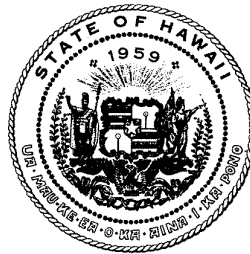


**PAN EVAPORATION:
STATE OF HAWAI'I,
1894-1983**

Report R74



**State of Hawaii
DEPARTMENT OF LAND AND NATURAL RESOURCES
Division of Water and Land Development**

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Report R74

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State of Hawaii
DEPARTMENT OF LAND AND NATURAL RESOURCES
Division of Water and Land Development

Honolulu, Hawaii
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ABSTRACT

Pan evaporation measurements in Hawai'i began as early as 1894 and eventually included intermittent observations at over 200 sites, the majority with stainless steel Class A pans set on 5 ft high platforms. Sites were concentrated in the dry lowland irrigated areas but shielded evaporimeter transects extended measurements into high rainfall areas.

Evaporation at sites with 20-yr records had a nearly normal distribution for which the standard deviation decreased from nearly 30% of the mean for daily, to 15% for monthly, and to 7% of the mean of annual values.

Empirical relationships between evaporation and temperature or rainfall had only limited applicability.

The pattern of annual evaporation for each island differed from the equilibrium value of 80 in. over the ocean as patterns of cloudiness, sunlight, and rainfall changed in response to wind flow over the island topography. Beneath the tradewind orographic clouds, evaporation was 30 to 40% less than the oceanic rate, while in the dry leeward areas evaporation was 30 to 40% more than oceanic, with summer rates greater than 12 in./mo. In the dry, sunny, and windy sites above the 6000 ft tradewind inversion level, evaporation again increased to equal surface rates.

KEYWORDS: pan evaporation, evaporation pans, evaporation rate, evaporimeters, net radiation, temperature, wind; Class A pans, sunlight, Hawaii, Maui, Molokai, Lanai, Oahu, Kauai

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INTRODUCTION

Although pan evaporation was first measured in Hawai'i as early as 1894 (Hawaii Weather Bureau 1897) and the USGS had several pan evaporation sites in 1910 to 1911, the first significant pan observations were just after World War I when Class A pan evaporation sites were established at Maunawili Ranch (Sta. No. 787.00) and Upper Hoaeae (Sta. No. 813.00), with the data reported in the U.S. Weather Bureau Climatological Data. Several additional stations were set up during the 1920 to 1930 period, but the majority of the pan evaporation measurements were begun in the mid- to later 1950s after World War II to aid in crop irrigation. These sites were concentrated in the dry leeward coastal areas where sugarcane was grown.

Pan evaporation has been the principal measurement used in Hawai'i to assess the amount of water use by crops. Assessment of the hydrologic balance requires measurement and/or calculation of evaporation from water and soil surfaces, as well as evapotranspiration from plants. Agronomic crop production often can be directly related to the amount of transpiration, although the water use efficiency of individual crops may be unique and can be changed by agricultural practices (Winter 1981). Reservoir and lake evaporation (Roberts and Stall 1966; Winter 1981) and potential evapotranspiration from crops can be estimated with reasonable accuracy from evaporation pans with the use of appropriate predetermined constants (Doorenbos and Pruitt 1975; Stewart and Hagan 1969). Many agroclimatic procedures for water-budget effects on crop yields require open-water evaporation as an index (Stanhill 1962; Linacre and Till 1969).

The pattern of evaporation over the Hawaiian Islands differs from that over the open ocean, just as the pattern of rainfall and cloudiness is changed by the island topography. Computed evaporation from the ocean near Hawai'i peaked in April near 0.22 in./day with an extended period near 0.16 in./day from July to January, which gave an annual rate of about 0.18 in./day or 65 in./yr (Seckel 1962, 1970). Evaporation over the open ocean must approach the equilibrium postulated by the Priestly-Taylor approximation of the radiant energy portion of the combination form of the Penman equation (Priestly and Taylor 1972),

$$LE_{\text{equilib}} = \alpha [s / (s + \gamma)] (R - G)$$

where α is an empirical constant about 1.26, s the change of the saturation

vapor pressure with temperature, γ the psychrometric constant, so that $[s/(s + \gamma)] =$ sea level and $75^\circ\text{F} = 0.61$, R the net radiation, and G the surface storage of heat. For Hawai'i, with an average sunlight of $500 \text{ cal/cm}^2/\text{day}$ (Ekern 1965a; Ekern and Yoshihara 1977), an ocean albedo of 0.05, a net long-wave radiation balance of $100 \text{ cal/cm}^2/\text{day}$, and no net storage, equilibrium evaporation would be 0.19 in./day or 71.0 in./yr , in close agreement with the previous calculations based on vapor deficit and transfer coefficients. With an ocean/pan coefficient of 0.9, and evaporation from sea water 0.98 that of fresh water (Turk 1970), the anticipated Class A pan evaporation over the open ocean adjacent to Hawai'i would be 79 in./yr . This evaporation corresponds to an estimated 18 in. of annual rainfall over the ocean (Reed 1980).

Most watersheds in Hawai'i are characterized by the relatively small fraction of the annual rainfall which leaves the basin as stream flow and, consequently, the large fraction of evaporation. On central O'ahu, runoff is about 25% and evapotranspiration 30% (45 in.) of the 150 in. of annual rainfall for the upper Kīpapa Stream basin (Mink 1962; Ekern 1983). For the Honolulu area, runoff was estimated in an early study as about 20% and evapotranspiration 50% (52 in.) of the 104 in. of annual rainfall (Wentworth 1951); and recalculated for Honolulu, runoff was 20% and evaporation 40% (24 in.) of 65 in. of annual rainfall (Giambelluca 1983). Detailed evaluation of the Pearl Harbor basin indicates 10% runoff and 39% (33 in.) evaporation of the combined 60 in. of rainfall and 25 in. of irrigation (Giambelluca 1983). Clearly, evapotranspiration is a major component of the hydrologic balance of the island, and the value differs from that over the open ocean.

Crop dry matter production in Hawai'i depends on the amount of water available from rainfall and irrigation. Sugarcane tonnage is a linear function of effective water application (irrigation + rainfall), while relative cane yield (actual/maximum experimental yield) is also a linear function of the relative water application (effective application/pan evaporation) for a series of irrigation studies (Jones 1980). Californiagrass dry matter production under heavy irrigation with secondary treated domestic sewage is also highly correlated with water use as well as linearly related to the amount of nitrogen supplied by that effluent (Handley and Ekern 1981, 1984).

Pineapple cultivated with both plastic and trash mulch uses one-tenth the water required for conventional grass vegetation (Ekern 1965c, 1967). Direct evaporation from soil drops to as little as one-fourth the potential rate as

capillary conduction of water to the soil surface fails to keep pace with demand and the plane of vaporization retreats within the soil (Ekern 1966a). Grass sod evapotranspiration cannot maintain the initial high rates (115% Class A pan evaporation), but decreases progressively as the soil water stress increases (Ekern 1966b, 1983). Evapotranspiration under sprinkler irrigation can exceed by 15% that when only partial surface wetting occurs as with drip irrigation of sugarcane (Ekern 1977).

Thus, many basic difficulties face the prediction of evapotranspiration. Direct measurement of all components of the water budget for entire watersheds is almost impossible, but measurements of the components of the water budget for artificial watersheds, lysimeters, or other evaporimeters can in turn be calibrated against water use of an actual watershed. Such evaporimeters range from large lysimeters (Ekern 1977) through pans (Phene and Campbell 1975; Nordenson and Baker 1962; Davis 1963; Sims and Jackson 1971; Ekern 1965b; Van Haveren and Farmer 1971) to atmometers (Stanhill 1962; Carder 1960, 1968; Dilley and Helmond 1973; Ekern 1983).

Many of these devices require an independent measure of rainfall. Errors which result from rain gage size, exposure, and elevation can often be about 5 to 10% of the rainfall and obscure the evaporation measurement (Kalma et al. 1969; Larson and Peck 1974; Helvey and Patrick 1983). A 10% error in evaporation measurements is usual when various methods of calculation and lysimetric measurements are compared (Grant 1975; Camillo and Gurney 1984).

The accuracy required in the evapotranspiration value has been debated when groundwater recharge is estimated as the difference among rainfall, runoff, irrigation, and evapotranspiration (Wentworth 1951). For the Honolulu basin, a 10% error in evapotranspiration would be about 5 in. of the 50 in. of evapotranspiration, or 17% of the 30 in. of recharge (Wentworth 1951), or again 10% or 2.6 in. of the 26 in. of evapotranspiration and recharge (Giambelluca 1983). For the Pearl Harbor basin, 3.4 in. would be 11% of the 30 in. of recharge from the 60 in. of rainfall (Giambelluca 1983). But for the high rainfall area of Kipapa where evaporation is less and recharge greater, the 4.5-in. error in evaporation would be but 7% of the 67.5 in. of recharge (Ekern 1983).

The tolerable error in the evaporation measurement and calculation depends on whether the intent is to describe the remnant recharge from the high rainfall watersheds or the irrigation needs for the high evaporation crop

sites in the low rainfall areas.

This report will review the pan evaporation measurements available for Hawai'i; translate auxiliary evaporimeter measurements into equivalent pan values; extend the measured pan evaporation data by empirical relationships with sunlight, rainfall, and elevation; and map the tabulated data for the major islands.

DIRECT MEASUREMENTS

Pan Evaporation

Many different types of evaporation pans have been used and although the absolute values are not identical, the high correlation among different diameter pan evaporimeters fostered the use of a wide variety of pan sizes and depths in evaporation studies (Davis 1963; Van Haveren and Farmer 1971; Davenport 1967a, b; Iruthayaraj and Morachan 1978; Sims and Jackson 1971; Hounam 1961; Kanehiro and Peterson 1977; Yu and Brutsaert 1967). The standard Class A pan has been used most frequently in Hawai'i (Division of Water and Land Development [DOWALD] 1961; Robinson, Campbell, and Chang 1963).

The standard Class A evaporation pan has been described in handbooks by Doorenbos and Pruitt (1975, p. 51) as follows.

The [C]lass A evaporation pan is circular, 121 cm (47.5 in.) in diameter and 25.5 cm (10 in.) deep. It is made of galvanized iron (22 gage) or monel metal (0.8 mm). The pan is mounted on a wooden open frame platform with its bottom 15 cm above groundlevel. The soil is built up to within 5 cm¹ of the bottom of the pan. The pan must be level. It is filled with water 5 cm below the rim, and [the] water level should not drop to more than 7.5 cm below the rim. Water is regularly renewed to eliminate extreme turbidity. The pan if galvanized is painted annually with aluminum paint.

Brakensiek, Osborn, and Rawls (1979, pp. 230, 231) describe the measurement of water in the pan and discuss site conditions as follows.

A micrometer hook gage is used with a stilling well to measure the level of water in the pan. The brass stilling well provides an undisturbed water surface around the hook gage and a support for the gage. A small hole in the base allows water to seep into or out of the brass cylinder. Leveling screws and lock nuts are provided on the triangular base. The stilling well is located in the pan about 1 foot (30.5 cm) from the north edge.

¹The National Weather Service Handbook (NOAA 1972) prescribes 1.27 cm (0.5 in.) rather than 5 cm.

The hook gage consists of a movable graduated stem with a vernier. The graduated stem is fitted on one end with a hook, the point of which touches the water surface when [the] water level is measured.

When in operation, the water level in Class A evaporation pans should be maintained at 2 inches (5.08 cm) below the rim, plus or minus 1 inch (2.54 cm). Water should be added or removed from the pan to maintain this level. This should be done at the time of observation. The water level may be lowered below the usual limit when heavy rainfall is forecast, thus avoiding loss of record due to pan overflow.

Hook-gage readings of the water level in the stilling well should be made daily. The micrometer hook-gage point is lowered into the well until it is below the surface of the water. The adjusting nut on the hook gage is then turned slowly, raising the point until it just pierces the water surface. The gage is removed from the well and the scale is read and recorded. Differences in readings for consecutive days give the daily evaporation amounts. When water is added or removed from the pan, hook-gage readings must be made before and after the water level change. Amounts added or removed are thus considered in computing evaporation. Any rainfall between observations should be measured with a nearby standard gage and should be used in computing pan evaporation.

The site for a Class A evaporation pan should be fairly level and sodded except in arid regions where maintenance of an artificial sod cover would induce unnatural modification of climatic conditions. Obstructions should not be closer to the pan than four times the height of the object. Weeds and grass should be mowed to keep growth below the level of the pan. Sites on the downwind side of large swamps or reservoirs should be avoided. Evaporation pans should not be located near large paved areas such as parking lots or airport runways. The site of the evaporation pan should be fenced to prevent animals from drinking from the pan, and the water surface should be kept free of shadows. When pans are installed over water or sunk in the ground, similar restrictions apply.

Automation of pan evaporation recording has acquired renewed value where drip irrigation requires frequent automatic measurement to replace evapotranspiration losses in high-frequency irrigation systems (Phene and Campbell 1975). A shallow constant level pan evaporimeter was designed for rainy areas in Hawai'i with continuous record from a float recorder on the water supply tank (van't Woudt 1960, 1963) with comparable evaporation rate and greater precision during rainy periods. The role of inaccurate rainfall measurements and the change in heat budget with rainfall makes it essential that pan evaporation be shielded from rain if accurate evaporation values are to be obtained (Bloemen 1978).

Modification into a constant level recording pan reduced evaporation to 0.94 that of an adjacent standard Class A pan over a period of about a year (Campbell, Chang, and Cox 1959; Ekern 1960). The maintenance of a constant

water level by continuous pumping from a reservoir whose stage is recorded, allows continuous record of the evaporation rates and does not require independent measure of rainfall, although loss by raindrop splash still remains a source of error in the measurements (Richards and Stumpf 1966).

The galvanized pan has often been painted or changed to monel or stainless steel to offset corrosion. Monel reduces evaporation 1% below that of a shiny new galvanized pan while stainless steel or aluminum paint reduces evaporation 8% below that for a darkened or black painted galvanized pan, and white paint reduces evaporation as much as 22% below that for a standard galvanized pan (Young 1947; Nordenson and Baker 1962). For shallow pans, white paint causes an even greater reduction to about 0.6 that of a black painted pan only 2 in. deep (Yu and Brutsaert 1967). The National Weather Service mandated a change to a monel pan in 1962. Many of the galvanized pans used in the sugarcane studies were painted aluminum and stainless steel pans were used in most recent studies. Evaporation measured from aluminum-painted pans and from steel pans is increased by a factor of 1.08 for comparison with a standard galvanized or monel pan for this study.

The Class A pan gains much of its heat through the bottom and side, and an insulated pan has 30% less evaporation than a standard pan (Wartena and Borghorst 1960; Riley 1966). The empirical psychrometric constant, γ , for a Class A pan is double, and for an insulated shallow pan, about 10% greater than that for a wet bulb psychrometer (Yu and Brutsaert 1967). The theoretical constant from a wet bulb thermometer is defined as

$$\gamma = C_p P/e L$$

where C_p = specific heat of air at constant pressure, P = atmospheric pressure, e = ratio of density of water vapor to that of dry air, L = latent heat of vaporization of water (Brunt 1941; Storr and den Hartog 1975; Stigter 1976; Ripley 1976).

The Bowen ratio of an evaporating surface is convective exchange of heat divided by vapor exchange of heat and equals to $\gamma(T_s - T_a)/(e_s - e_a)$, where T_s is the surface temperature and T_a the temperature of the air stream, and e_s the saturation vapor pressure at the surface temperature, and e_a the vapor pressure of the air stream. Since the relative convective exchange decreases with air pressure, the relative vapor exchange must increase with elevation as the value of γ decreases. The value of γ is principally determined by air pressure and, to a lesser degree, by temperature and to a still lesser degree

by relative humidity (Storr and den Hartog 1975). This difference in the empirical value for γ derived from the Bowen ratio makes problematic the ratios between pans of different sizes and depths with different rate of heat exchange through the pan side and bottom, although the evaporation rates between pans may be highly correlated (Davis 1963).

Empirical relationships between evaporation and area of the water surface finds evaporation a function of $(\text{area}^{\frac{1}{2}})^{-0.10}$ for large lakes, $(\text{area}^{\frac{1}{2}})^{-0.132}$ for smaller pans, and $(\text{area}^{\frac{1}{2}})^{-0.143}$ to -0.125 (Brutsaert and Yeh 1970). Yet the uncertainties in the corrections among pans with different diameters and different depths are such that no correction is recommended for nonstandard pans in this study.

Evaporation is reduced 9% when the water level is kept at 4.5 in., rather than the recommended 2 to 3 in. below the pan rim (Nordenson and Baker 1962). Although it is recognized that pans read weekly often have reduced evaporation when the water level is low, no attempt is made to correct the value for the water level.

For protection against animals and to help offset the effect of exposure on a pan in a small enclosure surrounded by crops, such as 15 ft high sugarcane, many pans are placed on platforms 5 ft above the soil surface. At the Hawaiian Sugar Planters' Association (HSPA) Kunia Substation, for the years 1964 through 1981, pan evaporation at 5 ft was 74.22 in./yr, while evaporation from a pan at 1 ft was 66.46 in./yr (Ekern 1977). All elevated Class A pan evaporation values are adjusted in this study to reduce the measurement to an equivalent surface pan for the map analyses.

Wire screen over the pan to prevent animals from drinking shades the pan and reduces wind flow so that a 2 in. mesh screen reduces evaporation an average of 12.8% in the humid southeast United States (Campbell and Phene 1976). In Hawai'i, such a screen reduces evaporation from a shallow (1 in. deep) pan about 5% (van't Woudt 1963). Pans used by Oahu Sugar Company on their cane fields on O'ahu have a protective screen around the pan rim but no measurement was made on the effect on evaporation. The screened pan evaporation is increased by a factor of 1.05 for comparison with a standard unscreened pan in this evaluation for the map analyses.

When the recommended well-watered grass sod does not surround the pan site, advection of heat from the dry surroundings can increase evaporation rates as much as 50% and magnify the differences among pans of different sizes

(Dale and Scheeringa 1977). Pan evaporation rates within sugarcane fetch must fluctuate with the moisture status of the upwind cane, particularly during the ripening period when irrigation is stopped and during the replanting period when evapotranspiration is reduced and the shelter effect of the pan greatly changed (Ekern 1977). No systematic correction is made for this effect on pan evaporation records.

Pan evaporation at the Pineapple Research Institute (PRI) Waipio site had a linear response to wind (Ekern 1960, 1965b). Although a power relationship could also be made, many empirical evaporation formulas for ponds and lakes use a linear wind function (Brutsaert and Yeh 1970). The original Perman combination of the radiation and aerodynamic formulas also uses a linear wind function (Skidmore, Jacobs, and Powers 1969).

The shelterbelt action of buildings or trees can reduce pan evaporation by as much as 35% (Carder 1968), but this effect can be reduced to less than 10% if little or no positive advection occurs and the radiant budget dominates the energy supply for evaporation (Lomas and Schlesinger 1971; Blundell 1974; Hanson and Rauzi 1977). The wind reduction in the shelter lee has a much greater effect on atmometers, such as the Piche, where the aerodynamic term dominates the evaporation, and was so reported (Lomas and Schlesinger 1971), but the other atmometers used in the lee of porous windbreaks indicate a 40% reduction in evaporation by these barriers, greater and more extensive than that for a solid barrier (Skidmore and Hagen 1970) under positive advection.

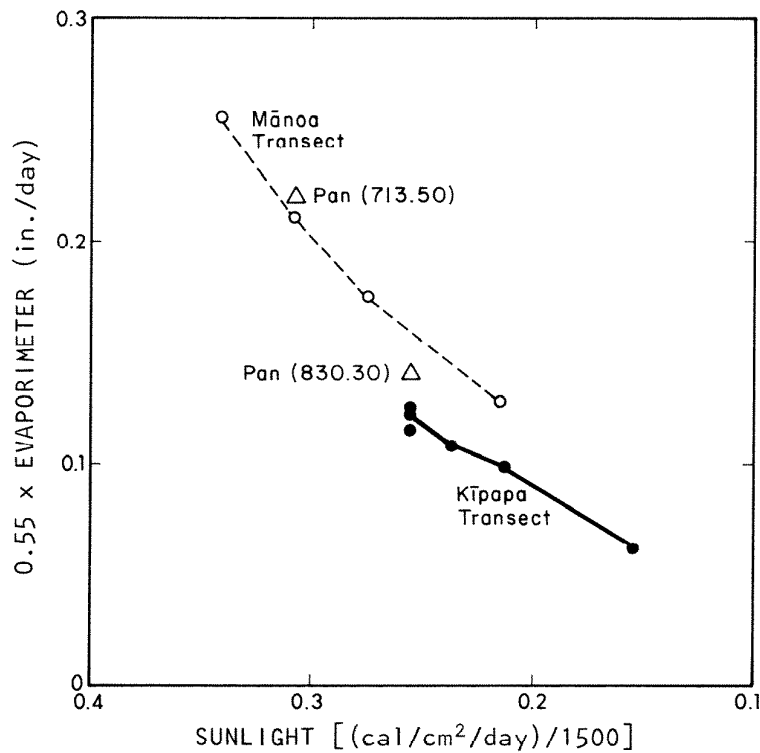
Some index of wind velocity might be used to normalize the pan evaporation measurements from different years. Possible indexes are anomalies in the northeast tradewind area and wind stress (a function of v^2) reported for the northeast trades since 1949 by Wyrcki and Myers (1976), and since 1976 by Sadler, Ramage and Hori (1982) and Sadler and Kilonsky (1981). In general the wind stress was below normal from 1948 to 1955 and above normal after 1955 except for the El Niño incursion.

However the Hawaiian Islands mechanically distort the trade winds and create many local departures from the average tradewind stream (Ramage 1978, 1979). The suggested streamlines of wind flow for O'ahu (Noguchi 1979), Maui (Daniels and Schroeder 1978), and Hawai'i (Mendonca 1969; Mendonca and Iwaoka 1969; Ekern and Garrett 1979; Schroeder 1981; Ekern and Becker 1982) are so complex that no adequate index is available to use for the different leeward

and windward pan sites; thus, no correction is made for wind in normalizing the pan evaporation records.

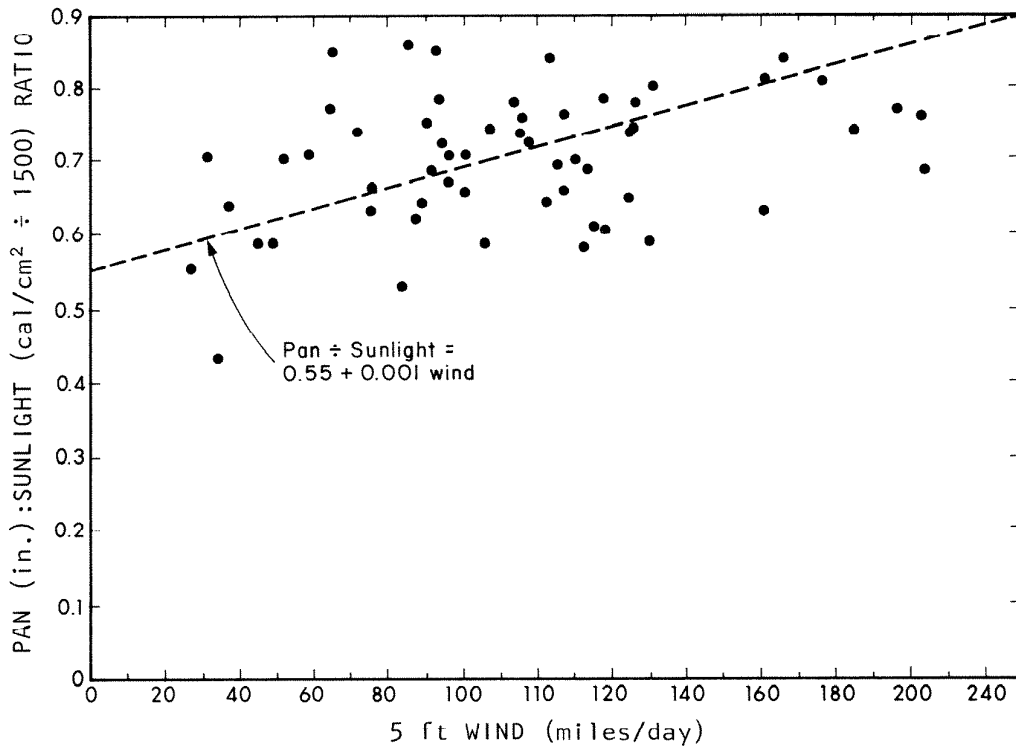
Island topography controls to a large extent the sunlight patterns because orographically induced clouds and rainfall are dominant features of the climate (Blumenstock and Price 1961; Ekern 1978). Sunlight and consequent net radiation so govern evaporation, particularly in the high rainfall areas, that an index of sunlight must be developed to normalize the miscellaneous years of pan evaporation record (Fig. 1). The sensitivity to wind velocity was such that once wind exceeded 40 miles/day, further doubling of the wind increases by only 10% of the fraction of sunlight used in evaporation for Wahiawa and a four-fold increase from a 55 to 200 miles/day wind run only 30% for the Mililani site (Ekern 1960) (Fig. 2).

Measured sunlight values for Honolulu since 1921 are about 3% below normal during the 1930s, remain about 5% above normal from the mid-1950s to



NOTE: Latent heat for 1 in. evaporation = approx. 1500 cal/in.

Figure 1. Evaporation along Mānoa and Kīpapa transects as function of sunlight, O'ahu, 1981



NOTE: Latent heat for 1 in. evaporation=approx. 1500 cal/in.

Figure 2. Fraction of sunlight used in monthly pan evaporation as function of wind, Mauka Campus (Sta. 713.50), Mānoa Valley, O'ahu, 1980-1984

mid-1960s, then decrease progressively to about 5% below normal during the 1970s, and have the lowest value of record, 13% below normal in 1982. Prior to 1932, only hours of bright sunlight were recorded. Hours of bright sunlight for the PRI Waipio site were used to evaluate the relationship to the Angot value and gave the equation (Ekern 1960),

$$\text{sunlight/Angot} = 0.2 + 0.62 n/N .$$

This relationship is used to normalize pan evaporation measurements prior to 1932 and the measured energy values used after 1932 (Table 1).

Because the vapor deficit, which governs evaporation rate, depends exponentially on surface temperature, and the temperature deficit, which governs sensible heat loss, depends linearly on surface temperature, small changes in the surface temperature can balance large changes in net radiation and heating. Tropical water surface temperatures are buffered against large variation by evaporation (Priestley 1966; Newell 1979; Hoffert et al. 1983). Tropical

TABLE 1. SUNLIGHT NORMALIZATION FACTORS BASED ON MEASURED SUNLIGHT AND HOURS OF BRIGHT SUNLIGHT, HONOLULU, HAWAI'I

Year	Sunlight Hour	Eppley	Year	Sunlight Hour	Eppley
1920	0.97	....	1953	1.02	1.05
1921	0.89	....	1954	1.00	1.05
1922	0.89	....	1955	0.93	1.06
1923	0.85	....	1956	1.00	1.07
1924	0.91	....	1957	1.03	1.04
1925	0.92	....	1958	0.99	1.05
1926	0.96	....	1959	1.04	1.04
1927	0.90	....	1960	1.05	1.05
1928	0.97	....	1961	1.13	1.05
1929	0.98	....	1962	1.02	1.08
1930	0.99	....	1963	0.95	1.03
1931	0.96	....	1964	0.94	1.05
1932	0.91	0.96	1965	1.06	1.01
1933	0.90	0.94	1966	1.00	1.05
1934	1.00	0.98	1967	0.89	1.01
1935	0.94	0.95	1968	0.92	0.97
1936	0.93	0.92	1969	0.99	0.95
1937	0.94	0.92	1970	1.03	1.00
1938	1.00	0.97	1971	1.02	1.00
1939	0.99	0.94	1972	0.96	0.95
1940	1.07	0.95	1973	0.94	0.94
1941	1.06	1.01	1974	0.92	0.91
1942	1.04	1.01	1975	0.93	0.92
1943	1.07	1.05	1976	0.91	0.97
1944	1.04	1.03	1977	0.99	0.97
1945	1.02	1.00	1978	1.00	0.95
1946	1.00	0.99	1979	0.98	0.94
1947	1.04	1.00	1980	0.99	0.93
1948	0.98	1.04	1981	1.03	0.99
1949	0.97	1.05	1982	0.87	0.87
1950	1.00	1.00	1983	0.95	0.93
1951	0.95	1.02	1984	....	0.92
1952	1.04	1.06			

sea surface and freely evaporating leaf temperatures cannot go above about 86°F because at higher temperature loss of energy by evaporation exceeds the energy input. Ocean temperatures near Hawai'i of about 77°F are just below this critical maximum value. Pan water temperatures for Hawai'i average about 75°F near sea level, with maximum values of about the critical 86°F. Pan water temperatures have not been measured for most pans in Hawai'i, but are reported for the National Weather Service stations.

Other Evaporimeters

The Piche evaporimeter, which measures water loss from a 1.25 in. diameter white filter paper, has been used to a very limited extent in Hawai'i. This instrument measures the wind term of the Penman combination evaporation equation since it responds primarily to the vapor deficit and wind velocity (Stanhill 1962), and, is not a satisfactory instrument for measuring the evaporation potential of the air.

The Livingston atmometer measures water loss from a hollow porous ceramic sphere about 2 in. in diameter with one-eighth inch thick walls. Both black and white Livingston atmometers have been used in Hawai'i (Ekern 1965b; Noffsinger 1961). Sunlight and pan evaporation are poorly correlated even with the difference between the black and white instruments, in contrast to reported correlation r^2 values of nearly 0.8 from other areas (Halkias, Veihmeyer, and Hendrickson 1955; Ekern 1965a; and Jones 1980). No extensive data are available for Livingston atmometer studies in Hawai'i.

The Bellani plate atmometer measures water loss from a flat porous ceramic surface 3 in. in diameter. From black plates, correlation with Class A pan evaporation in Hawai'i have an r^2 value of 0.735 (Ekern 1965b). The Bellani black plate correlates with the meteorological elements of sunlight, temperature, wind, and vapor deficit much like a Class A pan (Pelton 1963), although the relative importance of wind is slightly greater for the pan than for the atmometer, and the simple correlation between the plate and the pan has an r^2 value of 0.84. The Bellani plate has also been highly correlated with measured evapotranspiration of wheat and grass, with absolute values of water use 0.88 that of the plate when the crop surface is frequently wetted and water is not limiting (Carder 1968). Flat, porous sponge atmometers with the surface shaded and unshaded are also shown to have an r^2 correlation of 0.9 with net radiation and give accurate estimates of potential evapotrans-

piration in an Australian study (Dilley and Helmond 1973). No extensive data with Bellani plates exist for Hawai'i.

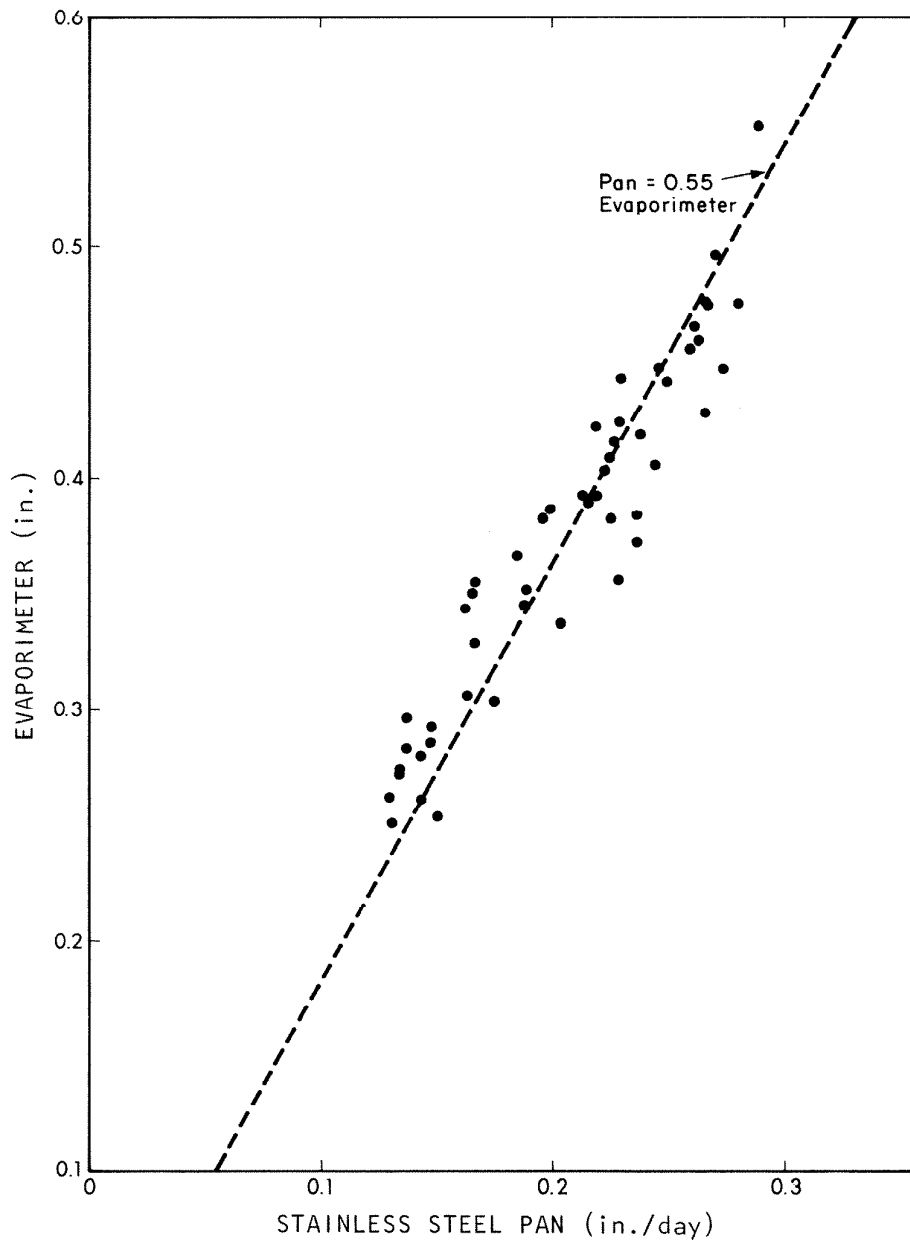
Rain-shielded, dark, flat, porous corundum evaporimeters have shown high correlation with sunlight and pan evaporation for transect studies on O'ahu (Wilcox 1962; Ekern 1983) with a composite daily summer r^2 value of 0.716 for 1981 and weekly values of 0.827 for June 1980 through May 1981. Pan evaporation adjusted to an equivalent galvanized surface pan for the University of Hawaii Mauka Campus (Sta. No. 713.50) is 0.53 the evaporimeter rate and about 0.66 of sunlight during the summer months when rainfall was least disruptive (Fig. 3). Extensive data on O'ahu and Hawai'i are used to extend the measured evaporation by a galvanized iron surface pan value equivalent to 0.53 the evaporimeter measure.

Several styles of small open water evaporimeters have been reported (Davis 1963; Davenport 1967a, b; Davenport and Hudson 1967; Sims and Jackson 1971; Van Haveren and Farmer 1971). Although many of these evaporimeters are highly correlated with Class A pan evaporation, the absolute values could not be predicted. A modification of an insulated pan evaporimeter was used at several sites on Hawai'i (Juvik, Singleton, and Clarke 1978). Evaporation from the small screened insulated pan on Hawai'i has a linear decrease with elevation from sea level to 6500 ft, and corresponds roughly to an adjusted fraction of a Thornthwaite calculation of expected evaporation.

LYSIMETERS

World-wide lysimetric measurements of water use in evapotranspiration by many crops have been reviewed and appropriate factors for translation of Class A pan evaporation into water use of crops presented (Doorenbos and Pruitt 1975). Pan factors for crop water requirements for Hawai'i have been established from lysimetric studies on O'ahu and Maui with sugarcane, pineapple, and grasses (Stearns and Vaksvik 1935; Stearns, Swartz, and Macdonald 1940; Campbell, Chang and Cox 1959; Robinson, Campbell, and Chang 1963; Ekern 1965-1978; Jones 1980; Handley and Ekern 1984).

With appropriate selection from these factors, pan evaporation measurements can be translated into actual evapotranspiration. The relationship of the consumptive use coefficient to the description of vegetation has been the focus of many modeling efforts that continue to refine the parameters neces-



NOTE: Stainless steel Class A pan at 4-ft elevation.

Figure 3. Evaporimeter vs. pan evaporation measurements, average monthly values, Mauka Campus (Sta. 713.50), Mānoa Valley, O'ahu, 1980-1984

sary to define these coefficients (Woo, Boersma, and Stone 1966; Ritchie 1972; Culler, Hanson, and Jones 1976; Burt et al. 1981; Federer 1982). Yet for irrigated crops in California with strong sensible-heat advection from dry upwind areas, pan evaporation is the least reliable predictor of water use compared to four empirical or pseudo-physical models (Shouse, Jury, and Stolzy 1980).

EMPIRICAL AND PSEUDO-PHYSICAL MODELS FOR PAN EVAPORATION

Since hydrologic balance measurements for pans and other evaporimeters have not been made for many parts of Hawai'i, empirical correlations and pseudo-physical combination energy balance-mass transfer models have been developed based on more commonly measured meteorological parameters.

In continental areas where air temperature more nearly corresponds to the amount of sunlight, empirical relationships between evaporation and air temperature have been used to estimate evaporation (Criddle 1953; Baver 1954; Holdridge 1959; Brutsaert and Stricker 1979; and, especially, Thornthwaite 1948). The Thornthwaite relationship was found to fit reasonably well for temperature up to 68°F if adjusted and was used to extrapolate evaporation rates from the insulated pans on Hawai'i Island (Juvik, Singleton, and Clarke 1978). Because air temperature in Hawai'i is greatly modified by the marine surroundings, temperature is not a reliable index of sunlight and generally is a poor predictor of pan evaporation (Ekern 1960-1965). In Hawai'i there are relatively few stations for which air temperature data are available, but generalized relations of temperature and elevation can be drawn from the radiosonde measurements.

Rainfall observations in Hawai'i have been made at some 1500 sites, and form the most nearly complete set of observation points over the islands. Pan evaporation observations, separated into those with low wind (less than 20,000 miles/yr) were presented for O'ahu by Takasaki, Hirashima, and Lubke (1969) as

$$\log E = 1.9387 - 0.0035R \text{ (in./yr)}$$

where $\log E$ = logarithm of evaporation (in./yr) and R = median annual rainfall. The revised relationships are $\log E = A + B \times \text{median rainfall}$ for the four major islands:

<u>Island</u>	<u>No. Cases</u>	<u>Avg. Evap.*</u>	<u>A</u>	<u>B</u>	<u>r²</u>
Hawai'i	23	69.07	1.99	-0.001	0.21
Maui	23	24.23	2.00	-0.001	0.39
O'ahu	35	42.14	1.99	-0.003	0.63
Kaua'i	45	45.00	1.97	-0.002	0.23
Combined	126	47.29	1.98	-0.002	

*In inches per year.

All A values are slightly greater than the 1.9387 reported by Takasaki, Hirashima, and Lubke (1969), and the slopes of the Maui and Hawai'i equations markedly less than the 0.0035 of Takasaki. Consequently, evaporation predicted for a 20-in. rainfall is 10 to 20 in. greater and for a 150 in. rainfall, 10 in. greater for the O'ahu or Kaua'i equations, and 35 in. greater than the Takasaki prediction when the Maui or Hawai'i equation is used.

An even simpler empiricism held annual evaporation = 3600 in./yr annual rainfall (Mink 1962) which resembles that plotted from pan evaporation data for O'ahu and Maui (Caskey 1968). Recent extension of evaporation measurements into the high rainfall areas on O'ahu suggest that neither of these relationships are general enough for unrestrained application to Hawai'i (Figs. 4, 5, 6). These relationships between annual rainfall and annual evaporation might be extended to monthly relationships based on the inter-relationship of annual and monthly rainfalls (Stidd and Leopold 1951).

At elevations above the 6000 ft temperature inversion which characterizes the structure of trade winds, sunlight is more intense, the relative humidity drops below 30%, and the low level rainfall and evaporation relationships are not valid (Mendonca and Iwaoka 1969).

Measured evaporation beneath the cloud deck on O'ahu and Hawai'i decreases with elevation in accord with the decrease in temperature, increase in humidity, and general increase in cloudiness as on Hawai'i Island (Fig. 7).

The average temperature and humidity profiles derived from radiosonde measurements in the free air are distorted by air flow along the mountain slopes so that the summit of Haleakalā at 10,000 ft and the Mauna Loa Observatory at 11,500 ft have frequent daytime incursions of moist air from beneath the tradewind inversion.

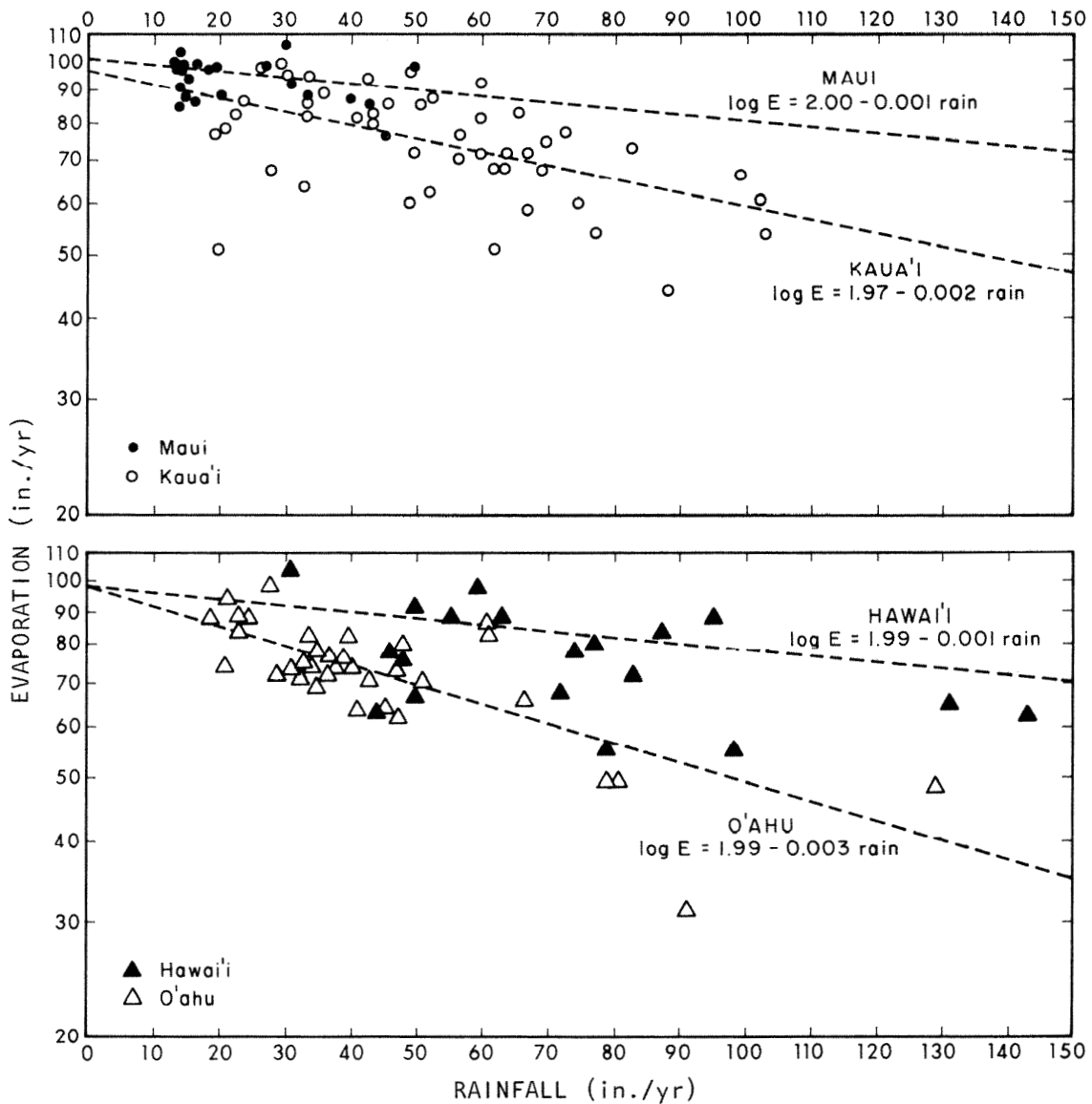
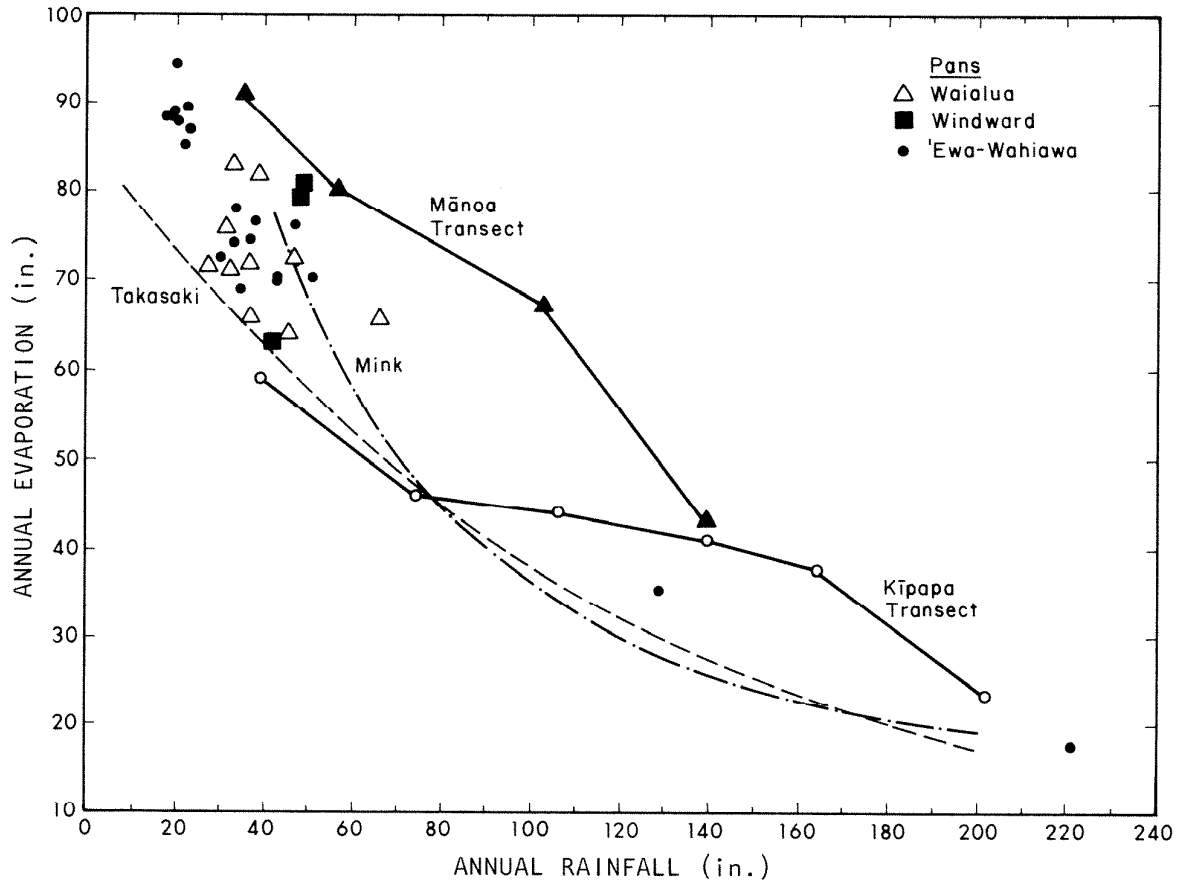


Figure 4. Evaporation (logarithm) vs. median rainfall (Maui, Kaua'i, Hawai'i, and O'ahu)



NOTE: Takasaki et al. (1969) and Mink (1962) calculated values.

Figure 5. Pan and evaporimeter measurements and calculations vs. median rainfall for Mānoa Valley and Kīpapa Ridge transects, O'ahu

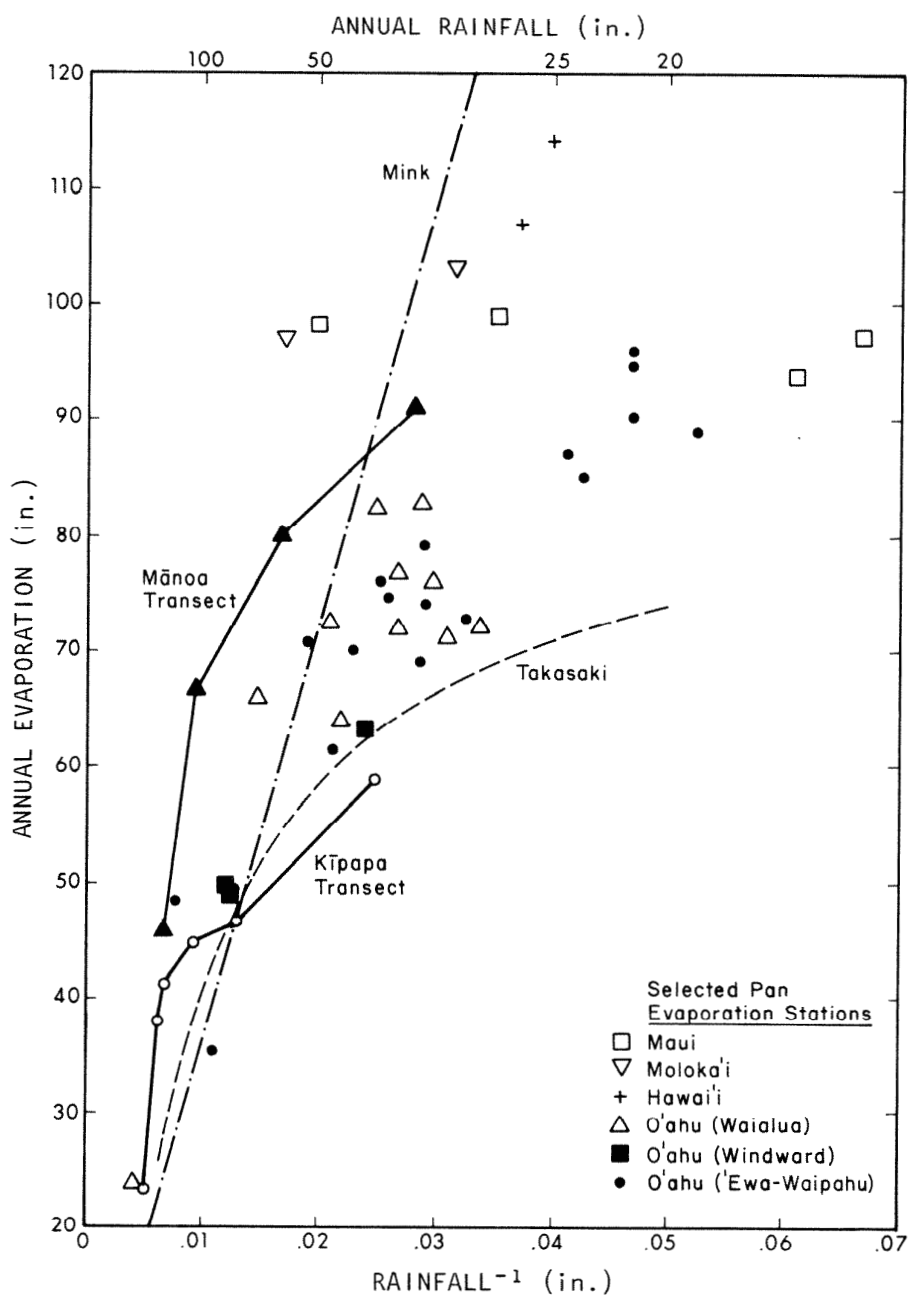
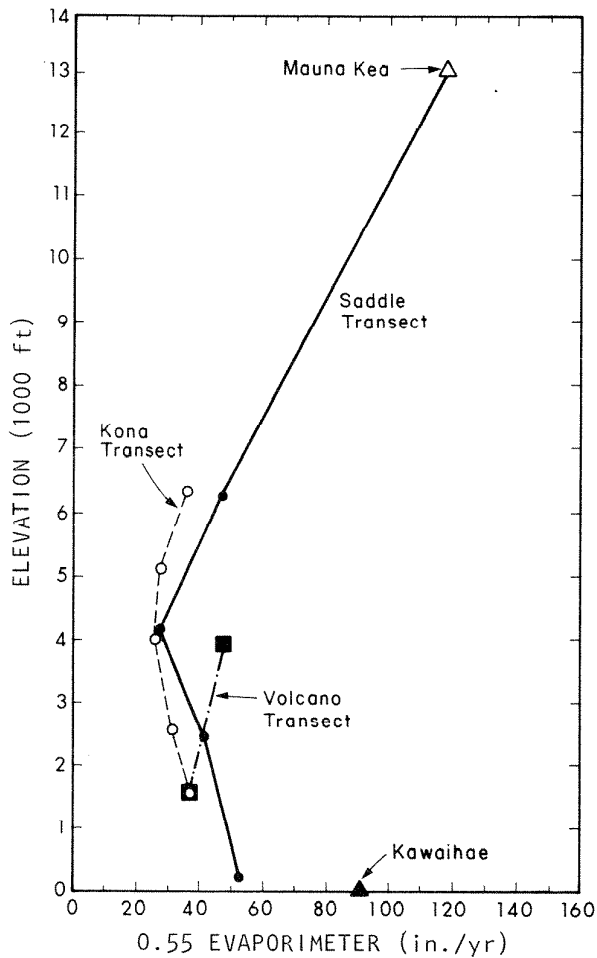


Figure 6. Pan and evaporation measurements and calculations vs. reciprocal of median rainfall



SOURCE: J.O. Juvik (1985): personal communication.

Figure 7. Evaporimeter measurements vs. elevation for Hawai'i Island

But at 5500- to 6000-ft elevations near the top of the tradewind clouds, evaporation increases again and at the summit of Mauna Kea evaporation in the dry air is as great or greater than at sea level. This is contrary to the general decrease in evaporation reported for California and was used in extrapolating pan evaporation measurements to high elevations in the NWS study of the mainland U.S. (Farnsworth and Thompson 1982). The alpine and subalpine vegetation on slopes of Mauna Loa bear out this extreme change in the ecological zones near the trade inversion (Mueller-Dombois 1967).

Evidence of the evaporation rate in the dry clear air above the normal tradewind inversion is too limited to set with any certainty the pattern of evaporation above the 4000- to 5000-ft elevation on Maui and Hawai'i.

PAN EVAPORATION RECORDS IN HAWAI'I

An initial publication of "Pan Evaporation Data, State of Hawaii" (DOWALD 1961), covered the 1894 to 1960 period with records from 61 pan evaporation stations that had been established, although only 32 stations were still in operation at that time. Details of the pan, such as size, composition, color, and height, were tabulated for many stations. A second publication, "Pan Evaporation in Hawaii: 1894-1970" (DOWALD 1973b), extended the data set and included additional stations, but gave little detail on the pans. NOAA pub-

lishes monthly and annual data in "Local Climatological Data: Hawaii and Pacific" for a series of six pan evaporation stations which began in 1919 (NOAA 1920-1983), although only three are currently in operation and data from Sta. Nos. 702.00 and 702.20 are combined as a single record. These data were summed and statistical parameters presented through 1980 in the NOAA Technical Report NWS 34 (Farnsworth and Thompson 1982). Although changes in pan composition, color, and size were acknowledged, no correction was made for these facts.

Critical attention must be paid to the history of changes in the pan composition, color, and elevation. Uncritical acceptance of NWS published data for statistical analysis of Sta. No. 702.20 (Farnsworth and Thompson 1982; Farnsworth, Thompson, and Peck 1982) actually represented a tremendous trend with time that probably was a progressive leak in the pan drainage valve (Fig. 8). In truth, evaporation remained relatively constant at nearby Sta. No. 740.50. For Sta. No. 1020.10, the shift from a painted galvanized pan to a monel pan in 1963 caused a marked increase in the measured pan evaporation, while evaporation decreased at Sta. No. 87.00 (Fig. 8).

Maps of pan station locations are presented in Appendix Figures A.1 to A.6 and a brief site description is given in Appendix Table A.1. Alternate station names which have been used over the years are in Appendix Table A.2, and an alphabetical list of current station names in Appendix Table A.3.

Evaporation records as reported for Hawai'i stations are contained in Appendix Table B.1, their statistical parameters in Appendix Table B.2, and adjusted values in text Tables 2 to 7. Probability plots of the mean annual pan evaporation for selected stations with values based on daily observations were slightly curvilinear, but where weekly data were the basis, reasonably linear values were a criterion for normal distribution (Fig. 9).

Probability plots of sunlight (1932 through 1984 for Makiki-Holmes Hall) had an apparent bimodal pattern with a cluster of values near the upper quartile during the mid-1950s to mid-1960s and another from the cluster near the lowest quartile in the 1930s and again in the 1970s (Fig. 10). Hours of bright sunlight from the period 1904 through 1983 had a more nearly linear probability plot and approach normal distribution (Fig. 11).

For a normal population, the standard deviation and the mean deviation μ have the relationship, $2\sigma^2/\mu^2 = \pi$. This ratio for Station No. 740.50, with 19 years of annual pan data, is 0.94π , and suggests near normality (Conrad

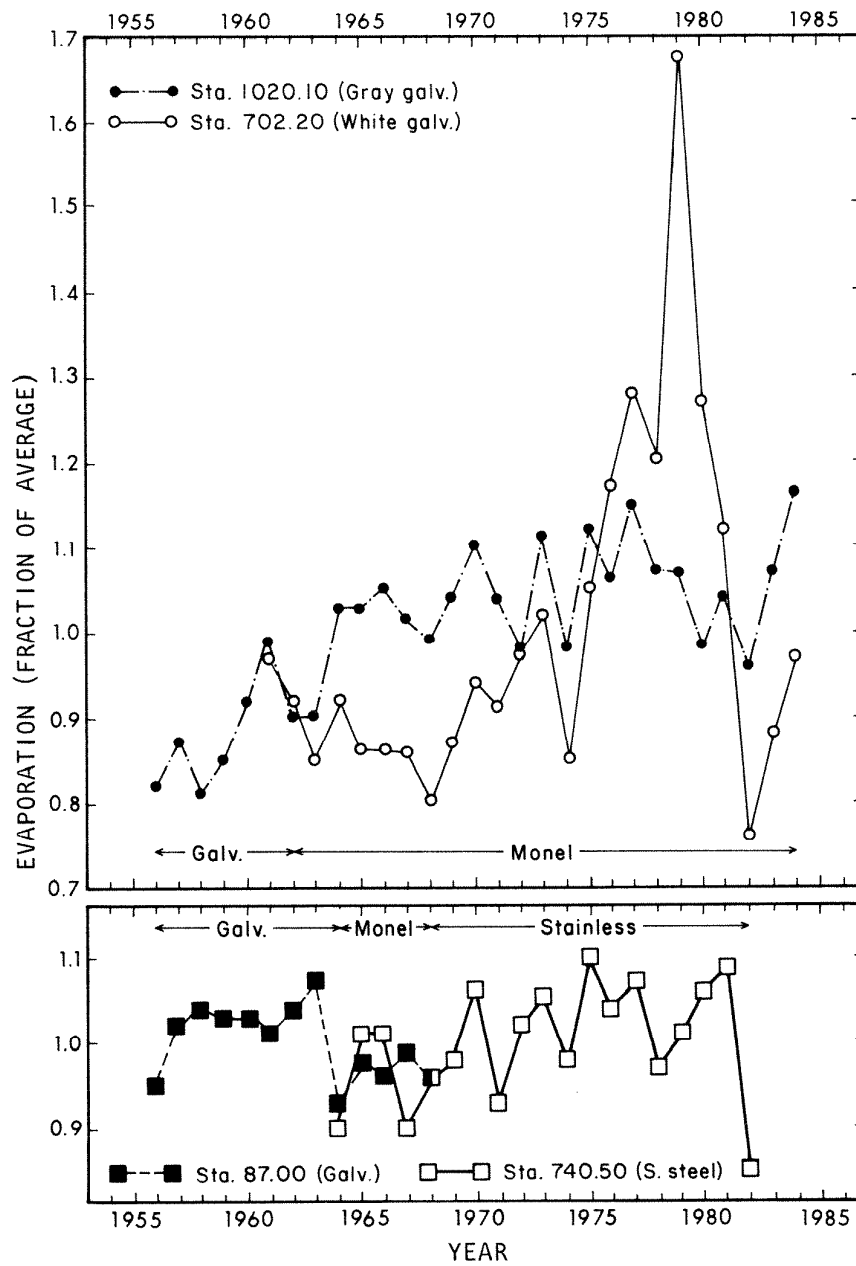


Figure 8. Evaporation trends as influenced by pan composition and color

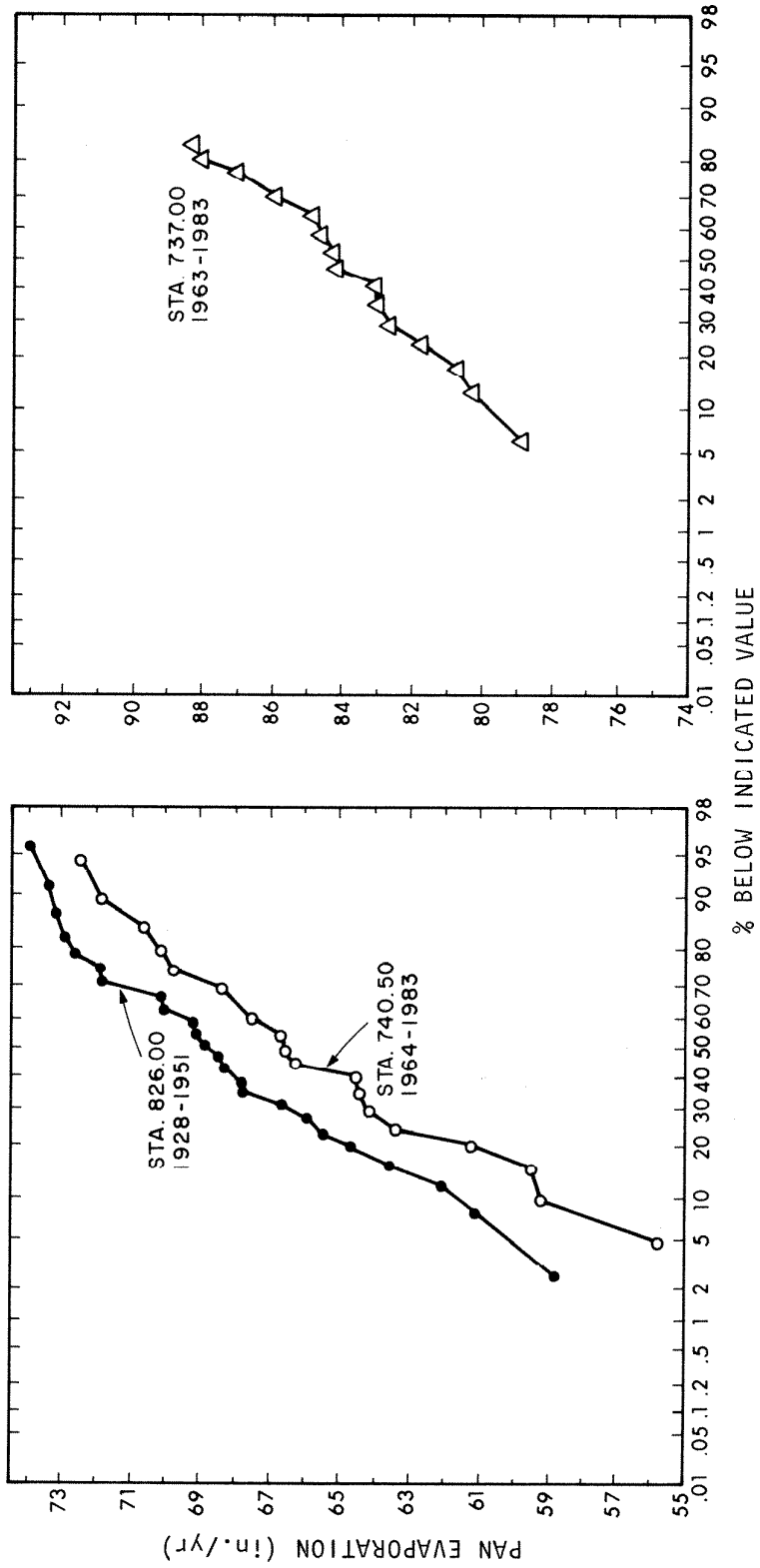


Figure 9. Probability of annual pan evaporation for O'ahu stations 740.50, 737.00, and 826.00

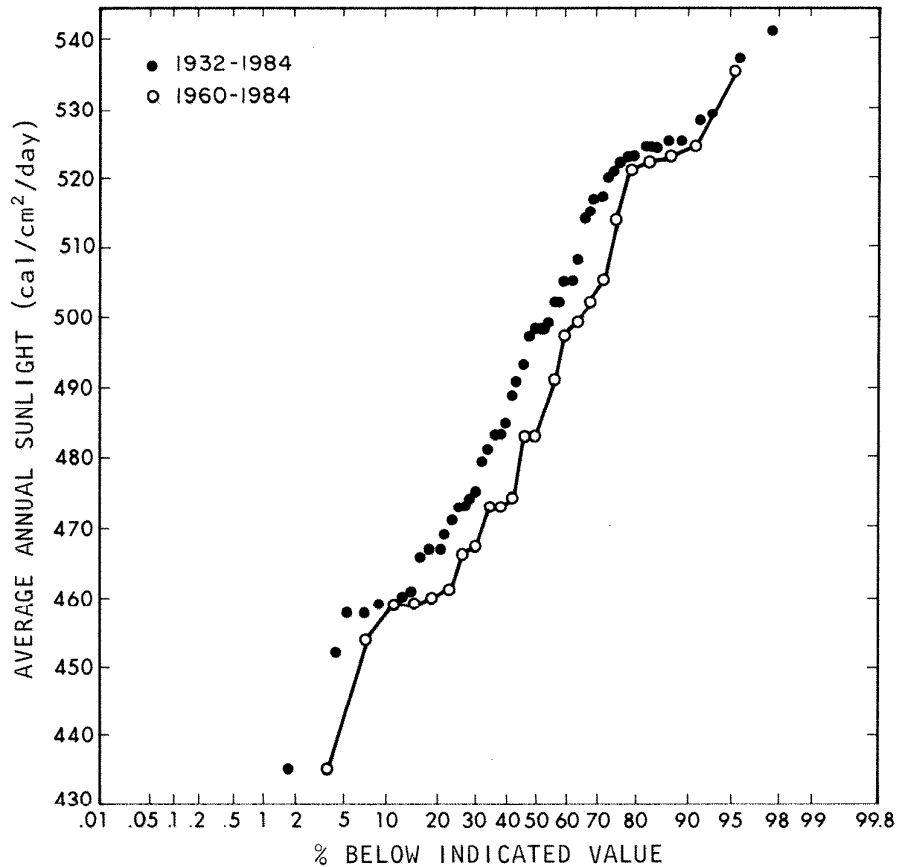


Figure 10. Probability of annual sunlight, Makiki-Holmes Hall, Honolulu, Hawai'i, 1932-1984

1944).

The coefficient of variation (standard deviation as a percent of mean) of annual pan evaporation values of the leeward station 740.50 (HSPA Kunia Substation) is $4.46/65.8 = 6.8\%$ for the 19-yr period beginning in 1963. The monthly coefficients have a maximum value of 16.6% in March and a minimum value of 6.93% in October. A windward site, station 87.06 (Hilo Airport) has an annual value of 5% with a maximum of 22.07% in December and a minimum of 8.98% in August for the monthly values. Daily pan evaporation at the University of Hawaii Mauka Campus (Sta. 713.50) for June 1983 has a coefficient of variation 25.6% of the mean pan evaporation of 0.25 in./day and for January 1983 has a coefficient of variation 33.5% of the mean of 0.138 in./day. The coefficient of variation approximately doubles from annual (7%) to monthly (15%), and doubles again to daily periods (30%).

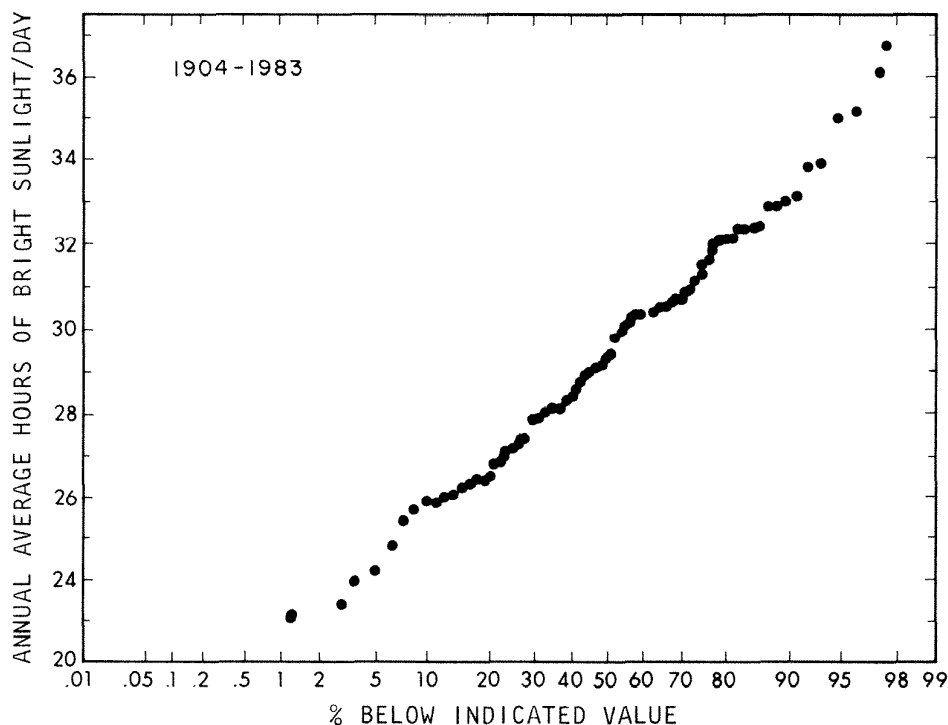


Figure 11. Probability of annual hours of bright sunlight, Honolulu, O'ahu, 1904-1983

Based on the premise of small sample number (less than 30) from a normal distribution, the standard error of the mean, $S_{\bar{x}} = s/\sqrt{N}$, where $s^2 = N \sigma^2 / (N - 1)$ for N observations.

For the 5% coefficient of variation, $S_{\bar{x}}$ would encompass 68% of the values with errors of 1% in 25 years and 1.58% in 10 years. However, for individual months—especially in spring and fall—with the coefficient of variation near 20%, the $S_{\bar{x}}$ of the mean would be 4% after 20 years and 6% after 10 years.

The NWS study (Farnsworth and Thompson 1982) omits pan evaporation records for periods less than 5 yr and uses only evaporation to the nearest 1 in./mo for those with 5 to 10 yr of record, with the presumption that a minimum record of 10 years is required to establish evaporation to the nearest 0.1 in./mo.

The standard deviations of the longer records for sunlight for the 1960 through 1984 period (when many of the pan records were taken) have an annual sunlight coefficient of variation $25.44/487 = 5.2\%$, with the July value 5.9% and the January value 10.4%. For the entire period of record (1932 through 1984), the annual coefficient of variation is $26.38/484 = 5.3\%$ with 9.3% in

January and 6.4% in July. The seasonal patterns resemble those for the pan evaporation and the magnitude of the annual coefficients of variation are almost identical, again supportive of the major role of sunlight in the determination of evaporation rates.

PAN EVAPORATION MAPS FOR HAWAI'I

Maps of evaporation were plotted for O'ahu, Kaua'i, Maui, and Hawai'i from the adjusted annual pan evaporation measurements, but were not prepared for Lāna'i with its single station or for Moloka'i, with only three stations. The monthly evaporation was graphed for selected stations on each major island to demonstrate the seasonal pattern of evaporation. The annual and diurnal patterns of rainfall which depend on cloudiness, that in turn affect sunlight and evaporation potential, helped suggest the delineation of the evaporation contours (DOWALD 1982).

Lāna'i

The single site (Table 2) with its short period of observation cannot be used to predict the amount or pattern of evaporation. Only rainfall isohyets are available to suggest the pattern of evaporation. At this site on the crest of Lāna'ihale, the persistent tradewind-generated orographic clouds offset the summer increase in potential sunlight so that the annual evaporation is only one-third that over the ocean and nearly uniform throughout the year (Fig. 12).

TABLE 2. STATION NUMBER, PERIOD OF RECORD, MEASURED EVAPORATION, PAN TYPE, AND ADJUSTED EVAPORATION FOR LĀNA'I

STATION NUMBER	PERIOD OF RECORD	ANNUAL EVAP. (in.)	PAN EVAPORATION				FACTOR		ADJ. ANNUAL (in./yr)
			Compo- sition	Paint	Eleva- tion	Other Notes	Pan	Sun- light	
687.00	1957-58	26.85	galv.		surf.		1.0	1.05	25.6

*Adjusted annual = measured annual \times pan correction \div sunlight correction.

