

NOAA Technical Report NMFS SSRF-693



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# Daily and Weekly Upwelling Indices, West Coast of North America, 1967-73

ANDREW BAKUN

SEATTLE, WA  
AUGUST 1975

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NATIONAL OCEANIC AND  
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# Daily and Weekly Upwelling Indices, West Coast of North America, 1967-73

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## ABSTRACT

Daily and weekly indices of intensity of large-scale wind-induced coastal upwelling at selected locations along the west coast of North America are presented for the 7-yr period, 1967-73. The indices are based on 6-hourly computations of the offshore component of Ekman transport using the synoptic surface atmospheric pressure analyses produced by the Fleet Numerical Weather Central to estimate the sea surface stress. The magnitude of offshore transport is considered an indication of resultant upwelling through the bottom of the Ekman layer. A spatial distortion in absolute magnitude results in noncomparability of numerical values between different locations.

## INTRODUCTION

Upwelling is a highly variable phenomena which can have important effects on fishery resources. As an aid in accounting for these effects, Bakun (1973) presented monthly indices of intensity of wind-induced coastal upwelling at intervals of three degrees latitude along the west coast of North America. This choice of time scale recognized that although important variations in the upwelling process are known to occur on time scales shorter than a month, specification on shorter scales often may not be required or even desired. Some major effects of upwelling occur at the very base of the food chain and are separated from the harvested resource by a considerable time lag and by multiple interacting biological processes. Where such extended linkages are involved, attempts to relate individual short-term upwelling events to characteristics of a subsequent fishery are likely to be unrewarding.

However, over longer time scales the mean value may be less important than the frequency content of the distribution from which the mean was formed. For example, a month of continual, fairly steady upwelling activity may have a mean rate of upward transfer similar to another month in which nearly all the upwelling occurs in one short, very intense burst. However, the responses of the biota in the two cases might be quite different. In addition, there are certain applications to which detailed specifications of individual upwelling events are pertinent. For instance, the life history of a particular organism may be such that a crucial process takes place within a definable, short time period. In cases where tactical fishing success is related to upwelling conditions, an indication of short-term variations in upwelling may aid in formulating fishing strategy and in interpreting catch data. Multidisciplinary investigations such as the CUE experiments (O'Brien and Smith 1971) promise new insights into the mechanisms linking upwelling phenomena to fishery resources. Early application of results of such efforts may be facilitated by having descriptive indicators available which are compatible with the short time

scales of the experiments but which are independent of a particular observational program and can be extended to the larger time and space scales involved in most fishery problems.

This report presents daily and weekly means of upwelling indices computed at 6-hr intervals over the 7-yr period, 1967 through 1973. The input data are synoptic surface atmospheric pressure fields. The calculation procedures and the locations (Fig. 1) are identical to those used by Bakun (1973). However, in the present case a lower value for the drag coefficient, corresponding to the use of synoptic rather than monthly mean input data, is used to estimate the stress of the wind on the sea surface.

## METHOD

The procedure for calculating upwelling indices is presented in detail by Bakun (1973). Six-hourly synoptic surface atmospheric pressure fields prepared by Fleet Numerical Weather Central (FNWC) are arranged on the 3-degree mesh length grid shown in Figure 1. Finite difference derivatives are formed and the geostrophic wind is calculated. An estimate of the wind field near the sea surface is made by rotating the geostrophic wind 15 degrees to the left and reducing its magnitude by 30% to approximate frictional effects. The sea surface stress field is computed according to

$$\vec{\tau} = \rho_a C_d |\vec{v}| \vec{v} \quad (1)$$

where  $\vec{\tau}$  is the stress vector,  $\rho_a$  is the density of air,  $C_d$  is an empirical drag coefficient,  $\vec{v}$  is the estimated wind vector near the sea surface with magnitude  $|\vec{v}|$ .

The resultant transport in the surface layer of the ocean is calculated from

$$\vec{M} = \frac{1}{f} \vec{\tau} \times \vec{k} \quad (2)$$

where  $\vec{M}$  is the Ekman mass transport,  $f$  is the Coriolis parameter, and  $\vec{k}$  is a unit vector directed vertically upward. The component of computed Ekman transport directed off shore is termed the *upwelling index* and is considered an indication of the rate of upwelling of deeper

<sup>1</sup>Pacific Environmental Group, National Marine Fisheries Service, NOAA, Monterey, CA 93940.

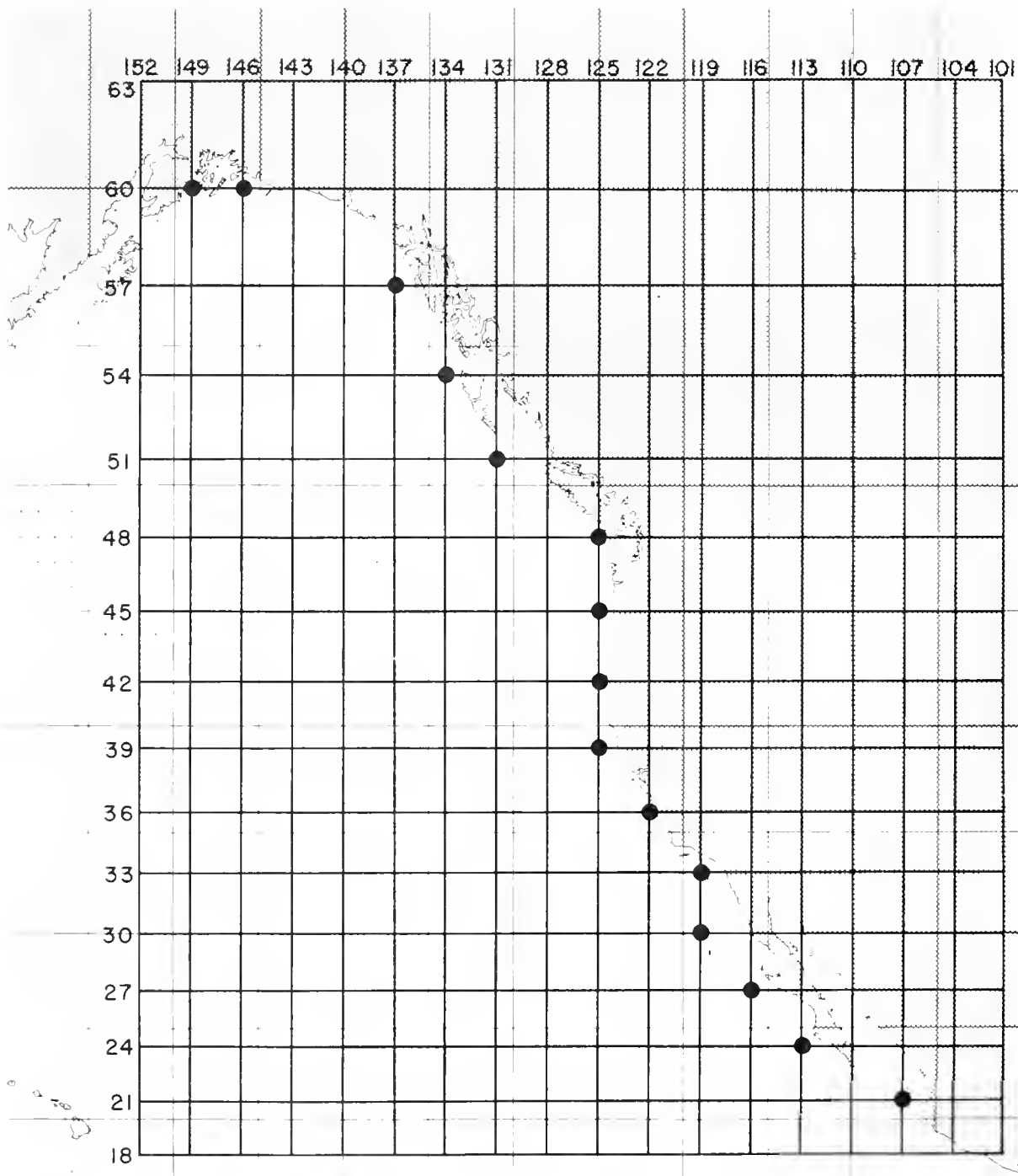


Figure 1.—Data grid. Intersections at which upwelling indices are computed are marked with large dots.



**Table 1.**—Coastline orientations chosen to characterize the dominant coastline trend at each location on a scale of approximately 200 miles. The directions of vectors tangent to the coast with the ocean on the right are given in degrees from true north.

LOCATION		COASTLINE	LOCATION		COASTLINE	LOCATION		COASTLINE
Lat.	Long.	ANGLE	Lat.	Long.	ANGLE	Lat.	Long.	ANGLE
60°N	149°W	69	48°N	125°W	166	33°N	119°W	129
60°N	146°W	90	45°N	125°W	185	30°N	119°W	155
57°N	137°W	146	42°N	125°W	180	27°N	116°W	153
54°N	134°W	163	39°N	125°W	156	24°N	113°W	144
51°N	131°W	135	36°N	122°W	152	21°N	107°W	164

waters to replace those driven offshore by the stress of the wind. The characteristic coastline orientations used to resolve the offshore component are listed in Table 1.

### Constants Employed in the Stress Calculation

Following the procedure of Fofonoff (1960),<sup>2</sup> the density of air used in Equation (1) was considered to have a constant value of  $0.00122 \text{ g cm}^3$ . This is very near to the U.S. standard atmosphere sea level air density value ( $0.001226 \text{ g cm}^3$ ) chosen by the U.S. Weather Service as representing average conditions over the United States at lat  $40^\circ \text{ N}$ .

The drag coefficient,  $C_d$ , was considered to be a constant equal to 0.0013. Recent research (Davidson 1974) has demonstrated dependence of the drag coefficient both on atmospheric stability and on spectral properties of the ocean waves. However, a generally agreed-upon formulation does not appear well enough established at this time to warrant attempting to incorporate these effects in the computations of upwelling indices. The value 0.0013 is within the range of recent estimates for constant drag coefficients. DeLeonibus (1971) gives  $0.0012 \pm 0.0004$  as characteristic of constant drag coefficients measured in neutrally stable conditions from the Argus Island tower off Bermuda. Denman and Miyake (1973) arrive at  $0.00163 \pm 0.00028$ , with no observed dependence on stability, from measurements at ocean station Papa. For our purposes, the absolute value is less important than intercomparability among various data sets. The value 0.0013 was used by Bakun, McLain, and Mayo (1974) in a climatological study, and is compatible with Bakun's (1973) discussion of the effect of monthly mean data on such computations.

### Atmospheric Pressure Data

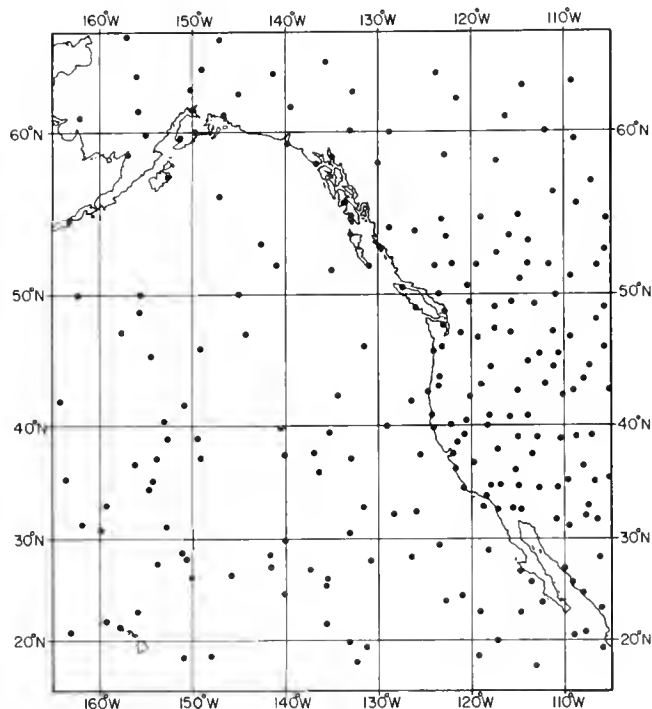
The choice of time scale (6-hr) and space scale (3-degree grid mesh) used in the calculations is largely dictated by the time and space distributions of the basic observational data. Meteorological observations are commonly made and collected via the international data network at 6-hr intervals. By convention, the times of observation are at 0000, 0600, 1200, and 1800 Greenwich mean time. The derived distributions are properly viewed as simultaneous instantaneous samplings rather than as averages over any time interval. Any averaging which may take place as part of a measurement procedure is intended merely as a means of filtering the very small-scale turbulent variations (having periods less than

several minutes) in order to reveal the underlying larger scale patterns which are of interest.

A typical distribution of pressure observations over the northeast Pacific Ocean for a particular 6-hr sampling (Fig. 2) suggests futility in attempting to resolve details in the distribution on a scale much smaller than three degrees. On any scale much larger than this, however, important features of coastline trend are lost.

The method of atmospheric pressure analysis presently in use at FNWC is described by Holl and Mendenhall (1972). The method not only incorporates pressure reports but also accompanying wind reports in the form of equivalent pressure gradients. The result thus reflects a greater amount of observational data than would a separate analysis of either pressure or wind. Objective forecast procedures are applied to the previous analysis (6 h earlier) to supply additional information.

About 1% of the 6-hourly synoptic sea-level pressure



**Figure 2.**—Distribution of observations made at 1800 GMT, 5 January 1974, which arrived at the Fleet Numerical Weather Central in time for incorporation in the operational surface pressure analysis.

<sup>2</sup>Fofonoff, N.P. 1960. Transport Computations for the North Pacific Ocean-1958. Fish. Res. Board Can., Manusc. Rep. (Oceanogr. Limnol.) 80, 81 p.

fields during the 7-yr period were missing from the FNWC archives. Certain of the missing fields had been rejected as erroneous. Some had been lost due to various equipment failures. As a result, some 113 of the daily averages reflect only three of the four daily synoptic periods, 15 contain two of four, and 2 contain only one. The days for which the daily averages represent less than all four synoptic samplings are listed in Table 2.

### Distortion of Spatial Distributions

Bakun (1973) listed two sources of distortion in the spatial distributions of upwelling intensity indicated by the monthly indices presented therein. In that case monthly mean pressure data were used for the purpose of extending the series back through 1946 in a reasonably consistent manner. A major distorting effect was attributed to the use of mean data in conjunction with the nonlinear stress law (Equation (1)), resulting in an underestimate which depended on the variability of the wind field during the month. To partially compensate for underestimating the mean stress, a high value (0.0026) of the drag coefficient was used. Since the normal variability differs among different geographical areas, indicated upwelling at certain locations was amplified relative to other locations. The series presented here cover 7 yr, for which there are available a quite complete and internally consistent set of 6-hourly synoptic pressure analyses. Thus, there is no need to resort to mean data and that particular source of distortion is not encountered.

The second source of spatial distortion discussed by Bakun (1973) applies also in the present case. This involves a

discontinuity in the onshore-offshore sea-level atmospheric pressure gradient caused by the coastal mountain ranges. In the interior valley of southern California, in particular, an intense localized thermal low develops during the summer. Because of the 3-degree mesh length of the computation grid, the effect of this low on the computed indices may be amplified relative to its actual effect on the wind stress field on the coastal side of the mountain range.

This effect can be illustrated by comparing the distribution of means by month and location of the 6-hourly upwelling indices to a corresponding summary of offshore Ekman transports produced from actual wind observations made by ships at sea. Figure 3(a) displays the annual cycle obtained by Bakun et al. (1974). The figure summarizes over 75,000 individual wind reports from the National Climatic Center's file of marine surface observations over the 20-yr period, 1948 through 1967, within the 1-degree squares (Figure 3(c)). The Ekman transport was computed for each wind observation and the offshore components, grouped by long-term month and by 1-degree square, were averaged. Figure 3(b) displays time-series isograms of the 7-yr (1967-73) mean monthly values of the 6-hourly upwelling indices. Some of the detail apparent in Figure 3(a) is smoothed out in Figure 3(b) because the upwelling indices are computed at 3-degree intervals using derivatives computed across a 6-degree length scale whereas the averages making up Figure 3(a) were formed at 1-degree intervals and contain data only from the surrounding 1-degree square. However, comparison of the two figures indicates a definite southward shift of the region of maximum magnitude of the upwelling indices. The indica-

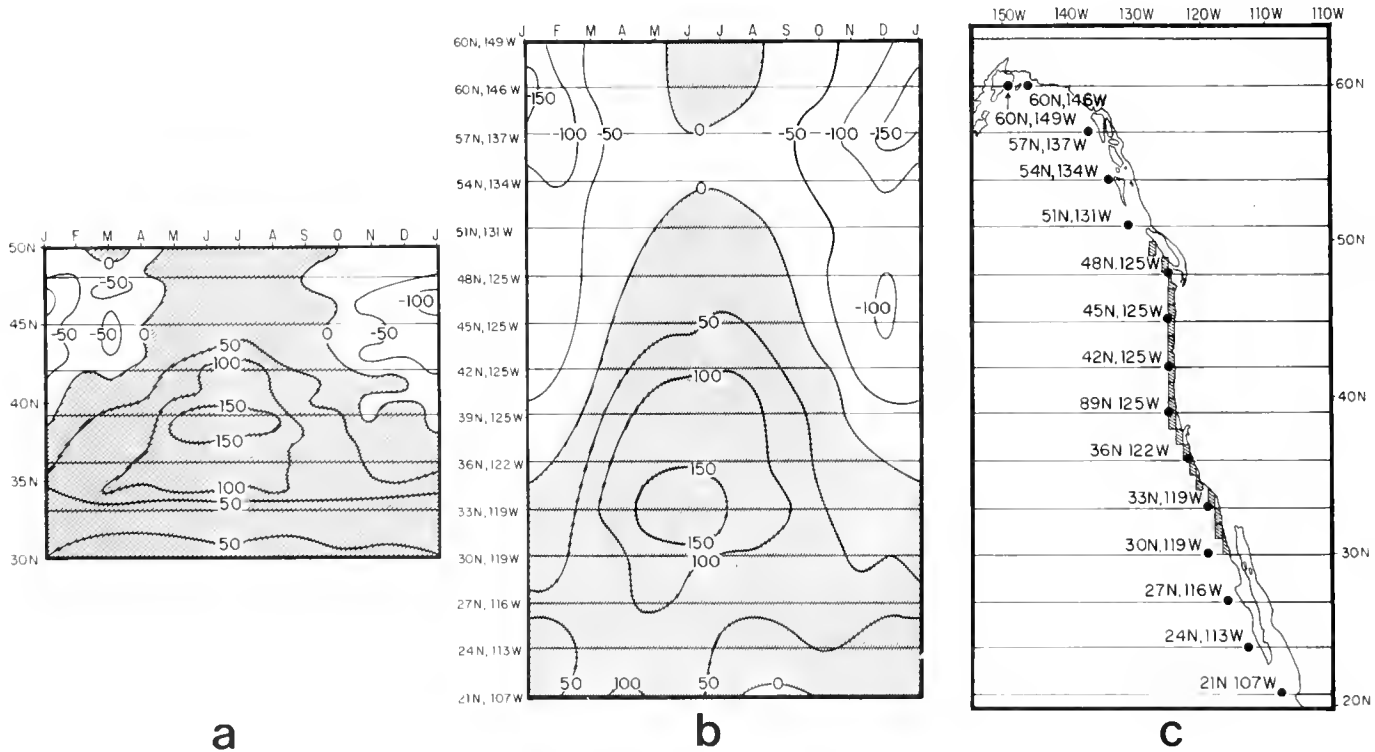


Figure 3.—Long-term annual cycle of offshore Ekman transport. Units are cubic meters per second per 100 m of coastline. (a) Cycle formed by averaging transports computed from individual wind observations taken at sea within the one degree coastal squares indicated in Figure 3(c). (b) Cycle formed from 6-hourly upwelling indices averaged by month at the locations indicated in Figure 3(c). (c) Coastline drawing. Coastal squares for Figure 3(a) are shaded. Locations for Figure 3(b) are indicated by dots.

**Table 2.**—Dates for which daily averages represent fewer than the total four possible synoptic samplings. The times (Pacific Standard Time) of the missing samplings are indicated to the right of each date.

1967		
Jan 13, 10AM	Jun 28, 10AM	Oct 24, 4AM
Jan 23, 10AM	Aug 6, 4AM	Oct 28, 10PM
Jan 25, 10PM	Aug 7, 10AM	Nov 11, 4AM, 10AM
Feb 8, 10PM	Aug 19, 10PM	Nov 29, 4AM
Feb 10, 10AM	Aug 24, 4PM	Dec 9, 4PM
Feb 28, 10AM	Aug 29, 4PM	Dec 15, 4AM
Apr 17, 10PM	Sep 23, 10PM	Dec 30, 4AM
May 4, 4PM, 10PM		
1968		
Jan 19, 10PM	Mar 18, 4PM	Jul 14, 10PM
Feb 5, 10AM	Mar 26, 4AM	Sep 28, 4AM
Feb 8, 10PM	Mar 30, 10PM	Nov 29, 4AM
Feb 9, 10AM	May 31, 10PM	Dec 11, 4AM
Mar 9, 4AM, 10AM	Jul 1, 4PM, 10PM	Dec 18, 4AM
1969		
Jan 9, 10PM	Aug 9, 4AM, 10PM	Aug 22, 4PM
Mar 7, 4PM	Aug 10, 4AM, 10AM	Aug 23, 10AM
Apr 21, 10PM	Aug 11, 10PM	Aug 24, 10PM
Apr 30, 4PM	Aug 12, 10AM, 10PM	Aug 25, 4AM
Jul 12, 10AM	Aug 13, 10AM, 10PM	Sep 20, 10PM
Jul 27, 10PM	Aug 14, 10PM	Sep 23, 10AM
Jul 28, 10PM	Aug 15, 10AM, 10PM	Sep 30, 10PM
Jul 31, 10AM	Aug 16, 4PM	Nov 12, 10AM
Aug 1, 10AM	Aug 17, 4AM	Nov 13, 10AM
Aug 4, 4PM	Aug 18, 4AM	Nov 29, 10PM
Aug 5, 4AM, 10PM	Aug 19, 10AM, 4PM, 10PM	Dec 2, 10AM
Aug 6, 4AM, 4PM	Aug 20, 10PM	Dec 3, 10AM
Aug 7, 4PM	Aug 21, 4AM, 10AM, 10PM	Dec 10, 10AM
1970		
Jan 4, 10AM	Jul 14, 10AM	Oct 27, 4AM
Jan 10, 10PM	Jul 30, 10AM	Oct 29, 10PM
Jan 31, 10PM	Aug 28, 10PM	Nov 10, 10AM
Mar 15, 10AM	Aug 29, 10PM	Nov 18, 10AM, 10PM
Mar 17, 10AM	Aug 30, 10PM	Nov 25, 10PM
Mar 25, 4AM	Sep 1, 10PM	Nov 27, 10PM
Mar 28, 10PM	Sep 26, 10AM	Nov 30, 10AM
Apr 5, 10PM	Oct 6, 10PM	Dec 4, 10AM
Jun 15, 10AM	Oct 18, 4AM	Dec 7, 10AM
Jun 30, 10PM	Oct 24, 10PM	Dec 22, 10AM
1971		
Jan 15, 10PM	Apr 5, 10AM	Aug 29, 10PM
Feb 8, 10AM	Apr 9, 10PM	Oct 25, 10AM
Feb 25, 10PM	Jun 5, 4PM	Dec 24, 4AM, 10AM
Mar 2, 4AM	Jul 13, 10AM	
1972		
Feb 17, 10AM	Oct 14, 4PM	Oct 17, 10PM
Mar 4, 10AM	Oct 15, 10PM	Dec 4, 10AM
Mar 7, 4PM		
1973		
May 1, 10PM	May 22, 10AM	Nov 29, 10AM
May 2, 10PM	Nov 15, 4PM	Dec 23, 10AM
May 10, 10AM	Nov 27, 10AM	

tion is that although the 6-hourly upwelling indices may be satisfactory indicators of temporal variations at individual locations, they give a distorted picture of spatial variations.

## DISCUSSION

A conspicuous feature of the charts in the appendix is the apparent variability of the upwelling process. A substantial component of this variability is the seasonal cycle, the major

features of which appear to be repeated from year to year. Clearly evident on a much shorter time scale, characteristically of one to several days, are individual "events" which seem randomly superimposed on the seasonal variation. Between these extremes of scale lie features which appear as clusters of events. These are the subject of further study and will be reported elsewhere (e.g., Bakun 1974) as will the diurnal periodicities which exist in the 6-hourly data but do not appear in the daily means presented here.

Table 3 gives the 7-yr mean values by month of the daily mean indices. Table 4 gives the corresponding mean values of the weekly mean indices. The values in Tables 3 and 4 are, of course, nearly identical, differing only in that a given weekly mean may overlap two consecutive months. Figure

3(b) is well representative of both sets. The southern portion is primarily an area of positive mean values of the indices indicating upwelling conditions on the average throughout the year. The northern portion is primarily a region of average downwelling (negative indices). Maximum mean

**Table 3.—Seven-year (1967-73) composite monthly averages of daily means of 6-hourly upwelling indices. Units are cubic meters per second per 100 m of coastline.**

Lat.	Long.	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
60°N, 149°W		-145	-89	-45	-12	-5	9	7	3	-14	-32	-66	-95
60°N, 146°W		-163	-104	-46	-13	-5	9	7	1	-18	-38	-78	-120
57°N, 137°W		-150	-138	-64	-39	-26	0	-4	-19	-41	-77	-108	-164
54°N, 134°W		-64	-103	-49	-38	-27	-2	-4	-19	-34	-72	-86	-103
51°N, 131°W		-42	-68	-33	-11	-4	13	14	5	-5	-42	-64	-72
48°N, 125°W		-86	-74	-39	-2	20	25	34	24	1	-45	-84	-115
45°N, 125°W		-90	-69	-36	8	36	42	58	42	16	-27	-72	-109
42°N, 125°W		-80	-54	-8	53	85	87	102	77	44	5	-49	-90
39°N, 125°W		-42	-35	33	101	123	133	138	115	68	35	-15	-37
36°N, 122°W		-8	4	66	124	146	146	134	116	70	40	8	5
33°N, 119°W		11	31	91	140	181	190	155	131	101	56	24	21
30°N, 119°W		40	46	83	98	109	107	88	90	77	64	45	53
27°N, 116°W		55	56	88	99	102	91	71	67	77	65	60	58
24°N, 113°W		37	36	66	81	81	68	38	30	51	40	38	38
21°N, 107°W		36	47	85	113	80	66	11	-6	-11	9	10	23

**Table 4.—Seven-year (1967-73) composite monthly averages of weekly means of 6-hourly upwelling indices. Where a given weekly value overlaps two different months, it is assigned to the month wherein falls the midpoint (Wednesday) of the week. Units are cubic meters per second per 100 m of coastline.**

Lat.	Long.	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
60°N, 149°W		-144	-88	-49	-11	-4	8	7	3	-14	-33	-64	-95
60°N, 146°W		-162	-103	-51	-11	-4	8	7	1	-18	-39	-77	-120
57°N, 137°W		-151	-137	-68	-38	-24	-1	-4	-20	-40	-79	-109	-161
54°N, 134°W		-64	-106	-51	-36	-26	-2	-4	-21	-33	-72	-87	-101
51°N, 131°W		-44	-72	-33	-10	-4	13	15	4	-6	-42	-65	-67
48°N, 125°W		-98	-71	-40	-2	20	27	34	24	0	-43	-87	-105
45°N, 125°W		-100	-61	-39	9	36	44	56	42	15	-26	-76	-101
42°N, 125°W		-89	-47	-11	55	83	90	101	77	43	5	-52	-84
39°N, 125°W		-49	-30	31	104	122	135	138	115	67	35	-16	-33
36°N, 122°W		-11	5	64	128	142	147	136	115	71	41	7	7
33°N, 119°W		9	32	90	144	176	195	154	127	103	60	21	22
30°N, 119°W		40	45	84	101	105	108	89	86	82	63	46	54
27°N, 116°W		55	54	91	101	99	93	71	63	81	64	59	59
24°N, 113°W		37	35	68	80	80	69	37	29	52	38	39	38
21°N, 107°W		34	50	83	114	80	67	11	-6	-10	7	9	23

## ACKNOWLEDGMENT

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**Table 5. — Standard deviations of daily means of 6-hourly upwelling indices grouped by long-term (1967-73) month. Units are cubic meters per second per 100 m of coastline.**

Lat.	Long.	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
60°N,	149°W	133	95	72	45	25	17	14	26	38	57	90	122
60°N,	146°W	153	109	72	41	27	17	14	24	42	60	94	139
57°N,	137°W	141	141	98	68	50	33	26	40	72	106	123	164
54°N,	134°W	132	121	97	86	67	55	40	51	74	118	130	147
51°N,	131°W	139	107	101	93	72	59	36	41	57	119	137	154
48°N,	125°W	146	106	97	68	45	39	33	27	39	90	118	181
45°N,	125°W	147	103	100	64	52	44	42	35	42	79	102	168
42°N,	125°W	160	112	119	92	80	70	60	56	58	75	98	171
39°N,	125°W	142	115	113	121	103	96	84	86	67	71	92	135
36°N,	122°W	75	81	80	93	92	74	63	59	53	57	59	77
33°N,	119°W	56	63	71	90	98	76	61	55	66	63	59	66
30°N,	119°W	51	57	56	63	60	53	49	54	51	47	55	55
27°N,	116°W	44	51	47	57	51	47	56	55	54	44	56	43
24°N,	113°W	38	41	46	48	41	49	51	54	57	54	39	37
21°N,	107°W	59	63	80	103	72	57	41	57	84	52	66	54

**Table 6. — Standard deviations of weekly means of 6-hourly upwelling indices grouped by long-term (1967-73) month. Were a given weekly value overlaps two different months, it is assigned to the month wherein falls the midpoint (Wednesday) of the week. Units are cubic meters per second per 100 m of coastline.**

Lat.	Long.	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
60°N	149°W	85	56	54	25	13	9	7	15	22	35	56	78
60°N	146°W	104	60	52	23	14	8	7	14	23	38	58	88
57°N	137°W	78	70	56	37	26	19	16	22	42	65	71	87
54°N	134°W	67	67	55	50	39	35	29	21	47	79	84	78
51°N	131°W	80	61	56	53	43	39	30	27	35	78	79	85
48°N	125°W	105	57	55	46	29	25	22	19	24	57	66	88
45°N	125°W	101	52	63	45	34	28	29	26	30	58	58	88
42°N	125°W	106	59	77	66	49	39	40	40	38	58	57	98
39°N	125°W	95	64	73	91	64	54	60	64	40	55	58	87
36°N	122°W	43	53	46	63	47	46	38	43	32	37	30	50
33°N	119°W	28	40	36	46	49	49	31	41	43	37	32	37
30°N	119°W	31	40	34	37	34	30	30	37	35	27	36	37
27°N	116°W	25	30	29	28	31	21	21	37	27	22	37	27
24°N	113°W	22	24	28	26	23	27	22	37	34	33	29	22
21°N	107°W	36	33	41	65	49	38	20	31	49	31	43	29

**Tabulation and Plots of Daily and Weekly Upwelling Indices**

The following pages display daily and weekly means of 6-hourly upwelling index computations at 15 near coastal locations (see text Fig. 1) over the 7-yr period, 1967-73. The display for each location occupies seven consecutive pages, one page per year.

The left column indicates the calendar date of the Sunday which begins a particular week. The seven columns to the right contain the daily averages progressing from Sunday through the following Saturday. Each daily average summarizes the synoptic computations at 4 AM, 10 AM, 4 PM, and 10 PM Pacific Standard Time. The average of the seven daily mean values is listed in the right column of numbers.

The units are metric tons per second per 100 m of coast-

line. These units may be thought of as the average amount (metric tons or cubic meters) of water upwelled through the bottom of the Ekman layer each second along each 100 m of a straight line directed along the dominant trend of the coast on a scale of about 200 miles. Because of uncertainties in some of the constants employed and for other reasons outlined in this report, it may be well to consider these indices as indicative of relative fluctuations rather than as quantitative measures of absolute magnitude.

To the right of each weekly row of numerical values, the daily values are plotted as horizontal lines, and the weekly means as vertical bars. Where a given value is so large that the plotted line would extend off the graph, truncation of the line is indicated by an "X".

