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SURFACE WATER TEMPERATURES AND SALINITIES AT SHORE STATIONS

United States West Coast

1987

Including five-meter temperatures and salinities at Scripps Pier

> SIO Reference 88-13 31 July 1988

Sponsored by:

Marine Life Research Group Scripps Institution of Oceanography

Approved for distribution:

Edward A. Frieman, Director

CONTENTS

Introduction	:
Station Descriptions	4
Station Location Chart	-
Table of Surface Temperature Monthly and Yearly Means	8
Table of Surface Temperature Anomalies	Ģ
Coastal Surface Water Temperature and Salinity Data	
Neah Bay Temperature Charleston Temperature Crescent City Temperature Trinidad Beach Temperature Trinidad Beach Salinity Trinidad Bay Temperature Bodega Bay Temperature Bodega Bay Temperature Bodega Bay Salinity Farallon Island Temperature Farallon Island Salinity Santa Cruz Temperature Pacific Grove Temperature Granite Canyon Temperature Granite Canyon Salinity Morro Bay Temperature Port San Luis Temperature Santa Barbara Temperature Point Mugu Temperature Point Mugu Temperature Balboa Temperature Santa Monica Temperature Santa Monica Temperature Santa Cemperature Santa Barbara Salinity San Clemente Temperature San Clemente Temperature San Clemente Salinity Scripps Pier Surface Temperature Scripps Pier Surface Temperature Scripps Pier Surface Temperature Scripps Pier Surface Temperature	10 11 12 13 14 15 16 17 18 19 20 22 22 22 22 22 22 22 22 22 23 33 33 33
Scripps Pier Bottom Salinity	3

INTRODUCTION

This report presents temperature and salinity data observed during 1987 at shoreline stations along the United States West Coast from the Strait of Juan de Fuca, Washington to La Jolla, California. The data consists of daily temperature and salinity values when available, with means, ranges and standard deviations based on these observations.

Various agencies and individuals volunteer to make daily observations which are sent periodically to the Scripps Institution of Oceanography, Marine Life Research Group, for the preparation of this data report and to update the computer tapes of the historical shore data. The agencies are: National Oceanic and Atmospheric Administration/National Ocean Survey (NOAA/NOS), Pacific Missile Test Center, Oregon State University, University of California, California State University, California Department of Fish and Game, Point Reyes Bird Observatory, Hopkins Marine Station, Los Angeles County, the cities of Santa Barbara, San Clemente, and Newport Beach, California, Pacific Gas and Electric Company, and Scripps Institution of Oceanography of the University of California at San Diego.

Annually, NOAA/NOS sends to Scripps Institution daily temperature and density values from four tide gauge stations located at Neah Bay, Washington and Crescent City, Port San Luis and Santa Monica, California. Temperature readings for those localities and Pacific Gas and Electric Company at Morro Bay, California are recorded variously to 0.1°, 0.5°, or 1°F. Pacific Missile Test Center temperature readings at Point Mugu are recorded to 0.1°F. These Fahrenheit readings have been converted and are reported to the nearest 0.1°C. Temperatures from Scripps' cooperative stations and from Charleston, reporting to Oregon State University, are read to the nearest 0.1°C with calibrated thermometers except for Santa Cruz, which records temperatures from a thermistor to 0.1°C. The observations are considered accurate to approximately ±0.2°C.

Salinities from Scripps Pier, Balboa, S.E. Farallon Island, San Clemente, Bodega Bay, Granite Canyon and Trinidad are obtained from sea water samples in special salinity bottles supplied by Scripps. Water samples are forwarded to Scripps at the end of each month for salinity determination by inductive salinometer. Salinities are listed to hundredths of a part per thousand. Values of maximum salinities may possibly be in error due to evaporation or contamination of the sample in the bottles. Reported salinities exceeding 34‰ may be due to faulty sampling techniques. Salinities less than 30‰ are due to local precipitation or fresh water runoff. Neither are representative of offshore oceanic waters. As with previous reports in this series, all salinities higher than 34.9‰ have been omitted.

The data presented is grouped in three periods: days 1 through 10, 11 through 20, and 21 through 31; the mean is computed for each period. In this report some temperatures and salinities appeared to be higher than the norm but not high enough for omission. These have been noted with a U and not included in any of the computations nor are they listed as the maximum for that year. The monthly means, maxima and minima are reported. Also computed are yearly mean, maximum and minimum values for those stations with some observations for every month of the year.

In addition to the data tabulated in this report, tables have been included that summarize, by station, the monthly and annual temperature means and the monthly and annual temperature anomalies for 1987. Below each station for which anomalies have been tabulated are shown the years over which data have been used in determining the long term averages from which the anomalies have been calculated.

STATION DESCRIPTIONS

The paragraphs that follow provide information for the stations listed in this report. They are described in geographical order as they occur from north to south.

Neah Bay, Washington

48°22.1'N, 124°37.0'W

NOAA/NOS

This tide gauge station is located near Cape Flattery at the entrance to the Strait of Juan de Fuca.

Charleston, Oregon

43°20.7′N, 124°19.3′W

Oregon Institute of Marine Biology,

Oregon State University

Daily temperatures are collected at high tide from the OIMB pier in Coos Bay.

Crescent City, California

41°44.7'N, 124°11.8'W

NOAA/NOS

This tide gauge station is located on the end of the Coast Guard Pier inside the harbor at Crescent City. The harbor has a small entrance formed by two breakwaters. Temperatures at the tide gauge site and the water on the beach outside the breakwater are nearly the same.

Trinidad Beach, California

41°03.6′N, 124°08.9′W

Humboldt State University Marine Laboratory

Trinidad Bay, California

41°03.3'N, 124°08.8'W

Humboldt State University operates a marine laboratory on this rocky headland. Temperatures are taken daily off the fishing pier on the lee side or southeast side of the headland and on the beach on the northwest side of the headland. In May 1977 the laboratory began collecting water samples in bottles supplied by Scripps, returning the samples monthly for salinity determination by inductive salinometer. Due to the similarity of the salinities from the coast and the bay, except during periods of large run-off, the bay salinities were discontinued May 31, 1979.

Bodega Bay, California

38°19.0'N, 123°04.3'W

University of California Marine Laboratory

The Marine Biological Laboratory located at Horseshoe Cove takes daily water temperature and salinity samples at the intake pipe to their aquarium water system located in a deep rocky channel on the northern headland of the cove. Since the water is deep and the headland steep and rocky, the temperatures are quite representative of the coastal water. This station continues the coverage provided earlier by Sonoma Coast State Beach.

Farallon Islands, California

37°41.8'N, 122°59.9'W

Point Reyes Bird Observatory

The islands are part of the Farallon Island National Wildlife Sanctuary. Personnel stationed on S.E. Farallon, where the Coast Guard lighthouse is located, take daily temperature and salinity samples. Salinity samples are collected in bottles supplied by Scripps and mailed back when the supply boat comes out to the island. The boat landing on the southeast side of the island is steep and rocky, so the measurements are very representative of the oceanic waters around the islands. Measurements are interrupted from time to time because of weather, personnel and supply problems caused by the islands' location 26 miles west of the Golden Gate Bridge, where they catch the full force of winter storms and the strong summer northwesters.

A buoy-gauge thermistor unit has been installed in the wharfmaster's office with the thermistor located in a protective pipe on a pier piling under the office. Maintenance of this wharf station is carried out by the Marine Biology Department of the University of California, Santa Cruz.

Pacific Grove, California

36°37.3'N, 121°54.2'W

Hopkins Marine Station

Hopkins Marine Station of Stanford University takes daily temperatures from a beach on the north side of Point Cabrillo just north of their main laboratory buildings. The location is exposed to the northwest swell as it sweeps past Point Pinos so is very representative of the coastal conditions on the south side of Monterey Bay.

Granite Canyon, California

36°25.9′N, 121°55′W

Marine Resources Laboratory California Department of Fish and Game

Personnel of the Marine Resources Laboratory of the California Department of Fish and Game take daily temperature and salinity samples off the rocks near the water intake for the laboratory. The spring-summer upwelling that is typical of the central California coast is well represented by this station; it is approximately 5 miles south of the old Point Lobos South location.

Morro Bay, California

35°22.2'N, 120°51.6'W

Pacific Gas and Electric Company

The Pacific Gas and Electric Company has a major power generating plant located at the entrance to Morro Bay's harbor mouth. Temperatures are logged from the thermograph that monitors the cooling intake water for the generators. Temperatures are recorded about 8 A.M. every morning, which reduces the effect of tidal heating from back-bay water. Since the discharge of hot water is outside the bay, the intake temperatures are quite representative of those found in the southern end of Estero Bay. (The northern part of the bay is generally cooler. This condition existed long before the power plant went in and was noted in earlier measurements made by Daniel Brown of SIO.)

Port San Luis, California

35°10.1'N, 120°45.1'W

NOAA/NOS

This tide-gauge station is located on the old fishing pier in the northwest corner of the harbor. The old site was on Avila recreational pier which was a better location. The new location is less subject to storm damage, particularly from the southeast winter gales. However, the counterclockwise circulation of current in the bay traps the river run-off from San Luis Creek in the northwest corner of the bay behind the breakwater. Temperature is also about 0.1°C warmer at the new site.

Santa Barbara, California

34°24.2′N, 119°41.6′W

City of Santa Barbara

Personnel of the Harbor Department now take daily water temperatures off their boat dock instead of the breakwater by the corner where it meets the beach. This is done every morning early before the sun heats up the beach and so gives a representative temperature of the coastal water. Temperatures were formerly collected from the harbormaster's dock, but the configuration of the harbor changed, so the site was moved to the beach by the breakwater.

Point Mugu, California

34°06'N, 119°05'W

Pacific Missile Test Center

Personnel at the Pacific Missile Test Center have been recording weather observations continuously since 1946 and water temperatures since 1967. At the present time daily water temperatures are being recorded four times a day from an electric thermistor at the end of a 300-foot pier. This is located at the beginning of a submarine canyon in a lagoon open to the sea on three sides.

The Los Angeles County Lifeguards man the station at Zuma Beach County Park west of Point Dume. They take daily water temperatures in the surf early every morning thus giving representative temperatures for this section of the coast.

Santa Monica, California

34°00.5'N, 118°30.0'W

NOAA/NOS

This tide-gauge station is located at the end of the Santa Monica pier near the harbormaster's office. Although located behind the breakwater, there is sufficient water flow to make this representative of the nearshore waters.

Balboa, California

33°36'N, 117°54'W

City of Newport Beach

The city lifeguards take daily temperature and salinity samples from the Newport Beach pier. Since these samples are taken in deeper water, and not from the surf, they reflect coastal conditions accurately. The salinity is affected during winter storms by run-off from the Santa Ana River mouth located only a mile or so up the beach from the pier.

San Clemente, California

33°25'N, 117°37'W

City of San Clemente

Personnel of the Department of Marine Safety take daily temperatures and salinity samples off the pier. This station was established to take over the temperature monitoring on this section of the coast from the old Dana Point and Doheny Beach stations. The new yacht harbor at Dana Point removed the Dana Point station, but the San Clemente pier site is so similar that the long record for this area is still preserved.

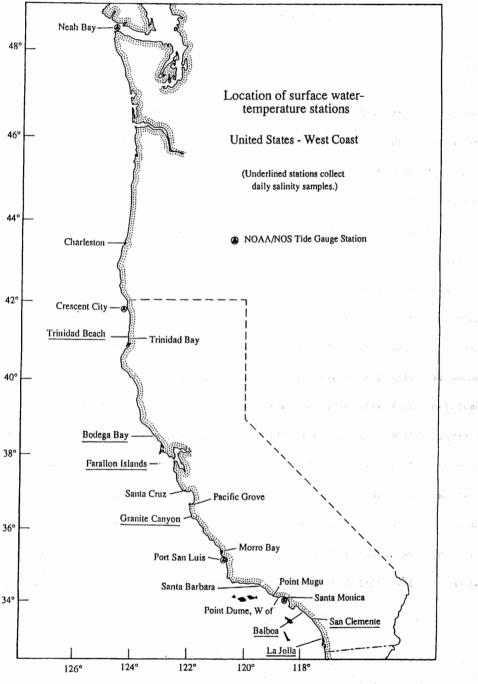
La Jolla, California

32°52.0'N, 117°15.5'W

Scripps Institution of Oceanography U.C. San Diego

Daily temperature and salinity measurements are made at the end of the Scripps Institution of Oceanography pier. Two levels of measurement are made: surface and 5 meter or bottom. The temperatures at the end of Scripps pier may fluctuate because of the presence of nearby Scripps Canyon and upwelling from it.

New state parks and new marine laboratories may be able to extend some of our coverage in the future. Many of the participants are volunteers, people seriously interested in the sea at their doorstep, and it is to these people we owe the success of this long-range program.



1987 COASTAL SEA-SURFACE TEMPERATURE MONTHLY AND YEARLY MEANS

Location	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Neah Bay	8.09	8.34	9.42	10.35	10.90	11.79	12.55	13.21	11.61	10.40	10.37	8.92	10.50
Charleston	10.65	10.46	10.60	11.10	11.32	11.79	12.25	10.79	11.40	10.83	12.04	11.25	11.21
Crescent City	11.59	11.77	11.81	13.20	13.65	14.41	14.78	15.17	14.45	14.22	12.89	11.06	13.25
Trinidad Beach	11.98	11.73	11.40	11.53	11.98	11.34	12.17	12.04	12.50	12.69	12.97	12.62	12.08
Bodega Bay	11.71	11.60	11.51	11.27	11.29	10.97	12.30	14.11	13.58	14.12	13.47	-	-
Faralion Island	12.76	12.71	12.09	11.36	12.49	12.32	12.97	14.59	14.91	14.55	14.59	12.61	13.16
Santa Cruz	12.62	12.68	12.99	13.21	13.98	14.22	15.10	16.00	16.34	15.42	14.69	12.66	14.16
Pacific Grove	12.52	12.71	12.79	12.69	13.57	13.66	14.73	15.99	15.36	15.07	14.53	12.72	13.86
Granite Canyon	12.85	12.59	11.91	10.88	12.03	11.30	11.71	14.49	13.29	14.51	14.08	12.89	12.71
Morro Bay	13.68	13.59	13.15	13.46	14.54	13.87	14.72	15.49	15.60	16.26	15.18	13.85	14.45
Port San Luis	12.56	12.69	12.05	12.19	13.53	13.04	13.50	14.62	15.42	15.61	14.79	12.42	13.54
Santa Barbara	14.39	14.41	13.56	-	16.85	16.41	17.73	17.72	18.61	18.64	16.74	14.27	-
Point Mugu	14.69	13.95	13.32	14.47	15.42	14.85	15.92	16.30	17.64	17.79	16.70	14.62	15.47
Point Dume	14.80	14.12	14.04	15.59	17.09	16.31	17.49	17.91	19.09	18.41	16.93	14.15	16.33
Santa Monica	14.52	14.30	14.23	16.29	18.77	17.95	18.88	20.23	19.79	19.23	17.22	13.84	17.11
Balboa	15.24	14.77	14.38	16.37	17.78	17.26	18.36	18.66	19.88	18.70	17.83	15.07	17.02
San Clemente	14.03	13.87	13.11	15.62	16.94	16.80	18.47	18.74	19.67	18.79	17.46	14.54	16.50
La Jolla	14.93	15.12	14.89	17.36	18.57	18.23	18.63	19.95	20.69	19.89	17.54	14.96	17.56

1987 COASTAL SEA-SURFACE TEMPERATURE ANOMALIES

Location	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Neah Bay 1935-87	0.79	0.92	1.32	1.15	0.35	0.30	0.81	1.63	0.23	-0.20	0.93	0.75	0.75
Charleston 1966–87	0.76	0.41	0.06	0.34	-0.14	-0.42	-0.19	-1.50	-1.03	-0.67	0.66	0.91	(-0.07)
Crescent City 1933-87	1.69	1.60	1.34	2.38	2.06	1.82	1.07	0.69	0.72	1.76	1.53	0.72	1.45
Trinidad Beach 1975–87	1.05	0.81	0.22	0.82	1.19	-0.06	0.06	-0.37	0.03	0.27	1.05	1,40	(0.54)
Bodega Bay 1957–87	0.59	0.27	0.55	0.99	1.24	0.19	0.87	2.00	0.96	1.45	1.06	- 3	(0.92)
Farallon Island 1925-43, 55-87	0.93	0.84	0.42	0.15	1.22	0.64	0.73	1.65	1.30	1.02	1.69	0.36	0.91
Santa Cruz 1955-71, 80-87	0.73	0.46	0.69	0.85	1.04	0.38	0.27	0.66	1.09	0.93	1.55	0.44	(0.76)
Pacific Grove 1919–87	0.60	0.60	0.50	0.23	0.84	0.23	0.82	1.91	1.02	1.20	1.56	0.35	0.82
Granite Canyon* 1957–87	0.74	0.64	0.63	0.22	1.25	-0.17	-0.37	1.68	0.10	1.52	1.18	0.48	0.66
Morro Bay 1962–87	1.22	1.07	0.89	1.26	1.82	0.22	0.41	0.69	0.98	2.07	1.59	0.98	(1.10)
Port San Luis 1945–87	0.04	-0.02	-0.34	-0.21	0.59	-0.95	-1.82	-1.23	-0.32	0.52	0.90	-0.47	-0.28
Santa Barbara 1955–87	0.90	0.64	-0.41	-,	1.52	-0.40	0.15	-0.60	0.27	1.15	1.06	0.25	(0.41)
Point Mugu 1967–87	0.71	0.09	-0.13	1.53	1.86	0.24	0.44	-0.26	0.80	1.26	0.93	0.00	(0.62)
Point Dume 1957–87	0.73	0.27	0.17	1.39	2.30	0.07	0.15	-0.67	0.89	0.97	0.84	-0.51	0.55
Santa Monica 1946–87	0.76	0.36	0.06	1.42	2.82	0.23	-0.45	0.25	0.49	1.38	1.29	-0,55	0.67
Balboa 1925–87	1.14	0.72	0.07	1.41	1.62	-0.33	-0.22	-0.63	1.30	0.86	1.55	0.11	0.63
San Clemente* 1955-87	0.17	-0.25	-1.26	0.38	0.40	-1.16	-0.66	-1.18	0.40	0.57	1.22	0.09	-0.11
La Jolla 1916–87	0.84	1.08	0.39	1.94	1.62	-0.19	-1.27	-0,80	1.25	1.87	1.25	0.08	0.67

^{*} Recent data combined with older nearby records for historical means.

