941.1
Field K-43 (Grove Farm)	936.1
Field L-2 (Haw'n Can.)	1112.1
Field P (Kekaha Sug.)	1070
Field P-24 (Haw'n Can.)	1117.4
Field U (Kekaha Sug.)	1033
Field W-4 (Haw'n Fruit Packers)	1092.2
Field W-6 (Haw'n Fruit Packers)	1092.2
Field Lihue 2 (Haw'n Can.)	1101
Field Lihue 3 (Haw'n Can.)	1102.1
Field Lihue 8 (Haw'n Can.)	1054.3
Field Lihue 9 (Haw'n Can.)	1054.4
Field Lihue 10 (Haw'n Can.)	1054.2
Field Makee 2B (Lihue Plant.)	1102
Field Makee 3C (Lihue Plant.)	1066
Field Makee 8 (Lihue Plant.)	1110
Field Makee 14A (Lihue Plant.)	1114
Gage 4-A (Grove Farm)	1016
Gage 18-A (Grove Farm)	1012
Grove Farm	1021
Halaula	1110
Halenanaho	1006
Hanahanapuni	1055.2
Hanalei	1117.5
Hanalei (Deverill)	1117.1
Hanalei (Haw'n Can.)	1117.4
Hanalei River	1117.2
Hanalei Tunnel	1053
Hanamaulu	1022
Hanepepe	966.3
Hanapepe Valley	990.1
Hiloa-Manawaiopuna Divide	990.2
Homestead	985
Hukipo	945
Hukipo (400)	945.2
Iliiliula Cut-off	1052.1
Iliiliula Intake	1050
Intake, Wainiha Power Canal	1086
Kaala	1003
Kaana	1072
Kaawanui	953
Kahana	990.5
Kahana-Makuone Divide	990.5
Kaholuamanu	1042.1
Kalaheo (McBryde Sug.)	930.1
Kalaheo (McBryde Sug.)	985
Kalaheo Field 3 (Kauai Pine)	928.1
Kalaheo Field K-1 (Kauai Pine)	928
Kalaheo Field W (Kauai Pine)	928.2
Kalaheo Field Office	986
Kalalau	1077
Kalihiwai (Kilauea Sugar)	1131
Kalihiwai (USGS)	1131.2
Kalihiwai Reservoir	1131
Ka Loko Reservoir	1137
Kaluahonu	1005
Kamooloa	996
Kanaha Ditch	1057
Kanalohuluhulu	1075
Kaneha	1092
Kaneha Reservoir	1092
Kaneha Reservoir (800)	1092.3
Kaneha Reservoir Camp	1092.3
Kapaa	1107.1
Kapaa (HFP)	1100
Kapaa Stables	1104
Kapahi	1100
Kapahi (McKee)	1100.1
Kapaka	1131.1
Kapehuala	1053.2
Kauai Variety Station	1062.1
Kaunalewa	942
Kealia (PRI)	1101
Kealia	1112
Kealia (USGS)	1095.1
Keanakua	1044
Kekaha	944
Kekaha (USGS)	954.1
Kilauea	1134
Kilauea Field 3 (Kilauea Plant.)	1132.1
Kilauea Field 17 (Kilauea Plant.)	1135
Kilauea Pt.	1133
Kilohana	1084
Kilohana Alakai	1084
Kilohana (Lihue)	1015.1
Kipu 4	1007.1
Kipu 11	1007.2
Kipu Kai	1007.3
Kipu Stable	1007.1
Kitano	1037.1
Kitano Reservoir	1037.1
Knudsen	1000.1
Kohua Ridge	1085
Kokee	1075.1
Kokee Ranger Station	1075
Kokee-Moir	1080.1
Kolo	1033
Koloa	936
Koloa (200)	936.3
Koloa (Kukuiula)	935
Koloa Ditch	996.1
Koloa Field 52 (Grove Farm)	995
Koloa Field 0 (Kauai Pine)	936.2
Koloa Gap	1000
Koloa Mauka	994
Koloa Mill	937
Koloko	1137
Koloko Reservoir	1137
Koolau	1141
Kuewa	1002
Kukaua	1006.1
Kukuiula	935
Kumaloa Ditch	996
Lawai (Gov't Road)	931.2
Lawai Beach	931.1
Lehumakanoi	1077.1
Lepeuli	1143
Lihue	1020
Lihue Airport	1020.1
Lihue Ditch	1054.1
Lihue, Kukaua	1006.1
Lihue Variety Station	1062.1
Limaloa	1027
Lot 143	1067
Lower Powerhouse	1054
M & M	1001
Mahaulepu	941
Makaha	1071
Makahuena Pt.	940.1
Makaweli	965
Malumalu	1017
Mana	1026
Mana Pump	1026
Marsh	990
Matsumura	1094
McBryde Residence	985.1