# COASTAL UPWELLING INDICES, DAILY AND WEEKLY MEANS

DURING 1967 AT 60N, 149W

WEEK BEGINNING	DAILY VALUES							WEEKLY MEAN	CUBIC METERS PER SECOND PER 100 METERS OF COASTLINE						
	SUN	MON	TUE	WED	THU	FRI	SAT		-600	-400	-200	0	200	400	600
1 JAN	-49	-205	-100	-15	-36	-57	11	-76							
8 JAN	2	-260	-195	-51	-46	-77	-227	-122							
15 JAN	-60	-22	-169	-177	-82	-297	-197	-144							
22 JAN	-110	-64	-56	-122	-142	-230	-409	-163							
29 JAN	-354	-220	-270	-112	-63	-191	-50	-175							
5 FEB	-19	25	-79	20	-86	-78	-152	-53							
12 FEB	-81	-40	-103	-106	-95	-26	32	-60							
19 FEB	6	22	-40	-42	-72	-207	-168	-72							
26 FEB	-330	-55	-14	7	43	56	100	-15							
5 MAR	16	-13	39	-80	-81	-46	-6	-25							
12 MAR	-111	-65	-92	-85	-84	-72	-51	-80							
19 MAR	-191	-143	-18	-161	-162	-86	-10	-110							
26 MAR	-98	-14	9	-4	42	36	84	8							
2 APR	37	14	21	114	49	11	-25	32							
9 APR	-2	82	-82	-97	-11	23	-60	-22							
16 APR	8	14	-3	11	-1	-39	-7	-2							
23 APR	-9	-25	-8	25	47	-11	-20	-0							
30 APR	-10	-10	5	10	-4	7	-18	-3							
7 MAY	-20	-17	-17	-11	-65	-18	2	-21							
14 MAY	6	1	-12	-2	8	-1	-55	-8							
21 MAY	10	20	17	8	-4	-27	-16	1							
28 MAY	5	16	25	-12	36	25	12	15							
4 JUN	34	43	26	7	2	-3	-7	14							
11 JUN	8	5	-2	6	11	4	-0	5							
18 JUN	3	9	24	20	3	10	10	13							
25 JUN	5	8	6	50	76	14	-4	22							
2 JUL	8	21	0	22	4	22	5	12							
9 JUL	-4	-15	-13	1	5	15	6	-1							
16 JUL	39	3	17	47	45	8	15	25							
23 JUL	3	21	9	11	-21	-1	17	6							
30 JUL	30	49	17	-7	3	10	6	15							
6 AUG	-2	-20	-3	11	14	35	174	30							
13 AUG	92	49	56	38	25	-10	-15	34							
20 AUG	4	-6	-1	1	-6	-8	5	-2							
27 AUG	-3	-47	-47	-16	-19	1	-7	-20							
3 SEP	-31	-22	-2	-47	26	6	1	-10							
10 SEP	-2	-84	-134	-15	-53	17	-69	-49							
17 SEP	-30	51	7	-3	-15	-150	-31	-25							
24 SEP	14	-145	20	17	-40	-16	-19	-24							
1 OCT	-71	-125	-60	-94	-33	-9	-15	-58							
8 OCT	-144	-86	-36	-4	1	-2	-18	-41							
15 OCT	12	-1	-12	-10	-65	-4	-11	-13							
22 OCT	5	-3	-8	-137	-55	-5	4	-28							
29 OCT	-99	-8	1	-25	71	37	3	-3							
5 NOV	-8	-24	-74	-82	-47	-53	34	-36							
12 NOV	194	16	2	107	120	-10	70	72							
19 NOV	56	47	59	90	-42	-126	-114	-4							
26 NOV	-82	-32	-139	-37	-48	-103	-116	-92							
3 DEC	-232	-147	-15	-273	-40	-19	-110	-119							
10 DEC	-27	-16	-99	44	-35	40	-4	-14							
17 DEC	-22	-6	-21	-57	-160	-320	-157	-107							
24 DEC	-142	-167	-31	-2	16	50	3	-42							
31 DEC	-8	15	25	-13	18	-60	-92	-16							



# COASTAL UPWELLING INDICES, DAILY AND WEEKLY MEANS DURING 1968 AT 60N, 149W

WEEK BEGINNING	DAILY VALUES							WEEKLY MEAN	CUBIC METERS PER SECOND PER 100 METERS OF COASTLINE						
	SUN	MON	TUE	WED	THU	FRI	SAT		-600	-400	-200	0	200	400	600
7 JAN	-92	-46	-109	-247	-154	-355	-405	-201							
14 JAN	-278	-332	-272	-212	-157	-101	-29	-197							
21 JAN	-297	-174	1	20	10	13	-73	-71							
28 JAN	-58	-133	-268	-346	-150	-116	-374	-206							
4 FEB	-119	-360	-102	-77	20	-23	-12	-108							
11 FEB	-45	-36	-14	-28	-23	-44	-101	-42							
18 FEB	-117	-86	-96	-160	-98	-13	-41	-87							
25 FEB	-202	-132	21	-21	-77	17	-54	-64							
3 MAR	-11	-6	-9	-8	-84	-78	-73	-38							
10 MAR	-81	-282	-41	-30	-20	-30	-57	-78							
17 MAR	-67	-41	-131	-129	-10	6	1	-53							
24 MAR	-3	-105	-30	5	4	-23	-6	-23							
31 MAR	-6	-54	-76	-32	3	13	27	-18							
7 APR	16	42	13	-9	-8	-7	27	11							
14 APR	-1	21	14	-23	8	11	-34	-1							
21 APR	-133	-44	-27	-10	-0	12	23	-27							
28 APR	5	15	-14	-25	6	9	30	4							
5 MAY	21	-25	-23	3	-3	22	-14	-3							
12 MAY	-29	-39	-5	7	14	-3	-5	-8							
19 MAY	-6	-24	-3	-6	-4	-2	1	-6							
26 MAY	-1	2	11	14	10	2	-7	5							
2 JUN	3	4	-0	-1	5	-15	-9	-2							
9 JUN	-6	-28	7	10	15	1	-2	-0							
16 JUN	-4	-5	-10	30	34	23	0	12							
23 JUN	-41	-9	2	7	7	-1	-6	-6							
30 JUN	2	10	3	1	-1	5	6	4							
7 JUL	-31	-21	2	5	12	6	20	-1							
14 JUL	8	1	0	-0	2	3	6	3							
21 JUL	-0	-28	-27	-11	-20	-1	9	-11							
28 JUL	-7	3	4	14	12	9	3	5							
4 AUG	0	-16	1	5	22	17	1	4							
11 AUG	-9	-12	3	5	-17	-48	-4	-12							
18 AUG	-4	6	5	4	1	0	-2	1							
25 AUG	-20	-4	-7	-22	-7	-50	-19	-18							
1 SEP	-6	-28	-51	-42	3	-3	-9	-19							
8 SEP	0	-7	-13	-11	-14	-119	-24	-27							
15 SEP	0	22	-7	-23	41	40	-25	-24							
22 SEP	-27	-33	-29	-22	-36	39	0	-14							
29 SEP	2	14	-43	-110	3	-7	-3	-21							
6 OCT	7	-6	-2	-1	-23	-26	-0	-9							
13 OCT	-4	-3	-10	-135	-54	-116	-35	-51							
20 OCT	-87	-196	-30	-145	-9	-6	-100	-83							
27 OCT	-13	-22	1	-0	-30	-227	-20	-45							
3 NOV	-31	-230	-67	-193	-82	-08	-35	-104							
10 NOV	-59	-11	3	5	-28	-108	-63	-37							
17 NOV	-276	-141	-35	-87	-132	-43	-17	-104							
24 NOV	-43	-124	-36	-80	-81	-10	-19	-57							
1 DEC	-32	-55	-92	-220	-302	-206	-285	-196							
8 DEC	-533	-464	-52	-61	-56	-153	-82	-200							
15 DEC	15	30	4	26	4	-68	-52	-6							
22 DEC	-67	-97	-99	-73	-76	-85	-129	-90							
29 DEC	-100	-71	-285	-201	-246	-242	-233	-198							

# COASTAL UPWELLING INDICES, DAILY AND WEEKLY MEANS DURING 1969 AT 60N, 149W

WEEK BEGINNING	DAILY VALUES							WEEKLY MEAN	CUBIC METERS PER SECOND PER 100 METERS OF COASTLINE						
	SUN	MON	TUE	WED	THU	FRI	SAT		-600	-400	-200	0	200	400	600
5 JAN	-349	-171	-17	-246	-447	-284	-363	-268							
12 JAN	-372	-130	-101	-122	-129	-86	-64	-144							
19 JAN	-56	-20	-10	3	-10	-16	-39	-22							
26 JAN	-14	-12	-20	17	-5	5	-9	-6							
2 FEB	-163	-222	-200	-117	-344	-403	-158	-229							
9 FEB	-207	-340	-77	-41	-20	-13	-30	-106							
16 FEB	-23	-114	4	-32	-2	-52	-68	-42							
23 FEB	-34	-19	-13	69	66	-6	-63	3							
2 MAR	-10	-38	-30	-36	-15	9	-41	-24							
9 MAR	-7	-5	1	-0	-14	-117	-129	-39							
16 MAR	-29	-16	-26	-3	95	130	46	28							
23 MAR	3	-14	-44	-16	-56	-53	-21	-29							
30 MAR	-4	-23	-2	-17	-55	-12	-10	-17							
6 APR	-12	13	-22	-10	-50	1	-7	-15							
13 APR	-9	-36	-80	-29	-32	-70	-7	-38							
20 APR	-11	-70	-52	-32	-17	-26	-9	-32							
27 APR	9	-3	-20	-6	-5	-5	-6	-5							
4 MAY	16	51	-35	36	7	-28	-6	6							
11 MAY	7	22	30	14	13	0	3	14							
18 MAY	2	-6	-10	-05	9	-30	-00	-30							
25 MAY	-1	9	-9	-14	5	-8	2	-2							
1 JUN	6	-8	6	27	24	7	2	9							
8 JUN	33	51	30	21	13	-2	-13	19							
15 JUN	-8	13	20	0	5	5	-11	6							
22 JUN	-4	7	6	2	1	3	11	4							
29 JUN	9	6	0	0	12	10	4	8							
6 JUL	15	0	5	-1	7	23	7	9							
13 JUL	6	21	32	2	0	-1	2	9							
20 JUL	3	3	5	4	24	7	2	7							
27 JUL	7	60	24	11	-0	4	22	21							
3 AUG	14	31	14	14	-7	-19	93	20							
10 AUG	-19	-15	-13	-46	-5	13	-16	-15							
17 AUG	-7	-8	-24	-16	-2	3	-30	-12							
24 AUG	-73	2	-0	-0	0	14	12	-5							
31 AUG	3	2	16	24	5	-3	-6	6							
7 SEP	-8	-55	-120	-11	3	3	5	-25							
14 SEP	-16	-52	-40	-14	-19	-6	-44	-28							
21 SEP	-49	-14	-11	-9	-3	4	-27	-16							
28 SEP	-24	-2	2	10	-5	57	50	14							
5 OCT	-121	-89	-30	-6	54	-149	20	-46							
12 OCT	-106	-89	-97	-155	-06	-90	0	-90							
19 OCT	-4	-26	-30	-35	-27	-25	-15	-23							
26 OCT	-25	-36	-67	-31	-24	-70	-31	-41							
2 NOV	-21	-42	-4	0	-120	-7	7	-26							
9 NOV	-19	-210	-106	-252	-05	-204	-149	-146							
16 NOV	-114	-296	-356	-212	-117	-87	-33	-174							
23 NOV	-43	-98	-150	52	-97	-13	-1	-50							
30 NOV	10	-200	-50	4	-114	-179	-92	-90							
7 DEC	-56	-35	-27	-02	-176	-99	-63	-77							
14 DEC	-19	-44	-23	-219	-203	-219	-95	-129							
21 DEC	-165	-304	-205	-63	-15	-63	-124	-157							
28 DEC	18	7	12	-11	49	-20	-31	-4							

# COASTAL UPWELLING INDICES, DAILY AND WEEKLY MEANS DURING 1970 AT 60N, 149W

WEEK BEGINNING	SUN	MON	DAILY VALUES					WEEKLY MEAN	CUBIC METERS PER SECOND PER 100 METERS OF COASTLINE							
			TUE	WED	THU	FRI	SAT		-600	-400	-200	0	200	400	600	
4 JAN	-224	-289	-185	-61	-79	-81	-120	-150								
11 JAN	-230	-318	-377	-274	-196	-66	-114	-226								
18 JAN	-219	-324	-334	-162	-112	-116	-133	-200								
25 JAN	-110	-47	-3	-39	-46	-250	-31	-75								
1 FEB	-180	-436	-10	-51	-58	-48	-31	-117								
8 FEB	-18	-131	-122	-26	-119	-135	-143	-99								
15 FEB	-34	-30	-140	-114	-28	-5	-135	-69								
22 FEB	-105	-14	119	-9	-19	-4	-10	-5								
1 MAR	-9	-40	-55	-72	-74	-3	3	-36								
8 MAR	-60	-60	-110	-110	-83	-47	-99	-82								
15 MAR	-30	-1	-92	56	9	1	-10	-11								
22 MAR	-25	2	-45	6	47	30	79	13								
29 MAR	-6	66	35	4	-30	-21	-2	7								
5 APR	-61	-32	-30	-15	-26	16	27	-18								
12 APR	66	10	-0	8	16	13	5	18								
19 APR	23	70	70	36	3	-44	-35	19								
26 APR	3	8	3	22	3	4	3	7								
3 MAY	-3	-11	-10	-97	-9	-10	-16	-22								
10 MAY	0	0	-0	-4	-7	3	1	-1								
17 MAY	2	-2	-7	-39	-3	13	-20	-9								
24 MAY	-59	16	16	4	7	6	-10	-3								
31 MAY	5	2	-4	2	19	-1	-10	2								
7 JUN	8	4	4	39	52	-14	-7	12								
14 JUN	21	16	15	59	57	30	9	30								
21 JUN	11	5	9	-6	-2	3	10	5								
28 JUN	11	-4	-15	7	-8	-6	7	-2								
5 JUL	0	-5	14	21	19	30	48	19								
12 JUL	16	7	12	-1	2	-11	1	4								
19 JUL	8	4	-3	-1	1	-0	6	2								
26 JUL	11	11	12	68	33	-3	15	21								
2 AUG	15	-35	5	53	10	34	4	13								
9 AUG	0	-4	-2	14	-14	-7	22	1								
16 AUG	13	-6	-1	10	30	34	30	18								
23 AUG	12	4	-3	-3	-16	-42	-1	-7								
30 AUG	5	-1	-7	-4	13	40	16	9								
6 SEP	-4	-16	-44	-24	-19	-21	8	-17								
13 SEP	5	2	-10	-26	-0	-8	-11	-7								
20 SEP	-7	-23	-20	-55	-149	-35	-47	-48								
27 SEP	-31	-0	-1	-5	-1	-29	-21	-13								
4 OCT	-23	-14	-1	12	4	-27	10	-6								
11 OCT	56	71	63	-2	-5	-11	-33	20								
18 OCT	-55	-91	-101	-82	-175	-123	-40	-95								
25 OCT	-156	-340	-42	24	-4	-100	-58	-109								
1 NOV	-28	-6	-23	-30	-48	-60	-102	-43								
8 NOV	-130	-172	-301	-145	-74	-100	-72	-142								
15 NOV	-83	-73	0	-0	-17	4	-77	-35								
22 NOV	-32	-119	-27	-43	-60	3	-20	-44								
29 NOV	-357	-232	-237	-231	-305	-430	-334	-316								
6 DEC	-180	-196	-131	-169	-22	-150	-175	-147								
13 DEC	-73	-6	-78	-68	-33	-44	-92	-56								
20 DEC	9	21	20	201	87	33	-115	37								
27 DEC	-155	-349	-180	-173	-81	-36	-304	-195								

# COASTAL UPWELLING INDICES, DAILY AND WEEKLY MEANS DURING 1971 AT 60N, 149W

WEEK BEGINNING	DAILY VALUES							WEEKLY MEAN	CUBIC METERS PER SECOND PER 100 METERS OF COASTLINE						
	SUN	MON	TUE	WED	THU	FRI	SAT		-600	-400	-200	0	200	400	600
3 JAN	-88	-10	21	-98	-201	-284	-285	-135							
10 JAN	-100	-100	-165	-268	-356	-453	-236	-241							
17 JAN	-403	-173	-49	-64	-123	-222	-187	-174							
24 JAN	-236	-639	-496	-437	-253	-223	-112	-342							
31 JAN	-353	-43	-32	-36	-127	-120	-35	-107							
7 FEB	-4	-49	5	-28	-211	-31	-155	-68							
14 FEB	-177	-33	-27	-141	1	-123	-73	-82							
21 FEB	-7	0	-52	-89	-66	-42	-3	-37							
28 FEB	-65	-140	-312	-244	-183	-256	-221	-203							
7 MAR	-49	-65	-47	-150	-111	-39	-9	-67							
14 MAR	-34	-41	-99	7	-6	-56	-53	-40							
21 MAR	-57	-55	-48	-8	-18	-71	-157	-59							
28 MAR	-59	-35	-14	-26	-26	-100	-87	-51							
4 APR	-0	-7	1	-34	-228	-98	-2	-53							
11 APR	-10	14	-112	84	-9	13	5	-2							
18 APR	10	10	-63	-113	-19	0	-44	-31							
25 APR	2	25	2	2	-3	0	-15	2							
2 MAY	-10	71	-7	-11	13	61	1	17							
9 MAY	-53	-69	1	-44	19	6	1	-20							
16 MAY	-16	-79	-1	7	-17	25	5	-11							
23 MAY	3	9	3	9	-79	-1	21	-5							
30 MAY	44	-88	68	27	1	-5	-4	6							
6 JUN	3	-11	-79	-31	1	13	24	-11							
13 JUN	20	37	27	9	1	3	-0	14							
20 JUN	-0	-1	-4	5	15	6	21	6							
27 JUN	19	16	34	6	-1	-1	4	11							
4 JUL	13	10	11	12	3	0	6	8							
11 JUL	8	29	30	10	-0	13	5	15							
18 JUL	-6	-11	45	22	18	14	-12	10							
25 JUL	6	27	9	3	-1	10	16	10							
1 AUG	12	0	-21	1	12	24	45	10							
8 AUG	75	63	23	2	4	-3	-6	23							
15 AUG	-5	-8	-18	-23	-9	-33	-8	-15							
22 AUG	-22	-6	-1	2	8	-8	-86	-16							
29 AUG	-20	-1	3	1	-19	-12	-0	-7							
5 SEP	13	-119	-70	2	-17	-28	-33	-36							
12 SEP	1	14	2	-165	81	19	-4	-8							
19 SEP	9	5	-1	-9	6	1	-3	1							
26 SEP	-13	-16	-11	27	12	12	-1	2							
3 OCT	-38	-19	-19	-84	-116	71	-113	-45							
10 OCT	14	-3	19	-3	6	17	84	19							
17 OCT	27	-7	-8	-159	-163	0	2	-44							
24 OCT	-5	-16	16	-44	5	1	-1	-6							
31 OCT	-53	-3	-200	-115	-7	-115	-110	-87							
7 NOV	-106	-155	-113	1	3	-3	-48	-60							
14 NOV	-15	-162	-29	-30	79	33	-45	-24							
21 NOV	-29	-98	-201	-91	-158	-148	-100	-118							
28 NOV	-17	-54	-137	-213	-47	-18	-42	-76							
5 DEC	-21	-26	-30	-25	-88	-59	-57	-44							
12 DEC	-83	-17	1	-41	-79	44	72	-15							
19 DEC	-125	-451	-191	-125	-2	-5	4	-128							
26 DEC	-18	45	58	-36	18	23	-0	14							

# COASTAL UPWELLING INDICES, DAILY AND WEEKLY MEANS DURING 1972 AT 60N, 149W

WEEK BEGINNING	DAILY VALUES							WEEKLY MEAN	CUBIC METERS PER SECOND PER 100 METERS OF CROSSING						
	SUN	MON	TUE	WED	THU	FRI	SAT		-600	-400	-200	0	200	400	600
2 JAN	-94	-16	-30	-13	-35	-51	-159	-57							
9 JAN	-150	-149	-115	-120	-217	-344	-400	-217							
16 JAN	-650	-303	-231	-210	-189	-116	-150	-265							
23 JAN	-145	-64	-32	37	42	89	47	-4							
30 JAN	10	-1	-35	-72	-210	-267	-275	-171							
6 FEB	-265	-133	-210	-3	-136	-80	-42	-125							
13 FEB	-56	-195	-89	-189	-279	-345	-299	-207							
20 FEB	-250	-294	-92	-54	-240	-173	-62	-167							
27 FEB	-130	-199	-122	-296	-175	-140	-119	-171							
5 MAR	-171	-140	-171	-211	-219	-75	-164	-165							
12 MAR	-224	-16	-3	-110	24	-132	-101	-93							
19 MAR	-35	-2	-10	-63	-40	19	46	-13							
26 MAR	35	39	29	-27	-112	-94	-17	-21							
2 APR	-33	5	-50	-230	-205	-115	-40	-98							
9 APR	-1	-15	4	46	44	0	-43	5							
16 APR	-7	65	77	0	-34	-17	-32	6							
23 APR	-32	-4	-1	-19	-27	0	-2	-12							
30 APR	0	8	-41	-39	-10	-35	11	-16							
7 MAY	-2	-4	-7	-5	-8	1	18	-1							
14 MAY	10	-6	8	25	32	47	24	20							
21 MAY	21	10	19	-56	-17	-23	8	-6							
28 MAY	22	-10	-9	-6	25	46	-4	9							
4 JUN	-5	-3	0	-2	16	0	-17	-0							
11 JUN	-11	3	1	19	24	2	9	7							
18 JUN	25	16	7	8	22	39	12	18							
25 JUN	13	7	6	7	21	17	3	11							
2 JUL	-1	-2	-0	-1	-1	4	9	1							
9 JUL	13	2	0	2	6	10	14	7							
16 JUL	7	11	29	19	12	-6	-11	8							
23 JUL	-4	3	-1	-2	4	3	3	1							
30 JUL	1	-4	-5	-5	-11	6	6	-2							
6 AUG	23	6	7	2	1	17	29	12							
13 AUG	22	12	-2	1	4	12	16	9							
20 AUG	20	-13	-29	3	-11	-24	-1	-8							
27 AUG	0	3	-10	-16	0	2	-2	-4							
3 SEP	21	15	3	3	-1	7	43	13							
10 SEP	8	12	94	45	32	33	5	33							
17 SEP	-113	-92	-176	-102	-73	-10	-4	-82							
24 SEP	-5	6	18	-19	-20	5	20	2							
1 OCT	-93	5	4	-77	0	9	-26	-24							
8 OCT	-21	6	29	-0	-6	-11	30	3							
15 OCT	57	10	27	34	-1	-10	-23	12							
22 OCT	-24	-100	-83	-6	14	-5	-40	-35							
29 OCT	-43	-12	-12	-54	-99	-60	-20	-44							
5 NOV	-9	-21	-152	-176	-11	-7	-29	-57							
12 NOV	-56	-32	-29	-7	-67	-5	-50	-36							
19 NOV	-79	-31	-23	-1	7	-452	-34	-87							
26 NOV	-11	-143	53	-4	-93	-113	-42	-50							
3 DEC	-7	-10	-5	-5	-10	4	40	1							
10 DEC	-8	-0	-24	11	-334	-752	-324	-205							
17 DEC	-03	-144	-66	-22	-50	-256	-297	-132							
24 DEC	-414	-135	-19	-29	-59	-19	-69	-109							
31 DEC	-270	-264	-32	-10	-39	-33	-24	-96							

# COASTAL UPWELLING INDICES, DAILY AND WEEKLY MEANS DURING 1973 AT 60N, 149W

WEEK BEGINNING	DAILY VALUES							WEEKLY MEAN	CUBIC METERS PER SECOND PER 100 METERS OF COASTLINE						
	SUN	MON	TUE	WED	THU	FRI	SAT		-600	-400	-200	0	200	400	600
7 JAN	-33	-16	-19	-32	-89	-253	-256	-100							
14 JAN	-236	-213	-217	-333	-166	-87	-37	-184							
21 JAN	-175	-126	-33	-61	-114	-183	-69	-111							
28 JAN	88	-67	-250	-147	-23	16	-29	-59							
4 FEB	-16	-64	-31	-63	-30	-38	-100	-49							
11 FEB	-165	-280	-137	-94	-43	-42	-38	-117							
18 FEB	-50	-113	41	6	-16	-51	-81	-38							
25 FEB	-81	-52	-35	-29	-21	-3	-10	-33							
4 MAR	1	-1	-75	-13	29	4	42	-2							
11 MAR	26	18	-35	-15	-6	-36	-58	-15							
18 MAR	-91	-12	-13	-43	-80	3	7	-33							
25 MAR	13	5	-42	-4	8	-1	1	-3							
1 APR	-62	-43	-28	4	11	-53	-3	-25							
8 APR	12	7	10	26	5	-43	-4	2							
15 APR	-12	2	4	7	1	-69	-40	-15							
22 APR	-5	2	0	-16	-3	6	-1	-2							
29 APR	-44	-30	11	-1	-8	-62	-1	-19							
6 MAY	-19	-65	-10	-3	-18	-64	-27	-29							
13 MAY	-36	-37	-2	-18	-11	1	38	-9							
20 MAY	-6	4	-1	-7	6	9	-44	-6							
27 MAY	-5	-14	-4	9	8	21	52	10							
3 JUN	1	1	-5	-8	5	4	3	1							
10 JUN	-8	-8	-7	4	1	6	4	-8							
17 JUN	4	12	14	9	-3	-3	-8	4							
24 JUN	3	16	9	9	15	23	7	12							
1 JUL	2	2	3	3	9	8	7	5							
8 JUL	12	12	5	5	-14	12	10	6							
15 JUL	1	6	10	3	13	11	24	10							
22 JUL	10	3	7	40	13	-36	0	6							
29 JUL	10	13	13	2	-6	10	9	7							
5 AUG	59	23	14	12	5	7	10	19							
12 AUG	12	-20	-16	-5	-2	4	14	-2							
19 AUG	15	44	33	2	8	40	33	25							
26 AUG	3	7	10	7	4	-57	-14	-6							
2 SEP	-3	-25	-20	-5	-3	-51	-15	-18							
9 SEP	2	5	18	22	10	3	-19	6							
16 SEP	-17	1	-3	-8	-4	-2	-4	-5							
23 SEP	-8	-8	-21	-1	-3	-9	2	-5							
30 SEP	56	49	0	-5	17	1	0	17							
7 OCT	-5	6	1	4	-13	-29	-17	-7							
14 OCT	-91	-224	-19	13	-49	-83	-159	-87							
21 OCT	-84	-20	-30	-25	-104	-51	-13	-47							
28 OCT	-62	-79	-22	-36	-36	-23	-15	-39							
4 NOV	-18	-21	-29	-19	-90	-26	27	-26							
11 NOV	-116	-104	-128	-90	-16	-16	1	-67							
18 NOV	-49	-118	-19	-39	-47	4	-13	-40							
25 NOV	-12	-197	-429	-304	-222	-174	-128	-209							
2 DEC	-148	-58	-147	-97	-55	-40	-181	-103							
9 DEC	-45	-49	-223	-153	-108	-67	-66	-102							
16 DEC	-12	-108	-120	-4	9	-17	-180	-62							
23 DEC	-120	-14	-10	-55	-252	-23	7	-67							

# COASTAL UPWELLING INDICES, DAILY AND WEEKLY MEANS DURING 1967 AT 60N, 146W

WEEK BEGINNING	DAILY VALUES							WEEKLY MEAN	CUBIC METERS PER SECOND PER 100 METERS OF COASTLINE						
	SUN	MON	TUE	WED	THU	FRI	SAT		-600	-400	-200	0	200	400	600
1 JAN	-97	-38	-56	-41	-44	-103	11	-44							
8 JAN	-18	-276	-174	-50	-37	-95	-291	-134							
15 JAN	-58	-58	-268	-344	-95	-271	-198	-185							
22 JAN	-153	-106	-52	-102	-124	-198	-398	-162							
29 JAN	-396	-192	-256	-97	-47	-189	-50	-175							
5 FEB	-33	-18	-95	31	-74	-79	-146	-59							
12 FEB	-45	-11	-72	-97	-190	-42	4	-65							
19 FEB	0	-19	-105	-23	-30	-113	-116	-58							
26 FEB	-309	-49	-4	5	7	35	113	-29							
5 MAR	46	-59	44	2	-52	-56	-24	-14							
12 MAR	-36	-60	-91	-130	-138	-116	-29	-86							
19 MAR	-126	-128	-27	-115	-145	-78	-20	-91							
26 MAR	-127	-21	7	-2	28	28	43	-6							
2 APR	37	18	15	94	56	4	-8	31							
9 APR	6	38	-3	-38	-12	7	-17	-3							
16 APR	-7	6	-5	11	10	-8	-2	1							
23 APR	-4	-18	-6	14	28	-5	-14	-1							
30 APR	-9	-6	7	20	4	22	-9	4							
7 MAY	-18	-6	-13	-6	-35	-15	5	-13							
14 MAY	5	3	-4	0	8	-2	-46	-5							
21 MAY	15	22	21	7	-6	-26	-17	2							
28 MAY	4	15	28	-16	48	23	10	16							
4 JUN	91	55	40	7	4	1	-9	18							
11 JUN	11	2	-1	11	17	5	-1	6							
18 JUN	2	11	28	30	8	11	14	15							
25 JUN	6	9	5	50	71	19	-8	22							
2 JUL	5	22	2	12	0	20	10	10							
9 JUL	-1	-11	-19	-2	3	19	5	-1							
16 JUL	31	3	10	39	50	10	17	23							
23 JUL	0	16	8	16	-7	-1	16	7							
30 JUL	22	31	27	-10	1	5	-7	10							
6 AUG	-2	-19	-3	9	20	32	148	27							
13 AUG	91	46	35	26	10	-10	-17	26							
20 AUG	4	-4	0	1	-18	-13	9	-3							
27 AUG	-3	-62	-47	-16	-17	4	-6	-21							
3 SEP	-22	-29	-13	-94	-29	1	2	-26							
10 SEP	-1	-81	-182	-29	-58	-17	-71	-63							
17 SEP	-50	28	-3	-6	-11	-164	-53	-37							
24 SEP	2	-162	-37	12	-48	-22	-18	-39							
1 OCT	-38	-99	-39	-169	-96	-27	-14	-69							
8 OCT	-162	-100	-34	-3	-1	-9	-47	-51							
15 OCT	16	-1	-11	-2	-54	1	-6	-8							
22 OCT	6	-3	-5	-132	-97	-1	11	-32							
29 OCT	-107	-6	0	-57	0	0	0	-23							
5 NOV	-9	-17	-71	-93	-59	-43	0	-42							
12 NOV	65	-11	-5	62	49	-18	25	24							
19 NOV	29	-2	74	81	20	-58	-149	-1							
26 NOV	-145	-65	-84	-52	-29	-189	-64	-90							
3 DEC	-117	-120	-28	-299	-56	-19	-69	-101							
10 DEC	1	-13	-190	-71	-71	64	1	-40							
17 DEC	-20	-23	-27	-65	-220	-481	-302	-163							
24 DEC	-234	-268	-57	-3	5	30	2	-75							
31 DEC	2	-20	6	9	10	-57	-99	-21							

# COASTAL UPWELLING INDICES, DAILY AND WEEKLY MEANS DURING 1968 AT 60N, 146W

WEEK BEGINNING	DAILY VALUES							WEEKLY MEAN	CUBIC METERS PER SECOND PER 100 METERS OF COASTLINE						
	SUN	MON	TUE	WED	THU	FRI	SAT		-600	-400	-200	0	200	400	600
7 JAN	-84	-53	-65	-215	-152	-430	-520	-219							
14 JAN	-290	-299	-252	-163	-85	-60	-5	-166							
21 JAN	-290	-257	5	19	-6	-1	-47	-82							
28 JAN	-45	-91	-295	-410	-100	-194	-541	-252							
4 FEB	-121	-344	-170	-175	-31	-39	-31	-130							
11 FEB	-66	-49	-29	-42	-26	-40	-140	-56							
18 FEB	-150	-76	-69	-113	-50	-8	-36	-73							
25 FEB	-223	-161	-10	-36	-80	11	-53	-81							
3 MAR	-21	-3	-6	-5	-90	-82	-87	-42							
10 MAR	-87	-330	-41	-33	-24	-31	-44	-86							
17 MAR	-59	-29	-100	-173	-30	14	5	-54							
24 MAR	-1	-100	-30	9	14	10	-8	-19							
31 MAR	-6	-42	-76	-37	-4	10	31	-18							
7 APR	15	57	33	9	-15	-20	24	15							
14 APR	5	10	3	19	34	12	-31	8							
21 APR	-141	-37	-17	-16	1	6	35	-24							
28 APR	17	24	-13	-32	14	6	12	4							
5 MAY	23	-17	-23	-6	-3	29	-3	-0							
12 MAY	-10	-29	-1	10	12	-2	-4	-2							
19 MAY	-2	-20	-4	-4	-5	-4	0	-6							
26 MAY	1	3	13	17	21	3	-1	8							
2 JUN	7	4	-0	-0	8	-10	-11	-1							
9 JUN	-8	-26	11	8	18	3	1	1							
16 JUN	-2	-2	-16	35	49	25	13	14							
23 JUN	-33	-5	5	10	12	1	-0	-1							
30 JUN	5	10	2	1	-1	10	4	5							
7 JUL	-59	-35	2	3	12	6	19	-7							
14 JUL	7	2	1	-0	5	5	9	4							
21 JUL	1	-10	-25	-10	-22	-6	4	-11							
28 JUL	-5	-7	7	21	16	13	5	7							
4 AUG	1	-21	-7	2	1	3	-6	-4							
11 AUG	-10	-12	-1	9	-6	-52	-7	-12							
18 AUG	-6	2	-1	1	2	1	-4	-1							
25 AUG	-14	-3	-6	-26	-5	-40	-7	-14							
1 SEP	-4	-27	-53	-81	-0	-4	-14	-23							
8 SEP	-2	-13	-15	-16	-21	-172	-42	-40							
15 SEP	1	2	-2	-6	-18	-31	-19	-10							
22 SEP	-23	-53	-30	-30	-52	20	26	-19							
29 SEP	8	9	-92	-102	-1	-5	-5	-35							
6 OCT	3	-0	-14	-2	-15	-26	-12	-11							
13 OCT	-12	-3	-11	-100	-17	-117	-33	-43							
20 OCT	-77	-156	-27	-153	-24	-11	-134	-83							
27 OCT	-1	-16	-3	-2	-20	-302	-55	-57							
3 NOV	-22	-104	-01	-104	-97	-56	-15	-91							
10 NOV	-30	-5	-3	6	-21	-100	-77	-35							
17 NOV	-367	-100	-20	-73	-145	-30	-18	-122							
24 NOV	-90	-142	-15	-80	-54	-5	-11	-59							
1 DEC	-79	-37	-92	-199	-204	-196	-223	-158							
8 DEC	-465	-577	-104	-131	-86	-220	-96	-240							
15 DEC	-32	26	19	-9	-5	-00	-95	-25							
22 DEC	-134	-156	-119	-100	-137	-96	-130	-127							
29 DEC	-151	-96	-227	-229	-279	-222	-197	-200							



# COASTAL UPWELLING INDICES, DAILY AND WEEKLY MEANS DURING 1969 AT 60N, 146W

WEEK BEGINNING	DAILY VALUES							WEEKLY MEAN	CUBIC METERS PER SECOND PER 100 METERS OF COASTLINE						
	SUN	MON	TUE	WED	THU	FRI	SAT		-600	-400	-200	0	200	400	600
5 JAN	-340	-230	-20	-229	-553	-346	-459	-312							
12 JAN	-467	-159	-174	-201	-217	-150	-112	-213							
19 JAN	-111	-51	-27	-3	-29	-30	-79	-48							
26 JAN	-35	-23	-30	-27	-13	1	-10	-21							
2 FEB	-139	-227	-200	-141	-434	-300	-157	-242							
9 FEB	-244	-447	-62	-34	-32	-20	-72	-130							
16 FEB	-70	-154	-1	-72	-6	-62	-94	-66							
23 FEB	-39	-22	-18	18	-5	-20	-90	-26							
2 MAR	-20	-72	-49	-41	-70	2	-40	-44							
9 MAR	-21	-11	5	4	-25	-72	-95	-31							
16 MAR	-36	-17	-19	-30	49	131	57	19							
23 MAR	7	-4	-35	-12	-51	-66	-23	-26							
30 MAR	-8	-27	-1	-15	-37	-3	-15	-15							
6 APR	-31	-2	-25	-26	-70	-11	-9	-25							
13 APR	-4	-40	-102	-36	-36	-74	-6	-43							
20 APR	-9	-52	-46	-36	-26	-52	-25	-35							
27 APR	5	-3	-27	-6	-9	-9	-23	-10							
4 MAY	9	60	-50	33	0	-29	-7	2							
11 MAY	9	10	40	12	13	10	-1	15							
18 MAY	-1	-9	-22	-86	0	-42	-93	-35							
25 MAY	-5	0	-21	-13	5	-13	-9	-6							
1 JUN	0	-11	7	24	14	10	0	9							
8 JUN	9	45	21	20	14	2	-15	14							
15 JUN	-14	15	26	7	7	9	-9	6							
22 JUN	-5	6	3	1	1	2	10	3							
29 JUN	10	0	11	5	10	5	-3	7							
6 JUL	9	7	9	-2	12	30	9	11							
13 JUL	7	25	27	6	2	-0	3	10							
20 JUL	3	-0	3	2	20	19	6	9							
27 JUL	1	50	20	7	2	2	24	16							
3 AUG	12	23	25	11	3	-10	72	19							
10 AUG	-16	-15	-10	-30	-6	4	-29	-17							
17 AUG	-5	-6	-12	-9	-2	3	-42	-10							
24 AUG	-00	1	-0	-4	-6	3	4	-12							
31 AUG	3	2	11	16	5	-3	-5	4							
7 SEP	0	-73	-150	-23	-2	5	0	-35							
14 SEP	-12	-66	-62	-32	-39	-7	-50	-37							
21 SEP	-55	-21	-9	-21	-2	-2	-36	-21							
28 SEP	-50	-24	-0	0	-16	2	47	-5							
5 OCT	-133	-174	-53	-23	33	-177	-01	-87							
12 OCT	-130	-131	-143	-200	-87	-110	-7	-117							
19 OCT	-10	-27	-41	-49	-52	-65	-42	-41							
26 OCT	-50	-59	-02	-47	-19	-85	-43	-56							
2 NOV	-13	-22	-8	2	-99	-21	5	-22							
9 NOV	-1	-149	-136	-315	-93	-145	-137	-139							
16 NOV	-137	-373	-404	-303	-166	-99	-44	-229							
23 NOV	-53	-132	-231	21	-142	-49	-22	-87							
30 NOV	15	-251	-04	-5	-123	-211	-135	-113							
7 DEC	-77	-52	-35	-106	-229	-193	-89	-102							
14 DEC	-25	-102	-69	-301	-353	-303	-136	-184							
21 DEC	-194	-494	-336	-116	-16	-66	-147	-196							
28 DEC	-12	-46	-4	-62	41	-14	-91	-27							

# COASTAL UPWELLING INDICES, DAILY AND WEEKLY MEANS

DURING 1970 AT 60N, 146W

WEEK BEGINNING	DAILY VALUES							WEEKLY MEAN	CUBIC METERS PER SECOND PER 100 METERS OF COASTLINE						
	SUN	MON	TUE	WED	THU	FRI	SAT		-600	-400	-200	0	200	400	600
4 JAN	-334	-431	-257	-73	-83	-88	-150	-202							
11 JAN	-297	-424	-588	-391	-351	-106	-90	-321							
18 JAN	-230	-341	-414	-185	-101	-91	-124	-212							
25 JAN	-91	-30	3	-23	-33	-261	-46	-69							
1 FEB	-194	-486	-3	-22	-50	-69	-25	-121							
8 FEB	-9	-135	-182	-38	-116	-133	-153	-110							
15 FEB	-52	-40	-158	-156	-39	-5	-184	-91							
22 FEB	-103	-35	74	-4	-27	-4	-12	-16							
1 MAR	-10	-39	-57	-70	-85	-31	-3	-42							
8 MAR	-27	-36	-112	-124	-109	-62	-79	-78							
15 MAR	-27	-1	-131	39	7	-12	-10	-19							
22 MAR	-24	4	-50	-23	27	28	84	7							
29 MAR	-13	72	43	10	-25	-6	7	13							
5 APR	-11	-18	-42	-5	-23	20	24	-8							
12 APR	-2	3	-3	-3	10	9	6	3							
19 APR	14	43	60	41	7	-10	-13	20							
26 APR	2	5	2	20	2	8	6	6							
3 MAY	-6	-15	-9	-129	-17	-2	-2	-26							
10 MAY	-0	1	1	-3	-3	0	2	-0							
17 MAY	4	-1	-6	-47	-6	15	-27	-10							
24 MAY	-66	16	24	6	9	0	-8	-1							
31 MAY	3	3	-2	4	26	2	-10	4							
7 JUN	9	4	0	26	40	-16	-11	7							
14 JUN	26	22	23	41	37	17	14	26							
21 JUN	19	4	11	-5	0	3	12	6							
28 JUN	10	-4	-25	-10	0	-4	9	-3							
5 JUL	-0	-6	13	12	16	32	20	12							
12 JUL	5	4	17	1	0	-12	-2	2							
19 JUL	10	5	-4	-0	3	1	10	3							
26 JUL	4	8	12	68	37	-3	13	20							
2 AUG	9	-32	-1	34	7	26	3	7							
9 AUG	2	-3	-3	6	-10	-7	20	-1							
16 AUG	11	-18	-14	15	14	37	41	12							
23 AUG	9	8	-2	-5	-13	-49	-1	-8							
30 AUG	10	-2	-9	-3	-4	40	13	6							
6 SEP	1	1	-16	-20	-21	-22	3	-11							
13 SEP	10	4	-8	-29	-2	-1	-12	-5							
20 SEP	-3	-15	-12	-50	-176	-45	-46	-49							
27 SEP	-21	0	-3	-3	4	-9	-15	-7							
4 OCT	-24	-20	-8	2	1	-50	27	-10							
11 OCT	33	31	51	2	-1	-12	-8	13							
18 OCT	-38	-64	-95	-86	-164	-92	-29	-81							
25 OCT	-149	-396	-49	-29	-23	-232	-117	-134							
1 NOV	-58	-6	-30	-37	-49	-54	-98	-47							
8 NOV	-151	-215	-353	-164	-86	-118	-83	-167							
15 NOV	-64	-97	-36	-3	-24	-6	-34	-38							
22 NOV	-45	-171	-64	-17	-110	-10	7	-58							
29 NOV	-279	-264	-315	-372	-529	-613	-486	-408							
6 DEC	-344	-340	-215	-278	-34	-176	-198	-226							
13 DEC	-87	-7	-61	-79	-59	-45	-150	-70							
20 DEC	-3	15	4	98	124	8	-39	30							
27 DEC	-117	-335	-195	-184	-113	-45	-446	-205							