Moloka'i

Despite their brevity the three pan evaporation records (Table 3) reveal the very high evaporation rates on the dry, windy uplands of central Moloka'i. Even at the 500- to 800-ft elevation, annual rates are 30 to 40% greater than

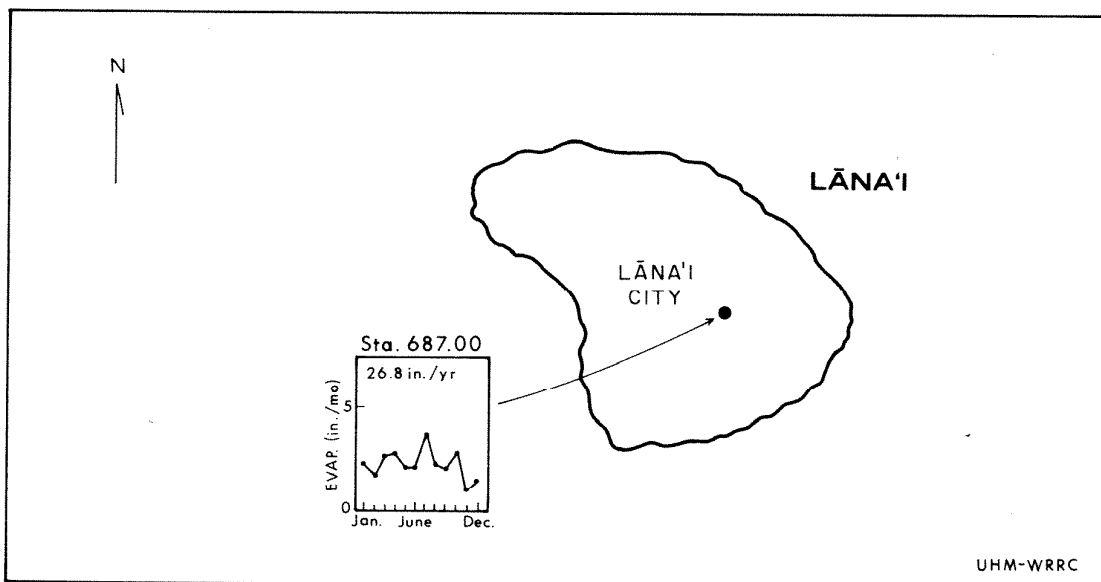


Figure 12. Pattern of monthly pan evaporation for selected selected station, Lāna'i

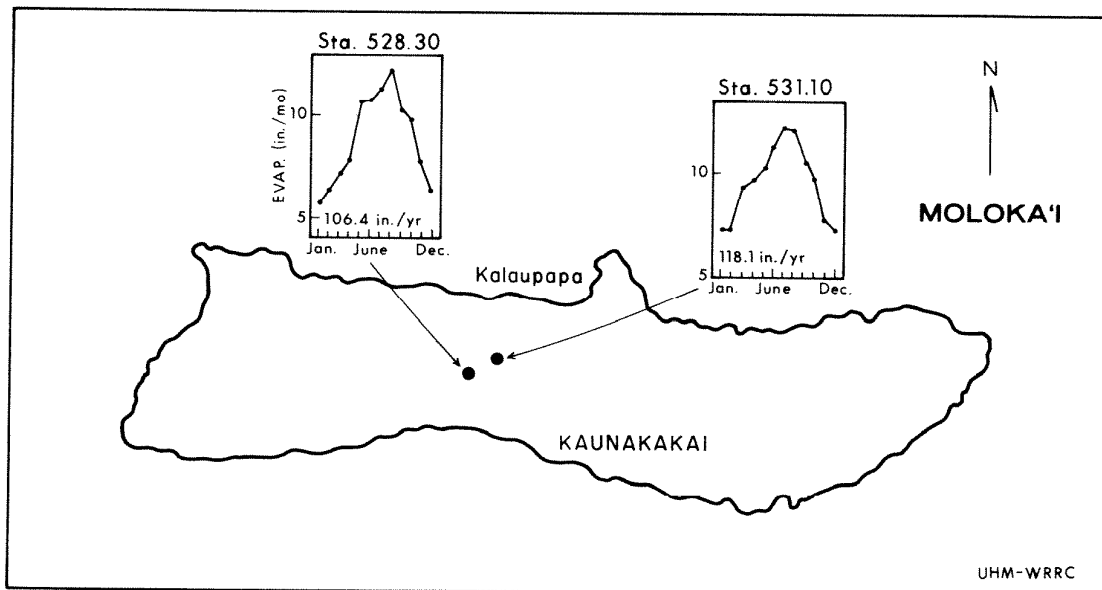


Figure 13. Pattern of monthly pan evaporation for selected stations, Moloka'i

that for the open ocean, and the marked increase to summer values more than 12 in./mo is evidence of the extreme positive advection of heat from the dry surroundings during the peak tradewind season (Fig. 13).

TABLE 3. STATION NUMBER, PERIOD OF RECORD, MEASURED EVAPORATION, PAN TYPE, AND ADJUSTED EVAPORATION FOR MOLOKA'I

STATION NUMBER	PERIOD OF RECORD	ANNUAL EVAP. (in.)	PAN EVAPORATION				FACTOR		ADJ. ANNUAL* (in./yr)
			Compo- sition	Paint	Eleva- tion	Other Notes	Pan	Sun- light	
511.50	1980-83	80.8	s. steel		surf.		1.08	0.93	93.8
528.30	1962-65	106.46	galv.		surf.		1.0	1.05	101.4
531.10	1970-84	118.1	s. steel		4-ft		0.97	0.95	120.6

*Adjusted annual = measured annual \times pan correction \div sunlight correction.

O'ahu

Pan evaporation measurements in the leeward lowland areas allow reasonable definition of amounts and patterns of evaporation, but the windward slopes and central highlands have few measurements of pan evaporation (Table 4; Figs. 14, 15). The mountain ranges do not reach the tradewind inversion so that the plethora of data and simplicity of wind flow make the patterns for this the most complete for any of the islands.

On-shore flow where the trade winds sweep the north and south ends of the island has increased mixing from the overland roughness that offsets the greater reflection of sunlight so that pan evaporation is nearly identical with that expected over the ocean. The summer peak in sunlight and tradewind flow also cause a summer peak in evaporation.

The orographic cloud which forms over the mountain ridges reduces evaporation to about one-fourth that over the ocean with little seasonal change in monthly rates. Immediately to the lee of the Ko'olau crest, evaporation is low because of decreased sunlight and low wind velocity, but evaporation increases downwind as cloudiness decreases and winds couple back to the surface so that the central Wahiawa plain evaporation is only reduced about 10% below that of the ocean.

Further to the lee on the dry 'Ewa-Wahiawa plain, positive heat advection increases evaporation to nearly 100 in./yr, 20% above that for the open ocean.

TABLE 4. STATION NUMBER, PERIOD OF RECORD, MEASURED EVAPORATION, PAN TYPE, AND ADJUSTED EVAPORATION FOR O'AHU

STATION NUMBER	PERIOD OF RECORD	ANNUAL EVAP. (in.)	PAN DESCRIPTION				FACTOR		ADJ. Annual* (in./yr)
			Compo- sition	Paint	Eleva- tion	Other Notes	Pan	Sun- light	
702.00	1956-60	74.56	galv.	white	surf.		1.2	1.05	85.2
702.20	1963-74 1975-81 1982-83	84.3 82.2	monel		surf.	leak?	1.0	0.99	85.2
707.00	1958-60 1971-75	73.62 74.88	galv.	Al	5 ft		0.97 0.97	1.05 0.94	68.0 77.3
713.50	1980-84	75.02	s. steel		4 ft		0.97	0.93	78.3
727.00	1963-83	93.39	s. steel		5 ft	screened	1.02	0.97	98.2
732.00	1962-83	90.77	s. steel		5 ft	screened	1.02	0.98	94.5
737.00	1962-83	84.51	s. steel		5 ft	screened	1.02	0.97	88.9
738.40	1962-83	75.65	s. steel		5 ft	screened	1.02	0.98	78.7
740.30	1959-64	80.10	galv.	Al	surf.		1.08	0.99	87.4
740.40	1962-83	74.03	s. steel		5 ft		0.97	0.98	73.3
740.50	1963-83	65.62	s. steel		1 ft		1.08	0.98	72.3
741.00	1961-83	80.82	s. steel		5 ft	screened	1.02	0.94	87.7
751.20	1962-83	86.09	s. steel		5 ft	screened	1.02	0.98	89.6
752.00	1929-30; 1960	57.67	galv.	Al	surf.		1.08	0.99	62.9
752.50	1960-63	74.41	galv.	Al	surf.		1.08	1.06	75.8
756.00	1962-83	71.27	s. steel		5 ft	screened	1.02	0.98	74.2
761.10	1962-67	71.2	s. steel		5 ft	screened	1.02	1.04	69.8
772.60	1970-81	35.2	s. steel		12 ft	3' diam	0.85	0.96	31.1
782.00	1931-36	35.57	galv.		surf	in grass	1.3	0.95	48.7
787.00	1920-30	44.37	galv.		surf.		1.0	0.9	49.3
787.10	1976-84	44.36	s. steel		5 ft		0.97	0.94	49.8
795.10	1957-60	73.59	galv.		4 ft		0.9	1.04	63.7
798.00	1939-47	74.12	galv.		surf.		1.0	1.0	74.1
813.00	1911-15	62.17	galv.		surf.	18" diam	1.0	0.91	69.0
815.00	1964-78	73.6	s. steel		5 ft	screened	1.02	0.98	76.6
816.20	1980-81	71.8	s. steel		4 ft		.97	0.99	70.4
816.30	1980-83	75.13	s. steel		surf.		1.08	0.93	87.3

NOTE: Std. Class A pan is galvanized, unpainted, 4-ft diam, 10 in. deep, and at surface.

*Adjusted annual = measured annual \times pan correction \div sunlight correction.

TABLE 4—Continued

STATION NUMBER	PERIOD OF RECORD	ANNUAL EVAP. (in.)	PAN DESCRIPTION			FACTOR		ADJ. ANNUAL (in./yr)	
			Compo- sition	Paint	Eleva- tion	Other Notes	Pan		Sun- light
818.10	1962-83	71.69	s. steel		5 ft	screened	1.02	0.98	74.6
820.20	1954-67	73.17	galv.		surf.	screened	1.0	1.05	69.7
824.10	1962-68	62.67	s. steel		5 ft	screened	1.02	1.04	61.5
825.30	1968-83	83.02	s. steel		5 ft	20' ridge; screened	0.8	0.95	69.9
826.00	1927-51	68.3	galv.		surf.	14" deep	1.0	0.97	70.4
830.30	1981-82	49.55	s. steel		4 ft		0.97	0.93	51.7
841.00	1960-70	67.01	galv.	Al			1.08	1.02	71.0
841.10	1960-83	67.49	s. steel		5 ft		0.97	0.98	66.8
846.00	1962-70	68.13	galv.	Al	surf.		1.08	1.02	72.1
847.00	1960-83	73.35	s. steel		5 ft		0.97	0.99	71.9
851.00	1962-70	71.88	galv.	Al	surf.		1.08	1.02	76.1
854.00	1962-70	78.55	galv.	Al	surf.		1.08	1.02	83.1
856.10	1950-52	47.68	galv.		surf.		1.0	1.04	45.85
860.60	1976-83	.....	s. steel		5 ft		.....	.....	.....
861.00	1960-83	64.33	s. steel		5 ft		0.97	0.98	63.7
882.10	1931-35	17.41	galv.		surf.	in weeds	1.3	0.94	24.2
890.00	1962-70	72.61	galv.	Al	surf.		1.08	1.02	65.9
892.00	1960-83	73.28	galv.	Al			0.97	0.98	72.5
894.20	1962-64	64.18	galv.	Al	surf.		1.08	1.05	66.0
908.00	1960-65	78.85	galv.	Al	surf.		1.08	1.04	82.2

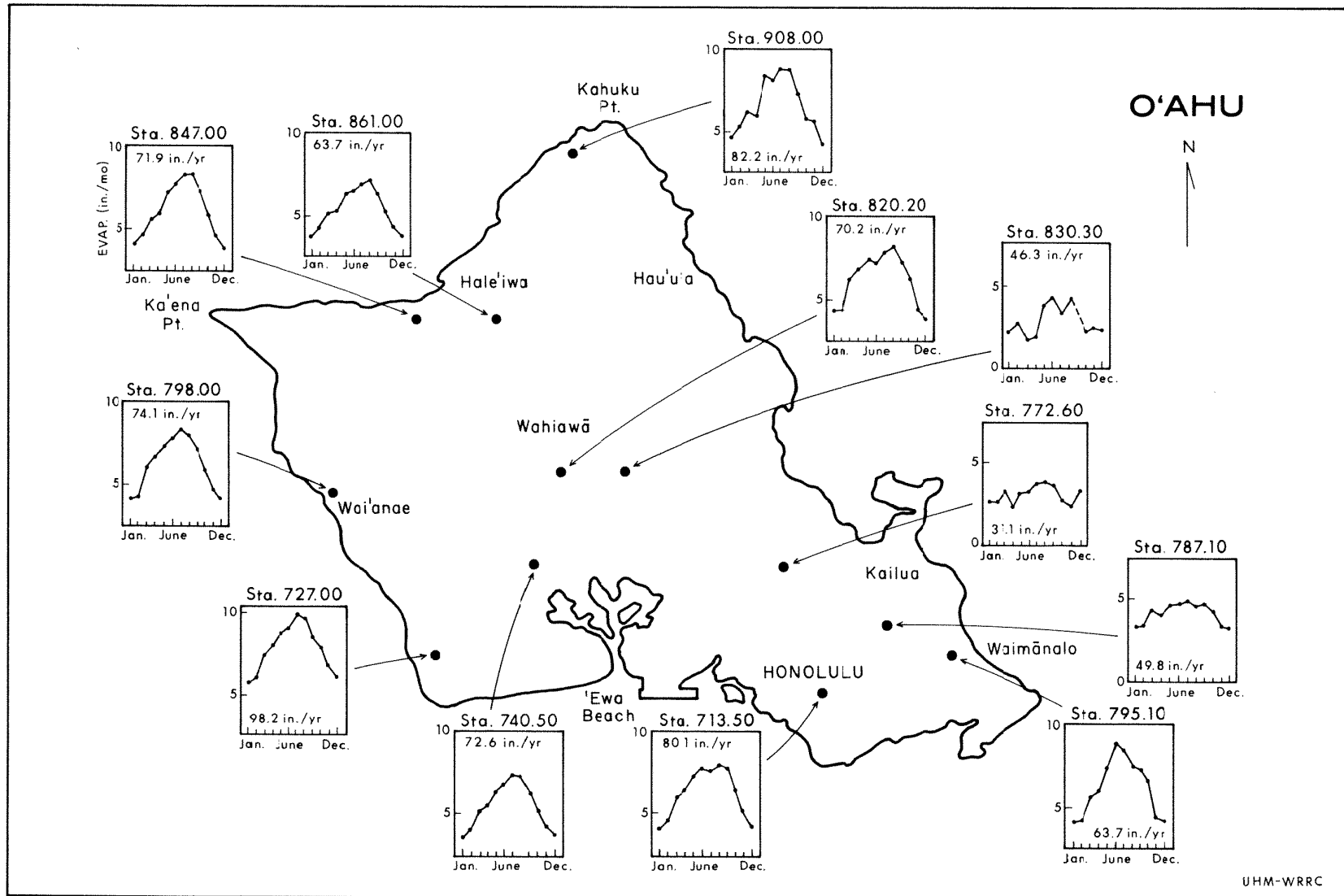


Figure 15. Pattern of monthly pan evaporation for selected stations, O'ahu

Kaua'i

The amounts and patterns of evaporation for the lowland areas are well-defined by the measurements (Table 5; Figs. 16, 17). Very few measurements were made on the central highlands and although the elevation does not reach the average 6000-ft elevation of the tradewind inversion, uncertainty about the downward mixing of dry air from above the inversion precludes establishment of realistic evaporation values for the central uplands.

Onshore flow along the windward coast is similar in pattern and amount to the open ocean with evaporation rates in the summer months about 50% greater than those for the winter months.

Sunlight reduces rapidly as clouds increase inland, and evaporation is less than 75% that of the ocean and relative summer rates much reduced even a mile from the coast.

Persistent orographic clouds over the central highlands reduce annual evaporation to as little as 25% that of the ocean, and eliminate any summer increase in the monthly rates.

Evaporation increases perhaps 10% above that of the ocean on the dry lee coasts and plains where heat advection markedly increases the evaporation rates during the summer.

TABLE 5. STATION NUMBER, PERIOD OF RECORD, MEASURED EVAPORATION, PAN TYPE, AND ADJUSTED EVAPORATION FOR KAUA'I

STATION NUMBER	PERIOD OF RECORD	ANNUAL EVAP. (in.)	PAN DESCRIPTION				FACTOR		ADJ. ANNUAL* (in./yr)
			Composition	Paint	Elevation	Other Notes	Pan	Sunlight	
925.00	1961-75	89.88	galv.	Al	surf.		1.08	1.08	97.1
927.00	1963-83	89.11	galv. s. steel	Al	surf. 3 ft		.... 1.03	.... 1.10	.... 98.2
930.00	1960-83	84.79	galv. s. steel	Al	surf. 3 ft		.... 1.03	.... 0.93	.... 93.9
931.00	1960-83	77.92	galv. s. steel	Al	surf. 3 ft		.... 1.03	.... 0.98	.... 86.5
934.00	1964-83	84.37	s. steel		3 ft		0.97	0.98	83.5
935.00	1963-83	84.37	s. steel		3 ft	unknown	.... 0.97	.... 0.98	.... 83.5
935.10	1964-68	86.49	galv.	Al	surf.		1.08	1.02	91.6
936.00	1910-11	50.17	galv.		surf.	18" diam	0.82	0.83	49.6

*Adjusted annual = measured annual \times pan correction \div sunlight correction.

TABLE 5—Continued

STATION NUMBER	PERIOD OF RECORD	ANNUAL EVAP. (in.)	PAN DESCRIPTION				FACTOR		ADJ. ANNUAL (in./yr)
			Compo- sition	Paint	Eleva- tion	Other Notes	Pan	Sun- light	
940.00	..... 1960-83	.... 87.4	galv. s. steel	Al	surf. 3 ft		.... 1.03	.... ....	.... 89.1
941.00	..... 1960-83	..... 86.62	galv. s. steel	Al	surf. 3 ft		.... 1.03	.... 0.98	.... 91.0
943.00	1910-11	51.01	galv.		surf.	18" diam	0.82	0.83	51.0
943.20	1961-62	72.90	galv.	Al	surf.		1.08	1.05	75.0
944.00	..... 1960-83	..... 73.82	galv. s. steel	Al	surf. 3 ft		.... 1.03	.... 0.98	.... 77.6
945.00	1962-83 1967-80	.... 77.89	galv. s. steel	Al	surf. 3 ft		.... 1.03	.... 0.98	.... 81.9
962.00	1963-75	90.47	galv.	Al	surf.		1.08	1.0	97.7
965.00	1969-70	87.66	s. steel		3 ft		0.97	1.0	85.0
965.10	1971-75	84.67	s. steel		3 ft		0.97	0.94	87.4
966.00	1961-75	84.11	galv.	Al	surf.		1.08	0.99	91.8
981.00	1963-75	77.65	galv.	Al	surf.	later 3'	1.03	0.99	80.8
982.00	1965-75	78.61	galv.	Al	surf.	later 3'	1.03	0.99	81.8
986.10	1960-83	78.37	galv.	Al	surf.	later 3'	1.03	0.99	81.5
993.00	1961-83	69.76	galv.	Al	surf.	later 3'	1.03	0.98	73.3
994.00	1976-83	64.78	s. steel		3 ft		0.97	0.94	66.9
1004.00	..... 1961-83	..... 56.61	galv. s. steel	Al	surf. 3 ft		.... 1.03	.... 0.98	.... 59.5
1005.00	..... 1961-83	..... 66.96	galv. s. steel	Al	surf. 3 ft		.... 1.03	.... 0.98	.... 70.4
1006.00	..... 1961-83	..... 57.18	galv. s. steel	Al	surf. 7 ft		.... 1.03	.... 0.98	.... 60.0
1011.00	..... 1960-83	..... 62.52	galv. s. steel	Al	surf. 7 ft		.... 1.03	.... 0.98	.... 65.7
1013.20	1968-75	72.65	s. steel		7 ft		0.97	0.99	71.2
1014.00	1971-83	78.37	s. steel		7 ft		0.97	0.96	79.2
1015.30	1965-66	.....	galv.	Al	surf.		....	....	....
1016.00	..... 1960-83	..... 67.99	galv. s. steel	Al	surf. 7 ft		.... 1.03	.... 0.98	.... 71.4
1020.10	1955-62 1962-84 1955-84	84.02 94.14 95.6	galv. monel	grey	surf. surf.		1.0 1.0 1.0	1.0 1.0 1.0	84.0 94.1 95.6
1020.40	1962-83	82.83	galv. s. steel	Al	surf. 7 ft		1.03	0.98	87.0

TABLE 5—Continued

STATION NUMBER	PERIOD OF RECORD	ANNUAL EVAP. (in.)	PAN DESCRIPTION				FACTOR		ADJ. ANNUAL (in./yr)
			Compo- sition	Paint	Eleva- tion	Other Notes	Pan	Sun- light	
1026.00	1962-83	75.53	galv. s. steel	Al	surf. 3 ft		1.03	0.98	79.3
1027.00	1982-83	.....	s. steel		3 ft		0.97	0.90	....
1033.00	1982-83	77.32	s. steel		3 ft		0.97	0.90	83.3
1035.00	1962-83	63.99	galv. s. steel	Al	surf. 3 ft		1.03	0.98	67.2
1040.00	..... 1962-83	..... 60.19	galv. s. steel	Al	surf. 3 ft		..... 1.03	..... 0.98	..... 63.2
1061.00	1959-60	45.69	galv.		surf.		1.0	1.05	43.5
1061.30	1962-83	57.32	galv. s. steel	Al	surf. 7 ft		1.03	0.98	60.2
1062.10	1965-83	68.71	s. steel		7 ft		0.97	0.98	68.0
1062.20	1960-69	64.84	galv.	Al	surf.		1.08	1.04	67.3
1062.30	1960-69	64.98	galv.	Al	surf.		1.08	1.04	67.6
1064.30	1969-83	78.37	s. steel		7 ft		0.97	0.99	78.4
1066.00	1965-66	.....	galv.	Al	surf.		.....	.....	.....
1072.10	1911	48.6*	galv.		surf.	18" diam	0.82	0.83	48.6
1082.00	1910-11	22.2*	galv.		surf.	18" diam	0.82	0.83	22.2
1092.00	1969-83	52.38	s. steel		7 ft		0.97	0.95	53.5
1101.10	1969-83	74.31	s. steel		7 ft		0.97	0.95	75.8
1102.00	1964-66	57.79	galv.	Al	surf.		1.08	1.04	60.1
1104.20	1969-82	78.13	s. steel		7 ft		0.97	0.95	79.8
1110.00	1964-66	62.95	galv.	Al	surf.		1.08	0.95	71.6
1112.00	1910-11	79.86	galv.		surf.	18" diam	0.82	0.83	79.9
1114.00	1964-83	77.0	galv. s. steel	Al	surf. 7 ft		1.03	0.98	84.9
1134.00	1962-67	†	galv.	Al	surf.		.....	.....	.....
1135.00	1962-66	†	galv.	Al	surf.		.....	.....	.....
1136.00	1962-67	†	galv.	Al	surf.		.....	.....	.....
1141.20	1962-67	†	galv.	Al	surf.		.....	.....	.....
1143.00	1962-67	72.58	galv.	Al	surf.		1.08	1.04	75.5
1145.00	1964-65	†	galv.	Al	surf.		1.08	1.03	.....
1146.00	1962-65	77.41	galv.	Al	surf.		1.08	1.03	82.1
1147.00	1964-65	†	galv.	Al	surf.		1.08	1.03	.....

*Estimated value.

†No single complete year of record.

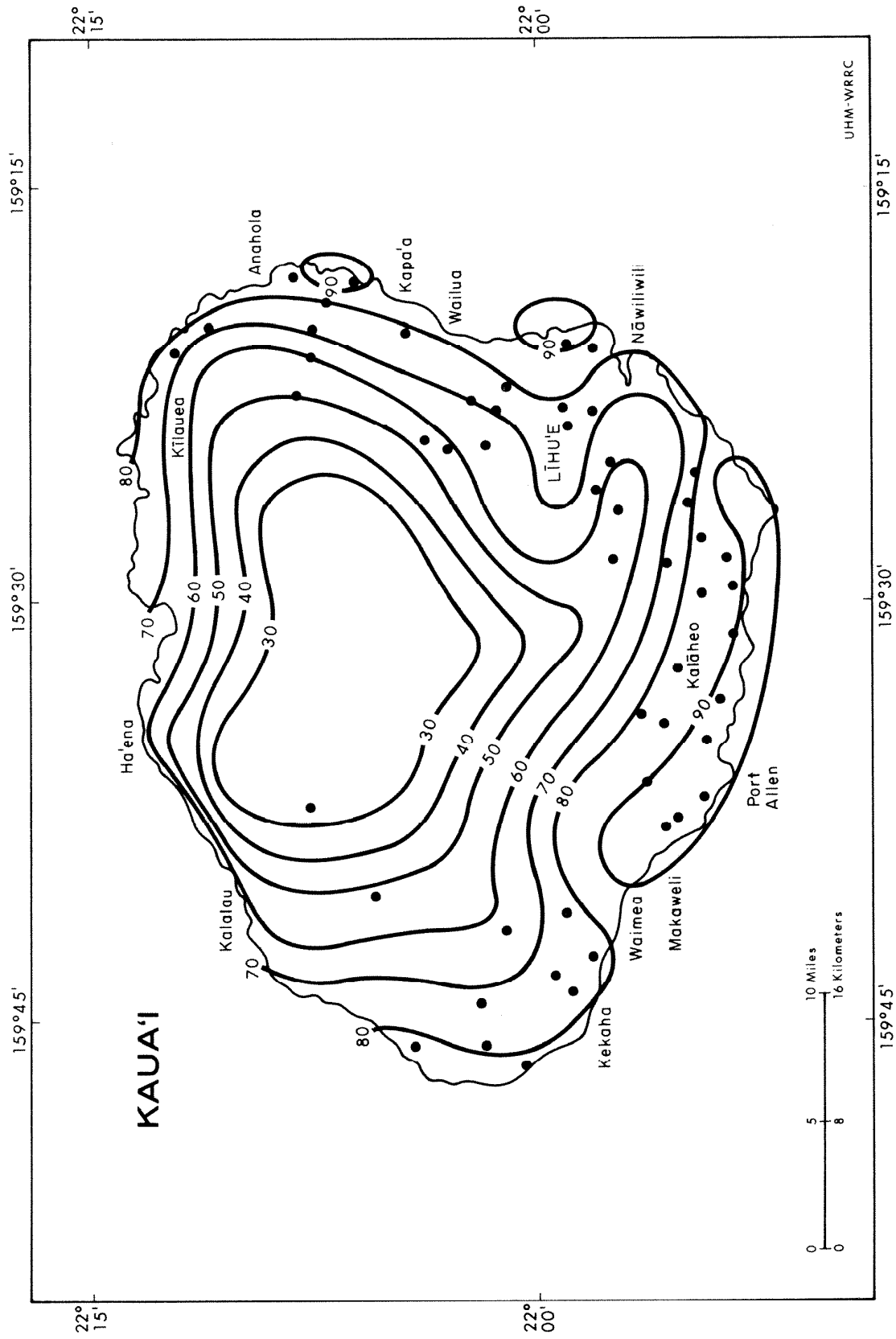


Figure 16. Adjusted annual pan evaporation for Kaua'i

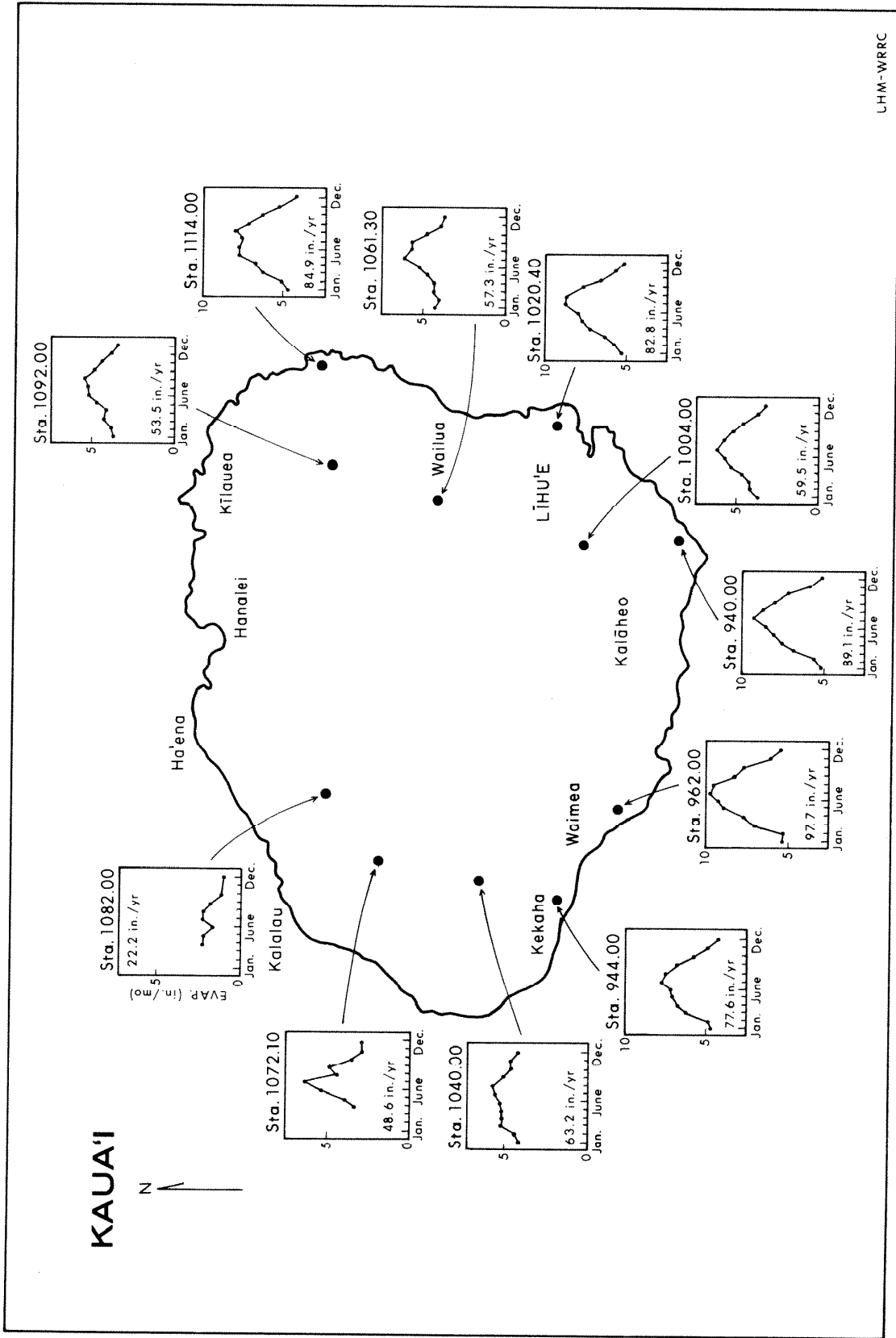


Figure 17. Pattern of monthly pan evaporation for selected stations, Kaua'i

Maui

Extensive pan and sunlight observations on the central isthmus and the West Maui coast allowed amounts and patterns to be delineated (Table 6; Figs. 18, 19). No observations were available for the West Maui highlands which rise to just below the tradewind inversion, nor for the Haleakalā summit which frequently penetrates through the inversion. The effect on evaporation of diurnal changes observed in up- and down-slope flow on the Haleakalā slopes has not been measured (Lyons 1979).

At the upwind coasts, onshore flow had evaporation of about 80 in./yr, similar to that expected over the ocean, although some minor increase in evaporation occurs in the increased wind flow diverted about the mountains.

On the central isthmus, high sunlight and wind flow channeled between the two mountain masses causes evaporation to increase 10 to 20% above that for the ocean with summer evaporation greater than 10 in./mo.

Neither sunlight nor evaporation measurements were available for the windward or southeastern flanks of Haleakalā.

TABLE 6. STATION NUMBER, PERIOD OF RECORD, MEASURED EVAPORATION, PAN TYPE, AND ADJUSTED EVAPORATION FOR MAUI

STATION NUMBER	PERIOD OF RECORD	ANNUAL EVAP. (in.)	PAN DESCRIPTION				FACTOR		ADJ. ANNUAL* (in./yr)
			Compo- sition	Paint	Eleva- tion	Other Notes	Pan	Sun- light	
296.10	1982	.....	galv.	Al	5 ft		....	....	....
310.00	1960-62 1980	91.94	galv. s. steel	Al	surf. 5 ft		1.03	0.98	96.6
310.10	1962-83	97.37	galv. s. steel	Al	5 ft	canopy	0.97	0.98	96.4
310.20	1964-66	90.01	galv. s. steel	Al	surf.		1.08	1.05	92.6
313.00	1963-83	91.86	galv. s. steel	Al	5 ft		1.03	0.98	96.6
313.10	1960-63	91.14	galv.	Al	surf.		1.08	1.06	92.9
313.30	1971-83	91.52	s. steel		5 ft		0.97	0.95	93.5
314.00	1960-81	..... 85.75	galv. s. steel	Al	surf. 5 ft		.... 1.03	.... 0.98	.... 90.1
314.10	1972-83	89.3	s. steel		5 ft		0.97	0.95	91.2
316.00	1960-61	95.28	galv.	Al	surf.		1.08	1.05	98.0
316.20	1957-60	84.73	galv.	Al		canopy	0.97	1.05	78.3

*Adjusted annual = measured annual × pan correction ÷ sunlight correction.

TABLE 6—Continued

STATION NUMBER	PERIOD OF RECORD	ANNUAL EVAP. (in.)	PAN DESCRIPTION			FACTOR		ADJ. ANNUAL (in./yr)	
			Compo- sition	Paint	Eleva- tion	Other Notes	Pan		Sun- light
316.30	1966-67	76.75	galv.	Al	surf.		1.08	1.05	78.8
317.10	1958-60	85.82	galv.	Al	surf.		1.08	1.05	88.3
317.20	..... 1960-77	..... 87.48	galv. s. steel	Al	surf. 5 ft		..... 1.03	..... 1.04	..... 86.6
321.50	1967-83	91.90	s. steel		5 ft		0.97	0.99	90.0
361.00	..... 1963-82	..... 81.16	galv. galv.	Al Al	surf. 5 ft		..... 1.03	..... 0.98	..... 85.3
363.10	1963-71	77.83	galv.	Al	surf.		1.08	0.99	84.9
372.20	1970-71	81.95	galv.	Al	5 ft		0.97	1.02	77.9
372.30	1964-70	79.51	galv.	Al	surf.		1.08	1.0	85.9
373.00	1982	.....	s. steel		5 ft		.....	...	.....
385.00	1976-83	78.47	galv.	Al	5 ft		0.97	0.94	81.0
388.00	1976-83	71.87	galv.	Al	5 ft		0.97	0.94	74.2
391.10	1976-83	95.28	galv.	Al	5 ft		0.97	0.94	98.3
391.20	1982-83	94.91	galv.	Al	5 ft		0.97	0.94	97.9
393.00	1974-83	96.72	s. steel		5 ft		0.97	0.94	99.8
394.00	..... 1964-83	97.74	galv. s. steel	Al	surf. 5 ft		..... 1.03	..... 0.98	..... 102.7
394.10	..... 1966-83	..... 97.49	galv. s. steel.	Al	surf. 5 ft		..... 1.03	..... 0.98	..... 102.0
396.00	..... 1960-83	..... 94.03	galv. s. steel		surf. 5 ft		..... 1.03	..... 0.98	..... 98.8
401.00	..... 1962-83	..... 89.61	galv. s. steel	Al	surf. 5 ft		..... 1.03	..... 0.98	..... 94.2
401.10	..... 1966-83	..... 84.20	galv. s. steel	Al	surf. 5 ft		..... 1.03	..... 0.98	..... 88.5
402.00	1971-72	.....	s. steel		5 ft		.....	.....	.....
403.10	..... 1966-83	..... 94.20	galv. s. steel		surf. 5 ft		..... 1.03	..... 0.98	..... 99.0
404.10	1962-66	94.7	galv.	Al			1.08	1.05	97.4
404.30	1962-83	93.90	galv.	Al	surf.		1.08	1.05	96.6
404.40	..... 1966-70	..... 92.73	galv. s. steel	Al	surf. 5 ft		..... 1.03	..... 0.98	..... 97.5
406.30	1982-83	.....	s. steel		5 ft		0.97	0.91	.....
410.10	..... 1966-83	..... 97.03	galv. s. steel	Al	surf. 5 ft		..... 1.03	..... 0.98	..... 102.0

TABLE 6—Continued

STATION NUMBER	PERIOD OF RECORD	ANNUAL EVAP. (in.)	PAN DESCRIPTION				FACTOR		ADJ. ANNUAL (in./yr)
			Compo- sition	Paint	Eleva- tion	Other Notes	Pan	Sun- light	
413.00	1960-83	..... 82.79	galv. s. steel	Al	surf. 5 ft		..... 1.03	..... 0.98	..... 87.0
413.20	1957-60	82.79	galv.	Al	surf	canopy	0.97	1.05	76.5
415.00	1963-83	93.23	galv. s. steel	Al	surf 5 ft		..... 1.03	..... 0.98	..... 98.0
416.00	1971-83	83.52	s. steel		5 ft		0.97	0.95	86.9
419.00	1977-83	88.21	s. steel		5 ft		0.97	0.94	91.0
457.00	1963-82	91.97	galv. s. steel	Al	surf. 5 ft		..... 1.03	..... 0.98	..... 96.7
458.00	1963-65, 1980	103.01	galv.	Al	surf.		1.08	1.03	108.0
458.10	1964-71 1982	..... 82.35	galv. s. steel	Al	surf. 5 ft		..... 1.03	..... 0.98	..... 86.6
462.00	1982	.....	galv.	Al	5 ft		.....	.....	.....
462.10	1964-67	73.3	galv.	Al	surf.		1.08	1.04	76.1
463.20	1965-67	.....	galv.	Al	surf.		.....	.....	.....
466.10	1963-64	105.91	galv.	Al	surf.		0.88	1.04	89.6
484.10	1976-83	68.01	galv.	Al	5 ft		0.97	0.94	70.2
485.00	1962-71	94.04	galv.	Al	surf.		1.08	1.03	98.6
485.10	1963-66	83.19	galv.	Al	surf.		1.08	1.03	87.2
485.30	1960-66	76.45	galv.	Al	surf.		1.08	1.04	79.4
486.50	1977-83	79.67	s. steel		5 ft		0.97	0.97	79.7
486.60	1971-77	105.54	s. steel		5 ft		0.97	0.94	108.9

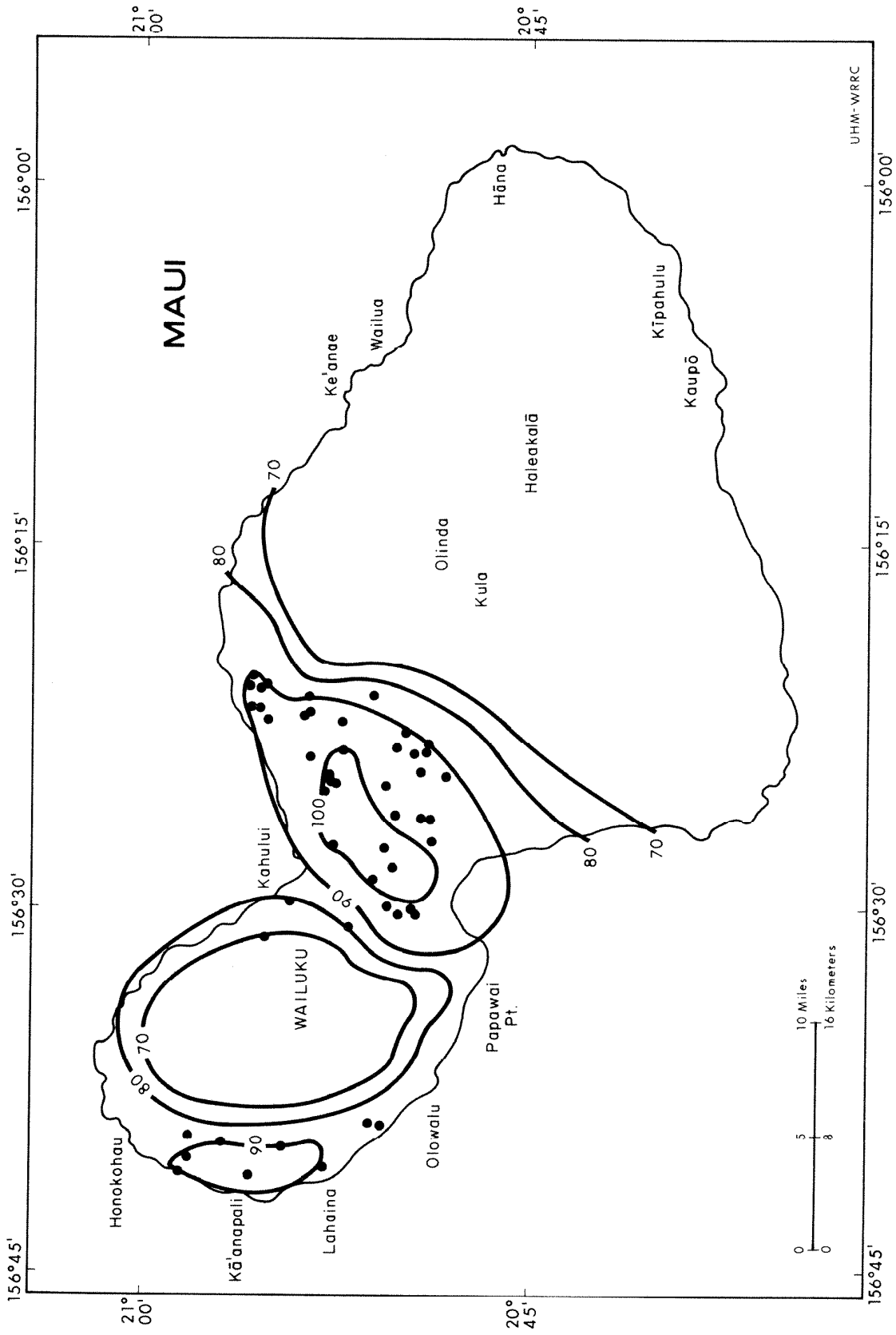


Figure 18. Adjusted annual pan evaporation for Maui

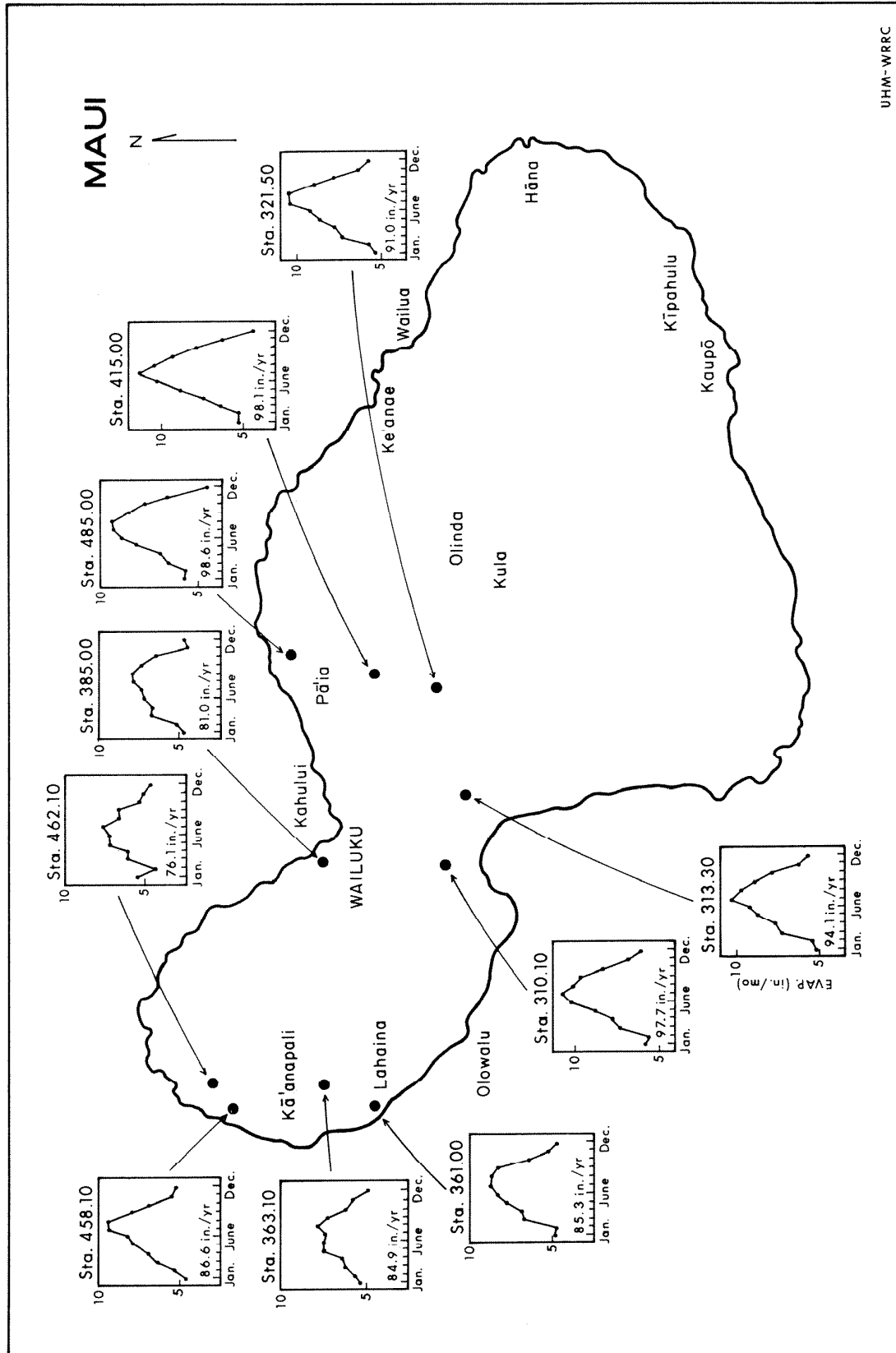


Figure 19. Pattern of monthly pan evaporation for selected stations, Maui

Hawai'i

Pan and sunlight measurements on the windward coasts were used to set evaporation values (Table 7; Figs. 20, 21), but measurements on the leeward areas and the central mountain masses were not available. The massive mountain masses of Mauna Kea and Mauna Loa reach well above the tradewind inversion and set up unique patterns of cloud and wind flow.

The bow wave and nocturnal downslope flow from the major mountains directly oppose the trade winds on the windward coasts, and light winds and reduced sunlight combine to cut evaporation along the coast to 75% that of the ocean and to 25% of the ocean value in the inland maximum rainfall zone. Monthly values are nearly constant throughout the year.

At 5000 ft, increased mixing of dry air from above the inversion and reduced cloudiness cause evaporation again to increase to about 33% that of the ocean. The single observation site in the clear, dry air above the inversion near the Mauna Kea crest suggests that evaporation increases to 50% more than surface oceanic rates.

On the southern slopes of Mauna Loa near Pāhala, upslope flow of the trade winds form orographic clouds which reduce evaporation to 75% that of the ocean nearby and causes nearly constant monthly rates of evaporation.

Wind flow diverted through the Mauna Kea-Kohala saddle at first increases evaporation about 10% near the coast, but cloudiness and higher elevation inland reduce evaporation to 50% that of oceanic. As the wind exits the saddle area, evaporation increases to 75% that of oceanic at Waimea. Further to the lee over the dry, dark barren lava flows, annual rates are as great as 50% above the oceanic with summer values greater than 12 in./mo and even winter values more than 6 in./mo.

Increased wind flow about the northern tip of the island causes a 20% increase in evaporation above the oceanic.

On the sheltered lee slopes, complex land-sea breeze wind regimes cause clouds, and light wind flow is about 40% that of the oceanic values beneath the clouds, but increase again with elevation where dry air is mixed from above the inversion.

TABLE 7. STATION NUMBER, PERIOD OF RECORD, MEASURED EVAPORATION, PAN TYPE, AND ADJUSTED EVAPORATION FOR HAWAI'I ISLAND

STATION NUMBER	PERIOD OF RECORD	ANNUAL EVAP. (in.)	PAN DESCRIPTION				FACTOR		ADJ. ANNUAL [†] (in./yr)	
			Compo- sition	Paint	Eleva- tion	Other Notes	Pan	Sun- light		
11.00	1962-72	52.21	galv.	Al	surf.			1.08	1.02	55.3
12.14	1962-64	67.72	galv.	Al	surf.			1.08	1.02	71.7
13.00	1962-73	63.30	galv.	Al	surf.			1.08	1.02	67.1
14.00	1962-73	73.89	galv.	Al	surf.			1.08	1.02	78.3
21.00	1931-45	63.31	galv.		surf.			1.0	1.0	63.3
87.00	1955-68	65.89	monel		surf.			1.0	1.05	62.8
89.50	1963-66	45.18	galv.	Al	surf.			1.08	1.04	46.9
90.10	..... 1963-83	..... 59.96	galv. s. steel	Al	surf. 7 ft			1.03	0.98	63.0
95.60	1975-76	108.0*	wash tub		surf.			.....	.....	.....
160.00	1960-71	95.36	galv.	Al	surf.			1.08	1.0	103.0
160.30	1965-66	.....				18" diam		.....	.....	.....
161.00	1961-71	81.66	galv.	Al	surf.			1.08	1.0	88.2
166.00	1968-71	92.37	s. steel		5 ft			0.97	1.0	89.6
168.00	1963-75	83.22	galv.	Al	surf.			1.08	0.99	90.8
171.00	1962-63	92.86	galv.	Al	surf.			1.08	1.06	94.6
173.00	1960-63	74.65	galv.	Al	surf.			1.08	1.06	76.1
176.00	1961-71	74.54	galv.	Al	surf.			1.08	1.0	80.1
179.00	1962-67	82.02	galv.	Al	surf.			1.08	1.0	88.6
179.10	1966-71	82.23	galv.	Al	surf.			1.08	1.0	88.8
182.00	1962-65	66.06	galv.	Al	surf.			1.08	1.05	67.9
191.10	1976-84	64.41	s. steel		5 ft			0.97	1.0	62.5
201.20	1967-69	41.02	galv.		surf.			1.0	1.0	41.0
203.20	1977-84	44.58	galv.		surf.			1.0	0.95	42.4
206.00	1963-64	79.91	galv.	Al	surf.			1.08	1.03	83.8
211.10	1961-64	57.01	galv.	Al	surf.			1.08	1.05	58.6
213.00	..... 1963-83	..... 88.44	galv. galv.	Al white	surf. 5 ft			..... 1.08	..... 0.98	..... 97.5
213.10	..... 1964-83	..... 80.96	galv. s. steel	Al	surf. 6 ft			..... 1.03	..... 0.98	..... 85.1
214.10	1961-64	72.30	galv.	Al	surf.			1.08	1.05	74.4
215.30	1964-83	61.74	s. steel	Al	surf.			0.97	0.99	60.5

*Estimated.

†Adjusted annual = measured annual × pan correction ÷ sunlight correction.

TABLE 7—Continued

STATION NUMBER	PERIOD OF RECORD	ANNUAL EVAP. (in.)	PAN DESCRIPTION				FACTOR		ADJ. ANNUAL (in./yr)
			Compo- sition	Paint	Eleva- tion	Other Notes	Pan	Sun- light	
215.40	1961-63	.....	galv.	Al	surf.		.....	.....	.....
216.30	1962-65	53.47	galv.	Al	surf.		1.08	1.05	55.0
216.40	1962-70	69.9	galv.	Al	surf.		1.08	1.04	72.6
216.50	1964-70	70.45	galv.	Al	surf.		1.08	1.03	73.9
217.00	1966-68	79.98	galv.	Al	surf.		1.08	1.0	85.6
218.00	1974-83	75.64	galv.	Al	6 ft		0.97	0.95	77.2
218.20	1973-83	86.8	galv.	Al	surf.		0.97	0.95	88.6
220.00	1962-70	68.81	galv.	Al	surf.		1.08	1.0	74.3
220.40	1960	.....	galv.	Al	5 ft		.....	.....	.....
220.50	1962-70	79.91	galv.	Al	surf.		1.08	1.0	86.3
221.30	.....	.....	galv.	Al	surf.		.....	.....	.....
	1964-82	79.79	s. steel		6 ft		1.03	0.98	83.9

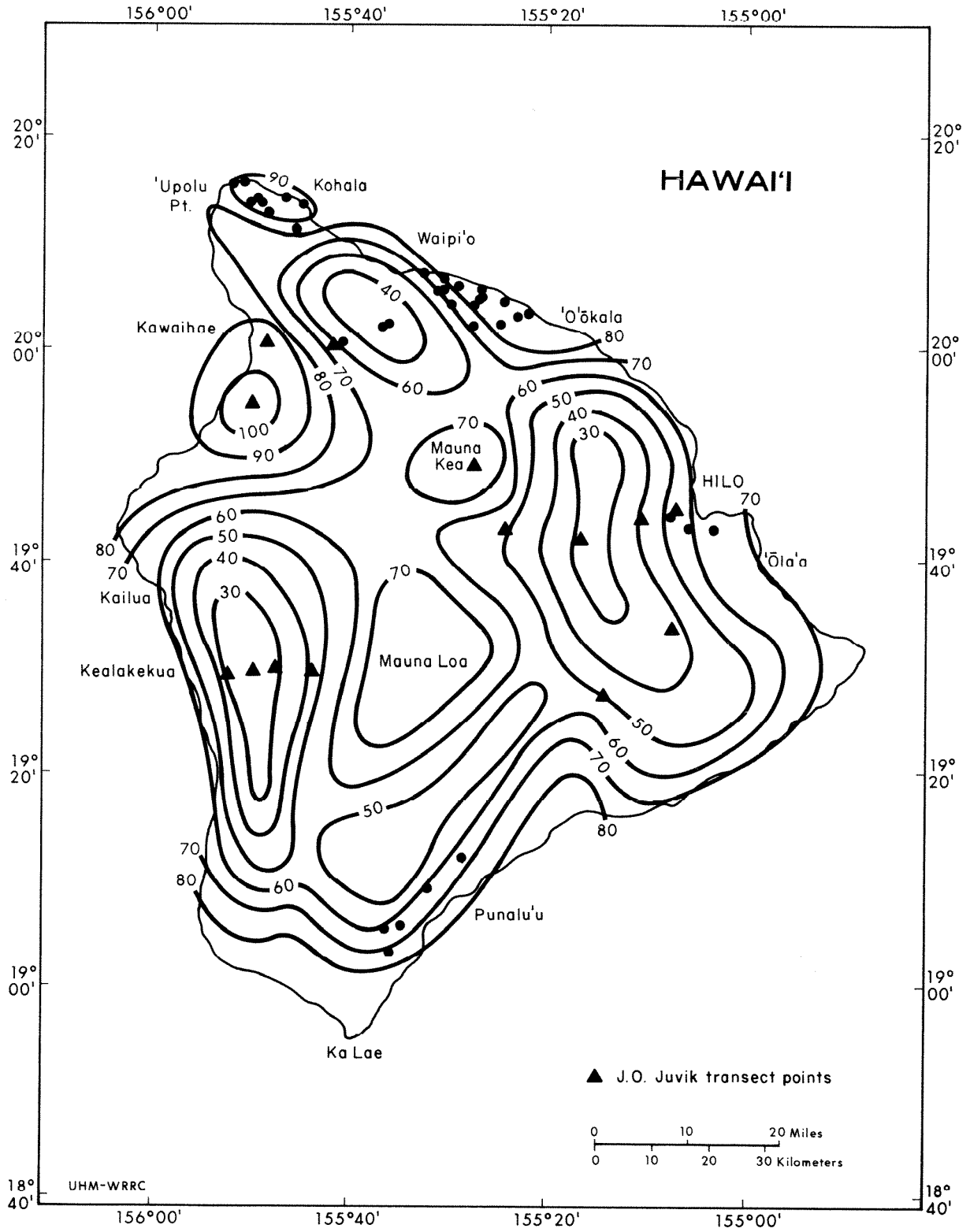


Figure 20. Adjusted annual pan evaporation for Hawai'i Island

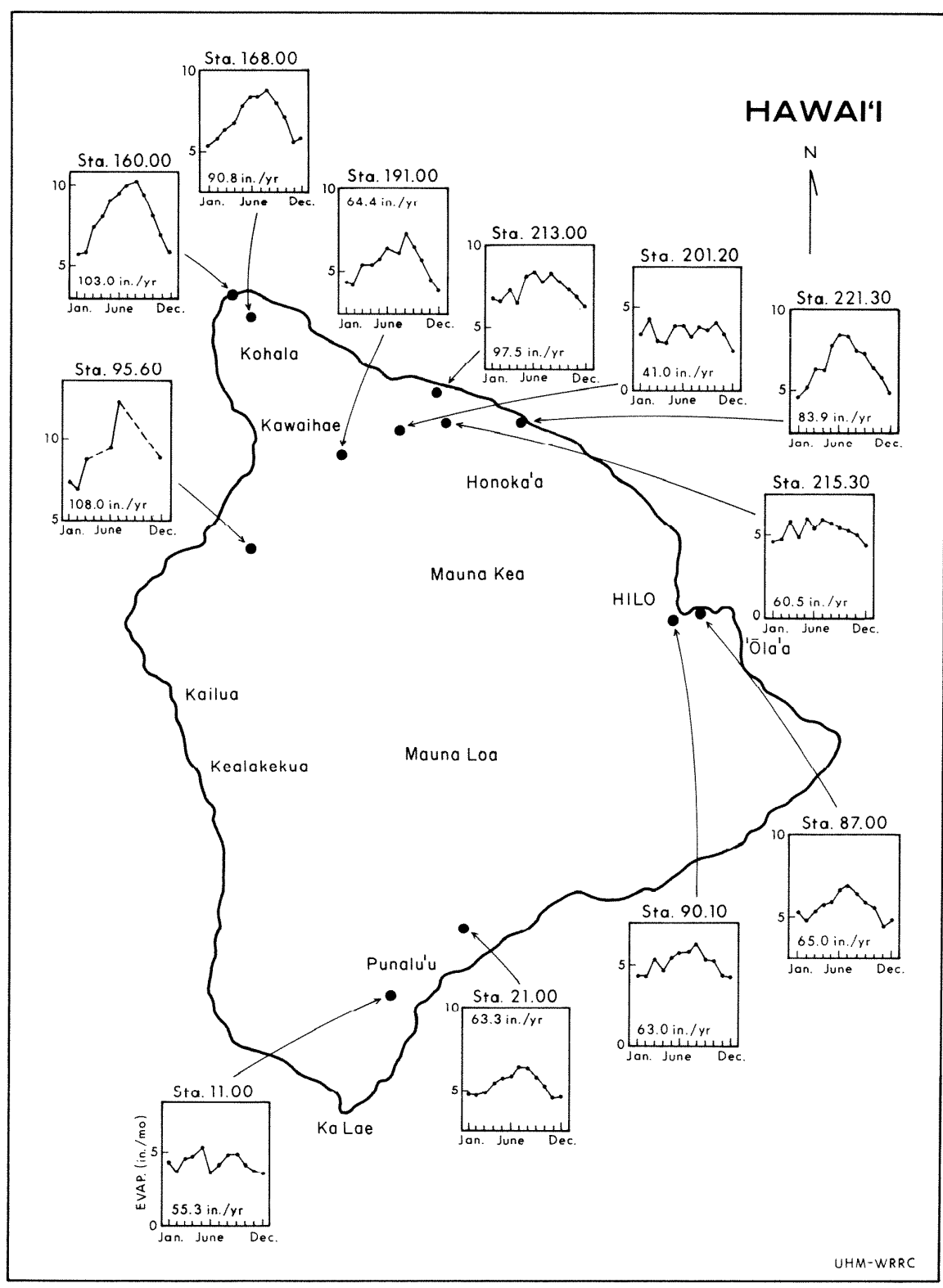


Figure 21. Pattern of monthly pan evaporation for selected stations, Hawaii'i Island

USE OF PAN EVAPORATION RECORDS

The series of maps showing the distribution of pan evaporation rates should be interpreted and utilized with care. It is necessary to understand differences (1) between evaporation and transpiration, and (2) in energy budget and aerodynamic properties between evaporation pan and vegetated surfaces.

The transpiration process may be physically described in terms of a resistance to a diffusive and turbulent vapor flux in the external air--a similar diffusive resistance that results from the internal leaf geometry, including stomata and, parallel to the latter, a resistance to vapor diffusion through the cuticle. In contrast, the last two resistances do not exist in the free water evaporation.

Reservoir

The ratio of reservoir to pan evaporation is called the pan coefficient. Kohler, Nordenson, and Fox (1955) have presented a map of the average annual Class A pan coefficient over the U.S. Values range from less than 0.60 in the Imperial Valley of California to more than 0.80 over the northern Great Lakes and in eastern Maine. They have cautioned that these values are unlikely to be within 10% accuracy for annual values and should never be used for estimates of monthly values in a climate of pronounced seasonal variation.

The relationship between reservoir and pan evaporation is basically dependent on three factors: the vapor transfer coefficient; the saturation vapor pressure, or the temperature of the water surface; and the vapor pressure of the overlying air. For a given wind speed, the vapor transfer coefficient increases with the roughness of the surface, which is determined by the nature of the surrounding terrain in the case of reservoirs and by the height of the pan rim in the case of an evaporation pan.

The saturation vapor pressure is a function of the water temperature. In mid-latitude the large heat storage of a reservoir, in comparison with a pan, greatly affects their relationship from one season to another. In the humid tropics, air and shallow-water temperatures do not differ greatly, while reservoir surface temperature is somewhat lower. In humid regions vapor pressure of the air is likely to be the same over small and large water surfaces. Therefore, the evaporation pan is likely to be a more accurate estimator of

reservoir evaporation in Hawai'i than in most other parts of the U.S. and the pan coefficient is probably in the neighborhood of 0.8.

Crops

With due caution, the use of evaporation pans to estimate crop water use for periods of a week or longer is warranted and widely practiced. Doorenbos and Pruitt (1975) have suggested that potential evapotranspiration, or also known as reference crop evapotranspiration (ET_0) in their terminology, can be related to pan evaporation (E_{pan}) by the pan coefficient (K_p) as

$$ET_0 = K_p \cdot E_{pan} \cdot$$

Doorenbos and Pruitt (1975) have reviewed many studies of pan coefficients and expressed the average values as a function of relative humidity and wind speed.

In lowland areas of Hawai'i below the tradewind inversion, relative humidity exceeds 70% and wind speed is moderate. In high mountains above the inversion layer, relative humidity is low and wind speed can be moderate to strong (Mendonca 1969).

The definition of potential evapotranspiration, or ET_0 , is very precise. It refers to the rate of evapotranspiration from an extended surface of short, green grass cover of uniform height, actively growing, completely shading the ground, and not short of water. Therefore, even when the water supply is adequate, evapotranspiration from a tall, rough crop surface or during the ripening stage when the crop is not actively growing may depart from the potential rate. The ratio between crop evapotranspiration and the reference crop evapotranspiration is known as the crop coefficient, K_c . Doorenbos and Pruitt (1975) have summarized crop coefficients for many crops.

The approach by Doorenbos and Pruitt (1975) consists of two steps: (1) an estimation of potential evapotranspiration, or reference crop evapotranspiration from pan evaporation under various climatic conditions; and (2) an estimation of crop evapotranspiration for any species and stage of development by the crop coefficient.

Use to pan ratios have been measured for several crops in Hawai'i. During the first five months from germination to the establishment of a full canopy of sugarcane, the ratio (at canopy level) increases from 0.40 to 1.01 (Jones 1980). After the establishment of full canopy, the ratio reaches

a peak of 1.20 at 10 mo and then declines gradually to 0.98 at 17 mo. For furrow- or sprinkler-irrigated mature sugarcane, the ratio is 1.0 with a surface pan. Drip-irrigated cane uses an average 0.8 of the annual surface pan evaporation or 0.7 of the pan elevated to 5 ft (1.52 m) height, about 15% less than sprinkler- or furrow-irrigated cane.

Evapotranspiration by Bermudagrass is essentially the same as Class A pan evaporation when soil moisture stress is small (Ekern 1966a). As the soil moisture stress increases, the grass sod maintains high rates of water use until the soil moisture stress exceeds 1 bar, but is unable to maintain these rates as the soil moisture stress increases toward the 15-bar level.

Pineapple evapotranspiration rate is only one-fifth that of pan evaporation (Ekern 1965c). The greatly reduced transpiration rate is largely due to daytime suppression of water vapor exchange by the pineapple leaf. Lettuce and Chinese cabbage in the winter season has a pan ratio of 1.0. Under drip irrigation the pan ratio is about 0.60 for lettuce, and between 0.70 and 0.80 for Chinese cabbage (Wu 1972).

Evaporation from Low Humic Latosols (Oxisols) in Hawai'i at field moisture content is only one-third the rate from a pan (Ekern 1966b). Similar low evaporation rates have also been reported for tropical soils in Puerto Rico.

SUMMARY

Measurements of pan evaporation in Hawai'i began in 1894 and eventually included intermittent observations for over 200 sites. Most sites had standard, galvanized Class A pans on the surface, but many were later replaced with stainless steel pans to avoid corrosion and set on 5 ft high platforms. Sites were concentrated in the dry lowland areas since measurements were used to schedule crop irrigation. Crop water use measured with lysimeters was utilized to develop empirical relationships between pan evaporation and actual crop evapotranspiration. Small, rain-shielded evaporimeters have extended evaporation measurements into the high rainfall areas.

Tables of monthly and annual values of evaporation were assembled and the standard deviation from the mean determined. Maps of annual evaporation were prepared for each of the four major islands from pan values adjusted for sunlight, pan composition, and elevation to represent an equivalent evaporation from a galvanized pan at the surface.

The standard deviation decreased from nearly 30% of the mean for daily observation, but only 15% for monthly and 7% of the mean for annual values and the distribution of pan evaporation from the records of longer duration approached normality.

Empirical relationships between evaporation and more readily available meteorological data, such as temperature and rainfall, were explored and found to have limited application even for the longer term annual evaporation rates.

The pattern of annual evaporation for the islands differs from the equilibrium value of 80 in./yr produced by the long fetch of the trade winds over the ocean as the pattern of cloudiness, sunlight, and rainfall changes in response to wind flow over the island topography. Evaporation on the windward coasts is much the same as that over the ocean, except where the massive bulk of Mauna Loa and Mauna Kea blocks the tradewind flow and reduces evaporation on the windward coast of Hawai'i Island 10 to 20% below that over the ocean. As the trade winds move onshore, the orographic cloud which forms causes evaporation to decrease rapidly inland to less than 30% of the oceanic rate. Beneath this persistent summer cloud, monthly evaporation rates remain nearly constant throughout the year. Evaporation increases 10 to 20% where winds increase around the ends of the islands or in saddles between the mountains where cloudiness was not great. Summer evaporation rates are greater than 12 in./mo on the dry leeward coastal plains where positive advection of heat increases annual pan evaporation rates 30 to 40% above those over the nearby ocean. Only in the leeward Kona area of Hawai'i Island is the sea-breeze cloud sufficient to reduce evaporation. The initial decrease in evaporation with an increase in elevation changes in the dry, sunny and windy sites above the tradewind inversion, and evaporation above the 6000-ft elevation on the high mountain slopes increases to again equal or to exceed rates near sea level.

REFERENCES CITED

- Baver, L.D. 1954. The meteorological approach to irrigation control. Hawaiian Planters' Record 84(4):291-298.
- Bloemen, G.W. 1978. A high-accuracy recording pan-evaporimeter and some of its possibilities. J. Hydrol. 39:159-173.
- Blumenstock, D.I., and Price, S. 1961. Climate of the states: Hawaii. Climatography of the United States No. 60-51, Environmental Science Services Administration, U.S. Department of Commerce. Washington, D.C.: Government Printing Office. 27 pp. (revised, reprinted 1967)
- Blundell, S.B. 1974. Evaporation to the lee of a shelterbelt. Agric. Meteorol. 13:395-398.
- Brakensiek, D.L.; Osborn, H.B.; and Rawls, W.J. 1979. Field manual for research in agricultural hydrology. Agric. Handbook 224, U.S. Department of Agriculture. 550 pp.
- Brunt, D. 1941. Physical and dynamical meteorology. Cambridge: At the University Press.
- Brutsaert, W., and Yeh, G.-T. 1970. Implications of a type of empirical evaporation formula for lakes and pans. Water Resour. Res. 6(4): 1202-1208.
- Brutsaert, W., and Stricker, H. 1979. An advection-aridity approach to estimate actual regional evapotranspiration. Water Resour. Res. 18(2): 443-450.
- Burt, J.E.; Hayes, J.T.; O'Rourke, P.A.; Terjung, W.H.; and Todhunter, P.E. 1981. A parametric crop water use model. Water Resour. Res. 17(4): 1095-1108.
- Camillo, P.J., and Gurney, R.J. 1984. A sensitivity analysis of a numerical model for estimating evapotranspiration. Water Resour. Res. 20(1):105-112.
- Campbell, R.B.; Chang, J.H.; and Cox, D.C. 1959. Evapotranspiration in Hawaii as measured by in-field lysimeters in relation to climate. In Proc., Int. Soc. Sugar Cane Technologists 14:805-812.
- Campbell, R.B., and Phene, C.J. 1976. Estimating potential evapotranspiration from screened pan evaporation. Agric. Meteorol. 16:343-352.
- Carder, A.C. 1960. Atmometer assemblies, a comparison. Can. J. Plant Sci. 40(4):700-706.
- Carder, A.C. 1968. The black Bellani-type atmometer as an instrument to estimate the evapotranspiration of crop plants. Int. J. Biometeorol. 12(1):11-14.

- Caskey, M.C. 1968. "The recharge of the Waikapu Aquifer, Maui." Master's thesis, University of Hawaii, Honolulu. 75 pp.
- Conrad, V. 1944. Methods in climatology. Cambridge: Harvard University Press.
- Criddle, W.D. 1953. Consumptive use of water and irrigation requirements. J. Soil Water Conserv. 8(5):207-212, 243.
- Culler, R.C.; Hanson, R.L.; and Jones, J.E. 1976. Relation of the consumptive use coefficient to the description of vegetation. Water Resour. Res. 12(1):40-46.
- Dale, R.F., and Scheeringa, K.L. 1977. The effect of soil moisture on pan evaporation. Agric. Meteorol. 18:463-474.
- Daniels, P.A., and Schroeder, T.A. 1978. Air flow in the central valley of Maui, Hawaii. J. Appld. Meteorol. 17:812-818.
- Davenport, D.C. 1967a. Variations of evaporation in time and space. I. Study of diurnal changes using evaporimeters and grass lysimeter. J. Hydrol. 5:312-328.
- Davenport, D.C. 1967b. Variations in evaporation in time and space. II. Study of spatial changes using evaporimeters. J. Hydrol. 5:329-350.
- Davenport, D.C., and Hudson, J.P. 1967. Meteorological observations and Penman estimates along a 17-km transect in the Sudan Geizira. Agric. Meteorol. 4:405-414.
- Davis, J.R. 1963. Relationship of can evaporation to pan evaporation and evapotranspiration. J. Geophys. Res. 68(20):5711-1718.
- Dilley, A.C., and Helmond, I. 1973. The estimation of net radiation and potential evapotranspiration using atmometer measurements. Agric. Meteorol. 12:1-11.
- Division of Water and Land Development. 1961. Pan evaporation data: State of Hawaii. Rep. R17, Department of Land and Natural Resources, State of Hawaii, Honolulu. 54 pp.
- Division of Water and Land Development. 1973a. Climatologic stations in Hawaii. Rep. R42, Department of Land and Natural Resources, State of Hawaii, Honolulu. 187 pp.
- Division of Water and Land Development. 1973b. Pan evaporation in Hawaii: 1894-1970. Rep. R51, Department of Land and Natural Resources, State of Hawaii, Honolulu. 82 pp.
- Division of Water and Land Development. 1982. Median rainfall: State of Hawaii. Circ. C88, Department of Land and Natural Resources, State of Hawaii, Honolulu. 45 pp.

- Doorenbos, J., and Pruitt, W.O. 1975. Crop water requirements. Irrigation and Drainage Paper 24, Food and Agriculture Organization of the United Nations, Rome, Italy.
- Ekern, P.C. 1960. "The evapotranspiration of pineapple in Hawaii." Pineapple Research Institute, Honolulu, Hawaii. 233 pp.
- Ekern, P.C. 1965a. The fraction of sunlight retained as net radiation in Hawaii. J. Geophys. Res. 70:785-793.
- Ekern, P.C. 1965b. Disposition of net radiation by a free water surface in Hawaii. J. Geophys. Res. 15:795-800.
- Ekern, P.C. 1965c. Evapotranspiration of pineapple in Hawaii. Plant Physiol. 40:736-739.
- Ekern, P.C. 1966a. Evapotranspiration by bermudagrass sod, Cynodon dactylon L. Pers., in Hawaii. Agron. J. 58:387-390.
- Ekern, P.C. 1966b. Evaporation from bare low humic latosol in Hawaii. J. Appld. Meteorol. 5:431-435.
- Ekern, P.C. 1967. Pilot evapotranspiration study: Lysimeter design. Tech. Rep. No. 13, Water Resources Research Center, University of Hawaii, Honolulu. 19 pp.
- Ekern, P.C. 1977. Drip irrigation of sugarcane measured by hydraulic lysimeters, Kunia, Oahu. Tech. Rep. No. 109, Water Resources Research Center, University of Hawaii at Manoa, Honolulu. 99 pp.
- Ekern, P.C. 1978. Variation in sunlight induced by topography under the tradewind regime on Oahu, Hawaii. Preprint Vol., Conference on Climate and Energy: Climatological Aspects and Industrial Operations, 8-12 May 1978, at Ashville, North Carolina, American Meteorological Society, Boston, Massachusetts, pp. 56-61.
- Ekern, P.C. 1983. Measured evaporation in high rainfall areas, leeward Ko'olau Range, O'ahu, Hawai'i. Tech. Rep. No. 156, Water Resources Research Center, University of Hawaii at Manoa, Honolulu. 60 pp.
- Ekern, P.C., and Yoshihara, T. 1977. Hawaii solar radiation summary. In Alternative Energy Sources: An International Compendium, December 1977, at Miami Beach, Florida, vol. 1, pp. 69-90.
- Ekern, P.C., and Garrett, A.J. 1979. Project Ahupua'a—Solar meteorological field measurements on the island of Hawaii, Summer 1978-2. Eastern flank of Mauna Loa. UHMET 79-04, Department of Meteorology, University of Hawaii, Honolulu. 56 pp.
- Ekern, P.C., and Becker, R.J. 1982. Project Ahupua'a—Solar meteorological field measurements on the island of Hawaii, Summer 1978 - 5. Southern flank of Mauna Loa, UHMET 79-08, Department of Meteorology, University of Hawaii, Honolulu. 54 pp.