Name or Number	State Key No.
McBryde Variety Station	986.1
Mimino	1095
Miyoshi	1097
Mohihi Crossing	1083
Mohihi-Koaie Divide	1085
Mohihi Upper Crossing	1083
Moloaa	1145
Moloaa Camp 1 (Haw'n Can.)	1142
Moloaa Field 7-A (Haw'n Can.)	1144
Molokoa	1015
Morita	1136
Mount Nonou	1063.1
Mt. Waialeale	1047
New Office (Grove Farm)	1013
New Powerhouse	1052
Newlun's House	1095.1
Niu Ridge	1035
Nonopahu 5	952
Nonopahu 6	954
Nonopahu Reservoir	952
North Wailua Ditch	1051
North Fork Wailua	1055
North Wailua	1052.2
North Wailua River	1055
North Wailua Intake	1051
Office (Kilauea Plant.)	1134
Office (Olokele Sug.)	965
Old Camp	1102
Old Office (Grove Farm)	1021
Old Stable	1092.1
Olokele	990.3
Olokele Ditch	990.3
Olokele Mauka	990.4
Omao Field M (Kauai Pine)	992
Paanau (McBryde)	935.1
Paanau	933
Pakala	951
Pali Trail	945.1
Papuaa	997
Papuaa Reservoir	997
Paukahana	1080
Pilaa	1141
PRI Kealia	1112.1
Pohakupili	1053.3
Pokii Ridge	1040.1
Port Allen	926
Powerhouse Camp 9 (Haw'n Sugar)	952.1
Powerhouse Wainiha	1115
Princeville	1117
Princeville Plantation	1117
Princeville Ranch	1117
Puehu Ridge	1040
Pueo	1131.3
Puhi	1013
Puu Eu	1131.3
Puuhi	940
Puu Hinahina	1072
Puu Ka Ele Reservoir	1135
Puu Kapele	1072
Puulani	966.2
Puu Loa	1072.2
Puu Lua	1072.1
Puuohewa	993
Puu Opae	1035
Puu Opae Garden	1037
Reservoir 5 (Grove Farm)	1011
Reservoir 6 (Grove Farm)	1004
Saki Mana	1031
Sanborn's House	1117
Sanchez	1067
Section 4B (Lihue Plant.)	1111.1
Section 5A (Lihue Plant.)	1111.1
Section 9 (Lihue Plant.)	1113
Stable Camp	1055.1
Stable Storm Ditch	1055.1
Station 4 (Lihue Plant.)	1015.2
Station 5A (Lihue Plant.)	1111.1
Station 9 (Lihue Plant.)	1113
Station 20 (Lihue Plant.)	1020.5
Station 24 (Lihue Plant.)	1020.4
Station 30A (Lihue Plant.)	1020.3
Station 35 (Lihue Plant.)	1104.1
Station 36 (Lihue Plant.)	1020.2
Station 39 (Lihue Plant.)	1013.1
Summit Camp	1053.1
Summit Camp Hanalei	1053.1
Takabayashi	1107.3
Upper Kapahi Reservoir	1094.1
Wahiawa	930
Wahiawa Mountain	990
Waiahi Lower	1054
Waiahi Upper	1052
Waiakoali	1082
Waiakoali Camp	1082
Waialae	1042
Waiawa	943
Waikala	950
Waikalua	1140
Wailua	1063
Wailua Falls Stable	1062
Wailua Field 219 (HFP)	1063
Wailua Intake	1061.1
Wailua Kai	1065
Wailua Kai 2	1066
Wailua Reservoir	1061
Wailua Uka	1062
Waimea	947
Wainiha Intake	1086
Waioli	1117.3
Waioli (Johnson)	1117.6
Wai Tah	1002
West Lawai	931
Wilcox Ditch	994