^() Incomplete year or historical mean of less than 30 years.

		NEAR BAY				TEMPE	TEMPERATURE			H	YEAR 1987	
DAYS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
	.6		7.2	10.0	10.0	10.6	13.3	12.8	10.0	11.1	10.8	9.4
2	8			9.4	4.6	11.7	12.2	15.0	11.1	11.1	10.6	4.6
e 6	.8		8.3	10.0	10.6	11.7	11.9	12.8	11.4	,	,	7.6
4	80			10.0	10.6	;	12.2		14.4	10.8	10.6	10.0
· ·	200	8 9	4	0.01	10.8	14.4	12.2	14.2	12.2	13.3	0 0	0.7
0 ^	ά.		4	7.0	11.7	13.3	12.8	14.7	10.6	:	2.6	10.0
. «	;		4.6	4.6) (*) 	11.7	12.2	12.8	11.1		4.6	7.6
6	7.		7.6	9.4		11.7	12.5	14.7	10.8	10.6	10.3	10.0
10	7.			10.6		11.7	12.5	12.8	11.7	10.0	10.0	10.0
	&		9.5		11.1	11.9	13.1	11.4	11.1	11.1	11.1	10.0
12	80		7.6	10.6		11.1	12.8	11.1	10.6	10.3	11.7	4.6
13	œ a		4.4	10.6	11.1	11.	111.7		110.8	10.8	11.9	10.0
1 2			10.0	10.6	11.7	11.4	11.7		10.8	10.0	11.1	
16	7.		9.7	10.6	11.1		12.5		11.1	10.3	11.1	8.3
17	7.		4.6		11,1	12.2	14.4	11.7	11.4	10.0	10.3	8.9
18	80		7.6	10.6		10.8	11.9	12.2	11.1	10.6	10.0	o. c
10	. r		4.6	10.0		11.1	11.8	12.2	15.0	10.3		
200			4.0	11.0	11.4		12.2			10.0	10.6	9.8
22	: ;		4.6	11.7	11.1	10.6	12.8		11.7	10.0	10.3	8.1
23	7.		9.4	10.0	11.4	11.7	12.2	15.3	13.3	10.0	10.3	7.8
24	7.		9.7	10.0	11.1	12.2	12.5	10.6	11.4	10.3	10.6	,
25	7.		10.0	10.0	11.1	12.8	13.1	10.8	11.1	10.0	,	8.1
50	:,		;	12.2	10.6	10.0	13.3		10.0	4 10	10.3	0.0
27	•		11.1	10.0	10.8	11.9	12.5	10.0	11.2			۰,۰
200	• «		4.0	11.7	11.1	13.3	15.0		11.7	10.3	4.6	8.1
30			4.6	10.3	10.6	11.7	12.8	15.0	11.1	9.7	4.6	8.1
. E	80		4.6		10.6		11.9	15.6		10.0		7.5
1-10 HEANS	8	8.31 8.12	8.85	9.82	10.52	12.18	12.40	13.80	11.61	11.10	10.16	71.6
SAMPLE SIZE			9	10	•	6	10	6	10	7	0	6
11-20 MEANS SAMPLE SIZE	89	8.16 8.39 10 10	9.50	10.60	11.07	11.50	12.29	12.22	11.58	10.48	10.83	9.16
21-31 MEANS SAMPLE SIZE	7.	7.83 8.56 11 8	9.69	10.70	10.99	11.70	12.90	13.30	11.64	9.89	10.07	7.97
MONTHLY MEANS SAMPLE SIZE	89	8.09 8.34 31 28	9.42	10.35	10.90	11.79	12.55	13.21	11.61	10.40	10.37	8.92
MAXIMUM VALUE	4.6	4.6 4	11.1	12.2	11.7	14.4	15.0	15.6	15.0	13.3	11.9	10.0
MINIMUM VALUB	7.2	2 6.1	7.2	9.4	4.6	10.0	10.8	10.6	10.0	4.6	4.6	7.5
RANGE	2.2	2 3.3	3.9	2.8	2.3	4.4	4.2	5.0	5.0	3.9	2.5	2.5
STANDARD DEV.	•	0.54 0.88	0.63	0.73	0.50	0.94	0.82	1.69	1.13	0.74	0.65	0.87
ANNUAL MIN	N	6.1		ANNUAL MEAN	SAN	10.50		ANNU	ANNUAL MAX	15.6	ø.	

	CHA	CHARLESTON, OR.	OR.			TEMPE	TEMPERATURE			Þ	YEAR 1987	
DAYS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
		10.3	10.1	11.11	10.2	12.8	12.0	14.7	12.0	11.9	11.8	11.9
2		10.5	10.1	11.0	10.4	13.2	12.5	12.9	11.9	11.8	11.9	12.1
m ·	;	10.4	10.4	10.8	10.9	13.1		10.5	11.9		11.0	
4 u	11,1	10.0	10.3	11.1	11.2	13.2	17 7	10.7	10.6	11.5	11.8	12.0
	10.0		10.3	113	11:1	12.3	12.0		110	10.0	11.6	11.8
, ,	10.4				11.0	11.7	12.2	10.2	11.4	10.1		11.9
. 00		10.5		11.5	 	11.1	14.2	10.2	11.1	11.0	11.8	11.8
6	10.6	10.6	10.5	11.8		11.2	11.2	7.6			12.3	12.1
10	10.6	10.8	10.4	11.6	12.3	11.3	13.3	,	,	11.3	12.4	,
11	10.9	10.8	10.3	11.5	13.0	11.3	12.3	11.0	11.1	11.4	11.6	11.9
12	11.2	10.8	10.5	11.9	12.6	6.11	9.8	10.6	11.1	11.7	11.5	11.7
14	10.5		10.3	11.6	13.0	10.2	10.4	11.0	11.0	11.3	12.2	11.5
15	10.5	10.7	10.6	11.7		10.6	10.3	11.4	12.2	10.7	11.8	10.7
16		9	1::	11.7		10.5	10.4	10.5	12.5	10.4	12.1	10.7
1.0	9	0.01	11.2	11.7		12.3	•	11.2	11.6	10.7	12.4	11.3
· ·	10.7	10.9	11.9			12.2	10.2	10.2	11.4	10.2	12.3	
50	10.5	10.9	10.8	11.9		10.1	10.5	10.0	11.8	10.4	12.4	11.2
21	10.6	10.9	10.9				11.0	10.1	11.2	10.0		11.1
22	10.4	8.6	10.4	8.6		,	11.4	6.6	10.9	10.1	12.7	10.9
23	10.4	9.7	10.6	9.6		12.2	12.4	10.0	11.8	0.0	12.3	10.0
47.0	4 01		10.3			11.4	12.1	10.2		10.0	12.3	
96	10.7	2.0	10.4	10.1	10.0	11.0	13,3	10.1		11.0		
27	10.7	.6.7	10.6	10.6	10.1		14.7	10.1	11.8	10.9	12.1	10.4
28	10.5	8.6		10.0	11.7		15.2	11.4	11.0	10.6	12.0	10.5
53	10.5		10.6	10.4		11.1	15.0	11.4	10.8	10.8	11.5	10.1
30			10.7	10.9		11.4	15.5	10.5	10.6	10.6	11./	10.2
16	10.3		7.11									
1-10 MEANS SAMPLE SIZE	10.68	10.52 8	10.30	11.27	11.02	12.43 10	12.45	11.12	11.46 8	11.27	11.94	11.94 8
11-20 MEANS SAMPLE SIZE	10.74	10.85	10.80	11.64	12.75	11.22	10.54	10.82	11.62	10.91	12.06	11.31
21-31 HEANS	10.54	96.6	10.66	10.20	10.66	11.58	13.49	10.50	11.06	10.40	12.14	10.49
SAMPLE SIZE	6	7	6	7	2	9	11	11	∞	10	00	œ
MONTHLY MEANS SAMPLE SIZE	10.65	10.46	10.60	11.10	11.32	111.79	12.25	10.79	11.40 26	10.83	12.04 26	11.25
MAXIMUM VALUE	11.2	11.0	11.9	11.9	13.0	13.9	15.9	14.7	12.5	11.9	12.7	12:1
ENTHUM VALUE	10.4	7.6	10.1	9.6	6.6	1.0.1	8.6	9.7	10.6	10:0	11.5	10.1
		٠				•	. •		-	, e	1.3	,
KANGE	•	3		7			:		:	:		
STANDARD DEV.	0,21	0.45	0.40	69.0	1.04	1.01	1.79	1.00	0.53	0.62	0.33	0.70
ANNUAL MIN		9.6	•	ANNUAL MEAN	:AN	11.21	ž	ANNUA	ANNUAL MAX	15.9	6	

₩	CRE	CRESCENT CITY	TY			TEMPE	TEMPERATURE			H	YEAR 1987	
DAYS	JAN	FEB	MAR	APR	HAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	12.1	11.2	9.4		13.5	12.8	17.1	12.8	17.1	13.8	13.8	11.7
F 1 1 1 1 2		12.1	10.5	12.8	12.9	12.7	15.7	14.8	16.7	14.3	13.3	12.6
m -	11.9	:	11.0	12.8	12./	14.4	0.41	/:01	16.0	13.7	13.3	0.41
	12.1	12.7	11.2	11.8	14.4	•	16.6	16.7		14.3		12.3
	1		13.1	12.7		13.8	15.1		15.8	,	12.8	11.8
	12.1	12.1	12.7	12.8	18.6	15.4	7 7 7	14.0	14.4	15.4	12.7	11.0
10 G	11.0	12.7	12.2	13.6	16.2	15,3	13.8	14.1	14.3		13.1	11:11
_	12.1	12.8	11.8		17.2		12.1	15.9	13.9	14.9	12.8	12.3
SF.		;	11.8	14.3		16.8	9	15.6	14.4	13.9	13.2	7.71
	12.0	12.5	12.0	7:41	15.0	12.9		2	14.9	14.8	13.3	11.7
41.			12.1	13.8		13.4	15.6	•	15.1	7 7 7	13.4	401
: 51 -	11.9	11.7	13.7	12.0	13.6	12.9	13.6	13.9	6.41	14.4	12.7	11.0
17	6.11		12.2	12.1	12.0	14.1		15.9	14.3	13.9	13.6	
8 1 1 8	11.6	12.2	,	11.9			12.3		12.9	4	7 61	11.0
19	;	12.7	12.3	8.11	12.1	14.3	14.0	15.4	13.9		1.51	11.0
21	11.2	12.6	10.7	12.9	11.5	15.7	13.9	14.4		13.7	12.9	10.6
22	10.7	12.2	10.7	14.0		13.2			12.9	13.8	12.8	10.5
23	:	0	12.1	13.3	13.4	13.2	15.1	15.1	14.3	13.1	17.7	10.6
4 5	11.0	7.0	13.3	12.1			14.3	15.0		14.3	12.7	10.2
26	11.8	10.0	12.7	14.3	11.2	15.7	14.0	15.1	12.8	14.6	12.6	,
27	;	10.1	;	13.9	,		16.7	4	12./	, ,	•	0.01
28	11.0	7.6	11.8	14.2	12.9	16.2	14.9	13.0	13.2	13.9	11.6	9.2
000	•			1		16.1	15.7	16.7			12.1	9.2
31	11.2		12.7		13.0			16.9				8.6
1-10 MEANS SAMPLE SIZE	12.01	12.25	11.49	13.06	14.97 8	14.17	14.96 8	14.95 8	15.46	14.46 8	13.11	11.95 8
11-20 MEANS	11.78	12.39	12.03	13.00	13.37	14.01	14.33	14.88	14.34	14.23	13.27	11.23
SAMPLE SIZE	S	. 7	7	7	1	00	٥	٥	-	٥	٥	`
21-31 MEANS SAMPLE SIZE	11.11	10.60	11.95	13.53 7	12.43	15.10	14.94 7	15.60 8	13.18	13.94	12.40 8	10.01 8
MONTHLY MEANS SAMPLE SIZE	11.59	11.77	11.81	13.20	13.65	14.41	14.78 21	15.17	14.45	14.22	12.89	11.06
MAXIMUM VALUE	12.2	13.3	13.3	14.9	18.6	16.8	17.1	16.9	17.1	15.4	13.8	12.8
MINIMUM VALUE	10.7	7.6	9.4	11.8	11.2	12.7	12.1	12.8	12.7	13.1	11.6	9.2
RANGE	1.5	3.6	3.9	3.1	7.4	4.1	5.0	4.1	4.4	2.3	2.2	3.6
STANDARD DEV.	0.49	1.15	0.94	0.95	2.02	1.26	1.37	1.09	1.29	0.55	0.56	1.01
ANNUAL MIN	5	9.2	•	ANNUAL MEAN	SAN	13.25		ANNUAL	AL MAX	18.6	بو	

	TR	TRINIDAD BEACH	ACH.			TEMPE	TEMPERATURE				YEAR 1987	
DAYS	JAN	FEB	MAR	APR	HAY	JUN	JUL	AUG	SRP	OCT	NOV	DEC
		12.0	9.4	12.5	12.2	11.8	12.1		14.5	11.2	13.5	12.2
2		12.5	10.0	12.0	12.1	12.5	12.4		14.2	12.1	13.3	12.8
6 →		12.3	8 6	12.2	12.6	11.1	12.1	11.8	13.1	12.0	12.8	14.0
• •		13.2	10.6	11.0	14.2	12.9		12.1	1.71	12.3	12.1	13.1
• • • • • • • • • • • • • • • • • • •		13.5	11.8	12.8	13.8		11.3	11.2		12.5	12.8	13.2
7		12.5	11.0	12.5	14.6		11.8	11.0		11.4	13.2	12.8
₩.		11.7	11.0	13.0		12.6	11.3		12.9	12.8	12.9	13.0
o ç		12.1		12.3	13.5	11:5	11.0		12.2	12.2	12.9	13.0
11		12.3	12.2	11.0	13.6	11.5	11.0	12.4	13.0	12.4	12.8	12.8
12		12.0	:	10.5		8.6		11.6	12.9		13.1	12.5
13		12.4		11.5	13.7		12.8	11.3	12.6	12.2	13.6	12.0
14	12.5	11.8	11.5	11.2	13.4	;	12.8	11.6	14.0	12.0	13.3	
15 14		11.7	11.3	12.1	0	10.4	12.0		13.0	12.4	13.2	
17		12.5	11.0	10.6	11.0	10.5	10.6	11.0	11.6	12.9	13.4	
18		12.2	11.8	10.2	10.8	10.9		11.4	11.9	13.0	13.0	
19		12.3	12.1	10.6	10.0	10.4	,	,	11.8	13.2	13.5	11.1
20	11.8	12.2	10.7	10.7	10.0		11.4	12.0	12.2	12.8	,	;
21	:	12.0	11.0	10.2	10.0	:	12.5	13.0	12.2	12.8	13.3	11.9
33 52	11.7	6.6	12.2			10.8	13.1			12.8	13.0	
24	11.0	9.3	11.8	11.7		10.9	13.8	12.9	13.0	13.0	12.5	
25	11.6	9.2	12.5	10.0		10.3		12.0	12.0	13.1	11.9	
26	12.9	10.0	11.5	11.0		12.0		11.9	12.0	13.3		
27	12.2	. (12.3	,	8.6		:	12.0	11.8	13.5		
87	12.3	6.6	10.1	12.0	10.7	12.8	12.0	2:51	11.8	13.7		
30	12.2		13.5	12.1	2	12.5	12.7		11.5	13.9	12.1	10.1
31	12.1		13.5				12.2	15.0		13.6		
1-10 MEANS		12.46	10.45	12.17	13.17	11.82	11.62	11.62	13.03	12.10	12.94	13.15
SANCE SALES		2		3		•	•	•		2	•	2
11-20 MEANS SANPLE SIZE	12.15	12.14	11.59	11.05	11.67	10.64	.11.97	11.61	12.49	12.62	13.24	12.10
21-31 MEANS SAMPLE SIZE	11.95	10.09	11.95	11.34	10.34	11.47	12.87 8	12.83	12.05	13.28	12.65	11.00
MONTHLY MEANS	11.98	11.73	11.40	11,53	11.98	11.34	12.17	12.04	12.50	12.69	12.97	12.62
SAMPLE SIZE	12	17	27	78	22	7.7	77	70	52	90	24	91
HAXINUM VALUB	12,9	13.5	13.5	13.0	14.6	12.9	13.8	15.0	14.5	13.9	13.6	14.0
HINIMUM VALUE	11.0	9.2	4.6	10.0	8.6	8.6	10.6	11.0	11.5	11.2	11.9	10.1
RANGE	1.9	4.3	4.1	9.0	4.8	3.1	3.2	4.0	3.0	2.7	1.7	3.9
STANDARD DEV.	0.50	1.16	1.04	0.92	1.58	0.89	0.81	0.92	0.81	99.0	0.45	1.00
2 →8 2:					: *							
ANNUAL MIN		9.2		ANNUAL MEAN	RAN	12.08		ANNU	ANNUAL MAX	15	15.0	