# COASTAL UPWELLING INDICES, DAILY AND WEEKLY MEANS

DURING 1971 AT 60N, 146W

WEEK BEGINNING	DAILY VALUES							WEEKLY MEAN	CUBIC METERS PER SECOND PER 100 METERS OF COASTLINE						
	SUN	MON	TUE	WED	THU	FRI	SAT		-600	-400	-200	0	200	400	600
3 JAN	-162	-41	28	-56	-170	-311	-423	-162							
10 JAN	-163	-149	-237	-355	-497	-587	-334	-332							
17 JAN	-539	-235	-91	-86	-125	-146	-169	-199							
24 JAN	-283	-801	-595	-495	-300	-385	-165	-421							
31 JAN	-413	-72	-34	-39	-112	-128	-90	-118							
7 FEB	-27	-64	10	-18	-189	-25	-143	-65							
14 FEB	-189	-30	-23	-193	4	-101	-77	-87							
21 FEB	-20	17	3	-60	-65	-80	-18	-32							
28 FEB	-63	-114	-218	-211	-145	-258	-182	-170							
7 MAR	-64	-77	-39	-131	-53	-12	-1	-54							
14 MAR	-21	-19	-188	-7	-11	-49	-63	-51							
21 MAR	-69	-99	-99	-14	-20	-69	-83	-78							
28 MAR	-70	-34	-11	-26	-32	-99	-89	-52							
4 APR	0	-9	4	-28	-234	-189	-1	-54							
11 APR	-20	-15	-184	85	-19	-9	-5	-24							
18 APR	16	11	-56	-148	-28	2	-43	-35							
25 APR	-1	34	5	3	-2	-1	-18	3							
2 MAY	-30	79	-11	-30	4	89	6	15							
9 MAY	-44	-74	-3	-76	3	11	7	-25							
16 MAY	-10	-70	0	9	-42	24	4	-12							
23 MAY	7	13	-1	15	-79	-4	13	-5							
30 MAY	23	-79	43	23	1	-3	-5	0							
6 JUN	-1	-11	-76	-31	2	19	25	-11							
13 JUN	22	31	31	11	5	6	2	15							
20 JUN	1	-3	-6	3	10	1	16	3							
27 JUN	20	14	31	7	-1	-1	4	11							
4 JUL	16	12	14	14	5	6	6	10							
11 JUL	9	30	47	17	1	14	2	17							
18 JUL	-2	-10	50	23	10	9	-10	9							
25 JUL	-1	28	15	9	-0	7	15	10							
1 AUG	12	5	-8	0	7	16	41	11							
8 AUG	64	51	25	2	4	0	-4	20							
15 AUG	-8	-15	-21	-23	-9	-21	-7	-15							
22 AUG	-26	-7	-1	2	5	-10	-98	-19							
29 AUG	-24	-3	4	3	-14	-12	-2	-7							
5 SEP	15	-121	-58	4	-22	-41	-34	-37							
12 SEP	0	18	2	-226	40	18	-8	-22							
19 SEP	-3	4	-2	-5	5	10	-4	1							
26 SEP	2	-12	-16	10	12	13	-2	1							
3 OCT	-13	-12	-5	-74	-182	69	-110	-48							
10 OCT	5	2	14	16	-4	-38	91	12							
17 OCT	23	-4	-6	-158	-155	-1	19	-40							
24 OCT	17	1	0	-77	17	7	-10	-6							
31 OCT	-20	-6	-156	-118	-15	-163	-190	-96							
7 NOV	-129	-141	-101	-20	6	-0	-43	-61							
14 NOV	-11	-198	-33	-49	56	24	-67	-40							
21 NOV	-11	-180	-254	-185	-172	-144	-117	-129							
28 NOV	-22	-38	-144	-216	-48	-19	-26	-73							
5 DEC	-19	-48	-62	-10	-88	-129	-120	-68							
12 DEC	-156	-32	-13	-95	-26	13	55	-36							
19 DEC	-39	-415	-282	-203	-16	-30	-23	-144							
26 DEC	-20	2	23	-56	13	24	4	-1							

# COASTAL UPWELLING INDICES, DAILY AND WEEKLY MEANS DURING 1972 AT 60N, 146W

WEEK BEGINNING	DAILY VALUES							WEEKLY MEAN	CUBIC METERS PER SECOND PER 100 METERS OF COASTLINE						
	SUN	MON	TUE	WED	THU	FRI	SAT		-600	-400	-200	0	200	400	600
2 JAN	-123	-25	-38	-1	-40	-49	-93	-53							
9 JAN	-78	-114	-94	-133	-268	-346	-198	-176							
16 JAN	-515	-303	-319	-290	-300	-158	-250	-305							
23 JAN	-216	-94	-63	-23	9	71	44	-39							
30 JAN	4	-13	-50	-73	-262	-335	-368	-157							
6 FEB	-348	-144	-297	-9	-143	-85	-50	-154							
13 FEB	-72	-239	-50	-138	-314	-453	-345	-230							
20 FEB	-306	-420	-155	-45	-248	-226	-70	-210							
27 FEB	-155	-219	-167	-362	-175	-174	-98	-193							
5 MAR	-118	-102	-197	-310	-261	-99	-143	-176							
12 MAR	-205	-16	-1	-113	44	-142	-181	-88							
19 MAR	-23	-8	-5	-23	-18	15	31	-4							
26 MAR	22	33	43	-10	-82	-101	-25	-17							
2 APR	-39	-1	-31	-159	-188	-92	-39	-77							
9 APR	-7	-20	-8	18	47	7	-31	1							
16 APR	-8	11	76	2	-28	-10	-42	-0							
23 APR	-66	-1	3	-5	-11	0	-1	-11							
30 APR	-1	1	-27	-43	-25	-37	9	-18							
7 MAY	-1	-2	-3	-2	-7	-1	26	1							
14 MAY	16	-1	6	19	7	43	34	18							
21 MAY	44	15	9	-39	-12	-26	7	1							
28 MAY	30	-0	-3	1	22	25	-6	10							
4 JUN	-8	-1	3	-0	8	9	-6	1							
11 JUN	-8	7	4	38	48	6	13	14							
18 JUN	25	20	15	16	24	46	18	24							
25 JUN	17	12	13	12	23	15	4	14							
2 JUL	1	-1	3	0	-0	6	10	3							
9 JUL	11	3	0	-1	14	18	14	8							
16 JUL	11	11	23	24	17	-2	-6	11							
23 JUL	-3	1	-2	-2	4	3	3	1							
30 JUL	2	-1	-7	-9	-21	1	7	-4							
6 AUG	24	7	9	1	-0	13	28	11							
13 AUG	13	10	-7	-1	4	13	21	7							
20 AUG	8	-14	-36	3	-11	-30	1	-11							
27 AUG	0	3	-11	-20	1	3	-12	-5							
3 SEP	12	13	-0	3	-0	5	32	9							
10 SEP	15	18	74	49	31	31	19	33							
17 SEP	-84	-69	-170	-119	-91	-21	-3	-80							
24 SEP	-5	-2	19	-17	-25	9	34	2							
1 OCT	-101	46	6	-94	16	21	-21	-18							
8 OCT	-31	-3	-1	-9	-13	-14	9	-9							
15 OCT	15	-22	23	27	0	-14	-32	-0							
22 OCT	-25	-83	-51	-12	13	-14	-65	-34							
29 OCT	-57	-17	-17	-53	-113	-109	-75	-63							
5 NOV	-20	-15	-126	-188	-16	-7	-14	-55							
12 NOV	-54	-29	-30	-2	-73	-11	-60	-38							
19 NOV	-103	-36	-93	-6	13	-459	-32	-94							
26 NOV	3	-178	16	-9	-75	-116	-66	-61							
3 DEC	-11	-31	-16	-7	-9	-5	17	-9							
10 DEC	-11	-2	-17	6	-299	-841	-383	-221							
17 DEC	-85	-136	-67	-27	-61	-289	-351	-145							
24 DEC	-487	-139	-9	-22	-93	-18	-29	-114							
31 DEC	-145	-200	-61	-13	-48	-69	-33	-82							

# COASTAL UPWELLING INDICES, DAILY AND WEEKLY MEANS DURING 1973 AT 60N, 146W

WEEK BEGINNING	DAILY VALUES							WEEKLY MEAN	CUBIC METERS PER SECOND PER 100 METERS OF COASTLINE						
	SUN	MON	TUE	WED	THU	FRI	SAT		-600	-400	-200	0	200	400	600
7 JAN	-60	-20	-34	-50	-94	-154	-166	-84							
14 JAN	-247	-215	-180	-274	-143	-63	-19	-163							
21 JAN	-159	-74	-6	-36	-80	-200	-139	-100							
28 JAN	4	-30	-91	-103	-50	-27	-27	-48							
4 FEB	-42	-88	-51	-99	-63	-53	-154	-79							
11 FEB	-251	-369	-146	-92	-36	-34	-31	-137							
18 FEB	-61	-166	31	1	-15	-61	-100	-54							
25 FEB	-116	-107	-60	-36	-25	-14	-5	-52							
4 MAR	2	-2	-81	-29	26	1	31	-7							
11 MAR	16	13	-16	1	3	-13	-50	-8							
18 MAR	-78	-17	-14	-44	-95	3	5	-34							
25 MAR	1	3	-50	-33	1	-7	-1	-13							
1 APR	-58	-45	-8	4	5	-68	-30	-28							
8 APR	-10	5	9	15	-21	-75	-17	-13							
15 APR	-7	1	5	9	4	-50	-15	-8							
22 APR	-1	5	2	-15	9	10	-2	1							
29 APR	-58	-64	-13	-1	-3	-61	1	-28							
6 MAY	-11	-64	-11	-2	-21	-61	-21	-27							
13 MAY	-46	-62	-4	-27	-9	1	22	-18							
20 MAY	-22	-1	-4	-9	3	1	-39	-10							
27 MAY	-3	-9	-1	14	7	27	71	15							
3 JUN	-1	-2	-4	2	9	8	5	2							
10 JUN	1	-6	-4	6	5	7	8	2							
17 JUN	9	19	14	7	-3	-1	-6	6							
24 JUN	5	13	6	13	21	28	8	14							
1 JUL	3	2	4	4	12	10	8	6							
8 JUL	15	16	11	7	-11	17	12	9							
15 JUL	3	9	18	4	13	13	29	13							
22 JUL	15	7	12	43	15	-35	-1	8							
29 JUL	10	14	10	4	-6	13	8	9							
5 AUG	45	20	17	20	9	10	12	20							
12 AUG	16	-4	-5	-3	-2	1	12	2							
19 AUG	11	39	40	9	4	28	35	24							
26 AUG	5	6	9	6	5	-58	-17	-6							
2 SEP	-4	-26	-28	-12	-1	-63	-11	-21							
9 SEP	2	3	9	7	5	1	-16	2							
16 SEP	-24	-4	-3	-3	-1	-0	-2	-5							
23 SEP	-1	-1	-34	-5	-1	-9	-1	-7							
30 SEP	27	51	-1	-3	11	1	1	12							
7 OCT	-3	-10	-2	-3	0	-11	-16	-6							
14 OCT	-95	-207	-24	-41	-56	-50	-150	-91							
21 OCT	-102	-25	-31	-20	-110	-70	-23	-55							
28 OCT	-60	-76	-8	-26	-42	-24	-14	-36							
4 NOV	-37	-41	-68	-45	-105	-48	9	-48							
11 NOV	-89	-140	-197	-135	-36	-22	-18	-91							
18 NOV	-113	-171	-21	-63	-98	-21	-32	-74							
25 NOV	-12	-165	-351	-290	-265	-299	-226	-230							
2 DEC	-238	-97	-208	-166	-81	-58	-264	-159							
9 DEC	-81	-74	-284	-212	-120	-84	-86	-134							
16 DEC	-33	-176	-246	-41	11	-4	-178	-95							
23 DEC	-155	-22	-28	-119	-302	-71	-3	-100							

# COASTAL UPWELLING INDICES, DAILY AND WEEKLY MEANS DURING 1967 AT 57N, 137W

WEEK BEGINNING	DAILY VALUES							WEEKLY MEAN	CUBIC METERS PER SECOND PER 100 METERS OF COASTLINE						
	SUN	MON	TUE	WED	THU	FRI	SAT		-600	-400	-200	0	200	400	600
1 JAN	-63	-52	-15	-47	-245	-189	-5	-88							
8 JAN	-78	-675	-313	-83	-17	-28	-391	-226							
15 JAN	-65	-145	-258	-321	-131	-159	-189	-181							
22 JAN	-324	-298	-202	-221	-159	-187	-268	-235							
29 JAN	-418	-277	-472	-213	-64	-362	-66	-267							
5 FEB	-63	-61	-206	39	-57	-68	-132	-78							
12 FEB	-28	-11	-56	-9	-363	-122	-59	-91							
19 FEB	-18	36	-253	-225	-48	-31	-164	-101							
26 FEB	-489	-75	-30	7	18	33	78	-66							
5 MAR	88	-96	18	56	-29	-55	-85	-15							
12 MAR	-39	18	-131	-282	-256	-177	-55	-133							
19 MAR	-82	-53	-20	0	-9	-17	-12	-27							
26 MAR	-178	-61	3	7	29	11	49	-19							
2 APR	21	38	27	57	67	-6	-18	26							
9 APR	7	-8	-76	-3	-14	-12	36	-10							
16 APR	31	6	6	2	6	3	3	8							
23 APR	-8	-6	14	11	18	1	-6	4							
30 APR	-4	-8	21	28	14	3	5	10							
7 MAY	8	4	-3	-14	-28	-19	-3	-8							
14 MAY	-1	1	9	-38	-7	-69	-139	-33							
21 MAY	-11	1	25	8	-38	-117	-126	-36							
28 MAY	-58	25	23	-23	11	63	52	14							
4 JUN	46	84	102	54	14	3	-9	42							
11 JUN	17	2	-12	-8	25	16	-18	4							
18 JUN	-13	28	42	92	38	22	6	28							
25 JUN	-1	2	-39	7	35	5	-3	1							
2 JUL	7	29	-5	8	-49	-4	8	-2							
9 JUL	-7	-48	-52	-21	-16	1	3	-19							
16 JUL	-3	-2	2	21	18	-1	19	7							
23 JUL	6	8	18	13	-12	-6	23	6							
30 JUL	32	19	-11	1	5	15	7	18							
6 AUG	-1	-84	-136	-71	-13	15	44	-35							
13 AUG	57	28	31	23	9	-88	-166	-15							
20 AUG	-28	-14	-26	-2	-64	-81	-24	-37							
27 AUG	-21	-133	-79	-61	-58	-4	-23	-54							
3 SEP	-18	-33	-34	-119	-155	-4	-19	-55							
10 SEP	-33	-88	-523	-187	-243	-39	-119	-164							
17 SEP	-142	-54	-18	4	31	-267	-54	-78							
24 SEP	5	-247	-83	15	-75	-78	-23	-68							
1 OCT	-35	-75	-15	-34	-182	-58	-32	-58							
8 OCT	-286	-147	-32	1	-6	4	-117	-83							
15 OCT	28	-9	-14	38	-185	-94	-2	-36							
22 OCT	-8	-52	-37	-141	-391	-35	7	-92							
29 OCT	-199	-49	19	-33	-23	-29	-19	-47							
5 NOV	-36	-16	-15	-35	-46	18	-2	-28							
12 NOV	-2	-184	-52	2	-2	-168	-11	-48							
19 NOV	-18	-74	138	-8	62	19	-91	3							
26 NOV	-291	-225	-63	-57	-27	-371	-89	-161							
3 DEC	-78	-183	-71	-532	-114	-98	-47	-148							
10 DEC	-35	8	-117	-319	-545	97	29	-126							
17 DEC	32	-27	-95	-194	-422	-687	-477	-256							
24 DEC	-538	-318	-281	8	3	-8	-7	-158							
31 DEC	22	-51	-51	24	25	-49	-53	-19							

# COASTAL UPWELLING INDICES, DAILY AND WEEKLY MEANS DURING 1968 AT 57N, 137W

WEEK BEGINNING	DAILY VALUES							WEEKLY MEAN	CUBIC METERS PER SECOND PER 100 METERS OF COASTLINE						
	SUN	MON	TUE	WED	THU	FRI	SAT		-600	-400	-200	0	200	400	600
7 JAN	-46	-70	-66	-105	-205	-478	-363	-190							
14 JAN	-133	-124	-140	-125	-85	-71	-5	-97							
21 JAN	-362	-390	-6	87	18	-28	-67	-107							
28 JAN	-68	-6	-98	-272	-156	-246	-798	-235							
4 FEB	-150	-633	-301	-219	-326	-133	-98	-265							
11 FEB	-165	-143	-79	-126	-57	-46	-116	-105							
18 FEB	-279	-261	-180	-228	-99	4	-39	-155							
25 FEB	-328	-285	-204	-98	-289	-87	-209	-214							
3 MAR	-103	-21	-8	-42	-149	-145	-173	-91							
10 MAR	-130	-394	-125	-36	-6	-2	-22	-102							
17 MAR	-102	-40	-278	-542	-263	-17	2	-177							
24 MAR	14	-86	-57	-19	-4	3	-3	-22							
31 MAR	-3	-20	-178	-126	2	-13	25	-44							
7 APR	-35	-29	-32	10	4	-105	-19	-29							
14 APR	11	10	-87	-220	-22	20	-42	-47							
21 APR	-317	-163	-64	-62	-7	-86	-18	-102							
28 APR	7	9	-26	-71	-42	12	44	-10							
5 MAY	48	-2	-81	-27	-2	83	22	6							
12 MAY	5	-10	-18	-6	1	-7	-10	-6							
19 MAY	-28	-37	5	-4	-49	-59	-7	-26							
26 MAY	-13	1	18	18	18	-8	-43	-1							
2 JUN	-22	-44	-19	3	9	-30	-20	-18							
9 JUN	-46	-68	-16	4	11	2	-6	-17							
16 JUN	-13	-27	-105	-11	30	35	56	-5							
23 JUN	-16	-34	3	0	34	16	14	3							
30 JUN	13	14	4	-6	-9	-7	-8	1							
7 JUL	-117	-26	1	-30	-4	4	-7	-26							
14 JUL	6	7	-1	-3	7	19	9	6							
21 JUL	0	-5	-15	-3	-32	-35	-13	-15							
28 JUL	-6	-17	-22	22	32	60	27	14							
4 AUG	20	-3	-17	-5	-9	0	-5	-3							
11 AUG	-25	6	6	17	3	-152	-59	-29							
18 AUG	-32	5	-2	-69	-61	-17	-6	-26							
25 AUG	-5	-10	-20	-155	-25	-126	-20	-52							
1 SEP	-5	-12	-58	-128	-57	-19	-64	-49							
8 SEP	-35	-34	-118	-147	-69	-322	-58	-112							
15 SEP	-11	-6	3	0	-8	-37	-16	-11							
22 SEP	0	-156	-55	-21	-65	-270	-63	-90							
29 SEP	-20	1	-72	-530	-39	-16	3	-96							
6 OCT	25	-57	-69	-11	-14	-20	-5	-21							
13 OCT	-12	-9	-37	-249	-165	-171	-34	-97							
20 OCT	-172	-347	-240	-408	-223	-18	-499	-272							
27 OCT	-6	0	29	-32	-55	-446	-69	-83							
3 NOV	-58	-286	-242	-314	-407	-336	-172	-259							
10 NOV	-160	-2	-27	-1	-8	-147	-253	-85							
17 NOV	-553	-341	-16	-67	-176	-19	-12	-169							
24 NOV	-87	-379	-51	-290	-247	-65	7	-159							
1 DEC	-63	-74	-64	-29	-193	-167	-158	-107							
8 DEC	-301	-555	-272	-199	-298	-363	-282	-324							
15 DEC	-84	-128	16	-12	-46	-50	-73	-54							
22 DEC	-392	-473	-219	-125	-244	-267	-296	-279							
29 DEC	-285	-225	-264	-246	-370	-132	-84	-229							

# COASTAL UPWELLING INDICES, DAILY AND WEEKLY MEANS DURING 1969 AT 57N, 137W

WEEK BEGINNING	DAILY VALUES							WEEKLY MEAN	CUBIC METERS PER SECOND PER 100 METERS OF COASTLINE						
	SUN	MON	TUE	WED	THU	FRI	SAT		-600	-400	-200	0	200	400	600
5 JAN	-107	-106	-68	-175	-373	-262	-426	-216							
12 JAN	-414	-147	-204	-166	-228	-194	-118	-210							
19 JAN	-170	-81	-123	-42	-58	-99	-152	-104							
26 JAN	-92	-41	-75	-54	-233	-4	-30	-76							
2 FEB	-40	-189	-61	-147	-460	-334	-44	-183							
9 FEB	-208	-718	-153	-19	-10	-24	-132	-192							
16 FEB	-163	-285	-67	-81	-227	-135	-179	-162							
23 FEB	-50	-23	-14	-16	-9	-38	-172	-46							
2 MAR	-81	-98	-70	-12	-102	-46	-65	-68							
9 MAR	-145	-75	-3	-4	-63	-37	-26	-50							
16 MAR	-14	-16	1	-20	-80	29	67	-5							
23 MAR	-66	-47	-27	7	-12	-71	-75	-42							
30 MAR	-60	-20	-10	-92	-119	-11	-0	-45							
6 APR	-48	-139	-95	-116	-255	-67	2	-103							
13 APR	-13	-55	-242	-111	-59	-152	-11	-92							
20 APR	-41	-41	-46	0	-42	-203	-95	-67							
27 APR	-19	11	-5	-13	-60	-36	-141	-38							
4 MAY	-59	-30	-140	-42	10	-61	-51	-53							
11 MAY	-6	32	73	54	0	22	10	28							
18 MAY	8	-3	-39	-82	-13	-50	-63	-35							
25 MAY	1	3	-15	-9	6	-101	-02	-28							
1 JUN	-8	-33	-31	-12	4	10	3	-10							
8 JUN	14	77	94	89	32	3	-3	44							
15 JUN	-10	-2	22	48	22	4	-4	11							
22 JUN	-11	-3	4	7	1	6	6	1							
29 JUN	7	7	13	20	6	0	-6	7							
6 JUL	-1	-6	-58	-90	-20	-8	5	-25							
13 JUL	10	16	10	8	-5	-17	-31	-1							
20 JUL	-5	-37	-11	-9	9	-24	-4	-12							
27 JUL	-6	1	-23	-13	-21	1	20	-6							
3 AUG	5	11	26	0	-1	-8	12	6							
10 AUG	-90	-5	-26	-25	-8	1	-101	-36							
17 AUG	-20	-3	-3	-6	-1	-9	-13	-8							
24 AUG	-20	-9	3	4	-19	-28	-17	-12							
31 AUG	3	16	25	5	1	-11	-8	5							
7 SEP	-19	-125	-200	-171	-29	8	4	-88							
14 SEP	-29	-125	-122	-82	-23	-8	-54	-63							
21 SEP	-104	-38	-6	-26	2	-2	-7	-26							
28 SEP	-76	-87	-17	11	-22	-230	-68	-70							
5 OCT	-255	-408	-210	-58	-18	-192	-297	-206							
12 OCT	-262	-217	-210	-230	-77	-61	-52	-159							
19 OCT	2	-44	-47	-25	-55	-157	-193	-74							
26 OCT	-130	-51	-109	-98	-72	-295	-98	-122							
2 NOV	-162	-107	-50	-18	-92	-53	-72	-79							
9 NOV	11	-21	-68	-441	-174	-33	-11	-105							
16 NOV	-8	-344	-437	-275	-90	-106	-148	-201							
23 NOV	-53	-175	-268	-92	-249	-322	-257	-202							
30 NOV	-25	-312	-273	-37	-125	-369	-318	-209							
7 DEC	-199	-58	-116	-158	-315	-298	-177	-189							
14 DEC	-19	-169	-202	-510	-563	-641	-163	-324							
21 DEC	-191	-365	-327	-200	-66	-98	-199	-218							
28 DEC	-47	-262	-96	-308	-16	9	-17	-105							



# COASTAL UPWELLING INDICES, DAILY AND WEEKLY MEANS

DURING 1970 AT 57N, 137W

WEEK BEGINNING	DAILY VALUES							WEEKLY MEAN	CUBIC METERS PER SECOND PER 100 METERS OF COASTLINE						
	SUN	MON	TUE	WED	THU	FRI	SAT		-600	-400	-200	0	200	400	600
4 JAN	-133	-421	-372	-124	-41	11	-43	-160							
11 JAN	-201	-366	-466	-204	-406	-206	-137	-287							
18 JAN	-248	-344	-468	-164	-99	-54	-81	-208							
25 JAN	-71	-44	-19	-154	-20	-79	-2	-55							
1 FEB	-155	-530	-85	-124	-156	-132	-103	-185							
8 FEB	-3	-131	-204	-78	-85	-65	-128	-99							
15 FEB	-54	-26	-124	-245	-202	-101	-196	-147							
22 FEB	-66	-116	0	2	-1	-13	4	-27							
1 MAR	-2	-16	-22	-67	-142	-25	-54	-47							
8 MAR	-121	-108	-103	-200	-221	-168	-113	-148							
15 MAR	-63	-6	-146	-87	-1	-16	-98	-60							
22 MAR	-60	17	-66	-26	-61	7	42	-21							
29 MAR	2	-3	30	19	-71	-36	-9	-9							
5 APR	-10	-2	-96	-29	-39	30	4	-20							
12 APR	-3	-32	-25	-7	-22	2	13	-11							
19 APR	10	-7	-45	-5	-33	26	22	-4							
26 APR	3	-17	-13	-6	-33	-11	2	-11							
3 MAY	-61	-38	-88	-206	-48	-1	8	-62							
10 MAY	2	4	2	-40	-10	-5	-7	-8							
17 MAY	-4	-4	-15	-109	-51	-27	-91	-43							
24 MAY	-220	-10	13	4	3	3	-93	-43							
31 MAY	-78	-0	-23	6	-9	3	-1	-16							
7 JUN	-8	-8	4	15	15	-62	-63	-15							
14 JUN	42	27	21	19	-4	-3	-0	15							
21 JUN	14	-20	3	-64	-102	-5	8	-24							
28 JUN	3	-45	-106	-20	-14	-25	-11	-31							
5 JUL	-30	-159	-67	-2	4	12	13	-34							
12 JUL	-32	-32	-18	-10	-25	-150	-44	-44							
19 JUL	1	12	-10	-49	-4	1	10	-6							
26 JUL	13	-1	9	29	1	-14	-4	5							
2 AUG	12	-54	-7	5	-3	-2	-7	-8							
9 AUG	-43	-27	-25	4	-77	-114	3	-40							
16 AUG	-4	-7	-102	-30	-39	-12	11	-26							
23 AUG	9	22	8	-2	-7	-58	-64	-13							
30 AUG	-22	-36	-29	-19	2	-53	4	-22							
6 SEP	0	1	12	-0	-7	-11	7	0							
13 SEP	13	11	-20	-87	-24	3	-4	-15							
20 SEP	-17	7	34	-10	-154	-64	-137	-49							
27 SEP	-133	-22	-5	-61	-1	-9	11	-31							
4 OCT	9	1	-15	-10	2	-61	35	-6							
11 OCT	30	23	-24	-105	-29	-46	-10	-23							
18 OCT	-15	-5	-42	-26	-110	0	6	-27							
25 OCT	-78	-324	-41	-119	-102	-455	-354	-222							
1 NOV	-227	-132	-91	-56	-53	-41	-95	-99							
8 NOV	-93	-380	-569	-291	-192	-312	-160	-285							
15 NOV	-12	-8	-9	39	-5	-32	-141	-24							
22 NOV	-55	-55	-31	-49	-60	-84	-31	-52							
29 NOV	-77	-131	-182	-253	-246	-752	-652	-328							
6 DEC	-270	-295	-174	-378	-31	-279	-325	-250							
13 DEC	-253	-49	-23	-26	-52	-53	-317	-110							
20 DEC	-49	-8	9	-48	-16	-61	-45	-31							
27 DEC	-27	-60	-131	-31	-44	-11	-395	-100							

# COASTAL UPWELLING INDICES, DAILY AND WEEKLY MEANS DURING 1971 AT 57N, 137W

WEEK BEGINNING	DAILY VALUES							WEEKLY MEAN	CUBIC METERS PER SECOND PER 100 METERS OF COASTLINE						
	SUN	MON	TUE	WED	THU	FRI	SAT		-600	-400	-200	0	200	400	600
3 JAN	-422	-201	-102	-17	1	-72	-268	-155							
10 JAN	-171	-93	-200	-262	-434	-371	-334	-267							
17 JAN	-400	-164	-41	-30	-57	-1	-3	-100							
24 JAN	-84	-708	-322	-229	-102	-235	-212	-282							
31 JAN	-227	-44	-57	0	-43	-182	-225	-111							
7 FEB	-181	-141	10	19	-190	-45	-150	-97							
14 FEB	-93	-8	-6	-301	-86	-246	-291	-146							
21 FEB	-86	-28	90	18	3	-4	-4	-1							
28 FEB	-126	-325	-32	-32	-8	-87	-28	-91							
7 MAR	-64	-119	-39	-122	-80	21	-68	-67							
14 MAR	-32	25	-154	-150	-74	16	-28	-57							
21 MAR	-74	-139	-158	-2	-4	-14	-156	-78							
28 MAR	-34	-19	1	-32	-15	-120	-236	-65							
4 APR	-25	-44	-17	-61	-227	-102	-6	-69							
11 APR	-36	-150	-424	-43	-80	-68	-83	-129							
18 APR	-8	6	-68	-155	-32	3	-29	-40							
25 APR	-34	44	34	5	-3	-8	-16	3							
2 MAY	-180	4	-4	-26	-127	62	4	-39							
9 MAY	-125	-234	-103	-201	-4	20	28	-89							
16 MAY	-1	-87	-23	10	-50	-13	-6	-24							
23 MAY	-1	16	5	-0	-86	-32	1	-14							
30 MAY	-14	-38	-1	12	16	5	-16	-5							
6 JUN	-16	-6	-110	-40	-10	-7	-1	-30							
13 JUN	17	25	60	30	5	1	-4	19							
20 JUN	-15	-15	9	6	16	5	3	1							
27 JUN	19	5	-1	1	-18	-31	-8	-5							
4 JUL	16	30	27	9	14	3	0	14							
11 JUL	-2	28	29	13	-16	-4	4	7							
18 JUL	-2	-7	13	32	34	14	-2	12							
25 JUL	-12	11	13	23	10	14	9	10							
1 AUG	-1	-5	-6	-4	1	4	15	1							
8 AUG	26	27	26	14	2	0	-1	13							
15 AUG	-11	-39	-53	-92	-116	-84	-27	-60							
22 AUG	-80	-68	-48	-18	-4	-43	-150	-60							
29 AUG	-44	-28	3	10	-59	-85	-53	-37							
5 SEP	-9	-165	-189	-72	-100	-102	-121	-108							
12 SEP	-4	23	-2	-166	-55	0	-9	-30							
19 SEP	-10	6	0	-2	30	48	31	15							
26 SEP	15	60	-1	-4	-40	-15	-18	-1							
3 OCT	-32	-62	-13	-62	-249	-74	-89	-83							
10 OCT	-71	-47	-5	33	23	-33	-16	-17							
17 OCT	15	-11	2	-224	-199	-4	-21	-63							
24 OCT	28	37	3	-62	-227	7	-29	-35							
31 OCT	9	1	-100	-18	-16	-328	-400	-133							
7 NOV	-166	-131	-78	-89	-100	-1	-11	-83							
14 NOV	-25	-317	-59	-155	0	7	-221	-110							
21 NOV	-6	-147	-249	-183	-109	-30	-112	-120							
28 NOV	-15	-74	-70	-117	-28	-58	-14	-54							
5 DEC	-4	-118	-189	20	2	-98	-119	-72							
12 DEC	-218	-123	-27	-315	-104	-4	41	-107							
19 DEC	22	-106	-225	-277	-106	-188	-107	-141							
26 DEC	-78	-40	-91	-146	-27	1	47	-48							

# COASTAL UPWELLING INDICES, DAILY AND WEEKLY MEANS DURING 1972 AT 57N, 137W

WEEK BEGINNING	DAILY VALUES							WEEKLY MEAN	CUBIC METERS PER SECOND PER 100 METERS OF COASTLINE						
	SUN	MON	TUE	WED	THU	FRI	SAT		-600	-400	-200	0	200	400	600
2 JAN	-123	-110	-54	15	-46	-50	-33	-58							
9 JAN	28	-69	-23	-171	-481	-404	-93	-173							
16 JAN	-141	-181	-257	-429	-259	-169	-200	-234							
23 JAN	-166	-141	-164	-115	-36	8	9	-86							
30 JAN	12	-20	-41	-60	-233	-302	-466	-159							
6 FEB	-446	-179	-376	-52	-173	-135	-42	-200							
13 FEB	-91	-145	1	-42	-99	-285	-327	-141							
20 FEB	-402	-672	-211	-62	-80	-251	-83	-253							
27 FEB	-93	-137	-179	-730	-282	-70	-167	-237							
5 MAR	-32	-7	-155	-335	-315	-198	-151	-171							
12 MAR	-190	-27	13	-196	20	-87	-143	-87							
19 MAR	-47	-17	-30	-25	1	35	30	-9							
26 MAR	23	6	1	2	-3	5	-6	4							
2 APR	-61	-8	-12	-109	-130	-59	-15	-57							
9 APR	-10	-100	-26	-37	13	18	-40	-28							
16 APR	-5	-42	-20	-8	-15	-2	-149	-34							
23 APR	-136	-42	-25	-2	6	10	0	-27							
30 APR	-17	-4	-14	-34	-17	-16	1	-14							
7 MAY	5	-2	-11	-30	-19	-3	22	-5							
14 MAY	17	-3	-5	5	-65	-30	21	-10							
21 MAY	70	31	9	-34	-64	-61	-0	-6							
28 MAY	5	4	-40	-16	-15	-22	-62	-21							
4 JUN	-24	-13	-14	-16	2	5	-2	-9							
11 JUN	-3	-0	-1	10	4	-2	1	1							
18 JUN	20	28	31	4	33	27	10	23							
25 JUN	6	-1	-7	-9	4	4	3	-0							
2 JUL	10	6	5	3	2	12	17	8							
9 JUL	2	-2	-13	-23	-13	-12	2	-9							
16 JUL	-0	31	32	64	40	22	3	27							
23 JUL	0	2	-0	-22	-20	-4	-0	-7							
30 JUL	1	0	-5	-10	-70	-29	-62	-26							
6 AUG	-7	-4	19	9	2	5	9	5							
13 AUG	-3	-23	-30	-20	2	15	7	-9							
20 AUG	-0	-13	-93	-23	-37	-145	-81	-56							
27 AUG	-20	-11	-11	-47	-11	-1	2	-14							
3 SEP	12	45	6	-8	-9	13	30	13							
10 SEP	20	12	13	8	-10	37	16	14							
17 SEP	-12	-13	-102	-72	-6	-0	1	-30							
24 SEP	0	1	-5	-26	-99	-54	4	-26							
1 OCT	-260	-110	-0	-156	-93	15	-0	-86							
8 OCT	10	-3	-1	-80	-60	-14	-3	-20							
15 OCT	-3	-16	-13	-5	3	-3	-74	-16							
22 OCT	-19	-102	-32	7	-2	2	-30	-38							
29 OCT	-197	-46	-11	-24	-102	-172	-117	-96							
5 NOV	-51	-8	-89	-310	-83	-32	-26	-86							
12 NOV	-90	-47	-43	-3	-13	-20	-62	-41							
19 NOV	-249	-244	-177	-71	3	-406	-152	-185							
26 NOV	37	-131	-42	-13	-5	-46	-77	-40							
3 DEC	-19	-47	-49	-14	-10	-3	7	-20							
10 DEC	-2	-15	-6	5	-180	-640	-284	-160							
17 DEC	-114	-153	-56	-9	-14	-300	-450	-159							
24 DEC	-549	-310	-85	-35	-275	-102	-126	-213							
31 DEC	-89	-6	-91	-24	-39	-72	-61	-55							