- Farnsworth, R.K., and Thompson, E.S. 1982. Mean monthly seasonal and annual pan evaporation for the United States. NOAA Tech. Rep. NWS 34, Office of Hydrology, National Weather Service, Washington, D.C. 85 pp.
- Farnsworth, R.K.; and Thompson, E.S.; and Peck, E.L. 1982. Evaporation atlas for the contiguous 48 United States. NOAA Tech. Rep. NWS 33, National Weather Service, National Oceanic and Atmospheric Administration, U.S. Department of Commerce, Washington, D.C. 26 pp., 4 maps.
- Federer, C.A. 1982. Transpirational supply and demand: Plant, soil and atmospheric effects evaluated by simulation. Water Resour. Res. 18(2): 355-362.
- Giambelluca, T.W. 1983. Water balance of the Pearl Harbor-Honolulu basin, Hawai'i, 1946-1975. Tech. Rep. No. 151, Water Resources Research Center, University of Hawaii at Manoa, Honolulu. 151 pp.
- Grant, D.R. 1975. Comparison of evaporation measurements using different methods. Quart. J. Roy. Meteorol. Soc. 101(429):543-550.
- Halkias, N.A.; Veihmeyer, F.J.; and Hendrickson, A.H. 1955. Determining water needs for crops from climatic data. Hilgardia 24(9):207-233.
- Handley, L.L., and Ekern, P.C. 1981. Irrigation of Californiagrass with domestic sewage effluent: Water and nitrogen budgets and crop productivity. Tech. Rep. No. 141, Water Resources Research Center, University of Hawaii at Manoa, Honolulu. 29 pp.
- Handley, L.L., and Ekern, P.C. 1984. Effluent irrigation of para grass: Water, nitrogen, and biomass budgets. Water Resour. Bull. 20(5):669-677.
- Hanson, C.L., and Rauzi, F. 1977. Class A pan evaporation as affected by shelter, and a daily prediction equation. Agric. Meteorol. 18:27-35.
- Hawaii Weather Bureau. 1897. Weather records for Honolulu and the Hawaiian Islands. Hawaiian Governmental Survey, Republic of Hawaii.
- Helvey, J.D., and Patrick, J.H. 1983. Sampling accuracy of pit vs. standard rain gages on the Fernow Experimental Forest. Water Resour. Bull. 19: 87-89.
- Hoffert, M.I.; Flannery, B.P.; Callegari, A.J.; Hsieh, C.-T.; and Wiscombe, W. 1983. Evaporation-limited tropical temperatures as a constraint on climatic sensitivity. Atmos. Sci. 40:1659-1668.
- Holdridge, L.R. 1959. Simple method for determining potential evapotranspiration from temperature data. Science 130(3375):572.
- Hounam, C.E. 1961. Evaporation in Australis: A critical survey of the results of observations. Bull. No. 44, Bureau of Meteorology, Commonwealth of Australia.

- How, K.T.S. 1978. Solar radiation in Hawaii, 1932-1975. R57 (prepared by Hawaiian Sugar Planters' Association Experiment Station), Division of Water and Land Development, Department of Land and Natural Resources, State of Hawaii, Honolulu.
- Iruthayaraj, M.R., and Morachan, Y.B. 1978. Relationship between evaporation from different evaporimeters and meteorological parameters. Agric. Meteorol. 19:92-100.
- Jones, C.A. 1980. A review of evapotranspiration studies in irrigated sugarcane in Hawaii. Hawaiian Planters' Record 59(9):195-214.
- Juvik, J.O.; Singleton, D.C.; and Clarke, G.G. 1978. Climate and water balance on the island of Hawaii. In Mauna Loa Observatory: A 20th Anniversary Report, ed. J. Miller, NOAA Special Rep., Environmental Research Laboratories, U.S. Department of Commerce, pp. 128-139.
- Kalma, J.D.; Lomas, J.; Thaller, M.; and Shashoua, Y. 1969. An accurate small orifice rain gage. Water Resour. Res. 5(10):857-863.
- Kanehiro, B.Y., and Peterson, F.L. 1977. Groundwater recharge and coastal discharge for the northwest coast of the island of Hawai'i: A computerized water budget approach. Tech. Rep. No. 110, Water Resources Research Center, University of Hawaii at Manoa, Honolulu. 60 pp.
- Kohler, M.A.; Nordenson, T.J.; and Fox, W.E. 1955. Evaporation from pans and lakes. Res. Paper 38, U.S. Weather Bureau.
- Larson, L.W., and Peck, E.L. 1974. Accuracy of precipitation measurements for hydrological modeling. Water Resour. Res. 5:300-305.
- Linacre, E.T. 1977. A simple formula for estimating evaporation rates in various climates, using temperature data alone. Agric. Meteorol. 18:409-424.
- Linacre, E.T., and Till, M. 1969. Irrigation timing and amounts. J. Aust. Inst. Agric. Sci. 35:175-196.
- Lomas, J., and Schlesinger, E. 1971. The influence of a windbreak on evaporation. Agric. Meteorol. 8:107-115.
- Lyons, S.W. 1979. Summer weather on Haleakala, Maui. UHMET 79-09, Department of Meteorology, University of Hawaii, Honolulu. 56 pp.
- Mendonca, B.G. 1969. Local wind circulation on the slopes of Mauna Loa. J. Appld. Meteorol. 8:533-541.
- Mendonca, B.G., and Iwaoka, W.T. 1969. The trade wind inversion at the slopes of Mauna Loa, Hawaii. J. Appld. Meteorol. 8:213-219.
- Mink, J.F. 1962. Rainfall and runoff in the leeward Koolau mountains, Oahu, Hawaii. Pac. Sci. 16(2):147-159.

- Mueller-Dombois, D. 1967. Ecological relations in the alpine and subalpine vegetation on Mauna Loa, Hawaii. J. Indian Bot. Soc. 46(4):403-411.
- National Oceanic and Atmospheric Administration. Total evaporation and wind movement.
1920-1972. In Climatological data annual summary: Hawaii, vols. 16-68, Weather Bureau, U.S. Department of Commerce.
1973-1983. In Climatological data annual summary: Hawaii and Pacific, vols. 69-79, National Climatic Data Center, Asheville, No. Carolina, U.S. Department of Commerce.
- National Oceanic and Atmospheric Administration. 1979. NWS observing handbook No. 1: Substation Observations. National Weather Service, U.S. Department of Commerce, Washington, D.C. (rev.). 77 pp.
- Newell, R.E. 1979. Climate and the ocean. Am. Sci. 67:405-416.
- Noffsinger, T.L. 1961. Solar radiation and crop water requirements as factors in land productivity classification. Tech. Paper No. 5, Land Study Bureau, University of Hawaii, Honolulu. 9 pp.
- Noguchi, Y. 1979. Deformation of trees in Hawaii and its relation to wind. J. Ecol. 67:611-628.
- Nordenson, T.J., and Baker, D.R. 1962. Comparative evaluation of evaporation instruments. J. Geophys. Res. 67(2):671-679.
- Pelton, W.L. 1963. "Evaporation from atmometers and pans." Paper presented to 5th National Conf. on Agricultural Meteorology, 4-5 April 1963, at Lakeland, Florida, 11 pp.
- Phene, C.J., and Campbell, R.B. 1975. Automating pan evaporation measurements for irrigation control. Agric. Meteorol. 15:181-191.
- Priestley, C.H.B. 1966. The limitation of temperature by evaporation in hot climates. Agric. Meteorol. 3:241-246.
- Priestley, C.H.B., and Taylor, R.J. 1972. On the assessment of surface heat flux and evaporation using large-scale parameters. Mon. Weather Rev. 100(2):89-92.
- Ramage, C.S. 1978. Effect of the Hawaiian Islands on the trade winds. Preprint Vol., Conf. on Climate and Energy: Climatological Aspects and Industrial Operations, 8-12 May 1978, at Asheville, North Carolina, American Meteorological Society, Boston, Massachusetts, pp. 62-67.
- Ramage, C.S. 1979. Prospecting for meteorological energy in Hawaii. Bull. Am. Meteorol. Soc. 60(5):430-438.
- Rasmusson, E.M. 1985. El Niño and variations in climate. Am. Sci. 73:168-177.
- Reed, R.K. 1980. Comparison of ocean and island rainfall in the tropical North Pacific. J. Appld. Meteorol. 19:877-880.

- Richards, L.A., and Stumpf, H.T. 1966. Graphical recorder for a pan evaporimeter. Water Resour. Res. 2(2):209-212.
- Riley, J.J. 1966. The heat balance of a Class A evaporation pan. Water Resour. Res. 2(2):223-226.
- Ripley, E.A. 1976. Comments on "Gamma - The psychrometer non-constant." J. Appld. Meteorol. 15:1027-1028.
- Ritchie, J.T. 1972. Model for predicting evaporation from a row crop with incomplete cover. Water Resour. Res. 8(5):1204-1213.
- Roberts, W.J., and Stall, J.B. 1966. Computing lake evaporation in Illinois. Water Resour. Res. 2(2):205-208.
- Robinson, F.E.; Campbell, R.B.; and Chang, J.-h. 1963. Assessing the utility of pan evaporation for controlling irrigation of sugar cane in Hawaii. Agron. J. 55:444-446.
- Sadler, J.C., and Kilonsky, B.J. 1981. Trade wind monitoring using satellite observations. UHMET 81-01, Department of Meteorology, University of Hawaii, Honolulu. 72 pp.
- Sadler, J.C.; Ramage, C.S.; and Hori, A.M. 1982. Carbon dioxide variability and atmospheric circulation. J. Appld. Meteorol. 21:793-805.
- Schroeder, T.A. 1981. Characteristics of local winds in northwest Hawaii. J. Appld. Meteorol. 20:874-881.
- Seckel, G.R. 1962. Atlas of the oceanographic climate of the Hawaiian Islands region. Fishery Bull. 193, from Fishery Bulletin of the Fish and Wildlife Service 61:373-427, Fish and Wildlife Service, U.S. Department of the Interior.
- Seckel, G.R. 1970. The trade wind zone oceanography pilot study. Part VIII: Sea-level Meteorological properties and heat exchange processes, July 1963 to June 1965. Spec. Sci. Rep.--Fish Series 612, Fish and Wildlife Service, U.S. Department of the Interior. 129 pp.
- Shouse, P.; Jury, W.A.; and Stolzy, L.H. 1980. Use of deterministic and empirical models to predict potential evapotranspiration in an advective environment. Agron. J. 72:994-998.
- Sims, J.R., and Jackson, G.D. 1971. Field measurement of pan evaporation. Agron. J. 63:339-340.
- Skidmore, E.L., and Hagen, L.J. 1970. Evaporation in sheltered areas as influenced by windbreak porosity. Agric. Meteorol. 7:363-374.
- Skidmore, E.L.; Jacobs, H.S.; and Powers, W.L. 1969. Potential evapotranspiration as influenced by wind. Agron. J. 61:543-546.
- Stanhill, G. 1962. The use of the Piche evaporimeter in the calculation of evaporation. Quart. J. Roy. Meteorol. Soc. 88:80-82.

- Stearns, H.T., and Vaksvik, K.V. 1935. Geology and ground-water resources of the island of Oahu, Hawaii. Bull. 1, Division of Hydrography, Territory of Hawaii, in cooperation with the Geological Survey, U.S. Department of the Interior. 479 pp.
- Stearns, H.T.; Swartz, J.H.; and Macdonald, G.A. 1940. Supplement to the "Geology and ground-water resources of the island of Oahu, Hawaii." Bull. 5, Division of Hydrography, Territory of Hawaii, in cooperation with the U.S. Geological Survey, U. S. Department of the Interior. 164 pp.
- Stewart, J.I., and Hagan, R.M. 1969. Predicting effects of water shortage on crop yield. J. Irrig. Drain. Div., Am. Soc. Civ. Eng. 95(IR1):91-104.
- Stidd, C.K., and Leopold, L.B. 1951. The geographic distribution of average monthly rainfall, Hawaii. Meteorol. Monogr. I(3):24-33.
- Stigter, C.J. 1976. On the non-constant gamma. J. Appld. Meteorol. 15:1326-1327.
- Storr, D., and den Hartog, G. 1975. Gamma - The psychrometer non-constant. J. Appld. Meteorol. 14:1397-1398.
- Takasaki, K.J.; Hirashima, G.T.; and Lubke, E.R. 1969. Water resources of windward Oahu, Hawaii. Geological Survey Water-Supply Paper 1894, prepared in cooperation with Division of Water and Land Development, Department of Land and Natural Resources, State of Hawaii.
- Thorntwaite, C.W. 1948. An approach toward a rational classification of climate. Geogr. Rev. 38(1):55-94.
- Turk, L.J. 1970. Evaporation of brine: A field study on the Bonneville Salt Flats, Utah. Water Resour. Res. 6(4):1209-1215.
- Van Haveren, B.P., and Farmer, E.E. 1971. An insulated evaporimeter. Water Resour. Bull. 7(6):1250-1252.
- van't Woudt, B.D. 1960. Water level control in evaporation pans. J. Geophys. Res. 65(12):4031-4035.
- van't Woudt, B.D. 1963. A pan evaporimeter for rainy areas. Tech. Bull. 57, Hawaii Agricultural Experiment Station, University of Hawaii, Honolulu. 39 pp.
- Wartena, L., and Borghorst, A.J.W. 1960. The energy balance of an evaporation pan and the measurement of reflectivity of its bottom. Quart. J. Roy. Meteorol. Soc. 87:245-249.
- Wentworth, C.K. 1951. Geology and ground-water resources of the Honolulu-Pearl Harbor area, Oahu, Hawaii. Board of Water Supply, City and County of Honolulu. 111 pp.
- Wilcox, J.C. 1962. Note on the effects of shielding Bellani plates on the rate of evaporation. Can. J. Plant Sci. 42:400-401.

- Winter, T.C. 1981. Uncertainties in estimating the water balance of lakes. Water Resour. Bull. 17(1):82-115.
- Woo, K.B.; Boersma, L.; and Stone, L.N. 1966. Dynamic simulation model of the transpiration process. Water Resour. Res. 2(1):85-97.
- Wu, I-P. 1972. Consumptive use and irrigation scheduling of Hawaiian vegetable crops. In Int. Conf. on Tropical and Subtropical Agriculture, Honolulu, Hawaii, Spec. Pub. SP-01-72, pp. 247-251. St. Joseph, Michigan: American Society of Agricultural Engineers.
- Wyrтки, K., and Meyers, G. 1976. The trade wind field over the Pacific Ocean. J. Appld. Meteorol. 15:698-704.
- Young, A.A. 1947. Some recent evaporation investigations. Trans., Am. Geophys. Union 28(2):279-284.
- Yu, S.L.; Brutsaert, W. 1967. Evaporation from very shallow pans. J. Appld. Meteorol. 6:265-271.

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APPENDIX TABLE A.1. LOCATIONS OF PAN EVAPORATION STATIONS, STATE OF HAWAII

STATE KEY NO.	NWS NO.	STATION NAME	OBSERVER	PERIOD OF RECORD	FULL YRS	EL. (ft)	COORDINATES Latitude Longitude	
HAWAII ISLAND								
11.00		Makino	Kau Sugar	1962-1972	2	120	19°05'36"	155°36'06"
12.14		Field 700*	Hutchinson Sug	1962-1964	1	650	19°09'12"	155°31'19"
13.00		Waiubata	Kau Sugar	1962-1973	5	1375	19°05'58"	155°34'12"
14.00	6588	Naalehu	Kau Sugar	1962-1973	7	675	19°03'48"	155°35'24"
21.00	7421	Pahala	Kau Sugar	1931-1945	14	860	19°12'06"	155°28'47"
87.00	1492	Hilo Airport	Natl Weath Serv†	1955-1968	12	30	19°43'24"	155°03'36"
89.50		Amauulu Camp 4*	Hilo Sugar	1963-1966	1	900	19°44'12"	155°07'58"
90.10		Hawaii Sub Off*	HSPA	1963-1983	13	220	19°43'48"	155°05'54"
95.60		Waikoloa	UH-WRRC†	1975-1976	0	405	19°55'43"	155°50'11"
160.00		Station 3*	Kohala Sugar	1960-1971	10	200	20°15'30"	155°52'30"
160.30		Station 3†	Kohala Sugar	1965-1966	0	200	20°15'30"	155°52'30"
161.00	8181W	Puakea*	Parker Ranch	1961-1971	8	570	20°14'06"	155°52'24"
166.00		Station 14*	Kohala Sugar	1968-1971	2	125	20°15'54"	155°50'30"
168.00	1339	Hawi*	Kohala Sugar†	1963-1975	11	600	20°14'24"	155°49'48"
171.00		Station 5*	Kohala Sugar	1962-1963	0	425	20°14'28"	155°49'36"
173.00		Station 16*	Kohala Sugar	1960-1963	2	450	20°14'24"	155°49'06"
176.00	4675	Kohala Maulili*	Kohala Sugar	1961-1971	9	960	20°12'42"	155°47'18"
179.00	6806	Niulii*	Kohala Sugar	1962-1967	5	75	20°13'30"	155°44'48"
179.10	4670	Kohala	Kohala Sugar	1966-1971	4	310	20°14'00"	155°46'54"
182.00		Station 12*	Kohala Sugar	1962-1965	1	1000	20°11'54"	155°45'12"
191.10	5260	Lalamilo Fld Off	DOWALD	1976-1984	4	2620	20°00'50"	155°40'45"
201.20		Mealani Farm	UH-HITAHRT†	1967-1969	1	2700	20°02'25"	155°36'41"
203.20		Puu Pulehu Res	DOWALD	1977-1984	4	2760	20°02'33"	155°36'12"
206.00	4938	Kukuihaele Landg*	Hamakua Sugar†	1963-1964	0	300	20°07'36"	155°33'42"
211.10		Honokaa Pasture	Honokaa Sugar	1961-1964	2	1530	20°05'10"	155°30'30"
213.00		Kawela	Hamakua Sugar†	1963-1983	10	390	20°06'20"	155°30'00"
213.10		New Stable*	Honokaa Sugar	1964-1983	6	1125	20°05'26"	155°30'10"
214.10		Field 34-35	Honokaa Sugar	1961-1964	1	350	20°05'56"	155°28'18"
215.30		Ahualoa*	Honokaa Sugar	1964-1983	5	1835	20°04'17"	155°29'43"
215.40		Field 26	Honokaa Sugar	1961-1963	0	1050	20°05'25"	155°29'29"
216.30		Airport	Hamakua Sugar†	1962-1965	1	2075	20°02'42"	155°27'00"
216.40		PMA Plant	Hamakua Sugar†	1962-1970	6	1250	20°04'13"	155°26'57"

*See Alternate Names List.

†Small pan; same site as 160.00.

‡Revised.

APPENDIX TABLE A.1.—Continued

STATE KEY NO.	NWS NO.	STATION NAME	OBSERVER	PERIOD OF RECORD	FULL YRS	EL. (ft)	COORDINATES	
							Latitude	Longitude
216.50		Field 003	Paauhau Sugar	1964-1970	6	920	20°04'40"	155°26'45"
217.00	7204	Paauhau†	Hamakua Sugar†	1966-1968	0	400	20°05'12"	155°26'24"
218.00		Hamakua Mill*	Hamakua Sugar†	1974-1983	6	180	20°03'12"	155°21'42"
218.20		Field 328*	Hamakua Sugar†	1973-1983	7	345	20°03'48"	155°23'33"
220.00		PMA	Paauhau Sugar	1962-1970	6	1160	20°04'18"	155°26'48"
220.40		Field 14	Paauhau Sugar	1960	0	430	20°04'36"	155°25'12"
220.50		Field 015	Paauhau Sugar	1962-1970	6	300	20°04'14"	155°24'13"
221.30		Hamakua Makai*	HSPA	1964-1982	15	750	20°02'42"	155°24'35"
MAUI ISLAND								
296.10		Olowalu*	Pioneer Mill	1982	0	25	20°48'54"	156°37'18"
310.00		Field 906 Vil 7*	HC&S†	1960-1962; 1980	1 1	85	20°49'20"	156°30'15"
310.10		Field 906	HC&S	1962-1983	19	160	20°49'30"	156°30'00"
310.20		Field 906-2	HC&S	1964-1966	1	160	20°49'30"	156°30'00"
313.00	0260	Field 811 Vil 3*	HC&S	1963-1983	17	270	20°48'48"	156°26'12"
313.10		Field 815	HC&S	1960-1963	2	285	20°49'10"	156°26'12"
313.30		Field 821	HC&S	1971-1983	10	160	20°48'42"	156°27'03"
314.00		Reservoir 81*	HC&S	1960-1961; 1976-1981	1 5	530	20°49'12"	156°24'24"
314.10		Field 412	HC&S	1972-1983	10	630	20°48'11"	156°24'39"
316.00		Field 405*	HC&S	1960-1961	1	665	20°49'36"	156°23'42"
316.20		Field 405	HSPA	1957-1960	2	670	20°49'36"	156°23'42"
316.30		Field 404	HC&S	1966-1967	0	665	20°50'06"	156°23'25"
317.10		Field 408 MASI*	HSPA	1958-1960	1	780	20°48'54"	156°23'24"
317.20		Field 413	HC&S	1960-1977	14	777	20°48'58"	156°23'31"
321.50		Field 402	HC&S	1967-1983	14	760	20°49'56"	156°22'49"
361.00	5177	Lahaina*	Pioneer Mill	1963-1982	3	45	20°52'48"	156°40'36"
363.10		Field F-2*	Pioneer Mill	1963-1971	6	850	20°54'36"	156°39'42"
372.20		Field MB-7	Pioneer Mill	1970-1971	0	320	20°51'02"	156°38'41"
372.30		Field MG-9*	Pioneer Mill	1964-1970	2	60	20°50'39"	156°38'56"
373.00		Field LA-5*	Pioneer Mill	1982	0	975	20°52'54"	156°38'54"
385.00		Field 55*	Wailuku Sugar	1976-1983	1	200	20°54'15"	156°29'41"

*See Alternate Names List.

†Revised.

‡Former observer, HSPA.

APPENDIX TABLE A.1.—Continued

STATE KEY NO.	NWS NO.	STATION NAME	OBSERVER	PERIOD OF RECORD	FULL YRS	EL. (ft)	COORDINATES	
							Latitude	Longitude
388.00		Field 72	Wailuku Sugar	1976-1983	0	780	20°51'58"	156°30'46"
391.10		Field 95*	Wailuku Sugar	1976-1983	0	300	20°50'03"	156°30'15"
391.20		Field 201	Wailuku Sugar	1982-1983	0	225	20°50'25"	156°29'55"
393.00		Field 719	HC&S	1974-1983	8	150	20°51'00"	156°28'42"
394.00		Village 6*	HC&S	1964-1983	8	105	20°50'18"	156°28'18"
394.10		Field 911*	HC&S	1966-1983	15	105	20°50'34"	156°27'34"
396.00	8543	Puunene*	HC&S	1960-1983	21	60	20°52'30"	156°27'24"
401.00		Village 13*	HC&S	1962-1983	19	385	20°50'30"	156°24'54"
401.10		Field 809	HC&S	1966-1983	15	275	20°50'12"	156°26'00"
402.00	0280	Village 10*	HC&S	1971-1972	0	355	20°51'42"	156°24'24"
403.10		Field 601	HC&S	1966-1983	15	200	20°53'29"	156°23'40"
404.10		Field 603*	HC&S	1962-1966	3	205	20°52'42"	156°24'30"
404.30		Field 604	HC&S	1962-1966; 1971-1983	3 11	205	20°52'28"	156°24'49"
404.40		Field 604B	HC&S	1966-1970	3	160	20°52'35"	156°24'50"
404.50		Field 806-2	HC&S	1964	0	330	20°50'53"	156°25'14"
406.20		Field 211*	HC&S	1964	0	80	20°54'53"	156°22'44"
406.30		Field 116	HC&S	1982-1983	0	880	20°55'04"	156°22'15"
410.10		Field 502	HC&S	1966-1983	15	480	20°52'01"	156°23'20"
413.00		Kaheka*	HC&S	1960-1983	20	395	20°53'42"	156°22'00"
413.20		Field 205	HSPA	1957-1960	2	410	20°53'36"	156°21'54"
415.00		Field 306*	HC&S	1963-1983	17	655	20°52'12"	156°22'12"
416.00		Field 102*	HC&S	1971-1983	11	320	20°53'30"	156°21'12"
419.00		Field 301	HC&S	1977-1983	4	1075	20°51'00"	156°21'12"
457.00	8398	Puukolii*	Pioneer Mill	1963-1966; 1980-1982	2 1	360	20°55'54"	156°40'48"
458.00		Kahana Camp*	Pioneer Mill	1963-1965; 1980	2 1	70	20°58'35"	156°40'42"
458.10		Field 31-C*	Pioneer Mill	1964-1971; 1982	3 0	350	20°58'13"	156°40'10"
462.00		Field 32-A*	Pioneer Mill	1982	0	450	20°57'48"	156°40'12"
462.10		Field 24	Pioneer Mill [†]	1964-1967	1	725	20°58'12"	156°39'12"
463.20		Field A-4*	Pioneer Mill	1965-1967	0	800	20°55'30"	156°39'45"
466.10		30 Lua Mauka*	Pioneer Mill	1963-1964	0	700	20°56'55"	156°39'33"

*See Alternate Names list.

[†]Former observer, Maui Pine.

APPENDIX TABLE A.1.--Continued

STATE KEY NO.	NWS NO.	STATION NAME	OBSERVER	PERIOD OF RECORD	FULL YRS	EL. (ft)	COORDINATES	
							Latitude	Longitude
484.10		Field 22	Wailuku Sugar	1976-1983	2	450	20°55'10"	156°31'11"
485.00	1086	Hamakuapoko*	HC&S	1962-1971	8	320	20°55'10"	156°20'54"
485.10		Field 105	HC&S	1963-1966	2	135	20°55'36"	156°21'42"
485.30		Field 104	HC&S	1960-1966	2	150	20°55'54"	156°21'38"
486.50		Field 109	HC&S	1977-1983	5	220	20°55'46"	156°20'44"
486.60		Field 108†	HC&S	1971-1977	5	300	20°55'30"	156°20'44"
MOLOKA'I ISLAND								
511.50		Benchmark Maunaloa	UH-HITAH†	1980-1983	3	1000	21°08'20"	157°13'10"
528.30		Hoolehua	UH-HITAH†	1962-1965	1	500	21°08'58"	157°04'38"
531.10		Kualapuu Reservoir	DOWALD	1970-1984	11	800	21°09'13"	157°03'03"
LĀNA'I ISLAND								
687.00		R-10	PRI	1957-1958	1	2750	20°49'43"	156°53'34"
O'AHU ISLAND								
702.00	8805	US Magnetic Obs*	USC&GS	1956-1960	4	10	21°18'12"	158°05'48"
702.20	1918	Observatory*	USC&GS	1960-1983	16	5	21°19'00"	158°01'00"
707.00	2146	Keeaumoku*	BWS	1958-1960; 1971-1975	1 3	50	21°18'22"	157°50'20"
713.00	8815	Univ of Hawaii	UH-Agric. Engrg	1960-1962	0	80	21°18'09"	157°49'10"
713.50		UH Mauka Campus	UH-WRRRC	1980-1984	4	150	21°18'30"	157°49'00"
727.00		Pump 10*	Ewa Plantation	1963-1983	14	30	21°20'18"	158°06'36"
732.00		Reservoir 6 OS	Oahu Sugar	1962-1983	15	90	21°20'54"	158°03'54"
737.00		Reservoir 9 OS	Oahu Sugar	1962-1983	16	210	21°22'36"	158°03'00"
738.40		Field 155	Oahu Sugar	1962-1983	14	600	21°24'31"	158°03'42"
740.30		Field 18*	Oahu Sugar	1959-1964	4	150	21°23'18"	158°01'54"
740.40		Kunia*	HSPA	1962-1983	19	285	21°23'30"	158°02'00"
740.50		Kunia Substation	HSPA†	1963-1983	18	280	21°23'30"	158°02'00"
741.00	0507	Ewa Mill	Ewa Plantation	1961-1983	19	41	21°20'38"	158°02'12"
751.20		Rock Pile OS	Oahu Sugar	1962-1983	17	25	21°20'00"	158°00'00"

*See Alternate Names list. †Incorrectly listed as Sta. 486.40 in DOWALD R42 (1973a). ‡Revised.

APPENDIX TABLE A.1.--Continued

STATE KEY NO.	NWS NO.	STATION NAME	OBSERVER	PERIOD OF RECORD	FULL YRS	EL. (ft)	COORDINATES	
							Latitude	Longitude
752.00		Waipio	HSPA/Oahu Sugar	1929-1930; 1960	0 0	50	21°23'36"	157°59'48"
752.50		Waipio Field L	HSPA	1960-1963	3	85	21°23'50"	157°59'54"
756.00	0100	Field 610*	Oahu Sugar	1962-1983	11	200	21°24'06"	157°57'30"
761.10		Field 615	Oahu Sugar	1962-1967	5	680	21°24'58"	157°56'37"
772.60		Moanalua	USGS	1970-1981	11	600	21°23'29"	157°51'05"
782.00	5637	Lower Luakaha*	BWS	1931-1936	6	880	21°21'15"	157°49'15"
783.00	6928	Nuuanu Reservoir 4*	BWS	1910-1911	0	1050	21°21'21"	157°48'37"
787.00	6228W	Maunawili Ranch	Kaneohe Ranch	1920-1930	9	250	21°21'24"	157°46'00"
787.10	6222	Maunawili	HSPA	1976-1984	7	410	21°21'18"	157°46'00"
795.10	9523	Waimanalo Exp Sta	UH-HITAHRT	1957-1960	2	60	21°20'18"	157°42'48"
798.00	9231	Waianae*	Capital Investment	1939-1947	8	10	21°27'00"	158°11'18"
813.00	1527W	Robinson Camp 1*	Hawaiian Pine	1911-1938	17	705	21°27'04"	158°02'28"
815.00		Field 245*	Oahu Sugar	1964-1978	10	690	21°27'06"	158°01'48"
816.20		Mililani WTP*	UH-WRRC	1980-1981	0	440	21°25'56"	158°01'05"
816.30		Benchmark-Waipio*	UH-HITAHRT	1980-1983	2	480	21°26'00"	158°00'00"
818.10		Field 220	Oahu Sugar	1962-1983	13	525	21°25'12"	158°01'54"
820.20	8172	PRI Wahiawa*	PRI	1954-1967	8	700	21°28'00"	158°01'18"
824.10		Field 525	Oahu Sugar	1962-1968	5	546	21°25'45"	157°59'30"
825.30		Field 541*	Oahu Sugar	1968-1983	6	600	21°26'42"	157°58'48"
826.00		Station 4101*	Dole Corp	1927-1951	24	680	21°27'06"	157°59'47"
830.30		Koa Ridge*	UH-WRRC†	1981-1982	1	1125	21°28'00"	157°57'42"
841.00	3734	Kawaihapai	Waialua Ag	1960-1970	6	20	21°34'27"	158°11'22"
841.10		Kawaihapai	Waialua Ag	1960-1983	8	100	21°34'12"	158°11'00"
846.00		Ranch	Waialua Ag	1962-1970	5	190	21°33'30"	158°08'24"
847.00	9195	Waialua*	Waialua Ag	1960-1983	8	15	21°34'36"	158°07'24"
851.00		Kemoo 3*	Waialua Ag	1962-1970	5	285	21°33'30"	158°06'24"
854.00		Helemano 9	Waialua Ag	1962-1970	5	310	21°34'42"	158°05'18"
856.10		Burma Road*	Dole Corp	1950-1952	1	700	21°33'25"	158°03'15"
860.60		Helemano 13	Waialua Ag†	1976-1983	0	500	21°32'11"	158°03'30"
861.00		Opaeula 17*	Waialua Ag	1960-1983	8	690	21°34'48"	158°03'42"
882.10		North Fork*	USGS	1931-1935	2	1150	21°31'00"	157°56'54"
890.00	3754	Kawailoa 4*	Waialua Ag	1962-1970	5	170	21°36'36"	158°05'18"
892.00	9593	Waimea 3*	Waialua Ag	1960-1983	8	420	21°37'43"	158°04'03"

*See Alternate Names list.

†Revised.

APPENDIX TABLE A.1.--Continued

STATE KEY NO.	NWS NO.	STATION NAME	OBSERVER	PERIOD OF RECORD	FULL YRS	EL. (ft)	COORDINATES	
							Latitude	Longitude
894.20		Kawailoa 20 Makai*	Waiialua Ag	1962-1964	0	840	21°35'45"	158°02'00"
908.00		Pump 4*	Kahuku Plant'n	1960-1965	0	40	21°41'42"	158°00'12"
KAUA'I ISLAND								
925.00		Field 130*	Olokele Sugar	1961-1975	7	135	21°54'30"	159°37'00"
927.00	0470	Eleele	McBryde Sugar	1963-1968; 1981-1983	5 0	165	21°54'24"	159°34'48"
930.00	8941	Wahiawa*	McBryde Sugar	1960-1983	15	215	21°53'58"	159°33'36"
931.00	9955	West Lawai*	McBryde Sugar	1960-1983	5	210	21°53'36"	159°31'12"
934.00	0456	East Lawai*	McBryde Sugar	1964-1983	11	440	21°54'30"	159°29'48"
935.00	4950	Kukuuiula*	McBryde Sugar	1963-1983	3	105	21°53'30"	159°29'30"
935.10		Paanau (McBryde)	McBryde Sugar	1964-1968	2	135	21°53'42"	159°28'30"
936.00	4742	Koloa	McBryde Sugar	1910-1911	1	240	21°54'36"	159°27'54"
940.00	8352	Puuhi*	McBryde Sugar	1960-1983	19	80	21°53'05"	159°26'13"
941.00	5710	Mahaulepu*	McBryde Sugar	1960-1983	19	100	21°54'42"	159°25'24"
943.00	9253	Waiawa	Kekaha Sugar	1910-1911	1	10	21°58'50"	159°43'58"
943.20		Field 25	Kekaha Sugar	1961-1962	1	400	21°59'33"	159°43'19"
944.00	4272	Kekaha	Kekaha Sugar	1960-1983	9	10	21°58'12"	159°42'42"
945.00	2161	Hukipo	Kekaha Sugar	1962-1983	2	800	21°59'05"	159°41'06"
962.00		Field 30*	Olokele Sugar	1963-1975	7	110	21°55'50"	159°38'12"
965.00	5864	Makaweli*	Olokele Sugar	1969-1970	1	140	21°55'20"	159°37'48"
965.10		Field 070	Olokele Sugar	1971-1975	6	140	21°55'15"	159°37'43"
966.00		Field 360*	Olokele Sugar	1961-1975	6	470	21°56'27"	159°36'24"
981.00		Field 370*	Olokele Sugar	1963-1975	9	350	21°55'54"	159°34'30"
982.00		Field 540	Olokele Sugar	1965-1975	6	775	21°56'32"	159°34'04"
986.10		McBryde Var Sta*	HSPA	1960-1983	16	630	21°55'18"	159°32'30"
993.00		Field 612*	McBryde Sugar	1961-1983	11	500	21°55'42"	159°28'42"
994.00	4750	Koloa Mauka*	McBryde Sugar [†]	1976-1983	0	640	21°57'30"	159°28'36"
1004.00	8573	Reservoir 6*	Grove Farm	1961-1983	11	420	21°57'20"	159°26'48"
1005.00	3023	Kaluahonu*	Grove Farm	1961-1983	14	330	21°55'00"	159°26'30"
1006.00	1038	Halenanahu*	Lihue Plantation	1961-1983	13	490	21°58'05"	159°26'00"
1011.00	8570	LP Reservoir 5*	Lihue Plantation	1960-1983	14	385	21°57'36"	159°24'58"
1013.20		Field L-1*	Lihue Plantation	1968-1975	6	340	21°59'00"	159°23'40"

*See Alternate Names list.

[†]Grove Farm former observer.

APPENDIX TABLE A.1.—Continued

STATE KEY NO.	NWS NO.	STATION NAME	OBSERVER	PERIOD OF RECORD	FULL YRS	EL. (ft)	COORDINATES	
							Latitude	Longitude
1014.00		Field L-3A	Lihue Plantation	1971-1983	6	320	21°59'14"	159°23'05"
1015.30		Field L-4	Lihue Plantation	1965-1966	0	240	21°59'16"	159°23'06"
1016.00		LP HI 4*	Lihue Plantation	1960-1983	19	260	21°58'14"	159°23'13"
1020.10	5580	Lihue Airport*	Lihue Plantation	1955-1969	26	103	21°59'05"	159°20'42"
1020.40		Field L-24*	Lihue Plantation	1962-1983	13	125	21°58'10"	159°20'50"
1026.00	6082	Mana*	Kekaha Sugar	1962-1983	4	10	22°01'50"	159°45'50"
1027.00		Limaloa	Kekaha Sugar	1982-1983	0	10	22°00'36"	159°46'36"
1033.00	4735	Kolo*	Kekaha Sugar	1982-1983	0	35	22°04'12"	159°45'48"
1035.00	6850	Niu Ridge*	Kekaha Sugar	1962-1967; 1976-1983	1 1	1250	22°02'00"	159°44'18"
1040.00	8205	Puehu Ridge*	Kekaha Sugar	1962-1983	5	1660	22°01'07"	159°41'42"
1061.00		EKW 5*	Lihue Plantation	1959-1960	0	450	22°03'55"	159°24'12"
1061.30		Field H-46*	Lihue Plantation	1962-1983	11	504	22°02'20"	159°22'17"
1062.10	5560	Lihue Variety Sta*	Lihue Plantation	1965-1983	11	340	22°01'30"	159°23'10"
1062.20		Field 38-A*	Lihue Plantation	1960-1969	2	425	22°01'48"	159°24'24"
1062.30		Field H-32A*	Lihue Plantation	1960-1969	4	300	22°02'20"	159°22'43"
1064.30		H 23 Camp 9	Lihue Plantation	1969-1983	8	315	22°01'16"	159°22'20"
1066.00		Field Makee 3C*	Lihue Plantation	1965-1966	0	10	22°04'12"	159°19'42"
1072.10		Puu Lua	USGS	1911	0	3500	22°05'36"	159°40'30"
1082.00	9130	Waiakoali Camp*	USGS	1910-1911	0	3450	22°07'40"	159°37'24"
1092.00	3104	Kaneha Reservoir*	Lihue Plantation	1969-1983	8	845	22°08'05"	159°22'30"
1101.10		Spalding Monument*	Lihue Plantation	1969-1983	8	410	22°07'33"	159°20'01"
1102.00		Field M-2B*	Lihue Plantation	1964-1966	1	613	22°07'36"	159°21'12"
1104.20		Field M-19*	Lihue Plantation	1969-1982	8	80	22°04'33"	159°20'23"
1110.00	0935	Field M-8*	Lihue Plantation	1964-1966	1	255	22°07'06"	159°19'12"
1112.00	3982	Kealia	Lihue Plantation	1910-1911	0	10	22°06'10"	159°18'30"
1114.00	0145	Field M-14A*	Lihue Plantation	1964-1983	10	180	22°08'15"	159°18'24"
1134.00	4561	Kilauea*	N. Rapozo	1962-1967	0	315	22°12'55"	159°24'36"
1135.00	4566	Kilauea Field 17*	Kilauea Sugar	1962-1966	0	415	22°11'30"	159°24'12"
1136.00		Field 23	Kilauea Sugar	1962-1967	0	350	22°12'10"	159°23'30"
1141.20		Field 29	Kilauea Sugar	1962-1967	0	440	22°11'53"	159°22'27"
1143.00		Field 30*	Kilauea Sugar	1962-1967	0	230	22°12'20"	159°21'00"
1145.00	6529	Moloaa Puuauau†	T. Javaliena	1964-1965	0	330	22°11'10"	159°20'06"
1146.00		Puuauau	Lihue Plantation	1962-1965	2	330	22°11'10"	159°20'04"
1147.00		Fld 960 Moloaa	Lihue Plantation	1964-1965	0	260	22°10'40"	159°20'20"

*See Alternate Names list. †New station.

APPENDIX TABLE A.2. ALTERNATE STATION NAMES

State Key No.	Station Name	Alternate Names and Notes
HAWAI'I		
12.14	Field 700	Field 712
89.50	Amauulu Camp 4	Substation Mauka, Hawaii Sub-Station Hilo Mauka
90.10	Hawaii Sub Off	Substation Makai, Hawaii Sub-Station Hilo Makai, Ag Office
160.00	Station 3	Upolu 5
161.00	Puakea	Puakea Puumano, Puakea Ranch
166.00	Station 14	Hoea, Hoea Mill
168.00	Hawi	Hawi Office, Station 1
171.00	Station 5	Alaala, Alaala 2 & 3
173.00	Station 16	Union Mill, Union Park
176.00	Kohala Maulili	Maulili, Kohala Mauka, Station 11
179.00	Niulii	Niulii Camp, Station 13
182.00	Station 12	Waiapuka, Niulii 15, Waiapuka Weir
206.00	Kukuihaele Landg	Kukuihaele Mill
213.10	New Stable	Field 288
215.30	Ahualoa	Field 7A
217.00	Paauhau	Office, Paauhau Office
218.00	Hamakua Mill	Hamakua Sugar
218.20	Field 328	Field 28
221.30	Hamakua Makai	Hamakua Variety Station, Variety Station
MAUI		
296.10	Olowalu	Field 935, Field 12, Station 12
310.00	Field 906 Vil 7	Field 913, Camp Maalea, Reservoir 9, Camp 7 Vil 7, Field 906
313.00	Field 811 Vil 3	Field 811, Camp K3, Kihei Camp 3, Kihei Vil 3
314.00	Reservoir 81	Field 408
316.00	Field 405	Station 6
317.00	Field 408 MASI	Field 408
361.00	Lahaina	Main Office, Station 17
363.10	Field F-2	Field 72
373.00	Field LA-5	Field 610, Station 16, LA 5, No. 17
385.00	Field 55	Field 36
391.10	Field 95	Field 98
394.00	Village 6	Field 903, Field 902, Camp 6
394.10	Field 911	Field 900
396.00	Puunene	Field 713, Puunene Mill
401.00	Village 13	Field 806, Field 3
401.10	Field 809	Village 13, Camp 13
402.00	Village 10	Field 510, Camp 10
404.10	Field 603	Pump 9
406.20	Maui Pine	Field 211
413.00	Kaheka	Field 205
415.00	Field 306	Field 304, Field 77, Station 4
416.00	Field 102	Field 101, 8, 10; Station 1
457.00	Puukolii	Field C3, Field 325, Station 10
458.00	Kahana Camp	Station 12, Field 425, Field 32-B, No. 12
458.10	Field 31-C	Field 32, Field 150, Station 04
462.00	Field 32-A	Field 31-A, Field 440, Station 13, Pedro Camp
463.20	Field A-4	B68

APPENDIX TABLE A.2—Continued

State Key No.	Station Name	Alternate Names and Notes
466.10	30 Lua Mauka	Field 30A
485.00	Hamakuapoko	Field 103 (moved from No. 485.2)
O'AHU		
702.00	US Magnetic Obs	US Magnetic Observatory 1
702.20	Observatory	US Magnetic Observatory 2
707.00	Keeaumoku	HSPA Experiment Station, HSPA Makiki, Experiment Station
727.00	Pump 10	Reservoir 10
740.30	Field 18	Field 200, Field 18 (Oahu Sugar)
740.40	Kunia	Kunia Sub-Station
741.00	Ewa Mill	Ewa Plantation
752.00	Waipio	HSPA Waipio, Waipio Substation
756.00	Field 610	Field 260, Field 615, Waimalu Field 605
782.00	Lower Luakaha	Luakaha Lower, Luakaha
783.00	Nuuanu Reservoir 4	Nuuanu, Nuuanu Dam 4, Upper Luakaha
798.00	Waianae	Waianae Mill (relocated 1969)
813.00	Robinson Camp 1	Robinson I, Hoaeae Upper, Field 4303-4 (Dole)
815.00	Field 245	Field 53
818.10	Field 245	Field 23 (moved 1962)
820.20	PRI Wahiawa	PRI Waipio, Waipio Main Station, PRI Wahiawa Main Station
825.30	Field 541	Aiea Field 42
826.00	Station 4101	Station 4101-2, Field 42 (Oahu Sugar)
830.30	Koa Ridge	Gage 1 Mink
847.00	Waialua	Waialua Mill, Waialua (Office), Office
851.00	Kemoo	Kemoo 5, Kemoo Camp 5
854.00	Helemano 9	Helemano Camp 9
856.10	Burma Road	Helemano 6C; (unknown location)
861.00	Opaepala 17	Opaepala 8, Opaepala Camp 8
882.10	North Fork	North Fork Kaukonahua (1150), N Fork, Kaukonahua Transpiration Site, North Fork Kaukonahua
890.00	Kawailoa 4	Kawailoa 3
892.00	Waimea 3	Waimea, Waimea 9, Kawailoa Camp 9
894.20	Kawailoa 20 Makai	Kawailoa 20
908.00	Pump 4	Pump A, Pump 4 (Kahuku Plantation)
KAUA'I		
927.00	Eleele	Field 216
930.00	Wahiawa	Office Wahiawa, Field 112
931.00	West Lawai	Lawai West, Field 410
934.00	East Lawai	Field 504
935.00	Kukuiula	Koloa (Kukuiula), Field 516
940.00	Puuihi	K2 Puuihi, Field 74, K2
941.00	Mahaulepu	K21 Mahaulepu, Field 728,
962.00	Field 30	Field 030, Field 3
965.00	Makaweli	Office Makaweli
966.00	Field 360	Field 36
981.00	Field 370	Field 37
986.10	McBryde Var Sta	Field 306
993.00	Field 612	Puuohewa

APPENDIX TABLE A.2--Continued

State Key No.	Station Name	Alternate Names and Notes
994.00	Koloa Mauka	Wilcox Ditech (former observer, Grove Farm), Field 600
1004.00	Reservoir 6	Field 31, Field 814
1005.00	Kalauhonu	Kalauhonu, Field 710
1006.00	Halenanahu	Halenanahu, Field 25
1011.00	LP Reservoir 5	H22 Reservoir 5, Field 22-A, HI 19, HI 19A
1013.20	Field L-1	L1, L3A
1016.00	LP HI 4	Field H-4A, Gage 4-A (moved 1970), H4, Field 4-A, H4-B, HI-4B
1020.10	Lihue Airport	Airport
1020.40	Field L-24	Field 180, Station 24, Field 24 Lihue
1026.00	Mana	Mana Pump, Field 420
1035.00	Niu Ridge	Puu Opae
1030.00	Puu Opae	Field 301
1033.00	Kolo	Field U
1035.00	Niu Ridge	Puu Opae, Field 301
1040.00	Puehu Ridge	Field G-1; (replaced 1041.1)
1061.00	EKW 5	Wailua Reservoir
1061.30	Field H-46	H41
1062.10	Lihue Variety Sta	Kauai Variety Station, HSPA
1062.20	Field 38-A	Lihue Variety Station 1'
1062.30	Field H-32A	Lihue Variety Station 5', Field H32A
1066.00	Field Makee 3C	M30, Wailuakai 2
1082.00	Waiakoali Camp	Waiakoali
1092.00	Kaneha Reservoir	Kaneha (replaced 1092.1), Kaneda
1101.10	Spalding Monument	Monument, M4B
1102.00	Field M-2B	Field Makee 2B, Old Camp, M2B
1104.20	Field M-19A	M30
1110.00	Field M-8	M8, Field Makee 8, Halaula
1114.00	Field M-14A	M14A, Field Makee 14A, Anahola-Lihue
1134.00	Kilauea	Office, Residence
1135.00	Kilauea Field 17	Field 170, Puukaele Reservoir
1141.20	Field 29	Field 290
1143.00	Field 30	Field 300, Lepeuli, Field 31
1145.00	Moloaa Puuauau	Puu Auau, Field 5 (Hawaiian Cannery), Moloaa, Moloaa Ocean
1147.00	Fld 960-Moloaa	Moloaa Mountain

APPENDIX TABLE A.3. ALPHABETICAL LIST OF CURRENT STATION NAMES

Station Name	State Key No.	NWS No.	Quad. Ref.*	Station Name	State Key No.	NWS No.	Quad. Ref.*
Ahualoa	215.30		H-44	Field 408 MASI	317.10		M-8
Airport	216.30		H-44	Field 412	314.10		M-8
Amaulu Camp 4	89.50		H-62	Field 413	317.20		M-8
Benchmark-Maunaloa	511.50		†Mo-1	Field 502	410.10		M-7
Benchmark-Waipio	816.30		†O-9	Field 525	824.10		O-9
Burma Road	856.10		O-4	Field 540	982.00		K-5
East Lawai	934.00	0456	K-8	Field 541	825.30		O-9
EKW 5	1061.00		K-10	Field 601	403.10		M-7
Eleele	927.00	0470	K-5	Field 603	404.10		M-7
Ewa Mill	741.00	0507	O-6	Field 604	404.30		M-7
Field 003	216.50		H-44	Field 604B	404.40		M-7
Field 015	220.50		H-44	Field 610	756.00	0100	O-9
Field 070	965.10		K-5	Field 612	993.00		K-8
Field 14	220.40		H-44	Field 615	761.10		O-9
Field 18	740.30		O-5	Field 700	12.14		H-42
Field 22	484.10		M-5	Field 719	393.00		M-5
Field 23	1136.00		K-9	Field 806-2	404.50		M-7
Field 24	462.10		M-1	Field 809	401.10		M-7
Field 25	943.20		K-2	Field 811 Vil 3	313.00	0260	M-8
Field 26	215.40		H-44	Field 815	313.10		M-8
Field 29	1141.20		K-9	Field 821	313.30		M-8
Field 30	962.00		K-5	Field 906	310.10		M-6
Field 30	1143.00		K-9	Field 906 Vil 7	310.00		M-6
Field 31-C	458.10		M-1	Field 906-2	310.20		†M-6
Field 32-A	462.00		M-1	Field 911	394.10		M-5
Field 34-35	214.10		H-44	Field 960 Moloaa	1147.00		K-9
Field 38-A	1062.20		†K-10	Field A-4	463.20		M-2
Field 55	385.00		M-5	Field F-2	363.10		M-2
Field 72	388.00		M-5	Field H-32A	1062.30		K-10
Field 95	391.10		M-5	Field H-46	1061.30		K-10
Field 102	416.00		M-7	Field L-1	1013.20		K-11
Field 104	485.30		M-7	Field L-3A	1014.00		†K-11
Field 105	485.10		M-7	Field L-4	1015.30		K-11
Field 108	486.60		†M-7	Field L-24	1020.40		K-11
Field 109	486.50		†M-7	Field LA-5	373.00		M-2
Field 116	406.30		†M-7	Field M-2B	1102.00		K-9
Field 130	925.00		†K-5	Field M-8	1110.00	0935	K-9
Field 155	738.40		O-5	Field M-14A	1114.00	0145	K-9
Field 201	391.20		†M-5	Field M-19	1104.20		K-10
Field 205	413.20		M-7	Field Makee 3C	1066.00		K-10
Field 211	406.20		M-7	Field MB-7	372.20		M-2
Field 220	818.10		O-5	Field MG-9	372.30		M-2
Field 245	815.00		O-5	H23 Camp 9	1064.30		K-10
Field 301	419.00		M-7	Halenanahu	1006.00	1038	K-8
Field 306	415.00		M-7	Hamakua Makai	221.30		H-44
Field 328	218.20		H-44	Hamakua Mill	218.00		H-52
Field 360	966.00		K-5	Hamakuapoko	485.00	1086	M-7
Field 370	981.00		K-5	Hawaii Sub Office	90.10		H-67
Field 402	321.50		M-8	Hawi	168.00	1339	H-13
Field 404	316.30		M-7	Helemano 9	854.00		O-4
Field 405	316.00		M-8	Helemano 13	860.60		†O-4
Field 405	316.20		M-8	Hilo Airport	87.00	1492	H-67
				Honokaa Pasture	211.10		H-35
				Hoolehua	528.30		†Mo-2
				Hukipo	945.00	2161	K-2
				Kahana Camp	458.00		M-1
				Kaheka	413.00		M-7
				Kaluahonu	1005.00	3023	K-8

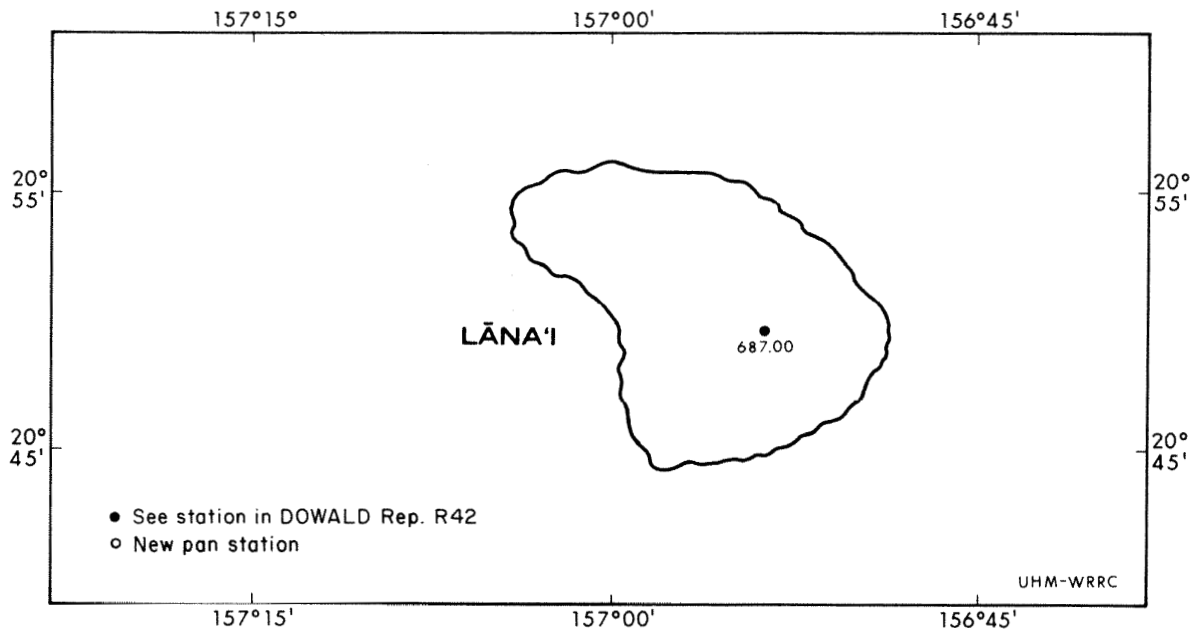
NOTE: Refer to App. Table A.2 for alternate station names not listed here.

*See Rep. R42 (DOWALD 1973a, pp. 15-148) and App. Figs. A.1-A.5 for station locations.

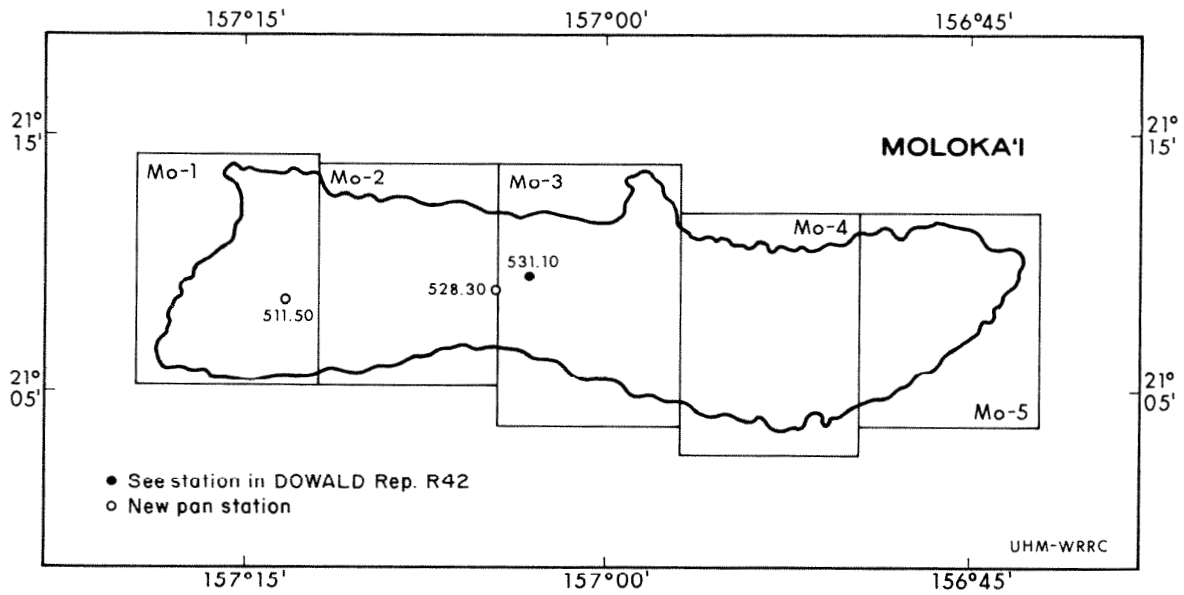
†Unmapped station on R42 quadrangle map.

APPENDIX TABLE A.3.—Continued

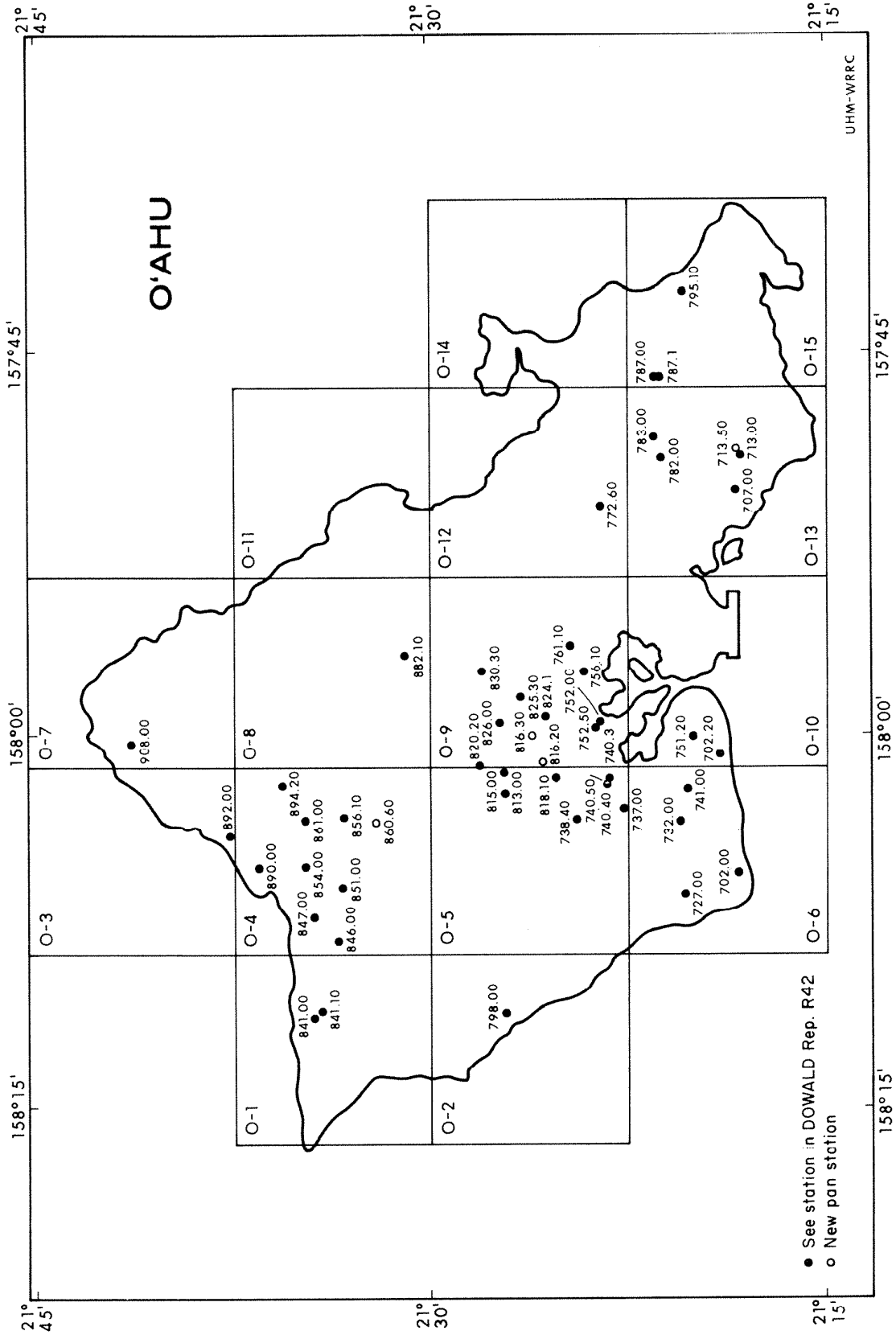
Station Name	State Key No.	NWS No.	Quad. Ref.*	Station Name	State Key No.	NWS No.	Quad. Ref.*
Kaneha Reservoir	1092.00	3104	K-9	Opaeula 17	861.00		O-4
Kawaihapai	841.00	3734	O-1	Paanau (McBryde)	935.10		K-8
Kawaihapai	841.10		O-1	Paauhau	217.00		H-44
Kawailoa 4	890.00	3754	O-4	Pahala	21.00	7421	H-51
Kawailoa 20 Makai	894.20		O-4	PMA	220.00		H-44
Kawela	213.00		H-35	PMA Plant	216.40		H-44
Kealia	1112.00	3982	K-10	PRI Wahiawa	820.20	8172	O-9
Keeaumoku	707.00	2146	O-13	Puakea	161.00	8181W	H-13
Kekaha	944.00	4272	K-2	Puehu Ridge	1040.00	8205	K-2
Kemoo 3	851.00		O-4	Pump 4	908.00		O-7
Kilauea	1134.00	4561	K-9	Pump 10	727.00		O-6
Kilauea Field 17	1135.00	4566	K-9	Puuauau	1146.00		K-9
Koa Ridge	830.30		O-9	Puuhi	940.00	8352	K-8
Kohala	179.10	4670	H-13	Puukolii	457.00	8398	M-2
Kohala Maulili	176.00	4675	H-13	Puu Lua	1072.10		K-1
Kolo	1033.00	4735	K-1	Puunene	396.00	8543	M-7
Koloa	936.00	4742	K-8	Puu Pulehu Res	203.20		†H-35
Koloa Mauka	994.00	4750	K-8	R-10	687.00		L
Kualapuu Reservoir	531.10		Mo-3	Ranch	846.00		O-4
Kukuihaele Landing	206.00	4938	H-35	Reservoir 6	1004.00	8573	K-8
Kukuiula	935.00	4950	K-8	Reservoir 6 OS	732.00		O-6
Kunia	740.40		O-5	Reservoir 9 OS	737.00		O-5
Kunia Substation	740.50		†O-5	Reservoir 81	314.00		M-8
Lahaina	361.00	5177	M-2	Robinson Camp 1	813.00	1527W	O-5
Lalamilo Field Off	191.10	5260	H-25	Rock Pile OS	751.20		O-10
Lihue Airport	1020.10	5580	K-11	Spalding Monument	1101.10		†K-9
Lihue Variety Sta	1062.10	5560	K-10	Station 3	160.00		H-3
Limaloa	1027.00		K-2	Station 3	160.30		†H-3
Lower Luakaha	782.00	5637	O-13	Station 5	171.00		H-13
LP HI 4	1016.00		K-11	Station 12	182.00		H-13
LP Reservoir 5	1011.00	8570	†K-11	Station 14	166.00		H-13
30 Lua Mauka	466.10		M-2	Station 16	173.00		H-13
Mahaulepu	941.00	5710	K-8	Station 4101	826.00		O-9
Makaweli	965.00	5864	K-5	UH Mauka Campus	713.50		†O-13
Makino	11.00		H-43	Univ of Hawaii	713.00	8815	O-13
Mana	1026.00	6082	K-2	US Magnetic Obs	702.00	8805	O-6
Maunawili	787.10	6222	O-15	Village 6	394.00		M-5
Maunawili Ranch	787.00	6228W	O-15	Village 10	402.00	0280	M-7
McBryde Var Sta	986.10		K-8	Village 13	401.00		M-7
Mealani Farm	201.20		H-35	Wahiawa	930.00	8941	K-5
Mililani WTP	816.20		†O-9	Waiakoali Camp	1082.00	9130	K-3
Moanalua	772.60		O-12	Waialua	847.00	9195	O-4
Moloaa Puuauau	1145.00	6529	K-9	Waianae	798.00	9231	O-2
Naalehu	14.00	6588	H-43	Waiawa	943.00	9253	K-2
New Stable	213.10		H-35	Waikoloa	95.60		H-15
Niulii	17.9	6806	H-24	Waimanalo Exp Sta	795.10	9523	O-15
Niu Ridge	1035.00	6850	K-2	Waimea 3	892.00	9593	O-3
North Fork	882.10		O-8	Waipio	752.00		O-9
Nuuanu Reservoir 4	783.00	6928	O-13	Waipio Field L	752.50		O-9
Observatory	702.20	1918	O-10	Waiubata	13.00		H-43
Olowalu	296.10		M-3	West Lawai	931.00	9955	K-8



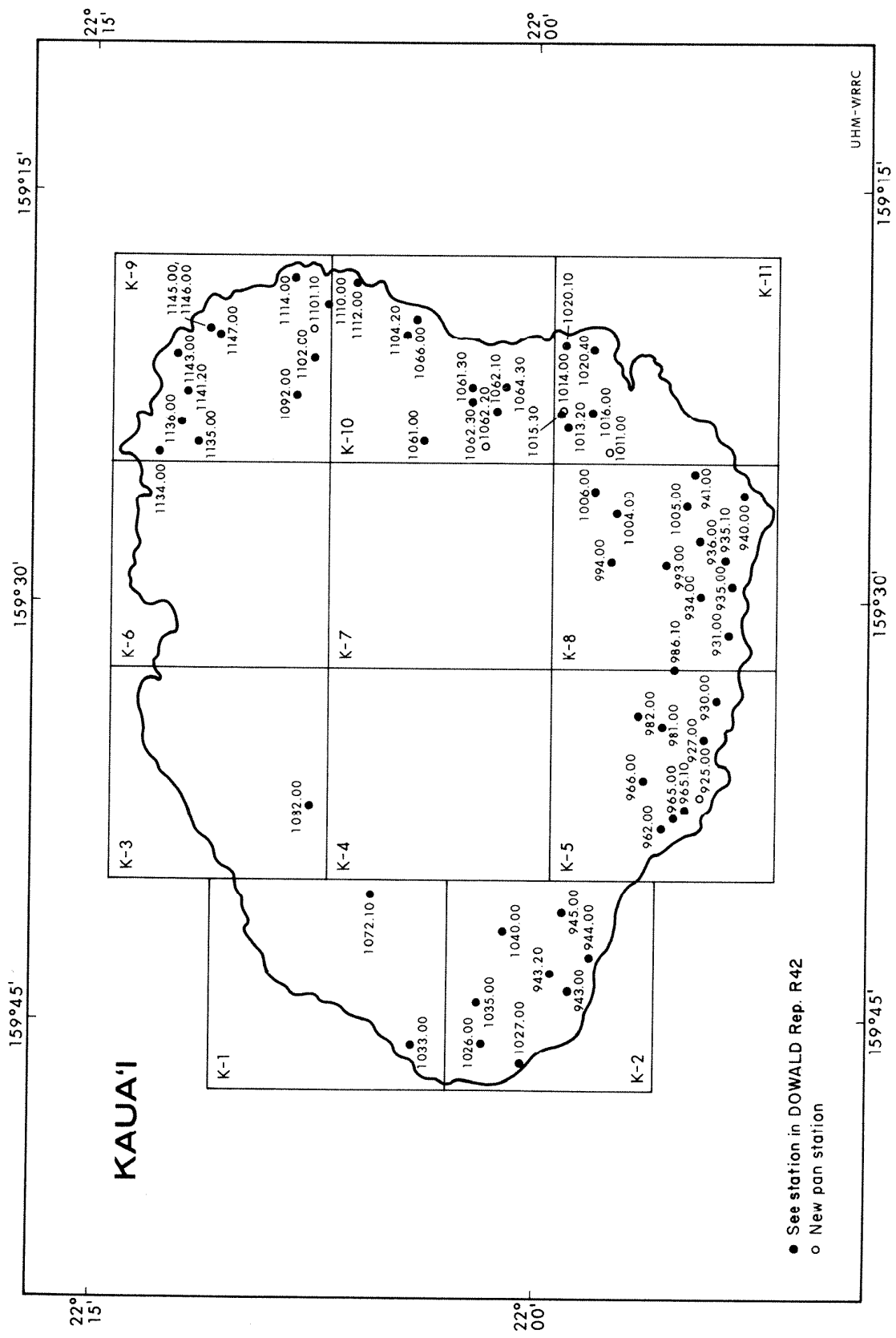
Appendix Figure A.1. Location map of pan evaporation stations, Lāna'i



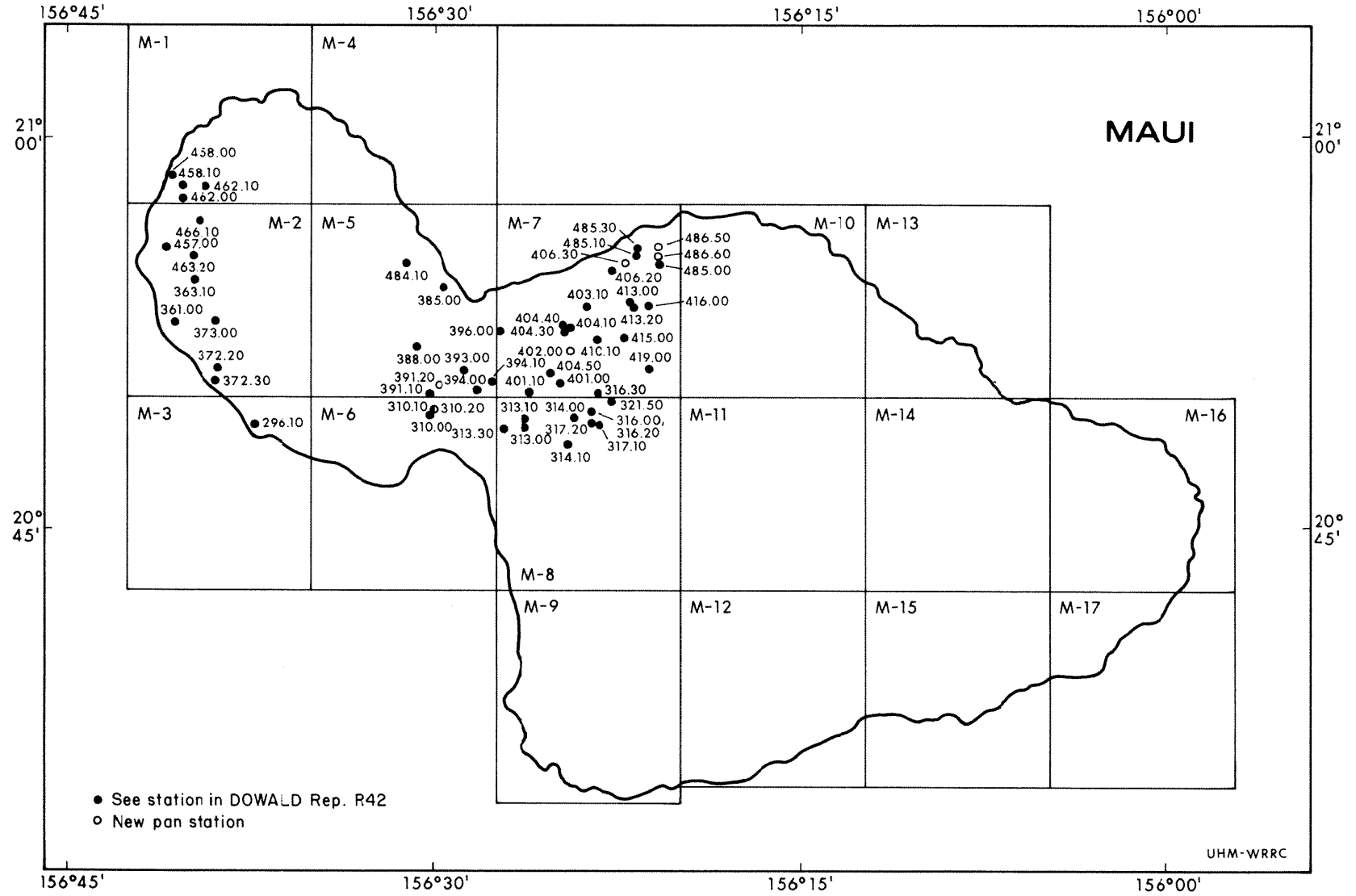
Appendix Figure A.2. Location map of pan evaporation stations, Moloka'i