13 to 13 to 14 to 14 to 15 feet agent the	TR	TRINIDAD BEACH	EACH	5		SALINITY	NITY				FEAR 1987	_
DAYS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV) DBC
2007		31.10	33.31	32.99	32.83	33.70	33.75		33,52	33.61	33.09	33.01
2		31.45	33.53	32.45	32.85	33.80	33.72		33,53	33.92	33,18	32.14
		30.10	33.22	32,19	32.74	33.72	33.75	33.86	33.98	33.64	33.28	29.06
一次一次一次一次		28.61	31.85	32.11	33.04	33,73		33.63	33.54	33.66	33,31	29.31
'n		29.85	31.68	32.69	32.93	33.87		33,57		33.66	33.33	29.55
MANUEL PROPERTY.		30.74	33.38	32.39	32.91		33.81	34.03		33.65	33.28	30.08
7		30.31	33.29	32.49	32.87	;	33.88	33.59		33.64	33.25	28.59
# 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		30.40	33.23	32.51		33.04	33.80		50.00	47.00	33.23	30.01
20 C		31.42		32.73	32.19	33.00	33.80	13.47	73.73	10.55	33.21	30.07
70 TO		11.5	31.14	32.53	32.06	33.63			33.65	33.60	33.29	31.96
12		31.34		33.15		34.07		33.60	33.75		33.21	32.52
<u>س</u>		31.60		33.10	32.89		33.80	33.75	33.62	33.55	33.10	32.76
4 B 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		30.47	34.18	33,10	33.03		33.87	۰	33.84	33.51	33.11	
in the	32.31	30.03	33.19	33.00		33.77	33.86		33.60	33.76	,	
		29.64	31.10	33.05	33.52	33.74	33.77	4	20.00	24.40	33.10	
/L		29.64	29.04	33.21	33.57	23.71	97.55	14	23.01	2 2 2	33.13	
		33,43	31.56	33.47	"			:	33.64	33.54	33.03	32.89
20	32.92	32.60	31.93	33.55	33.80	•	œ	34.17	34.07	33.43		
5 i S		32.86		33.62	m		_	33.66	33.78	33,36	33.04	32.86
22	32.61	32.76	30.37	33.71	m	33.83	33.68			33,35	33.22	
23	32.61	33.31	30.41			33.75	5			33.80	33.14	
24	32.61	33.61	32.08	33.39		33.75	'n	٠.	33.54	33.39	33.18	
2.5	32.89	33.77	32.40	33.55		33.80		ņ	33.55	33.29	33.22	
500	31.50	33.75	32.69	33.31	23 70	33./4		33.59	33.09	33.31		
77.	20.00	33	22.40	33	22.73		33.54	9	10.66	33.55		
9 0	30.74	9	61.00	33.17	23.00	7	יינ	•	33.61	33.25		
0.0	31.3		32.21	33.07	•	33.73	33.58		33.60	33.22	33.17	32.81
31	31.35		32.12			:	9	33,57		33.19		
			,		30 06	23 73	23	33 60	33 63	13 67	76 88	10.01
SAMPLE SIZE		10	8	•		:		•	7		10	100
11-20 MEANS SAMPLE SIZE	32.61	31.10	31.72	33.13	33.37	33.81	33.83 6	33.77	33.74	33.54	33.14 8	32.53
						-		•	,			;
21-31 MEANS SAMPLE SIZE	31.73	33.38	32.08	33.35	33.80	33.76	33.59 8	33.64	33.62 8	33.33	33.16 6	32.83 2
MONTHLY MEANS SAMPLE SIZE	31.88	31.48	32.24	32.98	33.26 22	33.76	33.73 22	33.70	33.67	33.51	33.19 24	31.12 16
MAXIMUM VALUE	32.92	33.77	34.18	33.71	33.85	34.07	33.94	34.19	34.07	33.92	33.33	33.01
MINIMUM VALUE	30.56	28.61	29.04	32.11	32.74	33.63	33.52	33.40	33.52	33,19	33.03	28.59
RANGE	2.36	5.16	5.14	1.60	1.11	0.44	0.42	0.79	0.55	0.73	0.30	4.42
STANDARD DEV.	0.87	1.45	1.21	0.44	0.44	0.10	0.12	0.21	0.15	0.19	0.08	1.63
ANNUAL MIN	2.8	8.59		ANNUAL MEAN	(BAN	32.88		ANNUAL	JAL MAX	34.19	19	

	TR.	TRINIDAD BAY	,			TEMPE	TEMPERATURE			۲	YEAR 1987	
DAYS	JAN	FEB	MAR	APR	HAY	JUN	JUL	AUG	SRP	OCT	NOV	DRC
		12.0	8.8	12.3	12.6	11.8	12.0		15.0	11.9	13.8	12.0
2		12.5	10.5	12.0	12.9	12.5	12.5		14.7	12.4	13.4	12.5
٣		12.9	10.3	12.0	12.0	12.2	11.6	11.9	13.5	11.9	13.0	13.9
4		12.6	10.0	11.9	11.4	11.0		13.2	13.5	12.5	12.7	13.9
'n		12.9	10.4	10.8	11.8	13.0	;	13.1		13.4	12.4	12.8
9		13.0	11.7	12.7	13.0		10.9	12.1		12.2	12.7	13.0
7		12.8	10.9	12.2	14.3	,	11.0	11.6	,	12.3	13.1	12.8
80		11.6	10.8	13.0	,	12.2	10.0		12.8	13.0	13.2	12.6
6		12.0		11.8	13.5	11.2	6.6	,	12.6	12.2	13.0	13.0
10		11.9	,	11.8	13.5	11.3	10.0	12.1	12.6	13.0	13.5	13.5
11		12.5	11.3	11.4	12.2	11.0		12.5	13.0	12.4	12.8	12.9
12		12.0		11.0	13.0	10.0	13.2	11.0	13.4	12.5	13.8	11.9
7 -	12.3	8	11.0	10.8	11.8		13.8	11.0	14.0	12.0	12.8	
15		11.4	11.2	11.1		10.6	12.9		13.3	12.0		
16		12.0	11.8	11.0	10.3	10.8	11.8		11.8	12.3	13.2	
17		11.9	10.8	10.1	8.6	10.1	10.2	10.9	11.8	12.4	13.7	
18		11.9	11.5	8.6	10.0	10.8		12.2	11.3	12.7	13.0	,
19	11.2	12.0	11.5	9.4	9.5	10.9	;	,	11.6	13.0	13.3	10.8
20	,	11.8	10.6	9.5	10.0		11.3	12.0	12.1	12.8	;	;
21	11.0	11.0	10.5	10.0	e. 6	;	12.6	12.1	12.1	12.7	13.1	0.11
77		7.6	8.11	10.1	10.0	1.0	13.7			13.0	12.9	
23			911.	4 0 1			13.2	13	12 8	13.5	12.5	
47	17.4	0.0	11.0	200		11.2		12.1	12.2	13.4	12.0	
26	12.0	9.0	11.2	11.2		11.9		12.1	11.2	14.3)	
27	12.2	•	11.4		0.6			12.1	11.3	14.0		
28	11.9	8.7	10.5	12.7	4.6		12.9	13.0	12.1	13.8		
29	12.1		10.8	12.6	8.6	14.1	12.6		12.2	14.1	,	,
30	12.0		12.4	12.1		12./	11.0	15.0	11.9	14.0	17.0	•
1-10 WRANS		12.42	10.42	12.05	12.78	11.90	10.99	12.33	13,53	12.48	13.08	13.00
SAMPLE SIZE		10	8	10	6	80	80	9	7	10	10	10
11-20 MEANS SAMPLE SIZE	11.75	11.95	11.21	10.47	10.82	10.67	12.20	11.71	12.53	12.46	13.22	11.90
21-31 MEANS SAMPLE SIZE	11.76	8.89	11.38	11.26	9.50	11.74	12.69 8	12.77	11.97 8	13.62	12.58	10.30
MONTHLY MEANS SAMPLE SIZE	11.76	11.33	11.05	11.26	11.32	11.46	11.94	12.27 20	12.63	12.89	13.00	12.39 16
MAXIMUM VALUE	12.4	13.0	12.4	13.0	14.3	14.1	13.8	15.0	15.0	14.3	13.8	13.9
HINIMUM VALUE	11.0	7.8	8.8	9.5	0.6 0.6	10.1	6.6	10.9	11.2	11.9	12.0	9.6
RANGE	1.4	.2	3.6	8	5.3	4.0	3.9	4.1	3.8	2.4	1.8	4.3
Dad nathana	9	1 61	7.7	10	ं र	80	1.26	8	1	0 73	87.0	1.15
SIANDAKU UBV.	•	,	, and a	, , ,	,		2					
ANNUAL MIN		7.8	Ì	ANNUAL MEAN	SAN	11.94	1.1	ANNO	ANNUAL MAX	15,	15.0	

	B0]	BODEGA BAY		4.		TEMPE	TEMPERATURE			X	YEAR 1987	
70	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
			•	12.6	11.0	10.4	13.2		15.3	13.6	1.44 1.4	•
2		7	11.9	13.0) Y 1	11.2	13.3		15.0	13.6	- 1	
8		12.0		13.4		- [*] - - -	i	12.5	S	j .	13.0	
	. •		12.0					12.5	9			
л ч	12.0	12.0		•	11.9	11.0		13.0		14.0	13.0	
6 T.	11.9	12.0	12.0	10.6	17.7		11.0	13.0		1 4 4 4 6 4	•	
- C - C - C - C - C - C - C - C - C - C	12.0					10.6	12.0			14.0		
٥ :	12.0	12.4	12.0	10.3	\$ 	10.5	10.4		E T	14.0	14.0	
		12.8	12.4		11.0	10.9		13.7	15.0		14.1	
12	~	*	12.4							14.0		
13	12.0			11.0	11.4		C	14.3	6	13.6	14.8	
S	1 2			11.3	11.4		13.0	•	12.3	13.0		
91	~	•	12.0	;					12.3		13.0	
77		17.0	1,0	0.11		471		15.1	13.0	7	•	
61			•					15.0		13.8	13.4	
20	_		10.1	6.6	~		12.0				•	
21	10.9			10.8	12.8	•	12.2	15.0	;	14.0		
2.3	10.5	10.7		/-11	7	0.01	12.3		12.8	14.9	13.0	
2.4	•	10.5	10.0	10.3		10.9			12.7		,	
25			10.1			,	•	14.8	12.8			
26	,	10.4			10.0	11.6		L				
, v c	12.8	7.01		10.6	y . c			15.0	13.0	4 4		
) 6 	12.0				10.0			1	13.0	15.0		
30 31	12.0			11.3		13.0	12.5		13.1	15.0	,	
	,	- (•	•	1	1	•	•	•	•	•	
1-10 MEANS SAMPLE SIZE	11.96	12.08 5	11.82	11.98	11,70	10.72 6	11.98	12.90 5	15.44	13.97	13.37	
11-20 MEANS SAMPLE SIZE	11.83	12.70	11.78	10.80	11.40	10.90	12.67	14.57	13.00	13.60 6	13.63	
21-31 MEANS SAMPLE SIZE	11.41	10.45	10.05	10.94 5	10.98	11.37	12.42	14.95	12.76	14.71	13.00	
MONTHLY MEANS SAMPLE SIZE	11.71	11.60	11.51	11.27	11.29	10.97	12.30	14.11	13.58 18	14.12	13.47 14	
MAXIMUM VALUE	12.0	12.8	12.4	13.4	13.2	13.0	13.3	15.3	16.0	15.0	14.8	
MINIMUM VALUE	10.5	10.2	10.0	6.6	6.6	10.0	10.4	12.5	11.9	13.0	12.8	
RANGE	1.5	2.6	2.4	3.5	3.3	3.0	5.9	2.8	4.1	2.0	2.0	
STANDARD DEV.	0.52	96.0	0.92	1.06	1.07	0.80	0.88	1.01	1.29	0.59	0.58	

YEAR 1987	NOV DEC	33.43 33.65	33.35 33.36	33.36 33.25	33.14 33.4 33.34 33.34	33.41 33.05 33.44	. 6.3 . 5	33.28 33.44 33.35 33.35	33.65 33.05 0.60 0.15
YEA	OCT	33		33.50 33.50 33 33.46	33.45 33.45 33 33	33.44 33 33.78 33 33.29 33	33.27 33.18 33.52 33	33.43 33 33.35 33 33.43 33	33.78 33 33.18 33 0.60 0
	SRP	33.57		33.48 33.51	33.52 33.53 33.57 33.54	33.53 33.50 33.51 33.82	34.48U 33.66 33.47 33.58	33.52 33.58 33.58 33.56	33.82 33.46 0.36 0.11
	AUG	33.93	33.95 33.51	33.74	33.64 33.70 33.51	33.60	33.59 33.83 33.78	33.65 33.66 33.66 33.69	33.95 33.51 0.44 0.14
SALINITY	JUL	33.92	33.90	33.92 33.97	33.85	34.54U 33.88 33.84 33.91	33.86 33.93	34.01 2 33.87 4 33.92 10	34.17 33.84 0.33
SAL	JUN	33.94	33.99	33.90 34.17 33.93 33.91		33.93 33.98	33.97 33.82 33.98 6	33.91 33.92 4 33.95	34,17 33,82 0,35
	HAY	33.79	33.56 33.69	33.85	33.81	33.73 33.67 33.56	33.56 33.87 33.98 33.68	33.78 33.75 33.75 13.75	33.58 33.56 0.42
	APR	33.11 32.95 32.71	33.65	33.74	33.82 33.82	33.98 33.93 33.99	33.82 33.57 33.23	33.90 33.89 33.66 14	34.12 32.71 1.41 0.43
	MAR	33.20	33.02	33.23 32.93 32.90	32.99	33.69 33.57 33.44	33.12 5	33.22 33.56 33.26 33.23	33.69 32.90 0.79
BODEGA BAY	FEB	32.86 32.89	32.87 32.92	32.81	33.40	33.47	33.20 33.20 32.87	33.03 2 33.47 33.12	33.61 32.66 0.95 0.35
BC	JAN		33.03 33.04 33.08	33.12	33.21 32.95 32.96	33.34 32.88 33.14	33.07	33.04 33.09 33.07	33.34 32.88 0.46
	DAYS	17 7 6 7	5 2 7	8 10 11 12	11.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1	2221000	26 27 27 29 30 31 1-10 MEANS SAMPLE SIZE	11-20 MEANS SAMPLE SIZE 21-31 MEANS SAMPLE SIZE MONTHLY MEANS SAMPLE SIZE	walling and the second of the

	FAR	FARALLON			S	TEMPE	TEMPERATURE			¥	YEAR 1987	
DAYS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
一般の は 東京の の で で で で で で で で で で で で で で で で で で	13.7	12.6	11.9	12.5	12.3	11.6	12.3	12.4	15.0	13.4	15.6	13.7
F 8 14 2	13.6	12.7		11,9	12.5	11.8	7.5	12.9	14.9	13.5	15.0	
	13.2	13.0		12.5	12.4	12.5	14.0	12.8	15.8	13.7	15.6	
×	13.2	12.9			12.1	12.9	13.5	12.0		14.0	15.0	
9	13.2	13.0	12.7	12.7	11.9	12.0	12.0	12.9	16.2	14.0	15.0	
. 🗴	13.2	13.2	12.6	11.6	12.4	12.3	11.8	13.5	16.7	14.0	15.2	
o 1	13.2	13.2	13.2	11:4	13.2	12.4	11.5	15.0	16.5	14.1	15.2	13.7
9 :	13.2	13.2	12.6	11.3	13.8	12.3	11.3	15.0	16.5	14.2	15.0	14.0
7 - C - C - C - C - C - C - C - C - C -	12.9	13.3	13.5	10.7	13.3	11.6	11.6	15.6	16.0	14.0	15.0	13.4
13	12.7	13.5	13.2	10.7	12.6	11.5	11.9	15.0	15.0	14.1	15.0	12.2
4 1	12.8	13.4	12.9	10.9	12.6	11.8	12.6	14.1	15.6	14.1	15.0	12.4
- T	12.5	13.2	12.9	10.9	12.7	14.9	13.7	14.3	15.0	14.0	14.5	
17	12.2	13.0	12.2	10.7	12.8	13.0	•	14.6	15.0	14.5	14.5	
1.8	12.2	13.0	12.2	10.7	12.1	13.2	13.4	14.8	15.0	14.3	14.4	
19	12.1	12.8	11.9	10.5	12.9	12.5	13.7	16.0	15.0	14.5	14.5	12.3
20	11.8	12.9	11.5	10.9	13.0	,	14.3	16.2	14.8	15.0	14.4	13.0
2.2	12.1	127	11.2	111	12.6	12.5	14.0	8.4	0.41	15.3	14.3	12.2
23	12.6	11.8	11.2	10.9	11.6	11.6	14.9	16.5	13.9	16.5	13.8	11.9
2.4	12.8	11.2	11.0	11.3	12.6	11.4	14.0	15.2	14.0	16.2	13.8	10.2
2.5	12.8	11.2	11.0	11.2	12.6	11.3		15.2	14.2	15.0	13.6	12.2
26	12.8	11.8	10.7	11.3	11.9	11.4		14.2	13.8		13.5	11.9
7.8	13.0	11.0	11.2	11.3 2.11	11.	11.9	13.2	14.5	13.2	15.8	13.4	1,0
29	12.5		11.5	12.4	11.5	13.2	12.9	14.6	13.7	14.6	13.3	14.0
30			12.2	12.1	12.1	12.8	12.6	14.8	13.7	15.5	13.7	12.4
31	12.8		12.2		12.1		12.1	14.9		15.7		13.0
1-10 MEANS	13.30	12.94	12.65	11.99	12.66	12.18	12.64	13.31	15.92	13.88	15.32	13.80
	•	•	•	•	2	2	9	9			2	n
11-20 MEANS SAMPLE SIZE	12.43	13.13 9	12.56	10.72	12.75	12.69	12.99	14.95 10	15.16	14.26	14.66	12.68 6
21-31 MEANS SAMPLE SIZE	12.61	11.72	11.35	11.44	12.10	12.13	13.35 8	15.42	13.78	15.52	13.69	12.21
MONTHLY MEANS SAMPLE SIZE	12.76	12.71	12.09	11.36	12.49	12.32	12.97	14.59	14.91 28	14.55	14.59	12.61
MAXIMUM VALUE	13.7	13.5	13.5	12.7	13.8	14.9	14.9	16.8	16.7	16.5	16.0	14.0
MINIMUM VALUE	11.8	11.2	10.7	10.5	11.5	11.3	11.3	12.0	13.2	13.4	13.3	10.2
RANGE	1.9	2.3	2.8	2.2	2.3	3.6	3.6	8.4	3.5	3.1	2.7	3.8
STANDARD DEV.	0.48	0.67	0.80	99.0	0.54	0.83	1.00	1.27	1.04	0.82	0.74	0.92
ANNUAL MIN	10	10.2	•	ANNUAL MEAN	'AN	13.16		ANNUA	ANNUAL MAX	16.8	60	