# COASTAL UPWELLING INDICES, DAILY AND WEEKLY MEANS DURING 1973 AT 57N, 137W

WEEK BEGINNING	DAILY VALUES							WEEKLY MEAN	CUBIC METERS PER SECOND PER 100 METERS OF COASTLINE						
	SUN	MON	TUE	WED	THU	FRI	SAT		-600	-400	-200	0	200	400	600
7 JAN	-75	-50	-36	-131	-174	-51	-32	-79							
14 JAN	-68	-60	-41	-241	-106	-69	-5	-84							
21 JAN	-160	-131	9	-37	-32	-253	-212	-120							
28 JAN	-50	-173	-137	-78	-4	-27	-11	-69							
4 FEB	-83	-156	-40	-83	-74	-16	-63	-75							
11 FEB	-117	-315	-298	-338	-121	-107	-56	-193							
18 FEB	-81	-163	-171	-11	3	-25	-13	-66							
25 FEB	-101	-227	-103	-74	-22	-52	-7	-84							
4 MAR	20	0	-53	-62	-17	-22	35	-14							
11 MAR	-27	2	-91	-31	22	1	-30	-22							
18 MAR	-44	0	-12	-38	-254	-60	22	-55							
25 MAR	-1	-17	-37	-239	-36	-20	-12	-52							
1 APR	-158	-160	-84	-6	10	-46	-152	-85							
8 APR	-119	-3	13	12	11	-69	-38	-28							
15 APR	-51	-18	6	16	11	-133	-38	-30							
22 APR	6	2	-4	-116	-18	-1	-10	-20							
29 APR	-47	-117	-32	-4	5	-46	-11	-36							
6 MAY	-41	-174	-61	-35	-47	-116	-35	-73							
13 MAY	-83	-70	-4	-33	-57	-47	9	-41							
20 MAY	-66	-26	-39	-98	-66	-77	-46	-60							
27 MAY	-20	-17	0	28	12	-1	40	6							
3 JUN	-74	-110	-32	-22	-13	3	-2	-36							
10 JUN	-11	-56	-33	-3	-1	-0	28	-11							
17 JUN	15	-0	-2	-4	-55	-67	-55	-24							
24 JUN	-8	-0	-7	2	31	53	5	11							
1 JUL	-5	-14	-8	-5	2	8	5	-2							
8 JUL	4	1	17	-16	-60	-25	10	-10							
15 JUL	15	13	15	0	5	7	6	10							
22 JUL	11	0	1	4	-1	-66	-19	-10							
29 JUL	-5	3	12	4	-34	-20	2	-5							
5 AUG	14	13	-5	12	10	-6	-42	-1							
12 AUG	0	-16	2	10	15	2	11	3							
19 AUG	14	21	17	-41	-23	-16	17	-2							
26 AUG	5	-5	14	4	4	-77	-83	-20							
2 SEP	-14	-46	-61	-14	-3	-138	-79	-51							
9 SEP	-58	3	63	8	-0	1	-20	-1							
16 SEP	-27	-24	-22	-11	-1	-2	-0	-12							
23 SEP	-1	1	-95	-119	-54	-30	0	-42							
30 SEP	3	-31	-14	-16	7	-13	-17	-12							
7 OCT	-6	-9	-90	-67	-30	-20	-17	-34							
14 OCT	-262	-187	-65	-57	-195	-124	-160	-150							
21 OCT	-94	-72	-19	-9	-126	-119	-171	-87							
28 OCT	-97	-202	-65	-4	-4	-24	-40	-62							
4 NOV	-60	-57	-110	-45	-61	-20	-12	-52							
11 NOV	-74	-57	-114	-75	-26	-18	-31	-56							
18 NOV	-118	-505	-0	-10	-238	-6	-110	-141							
25 NOV	-5	-101	-141	-172	-170	-199	-137	-132							
2 DEC	-441	-95	-284	-246	-172	-50	-287	-225							
9 DEC	-103	-64	-297	-267	-124	-136	-88	-154							
16 DEC	-51	-255	-720	-280	-16	3	-122	-206							
23 DEC	-207	-32	-19	-73	-380	-84	-8	-115							

# COASTAL UPWELLING INDICES, DAILY AND WEEKLY MEANS DURING 1967 AT 54N, 134W

WEEK BEGINNING	DAILY VALUES							WEEKLY MEAN	CUBIC METERS PER SECOND PER 100 METERS OF COASTLINE						
	SUN	MON	TUE	WED	THU	FRI	SAT		-600	-400	-200	0	200	400	600
1 JAN	-123	-60	35	10	-50	-117	-81	-56							
8 JAN	-201	-901	-223	-130	-0	-33	-268	-251							
15 JAN	-5	-26	-163	-157	0	13	31	-44							
22 JAN	-20	-10	-31	-29	-11	-33	-46	-27							
29 JAN	-137	-182	-460	-113	-101	-295	-73	-195							
5 FEB	-96	-42	-181	0	-130	-72	-143	-96							
12 FEB	-20	16	-47	10	-130	-13	-4	-28							
19 FEB	-100	69	-170	-82	-110	4	-306	-101							
26 FEB	-404	-70	-50	16	22	41	81	-66							
5 MAR	40	-29	14	144	32	47	30	41							
12 MAR	11	62	45	-40	-19	-50	-21	-3							
19 MAR	-45	-2	-3	41	52	17	23	12							
26 MAR	-50	-25	26	15	110	87	70	32							
2 APR	34	72	123	61	21	9	-23	43							
9 APR	7	21	-64	-5	-5	4	14	-4							
16 APR	90	94	115	72	20	9	22	61							
23 APR	12	-1	35	23	40	37	0	21							
30 APR	2	8	57	61	40	-49	-7	17							
7 MAY	5	51	26	13	-7	-44	-72	-4							
14 MAY	-25	-34	-2	-6	-23	-200	-130	-62							
21 MAY	-56	-29	19	3	-62	-230	-223	-84							
28 MAY	-111	7	31	-0	37	144	97	29							
4 JUN	45	112	102	124	101	16	1	83							
11 JUN	12	3	-24	-8	31	42	-4	7							
18 JUN	-1	24	79	146	72	25	-1	49							
25 JUN	-10	-8	-51	-10	12	3	1	-10							
2 JUL	4	20	16	-12	-45	-31	0	-7							
9 JUL	-31	-66	-71	-39	-49	-7	10	-36							
16 JUL	-9	-9	-6	8	5	10	10	1							
23 JUL	16	26	30	7	-21	-10	17	8							
30 JUL	20	19	7	17	27	30	36	22							
6 AUG	12	-90	-105	-69	-17	8	21	-44							
13 AUG	27	11	28	35	-6	-100	-155	-24							
20 AUG	-11	-15	-42	-14	-93	-100	-13	-41							
27 AUG	-59	-137	-72	-86	-60	-7	-99	-75							
3 SEP	-67	-39	-37	-110	-120	-6	-34	-60							
10 SEP	-16	-73	-370	-90	-190	-32	-112	-129							
17 SEP	-160	-157	-7	-4	12	-317	-87	-103							
24 SEP	-13	-207	-59	23	-03	-57	-5	-57							
1 OCT	5	-3	5	-6	-11	-5	-62	-11							
8 OCT	-250	-221	-78	-16	-49	30	-150	-105							
15 OCT	-40	-22	-89	-29	-212	-71	-7	-67							
22 OCT	10	-223	-60	-191	-512	-56	-24	-152							
29 OCT	-100	-17	6	-43	-20	-9	-27	-43							
5 NOV	-105	-94	-66	-24	-35	1	2	-46							
12 NOV	-1	-175	-73	-27	-34	-149	10	-64							
19 NOV	-25	-30	44	-20	29	94	-8	10							
26 NOV	-83	-37	-20	-2	1	-229	-179	-78							
3 DEC	-30	-47	-75	-410	-52	-83	-32	-106							
10 DEC	2	24	-27	-256	-422	110	69	-71							
17 DEC	203	124	9	-130	-290	-345	-222	-94							
24 DEC	-335	-95	-49	7	15	17	25	-59							
31 DEC	97	-1	-12	30	99	-5	20	35							

# COASTAL UPWELLING INDICES, DAILY AND WEEKLY MEANS

DURING 1968 AT 54N, 134W

WEEK BEGINNING	DAILY VALUES							WEEKLY MEAN	CUBIC METERS PER SECOND PER 100 METERS OF COASTLINE						
	SUN	MON	TUE	WED	THU	FRI	SAT		-600	-400	-200	0	200	400	600
7 JAN	130	34	150	5	-74	-71	-41	19							
14 JAN	-28	-55	-26	-107	-35	-22	50	-32							
21 JAN	-356	-484	-20	128	304	65	14	-50							
28 JAN	5	32	20	17	5	22	-524	-60							
4 FEB	-103	-562	-336	-171	-301	-100	-80	-236							
11 FEB	-75	-49	-10	-38	-34	-65	-85	-51							
18 FEB	-197	-249	-269	-101	-40	3	-123	-151							
25 FEB	-315	-278	-211	-98	-301	-110	-309	-232							
3 MAR	-131	-35	6	-152	-172	-149	-129	-109							
10 MAR	-192	-278	-64	-2	16	18	16	-69							
17 MAR	-28	-27	-294	-662	-214	-24	13	-177							
24 MAR	12	-85	-67	-47	-13	31	0	-24							
31 MAR	28	32	-111	-108	11	-52	32	-24							
7 APR	-66	-108	8	26	57	-50	-22	-22							
14 APR	57	37	-95	-250	-8	43	-43	-37							
21 APR	-297	-251	-120	-199	-26	-43	-15	-127							
28 APR	-36	-16	-26	-56	-22	37	238	17							
5 MAY	100	8	-51	-6	26	109	164	50							
12 MAY	84	7	-2	-16	4	-9	-8	8							
19 MAY	-31	-45	-5	-23	-74	-93	-30	-43							
26 MAY	-9	-5	4	11	-0	-90	-91	-26							
2 JUN	-40	-34	-6	11	23	-2	-8	-8							
9 JUN	-62	-129	-68	-3	6	-1	-19	-39							
16 JUN	-22	-105	-218	-83	3	21	51	-51							
23 JUN	-22	-34	9	0	24	78	46	14							
30 JUN	12	8	4	-5	-27	-17	-13	-6							
7 JUL	-172	-11	-9	-94	-2	-18	-23	-47							
14 JUL	22	12	-1	-1	18	53	10	16							
21 JUL	1	-0	-7	-3	-19	-13	-30	-10							
28 JUL	-6	4	14	43	62	114	97	47							
4 AUG	72	37	0	2	4	13	6	19							
11 AUG	-17	10	24	18	5	-124	-104	-27							
18 AUG	-42	41	29	-80	-81	-23	-6	-23							
25 AUG	-4	-24	-19	-275	-50	-116	-5	-71							
1 SEP	16	-5	-11	-35	-40	-4	-48	-18							
8 SEP	-39	-73	-138	-127	-70	-256	-35	-106							
15 SEP	-12	-5	13	26	15	-20	-28	-1							
22 SEP	38	-352	-124	-12	1	-262	-38	-107							
29 SEP	-3	8	-88	-402	-59	-66	26	-84							
6 OCT	93	-1	-61	18	-2	25	6	11							
13 OCT	-5	7	-63	-370	-146	-236	-30	-120							
20 OCT	-269	-399	-401	-483	-85	-40	-488	-309							
27 OCT	-2	19	151	-27	-121	-288	-19	-41							
3 NOV	-83	-249	-244	-268	-491	-278	-212	-261							
10 NOV	-98	94	23	-4	8	-84	-173	-33							
17 NOV	-437	-354	-57	-148	-174	-55	-33	-180							
24 NOV	-22	-304	-73	-318	-535	-169	24	-200							
1 DEC	-28	-65	-114	-115	-72	-134	-61	-84							
8 DEC	-159	-171	-76	-50	-242	-220	-219	-162							
15 DEC	-12	-54	52	25	-0	0	24	5							
22 DEC	-30	-162	-14	7	-11	-43	-100	-50							
29 DEC	-125	-171	-43	-75	-550	-190	-34	-170							

# COASTAL UPWELLING INDICES, DAILY AND WEEKLY MEANS DURING 1969 AT 54N, 134W

WEEK BEGINNING	DAILY VALUES							WEEKLY MEAN	CUBIC METERS PER SECOND PER 100 METERS OF COASTLINE						
	SUN	MON	TUE	WED	THU	FRI	SAT		-600	-400	-200	0	200	400	600
5 JAN	-65	-10	32	-35	-35	76	-59	-14							
12 JAN	-80	-30	-13	-5	12	-25	22	-17							
19 JAN	46	20	-15	-13	-6	-7	15	6							
26 JAN	79	13	-19	-4	-184	41	-51	-18							
2 FEB	-29	-60	0	-22	-221	-201	-5	-77							
9 FEB	-213	-488	-165	-8	-7	-1	-40	-132							
16 FEB	-120	-143	-31	-9	-113	-167	-173	-108							
23 FEB	-10	-2	6	-5	4	-7	-179	-28							
2 MAR	-89	-188	-90	8	-36	-15	-5	-59							
9 MAR	-83	-52	1	-1	-103	-66	-9	-45							
16 MAR	26	8	11	-12	-52	-9	98	10							
23 MAR	-79	-92	-33	8	10	-25	-48	-37							
30 MAR	-57	-23	-30	-211	-156	-11	29	-66							
6 APR	-62	-114	-151	-141	-234	-45	6	-106							
13 APR	-30	-180	-297	-164	-47	-239	-67	-135							
20 APR	-157	-117	-16	41	-39	-202	-82	-82							
27 APR	-6	40	2	-2	-62	-33	-127	-27							
4 MAY	-114	-20	-81	-8	25	-94	-62	-50							
11 MAY	1	26	115	85	28	20	11	41							
18 MAY	36	-1	-15	-43	-29	-51	-87	-27							
25 MAY	-23	1	0	-27	-4	-150	-107	-44							
1 JUN	-23	-82	-41	-12	13	9	2	-19							
8 JUN	30	111	144	141	27	-4	-4	64							
15 JUN	-19	-0	27	87	54	6	-14	20							
22 JUN	-17	3	17	24	14	27	6	11							
29 JUN	9	7	22	24	11	3	10	12							
6 JUL	7	-5	-137	-196	-48	-42	-18	-62							
13 JUL	0	15	6	7	-27	-35	-28	-9							
20 JUL	-2	-55	-26	-16	12	-48	-9	-21							
27 JUL	11	6	4	-9	-25	-20	13	-3							
3 AUG	8	21	26	-9	-19	-45	11	-1							
10 AUG	-182	-38	-17	-59	-17	-3	-150	-67							
17 AUG	-38	8	9	-4	-9	-8	24	-2							
24 AUG	8	-49	16	11	-30	-36	-59	-20							
31 AUG	-16	25	62	19	18	-18	-27	9							
7 SEP	-27	-112	-224	-97	-35	23	33	-63							
14 SEP	-32	-169	-148	-102	-9	5	-29	-69							
21 SEP	-63	-21	-4	-33	-5	1	1	-18							
28 SEP	-36	-47	-15	42	-8	-204	-142	-58							
5 OCT	-231	-346	-178	-22	-3	-115	-198	-156							
12 OCT	-284	-181	-181	-166	-40	-35	-71	-137							
19 OCT	-7	-52	-23	-4	5	-46	-187	-45							
26 OCT	-130	-27	-77	-87	-82	-319	-303	-146							
2 NOV	-229	-58	-107	16	-73	-12	-79	-77							
9 NOV	2	-52	-19	-198	-195	-6	72	-57							
16 NOV	28	-147	-162	-93	-51	-109	-259	-113							
23 NOV	-110	-195	-270	-161	-317	-459	-314	-261							
30 NOV	-43	-394	-286	-23	-139	-389	-344	-231							
7 DEC	-246	-92	-21	-228	-269	-399	-138	-199							
14 DEC	-21	-119	-191	-567	-530	-388	-97	-273							
21 DEC	-181	-184	-259	-263	-36	-80	-134	-163							
28 DEC	-66	-175	-121	-245	2	43	35	-75							

# COASTAL UPWELLING INDICES, DAILY AND WEEKLY MEANS DURING 1970 AT 54N, 134W

WEEK BEGINNING	DAILY VALUES							WEEKLY MEAN	CUBIC METERS PER SECOND PER 100 METERS OF COASTLINE						
	SUN	MON	TUE	WED	THU	FRI	SAT		-600	-400	-200	0	200	400	600
4 JAN	-24	-215	-290	-29	18	113	11	-61							
11 JAN	-15	-34	-78	-11	-105	-75	-112	-61							
18 JAN	-296	-337	-550	-170	-130	-90	-66	-236							
25 JAN	-31	-20	-27	-202	-126	-133	17	-75							
1 FEB	-160	-400	-90	-193	-145	-134	-40	-168							
8 FEB	-9	-72	-90	-61	-49	-30	-104	-60							
15 FEB	-54	-10	-67	-307	-419	-166	-152	-168							
22 FEB	-90	-136	-1	12	30	5	32	-22							
1 MAR	40	-2	-15	-41	-125	-24	-24	-27							
8 MAR	-141	-84	-126	-247	-223	-158	-100	-155							
15 MAR	-42	-23	-192	-166	-6	3	-149	-82							
22 MAR	-125	20	-86	4	-21	19	23	-24							
29 MAR	37	-0	20	34	-80	-53	-41	-11							
5 APR	-47	-6	-270	-124	-89	24	-2	-75							
12 APR	31	9	-9	-7	-22	-2	30	6							
19 APR	46	10	-15	-2	-47	71	69	19							
26 APR	32	-10	-29	-12	-106	-16	3	-20							
3 MAY	-81	-51	-121	-152	-30	-3	16	-61							
10 MAY	24	12	-5	-134	-33	-19	-30	-27							
17 MAY	-31	-9	-13	-179	-111	-30	-151	-76							
24 MAY	-166	-30	4	-0	-0	-4	-177	-56							
31 MAY	-90	-12	-30	-4	-5	6	-10	-22							
7 JUN	-18	-23	8	1	11	-13	-1	-5							
14 JUN	76	46	5	6	1	-3	-0	19							
21 JUN	27	-34	0	-61	-75	-9	17	-19							
28 JUN	12	-79	-164	-21	-36	-21	-3	-44							
5 JUL	-41	-271	-79	1	10	16	20	-49							
12 JUL	1	-39	-20	-0	-46	-133	-15	-36							
19 JUL	-6	8	-2	-28	-3	-15	26	-3							
26 JUL	29	18	15	12	3	5	10	13							
2 AUG	22	-29	-10	6	1	-4	-19	-5							
9 AUG	-77	-62	-75	5	-73	-135	-3	-60							
16 AUG	-15	-4	-30	-19	-8	-12	45	-6							
23 AUG	50	40	14	-3	-1	-30	-25	8							
30 AUG	-0	-6	-55	-25	35	-13	14	-7							
6 SEP	4	23	7	2	9	5	20	10							
13 SEP	47	9	-50	-117	-34	-0	-6	-20							
20 SEP	-14	-24	84	17	-129	-60	-137	-40							
27 SEP	-92	-50	-66	-33	-2	-2	22	-32							
4 OCT	80	52	3	-0	10	-9	29	24							
11 OCT	55	32	3	-69	-30	-32	-2	-7							
18 OCT	-39	-0	-44	30	-139	51	20	-16							
25 OCT	-54	-325	-106	-200	-248	-459	-393	-256							
1 NOV	-283	-129	-104	-65	-36	-17	-86	-103							
8 NOV	-24	-373	-501	-189	-109	-437	-154	-267							
15 NOV	6	-12	25	130	52	16	-65	20							
22 NOV	-60	14	32	-39	104	79	-20	15							
29 NOV	45	56	-3	-39	-9	-673	-464	-155							
6 DEC	-74	-71	-153	-430	2	-396	-356	-211							
13 DEC	-244	-44	60	93	33	-6	-170	-40							
20 DEC	11	-1	31	-13	-22	-50	-83	-19							
27 DEC	-12	-9	-127	-8	-29	-23	-186	-56							



# COASTAL UPWELLING INDICES, DAILY AND WEEKLY MEANS DURING 1971 AT 54N, 134W

WEEK BEGINNING	DAILY VALUES							WEEKLY MEAN	CUBIC METERS PER SECOND PER 100 METERS OF COASTLINE						
	SUN	MON	TUE	WED	THU	FRI	SAT		-600	-400	-200	0	200	400	600
3 JAN	-339	-140	-92	-57	54	8	20	-78							
10 JAN	116	61	0	-33	-119	-64	-119	-22							
17 JAN	-342	-164	-19	19	-29	60	31	-64							
24 JAN	10	-394	-145	-101	-2	-25	-66	-103							
31 JAN	-94	-28	-71	22	-21	-154	-236	-03							
7 FEB	-293	-273	-46	-5	-211	-67	-311	-172							
14 FEB	-92	-21	-4	-219	-22	-221	-406	-141							
21 FEB	-110	-66	61	85	44	32	40	13							
28 FEB	-56	-407	-142	-34	17	-71	-34	-115							
7 MAR	-87	-276	-137	-133	-100	48	-246	-133							
14 MAR	-42	12	-49	-143	-151	54	0	-46							
21 MAR	-60	-140	-54	16	12	10	-80	-43							
28 MAR	-60	-12	9	-151	-61	-151	-270	-99							
4 APR	-23	-96	-53	-156	-243	-133	-8	-102							
11 APR	-23	-126	-207	-11	-56	-28	-69	-74							
18 APR	-27	20	-52	-144	-30	4	2	-32							
25 APR	9	114	74	13	-4	-6	-2	28							
2 MAY	-70	14	10	3	-49	51	9	6							
9 MAY	-166	-266	-142	-127	1	3	81	-88							
16 MAY	11	-144	-26	19	-17	-5	-3	-23							
23 MAY	-20	10	20	2	-27	-6	24	3							
30 MAY	12	2	32	50	59	5	-10	21							
6 JUN	-2	-6	-140	-55	-47	-57	-32	-48							
13 JUN	25	34	60	23	7	3	-24	19							
20 JUN	-41	-15	6	-2	91	24	5	10							
27 JUN	16	1	-13	1	-6	-14	-9	-3							
4 JUL	9	37	47	16	25	11	6	21							
11 JUL	-0	15	23	2	-6	-2	13	6							
18 JUL	1	-1	19	20	40	25	15	18							
25 JUL	6	32	59	69	50	37	3	37							
1 AUG	-10	-24	-3	-7	-3	8	16	-3							
8 AUG	29	20	21	18	5	1	-1	13							
15 AUG	-13	-35	-60	-130	-184	-119	-63	-07							
22 AUG	-87	-113	-52	-30	-2	-52	-103	-63							
29 AUG	-40	-23	-3	11	-109	-143	-03	-56							
5 SEP	-7	-157	-144	-57	-144	-95	-232	-119							
12 SEP	-63	28	-6	-36	-21	-3	-0	-15							
19 SEP	7	16	10	-0	80	106	117	49							
26 SEP	54	80	55	49	-34	-15	-18	26							
3 OCT	-26	-101	-69	-19	-160	-30	-26	-63							
10 OCT	-37	-33	6	44	55	-3	-17	2							
17 OCT	10	-11	28	-258	-227	-2	-31	-70							
24 OCT	1	105	95	-8	-201	2	-5	-1							
31 OCT	15	67	-49	19	5	-340	-376	-94							
7 NOV	-140	-122	-19	-37	-103	-4	42	-56							
14 NOV	-5	-140	-45	-119	-63	-14	-160	-79							
21 NOV	13	-187	-256	-85	-50	10	-98	-93							
28 NOV	14	-130	-182	-72	-11	-74	-13	-67							
5 DEC	21	-55	-250	72	46	-3	20	-22							
12 DEC	16	-13	30	-136	-50	0	41	-16							
19 DEC	69	6	-37	-86	8	-33	-12	-12							
26 DEC	-24	-39	-48	-159	-40	-21	89	-35							

# COASTAL UPWELLING INDICES, DAILY AND WEEKLY MEANS DURING 1972 AT 54N, 134W

WEEK BEGINNING	DAILY VALUES							WEEKLY MEAN	CUBIC METERS PER SECOND PER 100 METERS OF COASTLINE						
	SUN	MON	TUE	WED	THU	FRI	SAT		-600	-400	-200	0	200	400	600
2 JAN	-63	-134	-77	-62	-30	-41	-67	-72							
9 JAN	63	-39	45	-48	-212	-307	-193	-96							
16 JAN	-58	-6	-25	-196	-64	-25	-30	-58							
23 JAN	-13	-25	0	8	-6	5	4	-4							
30 JAN	32	17	-14	-59	-120	-74	-238	-65							
6 FEB	-175	-115	-177	-88	-218	-220	-40	-148							
13 FEB	-126	-120	8	-31	-21	-14	-103	-58							
20 FEB	-245	-440	-46	-13	-4	-42	8	-112							
27 FEB	23	4	-84	-407	-80	4	-57	-86							
5 MAR	25	28	-49	-162	-229	-140	-163	-99							
12 MAR	-121	-105	-31	-160	-25	-56	-154	-93							
19 MAR	-72	-28	-13	-23	-3	66	78	1							
26 MAR	50	27	2	-6	-15	67	26	22							
2 APR	-18	4	13	-30	-114	-47	-2	-28							
9 APR	-0	-73	1	-0	-6	38	-30	-10							
16 APR	17	-21	-83	-9	-34	-1	-307	-74							
23 APR	-120	-24	-67	-42	18	35	-34	-35							
30 APR	-31	-10	-8	-6	2	6	15	-5							
7 MAY	10	-5	-51	-58	-49	-12	10	-22							
14 MAY	22	20	-19	13	-11	-12	47	9							
21 MAY	119	39	14	-46	-98	-56	-7	-5							
28 MAY	9	-6	-64	-71	-92	-48	-58	-47							
4 JUN	-29	-16	-49	-31	17	14	-4	-14							
11 JUN	-16	-20	-16	-2	-3	-21	-4	-12							
18 JUN	31	25	49	8	50	67	42	39							
25 JUN	4	-12	-14	-22	-9	-0	2	-7							
2 JUL	24	15	13	10	2	7	9	11							
9 JUL	0	-14	-46	-56	-20	-7	4	-20							
16 JUL	11	83	76	117	95	84	19	69							
23 JUL	3	3	-9	-35	-39	-11	-6	-14							
30 JUL	-1	2	-5	-29	-75	-35	-68	-30							
6 AUG	-3	-1	35	23	5	4	10	11							
13 AUG	5	-9	-7	-3	0	4	6	-0							
20 AUG	1	-12	-120	-41	-49	-172	-27	-60							
27 AUG	-29	-44	-5	-22	2	18	37	-6							
3 SEP	32	60	16	1	-5	25	54	26							
10 SEP	22	33	33	9	-19	19	40	20							
17 SEP	4	19	-32	-24	27	22	25	6							
24 SEP	8	27	13	-18	-83	-150	-26	-33							
1 OCT	-255	-107	-6	-69	-144	-22	6	-85							
8 OCT	01	52	14	-8	-29	11	4	18							
15 OCT	9	0	-3	-20	0	9	-136	-20							
22 OCT	-40	-209	-74	56	21	64	5	-25							
29 OCT	-163	-162	-3	-1	-90	-38	-8	-66							
5 NOV	-11	13	-62	-267	-74	-18	-22	-63							
12 NOV	-159	-40	-44	-5	-6	-88	-56	-54							
19 NOV	-209	-458	-267	-59	-20	-375	-81	-221							
26 NOV	21	-118	-20	-42	37	50	25	-7							
3 DEC	33	31	21	8	0	6	10	16							
10 DEC	12	23	2	39	-180	-352	-67	-75							
17 DEC	-79	-72	-17	10	16	-167	-231	-77							
24 DEC	-400	-227	-34	-1	-317	-199	-70	-179							
31 DEC	-175	51	34	-3	-1	-18	-23	-19							

# COASTAL UPWELLING INDICES, DAILY AND WEEKLY MEANS DURING 1973 AT 54N, 134W

WEEK BEGINNING	DAILY VALUES							WEEKLY MEAN	CUBIC METERS PER SECOND PER 10 <sup>3</sup> METERS OF COASTLINE						
	SUN	MON	TUE	WED	THU	FRI	SAT		-600	-400	-200	0	200	400	600
7 JAN	-38	-40	-9	-144	-230	-118	-41	-89							
14 JAN	-4	-2	3	-140	-11	-144	21	-41							
21 JAN	-412	-300	28	-15	-34	-301	-257	-186							
28 JAN	-66	-129	-20	-155	19	11	17	-50							
4 FEB	-7	-72	-5	-42	-21	7	3	-19							
11 FEB	-8	-111	-235	-287	-289	-300	-89	-200							
18 FEB	-67	-110	-240	-58	25	-18	4	-66							
25 FEB	-16	-153	-54	-58	-26	-110	-16	-62							
4 MAR	17	6	-20	-26	-19	-57	52	-8							
11 MAR	-24	16	-72	-26	21	-6	-19	-16							
18 MAR	-20	13	-13	-19	-211	-27	21	-37							
25 MAR	15	-7	-3	-197	-31	-14	-2	-34							
1 APR	-167	-280	-75	7	39	-27	-179	-97							
8 APR	-86	-7	18	68	92	-17	-37	4							
15 APR	-132	-26	14	26	18	-143	-52	-42							
22 APR	20	3	-15	-276	-29	9	-13	-43							
29 APR	-18	-67	-30	-7	9	-24	-12	-21							
6 MAY	-69	-213	-78	-35	-75	-163	-51	-98							
13 MAY	-107	-31	-2	-50	-41	-54	12	-39							
20 MAY	-69	-14	-68	-228	-107	-50	-72	-87							
27 MAY	-14	-6	3	29	16	6	50	12							
3 JUN	-155	-175	-43	-58	-36	-5	-3	-68							
10 JUN	-35	-174	-71	-14	-2	-18	19	-42							
17 JUN	13	-22	-19	-27	-68	-136	-120	-54							
24 JUN	-7	-6	-48	-16	28	62	7	3							
1 JUL	-25	-36	-22	-26	-3	2	3	-15							
8 JUL	1	-3	7	-57	-50	-19	21	-14							
15 JUL	40	70	48	7	8	8	8	27							
22 JUL	14	-8	-9	-2	-5	-35	-8	-8							
29 JUL	-2	2	18	1	-57	-43	3	-11							
5 AUG	39	31	9	25	24	8	-10	18							
12 AUG	9	-7	-0	16	40	10	13	12							
19 AUG	24	14	12	-12	-19	-2	13	4							
26 AUG	12	-23	13	8	15	-53	-110	-20							
2 SEP	-23	-60	-57	0	0	-123	-46	-44							
9 SEP	-27	-3	79	36	17	4	-16	13							
16 SEP	-25	-39	-48	-15	-2	-3	4	-18							
23 SEP	1	16	-81	-90	-44	-30	-3	-33							
30 SEP	27	-6	-27	-16	33	-3	-10	-0							
7 OCT	-11	-0	-91	-46	-27	-21	-27	-32							
14 OCT	-397	-100	-65	-50	-196	-144	-95	-149							
21 OCT	-77	-56	-21	-3	-175	-233	-172	-105							
28 OCT	-65	-166	-36	15	30	50	66	-15							
4 NOV	28	14	-1	4	1	32	34	16							
11 NOV	5	-15	-12	-4	24	6	-6	-0							
18 NOV	-80	-567	40	22	-119	19	-106	-114							
25 NOV	23	-51	-45	-78	-70	-33	-23	-40							
2 DEC	-346	-59	-273	-327	-255	-54	-290	-229							
9 DEC	-109	-54	-172	-210	-65	-89	-12	-102							
16 DEC	-33	-122	-764	-320	-30	2	-79	-192							
23 DEC	-167	-36	-3	-63	-311	-54	-0	-91							

# COASTAL UPWELLING INDICES, DAILY AND WEEKLY MEANS DURING 1967 AT 51N, 131W

WEEK BEGINNING	DAILY VALUES							WEEKLY MEAN	CUBIC METERS PER SECOND PER 100 METERS OF COASTLINE						
	SUN	MON	TUE	WED	THU	FRI	SAT		-600	-400	-200	0	200	400	600
1 JAN	-45	-44	60	60	54	-36	-69	-2							
8 JAN	-244	-670	-35	-44	24	-21	-170	-167							
15 JAN	156	76	-73	-156	-21	79	16	11							
22 JAN	-19	-17	-51	-49	-25	-75	-26	-37							
29 JAN	14	-81	-499	-49	20	-123	44	-96							
5 FEB	-88	5	-135	35	-21	-73	24	-36							
12 FEB	39	66	47	77	-8	142	52	59							
19 FEB	-67	40	-101	-73	-414	-11	-276	-129							
26 FEB	-433	-105	19	53	42	61	84	-41							
5 MAR	55	47	107	260	14	15	-20	68							
12 MAR	-13	-20	-101	-150	-156	-57	-59	-79							
19 MAR	-106	14	-81	-29	133	49	31	2							
26 MAR	4	-12	71	19	110	100	66	51							
2 APR	52	73	156	24	10	31	21	52							
9 APR	3	41	30	28	-9	46	9	21							
16 APR	-2	29	79	26	7	14	22	25							
23 APR	20	9	6	-7	37	62	3	19							
30 APR	3	46	87	100	140	35	14	62							
7 MAY	-1	115	57	9	21	-26	-93	12							
14 MAY	-20	-107	16	6	-18	-105	-40	-52							
21 MAY	-14	-32	22	26	-22	-148	-150	-47							
28 MAY	-50	4	51	34	104	162	85	56							
4 JUN	26	104	163	163	190	61	23	105							
11 JUN	13	21	-8	-7	52	77	22	24							
18 JUN	16	43	131	172	100	30	15	74							
25 JUN	-1	-5	-30	13	25	16	33	8							
2 JUL	57	12	43	20	5	12	14	23							
9 JUL	-35	-79	-24	-8	-36	-9	9	-26							
16 JUL	4	-36	-32	2	15	22	4	-3							
23 JUL	10	40	53	23	-10	-15	8	17							
30 JUL	13	14	23	39	44	55	60	37							
6 AUG	60	-17	-60	-10	1	7	3	-3							
13 AUG	1	5	17	22	-0	-16	-30	-2							
20 AUG	19	-14	4	15	-43	-25	-1	-6							
27 AUG	-66	-97	-40	-35	-27	-9	-74	-50							
3 SEP	-60	-59	-33	-73	-95	-11	-14	-49							
10 SEP	7	-30	-107	-49	-50	-60	-63	-63							
17 SEP	-107	-110	-7	-19	29	-127	-51	-50							
24 SEP	5	-94	-76	7	-72	-80	-32	-50							
1 OCT	7	-29	-3	-13	-33	-27	-157	-36							
8 OCT	-159	-301	-83	15	-89	96	-52	-82							
15 OCT	-56	-31	-205	33	-187	-40	12	-68							
22 OCT	51	-240	-5	-50	-471	-15	33	-101							
29 OCT	-179	-1	14	-69	-36	-31	-82	-55							
5 NOV	-179	-142	-39	-4	-52	-4	-20	-64							
12 NOV	-180	-306	-120	-10	-12	-74	33	-95							
19 NOV	3	15	69	57	86	247	37	73							
26 NOV	-117	3	51	19	37	-347	-100	-76							
3 DEC	1	10	-110	-520	-36	-123	-29	-115							
10 DEC	96	94	2	-69	-131	152	155	43							
17 DEC	99	81	16	-127	-343	-215	-51	-77							
24 DEC	-221	-25	32	17	12	37	39	-15							
31 DEC	110	74	1	27	111	14	-22	45							

# COASTAL UPWELLING INDICES, DAILY AND WEEKLY MEANS DURING 1968 AT 51N, 131W

WEEK BEGINNING	DAILY VALUES							WEEKLY MEAN	CUBIC METERS PER SECOND PER 100 METERS OF COASTLINE						
	SUN	MON	TUE	WED	THU	FRI	SAT		-600	-400	-200	0	200	400	600
7 JAN	123	2	109	38	-126	-186	-111	-22							
14 JAN	-179	-115	-9	-141	-10	2	2	64							
21 JAN	-169	-244	22	241	340	56	-5	34							
28 JAN	-71	20	7	22	-37	35	-250	-39							
4 FEB	3	-113	-124	-101	-125	-53	-75	-84							
11 FEB	-22	-14	-1	-47	-85	-101	-143	-70							
18 FEB	-181	-149	-249	-61	-54	-15	-246	-136							
25 FEB	-250	-220	-164	-46	-194	-44	-219	-162							
3 MAR	-166	-162	9	-109	-76	-98	-103	-112							
10 MAR	-248	-211	-48	-18	-7	6	54	-67							
17 MAR	41	-22	-205	-402	-157	-32	-43	-126							
24 MAR	-7	-22	1	10	-9	77	-15	5							
31 MAR	4	74	-25	-99	30	28	72	12							
7 APR	-36	-147	38	104	206	14	33	31							
14 APR	120	76	13	-53	58	92	26	47							
21 APR	-197	-225	-33	-57	15	-15	-32	-78							
28 APR	-84	6	17	-32	-7	39	394	48							
5 MAY	169	19	-4	41	44	60	213	78							
12 MAY	92	31	6	-3	4	-3	-2	18							
19 MAY	-92	-56	-48	-36	-19	-32	-17	-43							
26 MAY	-14	-12	-5	14	-7	-352	-175	-79							
2 JUN	-4	0	10	31	72	36	-28	18							
9 JUN	-65	-41	-65	-31	-3	-3	-7	-31							
16 JUN	-8	-126	-55	22	-1	-42	27	-26							
23 JUN	-3	-17	14	32	38	128	77	38							
30 JUN	20	13	7	-0	-8	4	-4	4							
7 JUL	-49	0	-10	-72	13	3	-46	-24							
14 JUL	6	18	7	4	27	90	31	26							
21 JUL	29	25	9	12	6	4	13	14							
28 JUL	19	73	76	92	106	132	130	91							
4 AUG	106	55	6	7	22	34	40	39							
11 AUG	-2	4	54	36	27	-9	-20	13							
18 AUG	-20	34	46	-23	-25	-15	-15	-4							
25 AUG	-0	-45	-9	-77	7	-5	31	-14							
1 SEP	69	25	22	4	2	35	-11	21							
8 SEP	-20	-44	-35	-15	-46	-119	2	-39							
15 SEP	26	-3	45	50	53	20	-41	21							
22 SEP	22	-273	-25	-21	71	-4	-8	-34							
29 SEP	17	39	-34	-231	-125	-38	42	-47							
6 OCT	156	33	-53	-18	-8	3	14	17							
13 OCT	-0	61	-8	-396	11	-207	-18	-80							
20 OCT	-179	-247	-457	-149	-59	39	-642	-242							
27 OCT	-109	-41	100	30	-170	-205	26	-52							
3 NOV	-49	-193	-139	-245	-515	-71	-190	-202							
10 NOV	-50	114	138	32	22	5	-100	11							
17 NOV	-369	-456	-200	-311	-170	-17	-100	-234							
24 NOV	59	-167	-20	-115	-513	-156	40	-125							
1 DEC	49	26	47	-72	12	-166	21	-12							
6 DEC	-206	-60	-14	14	-253	-316	-136	-139							
15 DEC	13	-11	79	126	15	1	-14	30							
22 DEC	-84	-156	-27	41	45	-29	-69	-40							
29 DEC	-151	-419	-122	-18	-512	-220	9	-206							