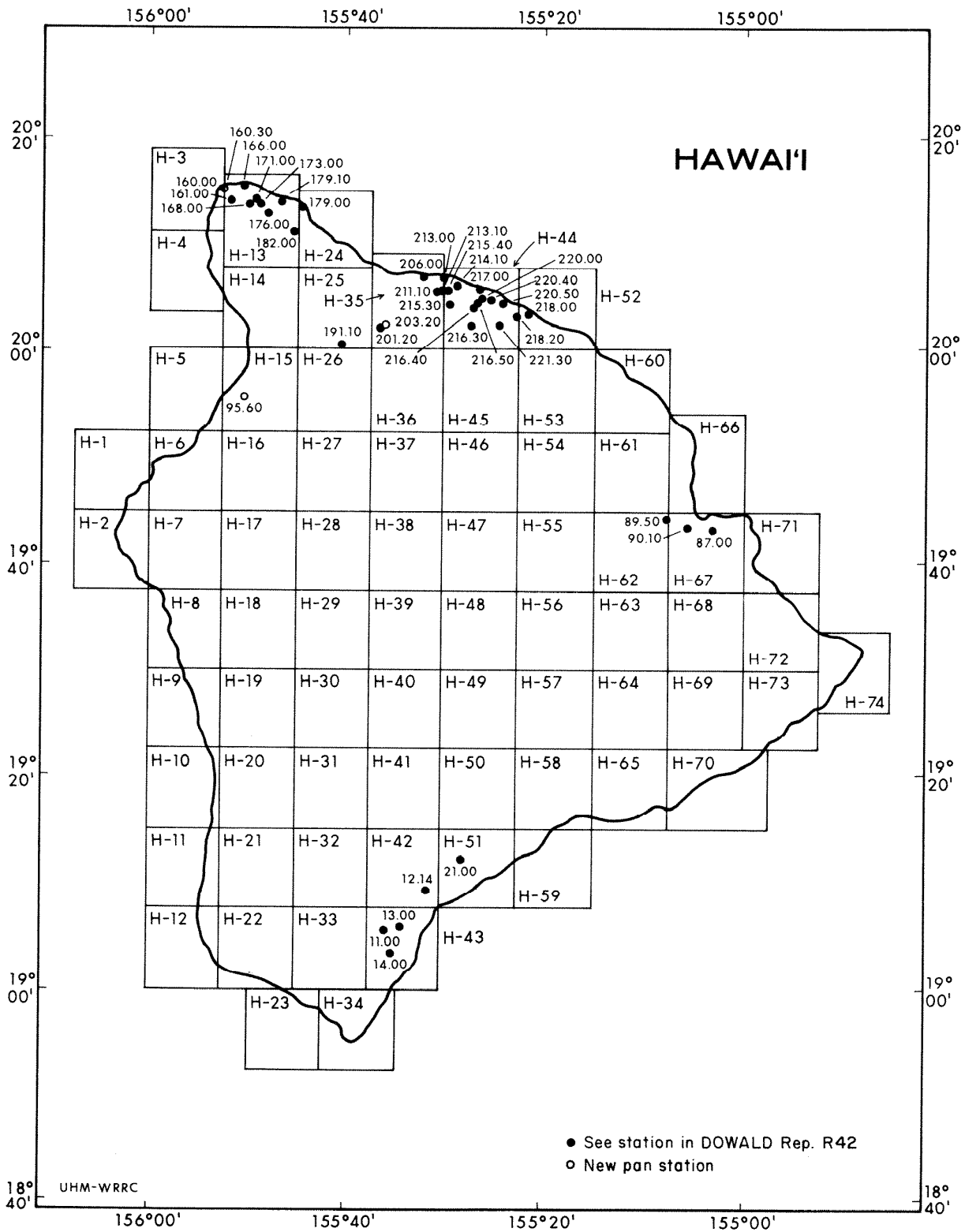
Appendix Figure A.3. Location map of pan evaporation stations, O'ahu



Appendix Figure A.4. Location map of pan evaporation stations, Kaua'i



Appendix Figure A.5. Location map of pan evaporation stations, Maui



Appendix Figure A.6. Location map of pan evaporation stations, Hawai'i Island

APPENDIX TABLE B.1. PAN EVAPORATION MEASUREMENTS, STATE OF HAWAII, 1910-1983

STATE KEY NO.	YEAR	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	ANNUAL (in.)
11-00	1963	5.17	4.23	5.64	5.29	6.72	2.04	4.47	2.92	3.51	3.39	2.84	3.52	3.52
11-00	1964	4.81	3.22	3.40	4.74	4.41	3.79	3.75	4.61	3.41	3.49	3.72	2.62	3.52
11-00	1965	2.63	3.77	4.09	4.93	4.06	3.54	4.65	3.69	6.41	5.86	2.03	2.63	3.52
11-00	1966	3.16	3.58	4.30	4.40	4.55	3.73	4.03	5.17	4.61	3.03	4.45	2.63	3.52
11-00	1968	3.20	3.92	4.30	6.92	6.72	5.22	4.15	5.61	4.92	4.45	5.19	4.05	3.52
11-00	1969	5.49	3.44	4.50	3.99	3.99	4.90	4.97	5.95	4.02	5.37	4.05	4.05	3.52
11-00	1970	4.91	4.94	5.48	4.09	6.48	2.75	3.78	3.84	3.96	3.75	4.05	3.46	3.52
11-00	1971	4.91	4.94	5.48	4.09	6.48	2.75	3.78	3.84	3.96	3.75	4.05	3.46	3.52
11-00	1972	5.09	4.70	5.23	4.48	4.50	4.18	4.50	6.38	6.22	4.93	5.29	3.46	3.52
12-14	1963	5.95	6.44	6.15	5.82	5.82	4.47	6.81	4.83	5.27	5.37	5.50	5.09	5.09
12-14	1964	5.00	7.17	4.97	5.67	5.67	5.42	5.70	7.69	6.29	5.04	5.50	4.38	5.09
13-00	1962	5.85	5.35	4.34	5.19	5.19	4.35	5.24	4.63	4.84	4.91	4.54	5.16	5.16
13-00	1963	4.99	5.54	5.67	4.50	4.50	5.13	5.74	5.68	5.01	4.62	4.57	5.39	5.39
13-00	1965	6.42	6.42	4.31	6.00	6.00	4.20	6.41	5.48	5.01	4.58	4.75	5.35	5.35
13-00	1966	4.73	4.73	3.70	3.60	3.60	6.02	6.09	5.48	6.66	5.23	5.35	5.95	5.95
13-00	1967	3.89	3.89	5.49	5.67	5.67	5.95	5.00	6.05	6.96	5.60	4.39	7.00	7.00
13-00	1968	3.26	3.11	5.42	6.96	6.96	5.43	5.94	5.12	4.83	4.69	4.34	5.88	5.88
13-00	1969	4.90	6.32	7.58	6.67	6.67	3.79	5.27	5.21	4.85	4.43	4.68	5.92	5.92
13-00	1970	6.26	6.17	5.58	6.23	6.23	5.35	4.45	6.64	4.42	4.57	4.88	5.56	5.56
13-00	1971	3.71	5.18	7.19	5.12	5.12	5.35	5.40	5.64	5.43	6.79	5.57	3.89	3.89
13-00	1972	5.35	5.39	6.03	6.01	6.01	6.84	5.99	7.12	8.95	4.30	4.38	5.56	5.56
14-00	1962	7.48	4.95	5.77	5.76	5.76	5.21	5.68	5.48	6.71	5.72	3.90	6.23	6.23
14-00	1963	5.62	6.53	5.74	6.20	6.20	6.13	7.44	8.76	7.30	6.74	6.56	6.45	6.45
14-00	1964	5.45	5.23	6.03	6.40	6.40	6.81	7.43	5.76	6.62	5.90	5.11	6.75	6.75
14-00	1965	5.99	3.20	5.83	6.38	6.38	5.50	7.23	6.79	7.04	6.99	5.40	4.90	4.90
14-00	1966	5.32	5.42	5.15	5.16	5.16	5.39	6.13	6.49	6.50	5.55	7.16	4.73	4.73
14-00	1968	3.07	4.32	4.87	5.16	5.16	7.53	7.33	7.07	6.50	6.55	6.72	5.15	5.15
14-00	1969	7.34	6.08	7.43	7.43	7.43	4.86	6.35	8.69	6.17	6.70	5.20	5.36	5.36
14-00	1970	5.96	7.07	8.89	7.43	7.43	7.29	7.08	6.59	6.03	5.46	4.31	5.95	5.95
14-00	1971	4.11	5.30	4.91	4.15	4.15	5.75	5.58	8.59	6.98	7.17	5.87	5.35	5.35
14-00	1972	4.11	5.12	6.74	5.85	5.85	7.78	8.10	9.83	5.87	5.68	5.87	4.18	4.18
14-00	1973	5.04	5.72	8.15	6.45	6.45	7.14	8.16	6.59	8.42	6.41	5.81	5.94	5.94
21-00	1931	4.54	4.02	4.79	4.45	4.45	6.47	5.73	5.00	6.00	5.47	4.55	4.30	4.30
21-00	1932	4.72	3.44	5.00	4.62	4.62	5.31	6.53	6.43	5.84	5.12	3.93	5.78	5.78
21-00	1933	4.03	4.44	3.87	4.44	4.44	5.70	6.50	5.43	5.07	6.33	4.62	4.10	4.10
21-00	1934	5.19	4.44	3.51	5.82	5.82	5.70	6.67	6.14	5.33	3.54	3.93	4.78	4.78
21-00	1935	3.96	4.67	5.16	6.79	6.79	6.43	6.67	6.84	5.94	4.54	4.69	5.68	5.68
21-00	1936	3.86	3.39	3.64	5.12	5.12	6.28	6.27	6.84	4.94	4.57	5.50	3.74	3.74
21-00	1937	4.42	3.98	3.51	4.98	4.98	6.39	6.56	6.71	5.55	4.55	4.13	6.00	6.00
21-00	1938	3.44	3.98	3.51	4.98	4.98	6.39	6.56	6.71	5.55	4.55	4.13	6.00	6.00

APPENDIX TABLE B.1--Continued

STATE KEY NO.	YEAR	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	ANNUAL (in.)
21-00	1939	5.08	4.12	4.61	4.29	3.30	5.15	6.42	6.35	5.58	4.90	4.13	4.12	61.05
21-00	1940	3.96	4.60	4.93	5.02	5.62	5.54	6.57	6.35	4.63	4.68	4.05	3.94	59.95
21-00	1941	4.22	4.00	6.30	6.57	5.74	7.04	6.68	6.45	4.91	4.81	4.46	6.06	67.24
21-00	1942	4.67	5.49	5.06	5.55	6.18	6.46	6.85	6.38	5.80	5.26	4.34	3.98	66.00
21-00	1943	3.72	4.09	4.19	6.36	4.99	6.54	6.84	6.49	5.92	5.76	4.51	4.30	66.20
21-00	1944	5.63	4.30	4.70	5.03	5.42	5.03	6.12	6.48	5.86	5.13	5.20	4.30	65.30
21-00	1945	4.17	4.01	6.26	-	4.48	-	-	-	-	-	-	-	-
87-00	1955	5.38	4.14	5.17	5.49	4.94	5.78	6.68	5.84	6.43	4.65	4.10	4.58	63.06
87-00	1956	4.56	4.71	6.39	5.31	6.41	7.56	6.34	5.56	6.48	4.52	3.93	4.91	67.49
87-00	1957	7.07	5.17	6.15	5.69	6.59	6.86	6.01	5.86	5.48	6.52	3.74	3.87	68.54
87-00	1958	4.27	5.20	6.28	5.26	6.59	7.73	7.62	5.10	5.05	5.70	3.86	5.35	68.19
87-00	1959	4.48	5.75	6.28	5.94	6.28	7.47	7.47	5.77	4.58	5.18	4.25	3.96	68.01
87-00	1960	5.37	4.27	5.84	6.23	5.50	7.55	7.47	6.30	5.88	6.18	4.32	4.77	68.01
87-00	1961	5.95	5.97	6.66	6.85	5.57	7.30	7.47	6.30	5.88	6.50	4.42	4.79	68.60
87-00	1962	6.14	5.46	6.33	5.90	6.16	7.65	7.36	5.79	5.17	6.81	4.51	4.80	70.80
87-00	1963	5.00	4.16	6.90	5.15	6.98	6.65	6.55	6.65	5.79	5.31	4.85	4.38	61.19
87-00	1964	5.69	4.71	6.65	5.42	6.21	7.81	7.08	6.65	5.79	5.84	3.65	4.22	61.62
87-00	1965	3.88	4.52	5.62	5.42	6.61	6.20	6.55	6.45	5.71	5.73	4.86	4.44	63.36
87-00	1966	3.82	4.81	5.44	5.35	6.51	6.33	6.55	6.55	5.11	5.02	4.31	4.44	63.07
87-00	1967	3.83	4.11	5.33	4.85	6.13	5.63	6.30	6.55	5.01	5.69	4.53	4.72	61.70
89-50	1968	4.41	4.22	5.32	3.85	6.93	3.63	4.60	5.27	5.26	5.23	3.36	3.33	61.70
89-50	1969	4.09	4.96	4.32	3.15	6.65	3.93	4.60	5.87	3.32	5.27	3.36	3.33	45.66
89-50	1970	4.71	4.57	4.32	3.74	6.91	3.91	4.55	4.79	3.32	5.34	3.78	3.33	45.66
89-50	1971	1.71	3.25	3.13	4.06	3.93	2.91	3.65	4.44	3.38	5.34	3.36	3.33	45.66
89-10	1963	5.17	4.29	3.84	3.02	4.66	6.01	5.41	3.61	5.59	5.00	4.46	4.76	54.20
90-10	1964	3.53	3.89	4.79	3.47	5.51	5.82	5.32	5.46	4.55	5.92	4.25	3.65	57.36
90-10	1965	3.83	4.72	4.16	3.52	6.72	5.72	5.85	5.67	4.86	5.20	4.94	3.32	53.11
90-10	1966	3.89	4.71	4.23	3.82	6.03	5.90	5.35	5.28	4.88	5.18	4.50	3.34	53.81
90-10	1967	3.89	4.75	4.42	3.79	6.67	5.91	5.58	5.68	4.30	5.36	4.33	3.72	59.02
90-10	1968	5.03	4.75	4.75	3.79	6.59	6.80	6.04	5.68	4.55	6.92	4.33	4.33	67.41
90-10	1969	4.45	4.98	4.42	3.52	6.78	5.80	5.23	5.68	4.56	6.02	4.33	2.77	67.41
90-10	1970	4.45	4.15	6.50	4.86	5.92	5.23	5.38	6.06	4.63	6.01	4.33	3.37	54.39
90-10	1971	3.49	4.06	6.33	3.59	4.73	5.06	4.78	7.17	4.67	5.85	3.55	3.37	54.39
90-10	1972	3.49	4.55	6.54	3.92	5.14	5.93	5.10	5.52	4.76	5.85	3.26	3.37	54.39
90-10	1973	3.81	4.90	6.77	4.12	5.91	6.45	4.84	5.93	4.67	5.80	4.44	3.56	59.04
90-10	1974	5.79	5.87	6.70	3.93	6.21	6.07	5.45	6.13	4.56	6.42	4.44	3.44	61.74
90-10	1975	5.51	5.92	6.88	5.11	6.88	6.99	5.99	6.03	4.69	6.26	4.44	4.20	61.64
90-10	1976	5.04	5.36	6.89	5.72	6.15	6.15	5.76	5.93	4.85	6.36	4.44	4.34	63.66
90-10	1977	6.06	5.26	6.89	5.45	6.40	6.46	5.76	5.56	4.85	6.91	4.44	4.55	63.66
90-10	1978	4.88	5.51	6.89	5.72	6.15	6.15	5.76	5.93	4.85	6.36	4.44	4.34	63.66
90-10	1979	5.04	5.36	6.89	5.45	6.40	6.46	5.76	5.56	4.85	6.91	4.44	4.55	63.66
90-10	1980	6.06	5.26	6.89	5.72	6.15	6.15	5.76	5.93	4.85	6.36	4.44	4.34	63.66
90-10	1981	4.88	5.51	6.89	5.72	6.15	6.15	5.76	5.93	4.85	6.36	4.44	4.34	63.66
90-10	1982	4.88	5.51	6.89	5.72	6.15	6.15	5.76	5.93	4.85	6.36	4.44	4.34	63.66
90-10	1983	4.88	5.51	6.89	5.72	6.15	6.15	5.76	5.93	4.85	6.36	4.44	4.34	63.66
95-60	1975	4.88	5.51	6.89	5.72	6.15	6.15	5.76	5.93	4.85	6.36	4.44	4.34	63.66

APPENDIX TABLE B.1--Continued

STATE KEY NO.	YEAR	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	ANNUAL (in.)
95-60	1976	7.44	7.00	6.20			9.30	12.40	9.01	7.51	7.05	4.86	4.03	.01
160-00	1960	4.70	4.26	6.60	6.89	8.20	8.20	8.21	11.29	11.09	8.21	8.44	4.09	96.04
160-00	1962	5.50	6.60	7.51	8.27	10.42	10.42	10.25	11.15	9.85	8.44	8.90	5.48	102.04
160-00	1964	7.39	7.47	6.60	8.79	9.38	9.38	10.30	11.06	8.00	8.69	7.50	5.55	95.50
160-00	1966	4.34	5.60	7.04	8.14	9.95	10.95	10.89	9.91	8.19	6.89	5.04	6.03	96.24
160-00	1968	5.45	4.17	7.05	8.25	10.42	9.42	9.55	11.16	9.26	8.07	5.57	6.03	96.87
160-00	1969	6.08	6.75	6.92	8.05	10.54	9.54	10.16	8.91	7.44	7.13	6.99	6.81	99.49
160-00	1970	6.66	6.44	9.15	8.69	9.97	9.97	10.07	9.57	8.65	9.76	6.52	5.81	89.39
160-00	1971	6.06	6.64	6.59	8.26	9.77	9.77	9.93	10.38	9.29	8.09	6.73	6.17	100.34
160-00	1972	5.19	7.17	8.93	8.92	9.08	9.08	9.80	9.38	9.92	9.09	6.28	7.70	98.72
160-30	1965									9.36	5.92	6.09	6.33	.01
160-30	1966	5.72								9.60	7.13	7.90	5.97	.01
161-00	1962	3.97	6.80	6.70	7.58	9.41	9.38	9.60	11.63	10.27	8.63	9.35	4.97	98.37
161-00	1963	5.50	5.07	4.96	5.66	7.63	10.60	10.84	8.68	6.98	6.76	5.48	4.20	75.88
161-00	1965	4.07	4.88	6.44	6.88	8.36	11.96	11.06	10.15	8.41	7.42	4.73	4.20	86.29
161-00	1966	4.17	3.14	5.97	6.69	10.94	11.94	11.06	10.23	8.88	7.22	4.55	4.85	87.77
161-00	1967	3.60	4.81	5.22	6.71	9.22	10.59	11.38	10.97	8.93	5.94	6.34	2.66	71.33
161-00	1968	3.98	4.49	6.30	7.14	9.40	10.38	11.38	10.98	8.86	7.82	6.04	4.36	80.33
161-00	1969	5.27	4.86	6.32	6.53	7.40	7.81	8.38	7.96	7.53	6.52	5.39	5.39	75.96
161-00	1970	4.96	5.69	6.56	6.53	7.53	7.81	8.34	7.96	7.11	6.52	6.41	5.86	73.89
161-00	1971	4.23	5.18	6.56					6.44	7.19	6.47	4.12	5.86	.01
166-00	1968	6.47	5.70	7.24	8.16	8.63	8.37	8.37	8.58	8.34	7.98	5.98	5.39	88.89
166-00	1969	6.44	7.06	8.40	8.57	8.33	9.64	9.64	9.77	8.79	6.74	6.33	6.39	88.89
166-00	1970	4.72	6.29	8.77	8.58	8.33			8.35	9.35	8.22	6.21	7.15	97.72
168-00	1963	6.42	6.55	6.17	6.69	7.07						5.28	3.84	.01
168-00	1965	4.10	3.50	5.58	6.24	8.47	8.49	8.68	7.93	6.63	6.00	4.04	4.58	78.56
168-00	1966	4.31	4.70	5.92	6.07	8.60	8.70	9.08	8.56	8.23	5.28	4.58	4.31	77.35
168-00	1967	4.48	4.70	3.92	5.42	6.68	6.10	6.10	7.07	8.15	6.39	4.76	4.45	70.14
168-00	1968	4.49	4.88	5.22	5.83	8.50	6.79	6.79	7.61	8.59	7.00	6.39	4.40	71.19
168-00	1969	6.45	5.40	7.99	6.74	8.87	7.96	7.96	8.82	7.73	6.81	5.69	5.38	79.73
168-00	1970	5.45	6.04	6.43	7.03	8.32	7.41	7.41	7.97	7.55	6.88	5.14	5.95	84.62
168-00	1971	4.56	5.40	7.43	6.51	8.74	9.51	9.51	9.23	7.58	6.03	5.05	5.10	81.32
168-00	1972	4.85	5.27	6.62	5.79	8.05	8.56	8.56	8.70	7.00	7.03	6.06	5.13	86.93
168-00	1973	7.32	7.76	7.13	7.01	8.64	8.36	8.36	10.00	9.00	8.17	6.50	7.13	85.18
168-00	1974	7.59	6.55	7.70	7.99	9.16	10.29	10.29	12.44	10.33	9.42	6.53	7.80	92.70
168-00	1975	6.97	6.32	7.21	7.35	9.29	9.64	9.64	10.44	8.33	9.42	6.26	8.26	103.08
171-00	1962	7.08	6.15	5.44	6.78	7.41	7.52	7.52	11.40	10.09	8.69	9.91	6.24	.01
171-00	1963								10.14	4.89	5.27	3.87	3.44	.01
173-00	1960								7.72					.01

APPENDIX TABLE B.1--Continued

STATE KEY NO.	YEAR	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	ANNUAL (in.)
173-00	1961	3-70	3-52	5-36	6-14	6-71	6-65	7-68	7-54	7-73	5-98	7-36	4-79	73-16
173-00	1962	5-03	5-86	5-40	7-80	8-45	9-02	8-86	9-30	7-84	7-12	5-16	4-92	85-76
176-00	1961	5-82	4-83	5-45	5-91	6-73	7-27	7-33	8-38	7-71	6-50	6-08	5-00	83-98
176-00	1962	4-85	5-76	5-78	7-30	8-13	7-92	8-56	9-01	7-95	6-87	7-08	5-44	70-40
176-00	1963	6-78	4-77	5-65	6-07	7-13	7-22	6-93	7-70	5-58	5-37	6-99	3-29	83-40
176-00	1964	5-97	5-59	5-26	5-77	7-44	7-49	6-94	7-02	5-93	5-96	4-44	5-64	71-22
176-00	1965	4-03	4-10	4-34	6-90	6-97	8-49	9-16	8-49	9-34	6-41	4-35	4-98	77-96
176-00	1966	4-50	4-44	5-92	5-31	7-64	8-04	7-70	7-41	6-63	5-74	5-63	4-99	71-10
176-00	1967	5-30	5-04	5-04	5-48	6-96	7-06	7-37	7-29	7-14	5-66	5-11	3-87	72-74
176-00	1968	4-00	4-00	5-00	6-02	6-22	7-06	7-99	7-75	8-34	7-98	5-11	3-87	72-74
176-00	1969	5-49	4-69	5-84	6-43	6-95	7-31	7-99	8-12	6-76	5-98	5-42	5-22	75-22
176-00	1970	4-89	5-61	5-82	7-04	6-64	6-89	7-41	8-94	6-85	6-97	5-42	4-71	73-00
176-00	1971	4-03	4-51	5-52	7-04	6-64	6-89	7-41	8-94	6-85	6-97	5-42	4-71	73-00
179-00	1962	5-78	4-25	6-38	6-80	7-87	8-12	8-57	8-62	7-55	6-55	8-37	4-96	80-67
179-00	1963	7-25	6-59	6-78	6-75	8-13	8-34	8-12	8-59	6-63	6-90	5-83	4-96	83-98
179-00	1964	4-76	4-57	4-96	7-73	8-07	8-30	8-35	8-67	7-25	6-22	5-10	4-96	85-64
179-00	1965	5-40	4-08	6-90	7-17	8-10	9-47	9-35	9-51	9-18	7-19	5-75	5-76	77-74
179-00	1966	5-41	4-56	6-90	6-07	7-54	7-81	8-26	7-01	6-18	6-41	5-42	4-54	77-74
179-10	1966	5-55	6-19	6-69	6-15	7-28	8-08	7-71	8-36	8-21	6-96	6-30	5-27	79-85
179-10	1967	5-91	5-17	6-06	5-66	8-52	8-26	7-98	9-02	9-03	5-54	7-07	5-01	88-60
179-10	1968	6-00	5-07	6-06	5-86	7-59	8-43	8-55	9-72	9-96	7-69	6-39	4-51	81-45
179-10	1969	5-63	5-99	6-12	5-57	7-79	8-35	8-57	8-63	7-69	7-14	6-14	6-02	82-78
179-10	1970	4-08	5-96	7-89	6-57	6-85	6-84	7-65	7-74	7-67	6-72	5-18	5-62	79-58
182-00	1962	3-75	4-25	4-20	5-81	5-54	6-49	5-96	6-07	5-63	5-20	5-44	4-03	57-65
182-00	1963	4-30	4-35	5-30	4-42	7-75	6-30	6-76	6-58	4-31	4-63	4-34	4-07	57-65
182-00	1964	4-01	4-52	5-00	5-70	6-69	7-38	7-54	8-15	6-82	4-96	4-34	4-34	57-65
191-10	1976	3-65	4-78	5-56	5-17	6-79	8-32	9-54	8-68	6-82	5-62	4-00	3-89	58-34
191-10	1977	3-58	4-18	5-30	4-88	6-95	8-62	9-71	7-17	6-41	5-62	4-48	3-87	58-34
191-10	1978	4-23	3-05	6-37	5-01	6-55	8-88	9-66	9-52	6-84	3-97	3-64	4-14	58-34
191-10	1979	4-37	3-08	5-13	4-04	5-65	8-88	9-66	9-52	6-84	3-97	3-64	4-14	58-34
191-10	1980	4-57	3-00	6-09	4-31	5-28	8-77	9-33	9-23	5-84	5-18	4-79	3-93	77-52
191-10	1981	4-93	3-70	6-29	4-37	6-90	7-48	7-93	7-81	6-77	9-39	4-97	4-20	77-52
191-10	1982	4-50	3-24	5-49	4-66	5-11	7-20	7-08	6-70	6-33	3-74	4-28	4-21	58-44
191-10	1983	4-55	4-54	5-57	4-55	6-77	6-84	5-28	5-03	6-44	5-88	4-30	3-26	64-69
191-10	1984	3-16	4-54	5-57	4-08	5-77	6-84	5-28	5-03	6-44	5-88	4-30	3-26	64-69
201-20	1967	3-16	3-58	3-12	3-00	3-81	3-99	3-85	3-07	4-32	3-72	3-24	2-68	42-56
201-20	1968	3-54	2-58	3-12	3-00	3-97	3-29	3-98	4-30	3-59	4-28	3-41	2-95	42-56
203-20	1969	3-58	3-53	3-47	3-93	3-97	3-29	3-98	4-30	3-59	4-28	3-41	2-95	42-56
203-20	1977	5-79	3-79	4-39	3-49	5-28	7-87	2-45	2-21	3-59	3-07	3-47	4-10	50-45
203-20	1978	5-87	3-65	3-65	3-46	3-65	2-76	2-57	3-75	3-60	3-57	2-55	6-72	50-48
203-20	1979	4-80	3-55	3-15	2-28	6-14	3-95	3-57	3-41	4-05	6-09	3-09	3-62	47-70

APPENDIX TABLE B.1--Continued

STATE KEY NO.	YEAR	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	ANNUAL (in.)
203-20	1981	4.11	4.05	4.15	3.25	3.69	5.67	5.27	4.55	4.02	3.35	3.36	2.48	. . .
203-20	1982	2.57	3.18	3.46	2.68	2.62	3.42	2.63	3.16	3.14	3.87	2.73	4.32	40.29
203-20	1983	3.82	3.52	3.31	3.87	2.26	3.72	2.97	4.09	3.06	3.87	2.73	4.32	. . .
203-20	1984	6.30	4.57	3.82	3.98	6.39	7.94	7.75	8.25	6.51	6.61	5.82	5.46	. . .
206-00	1964	. . .	5.81	. . .	6.68	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
211-10	1961	3.75	3.86	4.39	4.15	5.57	6.71	6.48	5.67	5.39	4.37	4.62	5.27	62.62
211-10	1962	4.65	3.22	3.39	4.47	4.68	4.97	4.34	3.93	3.36	3.72	3.93	5.18	52.61
213-00	1963	5.73	5.68	9.1	6.43	6.88	7.12	6.73	8.06	6.75	6.86	5.62	4.89	. . .
213-00	1964	9.23	5.30	6.18	6.74	6.21	6.85	6.71	7.57	6.78	4.37	4.02	5.46	71.92
213-00	1965	7.78	4.76	8.05	6.27	7.19	9.16	9.27	9.32	8.00	7.49	7.65	7.04	90.44
213-00	1966	6.14	6.10	6.50	5.45	8.16	7.48	7.14	7.23	6.77	6.80	5.25	5.83	79.40
213-00	1967	6.25	6.56	7.46	5.80	8.17	9.28	7.53	6.90	7.44	8.14	6.25	7.07	87.41
213-00	1968	6.99	7.47	6.49	5.96	7.51	9.47	8.36	7.79	5.98	7.41	8.46	7.05	. . .
213-00	1969	7.46	7.77	7.91	6.46	7.33	9.75	8.94	8.95	9.74	6.45	8.46	7.02	87.64
213-00	1970	4.80	6.27	7.15	5.83	9.20	8.75	7.58	8.95	8.95	6.97	9.88	6.94	97.39
213-00	1971	6.19	8.08	8.63	6.88	7.93	7.52	8.27	10.09	6.93	6.84	8.55	5.90	88.18
213-00	1972	5.34	5.93	6.89	8.32	8.39	8.72	8.54	7.98	9.78	6.93	8.42	6.18	94.30
213-00	1973	6.83	7.40	7.84	8.56	8.64	7.58	8.42	8.09	8.25	9.80	7.14	6.93	90.39
213-00	1974	6.83	5.60	6.51	8.01	8.17	8.18	6.95	9.23	7.12	6.05	4.82	6.54	91.91
213-00	1975	9.00	10.93	6.61	8.87	8.89	8.22	6.88	9.11	7.39	6.97	7.77	5.98	. . .
213-00	1976	6.41	6.51	9.98	5.37	8.94	7.14	6.06	9.42	8.08	5.57	4.90	5.64	. . .
213-00	1977	8.97	8.48	8.23	7.82	8.25	7.31	7.40	7.28	7.31	6.65	7.79	4.61	. . .
213-00	1978	6.04	7.40	8.94	8.47	9.27	8.86	9.59	7.72	10.64	6.30	6.09	4.61	. . .
213-00	1979	7.98	6.40	7.71	8.47	7.71	6.45	10.59	8.92	7.29	6.30	6.09	4.61	. . .
213-00	1980	6.31	6.52	6.97	8.66	7.43	6.54	5.10	7.25	6.75	3.41	5.80	4.59	87.77
213-00	1981	6.31	6.52	6.97	8.66	7.43	6.54	5.10	7.25	6.75	3.41	5.80	4.59	87.77
213-10	1965	3.69	4.17	5.09	6.06	7.09	11.49	12.04	10.46	9.21	4.55	6.24	5.08	73.66
213-10	1966	5.64	3.36	6.14	4.80	6.80	7.82	7.83	6.44	6.58	6.12	5.88	5.80	82.64
213-10	1967	5.15	6.68	5.33	6.12	8.04	9.25	8.34	7.57	6.88	7.19	6.42	5.83	. . .
213-10	1968	5.40	5.68	6.13	5.26	5.59	6.30	9.91	8.07	6.73	6.08	6.51	5.83	80.76
213-10	1970	7.40	5.95	6.61	4.89	8.06	7.74	6.47	6.80	7.15	7.28	5.19	6.78	71.32
213-10	1971	4.18	5.24	6.64	6.19	6.60	7.35	8.07	6.29	6.43	5.28	5.19	4.27	88.82
213-10	1972	4.35	6.15	6.94	8.26	7.00	6.73	6.38	7.98	6.64	10.72	5.60	5.27	. . .
213-10	1973	8.33	5.99	7.77	5.15	7.31	7.16	7.88	6.89	7.73	5.24	4.22	8.54	. . .
213-10	1974	8.48	11.22	8.96	7.62	7.30	7.78	6.92	6.84	6.66	7.59	5.10	6.42	. . .
213-10	1975	5.88	7.08	6.96	8.62	8.72	7.16	6.56	8.94	6.28	7.59	5.10	5.89	. . .
213-10	1976	7.04	6.48	8.23	7.82	9.27	10.45	10.59	8.92	7.29	6.30	6.09	4.61	. . .
213-10	1977	6.04	7.40	8.94	8.47	9.27	8.86	9.59	7.72	10.64	6.30	6.09	4.61	. . .
213-10	1978	6.31	6.52	6.97	8.66	7.43	6.54	5.10	7.25	6.75	3.41	5.80	4.59	87.77
213-10	1979	7.98	6.40	7.71	8.47	9.27	8.86	9.59	7.72	10.64	6.30	6.09	4.61	. . .
213-10	1980	6.31	6.52	6.97	8.66	7.43	6.54	5.10	7.25	6.75	3.41	5.80	4.59	87.77
213-10	1981	6.31	6.52	6.97	8.66	7.43	6.54	5.10	7.25	6.75	3.41	5.80	4.59	87.77
213-10	1982	6.31	6.52	6.97	8.66	7.43	6.54	5.10	7.25	6.75	3.41	5.80	4.59	87.77
213-10	1983	6.31	6.52	6.97	8.66	7.43	6.54	5.10	7.25	6.75	3.41	5.80	4.59	87.77
213-10	1984	6.31	6.52	6.97	8.66	7.43	6.54	5.10	7.25	6.75	3.41	5.80	4.59	87.77
213-10	1985	6.31	6.52	6.97	8.66	7.43	6.54	5.10	7.25	6.75	3.41	5.80	4.59	87.77
213-10	1986	6.31	6.52	6.97	8.66	7.43	6.54	5.10	7.25	6.75	3.41	5.80	4.59	87.77
213-10	1987	6.31	6.52	6.97	8.66	7.43	6.54	5.10	7.25	6.75	3.41	5.80	4.59	87.77
213-10	1988	6.31	6.52	6.97	8.66	7.43	6.54	5.10	7.25	6.75	3.41	5.80	4.59	87.77
213-10	1989	6.31	6.52	6.97	8.66	7.43	6.54	5.10	7.25	6.75	3.41	5.80	4.59	87.77
213-10	1990	6.31	6.52	6.97	8.66	7.43	6.54	5.10	7.25	6.75	3.41	5.80	4.59	87.77
213-10	1991	6.31	6.52	6.97	8.66	7.43	6.54	5.10	7.25	6.75	3.41	5.80	4.59	87.77
213-10	1992	6.31	6.52	6.97	8.66	7.43	6.54	5.10	7.25	6.75	3.41	5.80	4.59	87.77
213-10	1993	6.31	6.52	6.97	8.66	7.43	6.54	5.10	7.25	6.75	3.41	5.80	4.59	87.77
213-10	1994	6.31	6.52	6.97	8.66	7.43	6.54	5.10	7.25	6.75	3.41	5.80	4.59	87.77
213-10	1995	6.31	6.52	6.97	8.66	7.43	6.54	5.10	7.25	6.75	3.41	5.80	4.59	87.77
213-10	1996	6.31	6.52	6.97	8.66	7.43	6.54	5.10	7.25	6.75	3.41	5.80	4.59	87.77
213-10	1997	6.31	6.52	6.97	8.66	7.43	6.54	5.10	7.25	6.75	3.41	5.80	4.59	87.77
213-10	1998	6.31	6.52	6.97	8.66	7.43	6.54	5.10	7.25	6.75	3.41	5.80	4.59	87.77
213-10	1999	6.31	6.52	6.97	8.66	7.43	6.54	5.10	7.25	6.75	3.41	5.80	4.59	87.77
213-10	2000	6.31	6.52	6.97	8.66	7.43	6.54	5.10	7.25	6.75	3.41	5.80	4.59	87.77

APPENDIX TABLE B.1—Continued

STATE KEY NO.	YEAR	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	ANNUAL (in.)
213-10	1979	4-93				7-32	7-33	6-10	4-89	6-37	5-48			
213-10	1980	5-23				10-09	8-18	7-86	7-84	8-82	8-17	6-16		
213-10	1981	7-20	6-49	7-52	7-15	9-32	8-64	8-67	7-59	7-09	7-66	9-18		
213-10	1983	7-09	6-16			6-78	5-68			6-53	6-11			
214-10	1961										6-57	4-62		
214-10	1962	4-00	5-05	6-48	6-33	7-54	8-55	6-60	6-80	7-89	5-37	4-86	4-64	69-84
214-10	1963	4-90	5-99	5-48	6-08	6-11	7-56			5-67			3-86	
215-30	1964	3-04	3-4	4-12	4-76	4-70	4-58	4-90	4-31	5-22	3-29	5-49	4-06	
215-30	1965	3-80	2-87	3-43	3-37	5-49	4-59	6-56	7-59	5-96	4-65	5-46	5-21	63-99
215-30	1966	4-43	4-34	4-35	4-23	5-30	5-13	5-39	4-04	4-19	4-25	3-63	3-55	49-35
215-30	1968	4-46	5-54	4-22	3-68	6-46	6-11	5-34	5-05	4-95	4-87	4-84	4-88	57-69
215-30	1969	4-59	4-56	4-39	3-45	4-59	4-14	5-00	6-09	4-21	4-17	4-94	4-45	
215-30	1970	3-39	4-60	5-11	3-78	4-86	4-86	5-56	5-18	6-40	4-64	4-81	3-83	58-47
215-30	1971	3-13	4-12	6-94	5-01	4-54	4-32	4-21	6-75	5-90	5-66	4-21	3-16	53-30
215-30	1972	3-32	3-98		4-90	5-97	5-49	4-17	4-48	4-89	4-55	4-3	3-17	
215-30	1973	7-83			4-48	4-80	4-49	5-76	6-41	4-4	4-7	3-81	4-46	
215-30	1975	5-17	5-36	8-30	6-41	6-15	5-07	7-08	5-11	5-12	4-4	3-76	4-81	
215-30	1977	6-42	4-95	7-36	5-84	5-84	5-84	1-14	4-14	4-96	4-4		6-60	
215-30	1978	4-93			6-31	5-31	6-59	2-26	4-63	4-46	5-29	6-04		
215-30	1979	4-43	5-68	6-85	8-47	5-59	5-84	5-77	4-63	7-46	8-70	9-54		
215-30	1980	5-22	5-83		7-67	6-54	6-29	8-30	8-76	6-21	7-21			
215-30	1982	5-31	5-23	8-06	8-14	5-29						4-80		
215-40	1961										6-96	4-80	4-07	
215-40	1962	4-19	4-65	5-33	5-49	6-51					5-20	4-62		
215-40	1963	5-58	5-35	4-81	5-14	6-32	7-16				4-86	4-62		
216-30	1962	5-30	4-27	4-12	4-89	6-98	5-87	5-37	5-23	4-67	4-21	4-83	3-77	53-34
216-30	1964	3-87	4-23	4-20	4-71	4-97	4-69	4-64	5-10	3-08	4-91	3-00	3-30	
216-40	1965	2-71	2-19	3-42	4-26	5-83	6-57	6-14	7-62	4-14	3-90	2-44	2-99	
216-40	1966		5-55	4-20	4-26	8-52	7-87	8-68	8-14	6-23	6-46			
216-40	1967	5-51	6-93	5-87	5-21	6-55	6-52	6-67	5-85	5-04	4-76	4-54	4-05	70-34
216-40	1968	4-53	3-69	4-19	4-33	8-55	7-60	6-70	6-16	7-85	4-20	3-40	3-56	64-54
216-40	1969	4-07	5-34	5-24	5-84	7-91	8-41	6-96	5-35	4-98	4-76	4-07	4-79	63-16
216-40	1970	3-56	3-87	4-12	7-17	7-62	7-07	6-54	7-35	7-90	6-01	5-48	4-59	71-33
216-40	1971	5-92	4-51	5-12	6-21	6-32	8-03	7-78	8-48	6-91	5-70	6-10	4-12	
216-50	1970	4-25	4-93	5-08	6-00	5-20	6-29	7-78	7-46	5-54	5-98	5-4	6-33	71-64
216-50	1971	4-25	7-08	5-08	6-54	7-81	6-29	6-02	8-25	6-55	5-49	4-61	4-63	

APPENDIX TABLE B.1--Continued

STATE KEY NO.	YEAR	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	ANNUAL (in.)
216-50	1965	4.27	3.41	4.43	4.78	5.93	6.97	7.53	7.80	8.27	6.28	4.99	4.81	69.43
216-50	1967	5.07	3.78	4.84	4.44	6.13	6.48	6.22	5.51	5.10	4.72	4.18	6.04	64.74
216-50	1968	4.78	4.46	5.43	5.87	6.67	6.50	7.50	7.85	7.02	6.49	4.62	5.08	71.57
216-50	1969	4.49	4.34	5.44	5.99	7.07	7.02	7.01	7.05	5.55	5.20	5.85	4.09	73.63
216-50	1970	5.39	6.08	6.54	6.99	7.79	7.29	6.67	6.63	6.17	5.43	4.32	6.56	70.03
217-00	1967	5.46	5.86	6.45	6.03	9.08	7.78	6.76	6.84	5.47	7.91	5.85	5.27	72.94
217-00	1968	5.13	5.13	6.14	6.03	6.27	8.61	8.49	8.87	8.98	7.08	5.76	5.02	72.94
218-00	1975	5.65	4.87	6.81	7.49	8.87	8.72	8.39	7.43	8.23	8.06	5.51	6.83	83.52
218-00	1977	5.09	5.09	6.37	6.70	7.68	7.24	8.28	7.61	8.15	6.64	5.70	4.80	83.52
218-00	1978	5.44	6.29	7.07	7.07	7.28	7.94	7.76	7.41	6.62	6.50	4.52	5.45	74.21
218-00	1979	5.04	5.45	6.93	6.47	7.68	7.71	6.64	6.72	7.55	5.00	4.59	4.12	73.90
218-00	1980	5.19	5.42	6.40	6.49	7.25	7.58	6.71	6.70	7.24	5.83	5.04	4.53	76.18
218-00	1981	5.57	5.42	6.57	6.92	7.09	7.32	7.66	7.73	6.23	5.53	4.80	5.15	81.07
218-00	1982	3.64	4.56	3.77	4.46	5.33	8.92	9.31	6.49	7.57	5.69	4.44	4.44	56.34
218-00	1983	5.58	5.73	6.07	5.44	6.33	6.75	7.12	6.54	5.44	5.87	5.30	4.56	63.34
218-20	1973	5.39	6.42	6.83	10.31	7.00	8.95	8.06	8.93	8.04	6.89	5.36	5.15	99.96
218-20	1974	4.78	5.11	7.44	7.31	8.29	9.85	9.20	9.98	10.59	9.29	7.57	9.11	99.96
218-20	1975	6.48	6.73	5.19	9.17	8.53	8.85	8.48	7.54	7.05	6.49	5.45	6.55	84.82
218-20	1977	6.59	6.68	8.34	6.87	8.33	7.78	7.31	8.18	7.34	7.15	5.72	6.18	83.94
218-20	1978	7.15	6.58	9.95	7.32	7.84	9.11	7.05	8.01	7.10	5.49	6.85	5.47	82.10
218-20	1979	5.49	6.38	8.34	6.97	8.47	8.14	7.81	6.73	7.85	5.49	4.85	5.54	90.92
218-20	1980	6.52	5.53	7.67	6.16	8.50	8.82	8.05	8.12	7.19	6.87	5.35	6.41	90.92
218-20	1981	4.30	6.45	6.65	9.02	8.65	10.22	12.08	10.03	9.01	7.30	6.90	5.46	98.38
218-20	1983	4.46	5.29	6.17	5.58	6.64	8.44	7.97	7.21	5.99	6.55	6.12	5.22	72.77
220-00	1962	5.55	5.55	4.20	7.26	8.64	7.82	8.68	8.14	7.23	6.40	4.54	4.05	70.34
220-00	1963	5.00	6.93	5.87	5.01	8.52	6.50	6.67	5.85	5.23	4.76	4.54	4.33	70.34
220-00	1964	3.53	3.37	5.38	5.33	5.41	6.60	6.97	6.05	7.05	4.20	3.48	3.56	63.44
220-00	1966	3.07	3.34	5.19	4.84	7.36	8.41	6.96	5.90	4.98	4.76	4.07	4.79	63.16
220-00	1968	3.56	3.87	5.24	4.17	7.62	7.47	6.59	7.35	6.06	6.01	5.35	4.77	63.43
220-00	1969	5.92	4.93	5.09	5.20	6.32	8.03	7.55	8.48	5.91	5.70	6.48	4.59	71.33
220-00	1970	4.65	4.93	6.80	6.42	5.30	8.52	7.75	8.68	7.35	5.35	5.10	5.12	69.21
220-40	1960	5.72	5.49	5.24	6.81	9.80	6.63	7.89	6.25	7.54	7.15	7.49	5.37	75.02
220-50	1963	6.47	6.40	5.52	6.11	6.93	10.04	9.43	8.38	7.07	5.45	5.54	4.62	75.02
220-50	1965	4.42	3.60	4.52	4.85	8.06	8.30	8.28	8.37	6.11	5.73	5.52	5.20	74.88
220-50	1966	4.36	3.66	4.75	4.19	7.10	8.19	8.72	9.17	7.11	5.99	4.78	4.43	73.24
220-50	1967	4.67	3.87	5.44	4.55	7.67	9.09	7.96	9.53	6.76	6.82	5.75	4.67	77.08

APPENDIX TABLE B.1--Continued

STATE KEY NO.	YEAR	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	ANNUAL (in.)
220.50	1968	4.51	4.97	5.60	5.94	8.06	10.92	9.98	8.90	7.71	7.19	6.48	4.59	84.85
220.50	1969	6.67	6.08	7.75	5.79	6.94	7.47	8.18	7.41	6.57	6.73	5.65	5.49	80.73
220.50	1970	5.05	5.82	6.42										
221.30	1964	6.25	6.36	6.91	7.00	7.86	7.69	7.19	7.17	5.46	5.24	7.16	5.60	79.89
221.30	1965	4.28	3.08	5.96										
221.30	1966	4.36	4.14	6.17	4.20	5.70	9.36	6.51	5.74	6.90	5.87	4.70	3.95	67.60
221.30	1967	4.23	5.89	6.76	3.65	8.71	8.71	9.59	8.09	9.59	7.96	8.71	7.92	89.81
221.30	1968	5.87	4.21	5.99	7.41	4.38	10.59	8.97	5.39	7.88	6.55	6.74	4.10	78.08
221.30	1969	5.76		5.90	8.87	7.63	5.65	10.85	10.03	8.77	7.48	6.58	2.80	
221.30	1970	2.79	2.83	5.29	3.33	5.32	6.92	7.02	7.92	7.23	5.67	3.28	4.62	62.22
221.30	1971	2.83	7.09	8.66	6.59	9.05	9.22	11.27	10.29	8.34	6.37	5.84	5.06	90.61
221.30	1972	3.57	4.56	5.41	5.49	7.76	6.76	7.10	6.54	6.82	6.86	4.99	3.76	69.62
221.30	1973	3.77	4.57	6.47	7.60	8.65	9.32	8.88	8.93	7.89	6.26	6.71	5.16	84.21
221.30	1974	5.14	6.38	5.85	6.92	9.16	8.71	9.52	9.63	9.56	8.67	6.80	7.64	93.98
221.30	1975	5.56	4.81	6.18	7.06	9.88	8.40	8.08	7.39	8.29	5.48	5.73	4.70	81.56
221.30	1976	7.85	5.71	3.98	7.38	8.77	8.27	8.87	8.72	6.20	6.02	5.41	5.87	83.05
221.30	1977	5.47	7.17	9.18	5.36	8.90	9.27	5.50	5.83	7.24	5.48	5.89	2.56	77.85
221.30	1978	4.80	5.90	6.48	6.61	8.40	8.36	6.87	7.90	8.21	5.05	4.24	4.56	77.38
221.30	1979		4.21	6.29	5.20		7.98	6.02	6.67	7.71	5.99		3.59	
221.30	1980	3.68	4.43	5.97	6.98	7.75	7.67	8.18	7.92	6.56	5.66	5.53	4.43	74.76
221.30	1981	5.58	5.58	6.79	7.79	8.01	8.34	8.01	7.86	6.74	5.41	3.95	4.01	78.07
221.30	1982		4.01											
296.10	1982		6.08	7.26	7.68	9.31	7.66	9.26	9.46	8.52	8.99			
310.00	1960			5.70	7.95	8.70	9.59	11.36	11.11	10.61	8.61	7.88	4.90	
310.00	1961	6.05	5.16	7.30	7.04	9.30	9.26	9.41	10.41	8.82	6.82	6.32	4.64	90.53
310.00	1962	3.82	4.70	5.51	6.76	7.89	11.04							
310.00	1980	3.94	4.67	6.99	6.67	8.79	9.29	8.98	9.54	10.42	9.19	8.13	4.55	91.16
310.10	1962									14.08	9.57	9.10	5.46	
310.10	1963	6.84	5.65	7.03	7.35	8.99	10.22	10.61	10.41	9.34	8.46	7.19	5.05	97.14
310.10	1964	7.33	8.38	7.09	8.75	12.02	12.68	14.93	14.08	12.37	10.11	7.33	6.91	121.98
310.10	1965	5.57	5.52	7.33	6.85	7.41	10.65	9.84	10.02	7.88	8.05	6.27	6.64	92.03
310.10	1966	6.25	4.65	7.37	8.28	8.85	12.18	12.93	11.42	10.03	8.46	6.36	7.19	103.97
310.10	1967	6.41	5.63	5.55	7.07	8.13	8.78	9.25	8.81	8.88	7.40	6.89	5.29	88.09
310.10	1968	3.87	4.78	5.59	6.23	8.62	9.10	9.77	9.25	9.23	7.56	6.40	5.08	85.48
310.10	1969	5.31	6.25	7.31	8.04	8.69	9.09	9.81	9.88	9.88	8.47	7.02	3.87	93.62
310.10	1970	5.48	5.73	8.65	8.77	9.94	10.46	11.44	12.07	10.20	8.29	6.60	6.67	104.30
310.10	1971		5.33	7.71	7.10	9.18	9.17	10.05	9.35	8.16	7.95	6.54	6.19	
310.10	1972	4.96	5.46	5.96	7.56	8.47	8.87	10.27	10.13	9.28	8.24	8.04	5.58	92.82
310.10	1973	5.91	6.29	8.81	8.49	9.23	9.14	10.29	9.67	9.04	8.21	5.77	5.33	96.18
310.10	1974	4.72	5.48	6.75	7.89	8.24	9.91	11.53	10.93	7.86	8.25	6.25	7.00	94.81
310.10	1975	5.58	5.57	7.64	8.85	9.15	10.01	11.00	10.43	9.46	8.08	6.59	5.35	97.71
310.10	1976	6.10	6.42	6.22	10.18	12.41	11.43	13.18	13.32	11.51	9.65	8.05	7.44	115.91
310.10	1977	5.71	7.42	11.02	8.61	9.68	10.57	10.02	9.34	9.26	8.04	6.46	5.73	101.86
310.10	1978	6.16	5.64	7.38	8.27	8.18	12.12	12.81	12.01	11.08	7.94	5.32	6.59	103.50
310.10	1979	6.29	5.42	7.23	6.38	8.52	9.41	9.97	9.43	8.95	8.33	6.52	5.43	91.88
310.10	1980	5.08	4.67	6.99	6.67	8.79	9.29	8.98	9.54	10.42	9.19	8.13	4.55	92.30

APPENDIX TABLE B.1--Continued

STATE KEY NO.	YEAR	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	ANNUAL (in.)
310-10	1981	5.91	5.32	8.09	7.94	8.53	10.35	10.44	9.06	8.90	8.37	7.47	5.19	95.57
310-10	1982	3.83	4.61	4.45	6.25	7.63	8.04	9.04	9.27	8.97	7.24	6.14	5.15	80.62
310-20	1964	5.09	5.65	7.09	7.39	8.73	9.81	11.53	10.93	10.17	8.47	5.91	5.76	86.60
310-20	1965	4.67	5.81	7.06	6.97	7.23	10.34	9.64	9.54	6.77	6.78	5.49	6.30	86.60
310-20	1966	5.87	4.16	6.66										
313-00	1963	5.54	6.83	6.57	7.70	8.46	8.86	10.77	11.33	10.74	7.25	6.49	4.59	98.13
313-00	1965	4.91	5.63	7.54	6.70	7.26	9.17	8.77	8.91	7.44	9.06	6.77	4.43	83.56
313-00	1966	4.65	4.03	6.34	6.66	7.82	10.99	10.74	10.93	9.42	7.09	5.07	5.43	90.64
313-00	1967	4.89	4.87	5.15	6.74	7.82	8.99	8.74	8.00	7.88	6.98	4.18	5.69	80.14
313-00	1968	4.06	4.50	5.54	5.81	8.26	8.48	9.53	10.89	8.78	6.44	6.00	4.90	82.02
313-00	1969	4.90	4.38	6.84	7.64	8.45	8.59	9.31	10.54	8.02	7.83	6.65	6.04	90.95
313-00	1970	5.33	5.94	8.74	9.41	9.36	11.50	11.53	11.70	10.02	8.14	6.24	6.36	102.30
313-00	1971		5.63	7.32	6.25	9.10	9.57	10.81	10.73	8.56	8.88	6.72	6.31	96.56
313-00	1972	5.26	5.79	6.39	8.18	8.80	9.12	10.66	10.62	9.52	8.00	7.68	6.71	96.56
313-00	1973	5.09	6.85	8.96	8.73	9.51	10.54	11.30	10.97	9.55	8.78	6.26	5.71	102.50
313-00	1974	5.52	6.00	8.66	8.71	9.40	9.51	11.34	10.80	9.18	8.92	6.81	6.44	99.47
313-00	1975	5.52	5.73	7.62	8.32	9.25	9.94	11.63	10.84	9.88	8.92	7.36	5.77	107.65
313-00	1976	5.96	6.17	6.52	9.21	10.16	9.75	12.22	12.75	11.18	8.68	8.28	6.49	102.49
313-00	1977	6.45	6.77	9.73	8.90	9.45	10.90	10.89	9.81	8.75	7.87	6.46	6.56	88.94
313-00	1978	6.25	6.38	7.55	7.34	7.55	8.52	9.37	8.16	7.47	6.65	5.15	5.11	79.19
313-00	1979	5.20	3.85	5.80	6.37	7.42	8.22	9.83	8.68	8.42	7.55	6.06	4.54	86.33
313-00	1980	5.42	4.33	5.80	7.84	8.26	9.15	9.15	8.82	8.42	7.59	6.04	5.03	86.33
313-00	1981	4.40	6.12	4.08	6.00	7.15	7.89	10.15	8.39	8.56	8.27	6.14	4.54	77.26
313-00	1982	4.47	4.82	4.08	6.99	7.61	7.89	8.42	8.39	8.56	7.27	6.14	4.54	77.26
313-10	1960	4.60	4.25	6.02	6.15	7.96	8.56	10.28	9.33	8.78	7.45	6.38	4.25	91.77
313-10	1961	4.61	4.89	4.95	7.04	7.98	9.20	10.34	9.35	8.84	7.40	6.14	4.86	98.00
313-10	1962	4.28	6.22	4.68	7.04	7.98	9.20	10.34	9.35	8.84	7.40	6.14	4.86	98.00
313-30	1971	4.45	5.45	6.34	5.64	8.20	9.37	9.59	10.45	11.15	8.29	6.66	5.14	91.13
313-30	1972	4.24	4.96	5.36	6.49	8.04	9.50	10.22	9.86	8.42	7.41	6.55	5.18	88.34
313-30	1973	5.42	5.06	7.38	7.70	9.45	11.13	11.13	11.16	10.13	8.78	6.37	5.18	100.20
313-30	1974	4.94	6.48	6.76	8.38	9.98	10.77	10.77	11.79	10.28	8.57	6.48	5.74	96.98
313-30	1975	4.73	5.54	6.61	8.18	9.15	9.67	10.93	10.75	9.20	8.74	6.22	5.84	95.77
313-30	1976	5.73	5.78	6.23	8.08	9.63	10.98	10.40	10.04	9.21	7.99	6.72	5.84	99.23
313-30	1977	5.53	6.23	6.01	8.08	9.20	9.98	10.40	10.04	8.75	7.99	6.96	5.30	99.23
313-30	1978	5.91	5.91	7.24	7.89	8.17	9.20	9.57	9.22	8.01	6.49	5.81	5.30	81.48
313-30	1980	6.33	5.37	7.11	7.43	8.83	8.74	8.99	8.87	7.75	6.96	5.81	5.30	81.48
313-30	1981	6.63	5.66	7.11	7.09	8.15	9.16	10.09	8.12	8.77	7.69	6.41	5.83	85.70
313-30	1982													
313-30	1983													
313-30	1984													
313-30	1985													
314-00	1960	5.87	4.89	7.07	7.39	9.45	9.90	10.10	9.71	8.55	6.26	8.02	6.84	90.76

APPENDIX TABLE B.1--Continued

STATE KEY NO.	YEAR	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	ANNUAL (in.)
314-00	1976	6-01	6-26	9-19	7-95	8-62	9-43	9-33	8-92	9-06	8-01	7-06	6-09	91-47
314-00	1977	5-95	6-06	7-35	8-04	7-12	7-88	8-51	7-96	7-97	5-16	6-16	4-76	81-29
314-00	1978	4-76	4-10	5-62	6-24	7-51	7-23	9-12	8-86	7-34	5-84	5-15	4-95	77-34
314-00	1979	4-08	4-67	5-96	6-51	7-21	7-35	7-63	8-07	7-04	6-83	5-30	5-01	75-79
314-00	1980	4-94	6-05	7-38	7-37	7-98	9-45	9-39	8-70	8-45	7-37	5-09	4-14	90-19
314-10	1972	5-33	6-52	8-05	7-79	8-90	9-11	9-76	9-48	8-30	7-17	6-58	5-54	94-20
314-10	1973	5-27	5-78	6-92	8-33	9-04	9-02	10-04	9-63	9-45	8-54	6-01	5-11	94-17
314-10	1974	5-37	5-61	6-96	8-71	9-38	9-12	10-91	9-96	8-16	7-55	6-23	5-25	93-67
314-10	1975	5-67	6-11	7-84	9-51	9-66	9-27	11-08	10-20	9-55	8-51	7-06	6-40	94-22
314-10	1976	5-85	6-29	8-35	5-40	7-54	9-29	8-20	11-77	9-59	8-05	7-53	6-45	100-22
314-10	1977	5-90	6-47	9-62	7-40	8-58	8-29	9-32	8-79	7-25	6-07	4-61	5-94	89-58
314-10	1978	4-90	3-81	7-00	6-06	7-54	8-99	8-34	8-04	7-54	6-67	5-56	5-50	80-29
314-10	1979	4-08	4-21	5-54	8-19	8-73	8-08	8-33	8-79	7-54	6-87	5-80	5-50	80-89
314-10	1980	4-85	6-59	7-70	6-52	8-36	10-36	10-75	8-52	7-59	7-87	6-80	5-94	80-89
314-10	1981	4-22	6-59	8-80	6-52	8-73	8-33	7-74	7-72	7-73	6-92	5-47	5-85	95-50
314-10	1982	5-48	4-44	6-75	8-63	8-17	8-78	10-14	9-24	11-10	8-60	7-41	7-59	77-87
316-00	1960	4-59	4-56	5-77	8-05	8-26	9-56	10-78	11-13	9-31	7-16	6-77	5-88	94-37
316-20	1957	4-59	4-56	5-77	8-05	8-26	9-56	10-78	11-13	9-31	7-16	6-77	5-88	94-37
316-20	1958	5-46	6-33	7-58	6-36	7-71	10-55	8-89	8-13	8-31	5-80	4-40	4-23	84-82
316-20	1959	5-29	5-02	5-92	6-74	7-98	8-55	7-78	9-18	7-75	6-70	5-33	6-23	86-16
316-30	1966	4-48	4-43	4-59	6-15	7-49	8-19	8-79	7-63	7-99	7-18	4-86	4-87	85-18
317-10	1958	3-85	5-26	7-42	6-30	7-97	8-86	9-31	10-65	7-23	8-19	5-54	4-89	85-18
317-10	1959	5-21	5-17	5-77	7-72	7-97	8-86	9-31	10-65	7-23	7-38	5-25	5-70	85-18
317-20	1960	5-87	4-89	7-07	7-39	9-45	9-90	10-10	9-71	8-67	6-14	6-57	6-84	90-76
317-20	1961	5-10	5-51	6-71	7-16	8-24	9-96	10-26	9-74	9-06	8-83	7-52	5-00	94-59
317-20	1962	6-47	7-83	6-11	5-49	8-24	9-95	10-54	9-68	9-06	7-97	7-04	5-75	90-51
317-20	1963	6-77	7-83	7-37	8-28	9-04	8-35	8-67	9-17	8-17	7-74	6-05	4-97	90-22
317-20	1964	4-77	5-43	6-68	6-59	7-05	8-35	8-61	9-86	8-40	9-02	6-70	5-05	93-81
317-20	1965	5-82	5-43	7-16	8-02	9-00	9-89	9-71	9-50	8-24	6-76	5-67	5-05	89-48
317-20	1966	4-24	4-62	5-69	6-56	7-00	7-94	8-36	8-59	8-79	6-29	5-11	5-37	89-66
317-20	1967	5-49	6-46	6-89	8-08	8-56	8-32	8-53	8-39	8-90	6-25	5-73	5-30	79-70
317-20	1968	5-89	5-43	6-99	8-49	8-31	8-65	9-28	9-51	9-12	7-13	6-65	6-06	91-37
317-20	1969	5-45	5-57	6-89	8-27	8-56	8-56	9-34	9-51	8-90	6-25	5-73	5-30	79-39
317-20	1970	5-45	5-57	6-89	8-27	8-56	8-56	9-34	9-51	8-90	6-25	5-73	5-30	91-37
317-20	1971	5-45	5-57	6-89	8-27	8-56	8-56	9-34	9-51	8-90	6-25	5-73	5-30	79-39
317-20	1972	5-45	5-57	6-89	8-27	8-56	8-56	9-34	9-51	8-90	6-25	5-73	5-30	91-37
317-20	1973	5-45	5-57	6-89	8-27	8-56	8-56	9-34	9-51	8-90	6-25	5-73	5-30	79-39
317-20	1974	5-45	5-57	6-89	8-27	8-56	8-56	9-34	9-51	8-90	6-25	5-73	5-30	91-37
317-20	1975	4-46	4-86	5-75	7-49	8-34	8-79	10-54	10-88	9-28	7-22	5-25	5-44	87-76
317-20	1976	4-66	5-18	5-25	7-52	8-64	8-79	10-54	10-88	9-28	7-22	5-25	5-44	87-67
317-20	1977	4-66	5-18	5-25	7-52	8-64	8-79	10-54	10-88	9-28	7-22	5-25	5-44	81-52
317-20	1978	4-66	5-18	5-25	7-52	8-64	8-79	10-54	10-88	9-28	7-22	5-25	5-44	84-67

APPENDIX TABLE B.1—Continued

STATE KEY NO.	YEAR	(in.)												
		JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	ANNUAL
394	10	5.51	5.33	5.33	7.27	8.06	9.04	9.85	10.59	10.20	8.37	7.49	5.27	92.52
394	10	4.23	5.33	5.33	6.96	8.44	9.38	10.06	10.89	10.86	7.56	6.43	3.70	85.56
394	10	4.95	5.74	7.09	7.96	9.17	9.18	10.89	11.54	11.59	9.55	8.01	3.95	101.66
394	10	4.92	5.74	7.48	8.04	9.25	9.75	10.52	11.23	9.65	8.15	6.24	5.49	99.37
394	10	3.6	5.32	6.48	6.10	7.25	10.80	11.65	10.99	9.74	8.08	7.73	5.91	97.61
394	10	5.24	5.18	6.43	8.08	9.83	10.40	12.51	13.74	11.96	10.07	6.27	5.80	110.70
394	10	5.31	5.43	7.50	8.73	9.76	10.81	11.96	12.23	11.18	9.18	7.18	5.80	100.39
394	10	5.21	6.47	6.69	8.28	11.16	10.11	11.18	12.07	10.43	8.57	6.91	6.34	105.07
394	10	5.98	6.31	7.16	8.54	9.29	11.76	11.33	11.90	10.81	9.08	7.41	6.16	104.75
394	10	6.86	6.97	7.02	8.66	8.07	9.98	10.19	9.98	9.43	7.65	6.92	5.72	107.31
394	10	5.23	5.04	7.98	7.25	8.29	9.24	10.18	9.90	8.71	7.65	5.92	5.5	97.00
394	10	5.20	5.97	6.98	7.06	7.86	8.86	9.78	9.90	8.66	7.88	6.90	5.69	87.35
394	10	4.80	5.10	7.80	7.25	8.29	8.86	10.86	9.52	8.97	7.92	6.80	5.45	89.42
394	10	4.36	4.06	7.50	6.17	7.55	8.50	8.65	9.77	9.14	7.59	5.44	5.31	96.60
396	00	7.36	7.87	7.78	7.59	7.50	8.98	11.52	9.61	9.08	7.19	5.77	4.50	87.98
396	00	4.22	4.19	5.22	6.19	8.22	9.03	10.21	11.12	8.56	6.13	5.75	4.54	95.33
396	00	4.87	4.24	5.30	6.78	8.14	9.30	10.14	10.86	10.88	9.35	8.35	5.32	94.07
396	00	6.47	7.90	6.42	6.58	7.81	10.68	10.32	11.68	10.48	8.7	6.5	4.65	102.42
396	00	4.74	5.25	6.11	7.26	8.65	11.35	10.19	10.32	7.68	7.46	6.24	5.81	91.39
396	00	5.59	5.25	6.88	7.26	8.25	10.78	10.27	9.98	8.53	7.53	6.03	5.88	89.85
396	00	5.09	5.32	6.08	7.22	8.41	9.90	10.84	10.57	9.20	7.8	6.82	5.70	90.12
396	00	5.15	5.73	6.77	7.37	8.47	9.52	10.14	10.29	10.20	8.16	6.90	4.3	87.14
396	00	4.11	4.73	5.94	6.98	8.30	9.49	10.45	10.85	10.70	7.45	6.05	5.20	92.42
396	00	5.86	5.44	6.78	7.82	9.25	10.81	12.16	10.27	9.05	7.8	6.24	6.66	99.78
396	00	5.18	5.83	6.00	7.81	9.25	10.81	12.16	10.45	10.53	8.8	6.90	5.86	95.70
396	00	5.17	5.80	6.35	8.07	9.25	11.81	12.20	11.72	9.45	8.25	6.21	5.86	108.54
396	00	4.43	5.20	7.12	8.72	9.53	11.44	12.94	11.42	10.45	9.25	6.37	5.32	102.21
396	00	5.65	5.20	6.48	8.76	10.82	11.44	13.81	12.14	10.63	8.95	7.50	5.38	107.88
396	00	5.76	5.20	6.48	8.76	10.82	11.44	13.81	12.14	10.63	8.95	7.50	5.38	104.88
396	00	5.95	6.93	7.39	8.60	9.80	11.12	11.77	9.87	9.38	7.07	6.82	5.22	102.49
396	00	5.08	5.04	6.43	8.43	8.12	9.54	11.54	11.24	9.49	8.02	6.10	5.44	82.53
396	00	5.35	5.77	7.30	8.77	8.12	8.81	9.54	11.89	9.29	8.11	5.93	5.84	90.80
396	00	3.39	3.99	5.15	6.84	7.70	8.80	10.14	8.58	8.44	6.88	6.17	4.47	84.74
396	00	3.89	3.91	5.93	7.61	8.70	9.34	10.14	8.58	8.44	6.88	6.17	4.47	84.74
396	00	4.83	5.26	6.51	7.64	8.57	9.34	10.14	8.58	8.44	6.88	6.17	4.47	95.19
401	00	5.01	5.03	5.92	7.43	8.40	9.22	11.98	11.19	9.66	7.83	6.80	4.68	74.45
401	00	6.11	7.36	7.00	8.39	9.50	11.40	10.13	11.19	10.31	7.83	6.80	4.68	97.04
401	00	4.33	4.84	5.87	6.62	7.92	10.60	10.65	10.14	9.22	7.15	6.45	5.35	93.72
401	00	5.07	5.37	6.26	7.24	8.20	11.50	9.60	10.99	7.82	7.27	6.22	5.4	88.48
401	00	5.07	5.37	6.26	7.24	8.20	11.50	9.60	10.99	7.82	7.27	6.22	5.4	79.69

APPENDIX TABLE B.1—Continued

STATE KEY NO.	YEAR	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	ANNUAL (in.)
401-00	1967	4.20	4.61	5.18	7.78	9.49	10.49	10.91	9.48	8.92	7.43	6.48	5.00	89.97
401-00	1968	4.26	4.42	5.14	6.31	8.37	8.93	8.93	9.32	7.33	6.91	5.24	3.71	79.32
401-00	1969	5.06	5.19	6.70	8.14	9.77	11.01	11.01	10.26	8.33	7.28	6.85	5.22	92.95
401-00	1970	4.77	5.38	8.40	8.66	8.98	9.89	9.89	10.99	8.78	7.17	5.19	3.55	92.60
401-00	1971	8.1	5.08	8.38	7.03	9.79	11.71	11.93	10.56	8.48	7.98	6.48	5.96	88.05
401-00	1972	5.23	5.70	6.17	7.70	8.54	9.92	9.92	9.44	8.88	7.83	6.55	5.07	104.26
401-00	1973	4.80	5.69	9.97	8.54	10.23	11.75	12.10	11.92	9.87	7.94	6.55	5.33	90.97
401-00	1974	5.39	5.15	6.32	8.65	9.77	10.96	12.48	12.48	10.12	7.54	6.08	5.52	105.14
401-00	1975	5.35	5.55	7.75	9.25	11.87	10.91	9.41	9.07	8.22	7.60	6.28	5.34	92.99
401-00	1976	5.74	6.01	6.94	7.94	8.75	9.41	9.30	8.53	7.79	5.95	4.47	4.80	84.00
401-00	1977	4.26	3.68	6.91	5.84	8.96	8.78	8.78	8.99	8.22	6.17	4.66	4.19	78.12
401-00	1978	5.13	5.69	7.07	5.95	8.14	9.38	8.78	8.99	7.79	6.78	4.63	3.55	79.00
401-00	1981	4.32	3.75	7.58	6.82	8.14	10.41	10.41	9.19	8.71	7.17	5.79	4.33	88.56
401-00	1982	4.60	4.19	6.00	5.79	7.37	7.43	7.43	7.68	8.09	6.73	5.45	4.33	70.04
401-10	1966	4.70	4.51	4.64	6.33	8.71	8.97	8.97	8.09	16	6.97	5.70	5.29	79.45
401-10	1967	4.54	3.26	5.56	5.73	8.35	8.89	8.89	9.25	8.07	6.89	5.24	4.33	75.92
401-10	1968	4.30	4.92	6.72	7.13	8.08	10.70	10.70	9.22	8.01	6.81	5.87	4.54	86.18
401-10	1970	4.38	4.86	7.37	8.31	9.08	9.69	9.69	10.39	8.58	7.11	5.52	4.55	89.29
401-10	1971	4.38	4.86	7.37	8.31	9.08	9.69	9.69	10.39	8.58	7.11	5.52	4.55	89.29
401-10	1972	4.51	4.85	6.27	7.06	8.35	9.23	9.23	9.26	7.06	6.38	5.68	5.54	83.59
401-10	1973	4.59	4.55	6.75	8.29	8.95	10.20	10.20	10.08	8.05	7.99	6.12	5.44	92.57
401-10	1974	4.59	4.55	6.75	8.29	8.95	10.20	10.20	10.08	8.05	7.99	6.12	5.44	92.57
401-10	1975	4.59	4.55	6.75	8.29	8.95	10.20	10.20	10.08	8.05	7.99	6.12	5.44	92.57
401-10	1976	4.59	4.55	6.75	8.29	8.95	10.20	10.20	10.08	8.05	7.99	6.12	5.44	92.57
401-10	1977	4.59	4.55	6.75	8.29	8.95	10.20	10.20	10.08	8.05	7.99	6.12	5.44	92.57
401-10	1978	4.59	4.55	6.75	8.29	8.95	10.20	10.20	10.08	8.05	7.99	6.12	5.44	92.57
401-10	1979	4.59	4.55	6.75	8.29	8.95	10.20	10.20	10.08	8.05	7.99	6.12	5.44	92.57
401-10	1980	4.59	4.55	6.75	8.29	8.95	10.20	10.20	10.08	8.05	7.99	6.12	5.44	92.57
401-10	1981	4.59	4.55	6.75	8.29	8.95	10.20	10.20	10.08	8.05	7.99	6.12	5.44	92.57
401-10	1982	4.59	4.55	6.75	8.29	8.95	10.20	10.20	10.08	8.05	7.99	6.12	5.44	92.57
401-10	1983	4.59	4.55	6.75	8.29	8.95	10.20	10.20	10.08	8.05	7.99	6.12	5.44	92.57
402-00	1971	5.51	7.28	7.39	8.19	9.32	10.90	10.90	9.73	10.19	7.20	7.20	7.20	92.15
403-10	1966	5.17	5.06	5.74	6.85	9.98	10.33	10.33	9.73	19.35	7.38	5.74	4.96	92.48
403-10	1968	5.23	5.91	4.46	6.59	10.06	10.95	10.95	10.25	9.06	7.59	6.03	5.67	87.36
403-10	1969	4.86	4.83	6.16	7.45	9.71	11.31	11.31	10.89	8.76	7.95	6.75	5.53	92.57
403-10	1970	6.81	6.19	8.46	7.53	9.58	11.69	11.69	10.20	9.76	7.32	5.79	5.24	95.57
403-10	1971	5.99	5.46	7.21	6.58	11.57	12.74	12.74	11.53	9.41	9.00	8.09	6.56	98.77
403-10	1972	5.34	5.22	7.82	7.68	9.87	11.05	11.05	9.14	11.79	8.00	6.55	5.56	111.72
403-10	1973	6.32	5.84	7.82	9.16	12.06	13.51	13.51	13.14	11.93	10.00	8.22	6.81	110.62