	FA	FARALLON				SAL	SALINITY				YEAR 1987	87
DAYS	JAN	FEB	MAR	APR	HAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	33.24	33.35	33.49	33.27	33.82	33.79	33.55	33.80	33.40	33.41	33.29	33.40
2	33.38	33.37		33.73	33.42	33.80	33.59	33.66	33.58	33.38	33.61	
e		33.37		33.23	33.44	33.79	34.03	33.47	33.42	33.36	33,33	
4	33,59	33,35		33.30	33.72	33.76	33.60	33.69	33.46	33.67	33.32	
5	33.34	33.43			33.55	33.78	33.57	33.80		33.74	33.60	
9	33.38	33.33	33.27	33.22	33.52	33.80	34.17	33.69	33.37	33,31	33.31	
1	33.59		33.40	33,30	33.65	33.79	33.70	33.61	33.33	33,34	33.31	
	33,39	33,33	33.36	33.84	33.43	33.79	33.80	33.61	33.72	33.37	33.31	
	33.94	33,33	33.29	33.44	33.46	33.77	33.84	33.48	33.37	33.36	33.37	33.29
	33,37	33.42	33.36	33.40	33.69	33.78	33.83	33.43	33.31	33.50	33.48	33.30
	33,38	33.45	33.45	33.56	33.58	33.78	33,83	33.43	33.37		33.33	33.40
	33.36		33.41	33.70	33,51	33.77	33.81	33.51		33.66	33.31	33.42
	33.41	33.28	33.53	33.66	33.52	33.76	33.78	33.65	33.36	33,33	33,33	33.34
	33.35	33.38	33,38	33.48	33.52	33.62	33.67	33.48	33.42	33.55	33.41	33.39
	33.40	33.22	33,35	33.47	33.59	33.65	33.47	33.67	33.44	33.43	33.36	
	33,39	33.54	33.17	33.66	33.59	33.50	33.39	33.48	33.39	33.45	33.39	
	33,35	33.26	33.14	33.68	33.69	33.62	33.75	33.50	33.42	33.47	33.31	
	33,34	33.07	33.26	33.69	33.60	33.72	33.68	33.58	33.52		33.32	
	33.82	33.22	33.24	33.70	33.63	33.72	33.69	33.66	33.35	33.44	33,33	33.53
	33,33	33.25	33.48	33.69	33.57		33.69	33.47	33.34	33.63	33.30	33.40
	33.68		33.76	33,66	33.63	33.57	33.57	33.84	33.33	33,38	33.46	33.43
	33.28	33.17	33.53	33.61	33.67	34.01		33.55	33.49	33.36	33,39	33.40
	34.11	33.41	33.50	33,53	33.68	33.91	33.46	33.50	33.35	33.32	33,37	33.42
	33.42	4	33.53	33.44	33.64	33,77	33.47	33.98	33.31	33.31	33.38	33.44
	33.30	33.72	33.44	33,54	33.62	33.77		33.60	33.41	33.32	33.41	33.40
	33.44	33.49	33.48	33,55	33.62	33.76		33,36	33.46		33.36	33.33
27	33.32	2	33.42	33.56	33.70	33.71	33.55	33.60	33.73	33.33	33.92	;
	33.46		33,32	33.56	33.95	33.47	33.60	33.45	33.38	33.30		33.36
2.9	33.35		33.40	33.54	33.82	33.60	33.59	33.49	33.54	33,31	33.37	33.42
30			33.37	33.58	33.75	33.53	33.67	33.04	33.39	33.50	•	33.38
31	33.37		33.29		33.96		33.14	77.00		33.50		00.00
1-10 MRANS	33.47	33.36	33,36	33.41	33.57	33.78	33,77	33.62	33.44	33.44		33,33
SAMPLE SIZE	6			6	10	10	10	1.0	6	10	10	e
11-20 MEANS	33.41	33.30	33.34	33.63	33,58	33.68	33.68	33.54	33.40	33,49		33.41
	10	6	10	10	10	6	10	10	6	∞ ,	10	٥
21-31 MEANS	33.47	33.46	33.46	33.56	33.73	33.71	33.58	33.59	33.44	33.33 10	33.44	33.40
SARFLE SILE	01	•	1	2	:	2	•	1				
HONTHLY MEANS	33.45	33.36	33.39	33.54	33.63	33.73	33.68	33.58	33.43	33.42	33.39 29	33.39 19
		i	i	ì						;	;	;
MAXIMUM VALUB	34.11	33.72	33.76	33.84	33.96	34.01	34.17	33.98	33.73	33.74	33.92	33.53
MINIMUM VALUE	33.24	33.07	33.14	33.22	33,42	33.47	33,39	33,36	33,31	33.28	33.29	33.29
A A NA C	78 0	9 0	0.62	0.62	0.54	0.54	0.78	0.62	0.42	0.46	0.63	0.24
TONO4			1									
STANDARD DEV.	0.20	0.13	0.13	0.16	0.13	0.11	0.17	0.14	0.11	0.12	0.13	0.05
		23		AVMINAT	NYAN	33 50		ANNE	ANNIIAI. MAX	34.17		
ANNUAL MIN	,				uppro.)					12. 12.	

100 mm m	SAN	SANTA CRUZ		10		TEMPE	TEMPERATURE			H	YEAR 1987	
DATS	JAN	FEB	HAR	APR	MAT	NUL	JUL	AUG	SEP	OCT	NOV	DRC
1000 1000 1000 1000 1000 1000 1000 100	9						,		7 71			
7	14.9	12.3	12.3	13.5	13 3	2 7 1	14.3	15.3	10.1	7 71	15.7	13.7
) (M	14.0	12:5	12.5	12.0	7 7	1 4 5	1 2	15.5	17.5			13.7
· •	13.0	12.5	12.7	13.8	14.1	14.3		14.7	16.7			13.7
5	13.5		12.8		14.1	13.5	15.1	15.1	17.5	16.7	15.3	13.3
9	13.1	12.5	12.9	13.5	14.5	15.0	16.5		17.0	14.9	15,3	13.0
~ (13.1	12.7	12.5	13.5	14.7	15.7	16.1	14.5	,	15.3		13.7
×0.4	12.7	. 1		14.0	14.5		17.1	10.	1/.3	14.3		13.7
> •	13.1	12./		4 ·	10.0	15.3	16.9	15.7				13.9
	13.2	13.1	13.5	14.2	1	13.9	15.5	13.9	16.3	14.0	7.7	14.1
17	12.7	13.3	13.5		15.1	\ \ \ \	14.9	16.3	1	:	15.5	13.6
£		12.5	13.9	13.3	14.9		14.1	16.1	16.1	15.0		12.2
2 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4		13.5	13.7	13.5	13.9	13.4	14.1	,		15.3	15.0	12.5
15	12.5	13.8	13.5	13.1	14.7	13.1	,	17.3	14.9		14.0	,
10	,	13.5	13.1	12./	12.7	13.5	14.3	16.3	16.5		7 7 7	12.1
4	11.6	13:1	13.1	11.3	13.3	13.3		16.1	15.7	15.3	14.7	12.5
1 1 6	11.5	12.3	13.1	11.2	,	14.1			16.9	•	14.5	12.3
20	11.3	12.9		11.7	14.1		14.3	16.1	16.5	16.1	14.5	
21	11.5		12.0	12.1		16.1	14.1	15.3	16.5		14.3	12.3
22	11.7	12.3	12.2	12.7	13.7	14.3			16.1	15.3		
23		12.7	12.5	13.1	13.5	14.5	15.1	,	15.9	15.3	14.3	12.1
2.4	12.2	11.7	12.3	12.7			4	16.7	,	15.6	14.3	11.1
55	12.2	11.1	13.0	4.4.	12.0	13.7	15.0	10.3	16.3	13.3	6	-
2.7	12.5	0	13.1	7	12.1	1.71	14.2	16.3	16.5		14.	11.3
2.8	12.7	12.5	13.9	13.3	12.7	14.4	14.1	17.5	15.5		13.7	11.1
29	12.5)))		14.2	:	14.3	15.7	18.0	15.5		13.3	11.3
30	12.7		14.5	13.7	14.3	14.5	13.1		15.3		13.5	
31	12.6		13.1		14.9		15.9	16.3		15.5		11.3
1-10 MEANS	13.33 10	12.60	12.64	13.77	14.57	14.76	15.81	15.36	17.12 6	15.65	15.47	13.63 10
11-20 MEANS SAMPLE SIZE	12.06	13.11	13.41	12.57	14.10	13.43	14.53	16.07 8	16.15 8	15.14	14.70	12.67 8
21-31 MEANS SAMPLE SIZE	12.31	12.13	12.89	13.29	13.22	14.36 8	14.78	16.66	15.99	15.44	14.09	11.44
HONTHLY MEANS	12.62	12.68	12.99	13.21 27	13.98	14.22	15.10	16.00	16.34	15.42	14.69	12.66
HAXIMUM VALUE	14.0	13.8	14.5	14.9	16.5	16.1	17.1	18.0	17.5	16.7	16.2	14.1
MINIMUM VALUE	11.3	11.7	12.0	11.2	12.1	12.1	13.1	13.9	14.9	14.0	13.3	11.0
RANGE	2.7	2.1	2.5	3.7	4.4	4.0	4.0	4.1	2.6	2.7	2.9	3.1
STANDARD DEV.	97.0	0.55	0.61	0.93	1.08	0.95	1.07	0.98	0.67	0.72	0.74	1.06
ANNUAL MIN	11	11.0	•	ANNUAL MEAN	EAN	14.16		ANNUAL	IL MAX	18.0	0	

	PAC	PACIFIC GROVE	VE			TEMPE	TEMPERATURE			¥	YEAR 1987	
DAYS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	13.6	12.4	12.0	12.1	12.2	12.8	13.8	18.00	16.5	14.6	15.5	13.2
2 6	13.9	12.5	12.2	13.0	13.5	14.0	10.01	15.0	16.7	14.7	14.9	13.6
	13.7	12.3	12.8	14.0	13.2	13.8	16.5	13.9	16.5	15.0	15.0	14.1
	13.7	12.2	13.0	13.0	14.0	14.8	15.3	13.2	16.6	14.9	14.6	13.9
	13.3	12.3	13.0	13.0	13.5	14.2	14.8	13.5	16.7	14.1	15.0	13.8
	13.1	12.3	13.0	13.8	13.9	14.6	15.3	15.0	17.1	14.9	15.1	14.1
	13.0	12.2	13.0	13.9	13.9	14.2	15.2	15.8	16.0	15.0	15.2	14.8
	12.9	13.0	13.0	12.3	14.0	14.0	14.5	16.0	16.9	15.0	15.0	14.3
	12.8	13.8	13.1	12.1	13.0	13.0	15.2	16.3	16.0	15.0	14.5	14.0
٠,	12.0	13.8	13.1	12.5	13.2	12.9	14.0	16.2	16.3	15.0	15.0	12.5
7 6	13.0	13.0	13.1	12.3	14.0	12.9	14.0	17.0	16.5	15.0	15.3	12.3
٠ ٦	12.5	13.3	13.0	13.1	14.1	12.9	14.0	16.6	16.0	15.0	15.0	12.0
	12.0	13.1	13.0	13.7	13.2	12.9	14.0	16.8	15.5	14.8	14.8	12.0
16	11.5	13.1	12.8	13.0	14.0	13.7	14.1	16.8	15.1	15.0	15.0	12.0
7	11.5	13.0	12.9	11.5	13.0	13.9	14.2	17.0	13.2	14.9	15.0	11.9
. 00	11.3	13.1	13.0	13.5	12.9	14.0	16.0	17.0	14.1	15.0	15.0	12.1
6	11.3	13.0	12.9	12.6	12.9	13.5	16.0	16.0	14.2	14.9	14.4	12.1
0	11.1	13.1	12.7	11.3	13.0	13.2	14.5	16.2	14.3	14.9	14.0	12.3
1	10.9	13.0	13.1	11.9	13.2	13.1	14.7	16.2	14.0	8 . 4 .	14.1	11.0
2	11.0	12.8	12.9	12.1	13.0	12.5	14.2	16.5	14.9	15.2	14.3	13.0
23	12.3	12.5	13.0	11.9	15.1	13.1	15.3	17.0	14.7	15.3	14.1	12.1
4	12.3	12.3	12.2	12.2	13.0	13.2	15.5	17.6	14.5	15.5	13.9	12.2
s ·	12.5	12.1	12.3	13.5	13.0	13.3	15.6	16.9	14.4	15.3	14.0	12.0
۰.	12.8	11.2	12.4	12.3	13.6	13.9	14.0	16.1	14.2	16.0	13.3	11.8
. α	12.8	12.0	13.0	12.5	13.6	14.2	14.2	16.0	14.2	15.6	13.5	12.0
	12.3		14.0	12.8	13.0	14.5	14.1	16.3	14.0	15.6	13.0	12.0
	12.3		12.2	13.0	15.8 14.2	14.2	14.2 14.5	16.5	14.1	15.5	13.1	12.0
-21		,		,	13 63	14.10	14 91	14.71	16.55	14.79	15.05	13.99
1-10 MEANS SAMPLE SIZE	13.38	12.55	12.80	13.02	13.32	10	6	6	10	10	10	10
11-20 MEANS SAMPLE SIZE	11.95	13.25	12.94	12.58	13,35	13.31 10	14.60	16.59 10	15.12	14.95	14.80	12.32
21-31 MEANS SAMPLE SIZE	12.25	12.24	12.65	12.47	13.82	13.58	14.71	16.50 11	14.41	15.43	13.74	11.94
A WEANG	12 52	12.71	12.79	12.69	13.57	13.66	14.73	15.99	15.36	15.07	14.53	12.72
SAMPLE SIZE	31	28	31	30	31	30	30	30	30	+31	30	31
MAXIMUM VALUE	13.9	13.8	14.0	14.0	15.8	14.8	16.5	17.6	17.1	16.0	15.5	14.8
HINIMUM VALUE	10.9	11.0	11.5	11.3	12.2	12.5	13.8	13.2	13.2	14.1	13.0	11.0
	3.0	2.8	2.5	2.7	3.6	2.3	2.7	4.4	3.9	1.9	2.5	3.8
STANDARD DEV.	0.86	0.63	0.45	0.70	0.69	0.63	0.74	1.09	1.13	0.40	0.68	1.05
100					4s 7r							
ANNUAL MIN	ĭ	10.9	`	ANNUAL MEAN	NYS	13.86		ANNUA	ANNUAL MAX	17.6	9	