# COASTAL UPWELLING INDICES, DAILY AND WEEKLY MEANS DURING 1969 AT 51N, 131W

WEEK BEGINNING	DAILY VALUES							WEEKLY MEAN	CUBIC METERS PER SECOND PER 100 METERS OF COASTLINE						
	SUN	MON	TUE	WED	THU	FRI	SAT		-600	-400	-200	0	200	400	600
5 JAN	-29	37	127	6	17	-0	-0	23							
12 JAN	-68	-29	1	4	67	-9	-21	-7							
19 JAN	43	-7	-44	-4	-14	-111	-28	-24							
26 JAN	57	6	-15	-30	-97	147	16	11							
2 FEB	12	-15	19	-15	-90	-247	-58	-58							
9 FEB	-147	-403	-72	-3	-59	-166	-102	-136							
16 FEB	-104	-07	0	00	-22	-90	-129	-61							
23 FEB	-50	-2	9	-20	-31	-1	-202	-42							
2 MAR	-122	-107	-25	01	10	-6	3	-24							
9 MAR	-14	-33	3	13	-69	-88	-9	-28							
16 MAR	-27	-12	11	-55	0	7	101	16							
23 MAR	-26	-40	-11	36	34	-9	-82	-15							
30 MAR	-66	-65	-80	-241	-254	-40	16	-105							
6 APR	-21	-94	-151	-70	-100	-79	26	-71							
13 APR	-52	-47	-241	-139	-6	-80	-20	-85							
20 APR	-202	-49	-0	4	-30	-140	-106	-88							
27 APR	12	99	51	10	-3	3	-31	19							
4 MAY	-30	13	1	10	-4	-56	-10	-11							
11 MAY	15	44	120	06	22	-0	-7	40							
18 MAY	34	25	6	-6	-21	-54	-121	-19							
25 MAY	-113	-57	-2	-94	-4	-37	-70	-54							
1 JUN	-4	-24	-4	15	13	2	0	1							
8 JUN	35	114	110	105	12	-2	1	54							
15 JUN	-0	0	40	101	135	59	3	51							
22 JUN	5	60	54	66	43	71	29	47							
29 JUN	3	6	32	42	32	16	61	20							
6 JUL	55	27	-14	-126	12	16	7	-3							
13 JUL	4	20	11	10	-15	-12	9	5							
20 JUL	39	0	7	27	51	9	10	21							
27 JUL	32	20	30	12	6	14	4	19							
3 AUG	7	25	35	20	22	-20	25	16							
10 AUG	-29	22	25	-1	-31	19	-10	-2							
17 AUG	16	40	20	2	-16	-11	52	17							
24 AUG	40	-127	-9	20	-7	-31	-20	-19							
31 AUG	-14	14	124	79	63	-22	-26	31							
7 SEP	-11	-42	-47	-21	-7	57	09	3							
14 SEP	-7	-141	-147	-166	-27	4	-1	-70							
21 SEP	-31	-17	-1	-50	-19	-9	3	-18							
28 SEP	-7	-12	56	103	39	-34	-58	12							
5 OCT	-120	-276	-125	9	6	-36	-90	-90							
12 OCT	-195	-02	-119	-95	-14	-5	-9	-74							
19 OCT	20	-1	-7	3	0	-14	-300	-41							
26 OCT	-270	-20	-43	-32	-37	-173	-410	-141							
2 NOV	-47	-14	-297	62	-12	3	-17	-46							
9 NOV	4	-13	22	-43	-02	36	215	20							
16 NOV	119	-85	-134	-125	-57	15	-190	-66							
23 NOV	20	-173	-140	-199	-222	-255	-260	-178							
30 NOV	-32	-303	-294	24	-02	-312	-137	-174							
7 DEC	-226	-10	-10	-411	-324	-340	-279	-232							
14 DEC	-7	-133	-433	-750	-513	-303	-00	-318							
21 DEC	-142	-124	-121	-205	5	2	-45	-90							
28 DEC	-20	-95	-84	-116	20	66	59	-25							

# COASTAL UPWELLING INDICES, DAILY AND WEEKLY MEANS DURING 1970 AT 51N, 131W

WEEK BEGINNING	DAILY VALUES							WEEKLY MEAN	CUBIC METERS PER SECOND PER 100 METERS OF COASTLINE						
	SUN	MON	TUE	WED	THU	FRI	SAT		-600	-400	-200	0	200	400	600
4 JAN	-31	-179	-175	-24	48	202	55	-15							
11 JAN	9	6	-44	12	-92	-226	-186	-75							
18 JAN	-295	-208	-744	-175	-431	-131	-27	-299							
25 JAN	-4	19	33	-150	-161	-177	96	-49							
1 FEB	-72	-120	46	-63	-56	-191	-84	-77							
8 FEB	-49	-42	-75	-86	-39	-14	-94	-56							
15 FEB	-27	-25	-11	-214	-255	-131	-128	-113							
22 FEB	-125	-195	-70	-1	36	-36	2	-56							
1 MAR	62	9	-9	-10	-137	-53	15	-18							
8 MAR	-130	-81	-201	-257	-224	-116	-29	-148							
15 MAR	37	13	-137	-156	-35	42	-2	-34							
22 MAR	-4	109	-18	48	10	78	45	38							
29 MAR	123	19	42	104	-4	-4	-39	34							
5 APR	-83	49	-352	-92	7	76	34	-52							
12 APR	70	63	7	-1	-6	-0	78	30							
19 APR	112	44	30	32	148	161	71	85							
26 APR	70	17	1	1	-30	3	4	9							
3 MAY	-38	25	-7	-49	-21	49	19	-3							
10 MAY	15	13	3	-140	-68	-26	28	-25							
17 MAY	-5	-3	6	-111	-80	-7	-62	-37							
24 MAY	-32	43	39	12	-1	6	-116	-7							
31 MAY	-52	-5	-22	23	6	30	10	-1							
7 JUN	8	-34	28	16	17	22	68	18							
14 JUN	103	81	-1	-13	1	0	8	26							
21 JUN	61	4	24	-7	3	17	54	22							
28 JUN	37	-48	-105	-20	-61	-14	15	-28							
5 JUL	2	-50	15	24	49	47	54	20							
12 JUL	47	2	16	19	-48	-45	-0	-1							
19 JUL	21	38	23	8	13	-31	-3	10							
26 JUL	33	35	18	10	8	26	21	22							
2 AUG	22	6	-21	-15	-4	6	5	-0							
9 AUG	-13	-4	-39	38	-1	-44	16	-7							
16 AUG	7	3	3	16	16	8	97	21							
23 AUG	87	62	24	3	-2	-4	0	24							
30 AUG	17	19	-4	-20	66	42	65	27							
6 SEP	27	57	34	16	54	27	34	36							
13 SEP	62	14	-37	-127	-61	5	-1	-20							
20 SEP	1	-6	140	65	-66	-43	-40	7							
27 SEP	-25	-39	-52	-7	1	12	29	-12							
4 OCT	117	144	45	41	56	43	48	70							
11 OCT	78	55	17	-1	-5	-31	-58	8							
18 OCT	-102	9	-89	-22	-163	164	88	-16							
25 OCT	8	-250	-269	-293	-198	-449	-466	-275							
1 NOV	-317	-114	-140	-140	-50	-18	-76	-122							
8 NOV	-16	-243	-500	-44	-158	-339	-95	-199							
15 NOV	-12	22	83	164	117	109	-84	57							
22 NOV	-265	-28	60	0	22	54	-10	-27							
29 NOV	56	32	8	-26	69	-737	-456	-151							
6 DEC	-97	32	-68	-305	99	-233	-344	-131							
13 DEC	-277	-51	13	107	28	10	-66	-34							
20 DEC	29	2	32	38	10	-17	-53	6							
27 DEC	-26	3	-95	62	59	21	-44	-3							

# COASTAL UPWELLING INDICES, DAILY AND WEEKLY MEANS DURING 1971 AT 51N, 131W

WEEK BEGINNING	DAILY VALUES							WEEKLY MEAN	CUBIC METERS PER SECOND PER 100 METERS OF COASTLINE						
	SUN	MON	TUE	WED	THU	FRI	SAT		-600	-400	-200	0	200	400	600
3 JAN	-202	-59	-21	18	168	69	19	-1							
10 JAN	21	-1	-11	-18	-185	-164	-58	-60							
17 JAN	-238	-84	59	165	92	187	139	46							
24 JAN	88	-122	-51	-81	7	-2	-26	-28							
31 JAN	-28	29	4	38	-4	-79	-152	-27							
7 FEB	-200	-350	-208	1	-161	-37	-240	-171							
14 FEB	-23	27	-4	-115	34	-61	-325	-67							
21 FEB	-94	-26	50	211	229	129	167	95							
28 FEB	11	-472	-5	29	71	-90	-168	-90							
7 MAR	28	-260	-84	-104	-270	65	-451	-154							
14 MAR	1	36	4	-54	-79	65	12	-2							
21 MAR	-86	-252	-34	39	13	62	-88	-50							
28 MAR	-45	6	41	-141	-102	-26	-150	-60							
4 APR	-64	-198	-15	-219	-170	-115	-57	-120							
11 APR	-21	-178	-104	53	-13	-14	17	-37							
18 APR	-40	3	22	-185	-30	21	66	-21							
25 APR	67	177	140	21	-13	-12	8	55							
2 MAY	8	42	73	46	5	113	67	49							
9 MAY	-59	-146	-114	-48	16	-77	71	-51							
16 MAY	69	-100	-4	54	5	8	4	4							
23 MAY	21	22	66	37	4	33	83	39							
30 MAY	72	61	43	70	67	4	-7	44							
6 JUN	8	14	-84	-50	-7	-42	-54	-32							
13 JUN	-6	20	49	14	8	13	-45	7							
20 JUN	-50	-14	9	-18	-62	51	13	-10							
27 JUN	29	17	-11	1	21	4	-1	9							
4 JUL	21	29	36	6	4	4	1	14							
11 JUL	-8	10	19	7	14	15	25	13							
18 JUL	25	10	31	35	57	52	50	37							
25 JUL	34	42	57	53	36	6	-4	32							
1 AUG	-25	-35	-10	-16	-14	6	22	-10							
8 AUG	12	10	22	26	19	8	-1	12							
15 AUG	-4	-17	-44	-214	-140	-170	-39	-90							
22 AUG	-25	-54	8	-1	1	-9	-46	-19							
29 AUG	-44	-23	-11	21	-16	-78	-27	-26							
5 SEP	11	-64	-45	8	-121	-55	-115	-56							
12 SEP	22	51	5	1	-7	-5	14	12							
19 SEP	37	15	15	8	81	123	103	53							
26 SEP	72	71	79	60	-6	-46	-49	26							
3 OCT	-28	-159	-43	2	-41	-5	-3	-40							
10 OCT	-1	-16	34	106	79	30	8	33							
17 OCT	39	-16	60	-107	-261	-12	-5	-54							
24 OCT	3	140	154	10	-87	25	26	39							
31 OCT	108	162	-63	72	16	-204	-159	-10							
7 NOV	-100	-100	-30	-30	-39	-40	133	-30							
14 NOV	11	-10	-3	-27	2	10	-84	-14							
21 NOV	89	-176	-260	-88	-153	2	-181	-189							
28 NOV	15	30	-200	-59	-15	-35	-55	-46							
5 DEC	69	2	-201	159	155	45	5	33							
12 DEC	121	64	123	-26	28	23	45	54							
19 DEC	102	49	-51	-106	-77	-2	-71	-22							
26 DEC	-42	-32	2	-50	32	-4	116	3							



# COASTAL UPWELLING INDICES, DAILY AND WEEKLY MEANS DURING 1972 AT 51N, 131W

WEEK BEGINNING	DAILY VALUES							WEEKLY MEAN	CUBIC METERS PER SECOND PER 100 METERS OF COASTLINE						
	SUN	MON	TUE	WED	THU	FRI	SAT		-600	-400	-200	0	200	400	600
2 JAN	5	-52	23	92	0	24	219	46							
9 JAN	233	35	140	8	-52	-130	-87	21							
16 JAN	50	33	-35	-190	-38	-10	-19	-31							
23 JAN	4	-113	42	-97	-22	-4	-6	-20							
30 JAN	20	40	-27	-105	-102	-46	-136	-50							
6 FEB	-62	-45	-52	-89	-114	-126	41	-64							
13 FEB	-93	-13	110	74	-10	-72	-83	-13							
20 FEB	-362	-324	-100	-123	10	-30	-17	-138							
27 FEB	-26	-9	-32	-205	60	47	-72	-45							
5 MAR	100	92	-31	-165	-226	67	-131	-60							
12 MAR	-64	-117	-62	-95	-46	-20	-177	-84							
19 MAR	13	-52	-55	10	-10	51	102	7							
26 MAR	70	41	0	0	-34	71	76	33							
2 APR	-10	-21	2	9	-51	-31	1	-14							
9 APR	2	-25	20	07	19	95	25	26							
16 APR	72	16	-5	22	20	36	-499	-48							
23 APR	-170	24	-74	-125	40	05	-33	-35							
30 APR	-60	21	0	4	10	13	11	-8							
7 MAY	4	-2	-63	-39	-42	49	15	-25							
14 MAY	20	56	17	46	23	25	66	39							
21 MAY	153	80	46	-16	-66	-31	-11	24							
28 MAY	-6	-50	-30	-14	-24	-9	-16	-24							
4 JUN	-40	0	-17	-7	22	1	-3	-7							
11 JUN	-23	-33	-31	-10	-6	-12	2	-16							
18 JUN	54	40	90	33	00	142	99	77							
25 JUN	29	12	1	12	15	15	21	15							
2 JUL	30	27	53	50	17	-3	-1	26							
9 JUL	-1	-41	-103	-47	1	3	44	-21							
16 JUL	84	146	126	91	85	94	35	94							
23 JUL	10	4	3	-13	-7	2	2	1							
30 JUL	12	30	11	-4	-24	2	0	4							
6 AUG	15	32	00	49	14	6	9	31							
13 AUG	17	5	1	6	-7	-1	3	3							
20 AUG	1	-5	-53	-24	-9	-46	6	-19							
27 AUG	2	13	15	6	34	65	61	20							
3 SEP	51	76	40	21	2	27	76	43							
10 SEP	34	47	36	30	39	65	67	45							
17 SEP	34	21	-0	-42	61	29	30	19							
24 SEP	11	33	54	11	-12	00	1	5							
1 OCT	-56	24	26	3	-9	4	9	0							
8 OCT	93	85	54	6	3	14	-12	35							
15 OCT	11	1	1	-5	-6	-5	-39	-6							
22 OCT	34	-26	19	103	70	116	53	53							
29 OCT	-65	-224	-101	-20	-209	-95	33	-97							
5 NOV	-76	-36	-9	-276	-77	-32	1	-72							
12 NOV	-191	-70	-30	-36	-3	-124	-80	-78							
19 NOV	-240	-715	-195	-86	20	-213	30	-199							
26 NOV	41	-114	1	-10	73	92	24	15							
3 DEC	0	36	-19	8	3	2	-0	4							
10 DEC	25	19	19	75	-80	-520	-31	-72							
17 DEC	-24	-120	3	8	4	-99	-52	-41							
24 DEC	-185	-69	-3	41	-131	-215	13	-78							
31 DEC	-149	115	49	-4	6	-6	-3	1							

# COASTAL UPWELLING INDICES, DAILY AND WEEKLY MEANS DURING 1973 AT 51N, 131W

WEEK BEGINNING	DAILY VALUES							WEEKLY MEAN	CUBIC METERS PER SECOND PER 100 METERS OF COASTLINE						
	SUN	MON	TUE	WED	THU	FRI	SAT		-600	-400	-200	0	200	400	600
7 JAN	-55	-92	-46	-280	-309	-103	-9	-128							
14 JAN	-52	-96	1	-191	60	-149	32	-55							
21 JAN	-307	-281	-24	33	2	-376	-430	-198							
28 JAN	-273	-133	21	-259	29	44	45	-75							
4 FEB	2	-35	-26	-50	-15	-2	13	-16							
11 FEB	6	-42	-237	-173	-278	-290	-8	-146							
18 FEB	-92	-15	-118	-40	-25	-74	-27	-56							
25 FEB	-106	-277	-27	-57	14	-246	-41	-106							
4 MAR	17	-23	-1	-11	-0	-26	60	2							
11 MAR	42	82	23	33	-27	35	-39	23							
18 MAR	-114	12	-15	-3	-58	-44	27	-28							
25 MAR	78	24	20	-79	-30	-6	12	2							
1 APR	-51	-288	-16	12	78	-21	-111	-57							
8 APR	-39	-11	37	90	154	42	-8	38							
15 APR	-89	29	69	43	43	-21	22	14							
22 APR	52	6	-8	-175	30	50	2	-6							
29 APR	-2	-13	-23	-3	4	15	-5	-4							
6 MAY	-9	-162	-12	-6	-47	-110	-52	-57							
13 MAY	-76	-11	1	-20	7	5	41	-8							
20 MAY	-37	-2	-90	-344	-46	-8	-57	-84							
27 MAY	-0	-0	25	70	50	32	65	34							
3 JUN	-37	-81	-47	-21	-12	15	13	-24							
10 JUN	-49	-329	-141	-36	1	-21	19	-79							
17 JUN	13	-53	-10	-43	-17	-48	-139	-42							
24 JUN	-7	-2	-20	7	44	83	47	21							
1 JUL	-41	-10	-16	3	-10	-6	-5	-14							
8 JUL	-2	-11	13	-21	-1	13	56	7							
15 JUL	114	163	110	49	37	34	17	75							
22 JUL	14	-15	-61	-21	0	-0	3	-11							
29 JUL	8	7	26	6	2	13	32	13							
5 AUG	63	62	39	46	65	46	26	49							
12 AUG	50	49	21	21	72	21	10	35							
19 AUG	36	11	11	-0	-10	15	27	13							
26 AUG	47	5	29	17	34	-5	-57	10							
2 SEP	4	-24	-17	13	15	-47	-16	-10							
9 SEP	-11	-2	76	41	18	-1	-12	16							
16 SEP	-23	-66	-113	-34	-2	-14	13	-34							
23 SEP	-18	34	-63	-32	-7	13	14	-8							
30 SEP	47	21	9	3	37	11	3	19							
7 OCT	-5	5	2	6	45	22	9	12							
14 OCT	-236	-50	-74	-33	-36	-16	-26	-67							
21 OCT	-142	-59	-39	28	-172	-292	-81	-108							
28 OCT	16	9	23	56	42	23	47	31							
4 NOV	12	-32	6	9	2	33	-14	3							
11 NOV	14	8	-17	-12	17	47	4	9							
18 NOV	-16	-402	85	60	-26	117	65	-28							
25 NOV	114	-39	-5	-34	-85	-62	13	-14							
2 DEC	-244	64	-189	-363	-47	-19	-226	-146							
9 DEC	-184	-64	-80	-166	-91	-60	-4	-82							
16 DEC	-9	-24	-580	-442	-17	-1	-35	-159							
23 DEC	-171	96	21	-57	-127	-23	7	-37							

# COASTAL UPWELLING INDICES, DAILY AND WEEKLY MEANS DURING 1967 AT 48N, 125W

WEEK BEGINNING	DAILY VALUES							WEEKLY MEAN	CUBIC METERS PER SECOND PER 100 METERS OF COASTLINE						
	SUN	MON	TUE	WED	THU	FRI	SAT		-600	-400	-200	0	200	400	600
1 JAN	37	-132	-11	74	18	-23	-144	-26							
8 JAN	-67	-206	-120	-28	-91	-17	-08	-87							
15 JAN	68	74	-8	-173	-370	-133	-75	-89							
22 JAN	-112	-71	-141	-174	-125	-232	-116	-139							
29 JAN	23	-7	-175	-114	-92	-91	39	-60							
5 FEB	-6	13	-34	-12	14	24	-9	-1							
12 FEB	-16	64	-20	20	19	35	61	23							
19 FEB	-20	-19	-4	-15	-205	-130	-16	-59							
26 FEB	-222	-216	6	19	25	10	3	-54							
5 MAR	27	79	74	150	1	-2	-32	42							
12 MAR	-37	-32	-240	-194	-200	-103	21	-132							
19 MAR	-137	-47	-90	-295	-47	-11	-11	-92							
26 MAR	10	-72	52	45	11	20	20	15							
2 APR	9	40	11	3	4	43	3	16							
9 APR	-6	11	49	-1	-7	-20	-18	1							
16 APR	-54	9	10	5	15	14	7	1							
23 APR	20	22	-14	-11	16	5	0	6							
30 APR	27	72	123	98	72	43	35	67							
7 MAY	9	97	75	12	27	35	7	37							
14 MAY	0	0	26	31	31	6	15	16							
21 MAY	65	62	57	48	9	-10	-43	27							
28 MAY	-1	0	43	42	33	6	10	19							
4 JUN	0	45	70	00	107	04	05	67							
11 JUN	50	46	40	20	42	66	50	43							
18 JUN	29	64	94	117	52	25	33	59							
25 JUN	53	37	20	26	92	52	53	48							
2 JUL	102	144	102	66	50	29	34	77							
9 JUL	10	-2	20	02	95	52	50	46							
16 JUL	40	27	-23	-12	15	35	21	15							
23 JUL	42	105	60	66	26	14	14	48							
30 JUL	99	24	24	43	40	01	55	45							
6 AUG	67	72	25	14	30	50	18	42							
13 AUG	29	47	35	71	51	73	40	50							
20 AUG	20	10	34	92	36	24	25	36							
27 AUG	9	-9	10	17	3	-35	-0	-1							
3 SEP	-23	-16	2	2	7	5	1	-3							
10 SEP	1	3	-26	-6	-33	-54	-6	-17							
17 SEP	-14	25	18	10	90	25	2	24							
24 SEP	30	15	-9	15	1	-40	-66	-9							
1 OCT	-70	-43	-62	-165	-92	-200	-101	-130							
8 OCT	-80	-90	-125	-19	-69	-11	14	-56							
15 OCT	-47	-9	-111	20	-35	-225	-12	-59							
22 OCT	-35	11	-136	-23	-254	-106	27	-74							
29 OCT	-352	-113	50	-8	-42	-67	-260	-113							
5 NOV	-213	-130	-42	-178	-112	-48	-126	-122							
12 NOV	-211	-220	-50	-26	-5	-43	16	-78							
19 NOV	2	15	-5	84	14	219	23	50							
26 NOV	-103	-126	-04	-37	-36	-562	-202	-170							
3 DEC	-05	-110	31	-002	-65	-376	-209	-232							
10 DEC	03	106	-15	-69	-75	-12	132	22							
17 DEC	12	12	-16	-04	-600	-303	-124	-102							
24 DEC	-50	16	17	50	4	13	4	7							
31 DEC	77	92	-4	-10	47	16	-54	24							

# COASTAL UPWELLING INDICES, DAILY AND WEEKLY MEANS

DURING 1968 AT 48N, 125W

WEEK BEGINNING	DAILY VALUES							WEEKLY MEAN	CUBIC METERS PER SECOND PER 100 METERS OF COASTLINE						
	SUN	MON	TUE	WED	THU	FRI	SAT		-600	-400	-200	0	200	400	600
7 JAN	-65	-64	-60	16	-213	-650	-802	-291							
14 JAN	-376	-300	-140	-453	-460	-197	-264	-314							
21 JAN	-25	-110	-47	209	59	53	-74	9							
28 JAN	-200	-66	-122	-125	-169	-104	-206	-166							
4 FEB	-10	-44	-169	-157	-116	-142	-109	-107							
11 FEB	-20	-56	-35	-101	-140	-191	-356	-130							
18 FEB	-230	-31	-184	-44	-222	-162	-83	-136							
25 FEB	-162	-131	-156	-04	-92	-13	-6	-92							
3 MAR	-73	-174	-110	-53	1	3	-10	-60							
10 MAR	-66	-306	-35	-03	-109	-133	30	-100							
17 MAR	54	-13	-53	-210	-234	-71	-130	-94							
24 MAR	-61	45	-115	8	-13	107	-4	-5							
31 MAR	-23	25	34	-33	9	66	84	22							
7 APR	20	-7	10	129	244	76	-37	62							
14 APR	-14	65	51	-4	36	96	51	40							
21 APR	1	-73	6	-66	-3	3	-7	-20							
28 APR	1	33	144	-6	17	36	202	61							
5 MAY	51	29	32	23	20	36	106	43							
12 MAY	60	20	22	21	17	26	6	27							
19 MAY	-30	-33	-61	-17	5	3	44	-13							
26 MAY	2	2	27	47	16	-110	-95	-16							
2 JUN	43	52	54	70	99	76	31	62							
9 JUN	-8	43	4	-52	-6	-0	16	-0							
16 JUN	27	14	42	92	31	-10	16	29							
23 JUN	19	12	-2	28	86	67	52	37							
30 JUN	30	7	15	17	80	91	80	46							
7 JUL	47	54	34	-7	-11	39	-11	20							
14 JUL	-13	5	17	34	30	52	62	27							
21 JUL	67	67	43	48	55	45	63	58							
28 JUL	60	80	29	18	67	63	03	60							
4 AUG	110	49	24	48	17	30	47	46							
11 AUG	53	35	22	59	35	16	16	34							
18 AUG	-4	-2	7	8	-45	-18	-14	-10							
25 AUG	-3	-40	-23	2	32	6	25	-0							
1 SEP	77	43	30	10	1	52	17	33							
8 SEP	7	-5	-14	19	0	-80	-34	-17							
15 SEP	10	-54	37	31	19	25	5	10							
22 SEP	-45	-7	-6	0	77	56	8	12							
29 SEP	17	106	53	-20	-90	15	-06	-2							
6 OCT	70	10	-2	-130	-30	-53	-33	-23							
13 OCT	-133	-69	9	-333	6	-114	-61	-99							
20 OCT	-22	-213	-124	-103	-102	12	-301	-133							
27 OCT	-265	-264	-173	26	-29	-260	-12	-143							
3 NOV	-5	-133	-40	-397	-459	-40	-30	-160							
10 NOV	-114	-155	79	24	-20	62	-203	-47							
17 NOV	-460	-193	-367	-136	-295	-46	-144	-237							
24 NOV	24	-57	-210	-12	-206	-1	-162	-102							
1 DEC	34	-117	54	-33	-12	-230	-51	-53							
8 DEC	-297	-212	3	49	-190	-011	-363	-265							
15 DEC	-42	6	40	120	15	-5	-77	-4							
22 DEC	-360	-369	-40	23	46	10	-43	-107							
29 DEC	-271	-932	-667	-138	-216	-306	-59	-370							

# COASTAL UPWELLING INDICES, DAILY AND WEEKLY MEANS DURING 1969 AT 48N, 125W

WEEK BEGINNING	DAILY VALUES							WEEKLY MEAN	CUBIC METERS PER SECOND PER 100 METERS OF COASTLINE						
	SUN	MON	TUE	WED	THU	FRI	SAT		-600	-400	-200	0	200	400	600
5 JAN	-2	13	146	-26	-40	-113	-14	-5							
12 JAN	-93	-75	-109	-2	-5	17	-47	-45							
19 JAN	-6	-4	-41	-42	-98	-219	-110	-74							
26 JAN	-7	-55	-93	-196	-134	-39	-14	-77							
2 FEB	-142	-206	-87	-33	-63	-748	-256	-219							
9 FEB	-187	-557	-17	7	-33	-412	-378	-214							
16 FEB	-148	-132	-13	42	0	-6	-07	-49							
23 FEB	-77	-22	-3	-41	-100	-20	-111	-54							
2 MAR	-91	18	-79	13	83	-1	5	-8							
9 MAR	14	-11	-7	16	1	-57	-83	-18							
16 MAR	-158	-80	-7	-26	8	24	162	-11							
23 MAR	10	-41	-30	-1	52	-3	-53	-11							
30 MAR	-56	-151	-155	-3	-393	-178	-22	-137							
6 APR	37	-4	-22	-3	-16	-49	-1	-8							
13 APR	-36	1	-32	-107	-30	-93	-53	-51							
20 APR	-110	-45	11	-151	-29	-28	-65	-60							
27 APR	19	103	77	34	50	18	8	44							
4 MAY	4	46	45	4	-5	9	65	24							
11 MAY	73	53	76	59	32	8	-5	42							
18 MAY	14	53	35	7	-0	-21	-35	8							
25 MAY	-49	-94	-104	-99	5	39	1	-43							
1 JUN	36	33	24	56	41	16	32	34							
8 JUN	46	46	37	47	25	11	10	32							
15 JUN	44	24	34	50	134	124	34	64							
22 JUN	7	47	44	43	10	20	23	30							
29 JUN	10	28	24	31	21	24	34	25							
6 JUL	43	38	32	20	-2	23	15	25							
13 JUL	7	18	17	28	28	34	77	30							
20 JUL	69	51	53	60	101	34	20	60							
27 JUL	63	71	36	50	55	67	40	56							
3 AUG	32	35	31	29	15	21	20	27							
10 AUG	74	33	-3	4	13	26	10	23							
17 AUG	5	31	-9	-33	40	19	27	11							
24 AUG	-22	-25	-27	-2	5	1	17	-8							
31 AUG	32	22	83	61	29	-1	-4	32							
7 SEP	5	17	7	22	64	53	57	32							
14 SEP	15	25	-105	-135	-167	-49	1	-75							
21 SEP	-35	-59	-26	-98	-9	-2	0	-34							
28 SEP	-1	-13	-31	-9	40	21	-1	2							
5 OCT	-88	-147	-240	-42	-4	13	3	-64							
12 OCT	-26	-44	-74	-90	-13	11	13	-33							
19 OCT	-37	-43	-33	9	3	-7	-176	-40							
26 OCT	-393	-84	-58	-56	-54	-48	-146	-116							
2 NOV	-49	-21	-283	-310	-161	-234	-4	-152							
9 NOV	-14	14	-2	3	-15	2	60	7							
16 NOV	60	-53	-190	-344	-159	-33	-134	-119							
23 NOV	-21	-47	-44	-161	-97	-151	-310	-119							
30 NOV	-213	-243	-486	-93	-4	-175	-60	-183							
7 DEC	-137	-22	-35	-424	-656	-226	-523	-289							
14 DEC	-14	-72	-214	-504	-201	-314	-112	-221							
21 DEC	-61	-425	-60	-167	-45	31	-19	-189							
28 DEC	-23	-27	-20	5	-8	2	4	-9							

# COASTAL UPWELLING INDICES, DAILY AND WEEKLY MEANS DURING 1970 AT 48N, 125W

WEEK BEGINNING	DAILY VALUES							WEEKLY MEAN	CUBIC METERS PER SECOND PER 100 METERS OF COASTLINE						
	SUN	MON	TUE	WED	THU	FRI	SAT		-600	-400	-200	0	200	400	600
4 JAN	-70	-399	-195	-177	-111	31	10	-130							
11 JAN	-1	-3	-89	39	-65	-232	-184	-76							
18 JAN	-193	-239	-401	-113	-482	-61	-14	-219							
25 JAN	-55	-27	101	-39	-189	-154	-48	-59							
1 FEB	40	-112	20	-23	-80	-203	-219	-81							
8 FEB	-150	-132	-136	-84	-32	-25	-76	-91							
15 FEB	-51	-109	-10	-20	-62	-71	-100	-62							
22 FEB	-52	-106	-110	-21	13	14	28	-33							
1 MAR	8	13	-10	-7	-163	-227	-25	-59							
8 MAR	-36	-56	-74	-77	-278	-179	-30	-105							
15 MAR	-51	27	16	-4	-9	59	48	12							
22 MAR	14	49	36	71	30	69	193	53							
29 MAR	161	45	42	163	56	-30	-93	49							
5 APR	-157	-8	-101	-145	-81	36	52	-69							
12 APR	32	96	33	14	6	9	22	31							
19 APR	113	53	30	7	1	23	-15	32							
26 APR	31	43	19	25	26	28	18	27							
3 MAY	2	33	40	40	-18	5	1	14							
10 MAY	4	6	6	-27	-120	-40	63	-15							
17 MAY	41	37	50	22	-3	2	21	24							
24 MAY	20	112	105	51	-2	10	1	42							
31 MAY	4	-72	-5	73	97	32	125	36							
7 JUN	54	-0	-10	7	18	32	60	23							
14 JUN	54	23	11	3	2	33	38	22							
21 JUN	83	61	46	21	19	33	87	50							
28 JUN	30	15	-56	-12	-7	10	56	5							
5 JUL	79	24	36	117	132	97	58	78							
12 JUL	46	40	22	41	33	7	14	29							
19 JUL	77	102	65	36	38	0	-45	40							
26 JUL	2	19	6	7	11	28	33	14							
2 AUG	16	15	-9	-17	-19	-2	12	-1							
9 AUG	11	14	9	51	56	25	37	29							
16 AUG	78	25	24	49	54	36	44	45							
23 AUG	51	52	54	69	11	18	3	37							
30 AUG	28	32	25	-12	2	54	28	21							
6 SEP	19	29	19	21	43	30	27	27							
13 SEP	-8	-1	-1	-45	-76	-28	-12	-23							
20 SEP	10	-41	95	41	12	-44	-107	-5							
27 SEP	-51	-30	-11	-1	-4	-14	17	-13							
4 OCT	44	129	50	2	18	26	6	38							
11 OCT	59	26	7	-31	-37	-21	-210	-31							
18 OCT	-92	-190	-95	-359	-150	-2	0	-126							
25 OCT	3	-69	-213	-191	-174	-225	-182	-150							
1 NOV	-134	-101	-154	-156	-21	-30	-88	-109							
8 NOV	-79	-23	-328	-54	4	-100	-189	-120							
15 NOV	-225	10	31	61	64	101	-7	22							
22 NOV	-576	-200	25	26	-185	0	-25	-134							
29 NOV	-32	-17	-21	-57	7	-205	-353	-105							
6 DEC	-221	-65	-6	-188	-244	-37	-320	-154							
13 DEC	-183	-229	-460	-3	-23	-2	-72	-139							
20 DEC	-21	8	-17	9	-3	-21	-95	-20							
27 DEC	-235	-288	-193	-62	2	1	-5	-114							

# COASTAL UPWELLING INDICES, DAILY AND WEEKLY MEANS

DURING 1971 AT 48N, 125W

WEEK BEGINNING	DAILY VALUES							WEEKLY MEAN	CUBIC METERS PER SECOND PER 100 METERS OF COASTLINE						
	SUN	MON	TUE	WED	THU	FRI	SAT		-600	-400	-200	0	200	400	600
3 JAN	-61	-45	-7	5	37	70	53	7							
10 JAN	13	-14	-45	-24	-300	-520	-197	-160							
17 JAN	-91	-197	19	39	75	45	128	2							
24 JAN	69	-07	-70	-61	-40	-13	22	-20							
31 JAN	4	49	70	-87	29	-6	-25	5							
7 FEB	-54	-124	-205	-37	-01	-43	-76	-09							
14 FEB	-176	-50	-41	-23	-1	29	-56	-45							
21 FEB	-81	-18	-115	107	214	-37	127	28							
28 FEB	69	-179	-106	11	8	-111	-460	-110							
7 MAR	-6	-153	-116	-199	-646	-101	-133	-194							
14 MAR	-122	10	31	1	-3	21	50	-1							
21 MAR	-22	-145	-77	-2	-17	8	-93	-50							
28 MAR	-147	-51	49	-23	-81	-3	-8	-38							
4 APR	-54	-69	-14	-140	-223	-42	-107	-94							
11 APR	-10	-144	-91	51	25	-32	50	-22							
18 APR	-25	-49	85	-73	-45	51	85	4							
25 APR	47	54	70	16	-38	-25	3	19							
2 MAY	39	86	83	69	33	74	87	67							
9 MAY	17	1	-11	6	-18	-34	-173	-30							
16 MAY	125	14	13	47	47	27	26	43							
23 MAY	47	31	21	58	67	97	121	63							
30 MAY	64	49	23	39	15	14	13	31							
6 JUN	1	15	-2	-7	12	5	7	5							
13 JUN	-23	9	26	14	-2	3	-19	1							
20 JUN	-29	-4	9	-23	-236	-6	30	-37							
27 JUN	46	30	15	14	30	39	18	29							
4 JUL	43	19	20	4	0	-13	-12	9							
11 JUL	1	16	28	46	71	74	32	38							
18 JUL	51	30	66	84	99	103	51	70							
25 JUL	14	10	22	15	2	6	9	11							
1 AUG	13	13	3	15	15	16	40	17							
8 AUG	14	21	52	82	82	24	-1	39							
15 AUG	10	15	4	-7	-27	-09	-14	-14							
22 AUG	9	-13	27	55	44	28	3	22							
29 AUG	-0	-9	-23	-56	26	-43	-20	-19							
5 SEP	19	14	-38	11	-11	-49	-11	-9							
12 SEP	27	54	37	30	-13	-27	-5	15							
19 SEP	47	1	-10	-11	4	32	19	12							
26 SEP	11	-1	6	11	5	-14	-61	-6							
3 OCT	-59	-30	-22	6	5	-18	-7	-18							
10 OCT	4	7	-6	90	19	30	9	23							
17 OCT	5	-100	-37	-70	-345	-40	8	-05							
24 OCT	-33	36	100	30	-11	-36	3	15							
31 OCT	-35	81	-132	8	47	-30	-131	-29							
7 NOV	-162	-472	-294	-64	1	-139	-3	-162							
14 NOV	26	2	18	-2	-17	-21	-68	-9							
21 NOV	17	-42	-255	-97	-273	-115	-153	-131							
28 NOV	-53	43	-44	-202	-50	-19	-157	-81							
5 DEC	75	53	-163	-125	70	19	-164	-34							
12 DEC	50	-23	95	13	-36	10	24	20							
19 DEC	32	-27	-46	-69	-212	-0	-93	-59							
26 DEC	-110	-51	-24	-28	-79	6	125	-23							