APPENDIX TABLE B.1—Continued

STATE KEY NO.	YEAR	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	ANNUAL (in.)
403-10	1975	5.07	5.14	7.41	8.91	11.82	12.07	13.82	12.50	11.26	8.74	8.42	6.66	111.82
403-10	1976	6.18	6.48	7.39	7.47	10.98	10.41	11.71	11.74	9.33	8.45	6.09	5.56	101.79
403-10	1977	6.08	6.54	8.16	8.26	11.11	11.89	11.49	10.19	9.93	8.46	6.75	5.15	102.91
403-10	1978	6.37	6.37	8.40	8.19	9.59	9.18	9.33	9.53	8.46	6.45	6.30	4.33	89.66
403-10	1980	5.47	5.47	5.40	5.55	7.18	8.02	8.95	7.85	7.99	6.57	5.39	4.34	76.34
403-10	1981	5.54	4.57	4.64	5.81	7.18	8.02	8.94	8.85	8.36	6.55	5.14	4.74	88.88
403-10	1982	5.11	4.61	4.97	5.78	8.58	10.33	9.52	8.83	8.32	7.29	5.31	4.37	76.03
403-10	1983	4.58	4.75	6.22	7.08	6.67	8.74	8.52	8.40	8.32	6.69	5.07	5.07	83.81
404-10	1962	5.99	5.33	5.99	6.05	8.12	10.08	10.22	9.49	9.36	7.66	7.31	5.79	83.81
404-10	1963	5.37	5.33	7.08	8.97	8.12	8.59	9.27	9.80	7.90	6.91	5.69	4.44	104.18
404-10	1964	5.47	6.19	7.08	8.97	11.96	11.59	11.20	12.18	10.27	8.56	5.46	4.55	104.18
404-10	1965	4.66	4.93	6.35	7.33	8.09	11.46	11.47	11.81	8.46	8.20	7.59	6.27	96.62
404-10	1966	6.26	3.64	7.21	7.62	9.45	11.08	11.45	9.96	9.36	7.66	7.31	5.07	83.81
404-30	1962	5.37	5.33	5.99	6.05	8.12	10.08	10.22	9.49	9.36	7.66	7.31	5.79	83.81
404-30	1963	5.47	6.19	7.08	8.97	11.96	11.59	11.20	12.18	10.27	8.56	5.46	4.55	104.18
404-30	1964	5.66	4.93	6.35	7.33	8.09	11.46	11.47	11.81	8.46	8.20	7.59	6.27	96.62
404-30	1965	4.26	3.64	7.21	7.62	9.45	11.08	11.45	9.96	9.36	7.66	7.31	5.07	83.81
404-30	1966	6.26	5.33	5.99	6.05	8.12	10.08	10.22	9.49	9.36	7.66	7.31	5.79	83.81
404-30	1971	5.11	5.14	6.21	7.41	9.45	11.61	11.45	10.32	9.30	9.02	6.88	6.07	93.72
404-30	1972	4.86	5.14	6.21	7.41	9.45	11.61	11.45	10.32	9.30	9.02	6.88	6.07	93.72
404-30	1973	4.80	5.26	6.79	9.12	9.32	11.08	11.59	12.62	10.25	7.57	6.28	5.58	108.18
404-30	1974	5.34	5.58	8.79	9.02	10.87	11.35	12.70	11.44	10.22	9.22	6.11	5.32	101.80
404-30	1975	5.00	5.26	7.50	9.02	10.87	11.35	12.48	11.63	10.22	9.22	6.11	5.32	101.80
404-30	1976	5.48	6.17	8.52	10.47	11.55	11.89	12.38	11.86	10.39	8.32	6.89	5.50	105.24
404-30	1977	5.68	6.43	8.70	11.93	11.93	11.89	12.38	11.86	10.39	8.32	6.89	5.50	105.24
404-30	1978	5.11	5.43	7.09	8.83	9.19	10.45	10.22	9.44	9.18	6.29	5.70	4.39	88.65
404-30	1979	4.04	3.80	6.32	8.55	8.24	9.57	9.39	8.71	8.20	6.84	5.26	4.36	88.93
404-30	1980	4.53	5.27	6.45	8.91	8.07	10.11	9.90	9.71	8.20	7.08	5.27	4.36	82.07
404-30	1981	4.33	4.37	7.27	7.31	7.33	8.26	9.18	9.14	8.79	7.57	5.07	4.44	88.66
404-30	1982	4.09	4.72	6.40	7.33	7.40	9.14	9.18	9.68	8.96	6.43	5.67	4.61	78.40
404-40	1966	5.00	5.64	6.20	6.79	8.41	9.89	10.83	10.51	10.58	7.38	5.55	5.35	93.75
404-40	1967	4.20	4.64	6.65	7.31	8.40	9.79	10.31	10.67	9.97	7.94	7.16	4.80	93.75
404-40	1968	5.09	5.45	6.66	8.89	8.89	9.29	10.62	10.58	9.18	7.52	6.38	4.34	84.85
404-40	1969	5.09	5.75	8.59	9.93	9.91	10.42	11.75	11.42	9.98	7.58	6.09	6.70	92.49
406-30	1970	4.22	4.00	5.89	5.51	6.60	7.53	10.75	6.00	7.22	6.35	4.48	4.07	92.49
406-30	1983	4.77	5.31	5.30	6.54	8.33	9.78	10.91	11.02	10.71	7.50	5.43	5.33	96.51
410-10	1966	5.18	5.43	5.66	6.19	8.62	9.92	10.58	11.55	10.61	9.61	8.06	6.17	96.51
410-10	1968	5.77	5.43	7.37	8.32	9.30	9.71	12.88	12.84	10.20	8.20	6.35	6.73	105.80
410-10	1969	5.98	6.67	10.14	10.58	10.58	10.44	11.56	12.47	10.20	8.20	6.35	6.73	105.80
410-10	1970	5.98	6.67	10.14	10.58	10.58	10.44	11.56	12.47	10.20	8.20	6.35	6.73	105.80
410-10	1971	5.97	6.67	10.14	10.58	10.58	10.44	11.56	12.47	10.20	8.20	6.35	6.73	105.80
410-10	1972	5.97	6.67	10.14	10.58	10.58	10.44	11.56	12.47	10.20	8.20	6.35	6.73	105.80

APPENDIX TABLE B.1—Continued

STATE KEY NO.	YEAR	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	ANNUAL (in.)
410-10	1973	5-71	5-96	8-07	8-52	9-98	10-62	12-18	11-55	10-85	10-18	6-44	6-08	106-05
410-10	1974	5-89	5-74	7-41	8-46	9-80	10-96	12-91	11-71	10-06	9-29	6-63	7-17	103-97
410-10	1975	5-208	6-41	7-16	8-26	10-11	11-29	13-36	12-56	10-97	8-92	6-82	6-46	103-78
410-10	1976	6-38	6-87	9-31	10-02	12-11	11-23	13-25	12-13	8-70	7-79	7-88	5-23	109-55
410-10	1977	6-46	6-82	7-16	8-18	10-04	10-88	10-26	9-99	8-24	6-44	7-54	5-86	92-73
410-10	1978	5-08	6-30	5-68	6-81	7-80	8-88	9-34	8-56	8-19	6-70	4-54	5-12	80-54
410-10	1980	5-82	4-05	7-89	6-81	7-64	8-21	9-79	8-91	8-03	8-14	5-81	4-48	85-57
410-10	1981	5-35	6-11	7-96	7-59	8-52	9-38	9-08	9-10	8-68	8-17	6-36	4-65	95-37
410-10	1982	5-15	6-44	7-37	8-38	9-79	10-52	11-50	10-46	8-59	7-28	5-96	4-11	78-55
413-00	1960	5-47	4-95	8-31	8-35	8-45	9-48	10-43	10-06	8-99	7-53	6-18	4-14	93-61
413-00	1961	5-97	4-18	8-22	8-19	8-55	9-65	11-68	11-43	9-63	10-36	4-73	5-04	96-55
413-00	1962	6-96	6-04	8-72	8-55	8-38	9-27	10-13	9-86	11-26	10-42	6-26	6-97	92-43
413-00	1963	5-55	6-60	7-36	8-32	8-81	9-21	10-91	10-27	11-99	9-23	5-90	5-80	98-81
413-00	1964	5-21	6-74	7-11	8-53	8-59	9-49	10-29	9-46	11-13	7-34	6-01	5-30	85-82
413-00	1965	5-49	4-78	6-52	7-33	7-99	8-66	9-39	8-93	11-53	8-76	5-37	6-11	93-17
413-00	1966	5-01	6-25	7-13	8-19	8-00	8-98	9-48	8-60	11-36	8-57	5-52	4-33	83-68
413-00	1967	4-21	5-49	6-20	7-34	7-05	8-34	8-55	8-48	11-99	8-71	5-39	4-55	87-81
413-00	1968	4-82	5-80	6-00	7-98	8-10	8-34	9-83	8-68	11-99	8-77	5-50	4-73	80-52
413-00	1969	5-38	5-90	7-67	8-12	8-83	9-27	10-65	10-48	11-61	9-97	6-38	4-55	94-94
413-00	1971	5-37	5-81	7-76	8-27	8-10	9-48	11-44	10-43	11-40	8-29	6-35	5-57	91-56
413-00	1972	5-45	5-72	6-60	7-64	8-49	8-40	9-73	11-44	10-62	9-25	6-45	5-57	99-73
413-00	1973	5-49	5-37	6-03	7-84	8-27	9-27	10-95	10-29	11-48	9-43	7-01	6-40	95-22
413-00	1974	5-79	5-75	7-25	8-75	10-40	10-53	11-72	11-52	11-90	7-62	6-59	5-32	91-54
413-00	1975	5-90	5-94	7-26	8-51	9-73	10-34	10-03	10-52	11-80	7-19	5-41	5-40	91-11
413-00	1976	3-90	5-37	6-26	7-86	8-51	9-65	10-33	11-14	11-96	7-53	5-93	4-33	89-12
413-00	1977	3-79	5-38	6-71	8-01	9-49	10-71	11-03	11-88	11-37	7-97	3-88	3-52	73-32
413-00	1978	3-90	5-37	6-26	7-86	8-51	9-65	10-33	11-14	11-96	7-53	5-93	4-33	89-12
413-00	1979	3-62	5-07	6-92	8-35	9-72	10-22	11-03	11-88	11-37	7-97	3-88	3-52	73-32
413-00	1980	4-25	4-61	6-99	8-35	9-72	10-22	11-03	11-88	11-37	7-97	3-88	3-52	73-32
413-00	1981	3-28	4-76	5-79	6-65	7-67	8-55	10-10	10-68	11-61	8-22	4-95	4-02	60-99
413-00	1982	4-15	4-06	5-79	6-65	7-67	8-55	10-10	10-68	11-61	8-22	4-95	4-02	60-99
413-20	1957	4-93	4-93	4-93	8-86	8-86	8-86	7-51	8-86	7-80	6-77	6-12	2-54	81-20
413-20	1958	4-43	5-06	4-89	6-43	6-56	8-55	7-51	8-68	7-49	6-58	4-85	2-32	81-90
413-20	1959	4-48	4-89	5-69	8-43	9-04	10-98	11-23	9-64	8-69	5-88	5-82	3-50	99-08
415-00	1963	5-48	4-89	5-69	8-43	9-04	10-98	11-23	9-64	8-69	5-88	5-82	3-50	99-08
415-00	1964	6-30	6-35	7-34	8-51	9-54	11-54	13-38	12-60	11-11	9-00	6-79	4-46	94-49
415-00	1965	6-06	6-35	7-34	8-51	9-54	11-54	13-38	12-60	11-11	9-00	6-79	4-46	94-49
415-00	1966	4-27	4-79	5-31	6-55	7-99	9-33	11-46	10-51	8-77	6-88	6-90	4-62	96-37
415-00	1967	4-27	4-79	5-31	6-55	7-99	9-33	11-46	10-51	8-77	6-88	6-90	4-62	96-37
415-00	1968	4-25	4-56	5-51	6-57	7-88	8-77	12-29	10-93	9-96	8-23	6-46	4-35	80-66
415-00	1969	4-4	4-56	5-51	6-57	7-88	8-77	12-29	10-93	9-96	8-23	6-46	4-35	80-66
415-00	1970	4-25	4-56	5-51	6-57	7-88	8-77	12-29	10-93	9-96	8-23	6-46	4-35	80-66

APPENDIX TABLE B.1—Continued

STATE KEY NO.	YEAR	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	ANNUAL (in.)
415-00	1970	5-24	5-80	8-03	7-99	8-71	8-50	11-25	10-15	8-50	6-59	5-40	5-27	91-43
415-00	1971	5-15	5-25	6-73	6-29	10-21	12-46	13-88	12-42	10-51	9-37	6-51	6-55	90-18
415-00	1972	4-15	6-46	7-04	7-38	8-09	8-46	9-51	9-23	8-47	7-37	6-82	5-53	90-23
415-00	1973	5-36	5-45	7-84	8-16	8-75	9-77	10-45	14-23	10-02	10-19	6-87	5-49	113-26
415-00	1974	4-54	5-45	6-48	8-10	10-48	12-76	14-07	13-58	7-36	8-19	5-05	6-31	92-46
415-00	1975	5-14	5-03	5-79	10-92	9-51	9-44	11-07	10-72	10-60	8-30	7-76	5-94	108-71
415-00	1976	6-19	6-06	6-77	10-94	9-27	12-32	12-15	10-21	9-88	7-26	5-11	5-50	93-84
415-00	1977	6-29	5-98	7-53	9-53	7-86	10-87	10-33	9-32	10-63	8-06	4-73	6-56	107-84
415-00	1978	6-29	5-98	7-53	9-53	7-86	10-87	10-33	9-32	10-63	8-06	4-73	6-56	107-84
415-00	1979	5-79	5-53	6-86	10-86	8-26	10-78	9-15	9-29	8-74	7-89	4-14	3-77	82-70
415-00	1980	5-38	5-47	8-86	8-00	7-86	10-33	12-61	9-02	9-27	7-56	6-45	5-36	97-46
415-00	1981	4-77	5-03	7-97	5-37	7-97	12-82	17-82	8-25	8-33	7-72	5-43	4-39	82-70
416-00	1982	5-36	6-23	6-14	8-69	7-17	8-73	9-92	10-23	9-42	8-61	6-83	6-75	87-96
416-00	1972	5-36	6-23	6-14	8-69	7-17	8-73	9-92	10-23	9-42	8-61	6-83	6-75	87-96
416-00	1973	5-03	5-42	6-57	7-13	8-98	9-98	10-32	11-38	8-52	7-78	5-72	4-44	95-86
416-00	1974	5-21	6-52	6-59	8-33	9-48	10-17	10-11	11-35	9-30	9-93	6-66	5-44	97-76
416-00	1975	4-87	6-23	6-63	7-44	10-03	10-58	10-60	9-72	10-18	7-72	6-23	5-96	95-19
416-00	1976	5-72	6-52	6-21	7-55	9-91	9-53	10-27	10-09	8-15	7-37	5-14	5-82	92-17
416-00	1977	5-74	6-29	6-38	8-34	8-66	9-53	10-60	8-60	8-78	7-52	6-03	4-95	90-45
416-00	1978	5-28	5-32	7-39	6-26	7-27	7-43	8-08	7-90	8-33	5-62	3-48	4-29	90-45
416-00	1979	4-99	5-32	6-00	5-26	7-27	7-43	7-84	8-32	7-71	6-02	4-53	4-63	74-54
416-00	1980	4-60	4-15	5-88	6-90	7-88	7-01	7-84	7-88	6-19	5-24	4-54	4-14	73-30
416-00	1981	4-90	4-42	6-17	6-77	7-95	8-05	8-01	7-88	6-19	5-24	4-54	4-14	73-30
416-00	1982	3-62	4-22	6-17	4-27	6-55	11-05	8-95	7-40	6-76	7-78	4-51	3-94	65-30
416-00	1983	4-23	4-66	6-21	6-52	7-55	11-05	8-95	6-24	6-40	5-86	3-88	3-62	59-20
419-00	1977	5-88	6-27	9-65	10-09	6-59	11-98	12-22	10-41	9-44	8-15	7-82	5-32	91-01
419-00	1978	6-43	4-15	7-14	7-75	9-29	9-47	9-80	9-66	10-37	7-01	4-88	5-49	80-45
419-00	1979	5-43	5-03	7-11	6-08	7-11	9-48	9-31	9-58	8-23	6-97	5-01	4-60	80-45
419-00	1980	5-33	5-72	6-36	7-36	8-62	8-67	9-46	9-44	7-80	7-21	5-78	3-88	98-98
419-00	1981	2-88	5-26	6-68	10-42	8-49	10-42	12-80	9-33	9-97	9-98	6-64	6-00	98-98
419-00	1982	4-58	4-98	7-76	5-62	7-13	7-57	12-80	8-20	8-35	6-77	5-31	4-23	73-24
457-00	1963	5-70	5-72	6-81	7-81	12-87	8-57	8-80	9-21	8-31	7-22	6-13	3-28	93-57
457-00	1964	5-01	5-16	7-02	9-49	7-87	11-58	11-93	12-46	10-16	8-35	5-83	5-43	106-16
457-00	1965	5-24	5-21	7-65	6-60	8-09	8-87	8-90	9-34	7-70	6-76	5-58	4-36	82-39
457-00	1966	5-20	5-58	7-94	8-83	7-46	9-28	10-69	8-81	8-13	8-39	7-77	5-26	93-57
457-00	1980	7-34	9-09	9-57	8-03	9-59	10-30	10-56	8-97	7-98	8-78	7-77	4-39	117-97
458-00	1965	7-62	6-58	9-81	8-78	10-90	10-36	10-61	10-74	9-67	8-39	9-12	7-00	95-65
458-00	1980	7-18	5-63	11-69	8-78	8-37	11-36	11-20	11-42	12-12	8-75	5-49	6-89	95-65
458-10	1964	3-37	4-39	5-91	6-42	7-77	8-12	8-33	9-68	8-61	8-52	6-01	3-51	95-11
458-10	1965	3-37	4-39	5-91	6-42	7-77	8-12	8-33	9-68	8-61	8-52	6-01	3-51	95-11

APPENDIX TABLE B.1—Continued

STATE KEY NO.	YEAR	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	ANNUAL (in.)
458-10	1966	5.83	3.89	8.09	8.05	8.49	8.45	9.02	8.67	7.91	6.66	4.65	5.42	85.13
458-10	1967	5.13	5.18	5.74	6.71	8.38	9.37	10.47	9.21	8.51	7.15	6.38	6.32	88.58
458-10	1968	.	4.64	3.60	8.96	9.25	8.22	8.66	8.49	7.69	6.05	5.85	5.61	80.84
458-10	1969	3.64	6.20	8.23	7.03	8.06	6.97	7.96	9.34	8.63	8.17	6.46	4.78	.
458-10	1970	5.10	6.38	6.51	6.17	8.03	7.68	10.42	12.26	8.97	7.54	6.46	.	.
458-10	1982	.	6.31	6.81	6.93	8.29	6.57	8.10	7.71	8.66	8.12	.	.	.
462-00	1984	.	5.31	4.56	5.38	7.09	6.25	8.01	7.32	6.58	5.41	5.44	3.55	.
462-10	1965	3.91	4.77	5.65	5.46	7.85	7.77	6.01	7.14	6.22	5.01	.	.	.
462-10	1966	6.14	4.55	6.75	7.13	8.43	6.92	6.85	6.48	7.16	5.89	4.64	5.68	77.57
462-10	1967	6.46	3.56	.	.	8.43	.	.	.	.	5.76	5.12	3.69	.
463-20	1965	4.82	.	.	.	.	9.90	11.12	11.47	10.09	8.65	8.31	4.07	.
463-20	1966	.	.	.	10.48	9.97	.	.	.	.	.	.	.	.
466-10	1963	7.06	7.53	7.58	9.46	10.35	9.90	11.12	11.47	10.09	8.65	8.31	4.07	.
484-10	1976	4.57	4.39	4.63	6.19	6.64	7.00	6.71	7.33	5.71	4.78	4.45	3.95	66.35
484-10	1977	4.52	4.46	6.71	6.00	7.86	7.15	7.36	6.96	7.26	7.28	5.65	4.69	75.89
484-10	1978	5.74	6.20	6.94	6.48	6.33	6.20	6.00	6.03	5.30	4.48	3.45	4.29	.
484-10	1979	.	4.98	5.24	5.77	5.78	5.90	5.92	6.90	6.30	5.75	4.56	4.29	.
484-10	1980	.	4.91	4.69	5.17	5.74	6.01	5.94	6.40	6.10	5.67	4.80	4.29	.
484-10	1981	.	3.96	6.64	6.84	7.41	7.88	8.44	6.49	6.85	5.54	4.27	4.29	.
484-10	1982	3.65	3.92	5.65	5.64	5.88	5.57	6.33	5.59	6.55	.	4.77	.	.
485-00	1962	7.30	5.98	6.28	6.50	8.59	9.37	10.05	11.28	10.11	9.32	7.98	6.03	97.30
485-00	1963	6.96	7.11	8.12	9.09	10.72	10.64	10.82	11.28	9.31	9.32	7.43	5.75	102.62
485-00	1965	4.84	4.78	6.88	7.23	7.93	10.63	9.91	11.03	9.27	6.75	6.32	5.94	93.97
485-00	1966	6.85	4.23	7.54	7.11	8.33	9.22	10.18	9.89	9.24	9.29	7.47	6.86	90.99
485-00	1967	4.85	5.33	5.61	6.22	8.10	10.04	9.55	9.40	10.89	8.99	6.00	4.33	91.84
485-00	1968	4.78	5.67	4.81	6.77	8.10	9.04	9.81	8.90	8.97	7.33	7.43	5.32	85.15
485-00	1969	5.08	5.21	6.21	6.43	7.90	9.38	10.86	9.71	8.62	8.75	7.52	5.90	92.39
485-00	1970	6.79	6.98	9.42	8.45	9.40	9.71	8.99	10.53	8.62	6.93	5.07	5.61	95.33
485-00	1971	.	5.60	7.47	7.49	9.22	9.71	8.99	9.61	8.37	.	.	.	.
485-10	1963	5.69	5.87	6.62	7.34	7.36	7.98	8.65	8.75	7.35	6.20	7.12	4.87	79.92
485-10	1965	4.48	4.34	5.62	5.75	6.90	8.24	9.62	10.20	9.15	8.07	3.71	4.40	85.11
485-10	1966	5.25	3.58	6.64	6.61	8.38	.	.	.	.	.	5.01	7.73	.
485-30	1960	3.27	4.03	4.97	5.40	7.09	6.64	8.39	7.21	7.64	5.31	4.44	2.92	68.03
485-30	1961	3.60	3.89	5.05	6.31	7.55	8.38	8.20	7.99	7.27	4.96	4.63	3.80	.
485-30	1964	4.35	4.11	6.72	7.47	7.86	9.07	8.97	9.12	7.20	6.46	5.67	5.18	82.98
485-30	1965	5.68	3.89	6.65	6.60	8.44	9.07	8.96	8.35	8.15	6.99	5.27	5.98	.
486-50	1977	5.23	5.49	6.46	6.85	7.47	9.73	9.04	8.35	7.66	5.34	3.33	4.67	76.31
486-50	1978	.	.	.	.	.	7.99	7.87	7.95	.	.	.	.	.

APPENDIX TABLE B.1--Continued

STATE KEY NO.	YEAR	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	ANNUAL
		(in.)												(in.)
486.50	1979	5.09	4.33	6.92	6.53	9.05	9.30	9.96	9.29	8.59	5.92	4.23	5.02	84.23
486.50	1980	4.66	4.40	5.88	5.78	7.25	7.02	8.14	7.98	8.53	6.40	5.89	3.42	75.35
486.50	1981	4.93	5.13	7.46	7.76	8.75	10.41	10.08	8.41	8.89	7.45	5.50	3.98	88.75
486.50	1982	3.50	3.80	3.28	4.60	6.79	7.17	7.38	6.52	7.98	5.95	4.71	4.03	65.71
486.50	1983	3.75	4.91	6.49	6.77	6.89	8.64							
486.60	1971						10.28	11.38	11.00	9.80	8.81	7.61	7.38	
486.60	1972	5.47	8.07	7.14	8.64	11.17	10.77	10.99	10.26	10.49	9.92	7.49	6.53	106.94
486.60	1973	5.46	6.76	7.49	8.87	10.02	10.93	11.89	11.88	10.26	8.68	6.87	5.48	104.59
486.60	1974	4.97	6.12	7.98	8.32	10.03	10.94	12.22	11.47	10.80	10.03	6.86	6.71	106.45
486.60	1975	5.76	5.66	7.64	8.44	11.22	10.78	11.88	10.66	10.97	7.37	6.45	5.71	102.54
486.60	1976	5.47	6.26	7.59	8.60	11.12	10.51	11.45	11.70	9.77	8.86	8.94	6.92	107.19
486.60	1977	7.05	7.30											
511.50	1980	5.80	3.49	6.65	6.13	6.50	7.50	7.25	7.83	7.37	6.69	5.35	4.00	74.56
511.50	1981	4.86	5.25	7.88	6.98	9.09	8.98	9.75	8.35	9.30	8.57	9.62	5.44	94.07
511.50	1982	3.71	4.18	5.39	6.10	6.79	6.23	9.44	7.04	7.77	6.94	4.59	5.14	73.32
511.50	1983	4.06	4.26	6.85	7.70									
528.30	1962				8.67	11.75	10.45	12.30	12.66					
528.30	1964	6.82	6.51	6.42	8.08	9.52	11.05	9.72	12.11	10.29	9.98	7.74	6.32	104.56
528.30	1965	4.64	6.36	8.31	6.78									
531.10	1970							11.13	11.13	9.11	8.03	7.80	9.56	
531.10	1971	8.84	6.58	10.48	8.91	10.23	11.70	12.12	11.59	9.06	9.32	8.21	7.16	114.20
531.10	1972	6.58	8.28	8.49	8.99	10.64	9.45	8.12	10.63	9.87	9.16	8.43	8.17	106.81
531.10	1973	6.95	8.68	10.89	10.11	12.83	11.11	11.82	11.40	10.73	9.61	7.80	8.28	120.21
531.10	1974	9.02	6.75	8.84	9.42	8.90	10.20	10.60	11.04	8.55	9.10	9.87	8.84	111.13
531.10	1975	8.19	7.59	9.59	9.60	11.18	11.19	12.74	12.05	11.53	9.23	8.15	6.48	117.52
531.10	1976	8.25	9.40	7.36	9.20	10.96	9.26	10.29	12.30	10.22	8.30	8.75	8.14	112.43
531.10	1977	6.06	6.66	11.61	8.55	10.77	10.22	11.72	11.44	10.59	10.70	7.70	9.05	115.07
531.10	1978	8.29	7.15	10.03	10.28	9.26	10.79	13.29	11.66	11.89	9.34	7.81	9.14	118.92
531.10	1979	8.03	7.57	10.18	8.22	9.79	13.62	12.87	12.40	13.12	9.17	9.09	7.79	121.85
531.10	1980	7.64	8.58	11.37	9.48	9.39	13.28	11.88	10.93	9.79	10.94	8.09	8.06	119.43
531.10	1981	8.12	8.70	10.68	13.51	11.95	12.68	13.95	12.79	11.80	10.84	7.49	7.63	130.14
531.10	1982		6.27	8.81	8.61	10.69	8.48	11.91	12.01	10.25	10.34	9.15	7.39	
531.10	1983	6.30	6.18	8.29	11.73	12.57	13.97	12.30	11.67	11.31	12.48	7.50	6.94	121.24
531.10	1984	8.92	9.40	8.19	12.18		15.87	13.25	13.84	12.24	9.44	13.49	9.42	
687.00	1957	1.73	2.35	2.45	2.58	2.18	2.07	2.64	2.35	2.11	2.67	1.00	1.50	25.63
687.00	1958	2.60	1.31	2.65	2.70	1.95	2.07	5.19						
702.00	1956	3.50	4.12	5.83	6.61	7.63	8.38	7.60	8.92	7.33	6.12	4.39	4.44	74.87
702.00	1957	4.37	4.66	5.47	6.32	7.50	7.54	8.37	8.22	6.49	6.27	4.39	1.50	71.10
702.00	1958	7.04	5.17	5.98	6.98	7.55	7.49	8.04	8.44	8.26	6.40	4.76	4.62	80.73
702.00	1959	4.27	5.20	6.28	5.26	6.59	7.73	7.61	7.10	4.86	5.70	4.22	3.37	68.19
702.00	1960	5.08	5.50	5.98	8.44	8.37								
702.20	1960							9.06	10.04	7.94	6.68	6.29	4.51	
702.20	1961	5.54	5.57	7.19	7.36	9.47	8.86	8.90	10.17	8.91	7.72	6.63	5.68	92.00
702.20	1962	5.21	4.91	5.83	7.30	7.85	8.89	10.15	9.23	8.41	7.48	6.99	4.22	86.47
702.20	1963	4.86	5.00	5.98	6.29	7.44	8.36	9.04	8.41	7.81	6.95	5.77	4.16	80.07
702.20	1964	5.65		6.11	6.42	8.75	8.92	8.96	8.82	9.09	8.02	5.64	4.28	

APPENDIX TABLE B.1—Continued

STATE KEY NO.	YEAR	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	ANNUAL (in.)
702-20	1965	4-30	4-86	7-22	6-61	9-22	9-61	9-14	9-24	7-62	6-38	4-67	4-35	80-92
702-20	1966	4-25	4-19	6-08	6-96	9-35	9-20	9-20	9-02	8-19	6-04	4-83	4-43	81-64
702-20	1967	4-37	5-19	4-97	6-40	8-35	9-25	9-20	8-91	9-24	6-69	4-83	4-37	81-64
702-20	1968	3-59	3-85	6-34	6-37	8-41	9-15	9-14	8-47	9-27	6-80	5-59	4-37	81-64
702-20	1969	3-17	4-42	7-34	7-50	8-18	9-14	9-14	9-57	9-27	6-80	5-30	4-37	81-64
702-20	1970	3-86	5-00	6-77	8-60	9-63	10-47	10-47	9-93	8-06	6-25	4-77	4-55	88-98
702-20	1971	4-70	6-63	6-56	7-79	8-68	10-73	10-73	10-53	7-75	7-44	5-23	5-19	91-43
702-20	1972	4-78	5-24	6-28	7-58	8-75	10-63	10-63	10-16	9-22	8-25	6-32	5-95	91-43
702-20	1973	4-55	5-25	6-27	7-31	8-44	10-41	10-41	11-64	10-21	10-25	6-09	5-63	80-65
702-20	1974	4-92	5-37	6-69	7-04	8-31	10-29	10-29	11-06	10-41	10-89	7-42	5-43	80-65
702-20	1975	7-18	9-06	11-89	10-76	10-23	11-57	11-57	11-68	10-20	10-98	8-98	7-38	99-84
702-20	1976	7-28	9-56	11-96	10-67	10-45	11-16	11-16	11-13	10-20	10-98	8-98	7-72	110-62
702-20	1977	7-85	9-85	11-96	10-67	10-45	11-16	11-16	11-13	10-20	10-98	8-98	7-72	110-62
702-20	1978	5-27	6-55	9-61	10-67	12-66	12-66	12-66	11-04	10-13	10-33	6-27	5-74	113-22
702-20	1979	6-77	7-05	9-61	10-67	12-66	12-66	12-66	11-04	10-13	10-33	6-27	5-74	113-22
702-20	1980	4-24	4-18	6-44	7-17	8-71	10-78	10-78	9-63	7-27	5-32	4-49	4-49	119-41
702-20	1981	4-51	4-77	6-44	7-17	8-71	10-78	10-78	9-63	7-27	5-32	4-49	4-49	119-41
702-20	1982	4-51	4-77	6-44	7-17	8-71	10-78	10-78	9-63	7-27	5-32	4-49	4-49	119-41
707-00	1958	4-51	4-77	6-44	7-17	8-71	10-78	10-78	9-63	7-27	5-32	4-49	4-49	119-41
707-00	1959	4-53	5-05	6-44	7-17	8-71	10-78	10-78	9-63	7-27	5-32	4-49	4-49	119-41
707-00	1960	4-53	5-05	6-44	7-17	8-71	10-78	10-78	9-63	7-27	5-32	4-49	4-49	119-41
707-00	1961	4-35	4-70	5-48	6-32	7-42	8-45	8-45	7-39	7-23	6-02	4-54	4-54	73-62
707-00	1962	4-35	4-70	5-48	6-32	7-42	8-45	8-45	7-39	7-23	6-02	4-54	4-54	73-62
707-00	1963	4-35	4-70	5-48	6-32	7-42	8-45	8-45	7-39	7-23	6-02	4-54	4-54	73-62
707-00	1964	4-35	4-70	5-48	6-32	7-42	8-45	8-45	7-39	7-23	6-02	4-54	4-54	73-62
707-00	1965	4-35	4-70	5-48	6-32	7-42	8-45	8-45	7-39	7-23	6-02	4-54	4-54	73-62
707-00	1966	4-35	4-70	5-48	6-32	7-42	8-45	8-45	7-39	7-23	6-02	4-54	4-54	73-62
707-00	1967	4-35	4-70	5-48	6-32	7-42	8-45	8-45	7-39	7-23	6-02	4-54	4-54	73-62
707-00	1968	4-35	4-70	5-48	6-32	7-42	8-45	8-45	7-39	7-23	6-02	4-54	4-54	73-62
707-00	1969	4-35	4-70	5-48	6-32	7-42	8-45	8-45	7-39	7-23	6-02	4-54	4-54	73-62
707-00	1970	4-35	4-70	5-48	6-32	7-42	8-45	8-45	7-39	7-23	6-02	4-54	4-54	73-62
707-00	1971	4-35	4-70	5-48	6-32	7-42	8-45	8-45	7-39	7-23	6-02	4-54	4-54	73-62
713-00	1960	3-84	4-89	6-51	6-28	7-43	8-55	8-55	7-55	7-51	6-53	5-03	4-53	72-17
713-00	1961	3-84	4-89	6-51	6-28	7-43	8-55	8-55	7-55	7-51	6-53	5-03	4-53	72-17
713-00	1962	4-36	4-60	6-51	6-28	7-43	8-55	8-55	7-55	7-51	6-53	5-03	4-53	72-17
713-50	1980	4-03	4-87	6-94	7-11	7-50	8-89	8-89	7-75	7-80	6-51	5-70	3-72	79-85
713-50	1981	4-25	4-12	6-59	7-01	8-04	8-37	8-37	8-38	8-22	6-67	5-61	4-43	69-22
713-50	1982	4-25	4-54	6-17	6-75	7-47	8-60	8-60	7-10	7-78	6-97	4-92	4-43	72-93
713-50	1983	4-25	4-54	6-17	6-75	7-47	8-60	8-60	7-10	7-78	6-97	4-92	4-43	72-93
713-50	1984	0-40	0-30	6-79	6-69	7-94	8-69	8-69	8-97	7-95	6-22	5-16	4-35	80-38
718-20	1914	4-40	0-30	6-79	6-69	7-94	8-69	8-69	8-97	7-95	6-22	5-16	4-35	80-38
727-00	1962	4-36	4-60	6-51	6-28	7-43	8-55	8-55	7-55	7-51	6-53	5-03	4-53	72-17
727-00	1963	4-36	4-60	6-51	6-28	7-43	8-55	8-55	7-55	7-51	6-53	5-03	4-53	72-17
727-00	1964	6-61	7-71	7-72	8-27	10-04	10-72	10-72	9-81	9-31	7-79	7-56	4-38	96-63
727-00	1965	5-72	7-13	7-72	8-27	10-04	10-72	10-72	11-02	10-31	8-59	6-89	5-37	103-55
727-00	1966	6-89	4-79	7-78	8-00	10-49	10-97	10-97	10-33	9-36	8-60	6-80	6-60	95-72
727-00	1967	5-58	6-76	7-51	7-15	8-11	9-90	9-90	10-65	9-30	8-16	6-18	5-81	96-79
727-00	1968	5-58	5-53	6-94	7-15	8-11	9-90	9-90	10-65	9-30	8-16	6-18	5-81	96-79
727-00	1969	7-12	6-38	6-94	7-36	8-04	10-23	10-23	11-02	8-38	7-53	6-39	5-45	89-55
727-00	1970	5-93	6-51	8-70	9-50	10-32	10-77	10-77	11-48	9-18	7-12	6-24	5-25	93-37
727-00	1971	5-67	6-22	7-54	7-09	8-32	9-91	9-91	11-48	9-18	7-12	6-24	5-25	104-36
727-00	1971	5-67	6-22	7-54	7-09	8-32	9-91	9-91	11-48	9-18	7-12	6-24	5-25	104-36

APPENDIX TABLE B.1--Continued

STATE KEY NO.	YEAR	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	ANNUAL (in.)
727-00	1972	5-44	6-32	5-87	8-23	8-76	7-85	9-24	8-83	8-13	7-23	6-77	5-62	88-29
727-00	1973	5-55	6-17	8-63	7-53	9-53	7-49	9-36	7-90	7-09	7-21	6-03	5-94	94-07
727-00	1975	6-61	5-90	7-42	8-27	8-27	9-91	10-36	7-90	8-66	8-21	6-61	5-69	96-16
727-00	1976	5-81	6-10	7-51	8-40	8-40	9-46	9-36	10-05	7-36	7-33	6-28	5-13	89-48
727-00	1977	5-23	5-89	7-18	9-53	9-53	8-55	9-82	9-15	8-53	8-14	5-50	5-66	94-76
727-00	1979	5-76	4-53	7-31	8-51	8-51	8-51	9-87	9-09	8-70	8-34	5-34	5-87	88-49
727-00	1979	5-96	4-53	7-11	7-70	8-51	8-51	9-87	10-61	9-22	7-34	5-65	6-62	88-49
727-00	1981	5-68	5-53	8-16	8-16	8-33	8-33	9-11	10-26	7-09	6-81	5-60	5-86	88-49
727-00	1981	5-16	5-59	6-85	7-79	11-43	11-43	10-39	10-20	7-09	6-31	5-96	5-86	88-49
727-00	1982	6-05	5-40	6-54	6-57	7-72	6-36	8-00	8-00	7-47	7-22	10-05	5-86	88-49
727-00	1983	5-05	6-10	6-57	6-57	7-72	6-36	8-00	8-00	7-47	7-22	10-05	5-86	88-49
732-00	1962	5-27	5-27	5-95	8-20	8-4	9-1	11-14	9-98	9-34	6-84	6-97	4-67	93-12
732-00	1963	5-11	7-02	7-67	6-45	10-05	10-03	8-45	10-31	8-90	6-56	6-35	4-43	93-03
732-00	1965	6-48	6-66	7-07	6-37	8-76	10-33	9-98	10-20	8-57	7-95	6-56	5-18	95-35
732-00	1966	5-95	4-19	7-07	8-88	7-42	10-61	11-09	10-20	8-57	7-42	6-06	5-86	91-47
732-00	1967	4-94	5-37	5-64	6-88	7-42	8-61	9-37	8-86	8-34	7-39	6-64	5-5	85-37
732-00	1968	4-90	5-07	6-82	7-20	7-50	8-19	9-39	9-54	8-27	6-11	5-37	4-78	84-67
732-00	1969	5-33	5-13	8-12	8-46	8-70	9-42	10-29	10-59	8-33	6-73	5-69	6-82	97-29
732-00	1971	5-72	5-61	6-99	9-11	8-89	9-11	10-21	10-46	8-78	6-04	6-50	5-82	93-29
732-00	1972	4-89	5-94	8-87	8-54	9-43	8-54	9-67	10-09	8-07	8-7	6-67	5-04	93-79
732-00	1973	5-52	6-13	8-31	8-06	9-43	8-28	9-91	10-23	8-90	7-62	6-54	5-94	93-70
732-00	1974	5-39	5-73	7-86	7-86	8-66	8-28	8-05	9-23	7-62	7-52	6-06	6-63	96-64
732-00	1975	5-25	5-98	7-86	8-12	8-12	8-76	8-05	10-23	9-02	7-27	6-06	5-15	96-64
732-00	1976	5-40	5-32	8-05	8-05	8-12	8-76	8-05	10-23	9-02	7-27	6-06	5-15	96-64
732-00	1977	5-50	5-59	7-67	8-34	9-34	8-84	9-78	9-43	8-19	7-35	6-30	5-01	93-09
732-00	1978	5-33	5-91	6-89	7-04	8-59	8-47	9-56	9-68	8-50	7-35	5-53	5-36	90-37
732-00	1979	5-74	4-00	6-07	7-22	7-59	8-95	9-37	8-34	8-85	7-16	6-09	5-41	86-33
732-00	1981	5-39	6-40	7-41	8-47	8-63	8-63	8-39	9-34	8-46	7-76	6-09	5-36	86-33
732-00	1981	5-52	6-05	7-20	8-15	8-43	9-03	8-34	9-46	8-73	7-81	6-75	5-98	86-33
732-00	1982	5-52	6-05	7-20	8-15	8-43	9-03	8-34	9-46	8-73	7-81	6-75	5-98	86-33
737-00	1962	4-92	4-62	5-68	6-45	8-22	7-92	9-12	9-71	8-91	6-10	6-08	4-15	84-60
737-00	1963	6-09	6-71	7-07	8-35	8-22	8-89	8-56	9-18	8-09	7-89	6-78	4-39	87-03
737-00	1965	5-51	6-34	6-86	6-79	6-79	8-22	8-14	9-19	6-69	7-94	6-5	4-87	83-04
737-00	1966	5-79	4-09	6-86	7-28	7-37	8-88	9-14	8-86	7-59	6-60	5-71	5-11	83-04
737-00	1968	4-48	5-29	6-71	6-58	7-47	8-58	8-91	8-68	7-44	5-64	6-28	4-43	82-80
737-00	1968	4-31	4-98	6-02	6-58	7-47	8-58	8-91	8-68	7-44	5-64	6-28	4-43	82-80
737-00	1969	5-43	5-08	7-19	7-59	8-49	8-04	9-22	9-7	7-65	6-77	5-16	5-13	84-19
737-00	1970	4-59	5-76	6-38	7-52	8-52	8-04	9-11	9-41	7-35	6-43	5-55	6-01	84-19
737-00	1971	4-36	5-06	6-45	7-75	8-75	8-99	10-07	9-41	7-77	6-77	5-89	5-01	84-35
737-00	1972	4-5	5-46	6-67	7-91	8-91	8-99	10-07	9-41	7-77	6-77	5-89	5-01	84-35
737-00	1973	5-10	5-5	7-01	8-28	9-28	8-99	10-07	9-41	7-77	6-77	5-89	5-01	84-35

APPENDIX TABLE B.1--Continued

STATE KEY NO.	YEAR	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	ANNUAL (in.)
737-00	1974	5-13	5-21	6-55	6-80	6-76	6-87	7-60	6-98	5-11	6-27	5-51	5-68	86-09
737-00	1975	5-10	5-36	6-86	6-99	7-34	7-65	8-04	8-73	7-72	7-37	5-97	4-46	81-77
737-00	1976	5-03	5-61	6-86	7-96	7-10	7-97	8-64	8-62	8-41	7-15	5-54	5-87	89-64
737-00	1977	5-47	5-85	6-86	7-74	7-18	7-67	8-56	8-78	8-11	8-26	6-22	5-79	81-78
737-00	1978	5-71	5-79	6-07	6-94	7-14	7-52	8-50	8-42	8-98	6-81	6-10	5-97	91-02
737-00	1980	6-12	6-46	7-34	7-59	8-18	8-35	8-30	9-24	8-03	7-47	6-67	5-39	87-91
737-00	1981	5-28	6-49	7-41	7-83	8-48	8-73	8-84	8-46	9-03	8-21	6-90	5-86	.
737-00	1982	5-55	6-24	6-90	7-86	8-53	6-72	8-71	8-31	8-43	7-29	6-46	.	.
737-00	1983	.	5-91	6-03	6-18	7-53	10-26	.	.	.	.	.	.	.
738-40	1962	.	5-64	6-03	6-18	7-45	6-24	7-41	6-73	5-89	6-01	5-35	4-09	.
738-40	1963	.	5-94	6-05	6-49	7-41	6-87	6-83	6-58	6-34	5-76	5-70	4-40	.
738-40	1964	4-24	5-02	5-68	5-13	6-37	7-21	6-27	7-50	6-50	6-13	4-57	4-38	75-16
738-40	1965	4-29	5-06	5-68	5-23	6-36	7-25	6-25	7-62	6-86	6-30	4-52	4-50	72-83
738-40	1966	4-56	5-34	5-86	5-37	6-36	7-37	7-22	8-40	6-76	6-48	4-98	4-66	71-80
738-40	1968	4-33	5-11	5-85	5-32	6-36	7-43	7-59	8-58	6-66	6-23	4-29	4-33	71-75
738-40	1969	4-19	5-71	5-62	5-05	6-29	7-38	7-46	7-81	6-88	6-54	4-55	6-34	.
738-40	1970	6-74	5-66	6-26	6-42	7-12	7-77	8-21	8-50	6-29	5-92	4-41	5-02	79-19
738-40	1971	5-18	5-19	5-52	5-54	6-98	7-51	8-37	8-09	6-22	6-40	5-09	4-44	73-30
738-40	1972	4-92	5-20	5-52	6-43	7-31	7-15	8-12	7-87	7-33	6-34	5-41	5-51	76-66
738-40	1973	4-34	5-46	6-34	6-54	7-21	7-15	8-24	7-26	7-91	6-15	4-68	5-58	76-80
738-40	1974	4-35	5-46	6-35	6-80	7-29	7-39	8-10	8-59	7-80	6-25	4-68	5-10	82-88
738-40	1975	4-87	5-46	6-35	6-43	7-12	8-05	9-13	8-59	7-80	6-25	4-68	5-46	80-73
738-40	1976	4-31	5-51	6-44	6-22	7-12	7-35	8-37	7-72	6-93	6-28	5-52	6-53	81-27
738-40	1977	4-81	5-40	6-48	6-23	7-36	7-71	8-35	7-21	6-88	6-56	5-42	6-59	82-06
738-40	1978	4-27	5-27	6-18	6-06	7-22	7-59	8-66	6-51	7-57	6-11	5-66	6-41	79-03
738-40	1980	4-73	5-42	6-33	6-06	7-39	7-77	8-66	7-99	7-92	6-11	4-93	5-80	78-30
738-40	1981	4-65	5-24	6-64	6-79	7-10	6-57	7-41	6-73	7-56	6-38	4-23	5-15	.
738-40	1982	4-65	5-24	6-64	6-79	7-10	6-57	7-41	6-73	7-56	6-38	4-23	5-15	.
740-30	1959	3-11	4-04	4-70	5-68	7-78	8-64	9-96	9-88	7-44	5-76	4-17	4-02	75-00
740-30	1960	3-34	4-46	5-78	6-91	8-41	8-16	8-96	7-28	6-45	6-39	5-37	4-56	75-57
740-30	1962	4-23	5-75	6-65	6-69	8-13	8-13	9-56	9-46	6-91	6-51	4-84	4-83	79-90
740-30	1963	5-97	4-63	5-36	6-46	8-26	8-97	9-89	11-52	7-62	6-45	5-43	4-97	82-28
740-30	1964	6-09	.	.	.	.	.	.	.	.	.	.	.	.
740-30	1962	4-96	4-69	5-70	5-94	7-09	7-87	8-33	7-28	6-88	5-94	4-41	4-76	73-62
740-40	1963	4-33	5-91	5-07	5-43	7-66	7-39	8-09	7-89	6-37	5-14	4-20	3-53	73-16
740-40	1965	4-59	4-97	5-52	5-15	6-19	7-81	7-28	7-64	6-06	5-63	4-16	3-62	67-35
740-40	1966	4-59	4-97	5-52	5-15	6-19	7-81	7-28	7-64	6-06	5-63	4-16	3-62	73-65
740-40	1967	4-44	4-03	5-36	5-37	6-84	6-89	8-05	8-73	7-55	5-46	4-48	4-33	65-09
740-40	1968	3-46	4-20	4-58	5-65	6-84	6-39	7-98	8-76	6-83	5-15	4-65	3-44	70-30
740-40	1969	3-33	4-42	5-61	5-65	6-84	6-39	7-98	8-76	6-83	5-15	4-65	3-44	71-92

APPENDIX TABLE B.1—Continued

STATE KEY NO.	YEAR	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	ANNUAL (in.)
740-40	1970	4	5	7	8	7	8	8	8	7	6	4	5	82
740-40	1971	3	4	5	5	7	7	7	7	6	5	4	4	71
740-40	1972	3	4	5	6	8	7	8	8	7	6	4	4	75
740-40	1973	4	4	6	6	8	7	8	8	7	6	4	4	75
740-40	1974	4	4	6	6	9	8	9	9	8	6	4	5	72
740-40	1975	4	4	6	6	9	8	9	9	8	6	4	4	80
740-40	1976	4	4	6	5	8	7	8	8	7	6	4	4	71
740-40	1977	4	4	6	5	8	7	8	8	7	6	4	4	78
740-40	1978	4	4	6	6	8	7	8	8	7	6	4	5	73
740-40	1979	4	4	6	6	8	7	8	8	7	6	4	4	76
740-40	1980	4	4	6	6	8	7	8	8	7	6	4	4	76
740-40	1981	4	4	6	6	8	7	8	8	7	6	4	4	74
740-40	1982	4	4	6	5	7	6	7	7	6	5	4	4	84
740-40	1983	4	4	6	5	7	6	7	7	6	5	4	4	74
740-50	1963	4	4	6	4	7	7	7	7	6	5	4	3	65
740-50	1964	3	4	4	4	6	7	7	7	6	5	4	3	60
740-50	1965	4	4	5	4	6	7	7	7	6	5	4	3	66
740-50	1966	4	4	5	4	6	6	7	7	6	5	4	3	65
740-50	1967	3	3	4	4	5	5	6	6	5	4	3	3	59
740-50	1968	3	3	4	4	5	5	6	6	5	4	3	3	64
740-50	1969	3	3	4	4	5	5	6	6	5	4	3	3	64
740-50	1970	3	3	4	4	5	5	6	6	5	4	3	3	70
740-50	1971	3	3	4	4	5	5	6	6	5	4	3	3	67
740-50	1972	3	3	4	4	5	5	6	6	5	4	3	3	70
740-50	1973	4	4	5	4	5	5	6	6	5	4	3	3	67
740-50	1974	3	3	4	4	5	5	6	6	5	4	3	3	69
740-50	1975	3	3	4	4	5	5	6	6	5	4	3	3	64
740-50	1976	3	3	4	4	5	5	6	6	5	4	3	3	72
740-50	1977	4	4	5	4	5	5	6	6	5	4	3	3	65
740-50	1978	3	3	4	4	5	5	6	6	5	4	3	3	65
740-50	1979	3	3	4	4	5	5	6	6	5	4	3	3	69
740-50	1980	4	4	5	4	5	5	6	6	5	4	3	3	70
740-50	1981	4	4	5	4	5	5	6	6	5	4	3	3	67
740-50	1982	4	4	5	4	5	5	6	6	5	4	3	3	69
740-50	1983	4	4	5	4	5	5	6	6	5	4	3	3	64
741-00	1962	4	4	5	4	5	5	6	6	5	4	3	3	70
741-00	1963	4	4	5	4	5	5	6	6	5	4	3	3	64
741-00	1964	4	4	5	4	5	5	6	6	5	4	3	3	66
741-00	1965	4	4	5	4	5	5	6	6	5	4	3	3	66
741-00	1966	4	4	5	4	5	5	6	6	5	4	3	3	64
741-00	1967	4	4	5	4	5	5	6	6	5	4	3	3	64
741-00	1968	4	4	5	4	5	5	6	6	5	4	3	3	71
741-00	1969	4	4	5	4	5	5	6	6	5	4	3	3	64
741-00	1970	4	4	5	4	5	5	6	6	5	4	3	3	71
741-00	1971	4	4	5	4	5	5	6	6	5	4	3	3	71
741-00	1972	4	4	5	4	5	5	6	6	5	4	3	3	72
741-00	1973	4	4	5	4	5	5	6	6	5	4	3	3	65
741-00	1974	4	4	5	4	5	5	6	6	5	4	3	3	60
741-00	1975	4	4	5	4	5	5	6	6	5	4	3	3	66
741-00	1976	4	4	5	4	5	5	6	6	5	4	3	3	65
741-00	1977	4	4	5	4	5	5	6	6	5	4	3	3	66
741-00	1978	4	4	5	4	5	5	6	6	5	4	3	3	69
741-00	1979	4	4	5	4	5	5	6	6	5	4	3	3	64
741-00	1980	4	4	5	4	5	5	6	6	5	4	3	3	65
741-00	1981	4	4	5	4	5	5	6	6	5	4	3	3	64
741-00	1982	4	4	5	4	5	5	6	6	5	4	3	3	64
741-00	1983	4	4	5	4	5	5	6	6	5	4	3	3	64
741-00	1984	4	4	5	4	5	5	6	6	5	4	3	3	62
741-00	1985	4	4	5	4	5	5	6	6	5	4	3	3	71
741-00	1986	4	4	5	4	5	5	6	6	5	4	3	3	77
741-00	1987	4	4	5	4	5	5	6	6	5	4	3	3	71
741-00	1988	4	4	5	4	5	5	6	6	5	4	3	3	76
741-00	1989	4	4	5	4	5	5	6	6	5	4	3	3	76
741-00	1990	4	4	5	4	5	5	6	6	5	4	3	3	73
741-00	1991	4	4	5	4	5	5	6	6	5	4	3	3	77
741-00	1992	4	4	5	4	5	5	6	6	5	4	3	3	71
741-00	1993	4	4	5	4	5	5	6	6	5	4	3	3	71
741-00	1994	4	4	5	4	5	5	6	6	5	4	3	3	76
741-00	1995	4	4	5	4	5	5	6	6	5	4	3	3	76
741-00	1996	4	4	5	4	5	5	6	6	5	4	3	3	73
741-00	1997	4	4	5	4	5	5	6	6	5	4	3	3	77
741-00	1998	4	4	5	4	5	5	6	6	5	4	3	3	75
741-00	1999	4	4	5	4	5	5	6	6	5	4	3	3	75
741-00	2000	4	4	5	4	5	5	6	6	5	4	3	3	79

APPENDIX TABLE B.1—Continued

STATE KEY NO.	YEAR	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	ANNUAL (in.)
741-00	1972	4.09	4.97	5.43	7.11	8.38	10.16	9.90	8.90	8.27	6.88	6.08	4.52	84.17
741-00	1973	5.20	5.08	5.42	7.74	8.35	10.14	9.62	8.60	7.22	6.75	6.44	4.31	82.18
741-00	1974	5.56	5.32	5.87	8.39	8.45	10.61	9.80	8.67	7.65	7.11	6.55	4.21	79.86
741-00	1975	5.82	5.67	6.53	9.37	9.51	11.19	10.91	9.69	8.06	7.93	7.45	6.38	93.92
741-00	1976	5.94	5.61	6.99	9.36	9.11	11.94	11.49	9.64	8.51	7.96	7.81	5.50	88.36
741-00	1977	5.04	5.37	6.84	8.74	8.27	9.45	9.75	8.79	8.19	7.90	7.50	5.50	93.72
741-00	1978	5.25	5.97	7.61	9.54	9.05	9.82	8.88	8.51	8.19	7.06	6.12	5.00	81.72
741-00	1979	5.86	6.74	8.08	10.74	9.80	9.85	8.00	7.75	7.65	6.17	5.04	4.34	88.21
741-00	1980	5.38	6.57	7.84	10.13	8.80	9.15	8.00	8.00	7.65	6.17	5.04	4.34	88.21
741-00	1981	4.38	4.57	6.17	8.27	8.00	8.46	7.84	7.84	8.10	7.10	6.25	4.34	88.21
741-00	1982	4.31	4.70	6.76	8.53	8.55	8.46	7.84	7.84	8.10	7.10	6.25	4.34	88.21
751-20	1962	5.51	4.64	5.45	6.68	7.97	8.74	8.14	8.14	7.39	7.54	7.01	5.03	77.04
751-20	1963	5.88	6.08	5.70	7.04	9.17	8.99	8.73	8.73	7.35	6.45	5.35	3.75	85.96
751-20	1964	5.91	6.54	5.28	6.94	9.20	9.56	10.17	10.17	8.75	6.89	5.86	4.84	85.96
751-20	1965	5.31	5.07	5.94	8.30	8.40	10.56	10.26	9.33	8.42	6.80	5.50	4.84	84.79
751-20	1966	4.40	4.74	5.18	6.29	8.56	9.16	8.59	8.59	7.47	6.26	5.19	4.50	81.79
751-20	1967	4.00	4.71	5.63	7.29	8.96	9.80	9.31	8.31	7.47	6.26	5.37	4.23	77.04
751-20	1968	4.50	5.19	5.44	8.48	8.57	8.90	9.85	9.85	7.89	6.16	5.00	4.22	89.31
751-20	1969	4.21	5.36	5.71	7.47	8.32	9.03	9.87	9.87	7.71	6.85	6.35	4.83	81.64
751-20	1970	4.32	5.52	5.52	6.70	8.52	9.27	9.56	9.56	7.67	6.41	5.50	4.48	80.12
751-20	1971	4.87	5.82	5.52	6.46	9.44	10.82	10.02	9.02	8.62	6.92	5.49	4.32	94.45
751-20	1972	4.49	5.25	5.38	7.46	8.21	9.88	10.71	10.71	8.62	6.30	5.54	4.54	86.59
751-20	1973	5.63	5.02	5.95	8.31	9.28	9.87	8.89	8.89	7.22	6.23	5.54	4.38	89.52
751-20	1974	5.94	5.70	6.73	8.32	9.21	9.87	9.82	9.82	7.87	6.23	5.54	4.38	89.52
751-20	1975	5.73	6.05	6.41	8.32	8.16	9.81	9.18	9.18	8.77	7.22	6.44	5.55	94.97
751-20	1976	5.54	5.51	6.55	8.55	8.67	9.35	10.32	10.32	8.75	7.24	6.56	5.39	89.87
751-20	1977	5.81	5.42	7.09	8.78	8.67	9.32	9.29	9.29	8.26	7.32	6.39	5.40	86.78
751-20	1978	5.44	5.99	6.61	7.94	9.11	9.32	9.94	9.94	7.88	7.32	6.06	5.22	89.08
751-20	1979	5.56	5.99	7.94	8.78	8.91	9.89	10.52	10.52	8.88	7.35	6.39	5.22	89.08
751-20	1980	5.12	5.35	6.94	7.56	8.35	9.89	9.52	9.52	8.88	7.35	6.06	5.22	89.08
751-20	1981	5.12	5.35	6.94	7.56	8.35	9.89	9.52	9.52	8.88	7.35	6.06	5.22	89.08
751-20	1982	5.12	5.35	6.94	7.56	8.35	9.89	9.52	9.52	8.88	7.35	6.06	5.22	89.08
751-20	1983	5.12	5.35	6.94	7.56	8.35	9.89	9.52	9.52	8.88	7.35	6.06	5.22	89.08
752-00	1929	2.86	3.32	4.31	5.56	6.47	7.37	6.42	6.42	4.48	4.80	3.87	3.00	34.34
752-00	1930	4.14	4.58	5.12	6.41	6.80	8.33	9.26	9.26	7.49	6.87	6.76	5.87	81.11
752-50	1961	4.87	4.33	5.72	7.19	6.80	8.78	8.96	8.96	7.28	6.32	5.04	5.35	74.11
752-50	1962	3.29	3.75	4.26	5.04	6.78	7.87	7.87	7.87	6.32	6.32	6.13	5.38	74.30
752-50	1963	3.74	3.60	4.35	5.92	6.44	8.43	8.81	8.81	7.12	5.27	5.69	4.72	68.88
756-00	1964	5.38	5.32	6.00	7.99	6.39	7.63	7.16	7.16	8.14	6.75	5.47	4.25	70.20
756-00	1965	5.21	5.49	6.33	8.30	6.51	7.39	8.16	8.16	7.40	5.48	5.33	4.91	72.73
756-00	1966	5.61	5.44	6.07	7.53	6.20	7.70	8.30	8.30	6.80	5.13	4.44	4.84	74.04
756-00	1967	5.09	4.44	5.53	6.47	5.52	6.69	7.26	7.26	6.77	5.66	5.27	4.84	69.23

APPENDIX TABLE B.1—Continued

STATE KEY NO.	YEAR	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	ANNUAL (in.)
756-00	1968	4-41	4-98	4-64	6-07	6-88	7-20	7-36	8-16	7-02	5-00	3-69	3-57	72-73
756-00	1969	4-20	5-81	5-54	6-20	6-85	7-28	7-46	8-13	7-21	5-48	3-29	3-38	68-86
756-00	1970	4-07	5-51	5-16	6-22	6-77	7-62	7-58	8-32	7-95	5-16	3-44	3-85	70-70
756-00	1971	4-22	5-98	5-23	6-21	7-44	8-05	7-51	8-29	8-05	5-35	4-67	4-85	69-04
756-00	1972	4-65	5-11	5-41	6-58	7-04	7-16	8-18	8-16	7-50	5-58	4-77	4-33	76-72
756-00	1973	4-49	5-28	5-37	6-21	6-31	7-64	8-10	8-04	6-59	5-40	4-53	4-42	78-57
756-00	1974	4-35	5-30	5-42	6-28	6-95	7-53	8-09	8-21	6-56	5-83	4-55	5-42	
756-00	1975	4-19	5-16	6-44	7-05	7-92	8-60	8-00	8-45	7-56	6-50	5-16	6-32	
756-00	1976	4-93	5-49	6-98	7-78	8-17	9-27	8-06	8-34	7-39	6-57	5-99	6-32	
756-00	1977	5-39	6-15	6-30	7-46	7-53	8-60	8-20	8-73	7-56	6-75	5-33	6-32	
756-00	1978	4-84	5-48	6-58	8-06	8-82	9-08	7-41	8-82	7-56	6-75	5-33	6-32	
756-00	1979	4-34	6-27	6-89	8-20	8-20	9-17	7-32	8-20	7-12	6-77	5-66	6-32	
756-00	1980	5-12	6-05	6-20	7-33	7-86	8-47	7-83	8-15	7-12	6-27	5-18	6-32	
756-00	1981	3-74	5-32	5-21	6-49	6-69	7-39	7-63	8-16	7-39	6-27	5-69	7-25	68-89
756-00	1982	5-38	6-25	6-40	7-59	7-69	8-31	7-39	8-16	7-14	6-57	5-48	7-25	70-73
756-00	1983	5-61	6-49	6-38	8-00	8-13	8-22	7-77	8-24	7-53	7-54	6-70	7-25	74-03
756-00	1984	6-30	7-08	6-09	8-47	8-63	9-23	7-69	8-26	7-88	7-66	6-87	7-44	74-23
756-00	1985	4-30	5-16	5-28	6-91	6-58	7-63	6-08	7-61	7-19	6-09	5-11	5-33	69-27
756-00	1986	1-53	2-44	2-14	3-57	3-51	4-29	3-58	4-73	3-83	3-16	2-64	2-40	36-55
756-00	1987	3-26	4-18	3-24	5-13	5-18	6-36	5-84	7-17	5-86	5-28	4-35	4-50	40-46
756-00	1988	3-41	4-33	3-25	5-28	5-28	6-78	6-04	7-33	6-34	5-33	4-99	5-16	32-32
756-00	1989	1-45	2-33	2-54	4-16	4-08	5-46	4-78	6-26	5-18	4-65	3-44	4-18	30-86
756-00	1990	2-20	3-04	2-54	4-51	4-12	5-63	4-68	6-53	5-34	4-55	3-42	4-18	36-23
756-00	1991	4-38	5-28	4-30	6-15	5-19	7-34	6-84	8-07	6-86	6-55	5-44	6-18	38-87
756-00	1992	4-38	5-28	4-30	6-15	5-19	7-34	6-84	8-07	6-86	6-55	5-44	6-18	35-22
756-00	1993	4-38	5-28	4-30	6-15	5-19	7-34	6-84	8-07	6-86	6-55	5-44	6-18	35-79
756-00	1994	4-38	5-28	4-30	6-15	5-19	7-34	6-84	8-07	6-86	6-55	5-44	6-18	26-89
756-00	1995	4-38	5-28	4-30	6-15	5-19	7-34	6-84	8-07	6-86	6-55	5-44	6-18	47-60
756-00	1996	4-38	5-28	4-30	6-15	5-19	7-34	6-84	8-07	6-86	6-55	5-44	6-18	34-17
756-00	1997	4-38	5-28	4-30	6-15	5-19	7-34	6-84	8-07	6-86	6-55	5-44	6-18	33-99
756-00	1998	4-38	5-28	4-30	6-15	5-19	7-34	6-84	8-07	6-86	6-55	5-44	6-18	32-87
756-00	1999	4-38	5-28	4-30	6-15	5-19	7-34	6-84	8-07	6-86	6-55	5-44	6-18	31-64
756-00	2000	4-38	5-28	4-30	6-15	5-19	7-34	6-84	8-07	6-86	6-55	5-44	6-18	45-78
756-00	2001	4-38	5-28	4-30	6-15	5-19	7-34	6-84	8-07	6-86	6-55	5-44	6-18	42-71
756-00	2002	4-38	5-28	4-30	6-15	5-19	7-34	6-84	8-07	6-86	6-55	5-44	6-18	41-60
756-00	2003	4-38	5-28	4-30	6-15	5-19	7-34	6-84	8-07	6-86	6-55	5-44	6-18	43-60
756-00	2004	4-38	5-28	4-30	6-15	5-19	7-34	6-84	8-07	6-86	6-55	5-44	6-18	43-60
756-00	2005	4-38	5-28	4-30	6-15	5-19	7-34	6-84	8-07	6-86	6-55	5-44	6-18	43-60
756-00	2006	4-38	5-28	4-30	6-15	5-19	7-34	6-84	8-07	6-86	6-55	5-44	6-18	43-60
756-00	2007	4-38	5-28	4-30	6-15	5-19	7-34	6-84	8-07	6-86	6-55	5-44	6-18	43-60
756-00	2008	4-38	5-28	4-30	6-15	5-19	7-34	6-84	8-07	6-86	6-55	5-44	6-18	43-60
756-00	2009	4-38	5-28	4-30	6-15	5-19	7-34	6-84	8-07	6-86	6-55	5-44	6-18	43-60
756-00	2010	4-38	5-28	4-30	6-15	5-19	7-34	6-84	8-07	6-86	6-55	5-44	6-18	43-60
756-00	2011	4-38	5-28	4-30	6-15	5-19	7-34	6-84	8-07	6-86	6-55	5-44	6-18	43-60
756-00	2012	4-38	5-28	4-30	6-15	5-19	7-34	6-84	8-07	6-86	6-55	5-44	6-18	43-60
756-00	2013	4-38	5-28	4-30	6-15	5-19	7-34	6-84	8-07	6-86	6-55	5-44	6-18	43-60
756-00	2014	4-38	5-28	4-30	6-15	5-19	7-34	6-84	8-07	6-86	6-55	5-44	6-18	43-60
756-00	2015	4-38	5-28	4-30	6-15	5-19	7-34	6-84	8-07	6-86	6-55	5-44	6-18	43-60
756-00	2016	4-38	5-28	4-30	6-15	5-19	7-34	6-84	8-07	6-86	6-55	5-44	6-18	43-60
756-00	2017	4-38	5-28	4-30	6-15	5-19	7-34	6-84	8-07	6-86	6-55	5-44	6-18	43-60
756-00	2018	4-38	5-28	4-30	6-15	5-19	7-34	6-84	8-07	6-86	6-55	5-44	6-18	43-60
756-00	2019	4-38	5-28	4-30	6-15	5-19	7-34	6-84	8-07	6-86	6-55	5-44	6-18	43-60
756-00	2020	4-38	5-28	4-30	6-15	5-19	7-34	6-84	8-07	6-86	6-55	5-44	6-18	43-60
756-00	2021	4-38	5-28	4-30	6-15	5-19	7-34	6-84	8-07	6-86	6-55	5-44	6-18	43-60
756-00	2022	4-38	5-28	4-30	6-15	5-19	7-34	6-84	8-07	6-86	6-55	5-44	6-18	43-60
756-00	2023	4-38	5-28	4-30	6-15	5-19	7-34	6-84	8-07	6-86	6-55	5-44	6-18	43-60

APPENDIX TABLE B.1--Continued

STATE KEY NO.	YEAR	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	ANNUAL (in.)
787	00	3-38	3-05	4-13	4-22	3-98	3-92	5-12	5-51	4-14	3-96	3-57	3-08	48-13
787	00	3-48	3-18	4-73	4-57	3-85	3-62	4-67	4-05	3-47	3-35	3-18	3-04	44-70
787	00	3-27	3-34	4-56	3-44	4-74	3-95	4-41	4-74	3-16	3-09	2-94	2-90	44-26
787	00	3-69	3-20	3-56	3-22	4-18	3-35	4-48	4-73	4-16	3-99	2-88	2-70	43-62
787	00	3-89	3-06	3-96	4-00	4-09	4-32	4-68	4-34	3-09	3-88	3-23	3-67	47-34
787	00	2-89	2-30	4-18	3-61	4-36	4-75	4-23	4-34	4-03	3-11	3-19	2-48	44-91
787	10	3-73	3-68	5-41	3-72	4-78	4-47	4-93	3-18	3-24	4-03	3-57	3-30	50-50
787	10	3-78	3-95	4-52	4-22	4-99	4-55	4-70	4-57	4-26	4-32	3-22	3-33	50-06
787	10	3-51	3-44	4-46	4-11	3-99	4-19	4-63	4-13	4-32	3-89	3-82	3-37	48-06
787	10	3-55	3-18	4-25	4-07	3-99	4-19	4-82	4-69	4-98	4-98	4-28	3-55	51-96
787	10	3-55	3-77	4-49	3-64	5-31	4-07	4-43	4-46	4-05	3-92	3-29	3-56	44-12
787	10	2-82	3-89	4-32	4-49	5-37	5-45	5-43	4-72	5-13	4-26	3-18	4-41	54-29
787	10	3-10	3-68	4-72	3-42	4-07	3-65	4-01	4-88	4-19	4-33	3-28	4-22	44-44
787	10	3-77	3-58	5-06	4-12	4-07	4-68	4-64	4-45	4-06	3-67	2-48	2-99	46-66
789	00	0-50	0-50	0-10	0-64	5-26	5-12	0-00	0-00	0-00	0-00	0-00	0-00	0-00
795	10	4-50	3-19	4-93	6-19	6-27	7-89	8-95	8-47	6-91	6-58	4-29	4-35	66-84
795	10	3-30	4-59	3-67	5-76	7-34	7-88	6-50	5-95	7-70	5-94	4-33	3-48	66-84
795	10	4-58	4-60	3-67	5-76	7-34	7-88	6-50	5-95	7-70	5-94	4-33	3-48	66-84
798	00	3-90	4-64	5-79	6-55	7-87	6-94	8-36	8-13	7-29	5-45	4-43	3-67	75-90
798	00	3-45	4-85	7-18	7-19	6-33	8-65	9-04	8-00	7-59	5-01	4-50	3-97	80-97
798	00	4-97	4-89	6-40	7-09	8-36	8-12	9-89	9-00	7-51	5-60	5-20	4-86	75-16
798	00	3-07	4-19	5-27	6-09	7-01	8-75	8-17	8-27	6-86	5-03	4-24	3-47	75-77
798	00	4-08	3-85	4-22	6-62	7-19	8-07	8-68	7-91	6-27	5-66	5-12	4-36	72-66
798	00	4-09	4-37	6-49	4-73	7-22	6-17	7-59	8-42	7-76	5-95	4-68	3-65	71-74
798	00	3-89	4-37	6-11	7-17	7-31	7-72	8-85	7-69	6-34	5-55	4-45	3-70	74-37
813	00	3-89	4-37	6-11	7-17	7-31	7-72	8-85	7-69	6-34	5-55	4-45	3-70	74-37
813	00	6-00	5-50	6-40	6-80	8-80	10-00	9-50	9-00	9-48	6-32	6-77	5-51	71-15
813	00	5-80	5-20	7-10	7-80	7-70	9-40	8-90	7-80	9-10	7-90	6-30	6-30	91-60
813	00	4-90	6-00	5-90	7-10	7-20	7-90	8-30	8-20	6-80	5-70	4-00	3-40	79-60
813	00	6-00	6-00	6-70	6-30	7-20	8-60	0-00	0-00	0-00	0-00	0-00	0-00	0-00
813	00	0-00	0-00	0-00	0-00	0-00	0-00	0-00	0-00	0-00	0-00	0-00	0-00	0-00
813	00	0-00	0-00	0-00	0-00	0-00	0-00	0-00	0-00	0-00	0-00	0-00	0-00	0-00
813	00	3-73	4-81	4-81	5-46	5-96	5-97	6-97	7-06	5-71	5-23	4-31	3-77	66-15
813	00	3-45	4-63	4-95	6-20	6-52	6-45	8-25	7-55	6-48	6-73	3-91	3-77	69-26
813	00	3-02	3-52	4-71	5-36	6-43	6-43	7-29	7-29	5-02	4-19	4-02	3-72	61-80
813	00	3-07	3-22	3-87	5-36	6-05	6-86	7-08	7-40	5-54	5-15	3-70	3-91	61-47
813	00	3-51	4-00	5-54	4-65	5-53	6-54	6-16	6-54	5-02	5-02	3-86	2-91	59-44
813	00	3-91	3-65	4-64	4-65	5-41	5-67	6-52	7-61	5-60	5-31	3-73	3-33	60-62
813	00	3-91	3-65	4-64	4-65	5-41	5-67	6-52	7-61	5-60	5-31	3-73	3-33	60-62