	GR	GRANITE CANYON	NYON		\$6.0	TEMP	TEMPERATURE				XEAR 1987	,
DAYS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
	14.8	11.5	12.6	12.6	12.4	6.6	13.1	10.8	16.3	13.3	15.0	14.0
N 6	14.6	11.9	12.4	12.3	12.0	10.3	12.7	11.0	15.5	13.0	14.0	14.2
n 4	4.0	12.2	12.7	12.0	12.0	11:1	11.9	11.9	14.6	12.8	14.2	14.1
'n	14.3	12.4	13.5	1.7	0 0	7.7	11.8	12.0	15.3	12.5	14.7	14.3
9	13.4	12.9	13.1	10.7	11.2	11.2		13.5	4.4	13.0	14.2	14.2
7	13.8	12.9	12.9	10.8	11.9	10.9	11.1	15.1	15.3	15.9	15.6	14.3
∞	13.7	13.2	12.9	10.6	12.9	10.6	10.4	15.1	13.2	14.6	15.2	14.2
.	13.0	13.6	12.8	10.1	13.2	10.4	10.4	15.1	12.8	14.0	15.7	14.4
* TT	3.5	17.0	12.0	70.7	13.2	10.2	11.3	15.7	12.9	13.7	15.1	14.3
27	13.9	3 1	13.1	9.0			73.1	7.0	12.4	13.9	15.4	13.4
13	12.9	13.9	13.1	6.7	12.3	11.7	12.2	15.7	12.6	13.5	14.7	10.8
14	12.1	13.1	13.2	10.3	12.3	12.8	12.1	15.2	12.4	13.1	13.8	11.0
16	10.0	13.2	12.3		12.7	12.4	11.9	14.9	12.6	12.8	12.9	11.8
17	10.7	13.1	11.1	10.6	12.4	11.4	12.6	15.1	12.4	13.3	13.1	12.1
1.8	11.8	12.6	10.4	10.4	12.6	11.1	12.1	15.6	12.8	13.6	14.2	3.5
19	12.0	11.8	10.4	6.6	12.2	10.7	12.2	15.1	13.1	14.5	15.1	13.2
20	11.9	11.8	10.2	10.7	13.0	10.9	12.1	14.5	13.1	15.2	15.0	13.1
22	12.5	12.6	10.4	9:11	13.7	10.9	12.1	13.9	12.7	15.3	14.6	12.9
23.5	12.9	11.8	8	11.0	12.3	10.0	12.0	13.9	12.0	15.7	9.6	13.4
24	12.7	11.1	10.8	10.8	11.9	10.7	12.5	4.4	12.4	1 2 2	13.0	11.3
2.5	12.6	11.7	10.4	10.7	11.9	11.4	11.7	14.1	12.4	16.1	12.2	11.7
26	12.7	11.9	10.8	10.9	11.4	11.8	11.4	14.0	12.1	16.7	12.4	11.6
27	12.8	12.1	11.4	10.8	11.2	12.2	11.0	14.8	12.1	15.9	12.6	12.2
89 00	12.8	12.3	11.3	11.1	11.1	12.1	10.8	15.1	12.6	16.5	13.2	12.3
3.0	12.7		11.4	12.3	10.8	12.4	10.8	15.2	12.9	16.4	13.6	12.4
31	11.2		12.3	1.	10.7	1.71	10.4	16.4	13.6	15.9	13.4	12.2
1-10 MEANS	13 03	12 63	12 84	11 20	130	90	7 2		,		;	,
SAMPLE SIZE	10	10	10	10	10	10	10	13.34	14.70	13.69	14.83	14.22
11-20 MEANS SAMPLE SIZE	12.10	13.05	11.82	10.16	12.35	11.53	12.10	15.30	12.63	13.77	14.27	12.29
21 -21 WEANS		,	:	;	,	;	;	;	;	;	;	;
SAMPLE SIZE	11	8 8	11.15	11.21	11./3	11.52	11.52	14.80	12.55	15.94	13.14	12.22
MONTHLY MEANS SAMPLE SIZE	12.85	12.59 28	11.91 31	10.88	12.03	11.30	11.71	14.49	13.29	14.51	14.08	12.89
MAXIMUM VALUE	14.8	14.0	13.3	12.6	13.7	12.8	13.1	16.4	16.3	16.7	15.7	14.4
MINIMUM VALUE	10.0	11.1	10.2	4.6	10.7	6.6	10.4	10.8	12.1	12.5	12.2	10.8
RANGE	8.4	2.9	3.1	3.2	3.0	2.9	2.7	9.6	4.2	4.2	3.5	3.6
STANDARD DEV.	1.10	0.81	1.07	0.82	0.84	0.80	97.0	1.42	1.27	1.30	1.05	1.14
ANNUAL MIN		4.6	•	ANNUAL MEAN	NAS	12.71		ANNU	ANNUAL MAX	16.7	۲.	

<i>t</i> :	DEC	33.16	33.19	33.07	33.23	33.21	33.30	33.48	33.61	33.51	33.42	33.36	33.34	33,39	33,35	33.58	33.57	33.52	33.47	33.42	33.36	33.39	33.17 10	33.44 10	33.47	33.36	33.61	33.07	0.54	0.16	: ! #1.	
YEAR 1987	NOV	33.40	33.47	33.44	33.41	33.45	33.45	33.45	33.49	33.43	33.52	33.35	33.28	33,30	33.26	33.34	33.33	33.31	33.32	33.27	33.25	33.24	33.44 10	33.43 10	33.30	33.39	33.54	33.24	0.30	60.0		8 4
	OCT	33.55	33.61	33.49	33.43	33.64	33.53	33,36	33.43	33.43	33.36	33.39	33.36	33.30	33.31	33.34	33.48	33.41	1.0	33.23	33.41	33.33	33.52 10	33.40 10	33.40	33.44	33.64	33.23	0.41	60.0	3	34.18
	SEP	33.37	33.34	33.39	33,43	33.44	33.53	33.56	33.51	33.49	33.55	33.46	33.34	33.28	33.34	33.34	33.46	33.58	33.56	33.46	33.49	33.52	33.42 10	33.46	33.47 10	33.45	33,58	33.28	0.30	0.09		ANNUAL MAX
	AUG	33.89	33.45	33.53	33.40	33.92	33.42	33.40	33.54	33.42	33.42	33.46	33.46	33.51	33.57	33.59	33.57	33.67	33.68	4	33.44	33.38	33.62	33.47	33.56	33.55	33.92	33.38	0.54	0.16		ANNU
SALINITY	JUL	33.55	33.85	33.88	33.86	33.91	33.77	33.69	33.74	33.77	33.74	33.88	33.75	33.83	33.70	33.82	33.75	33.87	33.82	33.87	33.86	33.90	33.80	33.77 10	33.83 11	33.80	33.92	33.55	0.37	0.08		
SAL	JUN	34.15	33.86	33.85	34.01	33.94	33.96	33.91	33.87	33.78	33.72	33.86	33.87	33.86	33.88	33.91	34.15	33.77	33.67	33.73	33.75	33.73	33.97 10	33.85 10	33.82	33.88	34.15	33.67	0.48	0.13		33.61
	MAY	33.74	33.92	34.430	33.83	33.57	33.75	33.76	33.77	33.77	33.77	33.75	33.79	33.72	33.73	33.73	33.74	33.77	33.89	33.95	34.730	34.17	33.77	33.79	33.88	33.81	34.17	33.57	09.0	0.13		IEAN
	APR	33.58	33.46	33.83	34.38U	33.96	33.94	34.06	34.00	33.85	34.03	33.92	33.98	33.82	33.66	33.56	33.70	33.82	33.99	33.96	33.80	33.81	33.74	33.96	33.77	33.83	34.07	33,42	0.65	0.18		ANNUAL MEAN
NATON	MAR	33.51	33.53	33.51	33.45	33.47	33.57	33.40	33.85	33.50	33.79	34.02	34.18	33.93	33.86	33.82	33.90	34.03	33.79	33.89	33.79	33.80 34.34U	33.49 10	33.79 10	33.86 10	33.71 30	34.18	33.40	0.78	0.22		
GRANITE CANYON	FEB	34.01	33.52	33.63	33.46	33.46	33.40	33.53	33.32	33.23	33.43	33.52	33.62	33,63	33.78	33.56	33,75	33.55	33.68	33.56			33.58 10	33.43 10	33.62	33.54	34.01	33.23	0.78	0.16		33.07
6	JAN	33.49	33.83	33.43	33.42	33.43	33.53	33.74	33.67			33.64	33,49	33.51	33.35	33.36	33.36	33.37	33,34	33.42	33.97	33.42	33.50 10	33.61 8	33.47 10	33.52	33.97	33.34	0.63	0.16		Ä
	DAYS	- 0 -	1 4 V	1 	~ 80	6	110	12	13	15	16	18	19	20	21	23.5	2.4	25	26	28	2.9	30 31	1-10 MEANS SAMPLE SIZE	11-20 MEANS SAMPLE SIZE	21-31 MEANS SAMPLE SIZE	MONTHLY MEANS SAMPLE SIZE	MAXIMUM VALUE	MINIMUM VALUE	RANGE	STANDARD DEV.		ANNUAL MIN

The state of the s	MOR	HORRO BAY				TEMPE	TEMPERATURE			>	YEAR 1987	
DAYS	JAN	FEB	MAR	APR	МАТ	JUN	JUL	AUG	SEP	OCT	NOV	DEC
The second seco	14.4	13.9	12.2	12.8	14.4	13.9	15.0	14.4	15.6	15.0	16.1	15.0
2 0	15.0	13.3	12.8	14.4	14.4	13.9	14.4	13.3	15.6	15.6	15.6	15.0
n -4	12.0	13.9	7.5	13.9	13.3	12.8	15.0	13.3	15.0	0.4	15:0	16.7
	15.0	13.3	13.9	13.9	13.9	12.8	14.4	14.4	15.6	15.6	16.7	15.6
	15.0	12.8	13.3	13.9	13.9	13.3	13.9	14.4	15.6	16.1	14.4	15.6
- α	15.0	13.3	13,3	13.3	14.4	13.9	13.9	14.4	14.4	15.6	15.0	15.6
37	13.9	13.9	13.9	12.8	14.4	13.3	14.4	13.9	15.6	15.6	15.6	15.6
0T	13.3	13.3	13.3	12.8	14.4	14.4	13.9	16.1	15.6	15.6	17.2	15.6
	13.3	14.4	13.3	12.2	14.4	13.9	14.4	17.8	15.6		16.7	15.0
7	13.3	14.4	13.3	12.2	13.9	13.9	15.6			15.6	16.1	15.0
14	13.9	14.4	14.4	12.8	14.4	16.7	14.4	15.6	15.6	16.1	16.7	12.8
1.2	13.3	14.4	13.9	15.0	15.6	15.6	14.4	17.8	15.6	15.6	16.1	13.3
16	12.8	15.0	12.8	13.9	15.0	15.6	14.4	17.2	16.1	15.6	15.0	12.8
	12.2	4.4	13.5	13.3	1 4	7 7 7	14.4	16.1	16.1	13.0	15.6	13.5
19	12.8	13.3	13.3	13.9	15.6	13.3	15.0	15.6		14.4	15.6	13.3
20	12.8	13.3	12,2	12.8	15.6	12.8	14.4	15.6	15.0	16.1	15.6	15.6
21	12.8	13.9	12.8	13.3	15.6	13.3	15.6	15.6	15.6	16.1	15.0	13.9
22	12.2	13.3	12.8	12.8	15.6	12.8	16.1	15.0	15.6	17.2	15.0	14.4
2.4	12.8	13,3	13.3	12.8	14.4	13.3	15.6	15.6	16.1	17.8	13.3	14.4
2.5	12.8	12.8	12.8	13.3	14.4	13.3	15.6	15.6	15.6	18.3	13.3	11.7
26	13.9	12.2	12.8	13.3	14.4	13.3	15.0	17.2	15.6	17.2	13,3	11.1
27	13.9	12.8	12.2	13.3	13.9	15.6	14.4	16.7		17.8	12.8	11.1
29	13.0	7.71	12.8	4.41	1.4.4	13.9	14.4	15.6	15.6	17.8	13.0	12.2
30	15.0		12.8	1 2 1	13.0	9 2 1	1 4 4	15.6	15.6	2 2 2	15.6	1117
31	14.4		13.3		13.9		13.9	15.6		16.7		11.7
1-10 MEANS	14.60	13.43	13.26	13.50	14.14	13.44	14.44	14.25	15.53	15.58	15.74	15.42
	2		2		2	2	01	21	2	2	,	70
11-20 MEANS SAMPLE SIZE	12.99	14.24	13.37 10	13.28	14.83	14.28	14.58	16.61 8	15.73	15.64 8	16.02	13.78
21-31 MEANS SAMPLE SIZE	13.48	12.97 8	12.84	13.59	14.65	13.88	15.10	15.79	15.59	17.33	13.83	12.47
MONTHLY MEANS Sample Size	13.68 31	13.59 28	13.15 31	13.46	14.54	13.87	14.72	15.49	15.60	16.26 29	15.18	13.85
MAXIMUM VALUE	15.0	15.0	14.4	15.0	15.6	16.7	16.7	17.8	16.1	18.3	17.2	16.7
MINIMUM VALUE	12.2	12.2	12.2	12.2	13.3	12.8	13.9	13.3	14.4	14.4	12.8	11.1
RANGE	2.8	2.8	2.2	2.8	2.3	3.9	2.8	4.5	1.7	3.9	4.4	5.6
STANDARD DEV.	0.98	0.71	0.52	0.73	0.63	1.02	0.70	1.23	0.37	1.00	1.30	1.59
ANNUAL MIN	11.1	- :	4	ANNUAL MEAN	N N	14.45		ANNUAL MAX	L MAX	18.3		

DAYS 11 2		į	MAN.	4	247	200	1111	ATIC	0.00	POOT	MOV	DEC
- 10 6	JAN	FEB	4	AFK	1 4 5	2	100	0	400)
2 6	13.9			11.7	13.4		13.3		16.1	15.6		12.8
,	13.9	12.2	11.7	12.2		12.8	13.3	15.0	17.2		15.6	12.8
.4			11.7		13.3	12.2			14.4		15.0	12.8
2	13.3	12.8	11.7		12.8	12.8	;	13.9		,	15.0	
9 1	13.3	12.8	12.8	12.8	14.4		13.3	13.3		15.6	15.0	12.8
. 00	13.3			12.8	13.3	12.8	13.3		15.6	15.0		12.8
	13.3	12.2	12.8	12.2		12.2	13.3		15.6	15.0	15.0	13.3
10	12.8	12.8	12.8	12.2		12.2	13.3	13.9	15.6		15.6	13.9
11		13.3	12.8		14.4	12.8		14.4	15.6	•	15.6	•
12	12.8	13.3	12.8		15.0	12.8	•	14.4	15.0	15.0	12.0	13.3
13	12.8	13.4	13.3	11.1	15.0		13.3	15.0	7 7 7	15.0	15.6	,
4 1 4	12.2			11.1	12.0	13.3	1.4.4	13.0	14.4	15.6		12.2
	12.2	13.3	13.3	11.1	2	13.3	15.0		15.0	15.6	15.0	
17	1	13.3	12.8	12.8		15.0	13.3	15.0	15.0		15.0	11.7
18		13.3	12.8		13.6	13.9	12.8		14.4		15.0	11.7
19	11.7	12.8		11.7	13.3	13.3	•	15.0		15.6		
20	11.7	12.8	12.2	11:1	13.9		13.3	12.2	7 3 7	15.6	4	,
21	11.7		11.7	11.7	13.9	•	12.8	13.9	15.6	15.6	13.0	12.7
22	11.7	10 8	-	12.2	13.9	12.8	12.8		16.1	15.6	15.0	12.2
7.6	/	12.2	10.6	13.3		13.3	13.3	15.0			14.4	12.2
25		11.7	11.1			12.8		15.6	16.1		13.9	
26	12.2	11.7	11.1	,	11.7	13.3	;	15.6		16.1		
27	12.2	11./	-	13.3	11.7		13.0	12.6	15.6	16.7	12.8	12.2
50	12.2		1111	13.3	11.7	12.8	13.9		15.6	16.7		11.7
30	12.2		11.1		12.8	12.8	13.9 13.9	15.6	15.6	16.1	12.2	11.7
1-10 MEANS SAMPLE SIZE	13,39 8	12.60	12.25	12.36 8	13.60	12.54	13.30	14.10	15.75	15.36	15.20	13.03
11-20 MEANS SAMPLE SIZE	12.23	13.19 8	12.86	11.48	14.40	13.49	13.68	14.43	14.83	15.34	15.30 6	12.22
21-31 MBANS SAMPLE SIZE	12.01	12.02	11.19	12.67	12.49	13.10	13.52	15.19	15.74	16.06	13.88	12.01
MONTHLY MEANS	12.56	12.69	12.05	12.19	13.53	13.04	13.50	14.62	15.42	15.61	14.79	12.42
MAXIMUM VALUE	13.9	13.4	13.3	13.3	15.0	15.0	15.0	15.6	17.2	16.7	15.6	13.9
MINIMUM VALUE	11.7	11.7	10.6	11.1	11.7	12.2	12.8	12.2	14.4	15.0	12.2	11.7
RANGE	2.2	1.7	2.7	2.2	9.3	2.8	2.2	3.4	2.8	1.7	. st . c	2.2
STANDARD DEV.	0.71	0.58	0.85	0.75	1.14	0.65	0.53	0.89	0.71	0.51	0.95	0.62
ANNUAL MIN	ī	10.6		ANNUAL MEAN	AN	13.54		ANNU	ANNUAL MAX	17.	17.2%	