# COASTAL UPWELLING INDICES, DAILY AND WEEKLY MEANS DURING 1972 AT 48N, 125W

WEEK BEGINNING	DAILY VALUES							WEEKLY MEAN	CUBIC METERS PER SECOND PER 100 METERS OF COASTLINE						
	SUN	MON	TUE	WED	THU	FRI	SAT		-600	-400	-200	0	200	400	600
2 JAN	97	-24	-5	-5	2	-11	56	16							
9 JAN	189	-5	189	72	-12	-46	-127	37							
16 JAN	-3	34	-55	-89	-99	-25	-11	-35							
23 JAN	93	-77	31	-219	-112	-34	-49	-51							
30 JAN	-23	17	-52	-146	-115	-82	-94	-71							
6 FEB	-139	-68	-9	-51	-67	-21	-69	-63							
13 FEB	13	-96	-62	132	-50	-206	-303	-82							
20 FEB	-143	-163	-45	-85	-6	12	-45	-71							
27 FEB	-143	-80	71	-233	38	13	-129	-67							
5 MAR	12	61	-6	-140	-152	-82	-117	-61							
12 MAR	-123	-30	-79	-79	-23	-57	-23	-59							
19 MAR	-1	-27	-191	45	-65	43	24	-25							
26 MAR	13	13	14	18	3	-25	111	21							
2 APR	-6	-64	-172	-110	-39	-73	-20	-69							
9 APR	-23	-2	-73	41	7	57	62	10							
16 APR	46	30	14	12	24	82	-61	21							
23 APR	-160	-7	19	-38	26	71	9	-11							
30 APR	-38	-14	3	11	10	6	2	-2							
7 MAY	6	12	2	1	-2	-6	24	5							
14 MAY	15	5	42	48	23	28	21	26							
21 MAY	48	61	48	14	9	1	-1	23							
28 MAY	-5	2	25	19	23	35	36	19							
4 JUN	-3	19	39	34	4	6	-1	14							
11 JUN	-4	2	-1	2	15	28	6	6							
18 JUN	38	45	48	30	30	40	32	38							
25 JUN	54	9	2	16	33	50	31	28							
2 JUL	8	-6	25	47	51	5	-34	14							
9 JUL	-7	-28	-98	-27	9	19	49	-11							
16 JUL	36	65	43	10	3	29	25	30							
23 JUL	31	17	14	17	12	36	34	23							
30 JUL	34	59	43	26	15	29	28	34							
6 AUG	16	21	49	48	27	23	14	28							
13 AUG	16	28	6	7	-8	-5	1	6							
20 AUG	2	-2	6	8	21	15	33	12							
27 AUG	31	49	58	32	25	21	7	32							
3 SEP	14	44	61	7	-8	8	23	21							
10 SEP	11	16	3	10	32	54	47	25							
17 SEP	18	-16	-7	-156	-19	-15	9	-26							
24 SEP	5	14	35	2	-6	-3	3	7							
1 OCT	6	28	79	27	7	18	9	23							
8 OCT	37	41	17	-24	-25	-9	-42	-1							
15 OCT	-8	-5	4	4	3	-24	2	-3							
22 OCT	20	19	8	66	29	12	22	24							
29 OCT	0	-38	-197	-119	-143	-276	-9	-103							
5 NOV	-226	-263	-23	-207	-109	-96	4	-143							
12 NOV	-81	-88	-14	-50	-9	-57	-103	-57							
19 NOV	-28	-225	-94	-142	1	-55	-12	-79							
26 NOV	66	-42	-14	1	1	67	9	13							
3 DEC	-28	-19	-197	-35	-26	-21	63	-55							
10 DEC	-19	-69	-18	-16	-101	-775	-346	-191							
17 DEC	-67	-438	-39	-88	-48	-64	-57	-113							
24 DEC	-126	-239	-29	34	16	-131	3	-68							
31 DEC	-31	-33	1	-49	-8	-23	-34	-25							



# COASTAL UPWELLING INDICES, DAILY AND WEEKLY MEANS DURING 1973 AT 48N, 125W

WEEK BEGINNING	DAILY VALUES							WEEKLY MEAN	CUBIC METERS PER SECOND PER 100 METERS OF COASTLINE						
	SUN	MON	TUE	WED	THU	FRI	SAT		-600	-400	-200	0	200	400	600
7 JAN	-102	-291	-286	-440	-299	-121	-63	-230							
14 JAN	-265	-267	-123	-132	-94	-69	-274	-178							
21 JAN	-63	-274	-321	8	22	-143	-431	-172							
28 JAN	-250	-61	-50	-05	-97	2	23	-76							
4 FEB	-2	-13	-90	-134	-43	-27	-3	-45							
11 FEB	2	-9	-143	-01	-121	-74	19	-58							
18 FEB	-24	-7	-23	-09	-66	-44	-59	-44							
25 FEB	-185	-182	-40	-66	-7	-94	-85	-94							
4 MAR	0	-50	-3	-16	4	-22	8	-12							
11 MAR	31	61	42	-3	-79	30	-03	-0							
18 MAR	-329	-41	-2	10	13	-5	18	-48							
25 MAR	115	47	45	10	-37	-7	9	26							
1 APR	30	-10	-0	10	91	9	42	10							
8 APR	-8	5	21	22	49	40	-7	17							
15 APR	-11	0	50	19	46	39	23	24							
22 APR	66	40	5	-2	57	91	31	42							
29 APR	20	13	1	3	6	41	9	13							
6 MAY	13	-65	-22	2	4	-16	-9	-13							
13 MAY	-9	10	20	10	46	47	75	30							
20 MAY	22	-5	-39	-191	9	16	1	-27							
27 MAY	7	12	31	159	87	43	33	53							
3 JUN	40	13	5	-7	-21	26	37	14							
10 JUN	8	-06	-02	-18	3	12	-1	27							
17 JUN	16	-19	3	-2	31	54	-22	9							
24 JUN	-24	3	9	55	84	67	59	36							
1 JUL	3	0	1	31	9	-2	-6	6							
8 JUL	1	3	31	31	59	52	72	35							
15 JUL	91	76	27	25	52	45	41	51							
22 JUL	10	4	-9	8	37	29	32	17							
29 JUL	46	51	52	54	61	53	54	53							
5 AUG	30	28	27	38	64	49	32	39							
12 AUG	34	50	39	32	39	16	18	34							
19 AUG	16	21	32	16	6	6	24	17							
26 AUG	32	6	8	27	33	22	-1	18							
2 SEP	0	17	10	8	20	33	-2	13							
9 SEP	20	16	52	22	3	-2	-13	14							
16 SEP	-29	57	41	-80	-16	-17	1	-32							
23 SEP	-13	27	-6	-22	-4	0	45	5							
30 SEP	21	17	5	1	6	0	30	13							
7 OCT	-18	-7	2	2	13	-25	6	-4							
14 OCT	-0	-42	-27	-61	-21	-9	-9	-25							
21 OCT	-72	-77	-26	-79	-16	-167	-93	-77							
28 OCT	32	-12	32	53	10	-7	40	11							
4 NOV	-12	-71	-85	-12	-31	71	-110	-54							
11 NOV	-92	-21	-62	-69	-60	44	5	-40							
18 NOV	15	-300	-22	35	-1	-2	-22	-42							
25 NOV	67	-00	-119	-42	-97	-111	-26	-58							
2 DEC	-170	11	-55	-243	-120	18	-57	-83							
9 DEC	-149	-218	-213	-351	-150	-111	-476	-239							
16 DEC	-1	4	-227	-447	-182	-56	-27	-134							
23 DEC	-53	5	24	-48	-55	-15	23	-17							

# COASTAL UPWELLING INDICES, DAILY AND WEEKLY MEANS DURING 1967 AT 45N, 125W

WEEK BEGINNING	DAILY VALUES							WEEKLY MEAN	CUBIC METERS PER SECOND PER 100 METERS OF COASTLINE						
	SUN	MON	TUE	WED	THU	FRI	SAT		-600	-400	-200	0	200	400	600
1 JAN	24	-111	-46	28	-8	-9	-99	-31							
8 JAN	-77	-221	-131	-18	-140	-17	-40	-93							
15 JAN	1	30	1	-186	-577	-173	-43	-136							
22 JAN	-100	-117	-66	-140	-259	-300	-157	-187							
29 JAN	-60	-2	-101	-75	-54	-60	2	-51							
5 FEB	14	33	-1	-3	4	13	-1	8							
12 FEB	-50	40	-49	-4	-10	5	73	-0							
19 FEB	7	-26	-1	-0	-144	-40	-6	-31							
26 FEB	-170	-160	-22	10	56	73	36	-25							
5 MAR	39	90	77	70	2	4	-36	36							
12 MAR	-33	-51	-416	-317	-234	-107	-13	-167							
19 MAR	-145	-40	-127	-417	-101	-25	3	-122							
26 MAR	3	-32	00	-7	14	49	20	21							
2 APR	18	26	1	-3	15	55	6	17							
9 APR	-8	23	76	-12	-16	-40	-7	2							
16 APR	-74	11	5	-1	4	23	4	4							
23 APR	21	25	-24	-13	-7	2	6	1							
30 APR	16	49	162	149	104	77	23	83							
7 MAY	23	92	110	7	7	20	15	40							
14 MAY	15	32	32	40	43	15	10	29							
21 MAY	95	129	124	04	50	5	-9	69							
28 MAY	5	12	59	109	63	-5	12	37							
4 JUN	29	47	62	97	171	134	70	88							
11 JUN	30	50	61	40	59	101	70	61							
18 JUN	60	92	102	91	50	59	57	73							
25 JUN	75	67	41	53	174	120	61	84							
2 JUL	122	193	113	06	101	65	70	110							
9 JUL	27	11	44	105	142	113	140	83							
16 JUL	64	49	1	-2	30	55	60	47							
23 JUL	50	110	95	01	37	21	19	60							
30 JUL	55	56	42	77	60	09	06	66							
6 AUG	105	110	56	25	43	53	16	58							
13 AUG	37	92	46	69	43	05	70	63							
20 AUG	33	26	34	134	101	72	21	61							
27 AUG	17	-3	14	19	0	-24	22	6							
3 SEP	-5	1	1	22	30	17	-2	9							
10 SEP	-18	-17	3	10	-14	-17	-12	-9							
17 SEP	-24	47	60	47	91	120	60	60							
24 SEP	42	45	17	10	-1	-16	-72	5							
1 OCT	-166	-57	-176	-112	-69	-204	-107	-127							
8 OCT	-61	-29	-69	-25	-29	-25	32	-30							
15 OCT	-10	1	-79	-1	3	-173	-71	-47							
22 OCT	-133	14	-143	-14	-145	-102	12	-84							
29 OCT	-273	-94	-7	30	-4	-41	-170	-80							
5 NOV	-130	-56	-41	-143	-120	-90	-101	-110							
12 NOV	-210	-155	-60	-36	10	-21	34	-64							
19 NOV	114	34	21	76	16	103	20	55							
26 NOV	-69	-44	-95	-56	-52	-624	-301	-177							
3 DEC	-193	-191	3	-617	-39	-249	-205	-213							
10 DEC	-43	104	25	-6	-12	-2	143	30							
17 DEC	7	52	1	-45	-662	-466	-143	-179							
24 DEC	-47	9	26	30	24	35	12	13							
31 DEC	44	105	11	-0	13	19	-45	21							

# COASTAL UPWELLING INDICES, DAILY AND WEEKLY MEANS DURING 1968 AT 45N, 125W

WEEK BEGINNING	DAILY VALUES							WEEKLY MEAN	CUBIC METERS PER SECOND PER 100 METERS OF COASTLINE						
	SUN	MON	TUE	WED	THU	FRI	SAT		-600	-400	-200	0	200	400	600
7 JAN	-130	-120	-153	2	-172	-060	-055	-327							
14 JAN	-302	-260	-150	-407	-676	-342	-214	-351							
21 JAN	-10	-40	-54	122	114	76	-16	26							
28 JAN	-110	-26	-120	-203	-354	-379	-305	-226							
4 FEB	-15	28	-77	-42	-25	-53	-34	-31							
11 FEB	6	-11	-5	-43	-163	-186	-419	-117							
18 FEB	-372	-60	-223	-85	-213	-171	-84	-173							
25 FEB	-66	-65	-103	-40	-60	1	-1	-49							
3 MAR	-70	-155	-91	-66	1	15	2	-52							
10 MAR	-66	-267	-93	-175	-193	-184	36	-135							
17 MAR	40	3	-35	-213	-211	-56	-61	-78							
24 MAR	-60	15	-62	-27	-14	79	27	-7							
31 MAR	-11	51	50	-7	4	63	52	30							
7 APR	21	16	14	57	249	101	8	66							
14 APR	11	72	84	32	50	91	69	59							
21 APR	0	-47	14	-6	2	25	21	5							
28 APR	8	31	80	8	61	113	204	73							
5 MAY	53	26	74	89	70	85	129	76							
12 MAY	73	12	9	20	20	20	12	26							
19 MAY	-34	-31	-53	-6	5	-5	30	-12							
26 MAY	-5	13	79	54	30	-80	-61	4							
2 JUN	35	89	119	149	130	80	52	95							
9 JUN	7	73	15	-25	-11	10	54	10							
16 JUN	63	42	62	110	63	-9	18	54							
23 JUN	41	47	2	20	110	94	54	53							
30 JUN	69	22	32	42	105	146	112	75							
7 JUL	56	55	44	-3	-4	26	-5	24							
14 JUL	0	22	34	44	34	50	131	46							
21 JUL	145	137	80	113	117	97	114	116							
28 JUL	92	140	90	37	55	59	94	82							
4 AUG	93	43	40	00	36	32	48	53							
11 AUG	69	71	19	46	27	40	17	44							
18 AUG	-8	-9	2	11	-37	-23	-5	-10							
25 AUG	-8	-55	-32	20	72	11	20	5							
1 SEP	75	95	66	24	9	50	33	50							
8 SEP	20	0	-2	32	6	-66	-46	-7							
15 SEP	-15	-17	19	42	23	35	18	15							
22 SEP	-8	-0	1	10	67	102	60	34							
29 SEP	24	99	107	20	-42	14	-23	29							
6 OCT	41	35	13	-54	-21	-48	-53	-12							
13 OCT	-111	-90	-20	-133	22	-15	-45	-57							
20 OCT	-17	-153	-50	-129	-63	15	-130	-76							
27 OCT	-250	-303	-169	1	-10	-291	-5	-148							
3 NOV	17	-92	-49	-323	-325	-70	-27	-124							
10 NOV	-127	-156	20	17	-46	10	-156	-63							
17 NOV	-370	-154	-350	-153	-290	-60	-87	-211							
24 NOV	53	-7	-129	-3	-303	-32	-149	-82							
1 DEC	29	-156	-100	-20	-8	-157	-62	-69							
8 DEC	-292	-175	-24	-9	-256	-729	-320	-259							
15 DEC	-17	-11	-35	141	46	9	-78	8							
22 DEC	-474	-543	-75	47	42	-19	9	-145							
29 DEC	-46	-550	-491	-80	-131	-224	-74	-229							

# COASTAL UPWELLING INDICES, DAILY AND WEEKLY MEANS DURING 1969 AT 45N, 125W

WEEK BEGINNING	DAILY VALUES							WEEKLY MEAN	CUBIC METERS PER SECOND PER 100 METERS OF COASTLINE						
	SUN	MON	TUE	WED	THU	FRI	SAT		-600	-400	-200	0	200	400	600
5 JAN	-10	-12	65	-61	-140	-186	-23	-53							
12 JAN	-30	-74	-95	-20	-49	2	-7	-39							
19 JAN	17	31	10	3	-22	-119	-39	-17							
26 JAN	-18	-29	-13	-150	-37	-66	-22	-51							
2 FEB	-123	-166	-70	-15	-16	-550	-212	-166							
9 FEB	-129	-397	-13	8	-40	-402	-255	-188							
16 FEB	-222	-129	3	76	13	-8	-64	-47							
23 FEB	-69	-16	-6	-72	-106	-1	-98	-53							
2 MAR	-77	23	-32	29	120	0	13	12							
9 MAR	67	7	-1	33	16	-33	-91	-0							
16 MAR	-220	-110	-18	-27	34	41	97	-30							
23 MAR	15	-46	-32	-1	18	-8	-77	-19							
30 MAR	-62	-96	-119	1	-347	-128	-6	-108							
6 APR	16	-8	-10	-1	-7	-10	-23	-9							
13 APR	-22	8	-1	-48	-35	-70	-31	-28							
20 APR	-39	-10	12	-120	-20	-24	-23	-32							
27 APR	16	86	43	42	56	32	44	45							
4 MAY	47	114	114	14	-4	12	81	54							
11 MAY	81	64	47	23	8	7	8	34							
18 MAY	-1	13	30	19	4	-24	-19	4							
25 MAY	-97	-92	-95	-45	1	57	61	-30							
1 JUN	87	65	37	50	20	14	59	50							
8 JUN	72	49	32	14	29	17	22	34							
15 JUN	83	73	44	30	71	60	33	60							
22 JUN	4	25	20	36	17	20	10	19							
29 JUN	14	30	30	28	27	51	67	38							
6 JUL	65	63	69	60	15	20	33	48							
13 JUL	34	45	33	36	49	71	112	54							
20 JUL	135	100	92	77	93	71	61	92							
27 JUL	87	73	69	82	80	86	84	80							
3 AUG	53	46	39	56	43	54	54	50							
10 AUG	95	56	7	41	32	51	46	47							
17 AUG	26	35	1	-11	105	53	33	34							
24 AUG	-41	-5	-9	0	27	20	51	7							
31 AUG	69	63	109	99	46	17	15	60							
7 SEP	21	21	24	44	56	45	53	38							
14 SEP	31	-6	-107	-94	-119	-42	1	-48							
21 SEP	-17	-46	-26	-73	4	20	2	-19							
28 SEP	3	6	-39	-10	42	41	10	7							
5 OCT	-32	-134	-188	-69	-9	19	14	-57							
12 OCT	2	-24	-70	-43	-10	42	44	-9							
19 OCT	2	-18	-15	15	6	-8	-176	-28							
26 OCT	-290	-64	-20	-29	-26	-20	-76	-78							
2 NOV	-24	-12	-279	-335	-152	-162	2	-137							
9 NOV	-1	27	13	15	-6	-2	42	13							
16 NOV	30	-31	-117	-206	-130	-2	-50	-84							
23 NOV	-13	-15	-26	-72	-40	-95	-263	-76							
30 NOV	-163	-250	-372	-80	-0	-149	-25	-150							
7 DEC	-67	-15	-47	-353	-641	-235	-379	-248							
14 DEC	-22	-92	-237	-400	-312	-227	-96	-199							
21 DEC	-89	-460	-67	-134	2	40	-4	-101							
28 DEC	-3	-2	-4	4	10	0	0	3							

# COASTAL UPWELLING INDICES, DAILY AND WEEKLY MEANS DURING 1970 AT 45N, 125W

WEEK BEGINNING	DAILY VALUES							WEEKLY MEAN	CUBIC METERS PER SECOND PER 100 METERS OF COASTLINE						
	SUN	MON	TUE	WED	THU	FRI	SAT		-600	-400	-200	0	200	400	600
4 JAN	-32	-295	-229	-324	-173	38	6	-145							
11 JAN	-8	-22	-198	2	-40	-143	-109	-74							
18 JAN	-184	-172	-279	-98	-367	-57	-62	-174							
25 JAN	-118	-63	45	-29	-157	-72	-77	-67							
1 FEB	12	-65	22	-14	-54	-169	-154	-60							
8 FEB	-140	-66	-105	-92	-54	-40	-113	-91							
15 FEB	-100	-128	-63	-25	-47	-53	-81	-72							
22 FEB	-40	-95	-156	-34	5	12	102	-29							
1 MAR	19	3	-20	1	-127	-220	-34	-54							
8 MAR	-29	-23	-59	-116	-312	-167	-27	-105							
15 MAR	-22	33	41	20	-5	59	64	27							
22 MAR	33	53	59	94	80	56	118	71							
29 MAR	160	90	48	92	49	-1	-53	55							
5 APR	-93	7	-101	-121	-113	39	43	-48							
12 APR	120	241	74	9	33	22	22	75							
19 APR	76	37	47	6	-21	-26	-16	15							
26 APR	28	61	26	21	34	36	30	34							
3 MAY	17	29	63	59	-9	5	11	25							
10 MAY	-8	-2	-11	-14	-49	-0	92	1							
17 MAY	126	90	69	24	3	31	56	57							
24 MAY	65	133	163	78	5	20	22	69							
31 MAY	55	-44	-2	74	152	53	97	55							
7 JUN	70	-0	-23	16	26	93	93	40							
14 JUN	38	17	9	-3	3	33	50	21							
21 JUN	109	111	81	58	26	36	73	71							
28 JUN	26	15	-41	-9	1	18	71	12							
5 JUL	140	59	63	132	138	87	75	99							
12 JUL	80	44	44	50	30	9	24	41							
19 JUL	72	118	91	75	68	34	-3	65							
26 JUL	14	29	14	11	35	51	58	29							
2 AUG	25	41	5	-6	-8	12	31	14							
9 AUG	58	52	23	53	89	79	80	62							
16 AUG	106	59	54	89	75	56	86	75							
23 AUG	69	42	47	77	31	28	25	46							
30 AUG	52	42	26	3	24	69	9	32							
6 SEP	20	45	31	65	72	96	98	60							
13 SEP	24	4	1	-19	-32	-6	-11	-6							
20 SEP	11	1	62	64	48	-13	-27	21							
27 SEP	-22	-10	-8	4	17	2	17	0							
4 OCT	30	84	57	14	23	31	13	36							
11 OCT	57	64	46	5	-13	-7	-137	2							
18 OCT	-60	-136	-110	-254	-164	3	-12	-105							
25 OCT	13	-27	-151	-147	-184	-233	-171	-129							
1 NOV	-123	-130	-99	-97	-44	-48	-93	-91							
8 NOV	-59	-21	-192	-39	-4	-100	-198	-96							
15 NOV	-217	-11	12	63	32	73	26	-3							
22 NOV	-377	-337	-10	40	-92	-1	20	-109							
29 NOV	-6	-80	-82	-112	-100	-181	-321	-126							
6 DEC	-260	-85	1	-110	-267	-19	-199	-137							
13 DEC	-111	-162	-465	-81	-24	-13	-53	-133							
20 DEC	-21	31	-2	9	8	-1	-40	-2							
27 DEC	-191	-271	-168	-167	-7	57	11	-108							

# COASTAL UPWELLING INDICES, DAILY AND WEEKLY MEANS DURING 1971 AT 45N, 125W

WEEK BEGINNING	DAILY VALUES							WEEKLY MEAN	CUBIC METERS PER SECOND PER 100 METERS OF COASTLINE						
	SUN	MON	TUE	WED	THU	FRI	SAT		-600	-400	-200	0	200	400	600
3 JAN	-23	-18	10	31	25	10	-9	4							
10 JAN	-14	-14	-30	-51	-486	-617	-303	-216							
17 JAN	-99	-132	11	20	36	14	43	-15							
24 JAN	-41	-109	-43	-18	-15	-33	-10	-38							
31 JAN	1	66	65	-88	6	4	6	9							
7 FEB	-5	-71	-160	-68	-53	-31	-53	-63							
14 FEB	-167	-72	-42	-6	9	31	-27	-39							
21 FEB	-40	1	-88	34	145	-65	118	15							
28 FEB	100	-64	-169	-3	27	-92	-352	-79							
7 MAR	4	-51	-75	-246	-561	-32	-153	-159							
14 MAR	-81	13	59	17	33	18	31	13							
21 MAR	-18	-157	-67	2	-77	-119	-111	-78							
28 MAR	-99	-91	30	-8	-20	7	7	-26							
4 APR	-13	-33	7	-95	-192	-37	-114	-69							
11 APR	-12	-123	-40	60	25	-10	76	-4							
18 APR	12	-13	84	-67	-30	51	135	23							
25 APR	121	50	63	12	-23	-29	11	31							
2 MAY	66	123	86	75	110	72	61	89							
9 MAY	25	19	-5	-3	-18	-40	-133	-23							
16 MAY	64	9	20	61	61	61	76	53							
23 MAY	55	30	49	83	142	115	114	84							
30 MAY	67	74	15	28	17	3	11	34							
6 JUN	14	29	3	-1	21	18	11	13							
13 JUN	-9	23	57	30	-3	-1	-18	13							
20 JUN	-11	1	8	-4	-90	2	41	-9							
27 JUN	34	20	36	53	72	92	42	50							
4 JUL	50	25	32	15	-2	-17	-7	15							
11 JUL	13	40	63	96	110	132	56	73							
18 JUL	65	30	45	60	02	121	80	72							
25 JUL	29	20	19	29	5	4	0	16							
1 AUG	20	26	10	17	20	26	34	22							
8 AUG	6	20	43	75	93	24	6	38							
15 AUG	20	27	10	5	-13	-54	-12	-1							
22 AUG	16	11	46	81	63	23	5	35							
29 AUG	7	-19	-60	-77	14	-5	-8	-21							
5 SEP	33	30	-10	19	-3	-17	5	8							
12 SEP	42	137	104	92	60	14	0	65							
19 SEP	50	39	3	-4	-1	35	30	22							
26 SEP	15	-13	-5	26	26	1	-22	4							
3 OCT	-18	-20	-11	12	33	-8	-3	-2							
10 OCT	0	17	5	76	20	122	80	48							
17 OCT	10	-176	-116	-34	-235	-31	21	-80							
24 OCT	-5	-24	96	07	24	-7	18	27							
31 OCT	-45	39	-45	-44	35	-3	-77	-20							
7 NOV	-91	-392	-322	-61	-10	-140	-5	-146							
14 NOV	26	10	34	12	5	-6	-21	8							
21 NOV	4	-25	-205	-95	-287	-120	-153	-126							
28 NOV	-93	71	-6	-243	-48	2	-179	-71							
5 DEC	71	95	-32	-209	17	49	-178	-27							
12 DEC	77	-49	97	32	-47	-10	34	18							
19 DEC	15	-69	-54	-108	-270	-1	-31	-74							
26 DEC	-13	13	-9	-7	-21	4	27	-1							

# COASTAL UPWELLING INDICES, DAILY AND WEEKLY MEANS DURING 1972 AT 45N, 125W

WEEK BEGINNING	DAILY VALUES							WEEKLY MEAN	CUBIC METERS PER SECOND PER 100 METERS OF COASTLINE						
	SUN	MON	TUE	WED	THU	FRI	SAT		-600	-400	-200	0	200	400	600
2 JAN	143	13	-10	-12	-2	-27	-53	8							
9 JAN	55	-34	35	70	7	-8	-91	5							
16 JAN	-59	-10	-122	-242	-335	-90	-53	-130							
23 JAN	34	-03	77	-53	-16	-20	-26	-12							
30 JAN	-12	24	-12	-119	-143	-90	-68	-61							
6 FEB	-124	61	-4	-16	-40	-25	-117	-55							
13 FEB	10	-76	-113	0	-64	-171	-207	-100							
20 FEB	-124	-111	-85	-76	-29	-21	-138	-83							
27 FEB	-346	-236	-7	-256	9	6	-117	-135							
5 MAR	-123	43	-7	-169	-152	-127	-159	-99							
12 MAR	-129	-20	-39	-23	-14	-32	-22	-40							
19 MAR	-3	-17	-131	41	-46	30	32	-13							
26 MAR	23	28	27	22	3	-31	46	17							
2 APR	0	-74	-190	-170	-60	-81	-38	-89							
9 APR	-18	2	-55	42	19	27	93	16							
16 APR	66	54	59	24	19	52	-33	34							
23 APR	-140	-23	18	-2	46	40	16	-7							
30 APR	1	12	30	52	59	34	22	31							
7 MAY	2	0	8	8	4	12	33	10							
14 MAY	14	-1	71	57	69	92	18	46							
21 MAY	-3	55	72	54	46	7	3	33							
28 MAY	-3	10	45	49	73	76	34	41							
4 JUN	9	52	71	55	-2	-6	-45	19							
11 JUN	-10	7	6	20	41	35	39	20							
18 JUN	80	90	74	73	89	47	34	70							
25 JUN	53	26	16	43	100	165	113	75							
2 JUL	42	11	39	68	67	2	-20	30							
9 JUL	-2	-9	-29	-8	29	86	134	29							
16 JUL	71	61	94	28	10	6	19	41							
23 JUL	56	39	36	48	42	87	97	58							
30 JUL	60	73	90	82	53	55	50	66							
6 AUG	30	20	42	60	56	57	27	43							
13 AUG	29	45	4	6	-7	-2	1	11							
20 AUG	-4	-4	20	35	42	51	83	32							
27 AUG	61	76	70	104	66	57	13	64							
3 SEP	10	35	53	12	3	7	25	21							
10 SEP	46	30	8	20	45	70	53	41							
17 SEP	38	-1	-21	-148	-31	-26	6	-26							
24 SEP	6	16	60	32	8	11	14	21							
1 OCT	30	49	208	115	50	61	27	78							
8 OCT	22	32	31	10	0	4	0	14							
15 OCT	-3	-1	9	26	31	1	10	10							
22 OCT	44	64	33	61	33	14	53	46							
29 OCT	10	-7	-103	-118	-136	-107	-16	-78							
5 NOV	-251	-252	-20	-160	-159	-58	26	-127							
12 NOV	-105	-120	-7	-56	0	-30	-103	-61							
19 NOV	-12	-173	-70	-72	-10	-20	-30	-56							
26 NOV	49	-10	1	15	-3	-6	19	9							
3 DEC	34	36	-47	20	20	-5	-44	4							
10 DEC	-10	-53	-3	-11	-99	-720	-415	-189							
17 DEC	-118	-472	-74	-152	-217	-100	-103	-177							
24 DEC	-159	-323	-89	19	22	-52	3	-83							
31 DEC	1	-21	18	19	3	5	1	4							

# COASTAL UPWELLING INDICES, DAILY AND WEEKLY MEANS DURING 1973 AT 45N, 125W

WEEK BEGINNING	DAILY VALUES		DAILY VALUES						WEEKLY MEAN	CUBIC METERS PER SECOND PER 100 METERS OF COASTLINE					
	SUN	MON	TUE	WED	THU	FRI	SAT	-600		-400	-200	0	200	400	600
7 JAN	-30	-131	-58	-333	-305	-174	-147	-169							
14 JAN	-263	-297	-81	-257	-90	-52	-228	-181							
21 JAN	-21	-168	-314	-43	27	-160	-414	-156							
28 JAN	-202	-95	-39	-49	-96	-17	15	-60							
4 FEB	7	1	8	-20	-16	-46	-10	-11							
11 FEB	1	-29	-134	-54	-75	-36	10	-44							
18 FEB	-9	10	5	-57	-72	-50	-91	-38							
25 FEB	-251	-131	-25	-99	-43	-76	-63	-98							
4 MAR	-1	-59	1	-7	16	-25	-9	-12							
11 MAR	61	61	75	2	-35	12	-71	15							
18 MAR	-276	-14	-1	19	33	8	23	-30							
25 MAR	131	70	70	31	-32	-1	12	40							
1 APR	45	-1	1	12	54	25	22	16							
8 APR	-3	5	25	27	40	85	3	26							
15 APR	-6	-13	40	22	73	80	31	32							
22 APR	79	51	27	14	119	119	94	72							
29 APR	55	36	3	7	6	71	32	30							
6 MAY	15	26	26	6	25	5	4	0							
13 MAY	1	15	18	19	65	100	93	44							
20 MAY	42	11	-18	-141	0	8	0	-13							
27 MAY	22	57	71	240	141	64	52	92							
3 JUN	60	37	10	4	-3	47	66	36							
10 JUN	51	-42	-43	5	21	-13	-7	-4							
17 JUN	7	-10	15	3	45	44	-29	11							
24 JUN	-25	-2	23	105	179	140	81	73							
1 JUL	15	16	10	42	30	3	-3	10							
8 JUL	8	17	63	129	165	135	103	30							
15 JUL	90	100	54	33	30	50	46	59							
22 JUL	20	14	-0	61	103	75	51	47							
29 JUL	76	73	87	110	146	135	93	104							
5 AUG	61	56	37	46	71	70	99	60							
12 AUG	67	74	84	60	43	64	57	67							
19 AUG	41	40	45	13	3	3	37	27							
26 AUG	54	32	33	62	44	44	27	42							
2 SEP	20	53	29	-2	11	35	23	24							
9 SEP	79	18	24	22	25	8	-9	25							
16 SEP	-26	-40	30	-123	-72	-25	-7	-48							
23 SEP	-35	18	5	-0	7	20	97	16							
30 SEP	60	41	25	28	27	4	17	29							
7 OCT	-10	1	15	12	16	-25	-7	0							
14 OCT	11	10	-17	-20	-31	-26	-23	-16							
21 OCT	-53	-73	-49	-102	-8	-60	-63	-59							
28 OCT	10	0	9	63	32	6	-24	14							
4 NOV	-17	-14	-30	-4	-43	-131	-174	-60							
11 NOV	-133	66	-94	-130	-160	10	55	-75							
18 NOV	47	-220	-20	22	17	2	-22	-29							
25 NOV	56	-70	-242	-106	-90	-83	-33	-81							
2 DEC	-160	-22	-47	-152	-162	-6	-33	-83							
9 DEC	-97	-243	-295	-449	-170	-154	-444	-266							
16 DEC	-21	-2	-155	-429	-207	-83	-56	-136							
23 DEC	-37	-20	-3	-80	-77	-77	53	-36							



# COASTAL UPWELLING INDICES, DAILY AND WEEKLY DURING 1967 AT 42N, 125W

WEEK BEGINNING	DAILY VALUES							WEEKLY MEAN	-GM0	CURR. INDEX	1967	1968	1969	1970	1971	1972
	SUN	MON	TUE	WED	THU	FRI	SAT									
1 JAN	35	-20	-51	0	20	2	-30	-6								
8 JAN	-84	-270	-123	2	-22	3	-9	-73								
15 JAN	29	70	24	-90	-452	-90	20	-70								
22 JAN	-110	-202	-134	-179	-429	-425	-241	-246								
29 JAN	-120	-63	-9	-23	-0	-3	11	-29								
5 FEB	25	56	9	4	9	38	16	23								
12 FEB	3	107	23	15	-5	30	161	52								
19 FEB	69	-16	-0	9	-77	-0	26	0								
26 FEB	-64	-97	-15	40	171	217	122	51								
5 MAR	42	79	146	112	60	20	-32	61								
12 MAR	-51	-69	-521	-462	-140	-72	4	-107								
19 MAR	-100	-15	-117	-407	-26	5	32	-101								
26 MAR	22	10	175	39	-45	52	23	41								
2 APR	22	39	15	-23	17	93	30	29								
9 APR	6	29	126	20	6	-10	50	34								
16 APR	-50	7	7	-1	-6	50	5	2								
23 APR	11	30	4	1	-0	10	10	10								
30 APR	10	39	133	143	120	140	61	95								
7 MAY	55	70	109	9	5	40	63	52								
14 MAY	53	67	40	05	09	34	49	57								
21 MAY	142	270	327	205	154	64	12	100								
28 MAY	46	75	195	216	59	-9	22	78								
4 JUN	50	45	61	127	240	104	159	124								
11 JUN	125	59	95	67	69	113	77	06								
18 JUN	54	73	126	102	133	105	96	110								
25 JUN	117	122	120	111	171	92	21	109								
2 JUL	75	143	126	100	200	161	176	140								
9 JUL	02	37	07	120	250	200	246	147								
16 JUL	124	105	59	33	05	172	119	100								
23 JUL	03	114	159	153	72	52	35	96								
30 JUL	115	117	01	120	102	134	150	110								
6 AUG	195	206	04	42	79	52	20	90								
13 AUG	61	126	44	76	42	76	03	72								
20 AUG	75	70	53	197	154	50	11	00								
27 AUG	22	4	10	10	-4	2	62	16								
3 SEP	9	7	5	40	43	31	4	20								
10 SEP	-1	10	27	-1	-19	-0	-22	-2								
17 SEP	-15	97	125	101	03	202	104	99								
24 SEP	61	107	15	26	13	10	-3	33								
1 OCT	-35	-129	-116	-60	-17	-03	43	-70								
8 OCT	-23	0	-3	3	9	61	97	27								
15 OCT	19	6	-40	19	50	-65	-07	-15								
22 OCT	-39	39	-05	11	-32	-102	30	-24								
29 OCT	-73	-27	-5	75	6	-27	-115	-24								
5 NOV	-63	-29	-01	-49	-67	-03	-299	-97								
12 NOV	-270	-142	-59	-42	12	-12	03	-62								
19 NOV	212	50	01	00	79	09	64	94								
26 NOV	7	-21	-20	-11	-3	-505	-315	-130								
3 DEC	-173	-247	99	-505	15	-60	-90	-140								
10 DEC	-49	150	94	54	29	24	225	75								
17 DEC	-29	113	5	-26	-510	-347	-72	-124								
24 DEC	-16	21	59	69	95	43	24	41								
31 DEC	50	120	49	7	1	20	-27	32								