APPENDIX TABLE B.1--Continued

STATE KEY NO.	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	ANNUAL (in.)
813-00	3.53	4.05	4.25	4.93	5.09	6.12	5.38	6.72	5.41	5.22	3.57	2.95	57.22
813-00	3.45	3.55	4.43	4.83	5.48	5.58	5.95	6.44	5.24	4.91	3.27	3.51	57.29
813-00	3.28	3.43	4.40	5.00	5.84	5.31	7.41	6.92	5.29	4.63	3.66	2.97	58.10
813-00	3.25	3.85	4.66	5.54	6.65	6.44	7.23	6.82	5.85	4.54	3.41	2.21	60.11
813-00	3.84	3.48	4.66	5.54	6.45	6.13	7.35	6.72	5.57	4.75	4.50	3.63	63.21
813-00	4.30	4.70	5.63	6.28	6.21	7.13	6.26	6.72	5.57	5.24	4.50	3.51	66.14
813-00	4.16	3.75	4.88	5.32	6.61	7.39	7.80	7.55	6.33	5.37	4.92	4.48	68.26
813-00	4.01	4.57	4.90	5.40	5.38	6.28	7.10	6.48	5.87	5.33	3.92	4.26	62.20
813-00	3.86	3.48	5.87	6.57	6.12	7.06	7.06	6.35	4.77	5.52	4.64	4.26	66.10
813-00	4.04	4.26	5.13	6.04	5.80	6.79	8.03	6.97	6.16	5.44	3.99	4.33	66.10
815-00	3.69	4.69	5.66	5.10	5.15	7.84	7.30	7.77	5.54	5.93	3.59	3.42	66.20
815-00	4.07	3.90	6.33	6.35	6.16	6.75	7.20	7.59	6.60	4.96	4.04	3.44	66.21
815-00	4.75	3.50	4.33	4.34	6.58	5.87	6.80	7.04	6.10	5.25	5.04	4.44	68.23
815-00	5.27	4.58	5.82	5.32	6.14	6.14	7.80	8.77	8.71	5.05	3.32	3.35	72.32
815-00	5.02	4.16	5.16	6.33	7.14	7.36	8.91	7.59	6.29	6.29	4.44	3.40	70.93
815-00	3.52	4.84	4.47	6.22	7.71	7.20	7.97	7.92	6.96	6.40	4.23	4.40	83.38
815-00	5.74	6.02	7.37	7.08	8.51	7.78	8.46	8.19	7.45	7.26	4.44	5.85	82.88
815-00	4.62	5.12	6.58	7.42	8.39	7.45	9.48	6.09	2.54	3.97	5.54	4.04	87.15
815-00	4.85	5.44	6.26	6.90	8.15	7.18	8.25	8.58	7.03	6.70	6.96	6.31	87.26
815-00	5.91	6.33	8.78	8.37	7.25	7.32	9.03	8.50	8.88	7.59	5.56	6.17	86.81
815-00	5.92	6.23	8.05	7.53	7.97	7.48	9.44	8.90	7.29	8.26	5.45	6.40	86.81
816-20	5.05	4.40	5.89	6.03	6.98	6.82	6.44	7.71	7.29	6.76	5.45	6.40	78.10
816-30	5.81	4.81	6.49	6.73	7.85	7.38	8.91	7.80	6.39	6.19	5.10	6.74	78.10
816-30	2.81	5.36	6.47	6.72	7.16	6.08	8.51	7.80	7.67	7.59	5.68	6.44	70.00
816-30	4.62	4.77	6.12	4.49	8.46	7.05	6.19	7.71	7.25	5.99	5.68	6.44	70.00
816-30	3.78	5.05	6.05	6.08	6.13	5.87	7.53	7.04	5.36	5.67	4.88	3.84	67.69
818-10	3.09	3.76	4.84	4.12	4.90	7.94	8.31	7.16	7.02	6.25	5.56	4.04	64.97
818-10	3.57	4.85	5.39	4.72	7.79	6.97	6.64	7.99	6.52	5.29	4.00	3.29	64.71
818-10	4.15	4.06	4.82	4.61	5.86	6.50	6.43	6.65	6.10	6.03	4.83	3.44	66.09
818-10	4.04	3.98	4.70	2.77	5.74	7.22	6.75	7.65	7.70	6.29	4.88	4.75	68.37
818-10	2.92	4.21	3.39	5.69	6.37	7.37	7.81	7.30	5.70	6.48	3.42	4.64	70.83
818-10	6.48	5.04	6.01	4.98	7.02	6.24	7.59	7.32	6.57	5.15	4.92	4.22	70.83
818-10	3.56	4.59	5.29	5.35	6.77	6.74	7.33	7.18	5.87	5.65	4.19	4.81	70.13
818-10	4.21	4.34	5.42	5.90	6.25	6.30	7.29	7.38	7.41	5.64	4.68	3.95	70.55
818-10	4.12	5.12	5.42	5.5	6.59	6.68	7.20	7.6	6.6	5.64	4.3	5.4	70.55

APPENDIX TABLE B.1--Continued

STATE KEY NO.	YEAR	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	ANNUAL (in.)
818-10	1975	4.31	4.47	5.54	5.66	6.40	7.37	8.06	7.78	6.67	7.34	5.99	4.98	74.57
818-10	1976	5.08	5.67	6.03	6.81	6.82	6.60	7.88	7.15	6.05	5.92	4.90	4.73	73.64
818-10	1977	5.15	6.84	5.96	6.16	7.14	6.39	7.92	7.61	8.78	7.71	5.80	6.26	78.99
818-10	1978	5.67	6.13	6.41	6.88	7.11	6.58	8.20	5.23	7.35	6.49	5.84	6.45	78.53
818-10	1979	5.01	5.54	6.16	6.84	7.17	7.53	7.47	9.07	8.05	7.52	6.05	6.12	78.53
818-10	1980	5.87	6.54	6.29	7.10	7.38	7.95	7.91	8.07	6.05	5.42	4.98	6.45	78.53
818-10	1981	5.02	5.36	6.23	6.76	7.32	6.00	6.54	7.97	8.46	7.78	6.45	6.12	78.53
818-10	1982	5.02	6.36	5.83	6.76	7.32	6.00	6.54	7.97	8.46	7.78	6.45	6.12	78.53
818-10	1983	4.19	4.37	6.00	7.47	7.47	7.26	8.06	7.07	6.27	6.01	4.28	4.28	78.53
820-20	1954	4.74	4.73	6.01	6.66	6.88	7.23	8.06	8.00	7.89	6.70	4.53	4.40	71.72
820-20	1955	4.06	3.68	5.70	6.30	8.46	6.81	7.47	7.15	6.81	5.21	4.23	3.81	70.67
820-20	1956	4.71	4.09	5.86	6.79	7.22	8.07	8.37	8.41	7.35	5.49	4.39	3.91	73.61
820-20	1957	4.71	4.40	5.80	6.27	6.36	7.35	8.39	7.44	6.93	6.60	4.86	4.09	68.91
820-20	1958	4.15	4.45	6.79	6.27	6.07	8.82	8.65	7.81	7.30	5.87	4.47	4.22	76.17
820-20	1959	4.19	4.87	6.05	7.99	7.91	8.28	8.99	8.62	7.44	6.01	5.01	4.00	78.36
820-20	1960	4.39	4.70	5.08	6.76	7.97	6.66	8.37	8.22	7.02	6.06	3.84	4.06	72.22
820-20	1961	3.57	3.86	5.48	6.12	6.01	7.83	8.05	8.00	7.71	5.14	3.94	3.66	73.35
820-20	1962	3.57	4.82	5.86	7.47	7.47	7.53	8.53	8.00	7.71	6.14	3.94	3.66	73.35
820-20	1963	3.57	4.82	5.86	7.47	7.47	7.53	8.53	8.00	7.71	6.14	3.94	3.66	73.35
820-20	1964	3.57	4.82	5.86	7.47	7.47	7.53	8.53	8.00	7.71	6.14	3.94	3.66	73.35
820-20	1965	3.57	4.82	5.86	7.47	7.47	7.53	8.53	8.00	7.71	6.14	3.94	3.66	73.35
820-20	1966	3.57	4.82	5.86	7.47	7.47	7.53	8.53	8.00	7.71	6.14	3.94	3.66	73.35
820-20	1967	3.57	4.82	5.86	7.47	7.47	7.53	8.53	8.00	7.71	6.14	3.94	3.66	73.35
824-10	1962	4.15	4.96	6.42	5.31	5.36	9.12	7.50	8.53	6.15	6.70	3.87	3.22	71.07
824-10	1963	3.81	4.54	6.08	7.41	5.33	8.04	8.04	9.15	6.69	6.08	3.66	3.35	71.07
824-10	1964	3.76	4.76	5.50	6.41	5.53	6.29	7.60	6.19	7.42	5.60	4.39	4.19	63.63
824-10	1965	3.92	4.41	4.81	6.98	6.42	6.74	7.21	6.34	6.13	5.29	4.60	3.95	63.04
824-10	1966	3.85	4.24	4.47	5.39	6.46	6.45	5.94	7.90	5.87	5.13	3.26	3.14	59.14
824-10	1967	3.57	3.30	4.96	4.52	6.26	7.15	7.11	6.72	6.34	4.81	4.42	3.04	63.48
824-10	1968	3.57	3.48	4.62	4.93	6.82	6.43	4.77	5.99	6.43	4.85	4.44	3.08	63.48
825-30	1968	6.32	5.81	5.33	7.06	7.06	7.59	7.84	9.09	8.61	6.36	5.92	4.06	78.83
825-30	1969	6.32	6.83	7.83	7.83	7.83	7.06	7.84	8.02	5.10	6.36	6.14	5.12	83.41
825-30	1970	3.88	5.57	7.55	7.05	7.84	7.05	6.26	8.02	6.84	6.50	4.61	4.12	83.41
825-30	1971	5.25	5.72	6.13	8.04	8.04	7.76	8.39	8.36	7.48	6.64	5.52	4.64	83.41
825-30	1972	5.25	5.72	6.13	8.04	8.04	7.76	8.39	8.36	7.48	6.64	5.52	4.64	83.41
825-30	1973	5.25	5.72	6.13	8.04	8.04	7.76	8.39	8.36	7.48	6.64	5.52	4.64	83.41
825-30	1974	5.25	5.72	6.13	8.04	8.04	7.76	8.39	8.36	7.48	6.64	5.52	4.64	83.41
825-30	1975	5.40	5.23	5.96	7.40	8.04	7.52	8.63	9.60	8.45	7.33	6.84	5.66	86.49
825-30	1976	5.32	5.24	5.96	7.40	8.04	7.52	8.63	9.60	8.45	7.33	6.84	5.66	86.49
825-30	1977	5.32	5.24	5.96	7.40	8.04	7.52	8.63	9.60	8.45	7.33	6.84	5.66	86.49
825-30	1978	5.32	5.24	5.96	7.40	8.04	7.52	8.63	9.60	8.45	7.33	6.84	5.66	86.49
825-30	1979	5.69	4.46	7.37	8.15	8.15	9.22	8.83	6.31	8.03	6.92	5.92	5.11	88.21
825-30	1980	5.69	4.46	7.37	8.15	8.15	9.22	8.83	6.31	8.03	6.92	5.92	5.11	88.21
825-30	1981	5.69	4.46	7.37	8.15	8.15	9.22	8.83	6.31	8.03	6.92	5.92	5.11	88.21
825-30	1982	4.93	4.57	6.57	7.57	8.56	7.43	10.50	8.91	8.57	7.54	6.76	5.80	85.10
825-30	1983	4.93	4.57	6.57	7.57	8.56	7.43	10.50	8.91	8.57	7.54	6.76	5.80	85.10

APPENDIX TABLE B.1—Continued

STATE KEY NO.	YEAR	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	ANNUAL (in.)
841	1968	5.46	6.45	4.76	6.03	7.15	7.84	7.84	7.91	6.78	5.52	4.56	4.32	74.02
841	1969	4.56	4.07	5.16	6.56	7.27	7.84	7.84	8.48	6.70	5.68	4.82	4.68	75.97
841	1970	5.06	4.99	6.77	6.52	7.40	8.08	8.08	8.71	6.17	6.96	3.87	4.74	
841	1971	3.36	4.96	5.55	5.29	7.55	8.12	8.12	7.88	6.33	5.15	5.23		
841	1972	4.18	3.64	5.94	5.16	6.38	8.30	8.30	6.97	8.23	5.95	4.21		
841	1973	4.12	4.75	5.41	5.16	6.43	8.88	8.88	6.53	8.20	5.92	4.43	4.05	71.83
841	1974		3.46	4.90	4.83	5.83	7.69	7.69	8.53	6.37	4.65	3.97		
841	1975		4.81	5.32	5.29	6.16	8.69	8.69	7.31	7.47	4.98	4.16		
841	1976		4.81	5.39	5.32	6.08	7.50	7.50	6.02	6.47	4.93	4.33		
841	1977		5.13	5.31	5.32	6.45	8.87	8.87	7.10	7.14	5.03	4.09	5.37	
841	1978		4.64	5.38	5.36	6.78	8.87	8.87	6.25	5.50	5.11	4.09		
841	1979		4.14	5.43	5.40	6.17	7.35	7.35	6.40	6.53	5.02	4.11	3.37	
841	1980	3.96	4.27	5.01	5.36	6.38	7.55	7.55	6.00	5.90	5.02	4.11	3.37	
846	1962		5.53	5.30	5.28	6.07	7.15	7.15	7.21	7.87	7.15	5.40	4.22	
846	1963	3.32	4.53	5.18	5.45	6.50	8.33	8.33	6.38	6.22	5.36	4.41		
846	1964	3.30	4.56	5.18	5.45	6.57	8.48	8.48	6.76	6.20	5.13	4.89		78
846	1965	3.78	4.07	4.93	5.31	6.20	7.83	7.83	7.01	6.62	5.50	4.93	3.53	64.56
846	1966	4.12	4.07	4.16	5.09	5.76	6.73	6.73	6.27	6.25	5.15	4.36	3.75	62.55
846	1967	4.27	4.59	4.50	5.09	6.48	7.71	7.71	6.67	6.58	5.52	4.38	3.36	90
846	1968	4.49	4.23	4.87	5.08	6.55	8.38	8.38	7.25	7.85	5.26	4.20	4.77	66
846	1969	4.81	4.93	4.48	5.19	7.28	9.11	9.11	8.51	7.33	6.22	4.97	3.01	86
847	1970	3.81	3.93	4.12	4.69	6.47	8.79	8.79	7.54	6.30	5.79	4.33	3.41	74.03
847	1971	3.81	3.65	4.48	4.49	6.47	9.33	9.33	8.34	6.94	5.34	4.66	3.64	
847	1972	4.33	3.65	4.52	5.45	7.08	9.66	9.66	8.64	7.94	5.73	5.19		
847	1973	4.62	4.79	4.52	5.45	8.08	9.66	9.66	9.06	7.61	6.75	5.99	4.09	92
847	1974	4.62	4.79	4.52	5.45	8.08	9.66	9.66	9.06	7.61	6.75	5.99	3.36	
847	1975	4.62	4.79	4.52	5.45	8.08	9.66	9.66	9.06	7.61	6.75	5.99	3.36	
847	1976	4.62	4.79	4.52	5.45	8.08	9.66	9.66	9.06	7.61	6.75	5.99	3.36	
847	1977	4.62	4.79	4.52	5.45	8.08	9.66	9.66	9.06	7.61	6.75	5.99	3.36	
847	1978	4.62	4.79	4.52	5.45	8.08	9.66	9.66	9.06	7.61	6.75	5.99	3.36	
847	1979	4.62	4.79	4.52	5.45	8.08	9.66	9.66	9.06	7.61	6.75	5.99	3.36	
847	1980	4.62	4.79	4.52	5.45	8.08	9.66	9.66	9.06	7.61	6.75	5.99	3.36	
847	1981	4.62	4.79	4.52	5.45	8.08	9.66	9.66	9.06	7.61	6.75	5.99	3.36	
847	1982	4.62	4.79	4.52	5.45	8.08	9.66	9.66	9.06	7.61	6.75	5.99	3.36	
847	1983	4.62	4.79	4.52	5.45	8.08	9.66	9.66	9.06	7.61	6.75	5.99	3.36	
847	1984	4.62	4.79	4.52	5.45	8.08	9.66	9.66	9.06	7.61	6.75	5.99	3.36	
847	1985	4.62	4.79	4.52	5.45	8.08	9.66	9.66	9.06	7.61	6.75	5.99	3.36	
847	1986	4.62	4.79	4.52	5.45	8.08	9.66	9.66	9.06	7.61	6.75	5.99	3.36	
847	1987	4.62	4.79	4.52	5.45	8.08	9.66	9.66	9.06	7.61	6.75	5.99	3.36	
847	1988	4.62	4.79	4.52	5.45	8.08	9.66	9.66	9.06	7.61	6.75	5.99	3.36	
847	1989	4.62	4.79	4.52	5.45	8.08	9.66	9.66	9.06	7.61	6.75	5.99	3.36	
847	1990	4.62	4.79	4.52	5.45	8.08	9.66	9.66	9.06	7.61	6.75	5.99	3.36	
847	1991	4.62	4.79	4.52	5.45	8.08	9.66	9.66	9.06	7.61	6.75	5.99	3.36	
847	1992	4.62	4.79	4.52	5.45	8.08	9.66	9.66	9.06	7.61	6.75	5.99	3.36	
847	1993	4.62	4.79	4.52	5.45	8.08	9.66	9.66	9.06	7.61	6.75	5.99	3.36	
847	1994	4.62	4.79	4.52	5.45	8.08	9.66	9.66	9.06	7.61	6.75	5.99	3.36	
847	1995	4.62	4.79	4.52	5.45	8.08	9.66	9.66	9.06	7.61	6.75	5.99	3.36	
847	1996	4.62	4.79	4.52	5.45	8.08	9.66	9.66	9.06	7.61	6.75	5.99	3.36	
847	1997	4.62	4.79	4.52	5.45	8.08	9.66	9.66	9.06	7.61	6.75	5.99	3.36	
847	1998	4.62	4.79	4.52	5.45	8.08	9.66	9.66	9.06	7.61	6.75	5.99	3.36	
847	1999	4.62	4.79	4.52	5.45	8.08	9.66	9.66	9.06	7.61	6.75	5.99	3.36	
847	2000	4.62	4.79	4.52	5.45	8.08	9.66	9.66	9.06	7.61	6.75	5.99	3.36	

APPENDIX TABLE B.1--Continued

STATE KEY NO.	YEAR	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	ANNUAL (in.)
847-00	1981	5.80	5.80	7.00	6.56	7.33	7.17	8.43	8.54	7.91	7.09	5.68	4.00	..
847-00	1982	4.22	4.45	5.66	5.43	7.01	6.35	6.90	7.58	7.90	7.09	5.73	4.00	..
847-00	1983	4.78	4.78	5.91	6.74	7.45	7.65	8.20	8.05	7.60	6.76	5.68	4.00	..
851-00	1962	2.40	4.03	5.52	5.31	5.37	8.05	8.76	8.05	7.77	6.26	5.73	4.00	..
851-00	1963	4.40	4.73	5.05	6.01	7.37	8.18	8.21	7.54	6.76	6.26	5.73	4.00	..
851-00	1964	4.38	4.65	5.29	5.56	7.54	8.18	8.45	8.66	7.82	6.46	5.05	4.00	..
851-00	1965	4.38	4.65	5.29	5.56	7.54	8.18	8.45	8.66	7.82	6.46	5.05	4.00	..
851-00	1966	3.69	4.23	4.45	5.37	6.44	8.30	8.69	8.02	6.46	5.68	4.24	4.00	68.93
851-00	1967	3.69	4.23	4.45	5.37	6.44	8.30	8.69	8.02	6.46	5.68	4.24	4.00	70.37
851-00	1968	4.40	4.15	4.10	5.64	7.08	9.30	8.69	8.19	7.95	6.21	5.05	4.00	74.34
851-00	1969	4.40	4.15	4.10	5.64	7.08	9.30	8.69	8.19	7.95	6.21	5.05	4.00	74.34
851-00	1970	3.71	4.71	5.80	5.98	7.14	7.55	8.01	7.74	6.03	5.55	4.87	4.00	61.93
851-00	1971	3.71	4.71	5.80	5.98	7.14	7.55	8.01	7.74	6.03	5.55	4.87	4.00	69.86
854-00	1962	3.53	4.45	5.80	5.61	7.56	8.09	8.22	8.27	7.24	6.86	6.04	4.00	..
854-00	1963	4.81	4.56	5.93	6.13	8.96	8.09	8.22	8.27	7.24	6.86	6.04	4.00	..
854-00	1964	5.12	5.04	5.49	6.86	7.25	8.55	8.09	8.41	7.29	5.43	5.17	4.00	73.77
854-00	1965	3.91	3.95	5.27	7.40	8.71	10.16	9.80	9.41	5.97	6.12	4.75	4.00	81.09
854-00	1966	3.91	3.95	5.27	7.40	8.71	10.16	9.80	9.41	5.97	6.12	4.75	4.00	72.16
854-00	1967	4.37	4.17	4.21	6.59	8.43	9.45	9.03	8.96	6.08	6.47	5.84	4.00	78.05
854-00	1968	4.37	4.17	4.21	6.59	8.43	9.45	9.03	8.96	6.08	6.47	5.84	4.00	85.80
854-00	1969	5.57	4.74	5.90	6.85	8.87	8.29	8.29	9.29	6.54	5.81	4.58	4.00	85.80
854-00	1970	5.57	4.74	5.90	6.85	8.87	8.29	8.29	9.29	6.54	5.81	4.58	4.00	85.80
856-10	1950	4.51	5.89	7.07	7.70	9.06	9.61	10.53	9.59	7.54	4.70	3.83	2.35	46.96
856-10	1951	3.00	2.74	3.81	3.37	3.76	3.98	5.61	5.07	4.74	4.70	3.83	2.35	46.96
856-10	1952	3.16	3.14	4.31	4.20	4.71	5.95	6.55	6.63	5.70	4.72	3.55	..	..
860-60	1976	..	..	4.26	5.70	6.19	5.95	7.50	7.63	6.86	5.86	3.55	..	..
860-60	1977	..	..	5.09	6.84	7.00	6.65	7.38	6.37	6.21	5.83	3.55	..	..
860-60	1978	..	..	5.25	7.06	7.14	6.80	7.09	6.78	6.92	5.89	4.75	..	..
860-60	1979	..	..	5.85	6.13	6.32	6.49	6.56	6.33	6.27	4.89	..	..	..
860-60	1981	..	..	5.65	6.13	6.37	6.70	7.22	6.33	7.55	..	..	..	..
860-60	1982	..	..	5.05	5.32	6.37	7.00	7.21	6.28	6.20	5.77	..	..	..
860-60	1983	..	..	4.87	5.67	6.48	7.19	7.21	6.28	6.20	5.77	..	..	..
861-00	1960	..	..	4.81	5.95	6.48	7.46	7.93	6.54	5.74	5.41	3.48	2.70	60.18
861-00	1961	3.13	3.24	4.63	4.74	7.01	6.99	7.45	7.19	5.82	4.12	3.48	3.38	62.64
861-00	1962	3.60	3.60	5.81	4.78	5.09	6.17	7.54	7.22	6.61	5.53	5.02	3.50	..
861-00	1963	4.43	4.15	5.64	4.74	6.23	6.53	7.29	7.34	6.31	5.70	4.62	..	..
861-00	1964	4.71	4.62	5.27	5.36	6.72	6.56	7.16	7.86	5.31	5.08	4.42	4.41	68.57
861-00	1965	4.04	4.72	5.07	5.50	7.27	7.57	7.57	8.34	6.40	5.08	4.42	4.41	68.57
861-00	1966	3.70	3.99	4.86	4.95	6.61	7.30	7.53	8.05	6.28	5.08	4.42	4.41	68.57
861-00	1967	3.94	3.79	5.40	5.33	6.51	7.47	7.70	7.92	7.02	5.45	4.69	4.41	67.68
861-00	1968	4.26	4.40	5.43	5.93	6.32	7.64	7.97	7.92	7.02	5.45	4.69	4.41	67.68
861-00	1969	4.26	4.40	5.43	5.93	6.32	7.64	7.97	7.92	7.02	5.45	4.69	4.41	67.68
861-00	1970	4.20	4.26	5.35	6.16	6.47	6.79	8.06	7.80	6.48	5.16	4.84	4.41	71.10
861-00	1971	4.20	4.26	5.35	6.16	6.47	6.79	8.06	7.80	6.48	5.16	4.84	4.41	71.10
861-00	1972	3.92	3.73	5.55	6.32	6.51	6.97	7.41	7.02	6.01	5.29	3.06	..	..
861-00	1973	3.72	3.73	5.55	6.32	6.51	6.97	7.41	7.02	6.01	5.29	3.06	..	..

APPENDIX TABLE B.1—Continued

STATE KEY NO.	YEAR	JAN	FEB	MAR	APR	MAY	JUNE	JULY (in.)	AUG	SEPT	OCT	NOV	DEC	ANNUAL (in.)
861-00	1974	3-41	4-45	4-48	5-03	5-73	6-23	5-4	5-90	6-75	6-12	4-42	4-27	66-11
861-00	1975	3-78	4-47	4-99	5-03	6-47	6-20	6-88	5-46	6-89	5-58	4-18	3-89	66-11
861-00	1976		4-95	4-43	5-53	6-25	7-79	6-39	6-48	6-52	4-91	3-94		
861-00	1977		4-82	4-63	4-86	5-21	5-21	6-95	6-71	6-58	5-37	3-58		
861-00	1978		4-28	4-43	5-13	6-07	6-20	6-52	7-05	6-53	5-15	4-31		
861-00	1980		4-75	4-49	5-29	6-94	6-20	6-28	7-30	6-69	5-20	4-62		
861-00	1981		4-45	4-99	4-96	5-94	6-89	6-59	5-82	5-84	5-15	3-31		
861-00	1982	3-54	3-46	3-63	4-54	6-78	6-89	6-59	6-37	6-09	5-14		2-90	
882-10	1931			5-40	5-12	6-10	6-02		6-76	5-72				
882-10	1932	0-51	0-50	1-59	0-93	1-24	1-4	2-60		1-24	1-63	0-71	0-47	16-31
882-10	1933			0-65	0-65	2-09	1-85	1-44	1-88	2-04	1-18	0-20	0-49	
882-10	1934	0-76	1-37	2-63	1-90	2-95	2-13	2-14	2-68	1-71	1-69	0-87	0-93	19-13
882-10	1935	0-57	0-90	2-20	2-22	2-26	1-77	1-64	2-12	1-33	1-28	1-10	0-50	
890-00	1962		4-66	5-43	4-65	7-16	7-68	8-53	7-93	7-34	5-06	5-16	3-52	
890-00	1963	2-31	4-68	5-70	5-81	6-98	9-06	8-01	7-68	7-20	6-20	5-04		
890-00	1964	4-53	4-17	5-53	4-81	6-98	9-06	8-01	7-68	7-20	6-20	5-04		
890-00	1965	3-40	4-27	5-12	6-17	7-09	9-66	8-51	8-84	7-27	5-53	3-33	3-57	71-58
890-00	1966	3-22	3-90	4-82	5-74	6-84	9-62	8-26	8-01	6-63	5-83	3-82	3-56	71-50
890-00	1967	4-74	4-13	5-03	6-49	7-40	9-67	8-07	7-73	6-11	5-89	4-56	4-01	71-04
890-00	1968	4-74	4-42	5-03	6-49	7-40	9-67	8-07	7-73	6-11	5-89	4-56	4-00	74-54
890-00	1969	3-87	4-50	5-53	6-45	7-45	9-65	8-18	7-86	6-96	5-93	4-54	4-59	73-90
890-00	1970	4-91	4-72	5-35	6-49	7-46	9-72	8-17	7-61	6-22	5-80	4-52	4-96	78-45
892-00	1960	4-50	4-19	5-17	6-39	7-37	9-55	8-06	7-96	6-95	5-83	4-64	3-43	78-57
892-00	1961	4-31	4-70	5-35	6-39	7-37	9-55	8-06	7-96	6-95	5-83	4-64	3-43	78-57
892-00	1962	4-31	4-70	5-35	6-39	7-37	9-55	8-06	7-96	6-95	5-83	4-64	3-43	78-57
892-00	1963	4-31	4-70	5-35	6-39	7-37	9-55	8-06	7-96	6-95	5-83	4-64	3-43	78-57
892-00	1964	4-31	4-70	5-35	6-39	7-37	9-55	8-06	7-96	6-95	5-83	4-64	3-43	78-57
892-00	1965	4-31	4-70	5-35	6-39	7-37	9-55	8-06	7-96	6-95	5-83	4-64	3-43	78-57
892-00	1966	4-31	4-70	5-35	6-39	7-37	9-55	8-06	7-96	6-95	5-83	4-64	3-43	78-57
892-00	1967	4-31	4-70	5-35	6-39	7-37	9-55	8-06	7-96	6-95	5-83	4-64	3-43	78-57
892-00	1968	4-31	4-70	5-35	6-39	7-37	9-55	8-06	7-96	6-95	5-83	4-64	3-43	78-57
892-00	1969	4-31	4-70	5-35	6-39	7-37	9-55	8-06	7-96	6-95	5-83	4-64	3-43	78-57
892-00	1970	4-31	4-70	5-35	6-39	7-37	9-55	8-06	7-96	6-95	5-83	4-64	3-43	78-57
892-00	1971	4-31	4-70	5-35	6-39	7-37	9-55	8-06	7-96	6-95	5-83	4-64	3-43	78-57
892-00	1972	4-31	4-70	5-35	6-39	7-37	9-55	8-06	7-96	6-95	5-83	4-64	3-43	78-57
892-00	1973	4-31	4-70	5-35	6-39	7-37	9-55	8-06	7-96	6-95	5-83	4-64	3-43	78-57
892-00	1974	4-31	4-70	5-35	6-39	7-37	9-55	8-06	7-96	6-95	5-83	4-64	3-43	78-57
892-00	1975	4-31	4-70	5-35	6-39	7-37	9-55	8-06	7-96	6-95	5-83	4-64	3-43	78-57
892-00	1976	4-31	4-70	5-35	6-39	7-37	9-55	8-06	7-96	6-95	5-83	4-64	3-43	78-57
892-00	1977	4-31	4-70	5-35	6-39	7-37	9-55	8-06	7-96	6-95	5-83	4-64	3-43	78-57
892-00	1978	4-31	4-70	5-35	6-39	7-37	9-55	8-06	7-96	6-95	5-83	4-64	3-43	78-57
892-00	1979	4-31	4-70	5-35	6-39	7-37	9-55	8-06	7-96	6-95	5-83	4-64	3-43	78-57
892-00	1980	4-31	4-70	5-35	6-39	7-37	9-55	8-06	7-96	6-95	5-83	4-64	3-43	78-57
892-00	1981	4-31	4-70	5-35	6-39	7-37	9-55	8-06	7-96	6-95	5-83	4-64	3-43	78-57

APPENDIX TABLE B.1--Continued

STATE KEY NO.	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	ANNUAL (in.)
892-00	4.59	4.39	5.34	5.54	6.87	6.52	6.26	6.74	6.67	7.32	5.83	3.61	.
892-20	5.08	5.08	6.21	7.00	7.57	6.20	.	.	.	4.25	4.44	3.37	.
894-00	2.05	4.91	5.39	4.11	6.88	5.81	6.36	6.96	6.91	5.19	4.86	.	.
894-20	3.63	4.37	5.39	5.33	7.39	6.74	6.51	7.90	5.89	5.28	.	.	.
908-00	5.47	5.34	6.79	6.89	9.53	8.95	9.56	9.50	7.92	5.81	5.81	4.36	.
908-01	4.30	5.08	.	5.61	8.17	7.24	9.39	8.84	7.99	6.02	5.46	4.42	.
908-00	4.63	5.65	6.47	7.64	10.20	9.14	8.75	9.00	7.02	5.31	5.19	3.53	.
908-00	4.63	5.65	6.47	7.64	10.20	9.14	8.75	9.00	7.02	5.31	5.19	3.53	.
908-00	4.63	5.65	6.47	7.64	10.20	9.14	8.75	9.00	7.02	5.31	5.19	3.53	.
925-00	5.60	6.64	7.81	7.92	9.97	9.26	9.20	10.02	7.94	8.28	6.12	5.30	94.06
925-00	6.29	5.01	8.36	7.58	8.34	8.98	10.38	9.68	9.86	5.95	7.40	5.76	.
925-00	4.81	5.93	5.86	7.58	8.34	8.98	10.38	9.68	9.86	5.95	7.40	5.76	.
925-00	6.26	5.97	7.01	6.60	7.96	8.99	9.43	9.08	7.78	8.50	6.81	5.10	.
925-00	5.03	4.50	7.00	7.87	7.04	9.84	8.94	8.92	6.34	6.19	6.23	5.43	96.04
925-00	6.08	5.28	5.86	6.90	7.77	.	.	.	.	7.57	7.99	5.52	.
925-00	5.88	5.50	7.84	8.68	7.27	7.12	8.67	9.70	8.49	6.26	6.42	4.96	.
925-00	5.23	5.46	5.70	6.78	8.69	8.36	9.26	10.08	8.81	7.23	5.59	4.96	92.49
925-00	4.35	4.77	6.53	7.07	7.96	7.59	10.39	9.78	7.96	10.13	5.99	5.27	90.81
925-00	5.44	5.83	7.96	9.08	9.65	10.24	10.52	9.61	7.82	8.00	8.12	5.66	83.47
925-00	4.92	5.52	7.07	8.21	8.24	10.13	10.21	8.95	7.65	8.00	5.67	5.82	96.15
925-00	5.58	6.69	9.42	8.90	8.21	10.19	9.93	10.32	7.52	7.19	5.44	5.96	86.15
927-00	6.63	4.43	4.22	6.75	8.11	8.32	9.20	9.55	9.00	8.33	6.99	4.83	99.95
927-00	5.95	6.19	6.32	6.99	8.95	8.49	10.20	9.29	8.25	7.04	6.95	5.46	86.95
927-00	5.29	5.66	7.45	7.21	8.95	8.69	9.78	10.17	8.28	8.88	6.09	5.74	89.29
927-00	6.29	5.08	7.79	8.74	9.76	10.65	11.13	10.62	9.03	7.55	6.18	6.48	92.42
927-00	5.83	5.39	6.58	8.52	8.01	9.15	10.60	6.57	8.80	7.88	5.70	5.98	89.36
927-00	5.51	5.87	.	.	.	.	.	.	.	.	.	.	.
927-00	4.70	4.70	7.01	7.75	6.51	8.10	8.16	7.92	5.61	6.10	.	6.04	.
927-00	5.35	5.75	6.55	6.84	8.22	7.83	9.82	7.03	8.30	.	.	.	.
930-00	6.17	4.98	6.09	7.70	7.70	7.83	7.75	6.10	7.11	3.81	6.15	4.84	81.25
930-00	4.65	5.39	6.51	6.85	10.68	7.68	8.91	9.98	7.44	6.79	5.19	4.96	81.25
930-00	6.11	4.76	6.36	6.93	7.95	8.66	8.29	8.24	8.30	6.70	5.40	5.12	92.79
930-00	6.94	4.16	6.48	6.03	7.85	8.61	10.32	9.99	7.29	9.18	5.34	5.43	85.68
930-00	5.61	6.02	7.61	6.39	8.44	8.67	9.27	9.83	8.58	8.75	5.64	5.46	89.70
930-00	6.20	4.87	7.56	8.22	8.91	8.82	9.23	8.90	8.10	6.69	5.04	5.49	88.03
930-00	5.18	5.26	5.58	6.76	8.00	8.23	10.05	6.36	8.93	7.73	5.88	.	.
930-00	5.70	6.94	.	.	7.18	5.65	7.99	8.88	8.65	7.48	5.96	5.16	77.43
930-00	5.09	5.87	7.54	7.83	7.26	7.24	7.86	7.10	6.13	5.74	4.74	5.03	77.43

APPENDIX TABLE B.1—Continued

STATE KEY NO.	YEAR	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	ANNUAL (in.)
930-00	1971	4.90	4.52	5.92	6.05	7.67	7.64	7.44	7.43	7.32	7.84	5.94	5.34	78.01
930-00	1972	6.43	5.76	6.70	6.65	7.55	7.98	7.29	7.25	6.30	6.06	5.07	5.34	75.56
930-00	1973	5.72	5.62	6.89	7.32	6.73	6.40	7.44	7.20	8.35	7.57	6.36	5.52	83.87
930-00	1974	4.39	6.28	6.45	5.12	7.66	6.58	7.19	7.99	6.35	5.79	4.89	5.06	80.34
930-00	1975	4.91	5.28	7.43	6.82	7.37	7.14	8.17	8.22	7.63	7.16	6.25	5.09	85.38
930-00	1976	7.09	7.16	7.71	7.82	8.28	9.35	8.67	9.46	9.08	7.85	5.96	5.04	96.08
930-00	1977	5.52	5.39	8.50	7.97	10.49	9.21	9.84	8.03	7.70	7.92	5.15	5.53	83.42
930-00	1978	5.53	5.00	7.29	7.47	8.35	9.14	8.18	9.81	8.91	7.37	5.47	5.54	91.98
930-00	1980	6.26	6.40	7.24	8.16	7.84	7.96	10.88	8.68	7.99	7.81	6.91	4.54	84.91
930-00	1981	5.93	5.70	8.12	8.14	9.82	9.95	9.68	8.22	7.99	7.70	7.44	6.45	84.91
930-00	1982	5.87	6.50	7.50	7.94	8.92	7.92	7.94	8.46	7.71	7.94	7.44	6.45	84.91
930-00	1983	5.50	5.50	7.50	7.38	8.92	7.75	7.13	8.64	7.05	5.30	5.10	5.24	81.84
931-00	1960	4.53	5.22	5.33	7.38	9.85	8.94	9.30	9.64	7.62	5.80	5.18	5.15	72.29
931-00	1961	3.35	4.95	5.67	6.12	6.76	8.07	7.69	7.86	7.16	6.01	5.53	4.65	81.03
931-00	1962	6.05	5.78	6.01	5.61	6.80	7.29	8.52	8.00	8.22	6.84	5.79	5.44	81.03
931-00	1963	4.87	5.70	6.04	5.61	7.87	6.84	6.78	9.96	7.55	6.84	5.10	4.31	81.21
931-00	1964	6.15	5.03	6.53	6.70	10.09	9.13	8.85	7.80	6.45	3.84	5.21	5.67	78.33
931-00	1965	4.09	4.34	4.21	7.63	7.58	7.96	10.54	6.73	6.97	6.26	6.34	4.19	78.33
931-00	1967	5.36	6.45	4.65	6.78	8.53	10.53	10.54	8.20	6.97	6.97	6.15	4.19	78.33
931-00	1968	5.36	6.45	4.65	6.78	8.53	10.53	10.54	8.20	6.97	6.97	6.15	4.19	78.33
931-00	1981	5.07	4.11	5.64	5.66	6.14	5.56	7.46	7.21	5.72	6.35	5.37	5.37	81.08
931-00	1982	5.77	5.45	7.35	5.60	6.58	6.64	7.66	7.02	7.06	7.38	5.73	5.36	81.08
934-00	1964	5.42	6.12	7.35	6.42	7.49	7.37	8.09	7.74	6.36	5.49	5.67	5.21	79.57
934-00	1965	6.11	4.24	6.77	7.24	7.35	7.35	7.73	7.25	8.07	6.32	5.52	5.77	79.57
934-00	1966	5.26	5.26	5.77	7.14	7.10	7.61	7.48	6.77	6.46	6.46	6.13	5.77	79.57
934-00	1967	5.26	5.26	5.77	7.14	7.10	7.61	7.48	6.77	6.46	6.46	6.13	5.77	79.57
934-00	1968	4.49	5.11	6.52	6.46	6.50	7.00	6.72	6.86	6.07	5.28	4.63	4.49	77.45
934-00	1969	4.72	5.19	5.69	5.08	7.16	6.70	7.96	7.77	7.26	6.36	5.91	4.41	77.45
934-00	1970	4.10	5.08	5.59	6.84	7.43	7.41	7.83	7.91	7.26	6.07	4.91	4.74	72.08
934-00	1971	5.84	5.91	7.73	6.74	6.65	6.51	6.09	7.07	6.46	5.68	4.96	4.78	71.49
934-00	1972	4.09	5.91	6.84	6.74	6.65	6.51	6.14	7.02	6.32	5.25	4.96	4.33	86.88
934-00	1973	4.09	5.91	6.84	6.74	6.65	6.51	6.14	7.02	6.32	5.25	4.96	4.33	86.88
934-00	1974	4.79	5.43	6.84	6.77	6.57	6.52	6.04	7.42	6.09	6.59	4.44	4.54	77.80
934-00	1975	4.37	5.62	6.18	7.33	7.33	7.40	7.76	7.42	6.64	6.14	4.76	4.54	74.84
934-00	1976	6.46	5.29	6.58	8.00	8.00	7.59	6.47	7.59	7.06	6.82	5.17	4.42	81.60
934-00	1977	6.23	5.46	6.42	6.35	6.35	6.38	6.47	6.30	6.67	6.52	5.19	4.42	74.66
934-00	1978	6.43	6.43	5.77	5.25	5.25	5.97	5.77	6.64	5.64	5.97	6.09	4.42	78.99
934-00	1980	6.43	6.43	5.77	5.25	5.25	5.97	5.77	6.64	5.64	5.97	6.09	4.42	78.99
934-00	1981	6.01	6.39	7.49	7.71	7.51	6.94	7.62	7.03	6.99	6.22	5.09	5.75	68.42
934-00	1982	6.01	6.39	7.49	7.71	7.51	6.94	7.62	7.03	6.99	6.22	5.09	5.75	68.42
934-00	1983	6.01	6.39	7.49	7.71	7.51	6.94	7.62	7.03	6.99	6.22	5.09	5.75	68.42
935-00	1963	6.01	6.44	7.49	7.71	8.25	7.37	9.07	8.06	8.22	7.42	6.74	5.20	80.77

APPENDIX TABLE B.1--Continued

STATE KEY NO.	YEAR	(in.)												
		JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	ANNUAL (in.)
935-00	1964	6.26	6.78	6.14	7.24	9.08	9.24	8.93	9.86	8.12	7.23	6.12	5.05	90.05
935-00	1965	5.46	5.78	7.43	7.14	10.16	8.45	8.72	9.11	8.12	6.08	5.52	4.89	88.45
935-00	1966	5.95	4.44	8.50	8.50	8.89	9.66	9.52	8.12	8.10	7.10	5.10	5.36	
935-00	1967	5.46	5.65	7.71	7.63	7.48	8.80	9.15	9.38	7.93	7.62	7.73		
935-00	1968	5.61	5.89											
935-00	1981		4.94		6.21	7.92	6.32	9.91	8.99	7.04	7.25	4.87		
935-00	1982	4.78	4.93	6.21	6.05	7.37		6.70	6.95	6.69			4.79	
935-10	1983				6.08	7.18	7.26	7.19	8.34	9.08	7.78	5.94	5.15	86.26
935-10	1984	5.67	5.99	7.16	9.08	7.18	8.12	8.13	8.80	6.78	6.36	6.60	5.17	86.81
935-10	1985	6.38	4.19	6.75	7.53	9.95	8.20	8.56	8.68	8.44	7.60	6.21	6.63	
935-10	1986	5.80	4.38	6.11	7.18	7.79	8.59	8.78	7.19	7.41	7.02	6.89		
935-10	1987		5.24		7.25									
935-10	1988													
936-00	1910	2.27	3.28	4.34	4.71	5.02	5.04	5.05	5.35	4.59	4.35	3.47	3.17	49.71
940-00	1960	5.16	5.65	7.11	6.31	7.01	8.40	8.13	7.10	7.75	6.89	6.64	4.28	81.79
940-00	1961	4.28	5.02	5.79	6.70	8.75	9.37	10.46	9.36	9.05	7.73	6.79	4.55	88.97
940-00	1962	5.70	5.75	7.07	8.75	9.53	9.46	10.36	9.11	8.10	7.23	5.67	5.25	85.20
940-00	1963	5.86	5.65	7.26	7.11	7.22	7.35	8.57	6.59	6.33	6.69	6.20	4.99	86.28
940-00	1964	5.14	4.45	5.85	8.19	7.24	7.89	9.02	8.80	7.22	6.37	6.45	4.51	81.67
940-00	1965	4.84	5.29	5.21	6.49	6.81	7.18	9.04	10.03	7.92	6.03	5.40	4.44	76.23
940-00	1966	4.51	4.64	5.61	5.94	7.95	9.98	9.07	9.89	7.51	6.77	4.57	4.35	79.81
940-00	1967	4.39	5.1	7.32	8.04	9.16	7.98	9.04	9.03	8.37	6.18	4.57	4.35	90.29
940-00	1969	4.75	5.36	5.50	6.44	7.92	7.91	8.40	8.03	6.93	6.75	5.64	4.36	79.09
940-00	1971	4.75	5.69	6.76	6.48	7.28	9.17	10.38	8.73	8.62	7.32	5.53	5.36	94.45
940-00	1972	5.05	5.71	8.04	7.51	8.45	9.17	9.38	10.22	7.91	7.94	6.77	5.53	89.72
940-00	1973	5.65	6.71	8.04	7.51	8.45	9.17	9.38	10.22	7.91	7.94	6.77	5.53	89.72
940-00	1974	6.08	6.08	8.00	7.85	8.38	8.69	10.30	11.07	8.83	8.69	7.16	7.18	92.66
940-00	1975	5.94	7.31	8.27	7.69	9.19	8.68	9.56	9.11	8.13	7.68	7.28	5.96	92.53
940-00	1976	5.22	5.63	8.53	7.06	8.19	8.68	9.40	9.32	8.46	7.34	6.58	5.44	92.92
940-00	1977	5.46	6.18	8.11	7.88	10.12	8.68	9.40	9.01	8.44	7.93	6.57	5.95	93.82
940-00	1978	5.98	6.26	7.67	7.59	7.66	7.91	10.91	10.38	9.44	7.93	6.57	6.25	93.82
940-00	1979	5.89	6.81	7.40	7.63	8.73	8.67	9.93	8.35	8.07	8.06	6.32	6.45	86.82
940-00	1980	5.93	6.17	7.93	7.60	8.73	10.36	9.11	9.90	9.27	7.79	6.66	5.20	94.82
940-00	1981	5.78	5.85	7.25	8.36	9.19	7.44	9.38	8.45	7.49	8.12	7.29	6.31	94.82
940-00	1982	5.78	6.19	8.85	8.16	9.19	7.44	8.68	8.45	7.49	8.12	7.29	6.31	94.82
941-00	1983	4.93	5.19	6.67	8.01	8.85	8.03	8.12	9.82	8.51	7.25	5.61	4.53	84.89
941-00	1961	4.93	5.13	6.14	6.45	7.93	7.85	8.87	9.49	7.79	6.47	5.61	5.70	80.80
941-00	1962	5.12	5.04	5.75	7.29	7.27	7.39	9.00	10.03	7.58	8.17	5.67	5.32	82.57
941-00	1963	5.81	5.19	6.77	7.39	6.22	6.64	8.00	8.20	7.65	8.55	6.40	3.46	76.37
941-00	1964	4.81	5.19	6.31	6.64	6.36	6.29	8.53	12.28	7.66	7.48	6.51	4.56	86.47
941-00	1965	6.10	4.49	5.93	7.69	5.93	7.66	8.88	8.25	7.33	6.08	4.53	5.22	77.58

APPENDIX TABLE B.1—Continued

STATE KEY NO.	YEAR	(in.)											ANNUAL (in.)	
		JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV		DEC
941-00	1967	4.68	5.26	5.12	6.25	6.59	7.91	8.62	8.76	8.49	7.49	6.80	4.18	80.15
941-00	1968	4.62	5.02	5.96	6.49	7.02	7.99	8.36	8.86	8.10	7.49	6.72	4.58	80.14
941-00	1969	4.22	5.54	7.64	7.45	7.56	9.01	9.37	11.01	3.84	6.85	5.00	3.63	82.92
941-00	1970	4.07	4.97	6.08	7.14	7.84	9.53	10.26	10.16	8.33	8.08	7.14	6.06	90.56
941-00	1971	4.87	5.89	6.31	7.15	7.87	9.91	10.94	10.79	8.39	8.81	7.97	5.74	82.16
941-00	1972	4.23	6.17	7.85	7.23	8.31	9.66	10.52	10.91	7.60	6.01	5.55	5.53	89.28
941-00	1973	5.09	6.75	7.33	7.45	7.87	8.44	8.31	8.91	9.97	7.08	6.74	6.07	97.46
941-00	1974	6.16	7.00	7.88	8.40	8.55	9.37	10.31	10.37	9.08	7.01	6.98	6.10	97.46
941-00	1975	6.23	7.35	8.81	9.44	9.10	10.52	11.76	11.74	10.78	7.19	6.78	5.72	94.75
941-00	1976	5.25	6.34	8.81	8.77	9.18	10.81	11.50	11.43	10.88	7.91	6.91	6.29	90.43
941-00	1977	5.65	6.33	8.38	8.77	8.61	10.61	11.90	11.55	10.56	7.62	6.71	6.98	90.58
941-00	1978	6.69	4.84	7.34	8.22	8.21	10.70	11.15	10.38	10.10	8.27	7.46	6.64	96.98
941-00	1979	5.92	6.10	7.78	8.22	8.06	9.54	10.66	10.91	9.39	7.16	6.30	5.16	86.30
941-00	1980	5.74	6.05	7.45	7.98	8.73	9.79	9.88	9.44	7.85	9.03	6.86	6.54	86.30
941-00	1981	5.70	5.24	7.65	7.05	8.19	7.07	9.85	8.41	8.05	9.03	6.86	6.54	86.30
941-00	1982	5.93	5.93	7.65	8.28	9.26	7.07	9.85	8.41	8.05	9.03	6.86	6.54	86.30
943-00	1983	3.09	3.09	3.71	4.74	6.21	5.73	4.2	5.8	4.5	3.8	0.95	2.03	53.33
943-00	1910	1.89	6.40	6.40	7.78	9.31	6.24	6.66	5.38	4.57	3.86	3.51	3.31	53.33
943-20	1961	5.06	6.40	6.40	7.78	9.31	6.24	6.66	5.38	4.57	3.86	3.51	3.31	53.33
944-00	1960	4.40	5.04	5.10	6.79	7.72	6.72	7.43	6.22	5.54	6.05	5.11	4.76	76.19
944-00	1961	3.57	5.85	5.85	5.02	6.98	7.32	6.62	6.63	6.70	4.4	4.23	3.55	68.37
944-00	1962	3.36	3.92	4.91	5.84	7.02	6.56	6.07	6.39	7.06	4.97	4.36	3.93	69.97
944-00	1963	4.15	4.98	5.12	6.47	7.42	6.77	6.62	6.39	7.06	4.93	4.36	4.35	69.97
944-00	1964	4.68	4.58	5.36	6.75	7.37	8.12	7.80	7.07	6.92	5.64	4.96	4.38	67.28
944-00	1965	4.07	4.48	6.22	6.75	8.37	7.80	7.96	7.23	7.26	6.18	4.96	3.71	71.49
944-00	1966	3.99	4.78	6.88	7.84	9.13	8.12	7.96	7.41	7.20	8.08	5.05	3.49	71.49
944-00	1967	4.68	4.48	6.22	6.75	8.37	7.80	7.96	7.23	7.26	6.18	4.96	3.71	71.49
944-00	1968	3.64	4.40	6.44	7.06	8.77	8.12	8.52	8.02	7.37	6.96	5.32	4.38	72.33
944-00	1969	4.64	5.28	6.64	7.59	8.77	8.64	8.89	8.23	6.81	5.27	4.58	4.13	78.60
944-00	1970	3.07	5.03	7.19	7.59	8.77	8.12	8.52	8.02	7.37	6.96	5.32	4.38	72.33
944-00	1971	4.64	5.48	6.54	7.06	8.77	8.12	8.52	8.02	7.37	6.96	5.32	4.38	72.33
944-00	1972	4.64	5.48	6.54	7.06	8.77	8.12	8.52	8.02	7.37	6.96	5.32	4.38	72.33
944-00	1973	4.64	5.48	6.54	7.06	8.77	8.12	8.52	8.02	7.37	6.96	5.32	4.38	72.33
944-00	1974	4.64	5.48	6.54	7.06	8.77	8.12	8.52	8.02	7.37	6.96	5.32	4.38	72.33
944-00	1975	5.30	5.87	7.06	7.70	9.04	8.19	8.67	8.07	6.46	5.87	4.98	4.69	72.84
944-00	1976	5.84	5.04	6.78	7.44	8.61	7.45	7.90	7.75	5.56	5.15	4.25	3.27	76.75
944-00	1977	5.84	5.04	6.78	7.44	8.61	7.45	7.90	7.75	5.56	5.15	4.25	3.27	76.75
944-00	1978	5.84	5.04	6.78	7.44	8.61	7.45	7.90	7.75	5.56	5.15	4.25	3.27	76.75
944-00	1979	5.84	5.04	6.78	7.44	8.61	7.45	7.90	7.75	5.56	5.15	4.25	3.27	76.75
944-00	1980	5.84	5.04	6.78	7.44	8.61	7.45	7.90	7.75	5.56	5.15	4.25	3.27	76.75
944-00	1981	5.84	5.04	6.78	7.44	8.61	7.45	7.90	7.75	5.56	5.15	4.25	3.27	76.75
944-00	1982	5.84	5.04	6.78	7.44	8.61	7.45	7.90	7.75	5.56	5.15	4.25	3.27	76.75
944-00	1983	5.84	5.04	6.78	7.44	8.61	7.45	7.90	7.75	5.56	5.15	4.25	3.27	76.75
945-00	1962	5.80	6.19	7.32	8.47	9.53	8.66	7.32	6.25	8.09	7.66	7.57	6.44	76.97
945-00	1963	5.80	6.19	7.32	8.47	9.53	8.66	7.32	6.25	8.09	7.66	7.57	6.44	76.97
945-00	1964	5.80	6.19	7.32	8.47	9.53	8.66	7.32	6.25	8.09	7.66	7.57	6.44	76.97
945-00	1965	5.80	6.19	7.32	8.47	9.53	8.66	7.32	6.25	8.09	7.66	7.57	6.44	76.97
945-00	1966	5.80	6.19	7.32	8.47	9.53	8.66	7.32	6.25	8.09	7.66	7.57	6.44	76.97

APPENDIX TABLE B.1--Continued

STATE KEY NO.	YEAR	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	ANNUAL (in.)
945-00	1963	6.26	5.75	5.49	6.77	6.23	6.84	7.50	7.52	7.58	6.63	5.61	4.80	76.98
945-00	1964	4.81	5.35	4.89	5.93	8.43	7.57	8.09	9.18	8.70	6.76	5.33	4.36	74.62
945-00	1965	5.02	5.64	7.48	6.09	7.84	6.97	6.97	6.57	6.48	7.22	3.69	3.59	74.62
945-00	1966	4.93	3.57	5.42	6.28	8.88	7.56	7.39	7.77	6.98	7.92	5.96	4.96	78.11
945-00	1967	4.37	4.70	4.80	5.59	5.88	6.28	7.48	9.05	8.04	7.96	7.30	4.98	78.11
945-00	1980	5.80	6.26	6.76	6.07	6.50	7.48	7.85	9.15	8.87	6.54	5.55	5.77	87.14
945-00	1981	5.80	6.47	6.88	7.05	8.07	6.18	6.45	9.05	9.36	7.29	6.37	4.84	87.14
945-00	1983	4.65	1.61	5.21	6.43	8.06	10.15	10.15	10.11	8.11	6.89	6.32	4.42	87.14
962-00	1964	6.04	5.42	7.11	7.05	9.47	8.79	8.44	8.48	9.57	7.89	6.35	6.08	87.14
962-00	1965	5.37	4.92	6.10	7.05	9.37	8.48	8.79	8.48	7.57	7.40	6.35	5.08	87.14
962-00	1966	5.02	5.86	6.88	8.64	9.80	8.70	8.70	9.25	8.21	7.63	6.82	6.08	87.14
962-00	1967	5.08	5.52	8.32	9.73	10.11	10.48	9.44	10.65	8.67	7.14	5.53	4.78	98.34
962-00	1969	5.20	6.09	6.97	6.23	9.30	8.53	10.83	9.86	8.80	7.46	5.18	5.75	94.29
962-00	1971	5.12	6.61	7.53	8.36	9.10	10.18	9.06	9.29	7.58	9.64	6.23	4.84	90.35
962-00	1972	5.25	5.19	7.35	8.20	8.45	10.18	10.18	9.74	8.91	7.37	5.89	5.25	90.35
962-00	1973	5.27	6.28	7.95	7.14	9.62	10.09	10.51	10.46	9.44	8.82	6.94	6.36	90.04
962-00	1974	4.90	5.15	8.00	8.46	8.98	9.38	8.02	9.46	7.44	5.84	4.13	5.14	97.26
965-00	1969	3.94	4.72	6.38	6.51	9.13	8.51	9.64	10.56	8.15	6.74	4.55	5.60	90.47
965-10	1971	5.37	5.65	7.54	7.64	7.89	8.39	8.72	8.50	7.51	7.40	5.85	4.60	84.24
965-10	1972	4.47	5.43	7.04	8.50	8.91	9.88	9.13	8.98	7.09	6.78	5.37	4.68	81.61
965-10	1973	4.41	5.15	7.88	8.16	7.78	9.23	8.27	8.81	8.04	6.43	5.14	4.31	89.61
965-10	1974	4.09	6.48	6.10	5.99	9.06	10.55	9.25	12.09	7.76	7.53	5.32	4.46	79.06
966-00	1961	4.75	3.98	5.06	7.09	7.72	10.19	10.56	12.09	7.55	7.00	5.32	4.99	88.33
966-00	1962	5.61	4.52	6.02	6.54	6.88	8.73	9.18	9.75	8.12	6.16	5.50	4.56	88.33
966-00	1963	5.37	4.27	6.26	6.85	8.33	7.92	10.59	9.75	7.81	6.85	5.23	4.65	88.33
966-00	1964	4.96	4.44	5.06	6.85	8.33	8.77	9.77	9.02	7.24	6.70	4.68	4.55	88.33
966-00	1965	4.96	4.44	5.06	6.85	8.33	8.77	9.77	9.02	7.24	6.70	4.68	4.55	88.33
966-00	1966	4.96	4.44	5.06	6.85	8.33	8.77	9.77	9.02	7.24	6.70	4.68	4.55	88.33
966-00	1967	4.96	4.44	5.06	6.85	8.33	8.77	9.77	9.02	7.24	6.70	4.68	4.55	88.33
966-00	1968	4.96	4.44	5.06	6.85	8.33	8.77	9.77	9.02	7.24	6.70	4.68	4.55	88.33
966-00	1969	4.96	4.44	5.06	6.85	8.33	8.77	9.77	9.02	7.24	6.70	4.68	4.55	88.33
966-00	1970	5.26	5.07	7.91	8.28	8.19	10.39	8.94	8.19	7.76	8.46	5.56	4.63	83.25
966-00	1971	3.58	4.13	5.64	6.28	6.20	8.66	8.77	8.83	9.72	7.59	5.45	4.47	87.97
966-00	1972	4.28	5.38	5.86	7.70	8.42	8.69	11.33	10.15	9.13	9.81	4.27	5.85	77.31
966-00	1973	4.21	4.37	5.58	7.11	8.42	7.53	8.13	7.78	6.46	6.45	5.47	3.26	88.41
966-00	1974	4.35	4.30	6.58	7.14	7.94	10.94	10.81	9.52	6.39	7.59	6.19	4.06	76.41
966-00	1975	4.96	4.81	6.12	5.89	8.55	9.75	11.43	12.12	9.73	8.09	5.57	4.33	91.27
981-00	1963	5.00	1.70	5.67	5.89	7.28	9.73	11.86	12.26	7.11	5.28	5.32	4.99	91.27

APPENDIX TABLE B.1--Continued

STATE KEY NO.	YEAR	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	ANNUAL (in.)
981-00	1964	4.31	4.02	8.67	5.68	6.81	7.46	9.15	10.15	8.20	7.41	4.68	4.73	81.23
981-00	1965	5.21	4.61	6.22	6.68	6.06	8.57	7.91	8.26	7.25	5.49	4.56	4.59	75.40
981-00	1966	4.21	3.48	5.54	6.00	7.75	7.80	8.68	8.99	7.50	6.82	4.80	4.34	77.42
981-00	1967	4.65	4.20	5.89	6.46	8.15	9.56	8.01	9.76	8.52	5.65	6.36	4.34	85.56
981-00	1968	5.03	4.82	5.97	8.46	8.79	9.89	8.14	9.62	8.19	5.94	6.88	5.92	72.76
981-00	1969	5.00	4.82	7.29	7.20	7.68	7.82	8.68	8.44	7.99	7.51	5.84	5.97	72.36
981-00	1970	3.24	4.20	3.91	5.36	7.32	7.74	8.37	8.22	6.32	8.99	5.44	4.12	74.25
981-00	1971	3.51	4.26	5.37	6.13	7.86	8.82	8.33	8.28	7.93	6.18	5.72	3.64	74.25
981-00	1972	4.44	4.67	5.74	6.22	6.39	6.48	7.37	8.22	7.93	7.92	5.05	3.12	78.66
981-00	1973	4.00	4.22	6.95	6.86	5.99	6.40	8.50	8.72	7.99	7.79	5.62	3.95	87.13
981-00	1974	4.34	5.17	6.22	5.99	8.07	8.84	11.43	12.12	9.59	6.21	4.67	4.98	87.13
982-00	1965	5.97	4.77	5.91	6.83	5.65	8.97	8.56	9.26	7.11	6.21	5.67	4.98	87.13
982-00	1966	5.97	4.77	5.91	6.83	5.65	8.97	8.56	9.26	7.11	6.21	5.67	4.98	87.13
982-00	1967	5.03	4.82	5.97	8.46	8.15	9.22	8.27	9.01	8.52	6.77	6.19	4.95	86.85
982-00	1968	5.54	5.84	8.20	8.15	5.90	7.12	7.07	10.13	7.76	6.63	6.36	4.95	86.85
982-00	1969	3.72	4.48	5.12	5.50	7.42	8.56	9.38	8.79	7.28	6.73	6.41	5.40	76.69
982-00	1970	4.36	4.71	5.29	6.54	6.96	7.93	8.56	8.33	7.33	6.88	5.41	5.04	73.69
982-00	1971	3.59	4.49	6.05	6.40	6.77	6.52	8.53	8.31	7.26	6.67	5.59	4.65	72.97
982-00	1972	3.88	4.22	6.00	6.45	6.10	7.01	8.96	8.53	6.20	7.55	4.78	3.89	72.97
982-00	1973	4.81	5.03	6.44	7.42	8.07	8.69	8.09	8.49	8.04	7.10	4.97	4.97	78.69
986-10	1961	3.87	4.20	5.64	7.53	6.92	9.54	8.06	7.87	6.74	5.82	5.31	4.59	78.00
986-10	1962	6.39	6.17	6.20	6.57	7.69	7.55	8.86	8.72	8.33	6.16	5.52	4.37	75.87
986-10	1963	5.15	5.30	6.80	6.96	7.79	7.55	8.86	8.52	8.09	6.94	5.55	4.65	83.49
986-10	1964	4.99	4.94	6.58	7.22	9.21	9.18	8.47	8.59	7.09	7.00	5.16	4.56	76.15
986-10	1965	4.09	4.40	6.71	7.47	7.83	9.18	8.72	8.77	5.99	6.29	3.18	4.56	79.09
986-10	1966	4.09	4.40	6.71	7.47	7.83	9.18	8.72	8.77	5.99	6.29	3.18	4.56	79.09
986-10	1967	4.09	4.40	6.71	7.47	7.83	9.18	8.72	8.77	5.99	6.29	3.18	4.56	79.09
986-10	1968	4.09	4.40	6.71	7.47	7.83	9.18	8.72	8.77	5.99	6.29	3.18	4.56	79.09
986-10	1969	4.09	4.40	6.71	7.47	7.83	9.18	8.72	8.77	5.99	6.29	3.18	4.56	79.09
986-10	1970	4.09	4.40	6.71	7.47	7.83	9.18	8.72	8.77	5.99	6.29	3.18	4.56	79.09
986-10	1971	4.09	4.40	6.71	7.47	7.83	9.18	8.72	8.77	5.99	6.29	3.18	4.56	79.09
986-10	1972	4.09	4.40	6.71	7.47	7.83	9.18	8.72	8.77	5.99	6.29	3.18	4.56	79.09
986-10	1973	4.09	4.40	6.71	7.47	7.83	9.18	8.72	8.77	5.99	6.29	3.18	4.56	79.09
986-10	1974	4.09	4.40	6.71	7.47	7.83	9.18	8.72	8.77	5.99	6.29	3.18	4.56	79.09
986-10	1975	4.09	4.40	6.71	7.47	7.83	9.18	8.72	8.77	5.99	6.29	3.18	4.56	79.09
986-10	1976	4.09	4.40	6.71	7.47	7.83	9.18	8.72	8.77	5.99	6.29	3.18	4.56	79.09
986-10	1977	4.09	4.40	6.71	7.47	7.83	9.18	8.72	8.77	5.99	6.29	3.18	4.56	79.09
986-10	1978	4.09	4.40	6.71	7.47	7.83	9.18	8.72	8.77	5.99	6.29	3.18	4.56	79.09
986-10	1979	4.09	4.40	6.71	7.47	7.83	9.18	8.72	8.77	5.99	6.29	3.18	4.56	79.09
986-10	1980	4.09	4.40	6.71	7.47	7.83	9.18	8.72	8.77	5.99	6.29	3.18	4.56	79.09
986-10	1981	4.09	4.40	6.71	7.47	7.83	9.18	8.72	8.77	5.99	6.29	3.18	4.56	79.09
986-10	1982	4.09	4.40	6.71	7.47	7.83	9.18	8.72	8.77	5.99	6.29	3.18	4.56	79.09

APPENDIX TABLE B.1—Continued

STATE KEY NO.	YEAR	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	ANNUAL (in.)
986-10	1983	5.17	5.74	7.24	7.02	8.03	5.80	5.44	6.03	6.03	5.03	4.23	4.22	60.31
993-00	1961	3.91	3.67	6.39	5.31	4.89	5.62	5.80	6.84	6.37	5.81	4.90	4.26	62.27
993-00	1962	6.01	5.40	6.29	3.93	6.54	6.18	7.09	5.26	5.38	5.39	4.65	3.93	65.31
993-00	1963	4.96	4.44	5.98	4.23	3.91	5.97	6.58	6.85	5.14	5.26	4.65	4.78	65.41
993-00	1964	3.97	3.88	4.99	6.23	6.33	7.79	6.39	6.52	6.05	5.80	3.81	4.04	66.64
993-00	1965	4.05	4.74	5.07	5.86	6.43	7.89	7.54	7.80	5.19	5.42	4.33	3.48	67.64
993-00	1966	3.43	3.43	6.51	5.91	5.43	6.05	6.71	7.26	5.54	5.75	4.80	4.12	67.58
993-00	1970	3.72	4.45	6.98	6.39	6.93	7.08	7.20	7.40	6.34	4.70	4.80	4.92	63.78
993-00	1971	2.71	3.95	5.17	4.81	5.93	6.29	6.35	7.63	4.59	5.77	3.93	3.48	63.77
993-00	1972	4.38	5.18	5.20	5.93	6.58	6.68	7.92	6.53	5.50	6.59	4.63	4.77	65.60
993-00	1973	4.86	5.14	4.73	6.44	7.35	5.57	8.02	6.07	6.73	6.51	5.42	4.60	73.67
993-00	1974	5.14	5.36	5.71	4.35	7.00	8.21	6.79	7.73	7.72	6.62	4.66	4.18	73.43
993-00	1976	3.81	4.67	6.24	7.13	6.70	7.66	7.33	8.69	7.72	6.62	6.74	5.38	76.43
993-00	1977	4.46	5.73	6.99	6.06	7.00	7.66	7.63	7.38	7.03	6.14	5.20	4.07	73.07
993-00	1978	5.10	6.27	6.27	8.40	7.79	7.71	8.44	6.53	6.47	6.80	5.16	6.81	73.81
993-00	1979	5.28	6.36	6.78	5.40	7.07	8.94	8.44	8.01	7.77	6.19	5.10	4.19	73.19
993-00	1980	5.19	5.32	6.54	6.87	8.00	8.55	8.80	7.46	5.36	5.77	5.10	4.19	73.19
993-00	1981	4.70	4.44	6.39	6.03	7.10	8.29	8.80	6.99	7.36	6.48	5.10	4.19	73.19
993-00	1982	4.70	5.22	6.39	6.61	7.50	8.29	8.80	6.99	7.36	6.48	5.10	4.19	73.19
994-00	1976	6.00	3.62	5.19	5.37	6.10	5.61	6.69	7.33	6.37	4.93	5.27	3.93	93.93
994-00	1977	4.10	4.88	5.95	5.57	6.48	5.93	6.95	5.56	5.89	4.78	4.73	3.91	91.91
994-00	1978	4.65	4.99	5.31	6.15	6.48	6.09	5.95	6.48	6.77	5.00	4.12	4.03	93.03
994-00	1979	4.45	4.99	4.88	4.75	5.05	6.09	6.71	6.79	6.77	5.00	4.69	4.16	93.16
994-00	1980	4.45	4.42	4.78	4.73	5.55	6.90	5.47	6.10	5.54	4.90	4.69	4.16	93.16
994-00	1981	3.85	3.93	6.01	5.23	6.02	6.90	6.90	6.13	5.85	4.45	4.69	4.16	93.16
994-00	1982	3.85	3.36	6.01	5.56	6.44	6.26	6.90	6.13	5.85	4.45	4.69	4.16	93.16
994-00	1983	3.85	3.36	6.01	5.56	6.44	6.26	6.90	6.13	5.85	4.45	4.69	4.16	93.16
1004-00	1961	3.01	3.52	4.50	5.26	5.71	6.17	6.69	6.67	6.10	4.54	4.23	3.32	59.04
1004-00	1962	4.71	3.70	3.88	4.44	5.50	5.49	6.09	5.67	5.81	4.85	4.25	3.62	57.60
1004-00	1963	3.65	4.28	3.88	4.98	5.21	5.71	7.27	5.67	5.81	4.85	4.17	3.62	57.60
1004-00	1964	3.05	4.73	5.15	4.86	6.81	6.35	5.69	4.91	5.07	5.27	4.48	3.29	58.45
1004-00	1965	3.23	4.41	5.12	5.27	5.96	6.55	8.01	4.98	4.89	4.06	3.48	3.29	57.02
1004-00	1966	3.26	4.58	5.21	4.79	5.86	6.08	6.38	5.28	4.35	4.50	3.84	3.29	60.81
1004-00	1967	3.46	3.58	3.81	4.25	4.12	7.48	6.25	5.64	5.20	4.82	4.84	3.10	57.78
1004-00	1968	3.69	4.57	5.59	5.76	6.48	7.48	7.25	6.35	4.15	4.56	3.78	2.85	55.91
1004-00	1969	3.65	4.57	5.59	5.76	6.48	7.48	7.25	6.35	4.15	4.56	3.78	2.85	55.91
1004-00	1970	3.65	4.57	5.59	5.76	6.48	7.48	7.25	6.35	4.15	4.56	3.78	2.85	55.91
1004-00	1971	3.65	4.57	5.59	5.76	6.48	7.48	7.25	6.35	4.15	4.56	3.78	2.85	55.91
1004-00	1972	3.65	4.57	5.59	5.76	6.48	7.48	7.25	6.35	4.15	4.56	3.78	2.85	55.91
1004-00	1973	3.65	4.57	5.59	5.76	6.48	7.48	7.25	6.35	4.15	4.56	3.78	2.85	55.91
1004-00	1974	3.65	4.57	5.59	5.76	6.48	7.48	7.25	6.35	4.15	4.56	3.78	2.85	55.91