	DEC	15.3	15.6		15.2	15.6		15.4	15.4	2	14.0	13.8	13.4	13.6	13.7	:			12.2		11.4		15.43	14.03 6	12.43	14.27	15.6	11.4	4.2	1.31	
YEAR 1987	NOV		17.6	17.6		17.5	17.2	17.2	}		17.3	17.5	16.5	16.5		16.2	16.0	15.9			15.2	15.2	17.40	16.93 6	15.70	16.74	17.6	15.2	2.4	0.81	
Ā	OCT	18.8	;	18.9	,	19.3	,	18.8		101	19.1	19.0	18.9	18.1	17.0				18.2	18.4	18.4		19.04	18.63 7	18.15	18.64	19.7	17.0	2.7	0.68	
	SEP	18.2	18.2	C. /1	17.3	18.0		18.8	19.7						19.0	19.4	19.6	19.6	19.8	17.7	17.7	18.8	17.97 7	19.35	18.99 8	18.61	19.8	17.3	2.5	0.86	ANNUAL MAX
	AUG	18.3	18.0	17.9	17.9	7.71	17.2		17.7		17.6	17.4	16.4	16.4	17 8		18.1	18.1	17.6	17.8	17.8	18.2	17.84 8	17.10	17.96 9	17.72	18.3	16.4	1.9	0.53	ANNU
TEMPERATURE	Jur		17.1	18.0	,	17.3	16.9	17.2	17.8		1.8.0	17.7	17.2	:	17.5		18.6			19.1	18.8		17.32	17.54	18.67	17.73 17	19.1	16.9	2.2	0.64	
TEMP	JUN		16.6	16.5	17.4	15.9	16.1	15.7	15.8	;	14.7	15.4	16.6	17.0			. !	17.7	:	16.6		16.6	16.50 8	15.70	17.26	16.41	18.2	14.6	3.6	0.94	
	MAY	17.8	16.0	17.8	17.8	17.8	17.8	18.0		17.8	17.8	17.8	17.6	17.8	17.6	0.		16.0	14.7	14.3	13.6	15.0	17.41	17.72	15.26	16.85 26	18.0	13.6	4.4	1.36	EAN
	APR																														ANNUAL MEAN
ARA	MAR	13.2	13.5	13.5	13.9	14.2		14.8	15.2	15.1	15.2	13.4	12.8	13.0		1771		11.9	12.1	13.2	12.1	14.0	13.86	14.06	12.66 8	13.56 26	15.2	11.9	3.3	1.01	
SANTA BARBARA	FEB	14.5	14.9	15.2	14.5	14.7	15.0	15.0	15.0	14.8	14.8	14.5	14.8	14.2	14.2	14.2	13.9	13.9	13.0	13.0	13.0		14.84	14.64	13.57 8	14.41 28	15.2	13.0	2.2	0.65	
SA	JAN	15.3	16.6	15.6	14.6	14.4	14.1	14.2	*	14.4	14.5	13.4		7.0	•	13.0		13.5	0.61			14.4	14.93	13.95 6	13.84	14.39	16.6	13.0	3.6	0.87	
5. 27 2. 2. 2.	DAYS		7	5	9	7	6	10	12		7.	16	17	19	20	17	23	24	26	27	28	30 31	1-10 MEANS SAMPLE SIZE	11-20 MEANS SAMPLE SIZE	21-31 MEANS SAMPLE SIZE	MONTHLY MEANS SAMPLE SIZE	MAXIMUM VALUE	MINIMUM VALUE	RANGE	STANDARD DEV.	ANNUAL MIN

i.	POI	POINT MUGU				TEMPE	TEMPERATURE			r	YEAR 1987	
DAYS	JAN	FEB	MAR	APR	HAY	JUN	lur	AUG	SEP	OCT	NOV	DEC
- C	16.1	14.3	13.7	14.4	15.2	15.2	15.2	17.5	13.8	18.9	18.3	15.7
e 4	16.0	14.6	14.1	13.9	15.7	16.7	13.9	16.9	13.8	15.6	16.4	16.2
ن ا ا	15.9	14.3	14.1	12.9	16.4	13.6	15.6	17.0	16.9	17.3	18.4	
2 2	14.3	14.7	14.7	13.9	17.1	14.1	16.3	16.3	16.2	18.8	18.4	
∞ .	15.1	14.8	14.5	14.1	17.5	15.6	16.4	15.9	17.3	16.6	18.4	
6 10	15.0	15.1	14.2	14.0	16.8	15.1	15.4	15.3	18.4	19.2	17.9	
=======================================	14.9	15.2	14.4	15.6	17.2	15.6	17.1	16.8	17.2	18.7	17.8	15.9
12	14.9	15.2	14.6	14.2	16.9	15.6	17.4	15.5	17.9	18.9	17.8	15.6
17	14.3	14.8	14.3	15.2	16.9	13.0	15.3	16.2	18.1	18.6	15.2	14.8
15	14.5	13.1	13.2	14.3	17.1	13.6	16.4		18.6	18.5	14.1	15.0
16	14.4	13.7	11.8	13.4	17.4	12.7	15.7		18.9	17.9	15.2	14.0
18	14.2	13.7	12.7	14.3	13.4	12.8	15.9	16.9	18.8	17.9	16.2	14.2
19	14.4	13.8	12.1	13.8	15.2	13.1	17.0	14.2	18.7	17.7	15.9	14.2
20	13.7	12.7	11.8	12.9	16.1	12.7	16.5	14.1	17.8	16.6	16.6	14.2
21	13.9	13.1	11.6	15.4	16.1	13.1	16.6	14.7	18.2	17.9	15.7	14.6
23	14.0	13.3	11.3	14.4	14.3	16.9	14.4	16.1	19.3	18.8	15.9	13.9
24	14.0	12.1	11.6	14.7	14.7	17.6	14.5	18.7	17.71	19.1	16.1	14.0
25	14.1	12.6	12.0	15.2	13.6	17.4	15.1	18.7	18.4	18.7	16.3	14.0
076	14.1	13.0	12.4	15.0	12.9	16.2	15.1	15.4	18.0	17.2	15.8	3.0
28	14.2	13.7	13.8	16.1	13.2	14.3	15.9	17.6	18.7	17.2	15.8	
29	14.4		13.4	15.9	13.9	14.8	16.5	16.7	18.6	17.9	15.6	,
30	14.4		14.1	16.2	13.8	14.7	17.2	17.6	17.8	17.3	15.7	13.1
1-10 MEANS SAMPLE SIZE	15.46	14.60	14.30	13.76	16.38	15.25	15.51	16.25	16.10	17.31	17.96 10	16.02
11-20 MEANS SAMPLE SIZE	14.51	14.07	13.15	14.29	16.14	13.60	16.36	15.81 8	18.29	18.13	16.22	14.67
21-31 MEANS SAMPLE SIZE	14.16	13.00	12.58	15.37	13.89	15.69	15.90	16.71	18.52 10	17.92	15.83	13.93 9
MONTHLY MEANS SAMPLE SIZE	14.69	13.95	13.32	14.47	15.42	14.85	15.92	16.30	17.64 30	17.79 31	16.70	14.62 23
HAXIHUM VALUE	16.2	15.2	14.7	16.2	17.5	17.6	17.4	18.7	19.3	19.2	18.5	16.2
MINIMUM VALUE	13.7	12.1	11.3	12.2	11.7	12.6	13.9	14.1	13.2	15.6	14.1	13.1
RANGE	2.5	3.1	3.4	0.4	8.	5.0	3.5	9.4	6.1	3.6	4	3.1
STANDARD DEV.	0.72	06.0	1.14	1.08	1.56	1.54	1.00	1.18	1.57	1.05	1.24	0.95
(1) (1) (2)	7 2.0				14 14 14					;	į	
ANNUAL MIN	II.	11.3	•	ANNUAL MEAN	N	15.47		ANNUA	ANNUAL MAX	19.3	m K	

	POI	POINT DUME		7	*	TEMPE	TEMPERATURE			F	YEAR 1987	
DAYS	JAN	FEB	MAR	APR	HAY	JUN	JUL	AUG	SEP	OCI	NOV	DEC
	15.6	14.4	13.3	15.0	16.5	16.5	17.2	18.3	16.7	18.8	18.5	16.0
	15.6	14.4	13.4	13.9	18.0	17.0	16.6	18.3	16.7	18.6		16.0
(4)	15.8	14.4	15.6	13.9	17.8	17.0	16.6	18.5	17.5	18.9		15.1
4	15.7	14.4	15.6	13.0	17.8	17.0	17.2	18.5	17.5	19.4		16-1
	15.7	15.0	15.6	13.0	17.0	17.2	15.0	18.5	20.0	18.9		16.0
01	15.7	15.6	15.8	15.5	18.0	17.0	12.0			17.2		10.1
	15.0	14.4	15.8	13.0	17.7	15.0	16.1	18.5	19.0	17.4		16.0
	15.0	14.4	15.0	15.0	17.9	15.6	16.6	18.3	19.1	19.4		16.8
01	15.0	14.4	15.0	16.0	18.3	15.6	17.2	18.3	19.0	18.3		15.5
	15.0	14.4	15.0	16.1	18.3	16.0	17.8	18.3	19.0	20.5		15.0
12	15.0	14.4	15.0	14.7	18.3	15.6	17.8	18.3	18.9	19.4		14.3
13	15.0	14.4	14.4	16.1	18.7	15.6	17.8	18.3		19.4		13.0
5	14.0	14.0	15.0	17.2	17.8	15.6	17.8	18.3	19.0	19.4		12.1
	14.1	14.0	14.5	16.7	18.5	15.6	17.5		18.5	18.9		12.0
17	14.8	14.0	13.0	16.1	18.0	15.6	17.5		20.0	18.3		12.3
18	14.4	14.5	13.0	16.1	17.5	15.7	17.5	18.3	18.9	18.3		13.3
19	14.4	14.0	13.0	16.0	17.5	15.7	18.3	18.3	18.9	200		13.9
20	14.	4.4	12.5	12.7	17.0	10.1	10.5	16.7	4.0	17.0		***
21	14.0	13.9	13.0	15.8	17.8	17.0	10.5	16.7	19.4	17.2		14.5
23 2	14.0	13.1	13.0	16.6	16.6	17.0	16.4	16.0	19.4	17.8		12.1
7 7 7	13.9	13.0	13.0	16.6	16.4	17.0	16.4	16.1	18.0	17.8		12.6
25	13.9	13.0	12.2	16.1	16.1	17.0	19.4	16.1	20.5	17.8		12.6
26	15.3	13.5	12.8	16.6	13.3	17.0	19.0	16.1	20.6	17.8		12.1
27	15.3	13.3	12.8	17.0	13.4	17.0	18.3	18.0	20.0	17.8		9.5U
5 8	13.9	13.5	13.3	17.0	14.0	17.0	18.3	181	20.0	18.8		12.2
30	13.0		14.0	17.2	15.3	17.0	18.5	19.1	20.0	18.3		13.2
31			14.0					18.9		18.3		13.2
1-10 MEANS	15.41	14.58	15.01	14.13	17.67	16.41	16.53	18.42	18.38	18.43	18.30	16.11
SAMPLE SIZE	10	10	10	10	6	10	10	10	6	10	10	10
11-20 MEANS SAMPLE SIZE	14.51	14.25	14.08	16.08	18.08	15.71	17.81 10	18.14 8	19.07 8	18.97 10	16.92 [°]	13.33 10
21-31 MEANS	14.43	13.40	13,13	16.60	15.57	16.81	18.14	17.29	19.73	17.88	15.57	13.02
SAMPLE SIZE	6	80	11	10	10	10	10	11	10	11	10	10
MONTHLY MEANS SAMPLE SIZE	14.80	14.12	14.04	15.59	17.09 29	16.31 30	17.49	17.91 29	19.09 27	18.41	16.93 30	14.15 30
MAXIMUM VALUE	15.8	15.6	15.8	17.2	18.7	17.2	19.4	19.1	20.6	20.5	19.5	17.5
MINIMUM VALUE	13.8	13.0	12.2	13.0	13.3	15.1	15.0	16.0	16.7	17.2	14.5	12.0
RANGE	2.0	2.6	3.6	4.2	5.4	2.1	4.4	3.1	3.9	3.3	5.0	5.5
		i		;	;		,			6	•	
STANDARD DEV.	0.63	0.59	1.15	1.36	1.51	0.70	1.05	0.98	1.04	0.80	1.38	1.05

ANNUAL MAX

16,33

ANNUAL MEAN

	SAN	SANTA MONICA	Y:			TEMP	TEMPERATURE				YEAR 1987	_
DAYS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
	15.6	15.0	13.9	15.3		17.8	18.3		18.9	18.9	17.8	15.6
I m -		14.4	13.6	15.3	17.8	19.4		1.12	19.4		18.3	15.3
4 n	,	14.4	13.6	,	18,3	,	,	21.1	20.0	20.6	18.3	15.6
n vo	15.6	15.0	14.4	15.0	18.9	18.3	18.9	21.1	20.0	20.0	18.3	15.0
	16.1			15.6	18.9	18,9	17.2	21.1				0.01
∞ (15.0	14.4	;	15.6		18.3	17.8	21.1	18.9	19.4		15.0
. C		14.4	14.4	15.0	10 4		17.8	21.7	19.4		18.3	
11	15.6		14.4		19.4	10.0			18.9	10.4	18.3	12.8
12		14.4	14.4	15.6	19.0		19.4				•	12.8
13	15.6			16.7	18.9	1 41	•	21.1	20.0	20.6	17.8	13.3
15		13.3	13.9	16.7		17.2	19.4	21.1		19.4	17.2	12.8
16	13.3	14.4	14.2	16.7	18.9	17.8	18.9		19.4		16.1	13.3
17	13.3	14.7	7 71	7 7 7	18.9	17.8	18.3	18.9	18.9	;	,	13,3
61		14.4	1 5 0		10.4	0./1	10	1.01	11	4.01	16.7	
20	13.9			16.7	18.9		17.8	19.4	19.4	18.3	7.01	13.9
21	13.3	13.9	15.0	16.7		17.2		19.4	21.7			14.4
22	13.9	13.3	15.0	16.4	;	17.2	,	20.6	20.6	,		13.3
2.5	1 4 4	13.9	17.8		10.0	17.8	18.9	9		18.9	16.4	13.3
25		13.3	13.3		10.3	0.11		20.0	20.6	18.9	16.1	17.8
26	15.0		13.9	17.8	19.4	18.6		19.4		18.3	16.1	
27	13.3			18.1			18.9		20.6	18.9		
7 0 0	13.9		14.4	0./1	18.9		1.12	1 8 . 9	1 0 8	10.0	14.1	13.0
30	14.2		15.6			18.3	20.6					12.8
31					17.8		21.1	***				
1-10 MEANS SAMPLE SIZE	15.58	14.63	14.02 6	15.34	18.60	18.39 8	18.09	21.27	19.51	19.66	18.22	15.25
11-20 MEANS SAMPLE SIZE	14.37	14.27	14.38	16.52	19.04	17.34 5	18.87	20.06	19.62	19.34	17.07	13.10 8
21-31 MEANS SAMPLE SIZE	13.99 8	13.76 5	14.29	17.36 5	18.56	17.89 7	19.82	19.36	20.30	18.81	16.22	13.42 6
MONTHLY MEANS SAMPLE SIZE	14.52	14.30	14.23	16.29	18.77	17.95	18.88	20.23	19.79	19.23	17.22 18	13.84
MAXIMUM VALUB	16.1	15.0	15.6	18.1	19.4	19.4	21.1	21.7	21.7	20.6	18.3	15.6
MINIMUM VALUE	13.3	13.3	12.8	15.0	17.8	16.1	17.2	18.3	18.9	18.3	16.1	12.6
RANGE	2.8	1.7	2.8	3.1	1.6	3.3	3.9	3.4	2.8	2.3	2.	3.0
STANDARD DEV.	0.97	0.52	99.0	0.97	0.53	0.70	1.07	1.07	0.82	0.63	0.90	1.05
0.742			Ç.		34						A10.84	
ANNUAL MIN	12	12.6	<	ANNUAL MEAN	AN	17.11		ANNUA	ANNUAL MAX	21.7	LYS YES	

	BAI	BALBOA				TEMPE	EMPERATURE		Š	P 4,	YEAR 1987	
DAYS	JAN	FEB	MAR	APR	MAY	JUN	JUL	Aug	SEP	OCT	NOV	DEC
		15.0	4	ĸ)	17.2	7	4	8	7.	6	œ	9
~ (15.0	4	4		۲.	4.	œ.	9	œ.	6	٠,
n 4	o v	15.1	4 <	'n.	٠,	٠,	٠,	œ 0	œ. c	œ 0	<u>.</u>	•
· •	9	15.0	. 4	'n					, 0		ó «	. 6
9	9	14.7	4.	Š	œ.		7		6	6		
	5	15.6	4.	'n	œ .	٠.	œ (0	6	6.1	8	7.
	O R	15.6		, v	, o	٠,	9 0				.	•
10	S	15.6	'n			:.:		. 6	;;	, 6,	٠.	
11	2	16.1	5.	۲.	ω.	7	•		6	8	7	9
12	15.5	15.6	'n.	17.2	19.4	17.2	60	<u>.</u> ;	20.6	œ c	18.3	•
14	2 50	15.8		. ;		::	٠.	, 6		, 6	. «	ď
1.5	2	15.8	δ.					. 6		. 6		. 4
16	2	15.0	۳ ۱	٠,	۰.	٠.	œ .	60	.	٠ د	٠,	4.
18	4	15.0	. 4		. «	. 6	•	۰۵		: .		• 4
19	4	14.2	5.				. 6		6	: .		. 4
20	4	13.9	۳,	۲.		9	8	5.	œ.	7.	7	4.
21	4 .	13.5	4.	٠.	۲.	۲.	.	7.	6	۲.	7.	4.
2 52	4 4	ຕໍດ		۰,	.,	۲,	.		٠.	œ .	۲.	4,
24	1 4	13.9		: -		, a	. a		· .		:,	n .
25	14.4	13.6	. m	: .:	; ;	. 6	. «	. «		. 6	: .	
26	4	13.9			9					. 6		
27	14.7	13.9	4	6	9	6	6		; ;	6		. m
28		13.9	δ.	۲.	•	5.	6	œ.	Ξ.	8	7.	e.
2.9	14.7		4.	۲,	۲.	'n.	6	œ .	6	6	٠,	ë,
31	15.0		14.4		17.4	5	19.4 19.7	18.4 17.8	6	18.3 18.9	•	12.8 13.0
1-10 MEANS	16.12				18.17							16.66
SAMPLE SIZE	•		•)	,			١	١	ò		•
11-20 MEANS SAMPLE SIZE	15.09	15.14	14.66	16.79	18.63	16.79	18.72	18.95	20.03	18.43	17.68	15.14
21-31 MEANS SAMPLE SIZE	14.58	13.77 8	13.95 11	17.07	16.75	17.57	19.03 11	17.85 11	20.34	18.83	17.14	13.57 11
MONTHLY MEANS	15.24	14.77	14.38 31	16.37	17.78	17.26	18.36	18.66	19.88	18.70	17.83	15.07
MAXIMUM VALUE	16.6	16.1	15.4	17.6	19.4	19.4	20.0	21.7	21.7	19.5	19.0	17.1
MINIMUM VALUE	14.0	13.5	13.2	14.0	15.6	15.6	14.0	15.6	16.8	17.2	16.7	12.8
RANGE	2.6	2.6	2.2	3.6	3.8	3.8	0.9	6.1	4.9	2.3	2.3	4.3
STANDARD DEV.	0.79	0.81	0.59	0.99	1.04	0.98	1.56	1.39	1.11	0.64	0.75	1.42
							1		I			•