# COASTAL UPWELLING INDICES, DAILY AND WEEKLY MEANS DURING 1968 AT 42N, 125W

WEEK BEGINNING	DAILY VALUES							WEEKLY MEAN	CUBIC METERS PER SECOND PER 100 METERS OF COASTLINE						
	SUN	MON	TUE	WED	THU	FRI	SAT		-600	-400	-200	0	200	400	600
7 JAN	-105	-214	-172	43	-139	-656	-776	-317							
14 JAN	-414	-288	-85	-286	-437	-229	-79	-237							
21 JAN	0	-5	-54	146	388	114	14	74							
28 JAN	-162	-67	-31	-128	-488	-364	-215	-208							
4 FEB	-6	52	-26	2	5	-18	-17	-1							
11 FEB	13	5	-1	-49	-217	-248	-283	-111							
18 FEB	-342	-100	-298	-80	-173	-56	-42	-156							
25 FEB	-7	-38	-81	-34	-69	7	7	-31							
3 MAR	-33	-172	-38	-58	17	51	18	-29							
10 MAR	-32	-289	-192	-201	-152	-182	59	-133							
17 MAR	77	35	-19	-208	-243	-45	-6	-57							
24 MAR	-59	49	3	11	18	158	66	34							
31 MAR	-12	59	93	16	20	169	89	53							
7 APR	74	76	37	24	381	381	92	141							
14 APR	78	193	172	137	116	226	167	156							
21 APR	79	-18	51	64	70	143	83	69							
28 APR	18	18	92	88	97	179	236	110							
5 MAY	204	81	122	158	189	146	231	149							
12 MAY	138	9	7	29	16	29	4	32							
19 MAY	-32	-15	-8	9	10	-45	43	-5							
26 MAY	-2	43	176	152	89	-19	-24	59							
2 JUN	33	124	175	213	184	178	156	152							
9 JUN	36	127	71	17	6	52	141	64							
16 JUN	116	89	131	136	135	21	68	97							
23 JUN	97	92	8	49	279	299	118	135							
30 JUN	124	26	73	97	155	198	135	114							
7 JUL	61	78	84	8	4	48	36	46							
14 JUL	53	88	99	128	189	136	243	122							
21 JUL	228	215	137	146	198	144	156	175							
28 JUL	113	176	123	54	35	64	124	99							
4 AUG	185	82	81	183	38	26	45	67							
11 AUG	181	187	23	53	43	164	43	68							
18 AUG	-3	-6	3	24	-18	-14	-5	-2							
25 AUG	-22	-37	-19	88	86	-7	19	14							
1 SEP	91	145	67	12	17	26	14	53							
8 SEP	31	9	13	57	49	-26	28	23							
15 SEP	17	33	29	99	98	81	77	61							
22 SEP	18	8	6	13	76	188	41	36							
29 SEP	-2	43	116	48	-5	44	31	39							
6 OCT	91	187	52	-1	-6	-78	-32	28							
13 OCT	-25	-64	-12	-26	45	56	-11	-5							
20 OCT	14	-52	-13	-81	-11	43	-33	-28							
27 OCT	-158	-292	-133	5	-11	-351	18	-132							
3 NOV	57	-82	-44	-225	-149	-68	-8	-73							
10 NOV	-138	-38	68	54	-89	-2	-188	-36							
17 NOV	-275	-72	-235	-87	-198	-28	-34	-131							
24 NOV	185	32	-29	11	-227	5	-59	-23							
1 DEC	71	-67	-118	-44	11	-126	-144	-59							
8 DEC	-198	-191	-183	-29	-341	-684	-269	-259							
15 DEC	2	1	-6	166	78	32	-97	25							
22 DEC	-647	-785	-133	32	43	-129	39	-214							
29 DEC	15	-215	-295	-72	-71	-125	-27	-113							

# COASTAL UPWELLING INDICES, DAILY AND WEEKLY MEANS DURING 1969 AT 42N, 125W

WEEK BEGINNING	DAILY VALUES							WEEKLY MEAN	CUBIC METERS PER SECOND PER 100 METERS OF COASTLINE						
	SUN	MON	TUE	WED	THU	FRI	SAT		-600	-400	-200	0	200	400	600
5 JAN	-19	-19	71	3	-103	-107	-43	-42							
12 JAN	-50	-30	-26	-13	-11	-5	-12	-21							
19 JAN	29	23	35	22	-20	-57	-59	-4							
26 JAN	-1	-59	20	-151	21	-35	22	-26							
2 FEB	-22	-90	-50	-49	26	-300	-260	-119							
9 FEB	-126	-451	-3	49	-74	-544	-175	-189							
16 FEB	-350	-171	31	149	56	1	-01	-53							
23 FEB	-103	-35	-20	-150	-169	-17	-06	-88							
2 MAR	-100	09	44	110	151	32	16	49							
9 MAR	122	17	2	47	55	-6	-69	24							
16 MAR	-276	-90	4	-10	20	91	116	-21							
23 MAR	47	-00	-44	-9	10	-24	-104	-30							
30 MAR	-33	-12	-72	16	-246	-156	6	-71							
6 APR	13	-13	-11	11	15	-1	19	5							
13 APR	10	40	44	3	20	11	32	24							
20 APR	10	5	-23	-52	-0	2	11	-7							
27 APR	17	127	157	98	180	102	209	138							
4 MAY	221	262	150	7	-2	43	97	112							
11 MAY	67	40	25	29	6	12	13	29							
18 MAY	21	31	06	45	23	-10	-8	26							
25 MAY	-115	-66	-20	7	30	155	237	33							
1 JUN	191	109	36	50	26	30	97	77							
8 JUN	105	55	35	11	35	42	59	49							
15 JUN	140	106	40	32	39	54	05	72							
22 JUN	31	59	44	00	57	65	40	54							
29 JUN	03	06	57	75	129	164	100	112							
6 JUL	156	143	130	122	69	94	124	121							
13 JUL	124	131	126	116	155	145	161	137							
20 JUL	210	202	120	67	104	147	105	137							
27 JUL	130	116	121	135	160	193	237	156							
3 AUG	176	140	153	160	145	119	151	149							
10 AUG	169	160	00	105	65	137	166	130							
17 AUG	59	69	29	19	164	01	42	66							
24 AUG	0	50	30	00	130	131	115	78							
31 AUG	70	112	222	352	150	07	40	147							
7 SEP	26	21	70	105	102	04	163	82							
14 SEP	100	20	-20	-55	-27	-7	13	3							
21 SEP	15	-6	4	-9	53	46	9	15							
28 SEP	0	33	20	69	93	76	19	47							
5 OCT	-23	-93	-141	-24	-12	26	5	-36							
12 OCT	2	-23	-100	-65	-29	63	107	-6							
19 OCT	30	11	-1	23	13	-1	-159	-12							
26 OCT	-239	-25	-4	-2	-0	-15	-43	-47							
2 NOV	-3	-2	-165	-134	-75	-149	9	-74							
9 NOV	11	33	20	2	-24	-9	05	17							
16 NOV	51	-7	-60	-203	-70	22	-3	-41							
23 NOV	1	-1	-14	-21	-8	-20	-169	-33							
30 NOV	-111	-175	-161	-27	14	-79	-2	-77							
7 DEC	-22	-4	-63	-302	-745	-256	-357	-261							
14 DEC	-27	-120	-246	-303	-396	-250	-205	-235							
21 DEC	-34	-350	-45	-119	-2	66	14	-67							
28 DEC	10	16	10	1	21	-6	10	10							

# COASTAL UPWELLING INDICES, DAILY AND WEEKLY MEANS DURING 1970 AT 42N, 125W

WEEK BEGINNING	DAILY VALUES							WEEKLY MEAN	CUBIC METERS PER SECOND PER 100 METERS OF COASTLINE					
	SUN	MON	TUE	WED	THU	FRI	SAT		-600	-400	-200	0	200	400
4 JAN	-9	-208	-300	-692	-343	-17	4	-225						
11 JAN	-39	-134	-390	-80	-140	-220	-126	-161						
18 JAN	-210	-176	-301	-102	-303	-100	-142	-192						
25 JAN	-121	-200	60	-11	-146	-15	-46	-72						
1 FEB	17	-14	55	7	-37	-133	-140	-36						
8 FEB	-148	-55	-80	-117	-96	-55	-135	-90						
15 FEB	-244	-115	-14	-11	-20	-31	-50	-71						
22 FEB	-24	-100	-217	-69	-11	-7	47	-54						
1 MAR	74	7	-27	-2	-76	-171	-14	-30						
8 MAR	-3	-10	-46	-101	-250	-145	21	-70						
15 MAR	10	00	97	48	2	50	112	59						
22 MAR	127	102	150	101	104	84	211	154						
29 MAR	200	106	97	100	134	47	15	114						
5 APR	-0	101	-2	-34	-31	137	120	47						
12 APR	236	375	110	14	67	60	50	136						
19 APR	125	61	127	41	12	30	30	63						
26 APR	43	90	80	59	67	75	19	65						
3 MAY	47	59	160	159	15	40	64	79						
10 MAY	15	-3	-23	4	10	45	145	20						
17 MAY	242	195	163	65	25	135	145	141						
24 MAY	126	97	100	100	60	60	93	119						
31 MAY	92	-19	8	159	229	75	74	80						
7 JUN	147	3	-16	60	105	247	132	97						
14 JUN	55	63	33	-5	16	51	66	40						
21 JUN	140	100	99	79	37	40	61	83						
28 JUN	100	60	1	2	26	52	136	56						
5 JUL	243	152	111	125	126	67	97	132						
12 JUL	137	106	55	67	57	34	46	72						
19 JUL	77	140	102	170	125	100	47	120						
26 JUL	30	65	60	44	70	60	92	67						
2 AUG	91	110	30	9	25	106	132	73						
9 AUG	147	81	50	105	170	103	146	127						
16 AUG	135	114	101	124	100	73	116	110						
23 AUG	86	49	59	92	79	56	50	67						
30 AUG	62	65	53	60	101	161	57	80						
6 SEP	60	94	131	95	93	161	176	116						
13 SEP	100	16	19	8	8	40	16	31						
20 SEP	25	49	90	195	132	-23	-10	66						
27 SEP	-10	-3	-5	12	50	0	20	11						
4 OCT	30	117	100	60	57	66	55	73						
11 OCT	57	120	64	12	2	5	-35	32						
18 OCT	-15	-74	-17	-100	-142	16	3	-60						
25 OCT	23	-2	-110	-120	-147	-270	-152	-113						
1 NOV	-143	-134	-105	-01	-70	-66	50	-101						
8 NOV	-54	-3	-135	-20	5	-132	-234	-82						
15 NOV	-192	1	25	54	37	39	14	-3						
22 NOV	-315	-252	-44	20	-65	-52	4	-101						
29 NOV	11	-40	-82	-120	-220	-150	-257	-124						
6 DEC	-261	-33	7	-40	-157	9	-03	83						
13 DEC	-31	-66	-404	-39	-22	-25	-5	-50						
20 DEC	-50	37	-2	4	7	-7	-16	-4						
27 DEC	-124	-215	-104	-150	11	142	103	47						

# COASTAL UPWELLING INDICES, DAILY AND WEEKLY MEANS DURING 1971 AT 42N, 125W

WEEK BEGINNING	DAILY VALUES							WEEKLY MEAN	CUBIC METERS PER SECOND PER 100 METERS OF EASTLINE						
	SUN	MON	TUE	WED	THU	FRI	SAT		-600	-400	-200	0	200	400	600
3 JAN	8	-5	38	65	52	20	-4	25							
10 JAN	-9	-6	-30	-51	-553	-557	-397	-229							
17 JAN	-84	-51	36	109	86	64	50	31							
24 JAN	4	-32	-10	1	-3	-15	-22	-11							
31 JAN	-1	112	120	8	-1	5	16	36							
7 FEB	-1	-28	-59	-29	-50	-18	-8	-25							
14 FEB	-93	-19	-30	39	31	75	2	-1							
21 FEB	-6	60	10	125	174	-1	131	70							
28 FEB	169	-6	-119	35	86	-28	-243	-16							
7 MAR	28	3	32	-193	-461	6	-106	-110							
14 MAR	-57	7	108	59	30	16	17	25							
21 MAR	-16	-151	-52	2	-414	-249	-44	-129							
28 MAR	-17	-23	76	8	3	60	46	22							
4 APR	4	-13	36	-24	-160	-95	-47	-43							
11 APR	7	-84	-22	154	87	10	151	41							
18 APR	89	19	136	-20	-17	91	260	81							
25 APR	229	64	63	47	-2	-43	-4	53							
2 MAY	56	140	121	145	180	55	55	109							
9 MAY	30	45	5	3	20	16	53	26							
16 MAY	122	54	52	176	252	248	188	156							
23 MAY	112	61	91	145	215	100	190	133							
30 MAY	207	130	31	54	52	11	33	74							
6 JUN	72	125	64	11	89	62	27	63							
13 JUN	38	113	102	151	20	12	1	74							
20 JUN	1	8	18	61	4	15	53	24							
27 JUN	71	84	105	153	184	222	129	135							
4 JUL	143	100	123	40	-6	14	30	63							
11 JUL	71	102	130	128	119	141	39	104							
18 JUL	58	17	24	45	89	134	60	65							
25 JUL	43	35	26	40	8	6	22	27							
1 AUG	61	49	32	39	31	47	16	38							
8 AUG	4	39	50	75	128	47	25	53							
15 AUG	22	47	54	39	12	-11	1	23							
22 AUG	66	55	70	107	54	13	10	54							
29 AUG	10	-5	-25	-56	69	19	5	2							
5 SEP	65	106	6	25	13	15	60	41							
12 SEP	113	234	136	84	32	-12	-11	82							
19 SEP	31	47	-1	-5	4	66	61	29							
26 SEP	25	-1	16	55	61	12	-1	24							
3 OCT	3	-16	-4	30	29	-6	4	6							
10 OCT	28	55	42	146	119	219	179	113							
17 OCT	25	-146	-128	1	-95	-13	45	-44							
24 OCT	15	-1	94	144	111	21	36	60							
31 OCT	1	38	1	-9	50	35	-40	11							
7 NOV	-12	-273	-375	-92	-70	-156	65	-130							
14 NOV	54	59	64	43	50	5	0	39							
21 NOV	14	-10	-113	-31	-205	-104	-109	-80							
28 NOV	-98	109	30	-205	-5	41	-63	-27							
5 DEC	41	175	51	-86	68	73	-195	18							
12 DEC	84	4	113	43	-7	-25	4	31							
19 DEC	11	-39	-93	-133	-442	-22	-11	-144							
26 DEC	-44	39	-1	-2	5	12	6	1							

# COASTAL UPWELLING INDICES, DAILY AND WEEKLY MEANS DURING 1972 AT 42N, 125W

WEEK BEGINNING	DAILY VALUES						WEEKLY MEAN	CUBIC METERS PER SECOND PER 100 METERS OF COASTLINE							
	SUN	MON	TUE	WED	THU	FRI		SAT	-600	-400	-200	0	200	400	600
2 JAN	150	51	-16	4	-2	10	2	27							
9 JAN	46	23	37	76	56	14	-51	29							
16 JAN	-23	3	-100	-218	-367	-60	-55	-115							
23 JAN	13	-123	85	-14	-3	-17	-21	-11							
30 JAN	-10	44	-8	-151	-206	-126	-59	-74							
6 FEB	-60	54	-90	-5	-7	-7	-20	-29							
13 FEB	45	1	-2	1	-35	-138	-245	-53							
20 FEB	-64	-70	-63	-55	-24	-42	-194	-73							
27 FEB	-265	-170	23	-235	-2	17	-26	-94							
5 MAR	-36	69	-7	-191	-170	-131	-120	-85							
12 MAR	-76	5	0	3	-5	9	33	-4							
19 MAR	22	4	-77	56	-13	27	93	15							
26 MAR	71	63	54	28	7	-9	6	31							
2 APR	0	-65	-301	-293	-47	-31	3	-105							
9 APR	12	10	-45	04	62	66	130	46							
16 APR	212	220	190	117	60	120	2	134							
23 APR	-122	20	87	46	60	164	127	56							
30 APR	63	80	150	132	113	74	26	94							
7 MAY	1	5	57	72	57	45	50	41							
14 MAY	33	15	60	120	204	117	4	81							
21 MAY	5	81	174	172	173	38	19	85							
28 MAY	7	37	101	116	150	100	81	85							
4 JUN	70	129	53	61	-14	-4	-51	40							
11 JUN	25	87	55	70	111	158	176	99							
18 JUN	181	138	105	160	156	92	94	134							
25 JUN	135	101	55	87	220	321	195	150							
2 JUL	51	16	42	85	87	17	23	46							
9 JUL	40	34	20	36	122	100	142	86							
16 JUL	63	39	100	63	18	6	25	46							
23 JUL	79	75	72	85	100	135	102	92							
30 JUL	50	102	165	100	120	115	50	116							
6 AUG	21	16	27	70	80	100	81	59							
13 AUG	80	67	13	5	10	5	-4	25							
20 AUG	-14	2	64	108	118	106	105	70							
27 AUG	49	61	54	145	92	34	5	63							
3 SEP	4	16	50	73	41	40	90	47							
10 SEP	142	30	12	22	41	60	63	56							
17 SEP	51	37	7	-41	-4	26	20	15							
24 SEP	17	-4	45	83	41	8	19	30							
1 OCT	62	126	245	152	95	56	5	106							
8 OCT	5	10	14	9	-7	-1	-2	4							
15 OCT	-10	-4	10	53	85	40	19	28							
22 OCT	50	103	43	50	84	45	93	74							
29 OCT	54	13	-50	-85	-100	-155	17	-42							
5 NOV	-120	-107	1	-116	-155	-46	57	-81							
12 NOV	-133	-201	-14	-112	-1	-27	-62	-84							
19 NOV	8	50	-9	-11	-3	-5	-12	-28							
26 NOV	61	22	10	23	-0	-10	5	17							
3 DEC	61	120	48	63	70	50	-10	44							
10 DEC	11	-27	-14	-2	-100	-700	-481	-196							
17 DEC	212	-410	-70	-160	301	-97	-03	-202							
24 DEC	-25	-171	-115	25	60	3	12	-31							
31 DEC	30	3	40	50	21	5	14	25							

# COASTAL UPWELLING INDICES, DAILY AND WEEKLY MEANS DURING 1973 AT 42N, 125W

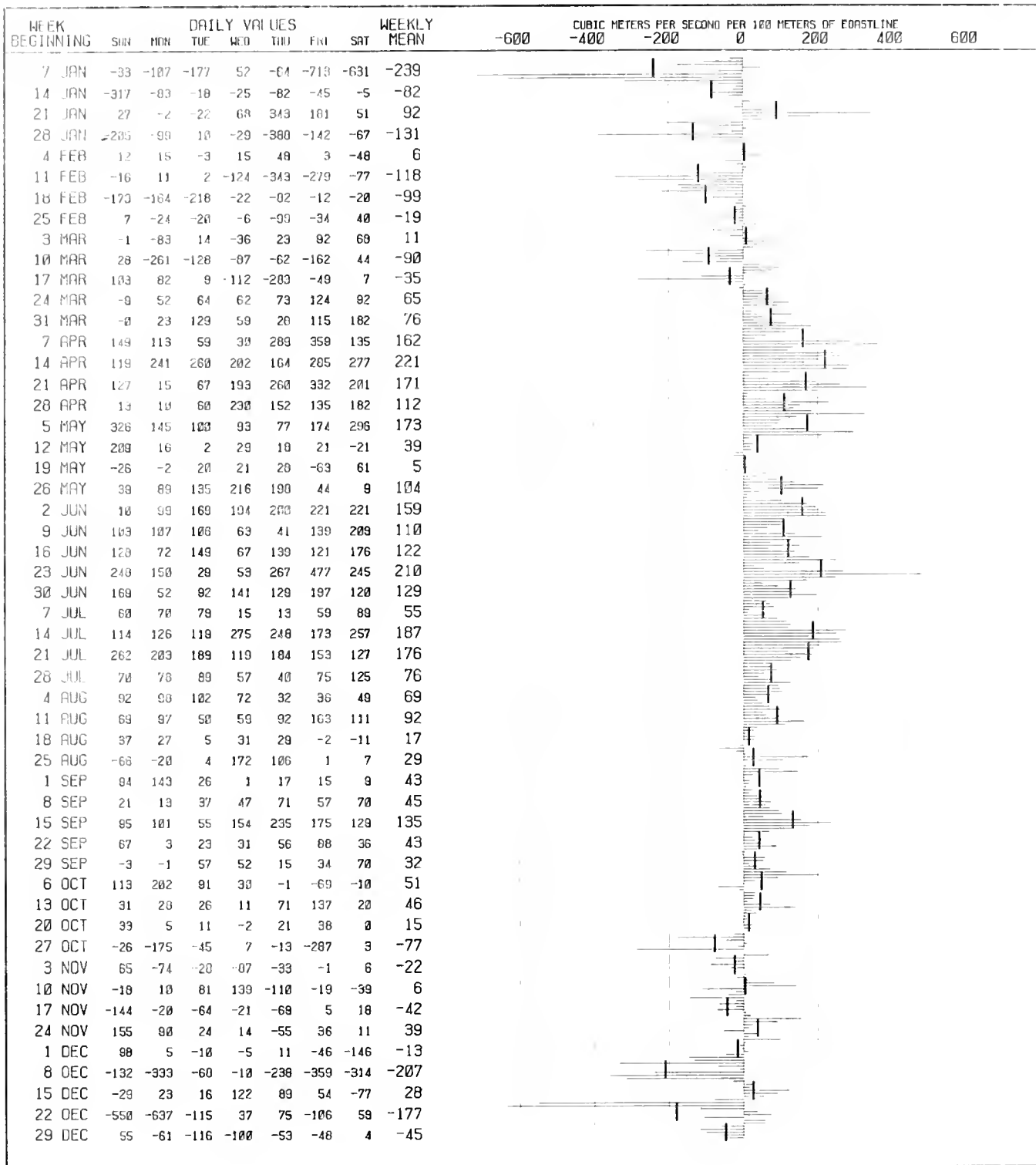
WEEK BEGINNING	DAILY VALUES							WEEKLY MEAN	CUBIC METERS PER SECOND PER 100 KILOMETERS OF COASTLINE						
	SUN	MON	TUE	WED	THU	FRI	SAT		-600	-400	-200	0	200	400	600
7 JAN	-13	-160	-46	-269	-304	-194	-156	-166							
14 JAN	-269	-368	-51	-606	-47	4	-197	-205							
21 JAN	-8	-91	-363	-110	54	-124	-432	-152							
28 JAN	-294	-49	-4	-11	-135	-143	-66	-101							
4 FEB	-35	-29	3	-2	-9	-115	-55	-34							
11 FEB	5	60	-115	-25	-0	1	52	-22							
18 FEB	5	20	16	-44	-70	-143	-231	-64							
25 FEB	-307	-101	-46	-59	0	-42	-45	-86							
4 MAR	5	-49	5	3	81	21	46	16							
11 MAR	130	130	180	38	-9	20	3	72							
18 MAR	-172	-13	27	30	91	35	20	3							
25 MAR	176	241	177	117	-7	12	56	110							
1 APR	112	37	19	20	46	64	-5	42							
8 APR	1	5	24	26	27	122	40	36							
15 APR	9	18	124	83	159	200	102	99							
22 APR	156	194	117	79	204	308	203	194							
29 APR	205	118	19	18	30	149	133	97							
6 MAY	56	13	24	50	100	36	34	45							
13 MAY	20	23	22	37	124	197	197	89							
20 MAY	199	98	27	-57	24	34	2	47							
27 MAY	69	113	140	379	311	207	140	197							
3 JUN	140	73	25	43	62	166	305	116							
10 JUN	179	10	20	90	117	18	51	69							
17 JUN	41	12	45	20	40	57	-5	31							
24 JUN	-6	0	60	174	327	344	253	164							
1 JUL	62	49	50	133	149	61	31	80							
8 JUL	56	66	239	357	300	163	110	188							
15 JUL	80	86	54	39	20	75	124	67							
22 JUL	106	77	39	161	162	101	69	101							
29 JUL	89	105	137	154	207	216	156	152							
5 AUG	88	79	42	55	103	130	177	97							
12 AUG	114	94	126	145	120	179	124	130							
19 AUG	92	97	101	37	20	28	94	68							
26 AUG	86	93	93	130	117	131	76	104							
2 SEP	34	60	26	8	30	131	103	58							
9 SEP	80	6	12	15	42	31	9	28							
16 SEP	-6	-5	-22	-150	-43	-11	-41	-41							
23 SEP	-27	26	50	24	25	46	190	40							
30 SEP	170	135	93	83	69	22	-13	81							
7 OCT	8	5	50	46	49	7	11	25							
14 OCT	23	-1	3	-2	-41	-62	-26	-15							
21 OCT	-37	-125	-32	-31	11	-8	-14	-34							
28 OCT	44	58	38	70	80	30	6	48							
4 NOV	-54	-81	-13	-17	-224	-208	-327	-141							
11 NOV	-161	-30	-59	-120	-240	1	73	-79							
18 NOV	114	-82	10	29	31	31	47	26							
25 NOV	85	-28	-219	-123	-86	-119	-7	-71							
2 DEC	-58	-13	-55	-107	-210	-31	-8	-69							
9 DEC	-35	-254	-223	-473	-99	-129	-369	-225							
16 DEC	-106	-16	-95	-414	-320	-154	-32	-162							
23 DEC	-13	-16	-3	-117	-74	-109	90	-35							

# COASTAL UPWELLING INDICES, DAILY AND WEEKLY MEANS DURING 1967 AT 39N, 125W

WEEK BEGINNING	DAILY VALUES							WEEKLY MEAN	CUBIC METERS PER SECOND PER 100 METERS OF COASTLINE						
	SUN	MON	TUE	WED	THU	FRI	SAT		-600	-400	-200	0	200	400	600
1 JAN	77	13	-17	-6	44	18	9	20							
8 JAN	-47	-157	-82	3	50	65	24	-20							
15 JAN	71	204	56	0	-150	-05	55	22							
22 JAN	-76	-371	-25	-119	-200	-222	-241	-186							
29 JAN	-61	-80	54	4	50	26	43	4							
5 FEB	29	11	3	16	31	59	23	24							
12 FEB	20	137	130	50	26	58	255	99							
19 FEB	141	-7	8	20	-29	-8	33	24							
26 FEB	-15	-40	-12	36	262	311	130	97							
5 MAR	33	37	103	114	72	1	-9	50							
12 MAR	-31	53	260	-500	-70	-32	14	-140							
19 MAR	-112	-12	-52	-227	0	46	23	-47							
26 MAR	33	49	154	111	26	90	2	66							
2 APR	15	24	29	-12	11	95	69	33							
9 APR	85	34	116	103	37	22	115	66							
16 APR	14	1	7	9	-11	37	-11	7							
23 APR	5	46	40	19	25	40	41	31							
30 APR	24	29	41	31	97	110	44	54							
7 MAY	33	30	41	35	23	75	120	51							
14 MAY	86	41	37	88	94	66	116	75							
21 MAY	148	272	437	423	260	147	80	252							
28 MAY	63	150	185	275	46	-30	14	103							
4 JUN	116	31	52	112	250	180	224	139							
11 JUN	245	63	93	94	65	114	94	110							
18 JUN	47	30	161	255	294	180	134	159							
25 JUN	137	116	171	140	64	32	27	98							
2 JUL	35	50	81	72	214	150	185	114							
9 JUL	130	75	142	147	253	202	242	170							
16 JUL	187	168	151	117	130	172	113	151							
23 JUL	81	99	211	226	67	49	49	112							
30 JUL	190	101	145	135	154	202	209	173							
6 AUG	226	217	74	37	117	62	61	113							
13 AUG	75	117	69	78	44	75	07	77							
20 AUG	100	160	80	179	121	29	4	99							
27 AUG	3	10	19	43	7	17	46	21							
3 SEP	11	13	26	50	43	18	11	26							
10 SEP	21	60	49	2	7	4	-13	20							
17 SEP	13	106	90	51	36	137	90	77							
24 SEP	52	142	46	29	26	32	65	56							
1 OCT	32	-32	-20	-42	6	-8	-45	-15							
8 OCT	-4	34	14	20	67	124	133	50							
15 OCT	43	6	-14	33	101	3	-46	18							
22 OCT	14	62	4	63	30	-1	59	33							
29 OCT	50	-0	2	113	50	-2	-23	26							
5 NOV	-32	40	-156	7	-15	-34	-277	03							
12 NOV	-322	-170	-46	-74	-0	2	131	-69							
19 NOV	124	2	50	27	03	70	119	69							
26 NOV	69	35	19	33	24	-204	-247	-49							
3 DEC	-03	-111	110	-101	30	15	-34	-36							
10 DEC	-10	175	170	85	22	25	238	95							
17 DEC	0	14	33	-11	-176	-147	-18	-14							
24 DEC	10	23	23	26	119	41	12	37							
31 DEC	57	116	50	35	6	49	4	51							



# COASTAL UPWELLING INDICES, DAILY AND WEEKLY MEANS DURING 1968 AT 39N, 125W



# COASTAL UPWELLING INDICES, DAILY AND WEEKLY MEANS DURING 1969 AT 39N, 125W

WEEK BEGINNING	DAILY VALUES								WEEKLY MEAN	CUBIC METERS PER SECOND PER 100 METERS OF COASTLINE					
	SUN	MON	TUE	WED	THU	FRI	SAT	-600		-400	-200	0	200	400	600
5 JAN	3	-1	58	89	-32	-97	-102	-12							
12 JAN	-201	5	9	10	-21	-41	-47	-41							
19 JAN	-14	-25	52	30	-50	-42	-85	-19							
26 JAN	99	64	98	-10	36	35	54	54							
2 FEB	3	-42	-36	-167	83	-104	-273	-76							
9 FEB	-139	-433	8	130	-42	-371	-93	-134							
16 FEB	-367	-122	65	187	160	9	-41	-17							
23 FEB	-115	-31	-27	-132	-206	-40	-37	-84							
2 MAR	-55	157	210	169	161	61	11	109							
9 MAR	156	44	8	59	83	16	-52	44							
16 MAR	-171		24	1	-11	96	159	9							
23 MAR	76	36	-31	-7	4	-12	-58	-8							
30 MAR	-8	28	-13	10	-105	-226	-3	-45							
6 APR	-3	27	-6	45	121	35	51	31							
13 APR	62	123	161	87	84	67	100	98							
20 APR	61	28	-53	-8	16	60	107	33							
27 APR	63	134	270	118	241	375	394	229							
4 MAY	363	263	61	-1	-8	68	110	128							
11 MAY	75	9	2	23	20	17	13	23							
18 MAY	64	113	148	127	81	1	-2	76							
25 MAY	-40	-28	14	124	153	249	305	111							
1 JUN	191	74	15	13	12	39	96	63							
8 JUN	114	40	36	23	27	46	89	54							
15 JUN	164	152	28	16	51	66	127	86							
22 JUN	110	130	82	181	149	161	141	139							
29 JUN	284	140	91	149	313	323	316	221							
6 JUL	287	239	186	166	147	167	220	203							
13 JUL	249	272	250	251	270	178	139	223							
20 JUL	142	228	99	21	29	100	125	105							
27 JUL	140	141	163	175	206	260	312	200							
3 AUG	340	215	323	310	279	222	217	273							
10 AUG	323	256	333	184	86	210	240	233							
17 AUG	110	85	61	80	140	131	56	95							
24 AUG	31	105	107	233	252	230	147	169							
31 AUG	77	115	225	409	151	94	32	158							
7 SEP	18	53	99	160	131	138	204	115							
14 SEP	121	56	3	-16	-1	20	45	33							
21 SEP	93	25	35	60	120	54	9	57							
28 SEP	15	66	99	168	254	157	25	112							
5 OCT	-4	-12	-32	30	-13	17	5	-1							
12 OCT	3	-21	-130	-91	-11	60	131	-8							
19 OCT	45	38	16	23	3	1	-61	9							
26 OCT	-70	-0	47	46	22	9	-2	6							
2 NOV	16	14	-37	-7	-4	-129	-15	-23							
9 NOV	40	30	-14	-22	-14	-6	103	17							
16 NOV	87	9	-20	-66	-20	75	40	11							
23 NOV	9	11	5	9	19	9	-16	7							
30 NOV	-45	-61	-29	28	32	2	28	-6							
7 DEC	7	6	-38	-260	-562	-247	-306	-200							
14 DEC	-20	-94	-143	-286	-406	-279	-244	-210							
21 DEC	7	-110	30	-56	47	106	103	6							
28 DEC	107	44	14	0	6	-9	8	25							

# COASTAL UPWELLING INDICES, DAILY AND WEEKLY MEANS DURING 1970 AT 39N, 125W

WEEK BEGINNING	DAILY VALUES							WEEKLY MEAN	CUBIC METERS PER SECOND PER 100 METERS OF COASTLINE						
	SUN	MON	TUE	WED	THU	FRI	SAT		-600	-400	-200	0	200	400	600
4 JAN	7	-96	-298	-593	-434	-92	-22	-218							
11 JAN	-96	-160	-296	-88	-160	-166	-64	-147							
18 JAN	-152	-150	-297	-140	-109	-162	-109	-173							
25 JAN	-73	-164	71	25	-35	13	7	-22							
1 FEB	67	10	59	36	-10	-48	-155	-6							
8 FEB	-136	-49	-91	-219	-115	-32	-90	-105							
15 FEB	-225	-79	36	11	-4	-4	-19	-41							
22 FEB	-22	-112	-231	-80	-26	-70	-13	-80							
1 MAR	104	42	-12	-1	-18	-78	-1	5							
8 MAR	24	23	-7	-39	-96	-84	44	-19							
15 MAR	109	196	159	55	0	30	120	97							
22 MAR	152	119	161	170	225	52	331	173							
29 MAR	323	284	129	111	216	124	62	178							
5 APR	36	193	64	10	26	194	222	107							
12 APR	330	451	123	21	121	147	122	186							
19 APR	231	135	228	75	39	80	114	129							
26 APR	79	110	145	127	140	72	11	99							
3 MAY	56	76	234	219	105	60	112	123							
10 MAY	59	14	-16	44	100	90	135	61							
17 MAY	222	251	234	150	86	216	190	193							
24 MAY	131	51	125	213	204	175	175	153							
31 MAY	66	-4	29	261	201	97	62	113							
7 JUN	180	-17	-0	91	243	301	137	147							
14 JUN	109	187	75	8	30	59	122	86							
21 JUN	149	50	52	41	34	47	56	61							
28 JUN	219	173	92	50	59	99	101	125							
5 JUL	316	222	118	68	66	46	81	131							
12 JUL	166	149	103	70	51	97	112	107							
19 JUL	101	182	255	214	152	153	93	164							
26 JUL	52	64	130	74	105	80	113	89							
2 AUG	185	176	81	18	60	225	232	141							
9 AUG	176	102	80	169	211	255	161	166							
16 AUG	123	113	149	139	123	83	80	116							
23 AUG	71	93	63	86	109	96	82	86							
30 AUG	44	63	86	161	157	249	151	130							
6 SEP	129	119	186	73	53	123	219	129							
13 SEP	115	53	85	44	21	102	81	71							
20 SEP	30	101	110	226	116	-22	-0	81							
27 SEP	4	4	-5	24	104	44	32	29							
4 OCT	31	113	197	87	30	69	81	87							
11 OCT	42	100	50	38	25	10	6	41							
18 OCT	3	-19	15	-71	-39	31	6	-11							
25 OCT	11	10	-34	-85	-90	-209	-100	-72							
1 NOV	-91	-76	-90	-102	-54	-43	-65	-75							
8 NOV	-45	1	-63	-2	9	-39	-194	-48							
15 NOV	-100	9	48	79	90	20	-9	20							
22 NOV	-256	-143	-40	15	63	-46	-12	-60							
29 NOV	10	18	-59	-20	-172	-94	-89	-58							
6 DEC	-136	-27	8	2	-19	31	-0	-20							
13 DEC	11	-21	-120	49	9	-2	36	-6							
20 DEC	8	80	3	-33	-22	-30	-4	0							
27 DEC	-30	-67	-17	-38	6	122	233	30							

# COASTAL UPWELLING INDICES, DAILY AND WEEKLY MEANS DURING 1971 AT 39N, 125W

WEEK BEGINNING	DAILY VALUES							WEEKLY MEAN	CUBIC METERS PER SECOND PER 100 METERS OF COASTLINE						
	SUN	MON	TUE	WED	THU	FRI	SAT		-600	-400	-200	0	200	400	600
3 JAN	27	6	31	63	50	41	21	34							
10 JAN	43	31	37	8	-294	-407	-238	-117							
17 JAN	-39	-6	38	212	221	206	126	108							
24 JAN	56	11	3	7	8	-2	-6	11							
31 JAN	8	101	196	30	12	23	37	58							
7 FEB	2	-6	-3	3	-6	-1	17	1							
14 FEB	4	15	-30	109	21	124	35	39							
21 FEB	22	107	91	143	173	69	126	104							
28 FEB	170	41	-2	33	106	12	-72	42							
7 MAR	19	48	11	-40	-186	10	2	-19							
14 MAR	-27	-16	38	93	12	-1	9	16							
21 MAR	2	-64	-0	-13	-311	-29	8	-59							
28 MAR	22	30	131	48	29	114	125	71							
4 APR	18	13	39	23	-53	-75	-4	-5							
11 APR	3	-11	-13	206	190	98	222	100							
18 APR	106	75	138	33	3	107	327	124							
25 APR	289	37	62	65	9	-41	-94	44							
2 MAY	2	82	109	168	177	17	3	80							
9 MAY	26	66	29	10	85	79	171	66							
16 MAY	226	149	131	261	447	288	196	243							
23 MAY	162	134	119	119	103	81	220	146							
30 MAY	342	157	55	89	87	50	101	126							
6 JUN	165	200	201	27	126	146	55	133							
13 JUN	79	232	204	268	120	44	12	150							
20 JUN	13	16	38	148	63	22	35	48							
27 JUN	99	175	166	231	250	273	223	202							
4 JUL	225	189	200	101	13	56	109	128							
11 JUL	170	143	154	142	110	102	13	120							
18 JUL	33	15	19	20	65	121	95	54							
25 JUL	64	59	76	75	9	12	45	48							
1 AUG	119	65	66	39	26	48	7	56							
8 AUG	13	62	103	105	152	60	45	77							
15 AUG	50	50	83	71	51	9	14	45							
22 AUG	116	86	60	71	20	6	14	56							
29 AUG	14	15	20	29	165	96	24	52							
5 SEP	80	116	39	42	33	35	106	66							
12 SEP	112	160	151	40	12	-11	-6	65							
19 SEP	13	51	-0	-3	4	50	95	31							
26 SEP	46	19	45	93	56	19	16	42							
3 OCT	26	-3	6	54	25	7	17	19							
10 OCT	49	63	69	109	294	271	170	159							
17 OCT	34	25	-52	30	-5	18	64	9							
24 OCT	68	22	85	109	164	48	45	89							
31 OCT	40	41	16	7	50	60	3	35							
7 NOV	23	-117	-350	-170	-99	-54	91	-95							
14 NOV	131	156	71	56	85	7	8	74							
21 NOV	17	14	-20	15	-36	-15	-6	-4							
28 NOV	15	118	58	-99	29	97	21	34							
5 DEC	47	219	152	24	92	97	-48	83							
12 DEC	73	64	108	48	1	-4	-10	40							
19 DEC	7	-8	-163	-77	-459	-27	8	-105							
26 DEC	-125	20	12	2	17	12	-29	-13							