APPENDIX I

Supplementary Tables for the Islands of Kahoolawe & Niihau

ISLAND: KAHOOLAWE[1] TABLE ONE

State Key No.	USWB Index No.	Station Name or Number	Maintained By	Geographic Coordinates Latitude ° '	Longitude ° '	Elev. (ft.)	Year Estab-lished	Year Discon-tinued	Frequency of Read-ing	Location of Data	Location of Summaries	Other Names Relocations Remarks
499		Camp	Eben Low	(20 35.5)	(156 36.5)	80	1904	1917	Unknown		[2](2)	Kuheia; Sta. 50; data msg 1906-10 & 1916
499.1		Reservoir	" "	(20 35.5)	(156 34.2)	500	1911	1917	"		[2](2)	Hakirama; Sta. 51; data msg 1916
499.2		Kahoolawe	C.C. Conradt	20 35	156 36	1420	1905	1905	Daily	(1)		
499.3		Moaula	Eben Low	(20 33.3)	(156 35.2)	1100	1911	1917	Unknown		[2](2)	Sta. 52; data msg 1916
499.4		Kealialalo	" "	(20 32.5)	(156 38.6)	600	1911	1917	"		[2](2)	Sta. 53; data msg 1916
499.5		Kahoolawe (10)**	C.C. Conradt	(20 36)	(156 36)	10						Loc. doubtful

Key to symbols for columns headed Location of Data and Location of Summaries: (1) USWB-published; (2) USWB-not published.

** Non-rainfall instrumentation only - see same key number in Table Two. [1] In "Geology and Ground-Water Resources of Lanai and Kahoolawe, Hawaii", Bulletin 6 (Div. of Hydrography, T.H., 1940) there is evidence that rainfall observations, on at least an intermittent basis, continued from 1918 through at least 1938 at the four stations 50-53 but that the records have not been preserved (see map on Page 120 and text on Page 124). [2] Annual totals only 1912-15.

ISLAND: KAHOOLAWE TABLE TWO

State Key No.	Element(s) Observed	Year Estab-lished	Year Discon-tinued	Frequency of Reading	Location of Tabular Data	Location of Summaries	Location of Charts	Instrumentation, Relocations, Remarks
499.5	a	1905	1905	Daily	(1)			

Key to symbols for column headed Element(s) Observed: a - air temperature (maximum & minimum thermometers unless otherwise noted).
See Table One for key to number symbols in column headed Location of Tabular Data.

ISLAND: NIIHAU TABLE ONE

State Key No.	USWB Index No.	Station Name or Number	Maintained By	Geographic Coordinates Latitude ° '	Longitude ° '	Elev. (ft.)	Year Estab-lished	Year Discon-tinued	Frequency of Read-ing	Location of Data	Location of Summaries	Other Names Relocations Remarks
1150		Kiekie	Niihau Ranch	21 53.1	160 13.4	55	(1919)		Unknown	[1](6)	[2](3)19-25	

Key to symbols for columns headed Location of Data and Location of Summaries: (3) HWA; (6) on file with observer (company, agency, individual, etc.) maintaining and/or reading instrument.

[1] Probably not available for entire period of record. [2] Also pub. in "Geology and Ground-Water Resources of the Island of Niihau, Hawaii", Bulletin 12 (Div. of Hydrography, T.H., 1947).

APPENDIX II

Full Names of Observers Abbreviated in Tables

Listing in Table One	Full Name
Bd of A. & F.	Board of Agriculture & Forestry
B.W.S.	Board of Water Supply
C.P.C.	California Packing Corporation
F.A.A.	Federal Aviation Agency
F.R.C.	Federal Records Center
H.A.E.S.	Hawaii Agricultural Experiment Station
Haw'n Ag.	Hawaiian Agricultural Company
H.A.L.	Hawaiian Airlines
H. C. & S.	Hawaiian Commercial & Sugar Company
Haw'n Pine	Hawaiian Pineapple Company
H.S.P.A.	Hawaiian Sugar Planter' Association, Experiment Station
H.W.A.	Hawaii Water Authority
Kona Exp. Sta.	Kona Experimental Station, University of Hawaii
N.W.R.C.	National Weather Records Center
P.S.O.	Pacific Supervisory Office, U.S. Weather Bureau
P.R.I.	Pineapple Research Institute
U.S.C.G.	U.S. Coast Guard
U.S.D.A. Fruit Fly Lab.	U.S. Dept. of Agriculture Fruit Fly Laboratory
U.S.G.S.	U.S. Geological Survey
U.S.M.C.	U.S. Marine Corps
U.S.W.B.	U.S. Weather Bureau

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