APPENDIX TABLE B.1--Continued

STATE KEY NO.	YEAR	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	ANNUAL (in.)
1004-00	1975	3.50	3.73	4.19	4.82	5.28	6.49	6.16	5.79	5.45	3.88	3.81	3.07	50.06
1004-00	1976	3.04	3.60	4.58	4.80	5.11	6.50	5.76	5.01	4.82	3.40	3.81	3.21	49.98
1004-00	1977	3.05	3.25	3.59	4.45	5.97	5.49	5.63	5.63	4.77	4.32	3.19	3.14	49.98
1004-00	1978	3.47	3.82	4.31	5.14	5.97	5.89	4.17	4.69	4.34	4.34	3.06	3.31	49.98
1004-00	1979	3.34	4.25	4.69	5.61	5.44	5.89	4.70	5.70	5.35	4.15	3.79	3.55	49.98
1004-00	1980	3.16	4.42	3.69	3.98	4.41	5.58	4.35	4.62	4.28	4.85	3.79	3.37	49.98
1004-00	1981	4.13	4.87	5.18	5.07	5.95	4.26	5.35	4.53	5.28	4.85	3.79	4.37	49.98
1004-00	1982	4.13	4.87	5.18	5.07	5.95	4.26	5.35	4.53	5.28	4.85	3.79	4.37	49.98
1005-00	1962	4.87	5.13	4.95	7.53	4.54	6.07	6.43	6.70	7.09	5.92	5.04	5.21	69.75
1005-00	1963	6.23	6.14	6.02	5.85	6.17	6.09	6.30	6.97	5.33	5.16	5.59	4.46	72.49
1005-00	1964	5.98	5.91	6.76	6.53	6.57	6.32	6.47	6.53	5.71	6.70	5.60	4.46	72.03
1005-00	1965	5.88	5.70	6.96	6.26	5.52	6.08	6.88	6.57	5.73	5.48	4.14	4.37	62.74
1005-00	1966	3.99	4.93	5.18	6.02	4.44	6.48	5.25	5.16	5.20	5.55	3.57	4.46	62.74
1005-00	1967	4.29	4.77	5.50	6.31	4.93	6.81	5.90	5.33	5.40	5.37	4.96	4.99	60.03
1005-00	1968	4.79	4.77	5.50	6.31	4.93	6.81	5.90	5.33	5.40	5.37	4.96	4.99	58.44
1005-00	1969	4.06	4.65	5.07	5.17	4.44	5.57	4.20	4.99	5.23	4.39	3.67	2.71	61.87
1005-00	1970	3.37	4.37	4.83	5.62	4.10	5.42	4.99	6.12	6.36	5.31	4.35	4.68	58.88
1005-00	1971	3.81	4.27	4.83	5.62	4.10	5.42	4.99	6.12	6.36	5.31	4.35	4.68	58.88
1005-00	1972	3.15	4.16	4.76	5.56	4.04	5.30	5.77	6.05	6.44	5.42	4.55	3.82	62.60
1005-00	1973	4.15	4.65	5.76	6.56	5.04	5.42	6.58	6.89	6.77	6.09	4.82	4.55	62.60
1005-00	1974	6.07	4.65	7.6	8.77	6.82	5.54	8.58	7.26	6.77	6.55	4.82	4.55	62.60
1005-00	1975	5.04	4.91	7.6	8.77	6.82	5.54	8.58	7.26	6.77	6.55	4.82	4.55	62.60
1005-00	1976	5.04	4.91	7.6	8.77	6.82	5.54	8.58	7.26	6.77	6.55	4.82	4.55	62.60
1005-00	1977	5.57	4.60	7.20	8.09	6.14	5.85	7.35	7.95	7.47	5.78	4.52	4.88	71.64
1005-00	1978	4.57	4.44	7.25	8.23	6.57	5.90	6.32	7.92	7.53	6.57	4.82	4.88	70.51
1005-00	1979	5.48	4.88	6.65	7.49	6.49	6.11	6.25	7.11	6.09	6.26	4.70	4.88	71.73
1005-00	1980	5.69	5.22	6.65	7.49	6.49	6.11	6.25	7.11	6.09	6.26	4.70	4.88	71.73
1005-00	1981	5.20	5.64	6.65	7.49	6.49	6.11	6.25	7.11	6.09	6.26	4.70	4.88	71.73
1005-00	1982	5.22	5.67	6.83	7.03	7.46	5.81	5.59	6.71	7.25	6.47	5.98	4.88	71.73
1005-00	1983	5.22	5.67	6.83	7.03	7.46	5.81	5.59	6.71	7.25	6.47	5.98	4.88	71.73
1006-00	1961	2.36	2.90	3.69	4.74	5.38	5.63	6.30	6.84	5.32	4.85	3.35	3.27	52.11
1006-00	1962	4.74	3.78	4.99	4.26	5.01	5.81	6.29	5.68	5.18	4.05	3.38	3.36	53.99
1006-00	1963	3.63	3.69	4.46	5.01	4.68	5.44	5.48	5.53	4.54	4.54	3.62	2.81	56.07
1006-00	1964	3.16	3.62	4.46	5.01	4.68	5.44	5.48	5.53	4.54	4.54	3.62	2.81	56.07
1006-00	1965	3.16	3.62	4.46	5.01	4.68	5.44	5.48	5.53	4.54	4.54	3.62	2.81	56.07
1006-00	1966	3.19	3.43	4.83	4.44	5.14	5.54	5.91	5.21	4.44	4.33	3.73	3.22	54.29
1006-00	1967	3.82	3.43	4.83	4.44	5.14	5.54	5.91	5.21	4.44	4.33	3.73	3.22	54.29
1006-00	1968	3.82	3.43	4.83	4.44	5.14	5.54	5.91	5.21	4.44	4.33	3.73	3.22	54.29
1006-00	1969	3.82	3.43	4.83	4.44	5.14	5.54	5.91	5.21	4.44	4.33	3.73	3.22	54.29
1006-00	1970	3.82	3.43	4.83	4.44	5.14	5.54	5.91	5.21	4.44	4.33	3.73	3.22	54.29
1006-00	1971	3.72	3.83	4.71	4.62	5.18	5.52	6.17	5.98	4.54	4.33	3.94	3.22	52.76
1006-00	1972	3.76	3.39	4.82	4.62	5.18	5.52	6.17	5.98	4.54	4.33	3.94	3.22	52.76
1006-00	1973	3.70	3.69	4.04	4.86	5.08	5.94	6.65	6.32	5.58	4.44	4.24	3.22	52.00
1006-00	1974	3.70	3.69	4.04	4.86	5.08	5.94	6.65	6.32	5.58	4.44	4.24	3.22	52.00

APPENDIX TABLE B.1—Continued

STATE KEY NO.	YEAR	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	ANNUAL (in.)
1006-00	1975	3-08	3-32	4-43	5-20	5-82	6-80	6-83	6-59	5-91	5-25	3-94	3-15	60-32
1006-00	1976	3-55	4-23	4-91	4-81	5-94	5-93	6-89	6-89	5-57	4-74	5-04	4-35	62-85
1006-00	1977	4-39	3-47	4-90	5-06	5-69	5-57	6-85	6-20	6-15	.	.	.	.
1006-00	1978	.	.	.	.	.	.	.	.	.	.	.	.	.
1006-00	1979	.	4-83	4-78	6-23	6-57	6-57	5-98	7-24	5-46	5-01	2-44	4-08	.
1006-00	1980	4-00	4-37	4-02	5-51	6-40	6-40	6-88	5-99	5-77	4-75	4-50	5-30	.
1006-00	1981	4-98	4-37	5-26	5-17	6-40	6-40	6-16	6-47	6-68	6-64	5-32	4-64	.
1006-00	1982	5-09	.	5-98	6-91	7-29	7-29	.	.	.	.	.	.	.
1011-00	1960	4-10	4-53	5-13	4-71	7-10	7-10	7-16	7-18	5-90	6-87	4-91	3-59	68-35
1011-00	1961	3-81	4-18	4-19	5-57	5-67	5-67	6-79	6-23	6-08	5-00	4-36	4-06	64-11
1011-00	1962	4-77	4-43	4-19	5-86	5-98	5-98	6-50	6-29	5-68	5-63	4-41	5-95	61-31
1011-00	1963	3-47	4-91	5-15	5-35	6-89	6-89	6-50	7-02	5-63	4-44	4-17	3-69	60-03
1011-00	1964	4-87	5-22	4-91	5-40	6-85	6-85	6-50	7-07	5-28	4-50	4-26	3-60	63-31
1011-00	1965	4-00	3-21	4-80	5-29	6-05	6-05	6-01	6-19	5-25	5-30	4-36	3-76	59-82
1011-00	1966	3-12	2-66	4-03	5-42	6-15	6-15	6-01	6-49	6-27	5-01	4-64	3-89	58-60
1011-00	1967	3-40	2-49	3-90	5-20	6-33	6-33	6-05	6-49	6-74	4-93	4-64	3-22	58-49
1011-00	1968	4-23	4-38	5-39	5-70	6-45	6-45	6-05	6-55	5-13	4-22	3-78	2-82	.
1011-00	1969	3-03	4-38	5-39	5-02	6-68	6-68	7-03	6-44	5-58	4-35	4-87	4-79	63-09
1011-00	1970	4-00	3-89	4-81	5-53	7-00	7-00	6-03	6-91	5-24	5-41	4-73	3-75	61-88
1011-00	1971	3-60	4-30	4-67	5-01	6-74	6-74	6-32	6-98	5-14	4-54	4-62	3-96	63-10
1011-00	1972	3-89	4-59	5-13	5-59	6-31	6-31	7-37	6-89	6-89	5-44	4-92	3-96	.
1011-00	1973	3-71	3-89	5-28	6-57	6-14	6-14	6-87	6-82	5-89	5-13	4-92	4-47	59-44
1011-00	1974	3-00	3-73	4-10	5-78	6-52	6-52	5-85	6-62	5-85	4-62	4-02	3-86	.
1011-00	1975	4-69	4-03	5-92	6-71	6-91	6-91	7-85	7-54	6-86	5-22	4-34	3-68	63-74
1011-00	1976	.	.	.	5-15	6-76	6-76	6-20	5-86	5-61	.	.	.	.
1011-00	1977	.	.	.	.	.	.	.	.	.	.	.	.	.
1011-00	1978	.	.	.	.	.	.	.	.	.	.	.	.	.
1011-00	1979	.	.	.	.	.	.	.	.	.	.	.	.	.
1011-00	1980	5-10	4-30	5-65	6-66	7-03	7-03	7-09	7-43	5-09	5-31	2-64	5-11	57-91
1011-00	1981	2-72	4-82	4-52	4-56	6-05	6-05	6-09	5-41	4-68	3-97	3-24	3-36	.
1011-00	1982	5-35	3-33	5-87	6-81	7-19	7-19	8-12	6-25	6-11	5-32	4-75	4-14	.
1011-00	1983	.	.	.	.	.	.	.	.	.	.	.	.	.
1013-20	1968	4-23	3-20	4-44	6-22	6-27	6-27	6-95	7-46	6-46	5-18	4-11	4-91	65-06
1013-20	1969	4-54	4-76	5-81	6-21	6-42	6-42	7-99	7-03	6-39	6-24	5-35	4-40	70-41
1013-20	1970	4-73	4-64	5-95	6-46	7-68	7-68	7-96	8-16	6-89	6-24	5-09	4-36	74-37
1013-20	1971	4-51	4-95	5-53	6-20	5-88	5-88	7-42	7-75	6-50	6-07	5-80	4-21	71-01
1013-20	1972	4-25	5-99	6-74	6-90	7-59	7-59	8-61	8-33	7-25	6-58	4-77	4-47	81-05
1013-20	1973	4-24	5-10	7-25	7-09	8-39	8-39	7-01	7-50	5-91	5-98	4-24	5-35	75-40
1013-20	1974	4-51	5-16	6-41	7-84	8-39	8-39	8-79	8-89	1-43	6-91	5-24	4-36	75-40
1014-00	1971	4-51	4-96	5-53	6-18	7-60	7-60	7-96	8-16	6-89	6-24	5-46	4-36	70-99
1014-00	1972	5-25	5-99	6-74	6-90	7-88	7-88	8-42	8-74	7-25	6-07	5-80	4-21	81-06
1014-00	1973	4-20	5-10	7-25	7-09	8-39	8-39	7-01	7-50	5-91	5-98	4-24	5-35	75-40
1014-00	1974	4-20	5-16	6-41	7-84	8-39	8-39	8-79	8-89	1-43	6-91	5-24	4-36	70-99
1014-00	1975	4-20	5-16	6-41	7-84	8-39	8-39	8-79	8-89	1-43	6-91	5-24	4-36	70-99

APPENDIX TABLE B.1--Continued

STATE KEY NO.	YEAR	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	ANNUAL (in.)
1020-10	1967	5.77	5.88	5.60	8.07	8.42	9.95	10.41	10.30	9.79	9.01	7.89	5.56	96.65
1020-10	1968	6.40	6.18	6.71	7.61	8.84	10.82	10.14	12.36	9.20	7.02	6.65	5.53	68
1020-10	1970	5.49	8.13	10.15	9.05	9.05	9.01	10.46	10.63	10.70	8.47	6.08	6.23	104.24
1020-10	1972	5.97	6.32	7.05	9.97	10.09	10.12	11.25	10.22	9.85	8.37	6.37	5.19	94.09
1020-10	1974	5.86	7.16	7.05	7.91	10.18	10.58	11.64	10.28	9.44	9.09	5.77	4.38	105.82
1020-10	1975	4.64	6.05	7.50	7.36	8.33	11.60	11.52	10.57	10.52	7.27	7.57	6.31	193.44
1020-10	1976	5.52	6.37	8.96	8.08	10.60	11.17	11.15	10.35	10.84	9.79	6.44	5.61	106.96
1020-10	1977	5.94	6.78	9.73	10.08	9.32	11.62	11.62	11.50	11.20	9.72	7.19	6.76	101.25
1020-10	1978	5.94	6.93	8.79	9.52	9.54	10.41	11.57	10.57	10.91	8.87	7.54	6.35	102.39
1020-10	1979	6.53	5.04	7.26	9.42	8.51	10.57	11.62	10.57	8.43	7.19	6.07	5.40	101.90
1020-10	1980	6.36	5.40	8.81	8.73	8.84	9.76	10.62	9.97	9.35	9.30	6.83	6.33	99.62
1020-10	1981	6.62	6.33	8.26	8.77	9.66	8.30	10.50	9.04	9.35	8.66	6.45	5.57	91.90
1020-10	1982	5.91	6.33	8.26	9.12	9.77	10.71	10.56	11.50	9.96	8.98	6.01	5.53	102.31
1020-10	1984	5.91	7.40	9.62	11.73	11.73	12.00	12.00	11.74	9.76	7.70	7.36	5.88	111.63
1020-40	1962	4.52	7.42	5.43	6.55	7.98	7.72	7.44	8.43	6.86	6.88	5.91	3.23	78.37
1020-40	1963	4.22	7.59	6.24	7.38	8.22	8.27	8.06	7.79	7.18	5.64	5.34	4.47	79.50
1020-40	1965	5.77	6.12	6.31	5.56	6.23	8.06	7.88	8.59	6.05	4.96	4.11	4.61	76.27
1020-40	1966	5.47	4.42	6.24	7.14	6.90	7.81	7.50	8.59	7.28	4.51	3.96	4.46	75.28
1020-40	1967	6.39	6.08	5.51	7.01	7.22	8.17	8.09	7.34	6.38	7.28	6.61	5.35	77.98
1020-40	1968	4.78	6.08	5.62	6.78	6.58	8.20	8.36	8.05	6.90	7.11	6.52	5.87	90.17
1020-40	1969	6.29	4.46	5.28	6.50	8.58	8.20	8.37	10.24	8.82	6.81	6.17	5.84	88.40
1020-40	1971	5.84	5.44	6.21	6.51	7.87	8.01	8.50	8.45	7.54	7.91	6.54	5.43	82.78
1020-40	1972	5.81	7.13	6.66	6.61	7.36	7.09	8.40	8.68	8.04	6.74	5.26	5.03	87.31
1020-40	1973	5.32	5.94	6.57	7.22	8.25	9.09	10.17	8.81	8.76	6.77	5.94	5.20	91.01
1020-40	1975	5.25	5.87	7.53	8.04	7.32	8.95	9.84	8.81	8.31	6.70	6.63	5.37	91.01
1020-40	1976	5.32	5.83	8.56	7.10	7.76	9.33	8.52	9.29	8.80	7.49	6.58	4.86	79.51
1020-40	1977	5.48	4.29	6.31	7.52	10.05	9.32	10.87	8.90	9.27	6.49	5.58	4.86	79.51
1020-40	1978	5.48	4.29	6.31	7.52	10.05	9.32	10.87	8.90	9.27	6.49	5.58	4.86	79.51
1020-40	1979	4.80	4.80	6.55	7.71	7.34	7.77	7.88	8.46	6.81	6.81	3.31	4.37	93.09
1020-40	1980	4.18	4.70	6.67	7.37	8.58	9.93	11.43	9.60	8.89	8.77	7.18	5.79	93.09
1020-40	1982	6.53	4.76	8.00	8.00	8.34	7.65	8.00	7.30	8.04	7.00	4.44	5.79	93.09
1020-40	1983	4.82	4.82	5.04	6.46	6.46	7.25	8.76	7.33	6.76	6.69	4.75	5.00	76.03
1026-00	1962	4.97	4.97	5.73	5.10	6.99	7.26	8.93	7.49	6.63	6.67	5.54	4.46	76.03
1026-00	1963	6.26	5.07	5.06	5.73	7.92	8.99	10.49	8.28	6.74	5.98	5.54	4.46	76.03
1026-00	1964	4.53	4.71	6.88	5.31	5.83	6.91	8.01	7.11	7.90	5.98	2.66	3.84	76.03
1026-00	1965	4.53	4.71	6.88	5.31	5.83	6.91	8.01	7.11	7.90	5.98	2.66	3.84	76.03
1026-00	1966	4.53	4.71	6.88	5.31	5.83	6.91	8.01	7.11	7.90	5.98	2.66	3.84	76.03
1026-00	1967	4.53	4.71	6.88	5.31	5.83	6.91	8.01	7.11	7.90	5.98	2.66	3.84	76.03

APPENDIX TABLE B.1--Continued

STATE KEY NO.	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	ANNUAL (in.)
1026-00	4.06	4.25	4.76	5.99	6.28	6.47	5.89	5.12	5.57	5.07	3.66	3.67	..
1026-00	2.83	3.97	7.44	6.25	6.90	5.51	6.87	6.85	4.57	5.09	3.92	2.31	..
1026-00	6.89	4.68	5.59	5.95	6.70	6.12	7.66	7.52	6.94	6.65	4.06	3.07	75.30
1026-00	7.11	5.46	7.68	8.00	7.32	7.89	8.24	8.89	7.46	6.79	7.08	5.71	..
1026-00	5.98	6.03	7.30	7.11	6.86	6.58	7.46	7.44	7.45	6.79	7.56	5.67	..
1026-00	5.25	5.53	6.30	7.45	6.78	7.51	6.92	7.44	7.07	6.66	5.43	5.39	73.77
1026-00	5.06	5.08	6.27	6.40	7.52	8.04	8.50	8.69	5.89	5.86	5.31	5.32	84.36
1026-00	5.45	5.27	6.39	6.54	7.63	9.78	8.00	7.32	8.46	7.72	6.42	5.24	..
1026-00	4.59	5.68	8.34	8.16	10.42	9.75	6.29	7.87	7.32	6.26	..	5.02	..
1027-00	5.83	5.15	3.81	5.01	5.46	7.05	6.29	7.87	7.29	6.60	..	5.92	..
1033-00	5.02	3.50	4.84	6.90	8.92	8.09	6.60	6.57	6.00	5.24	8.52	6.91	..
1033-00	..	6.50	7.29	6.99	8.90	8.01	..	..	..	..	..	..	..
1035-00	6.37	3.91	4.50	4.14	5.20	5.37	7.02	5.61	5.29	5.94	3.88	4.51	64.19
1035-00	5.30	5.14	4.59	5.29	6.25	6.44	6.92	5.88	4.82	4.63	5.96	4.88	..
1035-00	3.72	4.17	5.53	4.72	6.69	6.76	6.57	5.61	5.29	4.86	4.45	..	..
1035-00	3.91	3.58	3.75	4.44	4.25	5.62	5.70	6.14	5.63	..	..	3.64	..
1035-00	3.12	4.60	3.62	4.16	4.28	3.54	5.80	6.13	4.62	..	4.19	3.76	..
1035-00	5.49	..	5.19	4.58	5.63	4.52	5.60	5.12	5.28	..	5.81	4.81	..
1035-00	6.51	5.75	6.23	6.42	6.39	6.31	5.40	6.27	5.78	5.93	5.35	5.98	..
1035-00	5.08	5.80	6.65	6.28	6.69	4.44	6.10	6.84	5.09	4.42	4.95	5.18	71.72
1035-00	5.08	5.80	6.65	6.28	6.69	4.44	6.10	6.84	5.09	4.42	4.95	5.18	..
1035-00	4.59	4.68	7.69	5.04	7.10	6.31	5.02	6.17	6.21	5.02	4.33	3.94	..
1040-00	5.37	4.66	3.51	6.68	4.95	4.42	5.11	4.54	5.15	4.22	4.33	3.81	59.28
1040-00	3.37	3.99	5.24	4.09	3.96	4.76	5.59	4.80	4.28	3.17	4.98	4.78	..
1040-00	3.53	4.56	4.96	4.22	5.63	4.51	4.59	4.97	4.96	3.63	..	3.33	53.40
1040-00	3.83	3.15	4.58	4.04	4.94	5.34	5.05	4.78	4.92	4.27	3.66	3.46	..
1040-00	3.38	3.70	4.77	4.10	4.85	4.61	4.95	5.22	4.23	3.97	4.65	3.71	59.33
1040-00	3.62	3.54	4.62	4.15	4.80	4.03	5.01	5.78	4.37	4.22	3.49	4.75	..
1040-00	3.27	3.57	4.22	4.07	4.03	5.10	5.27	5.67	5.38	4.54	4.29	4.12	58.18
1040-00	..	4.29	5.17	4.02	6.00	6.12	6.68	6.47	5.12	5.61	4.31	4.12	..
1040-00	4.23	4.56	4.11	5.84	5.00	4.62	4.47	5.37	5.68	4.30	4.44	3.34	..
1040-00	3.21	4.21	5.33	5.52	5.37	6.33	4.47	4.97	4.68	3.60	3.98	3.17	..
1040-00	..	4.08	4.63	4.46	5.44	4.64	6.56	5.44	5.73	4.55	4.45	4.35	..
1040-00	3.84	3.96	4.63	4.22	5.81	4.43	5.63	5.29	5.73	4.55	4.45	4.35	..

APPENDIX TABLE B.1—Continued

STATE KEY NO.	YEAR	(in.)												
		JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	ANNUAL
1040-00	1978	5.83	4.44	5.67	6.39	4.74	4.46	6.28	5.43	5.87	6.03	4.48	4.62	
1040-00	1979	4.51	4.98	7.26	6.51	5.91	6.01	6.24	6.07	6.44	6.03	5.11	4.94	
1040-00	1980	5.29	5.37	6.43	6.22	5.57	7.59	6.72	7.28	5.51	5.63	6.09	4.94	
1040-00	1981	4.77	5.04	5.43	5.40	5.61	5.07	5.43	6.51	6.85	6.39	5.73	4.74	75.98
1040-00	1982	3.10	2.80	3.72	3.30	6.32	7.80	4.34	6.51		5.36	7.62	4.28	
1061-00	1959	3.77	3.77	4.03	3.60	3.72	4.50	3.72	4.96	3.90	4.03	3.60	3.41	
1061-00	1960	5.37	5.37	3.14	5.37	3.92	5.75	6.88	7.70	5.96	5.99	4.29	2.70	
1061-30	1963	9.82	4.94	3.19	5.68	7.68	5.32	9.46	5.37	9.40	4.26	7.29	5.79	64.94
1061-30	1964	2.23	4.94	4.22	1.06	2.46	5.41	5.30	7.62	5.98	3.13	0.60	4.38	78.16
1061-30	1965	4.62	2.21	4.22	4.91	4.80	5.63	5.95	5.44	4.70	5.24	3.45	3.35	47.30
1061-30	1968	4.10	2.55	3.17	4.60	4.28	5.08	5.28	5.66	4.89	4.49	3.87	3.35	
1061-30	1969	5.16	4.21	4.64	4.17	4.81	5.06	5.56	5.57	4.31	4.49	3.73	3.30	51.12
1061-30	1970	3.97	3.80	3.84	4.14	5.78	5.65	6.58	6.68	5.75	4.67	3.47	3.30	55.83
1061-30	1971	3.76	3.40	4.87	3.64	5.15	4.94	5.84	6.04	5.03	4.40	3.31	3.30	57.75
1061-30	1972	3.69	3.98	3.64	4.53	5.91	5.09	5.44	6.75	5.03	4.40	3.31	3.30	55.00
1061-30	1973	3.05	3.47	4.18	4.43	5.26	4.33	5.38	5.11	4.69	4.56	3.85	3.30	53.44
1061-30	1974	3.04	4.16	4.36	4.02	5.83	5.73	7.01	5.48	5.32	4.68	4.20	3.30	58.73
1061-30	1975	3.11	3.41	3.33	5.43	5.74	4.18	5.90	6.33	5.61	4.99	4.20	4.40	54.53
1061-30	1976	4.18	3.87	4.33	5.43	3.95	5.28	6.33	6.44	6.56				
1061-30	1977													
1061-30	1978													
1061-30	1979													
1061-30	1980													
1061-30	1981	5.84	4.58	4.79	3.61	4.72	5.06	4.77	5.68	4.10	5.32	2.22	3.98	62.91
1061-30	1982	4.75	3.76	6.02	4.93	5.03	5.64	5.20	5.42	5.45	6.73	4.47	4.51	
1061-30	1983				5.31	4.72	6.04	6.33	4.62	5.52	4.39	5.51	5.12	
1061-30	1985				6.81	5.41	7.21	7.98	6.88	4.81	4.44	4.94	3.94	
1062-10	1966	4.72	3.00	4.47	6.05	6.41	8.88	5.53	6.61	5.81	4.94	4.45	3.94	65.30
1062-10	1967	3.48	4.39	5.81	6.05	5.37	5.88	6.20	6.75	5.62	3.94	3.45	4.62	31
1062-10	1968	3.18	3.58	4.99	5.77	5.49	6.65	6.83	6.71	6.93	5.02	4.92	5.48	68.59
1062-10	1969	4.79	4.63	4.96	6.09	6.86	4.33	6.60	6.79	5.31	7.01	4.63	3.74	60.17
1062-10	1970	4.23	4.49	5.08	6.70	6.82	6.64	6.87	6.59	6.45	4.40	3.63	3.93	70.08
1062-10	1971	4.44	4.44	4.15	6.01	7.48	6.53	7.18	7.89	6.21	5.50	4.23	3.70	67.80
1062-10	1972	4.73	4.26	6.29	5.46	7.87	5.20	7.41	6.95	6.07	6.64	5.59	3.82	71.69
1062-10	1973	3.81	5.43	5.29	6.18	6.61	7.00	7.55	6.95	6.65	5.92	4.73	5.46	
1062-10	1974	3.60	4.02	7.34	7.17	6.81	6.87	7.10	7.07	5.94	6.44	5.26	4.46	74.17
1062-10	1975	3.91	4.65	5.27	5.56	7.69	6.81	7.25	7.10	6.54	5.92	5.73	5.40	67.89
1062-10	1976	4.87	4.26	6.47	6.15	6.02	5.99	7.30	7.08	5.94	6.91	4.94	4.24	
1062-10	1977													
1062-10	1978													
1062-10	1979													
1062-10	1980	4.75	4.85	5.73	5.57	5.88	6.27	6.33	7.48	5.45	6.04	2.67	5.42	
1062-10	1981		5.57	6.50	5.82	5.92	7.10	7.39	6.09	6.66	7.36	5.60	5.67	74.43

APPENDIX TABLE B.1--Continued

STATE KEY NO.	YEAR	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	ANNUAL (in.)
1062-10	1982	5-51	4-83	6-95	6-03	7-83	6-43	6-89	6-64	6-85	5-30	3-93	4-90	.
1062-10	1983	5-15	5-13	6-37	7-07	8-81	7-54	6-10	6-09	5-64	7-47	5-94	4-19	71-26
1062-20	1961	3-76	4-44	4-02	4-47	7-50	6-27	7-44	6-32	7-59	4-50	4-63	2-95	62-20
1062-20	1962	4-59	3-95	5-67	6-06	7-81	8-65	6-51	5-72	7-33	5-08	4-44	3-78	69-48
1062-20	1963	4-22	5-38	4-81	5-43	7-54	7-35	6-07	6-16	6-68	4-40	3-84	4-34	.
1062-20	1965	4-37	4-12	6-79	5-72	6-52	6-88	6-93	6-18	4-93	4-25	4-03	3-42	64-56
1062-20	1966	4-83	4-63	4-71	4-74	7-83	6-38	6-97	4-84	5-15	3-41	5-51	4-62	.
1062-20	1967	3-07	3-63	5-27	4-74	5-47	6-92	7-80	6-57	6-00	5-09	6-02	.	.
1062-20	1968	3-64	4-69	4-88	5-52	8-81	6-54	6-10	6-09	5-64	7-47	5-94	4-19	71-26
1062-30	1969	4-91	5-13	4-37	6-07	7-50	6-27	7-35	6-32	5-90	4-50	4-63	3-95	63-11
1062-30	1961	3-76	4-44	4-02	4-47	7-81	8-64	6-51	5-72	7-59	5-08	4-44	3-78	69-48
1062-30	1962	4-59	3-95	5-67	6-06	7-54	7-35	6-07	6-16	6-68	4-40	3-84	4-34	.
1062-30	1963	4-22	5-38	4-81	5-43	6-52	6-88	6-93	6-18	4-93	4-25	4-03	3-42	64-56
1062-30	1965	4-37	4-12	6-79	5-72	7-81	6-69	6-97	5-97	5-15	3-41	5-51	4-62	.
1062-30	1966	4-83	4-63	4-71	4-74	7-83	6-38	7-80	4-84	5-15	4-25	4-03	3-42	64-56
1062-30	1967	3-07	3-63	5-27	4-74	5-47	6-92	7-80	6-57	6-00	5-09	6-02	.	.
1062-30	1968	3-64	4-69	4-88	5-52	8-81	6-54	6-10	6-09	5-64	7-47	5-94	4-19	71-26
1062-30	1969	4-91	5-13	4-37	6-07	7-50	6-27	7-35	6-32	5-90	4-50	4-63	3-95	63-11
1064-30	1962	4-59	3-95	5-67	6-06	7-54	7-35	6-07	6-16	6-68	4-40	3-84	4-34	69-48
1064-30	1963	4-22	5-38	4-81	5-43	6-52	6-88	6-93	6-18	4-93	4-25	4-03	3-42	.
1064-30	1965	4-37	4-12	6-79	5-72	7-81	6-69	6-97	5-97	5-15	3-41	5-51	4-62	64-56
1064-30	1966	4-83	4-63	4-71	4-74	7-83	6-38	7-80	4-84	5-15	4-25	4-03	3-42	.
1064-30	1967	3-07	3-63	5-27	4-74	5-47	6-92	7-80	6-57	6-00	5-09	6-02	.	.
1064-30	1968	3-64	4-69	4-88	5-52	8-81	6-54	6-10	6-09	5-64	7-47	5-94	4-19	71-26
1064-30	1969	4-91	5-13	4-37	6-07	7-50	6-27	7-35	6-32	5-90	4-50	4-63	3-95	63-11
1064-30	1970	5-30	5-63	6-06	6-35	6-93	7-49	7-68	8-16	7-60	6-08	5-44	5-37	73-08
1064-30	1971	4-65	4-52	5-26	5-76	7-82	8-85	7-45	8-95	7-61	6-26	4-98	5-63	78-44
1064-30	1972	5-58	5-21	5-77	6-17	6-88	6-30	7-66	7-48	6-81	6-17	5-63	5-22	80-39
1064-30	1973	4-54	5-25	5-92	6-80	7-40	7-48	8-34	7-99	7-49	6-13	5-63	4-12	73-78
1064-30	1974	4-67	5-59	7-74	6-80	7-10	7-15	7-62	7-83	6-84	7-27	4-87	4-78	77-64
1064-30	1975	4-86	5-09	6-86	6-56	8-34	8-25	8-73	8-81	7-82	6-32	5-25	4-32	83-23
1064-30	1976	4-77	4-00	6-75	6-94	7-62	7-06	8-57	7-95	7-26	7-97	5-37	4-54	76-92
1064-30	1977	.	.	.	.	.	7-26	8-48	8-39	8-33	.	.	.	.
1064-30	1978	.	.	.	.	.	.	.	.	.	.	.	.	.
1064-30	1979	.	.	.	.	.	.	.	.	.	.	.	.	.
1064-30	1980	4-64	5-95	5-80	6-72	7-01	8-15	7-56	8-08	5-85	6-61	2-65	5-59	85-63
1064-30	1981	5-14	5-23	6-09	6-26	7-52	7-74	9-81	8-63	8-96	9-02	5-99	5-61	.
1064-30	1982	5-10	.	7-05	6-80	6-88	6-34	7-57	7-07	7-89	6-59	5-27	4-80	.
1064-30	1983	.	.	.	7-62	8-09	9-01	.	.	.	.	3-31	4-53	.
1066-00	1965	4-51	4-16	.	.	.	.	.	.	.	.	.	.	.
1066-00	1966	.	.	.	3-26	3-93	5-21	6-08	4-27	4-73	3-45	2-77	2-76	.
1072-10	1911	.	.	.	2-17	1-58	1-53	1-60	1-55	1-36	1-12	.	.	.
1082-00	1911	.	.	.	4-46	2-82	4-39	2-64	5-09	4-86	3-74	3-92	3-41	49-33
1092-00	1969	3-58	1-91	4-61	4-56	3-87	4-56	5-91	5-29	4-71	4-06	3-36	3-15	51-41
1092-00	1970	3-85	3-67	4-28	4-67	3-87	4-56	5-91	5-29	4-71	4-06	3-36	3-15	51-41
1092-00	1971	3-85	3-12	4-98	4-3	5-42	6-03	5-85	5-83	4-91	5-34	3-24	3-98	55-22
1092-00	1972	3-47	3-27	4-58	3-89	4-55	5-03	5-48	5-95	5-09	4-60	3-80	3-54	53-25

APPENDIX TABLE B.1—Continued

STATE KEY NO.	YEAR	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	ANNUAL (in.)
1110-00	1966	3.52	2.69	.	.	.	.	.	.	6.50	7.78	8.79	7.70	.
1110-00	1910	5.51	4.79	5.30	5.13	6.47	6.71	7.50	7.68	8.21	6.31	6.45	5.85	.
1114-00	1964	5.92	6.78	5.51	4.80	4.14	9.85	7.39	9.07	7.56	5.61	3.63	3.09	73.35
1114-00	1965	4.60	3.46	5.44	6.61	8.31	8.18	8.39	8.81	7.10	6.20	5.50	4.81	78.99
1114-00	1969	5.50	4.14	5.03	7.27	7.38	7.76	8.01	7.54	7.23	6.18	4.91	5.12	78.60
1114-00	1970	4.43	5.79	5.16	5.88	8.39	8.22	8.23	8.08	7.19	6.47	5.60	5.29	77.73
1114-00	1971	4.16	5.87	5.24	6.05	7.07	6.91	7.54	7.56	6.91	6.51	5.02	4.76	73.60
1114-00	1972	4.64	5.83	6.69	8.16	8.40	8.32	8.82	7.94	7.33	6.72	5.00	4.31	82.16
1114-00	1973	4.41	5.10	5.92	6.99	7.45	6.64	7.18	7.34	6.12	6.20	5.55	4.96	80.35
1114-00	1974	5.45	4.76	5.17	6.55	8.61	8.44	8.53	7.88	6.91	6.48	5.42	4.96	80.35
1114-00	1975	4.52	4.37	7.58	8.16	7.25	5.57	6.70	6.71	6.96	6.48	5.77	4.93	70.12
1114-00	1976	4.89	5.27	.	.	9.38	8.55	7.65	8.67	7.87	.	.	.	.
1114-00	1977	.	.	.	.	.	.	.	.	.	.	.	.	.
1114-00	1978	.	.	.	.	.	.	.	.	.	.	.	.	.
1114-00	1979	.	.	.	.	.	.	.	.	.	.	.	.	.
1114-00	1980	5.45	4.54	6.12	6.57	7.31	7.06	7.13	7.80	5.44	5.36	3.08	4.62	82.63
1114-00	1981	4.43	5.55	6.36	7.59	8.28	8.45	8.32	7.55	7.95	6.51	4.79	5.92	.
1114-00	1982	4.28	4.89	6.69	6.72	8.37	8.02	6.47	6.71	5.96	6.35	3.86	4.69	.
1134-00	1962	3.84	5.77	.	.	7.63	7.78	8.14	5.28	7.68	7.01	4.68	.	.
1134-00	1963	5.36	4.79	5.80	4.62	8.25	8.28	8.28	4.77	6.22	5.99	4.95	.	.
1134-00	1965	4.03	4.28	6.23	6.90	7.47	7.94	7.98	8.01	6.39	3.38	.	.	.
1134-00	1966	.	.	.	5.88	5.80	8.01	7.98	7.94	7.80	4.68	2.52	.	.
1135-00	1962	3.78	3.92	.	.	7.32	.	6.36	6.01	5.31	5.30	3.87	.	.
1135-00	1963	.	3.74	4.15	.	.	6.88	7.17	7.66	6.58	.	.	.	.
1135-00	1965	3.78	3.72	4.93	4.95	.	6.78	7.41	6.60	6.48	.	.	.	.
1136-00	1966	4.74	5.18	.	.	4.25	5.57	6.51	5.80	5.47	6.51	4.14	.	.
1136-00	1963	4.34	4.09	5.08	4.89	6.63	6.54	6.29	5.75	5.52	4.98	4.40	.	.
1136-00	1965	4.34	2.83	5.74	4.86	5.21	6.47	5.67	6.71	5.25	4.37	.	.	.
1141-20	1967	4.74	5.18	.	.	4.25	5.57	6.47	6.82	5.47	6.51	4.14	.	.
1141-20	1962	4.34	4.09	5.08	4.89	6.63	6.54	6.29	5.75	5.52	4.98	4.40	.	.
1141-20	1963	4.34	2.83	5.74	4.86	5.21	6.47	5.67	6.71	5.25	4.37	.	.	.
1141-20	1965	4.34	4.09	5.08	4.89	6.63	6.54	6.29	5.75	5.52	4.98	4.40	.	.
1141-20	1966	4.34	2.83	5.74	4.86	5.21	6.47	5.67	6.71	5.25	4.37	.	.	.
1143-00	1967	5.49	4.98	.	.	6.02	7.10	7.92	6.82	7.53	6.70	4.86	4.09	.
1143-00	1963	5.49	4.98	.	.	6.02	7.10	7.92	6.82	7.53	6.70	4.86	4.09	.

APPENDIX TABLE B.2--Continued

STATION 87.00	JAN	5.05	FEB	4.92	MAR	5.24	APR	5.61	MAY	5.96	JUN	6.54	JUL	6.59	AUG	6.20	SEP	5.73	OCT	5.50	NOV	4.22	DEC	4.33	ANNUAL	65.89
MEAN DEV	0.93	0.83	0.89	0.79	0.83	0.81	0.67	0.56	0.82	0.74	0.54	0.49	0.38	0.28	0.26	0.25	0.24	0.23	0.22	0.21	0.20	0.19	0.18	0.17	0.16	0.15
STD DEV	18.39	16.76	16.94	14.16	13.91	12.43	10.14	8.98	14.33	13.49	12.88	12.35	11.88	11.44	10.98	10.56	10.14	9.72	9.30	8.88	8.46	8.04	7.62	7.20	6.78	
COV (%)	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	
N (YEARS)	3	4	4	4	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	
SUM OF MONTHLY MEANS																										
STATION 89.50	JAN	3.40	FEB	3.55	MAR	3.80	APR	4.07	MAY	3.86	JUN	3.82	JUL	4.06	AUG	4.14	SEP	3.29	OCT	3.76	NOV	3.57	DEC	3.32	ANNUAL	45.18
MEAN DEV	1.48	1.11	0.61	1.26	1.15	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
STD DEV	43.34	31.26	16.13	30.83	29.71	26.57	26.57	26.57	26.57	26.57	26.57	26.57	26.57	26.57	26.57	26.57	26.57	26.57	26.57	26.57	26.57	26.57	26.57	26.57	26.57	26.57
COV (%)	3	4	4	4	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	
N (YEARS)	3	4	4	4	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	
SUM OF MONTHLY MEANS																										
STATION 90.10	JAN	4.35	FEB	4.47	MAR	5.03	APR	4.59	MAY	5.45	JUN	5.53	JUL	5.59	AUG	6.07	SEP	5.34	OCT	5.08	NOV	4.31	DEC	4.15	ANNUAL	59.91
MEAN DEV	1.13	0.97	1.28	1.22	0.97	0.95	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73
STD DEV	25.90	21.64	25.46	26.53	17.83	17.21	13.02	13.02	13.02	13.02	13.02	13.02	13.02	13.02	13.02	13.02	13.02	13.02	13.02	13.02	13.02	13.02	13.02	13.02	13.02	13.02
COV (%)	16	19	18	18	19	19	18	18	19	19	19	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18
N (YEARS)	3	4	4	4	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	
SUM OF MONTHLY MEANS																										
STATION 95.60	JAN	7.44	FEB	7.00	MAR	6.20	APR	0.00	MAY	0.00	JUN	9.30	JUL	12.40	AUG	0.00	SEP	0.00	OCT	0.00	NOV	0.00	DEC	6.82	ANNUAL	0.00
MEAN DEV	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
STD DEV	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
COV (%)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
N (YEARS)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
SUM OF MONTHLY MEANS																										
STATION 160.00	JAN	5.85	FEB	5.93	MAR	7.34	APR	8.00	MAY	8.96	JUN	9.53	JUL	9.85	AUG	10.19	SEP	9.10	OCT	7.95	NOV	6.69	DEC	5.97	ANNUAL	96.36
MEAN DEV	1.06	1.15	0.99	0.76	0.90	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
STD DEV	18.14	19.46	13.51	9.52	10.03	9.66	9.66	9.66	9.66	9.66	9.66	9.66	9.66	9.66	9.66	9.66	9.66	9.66	9.66	9.66	9.66	9.66	9.66	9.66	9.66	
COV (%)	11	11	11	10	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	
N (YEARS)	3	4	4	4	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	
SUM OF MONTHLY MEANS																										

APPENDIX TABLE B.2--Continued

STATION 160.30	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
MEAN	5.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.36	5.92	6.09	6.33	0.00
STD DEV	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
COV (%)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
N (YEARS)	1	0	0	0	0	0	0	0	1	1	1	1	0
										SUM OF MONTHLY MEANS			0.00
STATION 161.00	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
MEAN	4.56	5.05	6.08	6.58	7.89	8.34	8.56	8.66	8.18	7.08	5.96	4.72	81.25
STD DEV	0.77	0.94	0.60	0.61	0.92	1.26	1.42	1.85	1.20	0.77	1.57	0.95	8.94
COV (%)	16.86	18.53	9.87	9.33	11.65	15.14	16.61	21.36	14.67	10.84	26.35	20.20	11.00
N (YEARS)	10	10	9	8	8	8	10	10	10	10	10	10	8
										SUM OF MONTHLY MEANS			81.66
STATION 166.00	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
MEAN	5.88	6.35	8.14	8.03	8.36	8.48	9.00	9.17	8.83	7.65	6.17	6.31	93.30
STD DEV	1.00	0.68	0.80	0.77	0.29	0.21	0.90	0.84	0.51	0.79	0.18	0.88	6.24
COV (%)	17.05	10.74	9.81	9.59	3.47	2.50	9.97	9.17	5.73	10.39	2.88	13.99	6.69
N (YEARS)	3	3	3	2	2	2	2	2	3	3	3	3	2
										SUM OF MONTHLY MEANS			92.37
STATION 168.00	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
MEAN	5.44	5.65	6.42	6.56	7.84	8.12	8.33	8.73	7.94	7.02	5.52	5.65	82.80
STD DEV	1.17	1.15	1.11	0.73	0.77	0.83	1.18	1.46	1.07	1.07	0.85	1.40	9.43
COV (%)	21.55	20.37	17.26	11.18	9.82	10.19	14.17	16.69	13.45	15.23	15.33	24.81	11.39
N (YEARS)	12	12	12	12	12	12	12	12	11	11	12	12	11
										SUM OF MONTHLY MEANS			83.22
STATION 171.00	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
MEAN	7.08	6.15	5.44	6.78	6.78	7.41	7.52	10.77	10.09	8.69	9.91	6.24	0.00
STD DEV	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.89	0.00	0.00	0.00	0.00	0.00
COV (%)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.27	0.00	0.00	0.00	0.00	0.00
N (YEARS)	1	1	1	1	1	1	1	2	1	1	1	1	0
										SUM OF MONTHLY MEANS			92.86

APPENDIX TABLE B.2--Continued

STATION 173-00													
MEAN	JAN 4.85	FEB 4.74	MAR 5.74	APR 6.62	MAY 6.88	JUN 7.30	JUL 7.45	AUG 8.10	SEP 6.79	OCT 6.34	NOV 5.46	DEC 4.38	ANNUAL 79.46
STD DEV	1.07	1.17	0.58	1.03	1.17	1.22	1.22	0.81	1.37	0.87	1.76	0.82	8.91
COV (%)	22.09	24.76	10.04	15.59	17.01	16.71	16.44	10.01	20.12	13.79	32.30	18.70	11.21
N (YEARS)	3	3	3	3	4	4	4	4	4	4	3	3	2
SUM OF MONTHLY MEANS 74.65													
STATION 176-00													
MEAN	JAN 4.98	FEB 4.78	MAR 5.41	APR 6.14	MAY 7.12	JUN 7.48	JUL 7.73	AUG 7.81	SEP 7.21	OCT 6.08	NOV 5.27	DEC 4.53	ANNUAL 74.41
STD DEV	0.92	0.66	0.62	0.75	0.56	0.66	0.76	0.68	1.13	0.87	1.06	0.65	4.19
COV (%)	18.43	13.77	11.51	12.26	7.87	8.88	9.88	8.69	15.70	14.30	20.15	14.45	5.63
N (YEARS)	10	10	10	9	9	9	10	10	10	10	10	10	9
SUM OF MONTHLY MEANS 74.54													
STATION 179-00													
MEAN	JAN 5.72	FEB 5.02	MAR 6.08	APR 6.60	MAY 8.00	JUN 8.33	JUL 8.44	AUG 8.46	SEP 7.47	OCT 6.66	NOV 6.13	DEC 5.11	ANNUAL 81.58
STD DEV	0.93	1.06	0.86	0.43	0.41	0.59	0.49	0.81	1.05	0.35	1.17	0.52	3.19
COV (%)	16.27	21.15	14.16	6.59	5.18	7.03	5.84	9.61	14.03	5.23	19.09	10.16	3.92
N (YEARS)	5	5	5	6	6	6	6	6	6	6	6	6	5
SUM OF MONTHLY MEANS 82.02													
STATION 179-10													
MEAN	JAN 5.23	FEB 5.68	MAR 6.52	APR 5.94	MAY 7.73	JUN 8.20	JUL 8.15	AUG 8.30	SEP 8.15	OCT 7.01	NOV 6.03	DEC 5.29	ANNUAL 83.10
STD DEV	0.76	0.52	0.51	0.66	0.73	0.88	0.59	0.69	0.58	0.70	0.78	0.58	3.89
COV (%)	14.5	9.10	7.84	11.15	9.40	10.5	7.18	8.36	7.06	9.95	12.88	10.90	4.68
N (YEARS)	5	5	6	5	5	5	5	5	5	5	5	5	4
SUM OF MONTHLY MEANS 82.23													
STATION 182-00													
MEAN	JAN 4.02	FEB 4.04	MAR 4.91	APR 5.53	MAY 6.16	JUN 7.12	JUL 7.35	AUG 7.37	SEP 5.59	OCT 4.93	NOV 4.89	DEC 4.15	ANNUAL 57.65
STD DEV	0.28	0.45	0.45	0.95	1.35	0.94	1.67	1.24	1.26	0.29	0.78	0.17	0.00
COV (%)	6.84	11.22	9.12	17.23	21.87	13.17	22.75	16.87	22.43	5.80	15.91	4.07	0.00
N (YEARS)	3	3	3	4	4	4	4	4	3	3	2	3	1
SUM OF MONTHLY MEANS 66.06													

APPENDIX TABLE B.2--Continued

STATION 191.10	JAN 1	FEB 4.12	MAR 5.32	APR 5.38	MAY 5.78	JUN 6.22	JUL 6.13	AUG 7.08	SEP 6.41	OCT 5.63	NOV 4.25	DEC 3.88	ANNUAL 64.75
MEAN DEV	4.21	4.12	5.32	5.38	5.78	6.22	6.13	7.08	6.41	5.63	4.25	3.88	64.75
STD DEV	0.63	0.63	0.72	0.82	0.82	0.80	1.06	1.31	0.40	2.04	0.51	0.34	9.02
COV (%)	15.05	15.21	13.50	15.30	14.77	12.80	17.21	18.46	6.25	36.17	11.90	8.74	13.93
N (YEARS)	8	9	9	9	7	8	8	8	8	6	8	8	4
										SUM OF MONTHLY MEANS			64.41
STATION 201.20	JAN 3	FEB 2.91	MAR 3.10	APR 2.96	MAY 3.89	JUN 3.64	JUL 3.41	AUG 3.68	SEP 3.95	OCT 4.00	NOV 3.32	DEC 2.81	ANNUAL 42.56
MEAN DEV	3.35	2.91	3.10	2.96	3.89	3.64	3.41	3.68	3.95	4.00	3.32	2.81	42.56
STD DEV	0.27	0.58	0.39	0.05	0.11	0.49	0.80	0.87	0.52	0.40	0.12	0.19	0.00
COV (%)	8.02	19.89	12.45	1.27	2.91	13.60	23.40	23.60	13.05	9.90	3.62	6.78	0.00
N (YEARS)	2	3	3	2	2	2	2	2	2	2	2	2	1
										SUM OF MONTHLY MEANS			41.02
STATION 203.20	JAN 4	FEB 3.58	MAR 3.71	APR 3.29	MAY 3.94	JUN 4.56	JUL 3.24	AUG 3.53	SEP 3.58	OCT 3.72	NOV 2.93	DEC 4.05	ANNUAL 44.73
MEAN DEV	4.45	3.58	3.71	3.29	3.94	4.56	3.24	3.53	3.58	3.72	2.93	4.05	44.73
STD DEV	1.21	0.69	0.45	0.62	1.51	1.89	1.07	0.81	0.42	1.24	0.45	1.47	5.14
COV (%)	27.28	19.24	12.13	18.77	38.23	41.34	33.06	23.01	11.72	33.30	15.37	36.39	11.50
N (YEARS)	6	7	7	7	6	6	6	6	6	6	6	6	4
										SUM OF MONTHLY MEANS			44.58
STATION 206.00	JAN 6	FEB 5.69	MAR 6.51	APR 6.68	MAY 6.39	JUN 7.94	JUL 7.75	AUG 8.25	SEP 6.51	OCT 6.61	NOV 5.82	DEC 5.46	ANNUAL 0.00
MEAN DEV	6.30	5.69	6.51	6.68	6.39	7.94	7.75	8.25	6.51	6.61	5.82	5.46	0.00
STD DEV	0.00	0.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
COV (%)	0.00	2.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
N (YEARS)	1	2	1	1	1	1	1	1	1	1	1	1	0
										SUM OF MONTHLY MEANS			79.91
STATION 211.10	JAN 4	FEB 3.86	MAR 3.89	APR 4.31	MAY 5.12	JUN 5.84	JUL 5.41	AUG 4.80	SEP 4.37	OCT 4.55	NOV 4.79	DEC 5.22	ANNUAL 57.61
MEAN DEV	4.85	3.86	3.89	4.31	5.12	5.84	5.41	4.80	4.37	4.55	4.79	5.22	57.61
STD DEV	1.21	0.64	0.71	0.23	0.63	1.23	1.51	1.23	1.44	0.93	0.96	0.06	7.08
COV (%)	24.91	16.58	18.18	5.25	12.28	21.07	27.97	25.63	32.81	20.40	20.07	1.22	12.29
N (YEARS)	3	3	2	2	2	2	2	2	2	3	3	2	2
										SUM OF MONTHLY MEANS			57.01

APPENDIX TABLE B.2--Continued

STATION 213.00													
MEAN	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
STD DEV	6.70	6.64	7.26	6.96	8.14	8.16	7.98	8.27	7.90	7.46	6.77	6.20	87.90
COV (%)	1.14	1.54	1.27	1.35	0.87	1.00	1.08	0.90	1.20	1.50	1.79	0.90	7.36
N (YEARS)	17.07	23.13	17.44	19.34	10.66	12.27	13.60	10.91	15.22	20.17	26.42	14.45	8.38
	18	18	19	18	20	20	19	19	20	20	17	15	10
										SUM OF MONTHLY MEANS			38.44
STATION 213.10													
MEAN	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
STD DEV	6.13	6.11	6.51	6.41	7.45	7.75	7.61	7.51	7.03	6.73	5.79	5.93	80.83
COV (%)	1.53	1.73	1.20	1.18	1.08	1.25	1.60	1.35	0.91	1.53	1.18	1.21	7.17
N (YEARS)	24.98	28.33	18.39	18.32	14.47	16.15	21.09	18.00	12.92	22.80	20.35	20.41	8.87
	18	15	14	14	19	19	18	17	19	18	14	13	6
										SUM OF MONTHLY MEANS			80.96
STATION 214.10													
MEAN	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
STD DEV	4.82	5.57	5.76	6.20	6.82	8.05	6.60	6.80	6.78	5.97	4.74	4.25	69.84
COV (%)	0.98	0.47	1.02	0.18	1.01	0.70	0.00	0.00	1.57	0.85	0.17	0.55	0.00
N (YEARS)	20.30	8.55	17.68	2.85	14.82	8.69	0.00	0.00	23.15	14.21	3.58	12.98	0.00
	3	3	2	2	2	2	1	1	2	2	2	2	1
										SUM OF MONTHLY MEANS			72.30
STATION 215.30													
MEAN	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
STD DEV	4.57	4.61	5.57	4.86	5.75	5.43	5.72	5.53	5.44	5.14	4.99	4.13	56.56
COV (%)	1.29	0.90	1.81	1.45	1.27	0.85	1.84	1.30	0.97	1.56	1.55	1.02	5.54
N (YEARS)	28.09	19.50	32.55	29.90	22.17	15.61	32.12	23.49	17.83	30.43	31.08	24.77	9.79
	16	14	12	15	19	19	18	16	19	18	14	14	5
										SUM OF MONTHLY MEANS			61.74
STATION 215.40													
MEAN	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
STD DEV	4.88	5.00	5.07	5.31	6.41	7.16	0.00	0.00	0.00	0.08	4.13	4.07	0.00
COV (%)	0.98	0.49	0.37	0.25	0.13	0.00	0.00	0.00	0.00	1.24	0.13	0.00	0.00
N (YEARS)	20.12	9.90	7.25	4.66	2.09	0.00	0.00	0.00	0.00	20.47	2.70	0.00	0.00
	2	2	2	2	1	1	0	0	0	2	2	1	0
										SUM OF MONTHLY MEANS			0.00

APPENDIX TABLE B.2—Continued

STATION 296.10													
MEAN	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
STD DEV	0.00	6.08	7.26	7.68	9.31	7.66	9.26	9.46	8.52	8.99	0.00	0.00	0.00
COV (%)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
N (YEARS)	0	1	1	1	1	1	1	1	1	1	0	0	0
SUM OF MONTHLY MEANS													
STATION 310.00													
MEAN	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
STD DEV	4.60	4.84	6.37	7.10	8.57	9.79	9.92	10.35	9.95	8.24	7.44	4.70	90.84
COV (%)	1.25	0.27	0.90	0.58	0.58	0.84	1.27	0.79	0.98	1.24	0.98	0.18	0.45
N (YEARS)	27	3	4	4	4	4	3	3	3	3	3	3	2
SUM OF MONTHLY MEANS													
STATION 310.10													
MEAN	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
STD DEV	5.68	5.71	7.20	7.76	9.02	10.04	10.81	10.42	9.75	8.37	6.88	5.79	97.36
COV (%)	0.88	0.90	1.35	1.02	1.22	1.24	1.57	1.46	1.50	0.72	0.89	0.94	9.82
N (YEARS)	15	21	21	21	21	21	20	20	21	21	21	21	19
SUM OF MONTHLY MEANS													
STATION 310.20													
MEAN	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
STD DEV	5.27	4.98	6.86	6.97	7.23	10.07	10.58	10.23	8.47	7.62	5.70	6.03	86.60
COV (%)	0.85	1.17	0.28	0.00	0.00	0.37	1.34	0.98	2.40	1.20	0.30	0.38	0.00
N (YEARS)	16	2	2	1	1	2	2	2	2	2	2	2	1
SUM OF MONTHLY MEANS													
STATION 313.00													
MEAN	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
STD DEV	5.23	5.54	6.80	7.60	8.54	9.18	10.23	10.13	9.00	7.82	6.30	5.49	92.16
COV (%)	0.71	0.91	1.39	1.09	0.87	0.82	1.05	1.25	1.02	0.82	0.90	0.96	9.57
N (YEARS)	13	20	19	20	20	20	19	19	19	20	20	20	17
SUM OF MONTHLY MEANS													
STATION 313.00													
MEAN	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
STD DEV	5.23	5.54	6.80	7.60	8.54	9.18	10.23	10.13	9.00	7.82	6.30	5.49	92.16
COV (%)	0.71	0.91	1.39	1.09	0.87	0.82	1.05	1.25	1.02	0.82	0.90	0.96	9.57
N (YEARS)	13	20	19	20	20	20	19	19	19	20	20	20	17
SUM OF MONTHLY MEANS													
STATION 313.00													
MEAN	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
STD DEV	5.23	5.54	6.80	7.60	8.54	9.18	10.23	10.13	9.00	7.82	6.30	5.49	92.16
COV (%)	0.71	0.91	1.39	1.09	0.87	0.82	1.05	1.25	1.02	0.82	0.90	0.96	9.57
N (YEARS)	13	20	19	20	20	20	19	19	19	20	20	20	17
SUM OF MONTHLY MEANS													
STATION 313.00													
MEAN	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
STD DEV	5.23	5.54	6.80	7.60	8.54	9.18	10.23	10.13	9.00	7.82	6.30	5.49	92.16
COV (%)	0.71	0.91	1.39	1.09	0.87	0.82	1.05	1.25	1.02	0.82	0.90	0.96	9.57
N (YEARS)	13	20	19	20	20	20	19	19	19	20	20	20	17
SUM OF MONTHLY MEANS													
STATION 313.00													
MEAN	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
STD DEV	5.23	5.54	6.80	7.60	8.54	9.18	10.23	10.13	9.00	7.82	6.30	5.49	92.16
COV (%)	0.71	0.91	1.39	1.09	0.87	0.82	1.05	1.25	1.02	0.82	0.90	0.96	9.57
N (YEARS)	13	20	19	20	20	20	19	19	19	20	20	20	17
SUM OF MONTHLY MEANS													
STATION 313.00													
MEAN	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
STD DEV	5.23	5.54	6.80	7.60	8.54	9.18	10.23	10.13	9.00	7.82	6.30	5.49	92.16
COV (%)	0.71	0.91	1.39	1.09	0.87	0.82	1.05	1.25	1.02	0.82	0.90	0.96	9.57
N (YEARS)	13	20	19	20	20	20	19	19	19	20	20	20	17
SUM OF MONTHLY MEANS													
STATION 313.00													
MEAN	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
STD DEV	5.23	5.54	6.80	7.60	8.54	9.18	10.23	10.13	9.00	7.82	6.30	5.49	92.16
COV (%)	0.71	0.91	1.39	1.09	0.87	0.82	1.05	1.25	1.02	0.82	0.90	0.96	9.57
N (YEARS)	13	20	19	20	20	20	19	19	19	20	20	20	17
SUM OF MONTHLY MEANS													
STATION 313.00													
MEAN	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
STD DEV	5.23	5.54	6.80	7.60	8.54	9.18	10.23	10.13	9.00	7.82	6.30	5.49	92.16
COV (%)	0.71	0.91	1.39	1.09	0.87	0.82	1.05	1.25	1.02	0.82	0.90	0.96	9.57
N (YEARS)	13	20	19	20	20	20	19	19	19	20	20	20	17
SUM OF MONTHLY MEANS													
STATION 313.00													
MEAN	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
STD DEV	5.23	5.54	6.80	7.60	8.54	9.18	10.23	10.13	9.00	7.82	6.30	5.49	92.16
COV (%)	0.71	0.91	1.39	1.09	0.87	0.82	1.05	1.25	1.02	0.82	0.90	0.96	9.57
N (YEARS)	13	20	19	20	20	20	19	19	19	20	20	20	17
SUM OF MONTHLY MEANS													

APPENDIX TABLE B.2—Continued

STATION 313.10													
MEAN	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
DEV	5.07	5.52	6.28	6.71	8.39	9.34	10.32	9.54	9.35	8.79	7.03	4.80	94.88
STD	0.81	0.67	1.12	0.71	0.48	0.10	0.74	0.60	1.55	1.17	1.34	0.92	4.41
COV (%)	15.99	12.10	17.78	10.65	5.75	1.07	7.13	6.33	16.60	13.25	19.05	19.20	4.64
N (YEARS)	3	3	4	4	4	4	4	4	4	3	3	3	2
									SUM OF MONTHLY	MEANS			91.14
STATION 313.30													
MEAN	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
DEV	5.22	0.79	7.05	7.65	8.4	9.24	10.17	8.6	8.82	7.73	6.04	5.51	91.75
STD	0.63	0.79	1.03	0.96	0.56	0.70	0.63	0.80	0.80	0.71	0.80	0.72	6.25
COV (%)	12.03	14.68	14.56	12.59	6.36	7.54	6.18	8.10	9.05	9.24	13.28	13.15	6.82
N (YEARS)	11	11	10	11	11	11	11	11	11	11	11	10	10
									SUM OF MONTHLY	MEANS			91.52
STATION 314.00													
MEAN	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
DEV	5.43	5.34	7.09	7.25	8.03	8.54	9.01	8.70	7.99	6.81	6.21	5.35	84.47
STD	0.57	0.90	1.26	0.74	0.84	1.19	0.85	0.64	0.73	0.77	1.24	0.88	7.18
COV (%)	10.45	16.88	17.83	10.17	10.45	13.89	9.42	7.34	9.18	11.23	20.00	16.44	8.50
N (YEARS)	6	6	6	6	7	6	6	6	7	7	8	8	6
									SUM OF MONTHLY	MEANS			85.75
STATION 314.10													
MEAN	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
DEV	5.39	5.79	6.78	7.42	8.46	8.97	9.50	8.8	8.36	7.56	6.24	5.65	89.20
STD	0.71	0.95	1.47	1.14	0.76	0.68	1.20	0.94	0.76	0.96	0.83	0.48	7.62
COV (%)	13.17	16.45	21.75	15.34	9.02	7.64	12.60	10.10	9.11	12.74	13.24	8.56	8.54
N (YEARS)	11	11	11	11	11	11	10	11	11	11	11	11	10
									SUM OF MONTHLY	MEANS			89.30
STATION 316.00													
MEAN	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
DEV	5.48	4.44	6.35	7.66	8.74	10.47	10.46	10.18	10.20	7.88	7.09	6.33	94.37
STD	0.00	0.00	0.57	1.15	0.69	1.29	0.45	1.34	1.27	1.02	0.45	1.77	0.00
COV (%)	0.00	0.00	8.2	15.04	7.84	12.2	4.2	13.12	12.40	12.92	6.38	28.02	0.00
N (YEARS)	1	1	2	2	2	2	2	2	2	2	2	2	1
									SUM OF MONTHLY	MEANS			95.28

APPENDIX TABLE B.2--Continued

STATION 316.20													
MEAN	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
DEV	5.11	5.30	7.09	7.38	8.14	9.07	9.21	8.84	7.32	6.33	5.44	5.50	85.49
STD	0.46	0.92	2.16	0.90	0.51	0.99	1.11	0.61	1.26	0.47	0.92	0.72	0.95
COV (%)	9.02	17.32	30.43	12.19	6.26	10.92	12.10	6.93	17.15	7.42	16.84	13.01	1.11
N (YEARS)	3	3	3	3	3	4	4	3	3	3	3	3	2
SUM OF MONTHLY MEANS 84.73													
STATION 316.30													
MEAN	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
DEV	4.48	4.43	4.59	6.15	7.49	8.19	8.79	7.63	7.99	7.18	4.86	4.87	0.00
STD	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
COV (%)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
N (YEARS)	1	1	1	1	1	1	1	1	1	1	1	1	0
SUM OF MONTHLY MEANS 76.65													
STATION 317.10													
MEAN	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
DEV	4.53	5.21	6.59	7.01	7.97	8.86	9.31	10.65	7.23	7.78	5.39	5.29	85.18
STD	0.96	0.06	1.17	1.00	0.00	0.00	0.00	0.00	0.00	0.57	0.21	0.57	0.00
COV (%)	21.23	1.22	17.69	14.32	0.00	0.00	0.00	0.00	0.00	7.36	3.80	10.82	0.00
N (YEARS)	2	2	2	2	1	1	1	1	1	2	2	2	1
SUM OF MONTHLY MEANS 85.82													
STATION 317.20													
MEAN	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
DEV	5.30	5.48	6.46	7.10	8.18	8.60	9.44	9.45	8.44	7.39	6.17	5.47	87.65
STD	0.72	0.73	0.97	1.01	0.65	0.87	0.74	0.54	0.78	0.93	0.83	1.00	5.05
COV (%)	13.61	13.34	15.05	14.29	7.95	10.12	7.85	5.68	9.19	12.58	13.54	18.36	5.76
N (YEARS)	16	17	17	17	17	17	17	17	15	15	15	16	14
SUM OF MONTHLY MEANS 87.48													
STATION 321.50													
MEAN	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
DEV	5.38	5.67	7.01	7.50	8.52	8.99	10.16	10.04	8.85	7.76	6.37	5.65	92.17
STD	0.90	0.80	1.67	1.18	0.94	0.81	1.31	1.57	1.11	0.98	1.11	1.14	10.32
COV (%)	16.68	14.11	23.86	15.73	11.02	9.00	12.91	15.66	12.51	12.69	17.44	20.17	11.20
N (YEARS)	15	16	16	16	16	16	15	15	16	16	16	16	14
SUM OF MONTHLY MEANS 91.90													

APPENDIX TABLE B.2--Continued

STATION 361.00	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
MEAN	4.90	4.76	6.81	6.90	7.91	8.16	8.65	8.56	8.24	6.45	5.27	4.55	83.43
STD DEV	0.41	0.90	0.68	1.00	0.65	0.71	0.81	0.67	0.74	0.28	0.55	0.28	3.44
COV (%)	8.36	19.02	9.94	14.51	8.25	8.68	9.33	7.85	8.98	4.5	10.35	6.12	4.3
N (YEARS)	4	5	3	5	5	5	5	5	5	4	4	4	3
													SUM OF MONTHLY MEANS 81.16
STATION 363.10	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
MEAN	5.29	5.54	6.29	6.45	7.50	7.37	7.45	7.71	7.19	6.33	5.74	4.97	78.70
STD DEV	0.55	0.39	0.75	0.69	0.80	0.50	0.94	0.54	0.82	0.54	0.50	0.77	3.49
COV (%)	10.44	7.08	11.90	10.74	10.68	6.82	12.57	7.00	11.46	8.53	8.76	15.42	4.43
N (YEARS)	7	7	7	9	9	9	9	9	9	9	9	7	5
													SUM OF MONTHLY MEANS 77.83
STATION 372.20	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
MEAN	5.30	5.93	7.64	6.79	7.77	6.36	7.55	8.44	8.04	6.93	5.61	5.59	81.48
STD DEV	0.64	0.31	0.76	0.66	0.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
COV (%)	12.13	5.25	9.90	9.79	11.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
N (YEARS)	2	2	2	2	2	1	1	1	1	1	1	1	1
													SUM OF MONTHLY MEANS 81.95
STATION 372.30	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
MEAN	4.98	5.59	6.41	6.86	7.80	7.71	7.83	7.88	7.38	6.29	6.02	4.76	78.73
STD DEV	0.86	1.40	0.64	1.08	1.49	1.10	0.51	0.62	0.54	0.40	0.36	1.29	3.88
COV (%)	17.35	25.05	10.06	15.74	19.12	14.23	6.47	7.87	7.31	6.28	6.04	27.13	4.93
N (YEARS)	4	5	5	6	6	6	6	6	6	6	5	5	2
													SUM OF MONTHLY MEANS 79.51
STATION 373.00	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
MEAN	0.00	4.98	6.66	6.09	7.90	6.36	6.93	6.49	6.99	6.75	0.00	0.00	0.00
STD DEV	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
COV (%)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
N (YEARS)	0	1	1	1	1	1	1	1	1	1	0	0	0
													SUM OF MONTHLY MEANS 0.00

APPENDIX TABLE B.2--Continued

STATION 385.00													
MEAN	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
DEV	4.82	5.33	6.70	6.65	7.28	7.46	7.74	7.93	7.22	6.41	5.40	5.53	68.78
STD	1.30	0.84	1.27	1.00	0.96	1.07	1.15	0.67	0.82	1.15	1.15	1.00	0.00
COV (%)	26.95	15.81	19.01	15.06	13.18	14.40	14.86	8.48	11.31	17.90	21.34	18.17	0.00
N (YEARS)	4	7	7	8	8	8	8	7	7	7	7	3	1
SUM OF MONTHLY MEANS 78.47													
STATION 388.00													
MEAN	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
DEV	5.15	4.86	5.84	6.14	6.69	6.63	6.58	7.13	6.83	5.92	5.01	5.09	74.35
STD	0.33	1.04	1.11	0.78	0.81	0.74	0.95	1.34	0.77	0.35	0.71	0.51	0.00
COV (%)	6.49	21.35	18.94	12.68	12.13	11.11	14.37	18.83	11.28	5.86	14.22	10.00	0.00
N (YEARS)	4	7	7	6	8	8	8	7	7	7	7	3	1
SUM OF MONTHLY MEANS 71.87													
STATION 391.10													
MEAN	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
DEV	5.70	6.16	7.68	8.27	9.17	9.48	10.06	10.21	9.32	8.16	6.04	5.03	105.05
STD	1.36	1.60	1.18	1.51	1.53	1.47	1.45	1.27	1.19	1.34	0.87	0.41	0.00
COV (%)	23.86	25.93	15.34	18.28	16.69	15.53	14.37	12.48	12.80	16.43	14.44	8.16	0.00
N (YEARS)	4	7	7	6	8	8	7	7	7	7	5	4	1
SUM OF MONTHLY MEANS 95.28													
STATION 391.20													
MEAN	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
DEV	5.41	5.31	7.80	9.88	10.76	10.01	8.49	9.66	8.82	8.65	5.65	4.47	0.00
STD	0.00	0.00	0.00	0.00	0.00	0.00	3.76	0.00	0.00	0.00	0.00	0.00	0.00
COV (%)	0.00	0.00	0.00	0.00	0.00	0.00	44.31	0.00	0.00	0.00	0.00	0.00	0.00
N (YEARS)	1	1	1	1	1	1	2	1	1	1	1	1	0
SUM OF MONTHLY MEANS 94.91													
STATION 393.00													
MEAN	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
DEV	5.52	5.54	7.64	8.01	8.90	9.94	10.78	10.38	9.51	8.26	6.69	5.91	95.97
STD	0.69	1.04	1.64	1.43	1.24	1.20	1.52	1.54	0.81	1.07	0.95	1.00	10.91
COV (%)	12.56	18.85	22.58	17.84	13.91	12.06	14.08	14.83	8.49	13.01	14.20	16.87	11.37
N (YEARS)	9	9	9	9	9	10	9	9	9	9	9	9	8
SUM OF MONTHLY MEANS 96.72													

APPENDIX TABLE B.2--Continued

STATION 394.00													
MEAN	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
DEV	5.46	5.33	7.17	7.82	9.03	10.21	11.14	10.92	9.84	8.41	6.73	5.68	98.53
STD	0.81	1.24	1.71	1.35	1.33	0.91	1.45	1.32	1.26	1.01	1.09	0.99	11.27
COV (%)	14.82	23.32	23.78	17.29	14.77	8.93	13.04	12.06	12.79	12.01	16.19	17.37	11.44
N (YEARS)	10	10	10	10	11	12	11	11	11	11	10	10	8
										SUM OF MONTHLY MEANS			97.74
STATION 394.10													
MEAN	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
DEV	5.29	5.65	7.06	7.79	8.96	9.78	10.78	10.96	9.78	8.45	6.76	5.74	97.17
STD	0.63	0.74	1.35	1.16	0.98	0.83	0.98	1.09	0.92	0.84	0.87	0.76	8.36
COV (%)	11.93	13.08	19.18	14.84	10.99	8.45	9.08	9.95	9.38	9.97	12.93	13.29	8.60
N (YEARS)	16	17	17	17	17	17	16	16	16	17	17	17	15
										SUM OF MONTHLY MEANS			97.00
STATION 396.00													
MEAN	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
DEV	5.10	5.44	6.80	7.59	8.90	9.86	10.67	10.39	9.44	8.07	6.46	5.31	94.25
STD	0.64	0.95	1.37	1.06	0.98	1.18	1.36	1.05	0.89	0.98	0.89	0.93	9.62
COV (%)	12.60	17.48	20.17	13.96	10.98	11.98	12.74	10.10	9.40	12.20	13.84	17.44	9.15
N (YEARS)	22	23	24	24	24	24	23	23	23	23	23	23	21
										SUM OF MONTHLY MEANS			94.03
STATION 401.00													
MEAN	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
DEV	4.88	5.01	6.73	7.53	8.90	9.62	10.29	9.91	8.68	7.36	5.79	4.91	89.20
STD	0.54	0.93	1.53	1.31	1.13	1.44	1.22	1.08	0.80	0.69	0.84	0.74	9.14
COV (%)	11.04	18.64	22.75	17.43	12.72	14.97	11.85	10.94	9.20	9.34	14.46	15.03	10.24
N (YEARS)	20	21	21	21	21	21	20	20	21	21	21	21	19
										SUM OF MONTHLY MEANS			89.61
STATION 401.10													
MEAN	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
DEV	4.57	4.80	6.20	7.03	8.20	8.90	9.64	9.29	8.27	6.98	5.51	4.81	84.12
STD	0.46	0.71	1.08	1.03	0.78	0.72	0.95	0.83	0.57	0.52	0.74	0.65	6.75
COV (%)	10.16	14.72	17.40	14.62	9.55	8.13	9.80	8.89	6.85	7.51	13.40	13.49	8.03
N (YEARS)	16	17	17	17	17	17	16	16	16	16	17	17	15
										SUM OF MONTHLY MEANS			84.20