21.7

ANNUAL MAX

17.02

ANNUAL MEAN

12.8

	B.	BALBOA				SALI	SALINITY				TEAR 1987	78
DATS	JAN	FEB	MAR	APR	HAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
T	33.41	33,35	33.65	3.7	•	33,58	33,55	~	33.59	33,52	33.24	33.24
6	33,40	33,38	33,36	33.48	33.52	33.40	33.60	n	33,53	33.47	33,54	33,26
.	33.41	33.35	33.65	3.4	33.77	33.43	33.52	3	33.80	33.47	33.35	33.29
4	32.46	33.35	33.78	3		33.46	33.80	ω.	33.59	33.47	33.44	33,35
ı,	32.46	33.33	33,38	33.46	33.53	•	33.83	33.57	33.64	33.65	33.37	33.79
ا ه	32.50	33.41	33,38	9.0	n	33.45	33.58		33.80	33.48	33,31	33.24
,	32.91	33.37	33.31	m	ຕໍ	33.50	33.60	m, c	33.80	33.48	33.40	33.00
∞ α	33.23	33.39	33.38	33.46	33.51	33.4/	33.61	n c	33.62	33.53	33.72	33.03
٠ -	33 10	33.63	33.40	2 6	7 6	33.40	33.62	33.73	33.61	33.50	22.55	33 . L4
1 1	33.54	33.34	44.66	٦ ٣	٦ ٣	٦ ٣	33.62	"	33.67	33.50	33.01	33.22
	33.23	33.40	33,36	33.77	33.53	33.49	33.83	າຕ	33.56	33.44	33.35	33.21
13	33.50	33.37		3	3	3	33.67	m	33.77	33.44	33,33	33.27
1.4	33.78	33,16	33.27	9	33.51	33.71	33.97	en o	33.59	33.42	33.23	33.40
15	0	33.20	33.29	m c	m (m (33.52	m e	33.60	33.45	33.41	33.52
17	33.66	33.20	33.34	7 6	7 6	7 6	39.62	າຕ	33.60	33.40	33 37	33 27
	33,35	33.28	33.35	9	1	າຕ	33.59	າຕ	33.60	33.45	33,33	33.32
10	33.52	33.27	33,29		33.65	ന	33.67	ന	33.86	33.41	33.34	33.25
20	33.38	33.43	33.53	33.44	33.53	m	33.62	ന	33.57	33.55	33.37	33.32
21	33.38	33.43	32.95	33,51	3	33,51	33.60	m	33.56	33.43	33.30	33,30
22	33.34	33.38	32.94	33.52	3	33.48	33.58	m	33.48	33.42	33,32	33,29
23	33,33	33.36	33,41	33,56	m		33.53	n	33.49	33.37	33,32	33.26
2.4	33.60	33.27	33.56	33.72	m 1	33.59	;	e	33.51	33.31	33.32	33.33
25	33.21	33.20	33.41	33.76	4.	33.58	33.73	m (33.46	33.42	33.34	33.26
26	33.31	33.39	33.41	33.55	m	33.70	33.53	33.50	33.50	24.60	20.00	33.30
77	33.32	33.46	33 43	33.48	22.47	33.53	33.58	٦ ٣	33.56	33.42	33.60	33,39
0 0	33.33)	33.45	33.4	4	33,58	33.58	33.53	33.49	33,45	33.42	33,32
30	33,33		33.43	33.49		33.52	33.53	33.52	33.45	33.27	33.37	33.28
31	33.28		33.43	9 A	33.44			33.33		33.55		05.55
1-10 MEANS	33.02	33,42	33.48	33.52	33.58	33.48	33.64	33,60	33.65	33.51	33.41	33.26
SAMPLE SIZE	10	10	10	10	0	o *-	10	10	10	0 .	10	10
11-20 MEANS	33.47	33.28	33.37	33.55	33.64	33.51	33.68	33.51	33.64	33.48	33,33	33.31
SAMPLE SIZE	6	10	σ.	ο.	ONE IS INC. IS INC. IS	01	91	91	10	3	7	10
21-31 MEANS	33.34	33.35	33.35	33.56	33,50	33.57	33,58	33.54	33.49	33.38	33.36	33.31
SAMPLE SIZE	=	∞	11	10	:	0	0		01	7	10	11
MONTHLY MEANS	33.27	33,35	33.40	33.54	33.57	33,52	33.64	33,55	33.60	33:45	33.36	33.29
SAMPLE SIZE	30	78	30	59	57	78	29	31	30	31	30	31
MAXIMUM VALUE	33.78	33,85	33.78	33.77	33.85	33.71	33.97	33,85	33.86	33.65	33,72	33.79
MINIMUM VALUE	32.46	33.16	32.94	33.41	33,43	33.40	33.52	33.46	33.42	33,27	33,23	33,00
Post		3		4	C7	31	24.0	70	77 0		Q	10
acce	1	3		?	≱) - - -) ! •) •				
STANDARD DEV.	0.31	0.13	0.17	0.10	0.11	0.08	0.11	0.07	0.11	80.0	60.0	0.13
dig.	* * * * * * * * * * * * * * * * * * * *	j.									e Jan	
ANNUAL MIN	in i	32.46	8.0. 1.0. 187 34	ANNUAL MEAN	IEAN	33.46	36 Jan 19 19 19 19 19 19 19 19 19 19 19 19 19	ANNUAL	AL MAX	33.	33.97	

	SAI	SAN CLEMENTE	22			TEMPE	TEMPERATURE			¥ € 8	YEAR 1987	
DAYS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	MOV	DEC
. 		14.0	13.1	14.4	16.5	15.8	17.3	19.7	18,3		17.1	16.6
2	15.1	14.0		14.4	16.0	15.8	17.9	21.2	18.0	19.1	18.2	16.6
М.		13.6	13.5	14.4	17.1	17.5	17.1	20.3	17.4	19.1	18.2	16.7
*	,	14.2	13.8	14.4	17.2	16.9	17.4	20.5	18.4	18.9	18.5	16.3
•••	14.7	13.8	13.9	14.4	17.1	16.1	18.2	20.7	19.4	19.1	17.6	16.8
0 1	14.7	14.3	13.7	0.0	20.00	16.7	1 6	19,3	19.7	19.1	19.0	18.5
. 00	14.1	14.9	13.6	14:4	18.4	15.9	19.1	21.5	21.3	1 8 1	17.6	15.0
6	14.7	15.0	13.6	15.0	17.9	16.4	18.6	21.3	19.6	20.7	17.3	16.3
	14.7	14.7	14.1	14.4	17.5	16.9	19.6	19.3	19.6	19.2	18,1	16.3
11	14.5	14.7	14.1	16.0	17.7	18.8	19.8	18.2	19.9	18.8	18.0	16.3
12	15.1	14.8	14.3	15.5	18.5	16.9	20.2	19.3	19.5	20.1	17.4	15.7
	13.1	16.9	12.7	16.7	17.0	10.9	183	18.2	19.6	18.5	17.9	14.1
41	13.8	15.8	13./	16.0	17.0	15.0	18.5	18.0	19.6	18.5	17.4	12.4
	13.8	14.3	12.0	15.5	18.1	14.7	19.1	18.0	19.6	18.5	17.2	12.4
. 17	12.7	14.0	12.1	16.1	18.0	14.7	19.1	16.7	20.1	18.2	17.3	12.2
18	12.7	14.2	12.3	15.0	18.0	17.5	19.4	17.4	20.7	18.5	17.5	13.0
19	14.5	13.8	13.3	16.7	17.4	15.8	19.4	16.3	19.0	17.6	17.6	13.5
20	13.2	13.2	12.6	16.7		15.8	1.0	16.9	18.6	17.9	17.9	14.1
177	3.5	13.9	12.7	16.7	9 9 9 9	17.5	18.5	10.7	10.0	17.9	17.3	14.1
23	13.4	13.0	12.5	16.1	16.7	16.9	16.4	16.3	20.2	2 2 2	1.71	14.0
24	13.2	12.5	12.9	16.1	17.3	16.9	16.5	18.0	20.6	19.2	16.7	13.3
25	13.2	12.0	11.9	16.7	16.8	19.0	17.7	17.4	20.2	18.5	16.8	
26	14.1	12.2	12.4	16.7	15.5	18.7	17.9	19.0	19.8	19.2	16.8	12.0
27		12.7	12.4	16.7	13.5	19.1	18.5	18.9	20.7	18.5	16.8	12.4
2.8	13.8	13.2	12.2	16.7	13.7	18.0	17.1	,	20.5	19.6	16.4	12.5
29	13.8		13.3	16.7	15.2	17.8	19.2	18.9	20.2	19.6	•	13.0
3.0	13.8		13.3	16.7	15.4	16.9	18.3	18.4		18.8		13.0
;			:				•					73.0
1-10 MEANS SAMPLE SIZE	14.69	14.28	13.62	14.36	17.45	16.47	18.28	20.51	19.08	19.20	17.95	16.66
11-20 MEANS SAMPLE SIZE	13.96	14.45	13.21	16.03	17.81	16.27	19.36	17.70	19.62	18.48	17.51	13.74
21-31 MEANS SAMPLE SIZE	13.63	12.69	12.56	16.47	15.67	17.66	17.84	17.93 9	20.31	18.75	16.84	13.15
MONTHLY MEANS SAMPLE SIZE	14.03	13.87	13.11	15.62	16.94	16.80	18.47	18.74	19.67 28	18.79	17.46	14.54
MAXIMUM VALUE	15.1	15.8	14.3	16.7	18.5	19.1	20.2	21.5	21.3	20.7	19.0	18.5
MINIMUM VALUE	12.7	12.0	11.9	13.9	13.5	14.7	16.4	16.3	17.4	17.6	16.4	12.0
RANGE	2.4	3.8	2.4	2.8	5.0	4.4	3.8	5.2	3.9	3.1	2.6	6.5
STANDARD DEV.	0.73	96.0	0.75	1.02	1.32	1.16	1.02	1.58	06.0	0.67	0.61	1.86

21.5

ANNUAL MAX

16.50

ANNUAL MEAN

11.9

	DEC	.41	33.39	33,36	33.50	11 11	28	96	.30	.54	.32	. 42	.44	33.32	33.42	.43	.37		.21	.46	33.26	87.	33.32	4.	.31	7.0	44	33.39	44.	.41		.39	10	.35	96.	.38	33,54	33.21	0.33		0.07	
1987		33					. ~																					33				33	6	.35 33 10	.37 33	.36 33 28	00					
YEAR 1987	NOV		33.		33.39												33.28								33.34		3 6	9 6	33	33		33	}	33	33	33	33.4	33.2	0.23		0.04	
	OCT			33.55	33 55	33 51	33 56	2000	33.54	33.50	33.54	33.52	33.59	33.45	33.39	33.41	33.44	33.50	33.47	33.52	33.44	33.44	•		23.22	•	•	3 5	33.49	33.39	33.45	33,53		33.46	33.41	33.47	33,59	33.30	0.29		0.07	
	SEP	33,55	33.77	33.65	33 72	23 63	33.64	•		33.58	33.64	33.59	33.59	33.77	33.63	33.65	33.82	33.66	33.70	33.61	33.60	33.73	33.59	33.65	33.66	33.01	33.63	33.63	33.63	33.59		33.64	6	33.68 10	33.64	33.65	33.82	33.55	0.27		0.07	
	AUG	33.58	33.57	33.58	11 57	33 76	33.50		33.52	33.62	33.81	33.63	33.65	33.76	33.56	33,33	33.61	33.57	33.54	33.55	33.52	33.52	33.65	33.50	33.55	33.04	10.00	33.73		33.56	33.57	33.62	10	33.56 10	33.59	33,59	33.81	33.33	0.48		0.09	
SALINITY	JUL	33.56	33.78	33.57	33 57	33 57	33.63		33.61	33.62	33.88	33.64	33.66	33.65	33.63	33.76	33.63	33.63	33.60	33.65	33.63	33.64	33.59	33.56	33.53	33.32	23.62	33.55	33.57	33.56	33.62 33.53	33.64	10	33.65 10	33.58 11	33.62	33.88	33.52	0.36		0.08	
SAL	JUN	33.58	33.58	33.77	33 70	22 77		7	33.55	33.52	33.61	33.80	33,53	33.50	33.74	33.56	33.70	33.65	33.86	33.89	33.84	33.96	33.91	33.53	33.84	33.00	33.02	33.59	33.57	33.61	33.58	33.70	10	33.72 10	33.68	33.70	34.09	33,50	0.59		0.16	
	MAY	33.67	33.56	33.56	23 73	23.66	22.54		33.54	33.55	33.55	33.54	33.52	33.52	33.53	33.52	33.50	33.49	33.52	33.60	33.54	33.68	33.63	33.52	33.52	33.51	22.03	33.50	33.51	33.49	33.48	33.59	10	33,54 10	33.52	33.55	33.73	33.48	0.25		90.0	
	APR	33.51	33.57	33.25	77 66		07.00	25.49	33.46	33.49	33.68	33.51	33,50	33.51	33.55	33.52	33.50	33.65	33.49	33.51	33.67	33.56	33.55	33.56	33.71	33.03	33.07	33.55	33.59	33.55	33.56	33.49	10	33.55 10	33.57	33.54	33.71	33.25	0.46		0.08	
TE	MAR	33.50		33 41			20.00	97.00	33.48	33.32	33.36	33.39	33,38	33,37	33,39	33.52	33.29	33.50	33.64	33.48	33.42	33.46	33.46	33.35	33.65	33.57	23.44	33.43	33.53	33.54		33.40	6	33.44 10	33.50	33.45	33.65	33.24	0.41		0.10	
SAN CLEMENTE	FEB	33.36	33.36	33 35	22.00		23.00	00.00	33.45	33.42	33.53	33.40	33,37	33.39	33.37	33.39	33.56	33.33	33.39	33,38			33.44	33,35	33.47	33.48	33.20	33.33	33.57			33.46	10	33.40	33.40	33.42	33.66	33.28	0.38	•	0.09	
SA	JAN		13 51	33 42		;	33.11	93.24	33.02	33.14	33.20	33.25	33.29	33.32	33.31	33,32	33.32	33.34	33,37	33.39	33.37	33.62	33.44	33,41	33.41	33.44	75.55	33.3/	33.36	33.32	33.34	33.24		33.36 10	33.40	33.34	33.62	33.02	0 9 0		0.12	
	ĽΩ																															SANS	SIZE	SIZE	SIZE	MEANS	VALUE	VALUE			D DEV.	
	DAY		,		1	1	n 4	0 !	1	80	6	10	11	12	13	14	15	16	17	18	19	20	21	22	23	77	7,7	97	2.8	29	31	1-10 MEANS	SAMPLE SIZE	11-20 MEANS SAMPLE SIZE	21-31 MBANS SAMPLE SIZE	MONTHLY MEAN SAMPLE SIZE	HAXIMUM	MINIMUM VALUE	AURYO	NAME D	STANDARD DEV	