APPENDIX TABLE B.2--Continued

STATION 402.00													
MEAN	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
DEV	5-51	7-28	7-39	8-19	9-14	9-32	10-90	0-00	0-00	0-00	0-00	7-20	0-00
STD	0-00	0-00	0-00	0-00	0-00	0-00	0-00	0-00	0-00	0-00	0-00	0-00	0-00
COV (%)	0-00	0-00	0-00	0-00	0-00	0-00	0-00	0-00	0-00	0-00	0-00	0-00	0-00
N (YEARS)	1	1	1	1	1	1	1	0	0	0	0	1	0
									SUM OF MONTHLY MEANS				0-00
STATION 403.10													
MEAN	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
DEV	5-54	5-51	6-63	7-31	9-03	10-22	10-87	10-31	9-41	7-97	6-17	5-23	93-94
STD	0-68	0-82	1-32	1-14	1-50	1-19	1-54	1-41	1-03	0-98	1-11	1-07	10-93
COV (%)	12-35	14-88	19-90	15-66	16-63	11-66	14-17	13-63	10-95	12-35	18-05	20-51	11-63
N (YEARS)	16	17	17	17	17	16	16	16	16	17	17	17	15
									SUM OF MONTHLY MEANS				94-20
STATION 404.10													
MEAN	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
DEV	5-44	5-02	6-66	7-49	9-40	10-67	10-86	10-65	9-00	7-83	6-51	5-17	94-87
STD	0-65	1-06	0-58	1-20	1-82	1-33	1-09	1-25	1-04	0-72	1-09	0-76	10-30
COV (%)	12-04	21-13	8-78	15-99	19-33	12-43	10-02	11-72	11-56	9-16	16-78	14-77	10-85
N (YEARS)	4	4	4	4	4	5	5	5	4	4	4	4	3
									SUM OF MONTHLY MEANS				94-70
STATION 404.30													
MEAN	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
DEV	5-01	5-14	6-85	7-74	9-15	10-30	10-93	10-36	9-11	7-92	6-24	5-15	93-99
STD	0-69	0-86	1-11	1-43	1-40	1-01	1-17	1-13	0-71	1-09	1-24	0-96	10-23
COV (%)	13-79	16-76	16-16	18-43	15-34	9-78	10-71	10-91	7-81	13-71	19-93	18-71	10-88
N (YEARS)	16	17	17	17	17	18	17	16	16	16	16	16	14
									SUM OF MONTHLY MEANS				93-90
STATION 404.40													
MEAN	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
DEV	4-76	5-22	6-52	7-40	8-90	9-79	10-63	10-79	9-68	7-62	6-29	5-13	90-36
STD	0-49	0-80	1-62	1-07	0-71	0-38	0-23	0-42	0-74	0-21	0-58	1-16	4-82
COV (%)	10-29	15-36	24-88	14-39	7-97	3-89	2-15	3-91	7-67	2-75	9-25	22-69	5-33
N (YEARS)	3	4	4	4	4	4	4	4	4	5	5	5	3
									SUM OF MONTHLY MEANS				92-73

APPENDIX TABLE B.2--Continued

STATION 406-30													
MEAN	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
DEV	4-22	4-00	5-89	5-51	6-60	7-53	0-00	6-00	7-22	6-35	4-48	4-07	0-00
STD	0-00	0-00	0-00	0-00	0-00	0-00	0-00	0-00	0-00	0-00	0-00	0-00	0-00
COV (%)	0-00	0-00	0-00	0-00	0-00	0-00	0-00	0-00	0-00	0-00	0-00	0-00	0-00
N (YEARS)	1	1	1	1	1	1	0	1	1	1	1	1	0
SUM OF MONTHLY MEANS 0.00													
STATION 410-10													
MEAN	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
DEV	5-43	5-54	6-92	7-84	9-16	10-28	11-18	10-77	9-46	8-17	6-72	5-56	97-14
STD	0-84	0-86	1-53	1-22	1-25	0-77	1-24	1-24	0-82	1-01	1-07	0-98	9-94
COV (%)	15-46	15-47	22-08	15-50	13-61	7-54	11-10	11-50	8-71	12-34	15-91	17-69	10-23
N (YEARS)	16	17	17	17	17	16	16	16	16	17	17	17	15
SUM OF MONTHLY MEANS 97.03													
STATION 413-00													
MEAN	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
DEV	4-85	5-10	6-16	6-75	8-26	9-05	9-59	9-68	9-20	7-69	5-89	4-95	87-82
STD	0-85	0-90	1-37	0-94	1-16	1-14	1-42	1-28	1-45	1-24	1-55	1-16	10-96
COV (%)	17-47	17-58	22-29	13-87	14-01	12-61	14-86	13-20	15-73	16-07	26-31	23-48	12-48
N (YEARS)	22	23	23	24	24	24	23	23	23	23	23	23	20
SUM OF MONTHLY MEANS 87.17													
STATION 413-20													
MEAN	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
DEV	4-08	4-95	5-21	7-56	7-90	9-64	9-48	9-06	8-66	6-94	5-86	3-71	81-53
STD	0-61	0-70	0-60	1-86	1-25	0-96	1-87	0-51	0-85	1-16	0-66	1-40	0-49
COV (%)	15-04	2-05	11-46	24-62	15-85	9-98	19-72	5-63	9-76	16-70	11-86	37-79	0-61
N (YEARS)	3	3	3	3	3	3	3	3	3	3	3	3	2
SUM OF MONTHLY MEANS 82.79													
STATION 415-00													
MEAN	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
DEV	5-06	5-22	6-49	7-36	8-82	10-27	11-22	10-47	9-10	7-87	6-10	5-25	94-31
STD	0-94	0-82	1-22	1-46	1-30	1-73	1-91	1-67	1-13	1-09	0-95	0-91	9-42
COV (%)	18-51	15-79	18-75	19-82	14-71	16-79	16-98	15-91	12-45	13-90	15-64	17-39	9-98
N (YEARS)	20	21	19	21	21	21	20	20	20	20	20	20	17
SUM OF MONTHLY MEANS 93.23													

APPENDIX TABLE B.2--Continued

STATION 416.00	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
MEAN	4.97	5.31	5.91	6.75	8.02	8.67	8.89	8.86	8.36	7.38	5.39	5.01	83.11
STD DEV	0.60	1.04	1.38	1.31	1.37	1.44	1.62	1.47	1.38	1.44	1.26	0.94	13.19
COV (%)	12.08	19.65	23.35	19.39	17.06	16.55	18.26	16.56	16.53	19.55	23.38	18.70	15.87
N (YEARS)	12	12	12	12	12	13	12	12	12	12	12	12	11
									SUM OF MONTHLY MEANS				83.52
STATION 419.00	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
MEAN	5.09	5.07	6.57	7.19	7.71	9.40	10.20	9.44	9.03	7.68	5.91	4.92	85.92
STD DEV	1.24	0.88	1.91	1.50	1.01	1.51	1.85	0.72	1.05	1.23	1.13	0.81	11.36
COV (%)	24.45	17.28	29.08	20.77	13.11	16.06	18.16	7.58	11.58	15.96	19.20	16.54	13.22
N (YEARS)	6	6	6	7	7	7	6	6	6	6	6	6	4
									SUM OF MONTHLY MEANS				88.21
STATION 457.00	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
MEAN	5.79	5.47	7.60	7.94	9.18	9.15	9.82	9.76	8.46	7.89	6.33	4.58	94.04
STD DEV	0.98	0.26	1.16	1.10	2.30	1.27	1.32	1.52	0.98	0.85	0.99	0.99	11.89
COV (%)	17.01	4.79	15.28	13.81	25.09	13.93	13.46	15.62	11.57	10.78	15.61	21.54	12.65
N (YEARS)	4	5	5	6	5	6	6	5	5	5	4	4	3
									SUM OF MONTHLY MEANS				91.97
STATION 458.00	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
MEAN	6.71	7.10	9.48	8.38	9.07	9.42	9.95	10.51	9.85	9.49	7.28	5.77	102.91
STD DEV	0.95	1.79	2.02	0.56	1.60	1.13	1.31	0.75	1.57	1.96	1.54	1.36	13.05
COV (%)	14.15	25.18	21.30	6.70	17.67	12.02	13.14	7.09	15.96	20.69	21.16	23.60	12.68
N (YEARS)	3	3	3	4	4	4	4	4	4	4	4	4	3
									SUM OF MONTHLY MEANS				103.01
STATION 458.10	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
MEAN	4.61	5.28	6.23	6.77	7.86	7.91	9.07	9.17	7.92	6.98	5.42	5.13	84.85
STD DEV	1.06	1.01	1.55	1.13	1.20	0.94	1.00	1.38	0.78	1.01	0.91	1.06	3.88
COV (%)	22.93	19.23	24.92	16.76	15.20	11.87	11.00	15.09	9.90	14.50	16.84	20.63	4.57
N (YEARS)	5	7	8	9	9	7	8	8	8	8	7	5	3
									SUM OF MONTHLY MEANS				82.35

APPENDIX TABLE B.2--Continued

STATION 485.00													
MEAN	JAN 2	FEB 5	MAR 9	APR 9	MAY 9	JUN 8	JUL 8	AUG 8	SEP 8	OCT 8	NOV 9	DEC 9	ANNUAL
DEV	5.82	5.65	6.93	7.25	8.79	9.81	10.02	10.04	9.35	8.07	6.89	5.42	93.70
STD	1.07	0.94	1.39	0.96	0.91	0.45	0.62	0.83	0.81	1.09	0.98	1.00	5.08
COV (%)	18.35	16.64	20.07	13.28	10.30	4.61	6.21	8.23	8.68	13.53	14.22	18.52	5.43
N (YEARS)	8	9	9	9	9	8	8	8	8	8	9	9	8
SUM OF MONTHLY MEANS 94.04													
STATION 485.10													
MEAN	JAN 3	FEB 3	MAR 3	APR 3	MAY 3	JUN 2	JUL 2	AUG 2	SEP 2	OCT 2	NOV 3	DEC 3	ANNUAL
DEV	5.14	4.60	6.29	6.57	7.55	8.11	9.13	9.47	8.25	7.13	5.28	5.67	82.51
STD	0.61	1.17	0.58	0.80	0.76	0.18	0.69	1.03	1.27	1.32	1.72	1.80	3.67
COV (%)	11.92	25.37	9.27	12.12	10.04	2.27	7.51	10.82	15.43	18.53	32.59	31.81	4.45
N (YEARS)	3	3	3	3	3	2	2	2	2	2	3	3	2
SUM OF MONTHLY MEANS 83.19													
STATION 485.30													
MEAN	JAN 4	FEB 4	MAR 4	APR 4	MAY 4	JUN 4	JUL 4	AUG 3	SEP 3	OCT 4	NOV 4	DEC 4	ANNUAL
DEV	4.22	3.98	5.85	6.44	7.73	8.28	8.63	8.11	7.37	5.69	5.68	4.47	75.50
STD	1.07	0.11	0.97	0.85	0.57	1.14	0.39	0.96	0.24	0.68	1.63	1.37	10.57
COV (%)	25.33	2.74	16.55	13.24	7.32	13.72	4.57	11.85	3.21	11.92	28.62	30.66	14.00
N (YEARS)	4	4	4	4	4	4	4	3	3	4	4	4	2
SUM OF MONTHLY MEANS 76.45													
STATION 486.50													
MEAN	JAN 3	FEB 6	MAR 7	APR 7	MAY 7	JUN 7	JUL 6	AUG 6	SEP 6	OCT 6	NOV 6	DEC 6	ANNUAL
DEV	4.53	4.61	6.57	6.76	8.00	8.61	8.74	8.08	8.30	6.34	4.82	4.24	78.07
STD	0.73	0.61	1.86	1.40	1.19	1.29	1.13	0.91	0.45	0.77	0.94	0.56	8.88
COV (%)	16.08	13.14	28.7	20.7	14.89	14.7	12.88	11.21	5.44	12.19	19.43	13.27	11.37
N (YEARS)	6	6	7	7	7	7	6	6	6	6	6	6	5
SUM OF MONTHLY MEANS 79.67													
STATION 486.60													
MEAN	JAN 0	FEB 9	MAR 7	APR 7	MAY 5	JUN 6	JUL 6	AUG 6	SEP 6	OCT 6	NOV 6	DEC 6	ANNUAL
DEV	5.71	6.68	7.30	8.57	10.71	10.70	11.63	11.16	10.35	8.94	7.37	6.45	105.54
STD	0.71	0.88	0.30	0.21	0.63	0.26	0.44	0.63	0.50	0.97	0.88	0.73	1.96
COV (%)	12.47	13.11	3.99	2.5	5.86	2.42	3.81	5.65	4.84	10.84	11.97	11.27	1.5
N (YEARS)	6	6	5	5	5	6	6	6	6	6	6	6	5
SUM OF MONTHLY MEANS 105.84													

APPENDIX TABLE B.2--Continued

STATION 511-50													
MEAN	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
DEV	4.61	4.29	6.69	6.73	7.46	7.57	8.81	7.74	8.15	7.40	6.52	4.86	80.65
STD	0.93	0.72	1.02	0.77	1.42	1.38	1.36	0.66	1.02	1.02	2.71	0.76	11.64
COV (%)	20.17	16.87	15.27	11.39	19.02	18.18	15.46	8.52	12.50	13.80	41.59	15.63	14.43
N (YEARS)	4	4	4	4	3	3	3	3	3	3	3	3	3
									SUM OF	SUM OF	MONTHLY	MEANS	80.83
STATION 528-30													
MEAN	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
DEV	5.73	6.43	7.36	7.84	10.63	10.75	11.01	12.38	10.29	9.98	7.74	6.32	104.56
STD	1.54	0.11	1.34	0.97	1.58	0.42	1.82	0.39	0.00	0.00	0.00	0.00	0.00
COV (%)	26.2	1.65	18.15	12.33	14.83	3.95	16.57	3.14	0.00	0.00	0.00	0.00	0.00
N (YEARS)	2	2	2	3	2	2	2	2	1	1	1	1	1
									SUM OF	SUM OF	MONTHLY	MEANS	106.46
STATION 531-10													
MEAN	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
DEV	7.78	7.14	9.63	9.91	10.70	11.56	11.87	11.79	10.67	9.73	8.62	8.14	117.41
STD	1.00	1.14	1.31	1.54	1.22	2.09	1.44	0.82	1.30	1.14	1.51	0.93	116.05
COV (%)	12.89	14.75	13.65	15.54	11.44	18.06	12.12	6.94	12.19	11.72	17.50	11.53	5.16
N (YEARS)	13	14	14	14	13	14	15	15	15	15	15	15	12
									SUM OF	SUM OF	MONTHLY	MEANS	118.10
STATION 687-00													
MEAN	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
DEV	2.16	1.83	2.55	2.64	2.06	2.07	3.91	2.35	2.11	2.67	1.00	1.50	25.63
STD	0.62	0.74	0.14	0.08	0.16	0.00	1.80	0.00	0.00	0.00	0.00	0.00	0.00
COV (%)	28.2	40.19	5.55	3.21	7.88	0.00	46.06	0.00	0.00	0.00	0.00	0.00	0.00
N (YEARS)	2	2	2	2	2	2	2	1	1	1	1	1	1
									SUM OF	SUM OF	MONTHLY	MEANS	26.85
STATION 702-00													
MEAN	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
DEV	4.85	4.93	5.91	6.72	7.53	7.78	7.90	8.77	6.73	6.12	4.43	3.48	73.72
STD	1.35	0.54	0.29	1.15	0.63	0.41	0.37	0.77	1.44	0.30	0.23	1.43	5.41
COV (%)	27.5	11.04	4.98	17.5	8.40	5.27	4.70	9.44	21.44	4.97	5.13	41.13	7.34
N (YEARS)	5	5	5	5	5	4	4	4	4	4	4	4	4
									SUM OF	SUM OF	MONTHLY	MEANS	74.56

APPENDIX TABLE B.2--Continued

STATION 702-20													
MEAN	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
DEV	4.96	5.55	7.24	7.92	9.20	9.71	10.47	10.45	9.28	8.12	6.43	5.38	98.76
STD	1.04	1.54	1.72	1.63	1.73	2.10	2.73	2.62	2.27	2.37	1.92	1.66	21.87
COV (%)	20.87	27.74	23.69	20.56	18.82	21.59	26.11	25.09	24.48	29.25	29.39	30.79	22.15
N (YEARS)	23	20	22	23	22	22	24	24	24	24	23	24	16
													94.71
													SUM OF MONTHLY MEANS
STATION 707-00													
MEAN	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
DEV	4.53	4.92	5.74	6.28	6.89	7.24	7.76	7.82	7.18	6.25	5.04	4.79	72.62
STD	0.28	0.18	0.54	0.47	0.57	0.88	0.95	0.92	0.60	0.54	0.60	1.00	0.76
COV (%)	6.22	3.68	9.37	7.42	8.23	12.21	12.25	11.75	8.34	8.69	11.85	20.91	1.04
N (YEARS)	6	8	8	8	8	8	8	8	8	8	8	6	4
													74.44
													SUM OF MONTHLY MEANS
STATION 713-00													
MEAN	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
DEV	4.10	4.60	0.00	0.00	5.71	7.20	7.37	7.97	6.80	5.57	6.22	4.53	0.00
STD	0.37	0.00	0.00	0.00	0.28	4.24	1.66	0.79	1.00	0.20	0.28	0.00	0.00
COV (%)	8.97	0.00	0.00	0.00	4.83	58.79	22.53	9.94	14.77	3.55	4.43	0.00	0.00
N (YEARS)	2	1	0	0	2	2	2	2	2	2	2	1	0
													0.00
													SUM OF MONTHLY MEANS
STATION 713-50													
MEAN	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
DEV	4.14	4.71	6.12	6.39	7.30	7.55	7.48	7.91	7.70	6.43	5.13	4.16	75.59
STD	0.13	0.50	1.07	0.94	0.57	0.47	1.14	0.75	0.55	0.33	0.58	0.28	5.44
COV (%)	3.07	10.70	17.55	14.69	7.80	6.20	15.5	9.53	7.09	5.09	11.5	6.61	7.19
N (YEARS)	4	4	4	4	5	5	5	5	5	5	5	5	4
													75.02
													SUM OF MONTHLY MEANS
STATION 718-20													
MEAN	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
DEV	0.40	0.30	0.60	0.50	0.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
STD	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
COV (%)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
N (YEARS)	1	1	1	1	1	0	0	0	0	0	0	0	0
													0.00
													SUM OF MONTHLY MEANS

APPENDIX TABLE B.2—Continued

STATION 727.00		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
MEAN	5.82	6.01	7.47	7.94	8.64	8.99	8.99	9.89	9.58	8.47	7.87	6.71	6.00	94.59
STD DEV	0.63	0.72	0.89	0.88	0.82	1.18	1.18	0.82	1.19	0.95	0.70	0.99	0.70	4.97
COV (%)	10.77	11.91	11.97	11.02	9.45	13.14	13.14	8.29	12.40	11.17	8.88	14.78	11.62	5.25
N (YEARS)	20	21	18	19	19	19	19	19	20	20	21	21	19	14
STATION 732.00		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
MEAN	5.46	5.75	7.12	7.75	8.41	8.99	8.99	9.74	9.65	8.48	7.54	6.29	5.59	91.28
STD DEV	0.37	0.73	0.77	0.66	0.76	0.77	0.77	0.88	0.92	0.46	0.56	0.84	0.65	3.96
COV (%)	6.70	12.71	10.85	8.57	9.02	8.58	8.58	9.02	9.51	5.39	7.42	13.33	11.63	4.34
N (YEARS)	20	21	19	20	21	21	21	20	20	20	21	21	19	15.77
STATION 737.00		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
MEAN	5.23	5.59	6.75	7.04	7.83	8.25	8.25	8.93	8.81	7.89	7.08	5.89	5.22	84.46
STD DEV	0.53	0.67	0.81	0.60	0.66	0.85	0.85	0.61	0.87	0.94	0.69	0.87	0.56	3.27
COV (%)	10.17	11.90	12.03	8.50	8.44	10.29	10.29	6.80	9.92	11.94	9.77	14.80	10.69	3.87
N (YEARS)	20	21	19	20	21	21	21	20	20	20	21	21	20	16.51
STATION 738.40		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
MEAN	5.16	5.31	6.28	6.10	7.12	7.38	7.38	7.68	7.63	6.79	6.19	5.07	4.94	77.27
STD DEV	0.76	0.81	0.65	0.75	0.66	0.77	0.77	0.81	0.73	0.77	0.64	0.70	0.92	3.83
COV (%)	14.73	15.24	10.37	12.30	9.21	10.42	10.42	10.55	9.51	11.36	10.39	13.76	18.58	4.98
N (YEARS)	19	21	19	21	22	22	22	21	21	21	21	20	19	14
STATION 740.30		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
MEAN	4.75	4.72	4.87	5.93	7.44	8.50	8.50	9.07	9.43	7.91	6.74	5.52	5.02	80.90
STD DEV	1.27	0.73	0.83	0.81	0.96	0.38	0.38	0.74	1.53	0.88	1.09	1.37	1.71	7.35
COV (%)	26.67	15.47	17.03	13.62	12.94	4.45	4.45	8.10	16.25	11.10	16.10	24.82	33.98	9.08
N (YEARS)	5	4	4	4	4	4	4	5	5	5	5	5	5	4
								SUM OF MONTHLY						80.10

APPENDIX TABLE B.2--Continued

STATION 740.40													
MEAN	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
STD DEV	4.22	4.66	5.85	6.27	7.12	7.56	8.10	7.96	6.97	6.09	4.80	4.40	74.19
COV (%)	0.62	0.59	0.98	0.77	0.77	0.81	0.56	0.64	0.57	0.42	0.48	0.59	4.71
N (YEARS)	14.50	12.60	16.80	12.25	10.83	10.73	6.90	8.06	8.20	6.90	10.10	13.47	6.35
	21	21	21	21	20	21	20	20	20	20	20	21	19
										SUM OF	MONTHLY	MEANS	74.03
STATION 740.50													
MEAN	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
STD DEV	3.60	4.07	5.16	5.88	6.41	6.79	7.30	7.20	6.21	5.41	4.15	3.74	65.99
COV (%)	0.52	0.50	0.86	0.69	0.65	0.72	0.54	0.57	0.55	0.37	0.38	0.48	3.77
N (YEARS)	14.34	12.32	16.60	12.39	10.10	10.56	7.39	7.95	8.78	6.93	9.26	12.75	5.71
	20	20	20	20	19	20	19	20	20	20	20	20	18
										SUM OF	MONTHLY	MEANS	65.62
STATION 741.00													
MEAN	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
STD DEV	4.57	4.89	6.31	6.83	7.85	8.31	9.25	8.85	7.57	6.52	5.31	4.56	80.36
COV (%)	0.72	0.70	1.11	0.81	0.89	0.80	0.90	0.94	0.75	0.76	0.97	0.83	7.06
N (YEARS)	15.67	14.34	17.68	11.84	11.34	9.64	9.68	10.67	9.95	11.71	18.24	18.24	8.78
	22	23	23	23	23	23	22	22	22	22	22	20	19
										SUM OF	MONTHLY	MEANS	80.82
STATION 751.20													
MEAN	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
STD DEV	5.10	5.34	6.70	7.36	8.13	8.73	9.44	9.24	7.96	7.03	5.94	5.12	85.97
COV (%)	0.50	0.80	1.05	0.71	0.93	0.87	0.54	0.80	0.62	0.50	0.88	0.69	5.39
N (YEARS)	9.77	15.00	15.63	9.69	11.42	9.93	5.72	8.62	7.84	7.16	14.78	13.43	6.27
	20	21	18	20	21	21	20	20	20	21	21	20	16
										SUM OF	MONTHLY	MEANS	86.09
STATION 752.00													
MEAN	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
STD DEV	2.86	3.32	4.31	4.85	6.60	6.28	6.88	6.42	4.48	4.80	3.87	3.00	0.00
COV (%)	0.00	0.00	0.00	1.00	0.01	0.28	0.68	0.00	0.00	0.00	0.00	0.00	0.00
N (YEARS)	0.00	0.00	0.00	20.70	0.21	4.51	9.85	0.00	0.00	0.00	0.00	0.00	0.00
	1	1	1	2	2	2	2	1	1	1	1	1	0
										SUM OF	MONTHLY	MEANS	57.67

APPENDIX TABLE B.2—Continued

STATION 752.50													
MEAN	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
STD DEV	3.97	4.12	5.20	5.84	6.88	7.45	7.91	8.61	7.84	6.41	5.98	4.20	76.58
COV (%)	0.54	0.43	0.62	1.21	0.66	1.09	1.04	0.65	0.79	0.43	0.87	1.03	4.12
N (YEARS)	13.50	10.52	11.96	20.64	9.54	14.67	13.12	7.55	10.07	6.66	14.56	24.42	5.38
	4	4	4	4	4	4	4	3	3	3	3	3	3
	SUM OF MONTHLY MEANS 74.41												
STATION 756.00													
MEAN	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
STD DEV	4.69	4.82	5.43	5.93	6.73	6.71	7.44	7.37	6.64	6.04	4.88	4.59	71.97
COV (%)	0.77	0.84	0.78	0.65	0.60	0.62	0.49	0.82	1.14	0.71	0.81	1.05	3.37
N (YEARS)	16.43	17.50	14.46	10.97	8.92	9.17	6.65	11.06	17.23	11.75	16.55	22.84	4.64
	17	21	20	20	21	22	21	21	21	21	20	18	11
	SUM OF MONTHLY MEANS 71.27												
STATION 761.10													
MEAN	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
STD DEV	5.13	4.62	5.16	5.65	6.58	6.40	7.34	7.42	7.31	6.14	4.98	4.48	71.02
COV (%)	1.13	0.94	0.96	0.70	0.93	0.76	0.49	0.90	0.87	0.98	0.86	1.22	3.26
N (YEARS)	22.07	20.40	18.58	12.35	14.17	11.81	6.71	12.18	11.84	15.99	17.29	27.33	5.18
	5	6	6	6	6	6	6	6	6	6	6	6	5
	SUM OF MONTHLY MEANS 71.21												
STATION 772.60													
MEAN	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
STD DEV	2.51	2.54	2.72	2.22	3.09	3.31	3.73	3.83	3.60	2.89	2.02	2.71	35.07
COV (%)	1.17	0.87	1.02	0.47	0.75	0.67	1.00	0.86	0.71	0.50	0.61	0.90	3.99
N (YEARS)	46.47	34.19	37.45	21.10	24.35	20.25	26.83	22.36	19.69	17.18	30.39	33.42	11.37
	12	12	12	12	12	12	11	11	11	11	11	11	11
	SUM OF MONTHLY MEANS 35.17												
STATION 782.00													
MEAN	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
STD DEV	1.44	1.74	2.51	3.43	3.87	4.39	4.88	4.44	3.54	2.44	1.48	1.41	35.59
COV (%)	0.54	1.09	0.74	0.46	0.77	0.88	1.19	1.30	1.29	0.65	0.73	0.30	5.95
N (YEARS)	37.6	62.64	29.32	13.43	19.86	20.03	24.34	29.18	36.6	26.6	49.09	20.90	16.6
	6	6	6	6	6	6	6	6	6	6	6	6	6
	SUM OF MONTHLY MEANS 35.57												

APPENDIX TABLE B.2—Continued

STATION 783.00													
MEAN	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
STD DEV	0.00	0.00	3.54	3.54	0.00	5.39	6.13	5.82	0.00	3.09	4.58	3.10	0.00
COV (%)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.22	0.18	0.00
N (YEARS)	0	0	1	1	0	1	1	1	0	1	2	2	0
SUM OF MONTHLY MEANS 0.00													
STATION 787.00													
MEAN	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
STD DEV	3.11	3.03	3.86	3.85	4.14	4.12	4.37	4.43	3.85	3.48	3.16	2.96	44.45
COV (%)	0.43	0.33	0.32	0.36	0.33	0.42	0.34	0.49	0.25	0.41	0.28	0.33	2.07
N (YEARS)	13	11	11	11	11	11	11	11	11	10	10	11	49
SUM OF MONTHLY MEANS 44.36													
STATION 787.10													
MEAN	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
STD DEV	3.35	3.47	4.40	4.05	4.44	4.53	4.70	4.51	4.67	4.12	3.26	3.26	48.41
COV (%)	0.40	0.51	0.76	0.37	0.57	0.54	0.41	0.39	0.99	0.41	0.53	0.61	4.06
N (YEARS)	11	8	8	9	9	9	8	8	8	8	8	8	37
SUM OF MONTHLY MEANS 48.76													
STATION 789.00													
MEAN	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
STD DEV	0.00	0.50	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
COV (%)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
N (YEARS)	0	1	1	0	0	0	0	0	0	0	0	0	0
SUM OF MONTHLY MEANS 0.00													
STATION 795.10													
MEAN	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
STD DEV	4.13	4.13	5.41	5.97	7.15	8.75	8.45	7.47	7.30	6.45	4.33	4.05	66.84
COV (%)	0.72	0.81	2.02	0.30	0.80	0.80	1.32	1.09	0.40	0.45	0.05	0.50	0.00
N (YEARS)	17	3	3	2	3	3	4	4	3	3	3	3	1
SUM OF MONTHLY MEANS 73.59													

APPENDIX TABLE B.2—Continued

STATION 798.00		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
MEAN		4.12	4.36	6.03	6.60	7.37	7.71	8.25	8.01	7.04	5.91	4.66	4.06	74.21
STD DEV		0.55	0.43	0.92	0.81	0.45	0.67	0.64	0.63	0.50	0.36	0.37	0.48	3.24
COV (%)		13.36	9.98	15.26	12.25	6.11	8.68	7.75	7.82	7.13	6.07	8.00	11.78	4.37
N (YEARS)		8	8	8	8	9	9	9	9	9	9	9	9	8
SUM OF MONTHLY MEANS 74.12														
STATION 813.00		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
MEAN		4.05	4.13	5.22	5.76	6.33	6.87	7.34	7.19	6.28	5.61	4.22	3.90	65.25
STD DEV		0.86	0.80	0.82	0.85	0.89	1.32	1.04	0.82	1.09	0.95	0.86	0.82	8.58
COV (%)		21.12	19.36	15.78	14.71	13.98	19.26	14.12	11.36	17.28	17.02	20.28	20.95	13.15
N (YEARS)		22	21	22	22	22	21	22	23	24	24	24	23	18
SUM OF MONTHLY MEANS 66.90														
STATION 815.00		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
MEAN		4.85	4.83	6.16	6.16	7.11	7.24	7.45	7.74	6.75	6.04	4.68	4.59	76.34
STD DEV		0.84	1.02	1.39	0.99	1.05	0.83	1.91	0.79	1.52	1.26	0.99	1.06	9.32
COV (%)		17.31	21.12	22.57	15.99	14.79	11.44	25.60	10.23	22.52	20.81	21.16	23.03	12.21
N (YEARS)		11	13	12	13	14	15	15	15	15	15	15	14	10
SUM OF MONTHLY MEANS 73.60														
STATION 816.20		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
MEAN		5.05	4.40	5.89	6.03	6.92	7.10	7.20	7.76	6.84	4.76	5.45	4.40	0.00
STD DEV		0.00	0.00	0.00	0.00	0.06	0.40	1.08	0.07	0.64	0.00	0.00	0.00	0.00
COV (%)		0.00	0.00	0.00	0.00	0.92	5.58	15.02	0.91	9.30	0.00	0.00	0.00	0.00
N (YEARS)		1	1	1	1	2	2	2	2	2	1	1	1	0
SUM OF MONTHLY MEANS 71.80														
STATION 816.30		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
MEAN		4.32	5.00	6.14	5.75	7.52	6.42	6.96	7.62	7.84	6.59	5.16	5.81	74.05
STD DEV		1.39	0.27	0.48	0.94	0.81	0.61	1.34	0.27	0.74	0.88	0.49	1.21	5.73
COV (%)		32.13	5.43	7.76	16.35	10.72	9.50	19.29	3.54	9.44	13.3	9.45	20.87	7.73
N (YEARS)		3	4	4	4	4	3	3	3	3	3	3	3	2
SUM OF MONTHLY MEANS 75.13														

APPENDIX TABLE B.2--Continued

STATION 818-10		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
MEAN		4.56	4.92	5.61	5.61	6.61	6.96	7.47	7.48	6.79	6.21	4.92	4.55	70.59
STD DEV		0.88	0.77	0.78	1.01	0.76	0.59	0.67	0.97	0.91	0.88	0.85	1.18	5.15
COV (%)		19.41	15.73	13.86	17.96	11.48	8.55	8.93	13.02	13.47	14.16	17.19	25.88	7.29
N (YEARS)		18	20	20	20	22	22	21	21	20	21	20	18	12
SUM OF MONTHLY MEANS 71.69														
STATION 820-20		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
MEAN		4.35	4.44	5.87	6.19	7.07	7.79	8.13	8.04	7.03	6.04	4.37	3.87	72.90
STD DEV		0.51	0.44	0.51	0.67	0.96	0.78	0.77	0.61	0.55	0.58	0.72	0.35	7.90
COV (%)		11.74	9.88	8.64	10.76	13.51	9.96	9.53	7.56	7.85	9.54	16.49	9.15	3.98
N (YEARS)		11	12	12	11	10	11	11	12	11	11	11	11	9
SUM OF MONTHLY MEANS 73.17														
STATION 824-10		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
MEAN		3.77	4.34	4.63	5.07	5.85	6.49	6.44	6.77	6.43	5.23	4.28	3.38	61.34
STD DEV		0.82	0.92	0.62	0.74	0.70	0.49	1.06	0.72	0.53	0.37	1.17	0.54	3.44
COV (%)		21.61	21.31	13.39	14.50	11.91	7.53	16.48	10.58	8.22	7.16	27.26	15.99	5.61
N (YEARS)		5	7	6	6	6	6	6	6	6	6	6	6	5
SUM OF MONTHLY MEANS 62.67														
STATION 825-30		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
MEAN		5.39	5.33	6.96	7.07	7.80	7.67	8.55	8.50	7.44	6.98	5.99	5.41	83.83
STD DEV		0.70	0.62	1.03	0.92	0.61	0.67	0.98	0.92	1.48	0.61	1.23	1.06	3.50
COV (%)		12.90	11.70	14.82	13.03	7.87	8.86	11.47	10.77	19.83	8.70	20.46	19.62	4.18
N (YEARS)		10	13	14	14	15	15	15	15	15	15	14	12	6
SUM OF MONTHLY MEANS 83.02														
STATION 826-00		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
MEAN		4.33	4.19	5.30	6.04	6.67	6.80	7.13	7.15	6.50	3.58	4.40	4.21	68.29
STD DEV		0.62	0.39	0.50	0.53	0.63	0.52	0.61	0.54	0.49	0.50	0.56	0.84	4.06
COV (%)		14.28	9.28	9.36	8.73	9.40	7.58	8.55	7.58	7.54	8.92	12.81	19.93	5.95
N (YEARS)		24	24	24	24	24	24	24	24	24	24	24	25	24
SUM OF MONTHLY MEANS 68.30														

APPENDIX TABLE B.2—Continued

STATION 830.30		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
MEAN		2.86	3.43	3.59	3.43	4.42	4.56	3.97	5.86	5.40	4.06	4.62	3.35	50.55
STD DEV		0.02	1.17	0.75	0.32	0.11	0.00	0.00	0.57	0.00	0.00	0.00	0.00	0.00
COV (%)		0.74	34.22	20.88	9.26	2.56	0.00	0.00	9.65	0.00	0.00	0.00	0.00	0.00
N (YEARS)		2	2	2	2	2	2	2	2	1	1	1	1	1
SUM OF MONTHLY MEANS 49.55														
STATION 841.00		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
MEAN		4.36	4.36	4.80	5.36	6.48	7.20	7.47	7.09	6.26	5.54	4.45	3.64	67.64
STD DEV		0.90	1.10	1.00	1.00	0.91	1.25	0.81	0.91	0.81	1.00	1.05	0.93	8.18
COV (%)		20.69	25.16	20.79	18.75	14.02	17.39	10.77	12.87	12.99	18.04	23.62	25.63	12.09
N (YEARS)		10	11	11	11	11	11	11	10	10	10	10	7	6
SUM OF MONTHLY MEANS 67.01														
STATION 841.10		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
MEAN		4.22	4.41	5.04	5.34	6.45	6.96	7.38	7.18	6.47	5.62	4.39	4.03	69.21
STD DEV		0.77	0.83	0.77	0.72	0.70	1.05	0.77	0.91	0.87	0.93	0.79	0.91	7.57
COV (%)		18.29	18.94	15.28	13.50	10.89	15.09	10.47	12.69	13.39	16.61	18.04	22.57	10.94
N (YEARS)		15	22	22	22	24	23	23	23	23	21	21	13	8
SUM OF MONTHLY MEANS 67.49														
STATION 846.00		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
MEAN		4.17	4.28	4.95	5.43	6.46	7.43	7.13	7.32	6.58	5.83	4.65	3.90	67.09
STD DEV		0.59	0.78	0.87	0.76	0.58	0.47	0.63	0.81	0.98	0.90	0.51	0.52	5.04
COV (%)		14.07	18.13	17.59	13.92	8.94	6.38	8.90	11.00	14.86	15.48	10.89	13.25	7.52
N (YEARS)		8	8	8	8	8	8	8	9	9	9	9	6	5
SUM OF MONTHLY MEANS 68.13														
STATION 847.00		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
MEAN		4.17	4.59	5.54	5.88	7.22	7.76	8.33	8.27	7.24	5.91	4.54	3.90	73.16
STD DEV		0.56	0.55	0.70	0.67	0.53	0.67	0.62	0.46	0.59	0.57	0.63	0.56	4.23
COV (%)		13.39	12.07	12.58	11.35	8.00	8.67	7.50	5.54	8.11	9.73	13.83	14.39	5.78
N (YEARS)		15	22	22	22	23	24	23	23	23	21	20	11	8
SUM OF MONTHLY MEANS 73.35														

APPENDIX TABLE B.2—Continued

STATION 851.00	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
MEAN	4.17	4.45	5.29	5.56	6.85	8.08	8.25	7.94	6.78	5.75	4.73	4.03	70.89
STD DEV	0.97	0.67	0.67	0.48	0.75	0.73	0.40	0.45	0.76	0.54	0.77	0.34	2.07
COV (%)	23.35	15.00	12.74	8.70	10.92	9.07	4.80	5.66	11.14	9.45	16.31	8.38	2.91
N (YEARS)	23	8	8	8	8	9	9	9	9	9	9	6	5
									SUM OF	SUM OF	MONTHLY	MEANS	71.88
STATION 854.00	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
MEAN	4.52	4.81	5.73	6.51	8.05	8.92	8.76	8.82	7.17	5.97	4.95	4.34	78.17
STD DEV	0.65	0.57	0.83	0.93	0.84	0.75	1.03	0.56	0.66	0.30	0.74	0.36	5.53
COV (%)	14.34	11.92	14.56	14.24	10.49	8.44	11.73	6.38	9.27	4.98	15.00	8.39	7.07
N (YEARS)	14	8	8	8	8	8	8	9	9	9	9	6	5
									SUM OF	SUM OF	MONTHLY	MEANS	78.55
STATION 856.10	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
MEAN	3.08	2.94	4.22	3.73	4.23	3.98	5.61	5.07	4.74	4.47	3.15	2.46	46.96
STD DEV	0.11	0.28	0.59	0.52	0.67	0.00	0.00	0.00	0.00	0.33	0.95	0.16	0.00
COV (%)	3.67	9.62	13.89	13.82	15.86	0.00	0.00	0.00	0.00	7.28	30.26	6.32	0.00
N (YEARS)	2	2	2	2	2	1	1	1	1	2	2	2	1
									SUM OF	SUM OF	MONTHLY	MEANS	47.68
STATION 860.60	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
MEAN	0.00	4.83	4.91	5.73	5.93	6.44	6.93	6.84	6.53	5.41	4.19	0.00	0.00
STD DEV	0.00	0.57	0.52	0.68	0.99	0.51	0.49	0.69	0.61	0.56	0.74	0.00	0.00
COV (%)	0.00	11.85	10.64	11.81	16.70	7.89	7.06	10.02	9.42	10.35	17.64	0.00	0.00
N (YEARS)	0	4	8	8	7	8	7	6	7	5	4	0	0
									SUM OF	SUM OF	MONTHLY	MEANS	0.00
STATION 861.00	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
MEAN	3.78	4.22	5.01	5.29	6.23	6.39	6.92	7.05	6.24	5.29	4.13	3.84	66.01
STD DEV	0.51	0.55	0.78	0.59	0.48	0.58	0.76	0.77	0.43	0.38	0.52	0.62	3.64
COV (%)	13.45	13.12	15.49	11.35	7.70	9.06	10.98	10.98	6.93	7.21	12.70	16.23	5.52
N (YEARS)	13	22	22	22	22	24	23	23	23	21	20	12	8
									SUM OF	SUM OF	MONTHLY	MEANS	64.33

APPENDIX TABLE B.2--Continued

STATION 882.10													
MEAN	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
	0.61	0.92	2.14	1.42	1.88	1.71	1.96	2.18	1.58	1.44	0.97	0.60	17.72
STD DEV	0.13	0.44	0.52	0.75	0.45	0.61	0.51	0.35	0.37	0.25	0.22	0.22	1.99
COV (%)	21.28	47.16	24.42	52.88	23.78	35.43	26.25	15.81	23.30	17.49	22.85	37.16	11.25
N (YEARS)	3	3	3	4	4	4	4	4	4	4	4	4	4
SUM OF MONTHLY MEANS 17.41													
STATION 890.00													
MEAN	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
	3.81	4.24	5.59	5.73	7.06	8.21	8.51	8.31	7.09	5.79	4.40	3.87	72.51
STD DEV	0.79	0.49	0.59	0.95	0.48	0.83	0.40	0.73	0.39	0.33	0.67	0.42	1.59
COV (%)	20.70	11.62	10.47	16.59	6.73	10.13	4.75	8.73	5.44	5.75	15.27	10.72	2.59
N (YEARS)	8	8	7	8	8	9	9	9	9	9	9	6	5
SUM OF MONTHLY MEANS 72.61													
STATION 892.00													
MEAN	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
	4.37	4.82	5.92	6.02	6.77	7.01	7.51	7.88	7.17	6.33	5.12	4.36	73.94
STD DEV	0.51	0.60	0.67	0.67	0.69	0.55	1.02	1.06	0.93	0.78	0.95	0.66	6.91
COV (%)	11.71	12.40	11.29	11.10	10.20	7.90	13.53	13.51	12.99	12.39	18.67	15.25	9.75
N (YEARS)	15	22	22	22	23	24	23	23	23	21	20	13	7
SUM OF MONTHLY MEANS 73.28													
STATION 894.20													
MEAN	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
	2.84	4.64	5.39	4.72	7.13	6.22	6.43	7.43	6.40	4.91	4.65	3.37	0.00
STD DEV	1.12	0.38	0.00	0.86	0.36	0.66	0.11	0.66	0.72	0.57	0.30	0.00	0.00
COV (%)	39.34	8.23	0.00	18.28	5.05	10.49	1.65	8.95	11.27	11.63	6.39	0.00	0.00
N (YEARS)	2	2	2	2	2	2	2	2	2	3	2	1	0
SUM OF MONTHLY MEANS 64.18													
STATION 908.00													
MEAN	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
	4.80	5.36	6.12	5.99	8.40	8.18	8.68	8.66	7.27	5.65	5.64	4.10	0.00
STD DEV	0.60	0.29	0.90	1.67	1.50	0.83	1.07	0.70	0.86	0.32	0.40	0.50	0.00
COV (%)	12.57	5.33	14.67	27.83	17.87	10.12	12.38	8.13	11.87	5.73	7.06	12.12	0.00
N (YEARS)	3	3	3	4	5	5	5	5	4	4	4	3	0
SUM OF MONTHLY MEANS 78.85													

APPENDIX TABLE B.2--Continued

STATION 925-00													
MEAN	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
STD DEV	5.46	5.59	7.17	7.66	8.26	8.87	9.63	9.51	8.16	7.54	6.48	5.55	91.12
COV (%)	0.61	0.67	1.07	0.90	0.87	0.97	0.74	0.57	0.79	1.13	0.85	0.43	5.46
N (YEARS)	11.20	12.00	14.97	11.76	10.55	10.97	7.71	5.97	9.73	15.02	13.07	7.67	6.00
	12	12	12	11	13	12	13	12	13	14	14	13	8
	SUM OF MONTHLY MEANS 89.88												
STATION 927-00													
MEAN	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
STD DEV	5.84	5.38	6.56	6.44	8.35	8.90	9.87	8.88	8.18	7.63	6.39	5.49	91.31
COV (%)	0.50	0.61	1.27	0.75	1.02	0.93	0.98	1.67	1.18	0.98	0.58	0.59	4.40
N (YEARS)	8.51	11.25	19.33	9.88	12.7	10.44	9.96	18.7	14.7	12.86	9.12	10.72	4.82
	7	8	6	7	7	6	7	7	7	6	5	6	5
	SUM OF MONTHLY MEANS 89.11												
STATION 930-00													
MEAN	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
STD DEV	5.72	5.66	7.10	7.07	8.20	7.94	8.67	8.43	7.87	7.03	5.86	5.24	84.96
COV (%)	0.70	0.71	0.77	0.86	1.03	1.03	0.99	1.12	0.97	1.13	0.76	0.64	5.97
N (YEARS)	12.32	12.54	10.84	12.17	12.56	13.02	11.44	13.26	12.28	16.10	13.00	12.18	7.03
	21	22	20	20	22	20	20	22	22	21	21	20	15
	SUM OF MONTHLY MEANS 84.79												
STATION 931-00													
MEAN	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
STD DEV	4.93	5.33	6.06	6.45	7.79	7.79	9.5	7.94	7.07	6.15	5.50	4.96	78.94
COV (%)	0.95	0.78	0.80	0.69	1.32	1.43	1.38	1.14	0.73	1.14	0.48	0.52	3.95
N (YEARS)	19.25	14.73	13.22	10.67	16.94	18.9	17.41	14.32	10.35	18.56	8.68	10.56	5.01
	8	11	9	10	10	9	10	10	10	9	8	8	5
	SUM OF MONTHLY MEANS 77.92												
STATION 934-00													
MEAN	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
STD DEV	5.30	5.34	6.68	6.55	7.22	6.80	7.18	7.15	6.78	6.23	5.43	5.34	76.18
COV (%)	0.85	0.64	0.76	0.89	0.85	0.55	0.83	0.46	0.61	0.56	0.67	0.96	4.24
N (YEARS)	16.01	12.02	11.40	13.66	11.81	8.04	11.51	6.45	9.03	9.05	12.44	17.89	5.57
	15	18	15	16	18	17	18	18	18	17	15	16	11
	SUM OF MONTHLY MEANS 76.00												

APPENDIX TABLE B.2--Continued

STATION 935.00													
MEAN	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
DEV	5.47	5.41	6.49	7.04	8.29	8.31	8.86	8.64	7.68	7.12	6.01	5.06	86.42
STD	0.57	0.76	0.88	0.86	1.11	1.25	1.03	0.99	0.65	0.54	1.08	0.23	4.96
COV (%)	10.51	13.97	13.54	12.22	13.41	15.03	11.62	11.42	8.46	7.57	18.02	4.55	5.74
N (YEARS)	7	8	6	7	7	6	7	7	6	6	6	5	3
SUM OF MONTHLY MEANS 84.37													
STATION 935.10													
MEAN	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
DEV	5.95	5.20	6.67	7.01	8.04	8.04	8.16	8.25	7.98	7.19	6.41	5.65	86.53
STD	0.38	0.75	0.53	0.64	1.30	0.56	0.70	0.73	1.07	0.64	0.42	0.85	0.39
COV (%)	6.35	14.38	7.93	9.10	16.14	6.97	8.62	8.90	13.37	8.92	6.54	15.02	0.45
N (YEARS)	3	4	3	4	4	4	4	4	4	4	4	3	2
SUM OF MONTHLY MEANS 84.55													
STATION 936.00													
MEAN	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
DEV	2.22	3.28	4.34	4.71	5.02	5.04	5.05	5.35	4.34	4.17	3.55	3.05	49.71
STD	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.35	0.25	0.12	0.17	0.00
COV (%)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.15	6.10	3.38	5.56	0.00
N (YEARS)	1	1	1	1	1	1	1	1	2	2	2	2	1
SUM OF MONTHLY MEANS 50.17													
STATION 940.00													
MEAN	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
DEV	5.36	5.77	7.00	7.72	8.06	8.59	9.42	8.98	8.07	7.21	5.99	5.23	87.11
STD	0.58	0.67	0.96	0.96	1.78	0.88	0.70	1.11	0.86	0.72	0.94	0.97	5.83
COV (%)	10.89	11.59	13.78	12.45	22.09	10.26	7.43	12.38	10.71	9.98	15.65	18.50	6.69
N (YEARS)	21	22	20	22	23	22	22	22	22	21	22	22	18
SUM OF MONTHLY MEANS 87.40													
STATION 941.00													
MEAN	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
DEV	5.14	5.67	6.93	7.43	7.82	8.05	9.10	9.37	8.23	7.33	6.17	5.40	86.58
STD	0.98	0.67	0.98	0.62	0.94	1.00	0.97	1.24	1.03	0.96	0.91	0.90	6.97
COV (%)	19.03	11.94	14.18	8.32	11.97	12.37	10.63	13.22	12.52	13.11	14.75	16.75	8.05
N (YEARS)	22	22	20	22	23	22	22	22	22	21	21	22	18
SUM OF MONTHLY MEANS 86.62													

APPENDIX TABLE B.2--Continued

STATION 943.00													
MEAN	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
DEV	1.89	3.09	3.71	4.74	6.21	5.98	6.04	5.98	4.53	3.94	2.23	2.67	53.33
STD	0.00	0.00	0.00	0.00	0.00	0.36	0.88	0.85	0.05	0.11	1.81	0.91	0.00
COV (%)	0.00	0.00	0.00	0.00	0.00	6.03	14.52	14.19	1.09	2.87	81.2	33.90	0.00
N (YEARS)	1	1	1	1	1	2	2	2	2	2	2	2	1
	SUM OF MONTHLY MEANS 51.01												
STATION 943.20													
MEAN	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
DEV	4.73	5.72	5.75	6.28	6.65	7.74	7.35	6.53	5.98	6.23	5.11	4.76	76.19
STD	0.47	0.96	0.92	0.70	0.15	2.22	0.14	0.58	0.00	0.23	0.00	0.00	0.00
COV (%)	9.87	16.81	15.99	11.2	2.23	28.69	1.92	8.75	0.00	3.76	0.00	0.00	0.00
N (YEARS)	2	2	2	2	2	2	2	2	2	2	1	1	1
	SUM OF MONTHLY MEANS 72.90												
STATION 944.00													
MEAN	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
DEV	4.54	4.98	6.31	6.67	7.07	7.29	7.59	7.55	6.82	5.96	4.89	4.15	73.53
STD	0.72	0.59	1.06	0.92	1.02	0.80	0.79	0.60	0.61	0.58	0.71	0.54	4.39
COV (%)	15.84	11.91	16.84	13.83	14.46	10.97	10.41	7.89	8.89	9.41	14.46	13.12	5.97
N (YEARS)	19	22	21	23	23	23	22	21	23	21	21	18	9
	SUM OF MONTHLY MEANS 73.82												
STATION 945.00													
MEAN	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
DEV	5.28	5.14	5.82	6.11	7.08	7.17	7.19	8.04	7.81	7.25	6.05	4.95	76.57
STD	0.68	1.00	1.06	0.55	0.73	0.91	0.55	1.26	0.93	0.57	1.32	0.85	1.78
COV (%)	12.79	19.54	18.20	8.97	10.27	12.71	7.65	15.68	11.85	7.83	21.77	17.22	2.33
N (YEARS)	7	9	8	9	10	11	10	9	9	8	8	8	3
	SUM OF MONTHLY MEANS 77.89												
STATION 962.00													
MEAN	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
DEV	5.22	5.30	7.03	7.77	8.96	9.40	9.68	9.50	8.24	7.71	6.16	5.50	92.94
STD	0.35	1.29	0.89	1.14	0.95	0.84	0.96	0.74	0.71	0.94	0.57	0.75	4.05
COV (%)	6.68	24.34	12.64	14.71	10.66	8.9	9.88	7.81	8.56	12.13	9.17	13.69	4.36
N (YEARS)	10	11	10	9	10	9	11	10	11	12	12	10	7
	SUM OF MONTHLY MEANS 90.47												

APPENDIX TABLE B.2--Continued

STATION 965.00		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
MEAN		4.90	5.15	8.00	8.46	8.98	9.38	8.83	9.79	7.79	6.36	4.43	5.59	90.47
STD DEV		0.00	0.00	0.00	0.00	0.00	0.00	1.15	0.47	0.50	0.74	0.43	0.64	0.00
COV (%)		0.00	0.00	0.00	0.00	0.00	0.00	12.97	4.84	6.44	11.66	9.73	11.50	0.00
N (YEARS)		1	1	1	1	1	1	2	2	2	2	2	2	1
SUM OF MONTHLY MEANS 87.66														
STATION 965.10		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
MEAN		4.17	5.28	7.00	7.55	8.55	8.55	9.03	8.65	7.86	7.38	5.69	4.95	84.67
STD DEV		0.88	0.68	0.73	0.85	0.66	1.19	0.73	0.23	0.64	0.89	0.66	0.48	4.61
COV (%)		21.12	12.93	10.45	11.21	7.74	13.92	8.07	2.70	8.19	12.00	11.57	9.76	5.45
N (YEARS)		5	5	5	5	5	5	5	5	5	5	5	5	5
SUM OF MONTHLY MEANS 84.67														
STATION 966.00		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
MEAN		4.85	4.78	6.33	7.09	7.76	8.79	9.74	9.52	7.79	7.03	5.67	4.74	84.76
STD DEV		0.75	0.53	0.81	0.98	0.89	1.31	1.12	1.41	1.05	1.34	1.04	0.58	5.91
COV (%)		15.50	10.99	12.68	13.78	11.43	14.86	11.53	14.86	13.45	19.02	18.38	12.28	6.97
N (YEARS)		13	13	13	11	12	12	13	12	13	14	14	12	7
SUM OF MONTHLY MEANS 84.11														
STATION 981.00		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
MEAN		4.36	4.10	6.12	6.45	7.09	7.82	8.70	9.15	7.75	6.70	4.98	4.43	78.31
STD DEV		0.62	0.94	1.16	0.90	0.85	1.02	1.03	1.14	0.85	1.01	0.67	0.65	5.37
COV (%)		14.12	22.87	18.94	13.89	12.15	13.06	11.84	12.48	11.01	15.14	13.39	14.61	6.86
N (YEARS)		11	12	12	10	12	12	12	12	12	12	12	11	9
SUM OF MONTHLY MEANS 77.65														
STATION 982.00		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
MEAN		4.49	4.90	6.08	6.81	7.98	8.14	8.45	8.80	7.46	6.74	5.27	4.49	77.58
STD DEV		0.91	0.45	0.93	1.00	0.95	1.01	0.65	0.59	0.66	0.67	0.72	0.66	5.01
COV (%)		20.25	9.08	15.33	14.75	13.56	12.36	7.69	6.76	8.83	9.96	13.66	14.65	6.46
N (YEARS)		8	8	8	8	9	9	9	9	9	10	10	8	6
SUM OF MONTHLY MEANS 78.61														

APPENDIX TABLE B.2—Continued

STATION 986-10													
MEAN	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
STD DEV	4.97	5.03	6.34	6.64	7.70	7.80	8.39	8.09	7.23	6.38	5.14	4.66	78.46
COV (%)	0.62	0.53	0.48	0.92	0.85	0.77	0.64	0.78	0.70	0.58	0.82	0.63	3.09
N (YEARS)	12.52	10.59	7.54	13.82	11.02	9.86	7.65	9.65	9.66	9.10	16.03	13.47	3.94
	19	22	19	20	21	20	21	22	22	21	21	20	16
									SUM	SUM	SUM	SUM	78.37
									OF	OF	OF	OF	MONTHLY MEANS
STATION 993-00													
MEAN	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
STD DEV	4.43	4.93	5.79	5.95	6.49	6.55	7.09	7.15	6.36	5.89	4.74	4.39	66.74
COV (%)	0.78	0.69	0.89	1.04	0.95	1.16	0.89	0.75	0.93	0.67	0.88	0.72	4.69
N (YEARS)	17.67	14.05	15.40	17.44	14.60	17.63	12.53	10.55	14.66	11.36	18.50	16.51	7.02
	20	19	19	21	22	18	19	21	21	20	18	20	11
									SUM	SUM	SUM	SUM	69.76
									OF	OF	OF	OF	MONTHLY MEANS
STATION 994-00													
MEAN	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
STD DEV	4.58	4.53	5.35	5.34	6.02	5.96	6.31	6.48	6.13	5.23	4.70	4.15	0.00
COV (%)	0.75	0.67	0.52	0.50	0.56	0.62	0.55	0.65	0.46	0.62	0.47	0.33	0.00
N (YEARS)	16.38	14.71	9.77	9.34	9.34	10.33	8.75	9.99	7.52	11.95	9.99	7.84	0.00
	6	6	6	7	7	5	6	7	7	6	4	5	0
									SUM	SUM	SUM	SUM	64.78
									OF	OF	OF	OF	MONTHLY MEANS
STATION 1004-00													
MEAN	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
STD DEV	3.64	4.03	4.37	4.78	5.43	5.84	6.15	5.72	5.07	4.55	3.75	3.29	57.84
COV (%)	0.54	0.51	0.65	0.69	0.72	0.76	0.87	0.76	0.54	0.43	0.70	0.57	3.53
N (YEARS)	14.84	12.75	14.86	14.45	13.25	12.97	14.18	13.34	10.64	9.55	18.79	17.31	6.09
	20	19	19	21	21	19	20	21	21	19	16	21	11
									SUM	SUM	SUM	SUM	56.61
									OF	OF	OF	OF	MONTHLY MEANS
STATION 1005-00													
MEAN	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
STD DEV	4.88	4.98	5.58	5.81	5.97	5.90	6.19	6.53	6.21	5.77	4.75	4.44	66.04
COV (%)	0.88	0.71	1.04	0.91	0.84	0.55	0.90	0.71	0.65	0.69	0.71	0.97	5.41
N (YEARS)	18.18	14.20	18.63	15.58	14.05	9.32	14.58	10.82	10.51	11.95	15.02	21.87	8.19
	20	20	19	20	22	20	21	21	21	20	19	21	14.96
									SUM	SUM	SUM	SUM	66.96
									OF	OF	OF	OF	MONTHLY MEANS

APPENDIX TABLE B.2--Continued

STATION 1006-00													
MEAN	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
DEV	3.57	3.66	4.20	4.90	5.56	5.85	6.18	6.21	5.30	4.69	3.71	3.32	55.49
STD	0.79	0.49	0.80	0.69	0.68	0.81	0.55	0.59	0.63	0.77	0.82	0.98	4.04
COV (%)	22.12	13.47	18.99	14.19	12.29	13.93	8.95	9.47	11.84	16.32	22.11	29.42	7.28
N (YEARS)	18	16	17	19	20	20	19	19	19	18	18	19	12
										SUM OF MONTHLY	MEANS		57.18
STATION 1011-00													
MEAN	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
DEV	3.98	4.16	4.81	5.30	6.19	6.32	6.76	6.45	5.54	5.10	4.09	3.82	61.66
STD	0.73	0.64	0.67	0.63	0.76	0.63	0.63	0.66	0.50	0.63	0.65	0.74	2.86
COV (%)	18.38	15.32	13.86	11.87	12.23	10.02	9.26	10.28	8.96	12.40	15.95	19.48	4.64
N (YEARS)	19	18	18	20	21	21	20	20	20	19	19	20	14
										SUM OF MONTHLY	MEANS		62.52
STATION 1013-20													
MEAN	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
DEV	4.60	4.83	5.79	6.23	6.92	7.03	7.68	7.87	5.83	6.18	4.94	4.75	72.88
STD	0.35	0.84	1.06	0.56	1.07	0.89	0.79	0.63	1.99	0.54	0.57	0.39	5.40
COV (%)	7.67	17.41	18.34	9.05	15.41	12.67	10.28	7.97	34.05	8.75	11.44	8.17	7.42
N (YEARS)	7	7	6	6	7	7	7	7	7	7	8	8	6
										SUM OF MONTHLY	MEANS		72.65
STATION 1014-00													
MEAN	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
DEV	5.00	5.29	6.72	6.75	7.62	7.22	8.17	7.80	6.97	6.52	5.18	5.13	78.48
STD	0.75	0.37	0.99	1.03	0.81	0.88	0.92	1.05	0.54	0.52	1.30	0.77	4.43
COV (%)	14.92	7.05	14.70	15.26	10.61	12.16	11.28	13.52	7.75	8.04	25.06	14.98	5.65
N (YEARS)	9	9	8	9	10	11	10	10	10	9	9	9	5
										SUM OF MONTHLY	MEANS		78.37
STATION 1015-30													
MEAN	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
DEV	4.80	4.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.90	5.41	0.00
STD	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
COV (%)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
N (YEARS)	1	1	0	0	0	0	0	0	0	0	1	1	0
										SUM OF MONTHLY	MEANS		0.00

APPENDIX TABLE B.2—Continued

STATION 1016.00													
MEAN	JAN 4.25	FEB 4.63	MAR 5.39	APR 5.97	MAY 6.71	JUN 6.79	JUL 7.27	AUG 6.73	SEP 6.14	OCT 5.62	NOV 4.50	DEC 3.99	ANNUAL 66.83
STD DEV	0.82	0.77	1.22	0.93	1.10	0.90	0.85	1.28	0.80	0.99	0.96	1.13	7.87
COV (%)	19.40	16.57	22.59	15.51	16.37	13.18	11.67	18.97	12.96	17.70	21.39	28.34	11.78
N (YEARS)	18	18	17	19	20	20	20	20	20	19	19	19	14
SUM OF MONTHLY MEANS 67.99													
STATION 1020.10													
MEAN	JAN 5.59	FEB 6.06	MAR 7.43	APR 8.10	MAY 9.08	JUN 9.68	JUL 10.30	AUG 10.10	SEP 9.22	OCT 8.04	NOV 6.36	DEC 5.64	ANNUAL 96.20
STD DEV	0.73	0.98	1.34	1.21	1.03	1.06	1.03	1.43	1.17	1.15	0.92	0.80	9.48
COV (%)	13.14	16.11	18.05	14.93	11.38	10.95	10.00	14.12	12.66	14.32	14.49	14.21	9.86
N (YEARS)	28	27	28	28	28	28	27	28	29	29	29	29	25
SUM OF MONTHLY MEANS 95.60													
STATION 1020.40													
MEAN	JAN 5.36	FEB 5.66	MAR 6.46	APR 7.19	MAY 7.76	JUN 8.09	JUL 8.72	AUG 8.56	SEP 7.52	OCT 6.83	NOV 5.56	DEC 5.12	ANNUAL 83.31
STD DEV	0.73	1.16	1.05	0.73	0.87	0.83	1.16	0.74	0.94	0.97	1.11	0.66	6.32
COV (%)	13.56	20.56	16.30	10.08	11.26	10.22	13.32	8.62	12.51	14.20	20.01	12.87	7.59
N (YEARS)	17	18	16	16	17	17	18	17	17	16	16	16	12
SUM OF MONTHLY MEANS 82.83													
STATION 1026.00													
MEAN	JAN 5.18	FEB 4.99	MAR 6.34	APR 6.65	MAY 7.10	JUN 7.27	JUL 7.85	AUG 7.45	SEP 7.00	OCT 6.25	NOV 4.93	DEC 4.52	ANNUAL 77.36
STD DEV	1.13	0.57	1.12	1.04	1.06	1.08	1.09	0.89	0.95	0.77	1.48	1.06	4.76
COV (%)	21.85	11.42	17.74	15.67	14.98	14.80	13.91	11.95	13.50	12.31	29.94	23.45	6.15
N (YEARS)	14	15	16	16	17	16	15	14	14	12	13	13	4
SUM OF MONTHLY MEANS 75.53													
STATION 1027.00													
MEAN	JAN 5.83	FEB 5.97	MAR 6.17	APR 6.28	MAY 7.13	JUN 7.75	JUL 6.29	AUG 7.87	SEP 7.29	OCT 6.60	NOV 0.00	DEC 5.92	ANNUAL 0.00
STD DEV	0.00	0.97	3.27	1.80	2.36	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
COV (%)	0.00	16.60	53.38	28.69	33.12	12.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00
N (YEARS)	1	2	2	2	2	2	1	1	1	1	0	1	0
SUM OF MONTHLY MEANS 0.00													

APPENDIX TABLE B.2—Continued

STATION 1033-00													
MEAN	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
STD DEV	5.00	5.00	6.06	6.94	7.41	7.05	6.60	6.57	6.00	5.24	8.52	6.91	0.00
COV (%)	0.00	2.12	1.73	0.06	2.11	1.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00
N (YEARS)	0.00	42.43	28.56	0.92	28.44	19.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	1	2	2	2	2	2	1	1	1	1	1	1	0
													77.32
													SUM OF MONTHLY MEANS
STATION 1035-00													
MEAN	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
STD DEV	4.90	4.70	5.42	5.43	5.69	5.70	6.03	5.95	5.39	5.39	4.80	4.59	67.95
COV (%)	1.17	0.82	1.20	0.97	0.97	1.11	0.69	0.47	0.52	0.69	0.81	0.80	5.32
N (YEARS)	23.86	17.38	22.19	17.94	17.09	19.41	11.47	7.86	9.60	12.86	16.80	17.35	7.2
	9	8	12	13	13	12	11	10	11	7	9	8	2
													63.99
													SUM OF MONTHLY MEANS
STATION 1040-00													
MEAN	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
STD DEV	4.23	4.50	5.20	5.24	5.34	5.40	5.53	5.69	5.21	4.86	4.86	4.10	61.23
COV (%)	0.81	0.64	1.20	0.79	0.88	0.97	0.73	0.69	0.73	0.86	1.02	0.62	8.60
N (YEARS)	19.23	14.12	22.93	15.01	16.47	18.05	13.28	12.14	14.03	17.61	20.95	15.20	14.04
	15	19	20	21	21	21	20	20	21	20	17	14	5
													60.19
													SUM OF MONTHLY MEANS
STATION 1061-00													
MEAN	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
STD DEV	3.10	3.28	3.87	3.45	3.72	4.65	4.03	4.65	3.90	4.03	3.60	3.41	0.00
COV (%)	0.00	0.69	0.22	0.21	0.00	0.21	0.44	0.44	0.00	0.00	0.00	0.00	0.00
N (YEARS)	0.00	20.88	5.66	6.15	0.00	4.56	10.88	9.43	0.00	0.00	0.00	0.00	0.00
	1	2	2	2	2	2	2	2	1	1	1	1	0
													45.69
													SUM OF MONTHLY MEANS
STATION 1061-30													
MEAN	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
STD DEV	4.39	4.07	4.24	4.27	5.00	5.30	6.07	5.93	5.61	4.80	3.90	3.74	58.16
COV (%)	1.71	1.01	1.09	1.13	1.10	0.51	1.07	0.86	1.17	0.82	1.45	1.05	8.29
N (YEARS)	38.88	24.96	25.65	26.55	22.04	9.63	17.57	14.41	20.90	17.12	37.06	28.10	14.26
	16	16	15	16	17	17	16	16	16	15	15	16	11
													57.32
													SUM OF MONTHLY MEANS

APPENDIX TABLE B.2—Continued

STATION 1062.10		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
MEAN		4.53	4.55	5.78	6.17	6.46	6.51	7.07	6.87	6.22	5.57	4.52	4.46	68.24
STD DEV		0.54	0.64	0.92	0.55	0.91	0.98	0.53	0.38	0.77	0.96	0.86	0.73	4.35
COV (%)		11.94	13.97	15.96	8.96	14.02	15.10	7.43	5.47	12.40	17.27	18.96	16.26	6.38
N (YEARS)		15	15	14	16	17	17	16	16	16	15	15	15	11
											SUM OF MONTHLY MEANS			68.71
STATION 1062.20		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
MEAN		4.17	4.29	4.99	5.37	6.73	6.98	6.54	6.07	6.09	4.81	4.92	3.88	66.87
STD DEV		0.64	0.73	0.90	0.61	1.61	0.71	0.83	0.55	0.99	1.13	0.90	0.57	4.21
COV (%)		15.32	17.00	18.12	11.39	23.92	10.22	12.69	9.13	16.23	23.56	18.33	14.65	6.30
N (YEARS)		8	10	8	8	9	9	9	9	9	9	7	7	4
											SUM OF MONTHLY MEANS			64.84
STATION 1062.30		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
MEAN		4.17	4.29	4.99	5.37	6.73	6.98	6.54	6.07	6.09	4.81	4.92	4.03	67.10
STD DEV		0.64	0.73	0.90	0.61	1.61	0.71	0.82	0.55	0.99	1.13	0.90	0.39	3.89
COV (%)		15.32	17.00	18.12	11.39	23.92	10.22	12.52	9.13	16.23	23.56	18.33	9.80	5.79
N (YEARS)		8	10	8	8	9	9	9	9	9	9	7	7	4
											SUM OF MONTHLY MEANS			64.98
STATION 1064.30		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
MEAN		4.86	5.04	6.30	6.63	7.28	7.48	8.27	8.10	7.47	6.72	5.16	5.06	78.63
STD DEV		0.46	0.70	0.83	0.47	0.61	0.89	0.77	0.54	0.79	0.87	0.93	0.51	4.34
COV (%)		9.52	13.90	13.22	7.07	8.36	11.88	9.28	6.64	10.61	12.96	18.10	10.02	5.51
N (YEARS)		12	12	11	12	13	13	12	12	12	11	11	11	8
											SUM OF MONTHLY MEANS			78.37
STATION 1066.00		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
MEAN		4.51	4.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.31	4.53	0.00
STD DEV		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
COV (%)		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
N (YEARS)		1	1	0	0	0	0	0	0	0	0	1	1	0
											SUM OF MONTHLY MEANS			0.00

APPENDIX TABLE B.2—Continued

STATION 1104-20													
MEAN	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
DEV	5.01	5.44	6.46	6.78	7.49	7.21	7.68	7.76	6.97	6.50	5.43	5.40	78.16
STD	0.94	0.59	1.14	0.93	0.66	0.57	0.56	0.58	0.52	0.74	1.07	0.81	5.67
COV (%)	18.84	10.80	17.66	13.77	8.75	7.87	7.27	7.47	7.52	11.35	19.73	15.05	7.25
N (YEARS)	10	11	9	10	11	11	11	11	11	10	10	10	7
										SUM OF MONTHLY MEANS			78.13
STATION 1110-00													
MEAN	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
DEV	5.35	4.68	5.23	2.94	3.55	7.01	6.94	7.36	6.96	4.03	4.10	4.80	63.87
STD	2.59	2.81	0.00	0.00	0.00	0.00	0.00	0.00	0.11	1.38	1.59	1.05	0.00
COV (%)	48.37	60.13	0.00	0.00	0.00	0.00	0.00	0.00	1.52	34.17	38.2	21.93	0.00
N (YEARS)	2	2	1	1	1	1	1	1	2	2	2	2	1
										SUM OF MONTHLY MEANS			62.95
STATION 1112-00													
MEAN	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
DEV	4.51	4.79	5.30	5.13	6.47	6.71	7.50	7.68	6.50	7.78	8.79	7.70	0.00
STD	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
COV (%)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
N (YEARS)	1	1	1	1	1	1	1	1	1	1	1	1	0
										SUM OF MONTHLY MEANS			79.86
STATION 1114-00													
MEAN	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
DEV	4.81	5.06	6.08	6.70	7.78	7.76	7.72	7.82	7.03	6.29	5.04	4.91	77.50
STD	0.55	0.83	0.80	0.96	1.24	1.08	0.73	0.72	0.79	0.41	1.03	0.72	4.28
COV (%)	11.33	16.47	13.24	14.39	15.93	13.95	9.47	9.24	11.19	6.48	20.45	14.75	5.52
N (YEARS)	14	14	12	13	14	14	13	13	14	13	13	13	9
										SUM OF MONTHLY MEANS			77.00
STATION 1134-00													
MEAN	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
DEV	4.41	5.01	6.01	5.80	7.00	7.70	7.90	6.81	6.78	5.46	4.81	0.00	0.00
STD	0.83	0.63	0.30	1.14	1.12	0.43	0.42	1.46	0.81	1.87	0.19	0.00	0.00
COV (%)	18.78	12.58	5.05	19.69	15.96	5.60	5.34	21.44	11.93	34.29	3.97	0.00	0.00
N (YEARS)	3	4	2	3	5	4	5	6	6	3	2	0	0
										SUM OF MONTHLY MEANS			0.00