	SCR	SCRIPPS PIER	æ		SURFA	SURFACE TEMPERATURE	RATURE			*	YEAR 1987	
DAYS	JAN	FEB	MAR	APR	HAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
,	16.4	14.2	14.9	15.6	18.5	18.5	18.3	19.6	19.8	20.6	19.0	17.0
7.7	16.0	14.8	15.2	15.5	17.9	18.1	18.3	16.6	20.5	20,7	18.8	16.8
η	2.0	14.	15.0	15.2	17.9	18.2	17.6	16.6	20.1	21.1	18.3	17.1
r in	15.2	15.0	14.0	15.2	1.01	18.1	16.4	180	19.0	20.4	18.4	17.7
9	15.9	15.4	15.2	15.7	18.2	17.7	16.4	21.4	21.1	21.3	17.8	16.8
_	15.8	15.6	15.1	16.2	19.0	18.1	16.4	22.4	20.7	21.1	18.2	16.6
× 0	15.2	15.5	15.2	17.1	18.3	18.1	18.1	21.9	20.8	20.4	17.8	16.5
10	15.3	16.0	15.2	17.6	17.0	17.9	0 0	22.3	10.7	4.6	17.5	16.1
11	15.4	16.0	15.3	17.5	19.0	17.6	18.6	20.8	20.4	20.3	17.6	16.4
12	15.5	16.0	15.6	18.2	19.4	18.1	18.9	20.8	20.0	19.7	17.7	16.5
13	15.1	16.5	15.0	17.8	19.0	18.0	19.4	21.1	19.7	19.6	17.5	14.7
7 F	5.3	16.5	1.4. 	17.2	18.6	17.9	19.1	20.0	20.4	19.6	17.9	13.2
16	14.4	15.2	15.2	17.8	18.5	18.7	19.0	20.4	21.0	19.8	17.1	13.3
17	14.0	15.1	14.6	18.7	18.8	17.6	18.9	20.1	20.6	19.8	17.1	14.4
∞ c	14.3	15.3	14.5	17.3	18.8	17.4	18.4	19.7	20.8	19.3	17.2	13.7
20	14.0	15.0	. 4. . 4.	17.9	18.9	17.8	18.6	19.8	20.8	19.1	17.1	14.3
21	13.9	14.9	14.5	17.0		17.0	1 0 1	20.1	0.00	10.1	17.5	14.5
22	14.4	14.9	14.0	18.2	18.9	18.1	19.3	20.0	20.8	18.9	17.4	14.7
23	14.3	14.2	13.7	18.9	19.2	18.6	19.8	19.9	21.6	19.0	17.5	14.2
24	14.3	13.9	14.5	18.7	19.0	18.2	19.6	19.5	20.9	19.6	17.4	14.1
57	14.6	13.5	14.5	18.9	18.6	18.8	19.6	19.0	21.1	19.4	17.1	13.9
27	7. v	13.0	15.6		0.01	7 9 0	7.0	19.0	70.0	19.4	6.91	13.1
2 8 7	14.8	14.1	15.5		18.2	18.7	19.1	19.0	21.3	20.3	17.9	13.2
29	14.8		13.9	18.0	18.0	19.8	19.1	19.1	20.0	19.7	17.5	13.7
30	14.0		15.4		18.4	19.0	19.7	20.1	21.6	19.4	17.1	14.0
31	14.1		15.7		18.6		19.0	19.9		19.0		13.4
1-10 MEANS SAMPLE SIZE	15.62	15.24	15.13	15.88	18.41	18,13	17.45 10	20.00	20.46	20.67	18.14	16.75
11-20 MEANS SAMPLE SIZE	14.81	15.73	14.79	17.80 10	18.77	17.90	18.94	20.27	20.51	19.60	17.31 10	14.37 10
21-31 MEANS SAMPLE SIZE	14.41	14.20 8	14.77	18.39	18.55	18.67 10	19.43	19.60	21.10	19.44	17.23	13.88
MONTHLY MEANS SAMPLE SIZE	14.93 31	15.12 28	14.89	17.36	18,57 31	18.23	18.63 31	19.95	20.69	19.89	17.54 29	14.96 31
MAXIMUM VALUE	16.4	16.8	15.7	18.9	19:4	19.8	19.9	22.4	21.6	21.6	19.0	17.4
MINIMUM VALUE	13.9	13.5	13.7	14.1	17.8	17.4	16.2	16.6	19.6	18.9	16.7	12.7
RANGE	2.5	3.3	2.0	8.4	1.6	2.4	3.7	5.8	2.0	2.7	2.3	4.7
STANDARD DEV.	0.68	0.86	0.53	1.27	0.46	0.52	1.00	1.32	0.54	0.74	0.56	1.50
ANNUAL MIN	12	12.7	4	ANNUAL MEAN	AN	17.56		ANNUA	ANNUAL MAX	22.4	4	

			_	_	_	_				-																																		
87	DEC	33,37	33.39	33.39	33.40	33.29	33.34	33.35	33.35	33.39	33.35	33.34	33.35	33.46	33.43	33.44	33.40	33.32	33.27	33.30	33.30	10.00	33.32	33.35	70.00	70.00	33 37	33.5	33.36	33.36	33.36	33.36	10	33.36	;	33.36	33.36	31	33.46	33,27	0.19		0.03	
YEAR 1987	NOV	33.38	33.26	33.35	33,32	33.37	33.27	33.27	33.30	33.28	33.27	33,31	33.31	33.31	33.28	33.30	33.34	33.31	33.30	33.32	33.30	40.00	33.34	33.35	33.33	40.00	33.30	33.50	33.37	33.37		33,31	10	33.31		33.36	33.33	30	33.40	33.26	0.14	1	0.03	33.71
	OCT	33.61	33.57	33.57	33.57	33.61	33.60	n	33.62	33.56	33.57	33.56	33.42	33.44	33.50	33.43	33.43	33.47	33.43	33.43	33.42	79.50	33.47	33.44	33.40	33.40	33.44	***	33.51	33.45	33.40	33.59	10	33.45		33.45	33.50	30	33.62	33.40	0.22	,	0.07	33.
	SEP	33.55	33.59	33.56	33.61	33.56	33.57	33,59	33.58	33.64	33.56	33.58	33.63	33.61	33.61	33.58	33.59	33.66	33.60	33.65	33.03	33.04	33.5/	33.65	33.03	33.09	33.09	33.66	33.65	33.66		33.58	10	33.61		33.63 10	33.61	30	33.69	33.55	0.14		0.03	ANNUAL MAX
	AUG	33.57	33.56	33.59	33.57	33.53	33.60	33.61	33.61	33.60	33.66	33.60	33.69	33.61	33.62	33.61	33.62	33.60	33.60	33.61	33.62	33.61	33.58	33.58	33.58	33.00	33.09	33.54	33.53	33.67	33.59	33,59	10	33.62		33.58 11	33.60	31	33.69	33,53	0.16		0.02	ANNU
NITY	JOL	33.64	33.63	33.58	33.61	33.59	33.61	33.60	33.68	33.60	33.60	33.63	33.61	33.68	33.62	33.69	33.71	33.63	33.60	33.65	33.65	33.02	33.65	33.65	33.00	33.03	33.00	10.00	33.50	33.59	33.59	33.61	10	33.65		33.62	33.63	31	33.71	33.58	0.13		0.02	
SURFACE SALINITY	JUN	33.54	33.51	33.53	33.52	33.52	33.49	33.47	33.48	33.40	33.53	33.49	33.49	33.49	33.50	33.51		;	33.54	33.57	33.56	33.50	33.57	33.56	33.59	33.08	33.00	23.09	33.69	33.62		33.50	10	33.52		33.60	33.54	28	33.69	33.40	0.29		0.05	33.49
SURF	MAY	33.55	33.55	33.56	33,55	33.56	33.54	33.66	33.57	33.55	33.55	33.55	33.56	33.57	33.54	33.55	33.54	33,55	33.56	33.58	33.67	33.64	33.59	33.61	33.61	33.03	33.56	23.00	33.56	33.53	33.56	33.56	10	33.57		33.59	33.58	31	33.67	33,53	0.14		0.02	IBAN
	APR	33.51	33.50	33.47	33.50	33.49	33.50	33.50	33.48	33.48	33.47	33.48	33.49	33.51	33.50	33.51	33.53	33.50	33.53	33.55	33.56	33.54	33.55	33.54	33.60	33.50	33.57	33.00	33.56	33.54		33.49	10	33.52		33.56	33.52	30	33.60	33.47	0.13		0.02	ANNUAL HEAN
ER	MAR	33,38	33.40	33,38	33,39	33.45	33.38	33.34	33.34	33.38	33,39	33.39	33.39	33.40	33.40	33.41	33.39	33.42	33.42	33.45	33,44	33.46	33.46	33.45	33.45	33.44	33.44	33.40	33.50	33.49	33.48	33.38	10	33.41		33.47	33.42	31	33.51	33.34	0.17		0.03	
SCRIPPS PIER	FEB	33.40	33.41	33.40	33.42	33.41	33.40	33.40	33.43	33.41	33.41	33.40	33.40		33.39	33.39	33.40	33.40	33.39	33.42	33.42	33.43	33.39	33.40	33.31	33.31	33.34	33.39	37.58			33.41	10	33.40		33.37 8	33.39	27	33,43	33.31	0.12		0.02	33.20
SC	JAN	33.40	33.40	33.39	33.37	33,33	33.32	33.20	33.26	33.29	33.29	33.33	33.33	33.35	33.32	33.34	33.35	33.38	33.38	33.41	33.39	33.40	33.39	33.40	33.40	33,39	33.41	33.40	72.04	33.42	33.39	33.32	10	33,36		33.40	33,36	31	33.42	33.20	0.22		0.05	33
	DAYS	-	7	e	4		ب ب	7	. 00		10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27.	2 0	30	31	1-10 MEANS	SAMPLE SIZE	11-20 MEANS SAMPLE SIZE	75.	21-31 MEANS SAMPLE SIZE	HONTHLY MEANS	SAMPLE SIZE	MAXINUM VALUE	MINIMUM VALUE	RANGE		STANDARD DEV.	ANNUAL MIN

1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	SCF	SCRIPPS PIER	Æ		BOTT	BOTTOM TEMPERATURE	RATURE			Þ	FEAR 1987	
DAYS	JAN	FEB	MAR	APR	HAY	JUN	lur	AUG	SEP	OCT	NOV	DEC
	16.2	14.6	14.9	15.1	18.2	18.4	17.8	19.2	19.7	18.9	18.7	17.1
7	15.9	14.8	15.2	15.5	18.1	17.9	18.2	16.6	20.1	20.2	18.8	17.2
	16.2	14.7	15.1	15.6	18.1	18.2	16.2	15.2	19.8	19.8	18.4	17.2
4 u	15.9	15.0	15.2	15.4	18.5	18.2	16.7	15.9	17.4	20.5	18.4	17.0
9 1/2/10/10	15.7	15.4	14.9	15.6	19.2	17.8	15.9	21.1	19.7	21.4	17.9	17.0
7	15.8	15.5	15.5	16.2	19.2	17.9	16.3	22.3	20.6	20.6	18.0	16.8
∞ (15.0	15.4	15.3	17.2	18.5	18.2	17.5	21.3	20.6	20.8	18.0	16.6
	15.2	16.0	15.2	17.3	18.7	18.1	18.0	20.0	18.8	10.8	17.5	16.6
े च	15.3	16.0	15.1	17.8	10.01	17.8	18.5	20.4	20.6	20.3	17.7	16.7
	15.3	16.3	15.6	18.5	19.5	17.8	19.0	21.0	19.7	19.3	17.7	16.6
13	15.1	16.5	15.0	17.4	19.5	17.6	18.2	20.4	19.8	19.6	17.6	15.5
4 -	14.0	17.2	15.7	17.4	18.0	16.0	18.0	10.3	20.3	18.3	17.8	12.9
16	13.8	15.0	15.2	17.9	18.6	18.7	19.0	19.8	21.1	20.3	17.1	13.5
17	14.1	15.1	15.0	18.8	18.7	17.4	19.0	20.3	20.3	20.0	17.1	13.2
18	14.4	15.2	14.6	17.3	18.9	16.7	18.8	19.7	20.7	19.4	17.3	14.5
910	17.8	15.0	14.4	17.4	19.0	17.8	16.8	19.7	20.6	19.0	17.2	14.2
2.1	13.0	14.3	14.2	17.8	10.0	17.9	101	20.1	20.3	18.7	17.5	15.1
22	14.2	14.4	13.9	18.2	18.9	18.2	19.1	20.1	20.8	18.4	17.5	15.0
23	14.5	14.2	13.9	18.7	19.2	18.6	19.7	18.9	21.3	19.1	17.5	14.8
24	14.3	13.9	14.7	18.9	19.2	18.1	18.1	19.3	20.8	18.6	17.6	14.0
25	14.7	13.5	14.4	18.1	18.7	18.8	17.2	17.1	21.2	19.3	17.1	13.2
97	14.8	13.9	13.8	18.2	18.	19.1	19.0	17.0	21.4	19.2	17.0	12.9
28	14.8	14.2	15.6	18.2	1001	17.0	17.5	9.01	21.0	10.4	17.7	13.5
29	14.8		15.6	18.1	17.9	13.1	16.1	18.8	20.8	19.4	17.5	13.8
30	13.8		14.6	18.0	18.6	15.4	19.5	19.1	21.3	19.1	17.1	14.2
31	14.1		14.1		18.4		18.9	18.4		18.6		13.6
1-10 MEANS	15.65	15.27	15.16	15.96	18.56	18.12	16.90	18.87	19.74	19.97	18.13	16.94
SAMPLE SIZE	10	10	10	10	10	10	10	10	10	10	σ.	10
11-20 MEANS SAMPLE SIZE	14.68	15.74	14.90	17.81 10	18.83	17.66 10	18.45	20.10	20.44	19.46	17.41	14.41
21-31 MEANS SAMPLE SIZE	14.41	14.09 8	14.63	18.29	18.63	17.50	18.47	18.86	21.01	18.99	17.29	13.94
MONTHLY MEANS SAMPLE SIZE	14.90	15.10	14.89	17.35	18.67	17.76	17.96	19.26	20.40	19.46	17.59	15.06
HAXIHUH VALUE	16.2	17.2	15.6	18.9	19.5	19.1	19.7	22.3	21.4	21.4	18.8	17.3
MINIMUM VALUE	13.8	13.5	13.8	15.1	17.9	13.1	14.7	14.3	17.4	16.8	16.9	12.5
RANGE	2.4	3.7	1.8	3.8	1.6	0.9	5.0	8.0	4.0	9.4	1.9	8.4
Tan day day to					9		•		ò		3	
STANDARD DEV.	1/.0	16.0	0.52	1.1/	9.4	1.13	1.23	16.1	0.84	66.0	0.50	1.63
ANNUAL MIN	12	12.5	•	ANNUAL MEAN	AN.	17.37		ANNUA	ANNUAL MAX	22.3	e,	

	30	SCRIPPS PI	PIER		ВОТ	BOTTOM SALINITY	NITY.				YEAR 1987	87
DAYS	JAN	FEB	MAR	APR	MAY	JUN	lur	AUG	SEP	OCT	NOV	DEC
-	33 37	~	7	33 7.0	33 55	33 61	~	23 57	23	200	70 00	10 00
1 6	22.27		200	23.5								70.00
1 ~	22.27	. "	:	77	23.57	١,	23.55	13.54	33.51		17.00	00.00
۱ ۹	22.27	. "	33 40	33.4	22.55	١,	23.50	33.52	07.66	99.00		70.00
	33.37	33.30	33.30	33.46	33.55	٠,	33.57	33.55	33.53	33.50	33 27	
۰ ۰	33.32	ľ	33.39	33.48	, "		33.58	33.59	33.53	33.59	33.23	33.55
7	33.19	(1)	33.35	33.47	٠. ش	3.4	33.58	33.62	33.56	33.55	33.22	33.38
&	33.24	m	33.35	33.48	33.54	3.5	33.59	33,59	33,35	33.58	33.26	33.34
6	33.27	3	33.38	33.44	۳.	3.5	33.59	33.59	33,55	33.41	33.27	33,36
10	33.28	3	33.44	33.43	ë.	3	33.60	33.63	33.50	33.53	33.26	33.35
11	33.29	9	33,39	33.44	÷	33.49	33.60	33.59	33.54	33.55	33.26	33.34
1.2	33.31	m	33.39	33.47	÷.	m ·	33.61	33.61	33.54	33.44	33.25	33.33
13	33,33	m (33.40	33.49	33.52	33.50	33.60	33.61	33.56	33.42	33.28	33.40
4 -		າ ເ	25.59	33.00	÷.	33.01	33.01	33.01	33.09	33.43	33.58	33.4/
61	33.33	20	33.38	4.00	· .	33.32	33.02	33.37	33.09	33.47	33.29	04.60
17	33.35	33.39	33.44	33.49	•		33.61	33.60	33.50	33.42	33.33	33.40
. 1	33.37	m	33,41	33,51	33.56	33,53	33.60	33.59	33,59	33.42	33,30	33,26
19	33,37	m	33.46	33.49	٠	33.54	33.57	33.57	33.61	33.41	33,31	33.31
20	33.38	3	33.44	33.51	θ,	33.56	33.60	33.58	33.61	33.41	33,32	33.30
21	33.40	e	33,45	33,52	۳,	33.61	33.63	33.58	33.59	33.40	33.32	33,31
22	33.40	3	33.41	33.54	ë.	33.55	33.63	33.58	33.55	33.40	33,35	33.31
23	33.38	m	33.46	33.52	ë.	33.55	33.64	33.55	33.59	33.45	33.34	33.30
24	33.40	33.31	33.45	33.57		33.56	33.59	33.57	33.59	33.41	33,35	33.34
25	33.39	33.32	33.43	33.56		33.57	33.58	33.51	33.62	33.44	33.37	33.34
26	33.39	33.30	33.45	33.53	33.58	33.58	33.62	33.49	33.03	33.43	33.30	33.39
77	44.44	33.40	33.56	33.54		33.58	33.53	33.54	33.62	33.43	99.00	33.36
29	33.37		33.45	33.54	<u>.</u>	33.56	33.51	33.53	33.62	33.40	33.37	33.36
30	33.42		33.48	33.53	33.61	33.60	33.58	33.55	33.61	33.44	33.37	33.35 33.36
1-10 MEANS SAMPLE SIZE	33.31	33.39 10	33,39 9	33.46 10	33.55 10	33.52 10	33.59	33.57 10	33.51 10	33.54	33.28	33.35 10
1-20 MEANS	33.34 10	33.44	33.41 10	33.49	33.54 10	33.52 8	33.60	33.59 10	33.58 10	33.44	33.29 10	33,36 10
1-31 MEANS	33.40	33.37	33.47	33.54	33.59	33.58	33.58	33.54	33.60	33.42	33.36	33.34
710	7	0	;	2	1	2	;	:	9	;) 1	;
CONTRLY MEANS	33.35	33.40 28	33.42	33.49	33.56	33.54	33.59 31	33.57 31	33.57 30	33.47	33.31	33.35 31
TAXIMUM VALUE	33.45	33.66	33.56	33.57	33.63	33.61	33.64	33.63	33.63	33.66	33.38	33.47
MINIMUM VALUE	33.19	33.30	33.35	33.43	33.52	33.48	33.51	33.49	33.35	33,39	33.22	33.26
RANGE	0.26	0.36	0.21	0.14	0.11	0.13	0.13	0.14	0.28	0.27	0.16	0.21
			•			•	0	ć		,		
STANDARD DEV.	0.05	90.0	0.03	0.03	0.02	0.03	0.02	0.03	0.04	0.07	0.04	0.04
ANNIAT MIN	33	0		AWWIAT	MPAN	14.47		ANNIAL	AT. MAY	33 66	4	
	;	:				;				;	9	