# COASTAL UPWELLING INDICES, DAILY AND WEEKLY MEANS DURING 1972 AT 39N, 125W

WEEK BEGINNING	DAILY VALUES							WEEKLY MEAN	CUBIC METERS PER SECOND PER 100 METERS OF COASTLINE						
	SUN	MON	TUE	WED	THU	FRI	SAT		-600	-400	-200	0	200	400	600
2 JAN	121	42	-23	-13	2	29	35	28							
9 JAN	49	32	41	63	81	4	-5	38							
16 JAN	-5	18	-9	-72	-83	-11	-7	-24							
23 JAN	41	-7	70	27	-7	-58	-23	7							
30 JAN	-9	25	-13	-103	-241	-218	-39	-97							
6 FEB	-24	-58	-142	-14	2	2	10	-31							
13 FEB	86	54	45	19	-2	-73	-140	-2							
20 FEB	-7	-37	-30	-6	5	-43	-105	-32							
27 FEB	-73	-36	42	-20	29	27	15	-2							
5 MAR	12	59	6	-142	-195	-62	15	-48							
12 MAR	8	46	55	41	18	53	69	40							
19 MAR	56	18	-26	55	19	21	88	33							
26 MAR	145	129	51	51	45	5	-4	57							
2 APR	1	-32	-344	-236	-12	11	33	-83							
9 APR	39	5	-9	69	118	126	103	65							
16 APR	353	582	354	163	132	184	67	252							
23 APR	-48	68	233	163	139	209	296	157							
30 APR	227	166	199	192	137	66	14	143							
7 MAY	-2	26	131	208	153	83	125	195							
14 MAY	106	72	80	225	333	73	-14	125							
21 MAY	-2	93	185	227	201	188	83	127							
28 MAY	36	96	179	177	203	128	149	139							
4 JUN	282	231	120	89	2	6	-7	92							
11 JUN	135	259	213	170	193	334	317	232							
18 JUN	222	97	85	177	145	49	153	133							
25 JUN	228	131	63	86	245	307	236	194							
2 JUL	45	38	57	138	137	84	91	82							
9 JUL	141	183	172	198	231	288	156	194							
16 JUL	27	15	82	86	27	13	33	38							
23 JUL	75	89	122	101	152	176	81	114							
30 JUL	65	154	269	343	238	167	69	185							
6 AUG	23	43	78	117	135	189	141	92							
13 AUG	145	69	12	-5	64	40	-18	45							
20 AUG	-16	17	138	239	315	218	118	153							
27 AUG	44	48	45	106	171	58	8	66							
3 SEP	-8	18	93	198	146	95	195	107							
10 SEP	216	56	27	33	52	29	27	63							
17 SEP	18	21	27	24	56	135	97	54							
24 SEP	63	-13	-19	62	49	18	16	27							
1 OCT	99	173	112	77	91	35	-18	83							
8 OCT	-23	-33	-13	-4	-38	-33	-26	-23							
15 OCT	-33	-31	-9	53	113	122	48	36							
22 OCT	65	78	28	41	140	87	101	78							
29 OCT	128	53	18	-24	-36	-67	56	16							
5 NOV	-9	-68	23	-27	-88	-24	148	-9							
12 NOV	-116	-288	-31	-128	-82	15	8	-88							
19 NOV	11	-26	-18	38	16	14	16	6							
26 NOV	78	88	65	7	-2	-2	1	32							
3 DEC	34	215	73	77	93	88	2	82							
10 DEC	-23	11	-5	1	-105	-556	-341	-146							
17 DEC	-183	-288	-95	-61	-158	33	-8	-88							
24 DEC	42	-12	-21	71	188	52	25	49							
31 DEC	77	33	74	93	39	4	11	47							

# COASTAL UPWELLING INDICES, DAILY AND WEEKLY MEANS DURING 1973 AT 39N, 125W

WEEK BEGINNING	DAILY VALUES							WEEKLY MEAN	CUBIC METERS PER SECOND PER 100 METERS OF COASTLINE						
	SUN	MON	TUE	WED	THU	FRI	SAT		-600	-400	-200	0	200	400	600
7 JAN	-41	-414	-113	-175	-191	-100	-68	-157							
14 JAN	-184	-289	-27	-609	40	46	-17	-149							
21 JAN	15	-7	-187	-86	62	-63	-342	-87							
28 JAN	-313	-116	21	14	-109	-274	-265	-149							
4 FEB	-212	-150	-30	0	-7	-162	-80	-93							
11 FEB	28	-60	-68	10	31	37	144	17							
18 FEB	38	17	14	-2	-71	-420	-266	-101							
25 FEB	-270	-104	-125	2	27	-10	-15	-71							
4 MAR	16	-19	14	20	154	109	103	57							
11 MAR	191	314	375	139	24	31	60	162							
18 MAR	-30	-12	75	40	120	60	20	39							
25 MAR	115	379	353	208	49	28	110	169							
1 APR	174	119	51	42	48	99	37	81							
8 APR	4	-2	42	51	39	103	129	52							
15 APR	24	37	274	205	272	298	191	186							
22 APR	293	413	303	160	224	419	441	322							
29 APR	413	290	67	36	117	211	269	200							
6 MAY	142	71	62	129	214	127	126	124							
13 MAY	91	53	45	106	207	298	304	158							
20 MAY	301	249	138	16	25	80	9	117							
27 MAY	137	199	264	460	328	312	277	282							
3 JUN	247	136	69	163	261	290	476	235							
10 JUN	364	126	86	226	251	88	104	178							
17 JUN	114	123	149	88	99	93	24	99							
24 JUN	18	55	157	239	389	362	363	228							
1 JUL	203	129	161	209	369	204	153	216							
8 JUL	175	217	423	529	329	189	89	279							
15 JUL	76	66	61	61	32	64	230	84							
22 JUL	252	179	145	283	201	117	79	179							
29 JUL	93	125	188	219	215	265	235	192							
5 AUG	102	82	47	66	123	221	303	135							
12 AUG	207	153	151	232	244	277	184	207							
19 AUG	153	168	188	110	77	103	171	139							
26 AUG	116	123	158	169	200	179	119	153							
2 SEP	60	81	86	28	116	301	252	132							
9 SEP	63	2	13	34	56	50	44	38							
16 SEP	12	13	-0	-54	22	21	6	3							
23 SEP	38	69	144	58	49	69	153	83							
30 SEP	226	197	167	160	121	97	-0	138							
7 OCT	39	17	76	143	117	41	28	66							
14 OCT	44	37	25	4	-14	-50	-31	2							
21 OCT	-23	-183	6	33	73	30	7	-5							
28 OCT	110	194	92	103	140	81	32	107							
4 NOV	-66	-285	-39	-60	-232	-279	-360	-189							
11 NOV	-147	4	-5	-41	-131	0	52	-38							
18 NOV	161	39	55	59	41	51	121	75							
25 NOV	128	25	-81	-53	-55	-179	23	-27							
2 DEC	2	10	-46	-96	-156	-35	7	-45							
9 DEC	-1	-135	-82	-208	-9	-36	-196	-95							
16 DEC	-142	8	-32	-227	-300	-68	16	-108							
23 DEC	2	14	2	-35	-2	-27	119	11							

# COASTAL UPWELLING INDICES, DAILY AND WEEKLY MEANS DURING 1967 AT 36N, 122W

WEEK BEGINNING	DAILY VALUES							WEEKLY MEAN	-600	CUBIC METERS PER SECOND PER 100 METERS OF COASTLINE					600
	SUN	MON	TUE	WED	THU	FRI	SAT			-400	-200	0	200	400	
1 JAN	85	17	-23	-27	110	39	5	29							
8 JAN	-43	-73	-30	8	87	34	-11	-4							
15 JAN	20	50	4	-9	-11	-59	-36	-5							
22 JAN	19	-48	-67	0	-49	-19	-27	-27							
29 JAN	-13	-12	97	41	50	6	-16	22							
5 FEB	-18	-40	-34	-9	31	10	-46	-15							
12 FEB	-8	79	219	71	50	37	70	75							
19 FEB	52	-50	-12	1	-15	3	57	5							
26 FEB	19	-43	6	46	126	200	91	65							
5 MAR	16	21	32	33	49	-51	-16	12							
12 MAR	-30	13	-43	-361	-84	51	96	-51							
19 MAR	25	24	34	-3	77	179	65	57							
26 MAR	41	33	137	206	41	45	6	73							
2 APR	9	33	63	-4	10	93	115	45							
9 APR	70	50	97	102	65	77	137	98							
16 APR	54	35	35	20	-7	19	20	24							
23 APR	-10	92	100	74	137	82	135	88							
30 APR	127	82	125	61	90	56	12	83							
7 MAY	11	91	70	125	141	151	92	97							
14 MAY	23	26	35	54	130	121	112	73							
21 MAY	166	140	274	407	254	247	273	253							
28 MAY	209	351	373	245	32	1	29	177							
4 JUN	127	70	76	120	272	233	219	161							
11 JUN	307	162	85	126	140	159	90	153							
18 JUN	100	70	160	210	232	179	143	158							
25 JUN	131	111	97	00	46	61	126	93							
2 JUL	114	52	84	91	217	124	132	116							
9 JUL	157	80	52	93	102	147	100	127							
16 JUL	121	191	175	150	170	118	133	151							
23 JUL	120	135	168	117	40	29	60	98							
30 JUL	212	200	141	129	150	264	206	187							
6 AUG	291	191	74	80	110	76	94	133							
13 AUG	80	95	69	96	41	80	112	83							
20 AUG	92	153	74	80	30	47	37	73							
27 AUG	53	67	82	76	66	35	22	57							
3 SEP	36	62	106	84	95	76	57	74							
10 SEP	45	52	59	26	40	41	59	46							
17 SEP	72	81	1	-3	20	81	38	41							
24 SEP	54	80	17	15	10	46	115	49							
1 OCT	73	31	26	12	87	51	-2	40							
8 OCT	10	50	63	40	50	85	80	54							
15 OCT	-20	-25	-25	21	22	8	26	1							
22 OCT	56	60	18	47	70	33	127	59							
29 OCT	45	-43	-24	24	1	-1	3	1							
5 NOV	-0	-2	-29	20	43	4	-51	-2							
12 NOV	-76	-57	-4	-32	-19	-15	14	-27							
19 NOV	20	-83	-10	-15	2	-8	-5	-14							
26 NOV	-5	15	76	10	29	-20	-107	1							
3 DEC	-63	-34	46	-15	70	90	-31	10							
10 DEC	4	63	197	211	43	20	132	96							
17 DEC	99	79	45	-0	-44	-70	-57	6							
24 DEC	-64	-93	-73	-59	-8	-4	13	-41							
31 DEC	8	20	42	1	11	24	4	18							

# COASTAL UPWELLING INDICES, DAILY AND WEEKLY MEANS DURING 1968 AT 36N, 122W

WEEK BEGINNING	DAILY VALUES							WEEKLY MEAN	CUBIC METERS PER SECOND PER 100 METERS OF COASTLINE						
	SUN	MON	TUE	WED	THU	FRI	SAT		-600	-400	-200	0	200	400	600
7 JAN	11	-19	-100	18	-10	-267	-233	-86							
14 JAN	-58	15	31	2	-69	-21	-5	-15							
21 JAN	17	-50	-42	-3	30	140	53	22							
28 JAN	-47	-103	-34	-12	-133	3	-1	-58							
4 FEB	-7	-14	-5	14	12	14	1	2							
11 FEB	-13	-1	1	-62	-184	-200	-43	-73							
18 FEB	-14	-19	5	30	16	35	-1	8							
25 FEB	-9	-21	0	2	-9	-26	62	1							
3 MAR	30	8	130	56	-5	65	161	64							
10 MAR	130	-28	-71	-0	2	-16	75	14							
17 MAR	155	213	49	-5	-51	-4	69	61							
24 MAR	81	129	139	01	41	36	07	05							
31 MAR	130	37	235	112	79	227	151	139							
7 APR	119	46	15	32	07	169	38	72							
14 APR	70	364	403	310	189	163	320	260							
21 APR	276	09	115	266	200	135	82	178							
28 APR	37	36	160	254	139	176	225	146							
5 MAY	412	151	72	74	143	210	437	215							
12 MAY	278	75	44	56	97	139	00	111							
19 MAY	41	146	177	204	193	61	252	153							
26 MAY	253	235	164	297	343	218	144	236							
2 JUN	157	200	200	340	260	240	240	248							
9 JUN	203	162	220	169	205	201	118	183							
16 JUN	101	92	134	96	120	162	299	143							
23 JUN	414	169	77	86	140	457	193	221							
30 JUN	74	71	264	152	07	109	117	125							
7 JUL	96	79	94	62	104	169	200	115							
14 JUL	193	217	157	127	123	154	103	166							
21 JUL	210	236	160	194	100	157	75	174							
28 JUL	51	46	100	102	148	149	171	111							
4 AUG	155	94	75	50	00	146	140	106							
11 AUG	173	179	163	94	163	215	159	165							
18 AUG	140	96	41	62	105	34	33	73							
25 AUG	-4	32	91	110	11	9	50	44							
1 SEP	115	195	100	22	59	05	79	94							
8 SEP	128	109	140	124	97	141	103	121							
15 SEP	144	25	21	120	344	196	00	133							
22 SEP	40	1	16	32	36	04	94	44							
29 SEP	29	10	52	69	22	65	149	57							
6 OCT	115	154	37	30	30	1	14	57							
13 OCT	36	109	132	60	35	104	34	73							
20 OCT	50	53	34	10	-11	1	1	20							
27 OCT	3	1	20	40	28	-39	-20	6							
3 NOV	66	7	30	-6	37	27	65	33							
10 NOV	10	0	169	203	-35	-22	-2	40							
17 NOV	-26	5	-5	-16	-20	40	4	-3							
24 NOV	146	161	90	4	-30	-9	49	59							
1 DEC	150	50	-29	-6	25	-11	-61	17							
8 DEC	-26	-153	-07	54	-36	-226	-118	-84							
15 DEC	-97	90	99	94	123	78	-19	53							
22 DEC	-203	-327	-102	59	122	-20	10	-66							
29 DEC	50	-13	-66	-35	-33	-6	-10	-17							



# COASTAL UPWELLING INDICES, DAILY AND WEEKLY MEANS DURING 1969 AT 36N, 122W

WEEK BEGINNING	DAILY VALUES							WEEKLY MEAN	CUBIC METERS PER SECOND PER 100 METERS OF COASTLINE						
	SUN	MON	TUE	WED	THU	FRI	SAT		-600	-400	-200	0	200	400	600
5 JAN	-4	-25	56	82	18	-4	-70	8							
12 JAN	-251	-45	47	26	3	-19	-123	-52							
19 JAN	-166	-185	22	49	-47	-81	-156	-81							
26 JAN	65	61	113	19	31	79	104	67							
2 FEB	30	-70	-37	-130	58	-4	-81	-33							
9 FEB	-12	-60	-13	214	61	-100	-37	4							
16 FEB	-51	-17	83	108	181	8	4	45							
23 FEB	-92	-86	-1	-28	-122	-19	19	-47							
2 MAR	43	263	244	149	300	175	12	169							
9 MAR	75	78	32	57	80	24	-8	49							
16 MAR	-1	19	85	35	-12	74	173	53							
23 MAR	51	-93	-57	-8	6	13	24	-9							
30 MAR	25	161	60	77	42	-41	19	49							
6 APR	27	3	9	87	181	93	185	84							
13 APR	253	272	218	144	127	208	107	190							
20 APR	75	83	43	37	138	227	92	99							
27 APR	56	91	270	216	285	354	474	238							
4 MAY	165	44	33	68	41	100	128	82							
11 MAY	182	100	93	130	93	71	69	105							
18 MAY	155	194	200	165	132	135	104	155							
25 MAY	49	71	163	207	214	240	121	152							
1 JUN	67	48	78	84	74	103	205	94							
8 JUN	166	182	147	186	118	119	152	129							
15 JUN	152	118	28	35	98	141	172	106							
22 JUN	171	267	193	181	263	305	245	232							
29 JUN	179	111	163	180	270	338	443	241							
6 JUL	268	225	159	145	164	182	153	174							
13 JUL	202	212	220	185	150	99	98	167							
20 JUL	73	87	75	42	182	126	177	97							
27 JUL	136	140	177	137	138	176	160	152							
3 AUG	164	139	269	197	129	132	118	164							
10 AUG	281	272	374	168	135	166	138	219							
17 AUG	82	138	67	64	59	165	158	182							
24 AUG	132	182	184	176	232	143	62	159							
31 AUG	58	55	95	110	58	28	15	59							
7 SEP	32	87	110	67	59	96	85	77							
14 SEP	114	115	79	38	66	124	144	96							
21 SEP	126	71	91	89	79	74	49	83							
28 SEP	29	103	153	200	306	173	7	139							
5 OCT	-8	18	28	124	116	121	44	62							
12 OCT	6	3	-4	-68	17	166	154	39							
19 OCT	23	8	18	27	12	11	2	13							
26 OCT	7	57	113	24	-2	-4	-5	27							
2 NOV	16	13	9	12	5	-103	-127	-25							
9 NOV	-1	-19	-51	-53	-16	4	39	-14							
16 NOV	137	28	-47	-64	-12	45	28	15							
23 NOV	-4	-26	-26	-12	-11	-14	-12	-15							
30 NOV	-29	-18	4	49	39	7	29	13							
7 DEC	16	26	9	-35	-118	-35	-69	-28							
14 DEC	-4	-44	-28	-37	-69	-128	-182	-58							
21 DEC	12	8	8	1	88	252	245	85							
28 DEC	75	3	-14	9	-8	-49	-17	-8							

# COASTAL UPWELLING INDICES, DAILY AND WEEKLY MEANS DURING 1970 AT 36N, 122W

WEEK BEGINNING	DAILY VALUES							WEEKLY MEAN	CUBIC METERS PER SECOND PER 100 METERS OF COASTLINE						
	SUN	MON	TUE	WED	THU	FRI	SAT		-600	-400	-200	0	200	400	600
4 JAN	18	-49	-164	-133	-287	-214	2	-118							
11 JAN	-22	-25	-54	-13	-78	-39	17	-30							
18 JAN	-10	-21	-33	-22	-0	-80	20	-22							
25 JAN	6	-1	130	39	-10	72	48	41							
1 FEB	118	7	14	29	21	1	-65	15							
8 FEB	-107	-88	-36	-71	-64	26	16	-46							
15 FEB	-42	-4	122	141	24	11	4	37							
22 FEB	5	-23	-103	-61	-5	-44	-110	-49							
1 MAR	7	81	17	20	41	3	16	26							
8 MAR	92	70	109	17	9	1	74	53							
15 MAR	240	159	257	70	-2	31	46	114							
22 MAR	61	36	46	48	132	24	125	68							
29 MAR	248	217	117	31	111	98	49	125							
5 APR	62	186	218	130	133	226	266	173							
12 APR	207	396	146	73	85	164	182	179							
19 APR	348	277	321	111	90	147	195	213							
26 APR	187	204	180	135	112	15	21	122							
3 MAY	30	71	240	203	252	164	273	188							
10 MAY	271	110	53	163	182	5	29	106							
17 MAY	183	282	257	251	163	163	138	181							
24 MAY	63	30	100	263	304	170	103	150							
31 MAY	10	14	58	211	211	75	73	93							
7 JUN	162	61	75	205	245	300	77	162							
14 JUN	114	248	118	96	182	88	118	126							
21 JUN	189	16	25	43	79	126	73	67							
28 JUN	364	250	149	70	36	55	98	147							
5 JUL	165	150	77	53	24	39	68	81							
12 JUL	153	154	167	188	139	126	82	133							
19 JUL	183	150	174	162	134	131	56	130							
26 JUL	32	60	118	88	157	151	145	106							
2 AUG	131	181	145	93	188	226	149	148							
9 AUG	38	62	44	85	153	151	181	90							
16 AUG	73	98	130	130	145	87	118	112							
23 AUG	126	143	131	127	147	143	113	133							
30 AUG	184	94	132	200	192	277	113	159							
6 SEP	27	51	81	32	35	88	211	75							
13 SEP	184	79	118	56	27	86	144	98							
20 SEP	117	83	11	64	29	-34	-15	36							
27 SEP	1	-3	-8	31	58	37	34	22							
4 OCT	37	185	281	63	8	28	54	69							
11 OCT	37	88	38	45	38	27	32	43							
18 OCT	36	29	35	17	18	51	63	36							
25 OCT	39	26	-24	-42	-34	-68	-18	-15							
1 NOV	-23	-15	-53	-61	-15	13	2	-22							
8 NOV	-4	14	6	34	88	-34	-156	-7							
15 NOV	-58	18	26	138	32	4	-1	24							
22 NOV	-26	-3	5	58	188	-54	-156	-12							
29 NOV	-26	14	-46	32	-28	-6	-7	-18							
6 DEC	-17	-7	16	45	8	1	-6	6							
13 DEC	34	28	-15	48	32	-42	5	12							
20 DEC	-27	42	2	-43	-53	-65	-12	-22							
27 DEC	11	-1	13	5	21	187	338	71							

# COASTAL UPWELLING INDICES, DAILY AND WEEKLY MEANS DURING 1971 AT 36N, 122W

WEEK BEGINNING	DAILY VALUES							WEEKLY MEAN	CUBIC METERS PER SECOND PER 100 METERS OF COASTLINE						
	SUN	MON	TUE	WED	THU	FRI	SAT		-600	-400	-200	0	200	400	600
3 JAN	3	-6	-8	-9	4	15	18	3							
10 JAN	22	26	55	25	-56	-137	-27	-13							
17 JAN	4	-8	8	84	187	118	46	51							
24 JAN	41	11	-12	-26	-8	-15	-9	-3							
31 JAN	6	48	158	55	58	98	68	67							
7 FEB	9	13	-2	9	-38	-21	16	-1							
14 FEB	48	69	-41	148	37	262	93	87							
21 FEB	31	172	118	89	338	168	142	158							
28 FEB	188	134	6	54	167	79	8	98							
7 MAR	44	82	93	58	7	-3	132	59							
14 MAR	15	25	51	97	-27	-13	24	25							
21 MAR	36	25	49	34	-28	54	114	42							
28 MAR	65	53	277	122	36	149	183	115							
4 APR	13	58	98	124	61	38	184	67							
11 APR	111	46	16	125	269	289	272	158							
18 APR	247	128	164	238	85	225	361	288							
25 APR	185	31	67	138	85	29	9	76							
2 MAY	9	99	136	248	181	18	9	87							
9 MAY	35	78	72	79	194	165	263	127							
16 MAY	338	213	136	176	444	268	187	239							
23 MAY	118	168	213	178	113	52	116	135							
30 MAY	253	173	148	134	157	145	138	162							
6 JUN	174	233	284	161	151	174	163	191							
13 JUN	173	158	136	117	128	123	118	134							
20 JUN	88	78	122	218	195	111	183	131							
27 JUN	181	221	198	195	182	214	191	196							
4 JUL	239	178	246	194	138	186	224	288							
11 JUL	223	147	129	127	124	69	14	119							
18 JUL	31	37	63	77	84	173	137	86							
25 JUL	111	113	175	152	83	73	62	118							
1 AUG	117	158	185	78	63	88	65	93							
8 AUG	64	87	64	98	116	85	96	86							
15 AUG	188	114	133	117	135	91	65	188							
22 AUG	128	49	33	49	48	41	73	58							
29 AUG	181	55	148	125	173	56	14	95							
5 SEP	82	131	35	34	64	78	67	78							
12 SEP	45	35	24	8	17	-5	-5	17							
19 SEP	12	67	3	3	27	93	125	47							
26 SEP	74	66	69	139	89	25	19	69							
3 OCT	6	-6	-2	46	13	21	38	15							
10 OCT	63	45	9	73	219	242	85	185							
17 OCT	29	2	-4	52	18	38	133	38							
24 OCT	113	33	68	238	216	28	31	182							
31 OCT	62	13	-3	-9	32	38	-3	19							
7 NOV	64	18	-63	-84	-187	38	115	-7							
14 NOV	198	129	46	11	8	-68	-9	46							
21 NOV	21	58	13	54	48	31	61	48							
28 NOV	58	136	46	-19	24	73	187	61							
5 DEC	31	228	237	25	95	82	24	182							
12 DEC	59	137	88	61	-35	-23	-9	48							
19 DEC	-4	-4	-259	-93	-88	-28	2	-67							
26 DEC	-148	-36	8	6	11	-46	-98	-42							

# COASTAL UPWELLING INDICES, DAILY AND WEEKLY MEANS

DURING 1972 AT 36N, 122W

WEEK BEGINNING	DAILY VALUES							WEEKLY MEAN	CUBIC METERS PER SECOND PER 100 METERS OF COASTLINE						
	SUN	MON	TUE	WED	THU	FRI	SAT		-600	-400	-200	0	200	400	600
2 JAN	15	-67	-150	-69	-12	14	83	-27							
9 JAN	48	59	113	125	70	-89	-48	38							
16 JAN	-9	14	8	8	8	84	76	26							
23 JAN	66	21	75	66	-23	-14	-25	24							
30 JAN	-53	-5	-9	-164	-159	-125	-2	-74							
6 FEB	28	-11	-63	-34	-31	-15	23	-15							
13 FEB	136	126	113	76	1	-22	-2	61							
20 FEB	26	15	23	43	61	22	19	30							
27 FEB	14	46	179	90	101	156	95	97							
5 MAR	18	38	11	-11	-43	36	70	17							
12 MAR	47	115	60	4	-2	73	192	71							
19 MAR	91	52	27	103	100	65	163	94							
26 MAR	133	116	91	121	79	37	44	97							
2 APR	63	20	-16	-23	40	92	122	45							
9 APR	123	22	-5	66	151	66	49	69							
16 APR	266	535	236	99	100	146	147	181							
23 APR	73	155	103	48	60	233	163	136							
30 APR	63	62	62	130	173	119	64	104							
7 MAY	42	84	166	168	68	36	63	92							
14 MAY	71	119	124	196	273	10	-8	112							
21 MAY	23	87	150	103	175	111	87	118							
28 MAY	86	106	162	153	155	162	170	155							
4 JUN	153	110	63	87	96	53	70	90							
11 JUN	163	125	146	155	177	256	177	171							
18 JUN	122	77	78	126	137	67	107	102							
25 JUN	158	94	82	95	130	110	134	114							
2 JUL	78	73	93	148	164	126	104	112							
9 JUL	164	192	110	92	84	100	207	137							
16 JUL	83	43	79	116	38	42	89	69							
23 JUL	112	110	130	114	99	117	83	109							
30 JUL	110	157	232	239	200	98	42	155							
6 AUG	63	100	140	158	134	124	124	122							
13 AUG	141	105	70	50	93	111	13	83							
20 AUG	18	56	144	219	261	103	51	122							
27 AUG	33	26	32	31	79	64	17	40							
3 SEP	22	30	75	124	85	70	101	72							
10 SEP	124	61	38	42	60	46	27	57							
17 SEP	22	11	52	42	60	146	120	66							
24 SEP	112	33	-3	9	21	6	44	32							
1 OCT	114	27	7	22	11	3	-14	24							
8 OCT	-17	-50	-44	-24	-30	-46	-73	-41							
15 OCT	-59	-31	-3	29	75	59	15	12							
22 OCT	33	8	5	7	41	33	77	29							
29 OCT	151	52	7	8	15	7	55	42							
5 NOV	34	-15	23	30	-3	-7	122	26							
12 NOV	-2	-156	-26	-78	-107	23	9	-48							
19 NOV	35	12	4	14	19	10	4	15							
26 NOV	34	12	3	-53	-41	-8	0	-7							
3 DEC	23	149	29	20	42	40	3	44							
10 DEC	-61	-5	-1	16	-54	-147	-89	-48							
17 DEC	-46	-32	0	1	-1	41	15	-3							
24 DEC	90	-8	-12	54	255	62	29	67							
31 DEC	67	7	57	70	33	1	0	35							

# COASTAL UPWELLING INDICES, DAILY AND WEEKLY MEANS

DURING 1973 AT 36N, 122W

WEEK BEGINNING	DAILY VALUES							WEEKLY MEAN	CUBIC METERS PER SECOND PER 100 METERS OF COASTLINE						
	SUN	MON	TUE	WED	THU	FRI	SAT		-600	-400	-200	0	200	400	600
7 JAN	-15	-227	-62	-20	-37	-5	-16	-56							
14 JAN	-30	-64	-47	-131	-40	166	27	-18							
21 JAN	19	-6	-24	-7	64	74	-81	-2							
28 JAN	-102	-75	32	25	-30	-117	-172	-63							
4 FEB	-97	-152	-122	-7	-2	-50	-63	-77							
11 FEB	41	-50	-7	32	56	32	48	25							
18 FEB	19	-10	9	-2	-9	-210	-135	-52							
25 FEB	-50	-40	-119	29	46	39	33	-10							
4 MAR	59	5	16	25	67	90	87	50							
11 MAR	101	121	300	125	17	35	103	127							
18 MAR	50	-0	100	36	115	45	27	50							
25 MAR	53	130	234	353	139	34	131	151							
1 APR	272	161	43	21	57	166	81	114							
8 APR	7	1	44	61	115	70	137	63							
15 APR	59	63	322	337	326	206	70	196							
22 APR	113	222	127	56	65	190	261	152							
29 APR	201	219	80	86	165	244	214	174							
6 MAY	189	196	142	149	100	70	112	139							
13 MAY	69	56	60	104	110	191	235	122							
20 MAY	205	207	207	152	75	106	99	161							
27 MAY	85	53	143	230	156	85	142	129							
3 JUN	187	103	50	77	124	93	241	126							
10 JUN	304	215	130	260	230	103	170	216							
17 JUN	222	177	91	39	50	147	121	121							
24 JUN	121	94	70	113	160	204	243	146							
1 JUL	159	137	157	144	257	209	203	192							
8 JUL	160	145	263	323	192	120	89	186							
15 JUL	90	114	131	175	145	34	164	132							
22 JUL	250	236	140	115	85	68	74	139							
29 JUL	110	106	133	173	143	120	103	124							
5 AUG	62	94	99	118	161	135	103	122							
12 AUG	176	106	113	130	152	180	135	144							
19 AUG	118	140	202	199	196	143	142	163							
26 AUG	60	90	67	56	120	192	85	100							
2 SEP	25	50	80	73	146	220	67	99							
9 SEP	18	18	44	77	106	66	103	64							
16 SEP	76	53	65	33	90	101	61	69							
23 SEP	105	103	71	-4	-5	10	71	51							
30 SEP	112	130	116	53	40	70	56	85							
7 OCT	25	46	60	43	52	21	9	36							
14 OCT	22	53	14	0	7	9	-2	16							
21 OCT	-12	-07	47	55	81	39	0	18							
28 OCT	63	65	-3	54	133	84	50	67							
4 NOV	2	-36	-9	4	-9	-46	-06	-25							
11 NOV	-04	9	20	3	-5	-14	-20	-14							
18 NOV	165	112	59	66	15	36	134	83							
25 NOV	119	52	-9	-19	-17	-104	34	-3							
2 DEC	44	22	0	-19	-39	-9	-7	-20							
9 DEC	-22	-40	-21	-16	6	2	-41	-20							
16 DEC	-19	33	-1	-50	-96	-30	50	-17							
23 DEC	46	20	40	6	13	30	94	37							

# COASTAL UPWELLING INDICES, DAILY AND WEEKLY MEANS

DURING 1967 AT 33N, 119W

WEEK BEGINNING	DAILY VALUES							WEEKLY MEAN	CUBIC METERS PER SECOND PER 100 METERS OF COASTLINE						
	SUN	MON	TUE	WED	THU	FRI	SAT		-600	-400	-200	0	200	400	600
1 JAN	12	-29	-53	-22	99	-17	-51	-9							
8 JAN	-71	-74	-90	-22	23	3	-4	-33							
15 JAN	-16	13	-21	-11	-2	26	41	4							
22 JAN	26	32	14	34	9	6	14	19							
29 JAN	30	55	145	60	56	17	-2	51							
5 FEB	3	-46	-21	-13	13	3	-30	-14							
12 FEB	-13	55	145	34	13	-2	27	37							
19 FEB	26	-47	-24	-5	-11	28	49	2							
26 FEB	28	-44	-21	32	70	199	110	53							
5 MAR	43	23	42	39	50	19	8	32							
12 MAR	31	39	15	-15	18	133	179	57							
19 MAR	116	126	96	42	131	196	116	118							
26 MAR	80	22	70	258	117	51	18	89							
2 APR	24	29	67	36	70	167	90	63							
9 APR	110	176	168	154	92	110	194	143							
16 APR	118	128	134	50	19	25	75	79							
23 APR	44	126	91	130	217	155	162	132							
30 APR	104	62	147	154	129	100	34	105							
7 MAY	47	204	165	203	237	209	89	165							
14 MAY	13	31	47	96	220	162	141	103							
21 MAY	110	98	141	215	253	345	334	214							
28 MAY	300	371	417	275	153	110	113	249							
4 JUN	159	100	116	190	312	360	354	230							
11 JUN	311	277	143	157	247	258	150	221							
18 JUN	160	156	142	116	193	195	136	158							
25 JUN	139	147	241	196	214	226	233	199							
2 JUL	181	100	195	157	240	130	148	167							
9 JUL	140	112	89	106	216	170	281	159							
16 JUL	181	175	161	143	156	131	146	156							
23 JUL	139	151	135	77	51	98	137	113							
30 JUL	251	221	180	194	212	129	135	189							
6 AUG	221	239	166	241	149	143	120	184							
13 AUG	159	87	103	119	30	73	89	95							
20 AUG	133	166	127	80	77	138	117	120							
27 AUG	130	96	91	81	32	18	28	68							
3 SEP	43	114	131	101	167	99	86	106							
10 SEP	6	12	134	109	61	70	83	69							
17 SEP	109	97	16	8	49	99	104	69							
24 SEP	185	171	90	51	53	102	121	112							
1 OCT	100	94	61	68	160	27	4	75							
8 OCT	16	63	44	17	34	36	21	33							
15 OCT	-20	-39	-7	21	17	40	80	13							
22 OCT	83	12	15	65	79	27	164	66							
29 OCT	-26	-108	-37	5	7	8	40	-16							
5 NOV	37	26	6	30	37	0	-18	17							
12 NOV	-7	-2	13	19	1	-3	8	4							
19 NOV	19	-60	-30	-26	5	-22	-45	-23							
26 NOV	-17	14	142	41	36	-5	-49	23							
3 DEC	-6	15	25	15	71	-17	-123	-3							
10 DEC	-5	11	52	91	-35	13	145	39							
17 DEC	51	98	97	8	-80	-200	-213	-36							
24 DEC	-149	-56	-21	-24	0	2	11	-34							
31 DEC	1	15	25	20	-1	8	-3	9							

# COASTAL UPWELLING INDICES, DAILY AND WEEKLY MEANS DURING 1968 AT 33N, 119W

WEEK BEGINNING	DAILY VALUES							WEEKLY MEAN	CUBIC METERS PER SECOND PER 100 METERS OF COASTLINE						
	SUN	MON	TUE	WED	THU	FRI	SAT		-600	-400	-200	0	200	400	600
7 JAN	45	-7	-1	12	-1	-91	-48	-13							
14 JAN	6	36	91	-4	-86	-34	-45	-5							
21 JAN	-11	-101	-56	-12	20	62	46	-8							
28 JAN	18	-1	16	-11	-20	33	-6	3							
4 FEB	-54	-43	-1	35	32	34	29	5							
11 FEB	3	10	1	-10	-57	-46	26	-10							
18 FEB	19	32	123	154	109	30	-4	67							
25 FEB	-11	5	73	20	12	33	-7	18							
3 MAR	4	37	115	168	40	74	153	85							
10 MAR	149	14	-6	45	27	11	173	59							
17 MAR	201	170	64	34	2	45	65	83							
24 MAR	76	127	102	24	17	30	120	72							
31 MAR	176	161	196	97	79	194	104	144							
7 APR	44	24	42	36	84	196	92	74							
14 APR	117	325	375	270	101	96	296	226							
21 APR	230	60	35	143	124	36	59	98							
28 APR	54	50	143	162	109	206	375	167							
5 MAY	407	206	143	167	220	251	499	270							
12 MAY	243	143	134	69	119	163	166	148							
19 MAY	196	280	355	330	291	196	193	265							
26 MAY	133	217	120	216	306	164	93	181							
2 JUN	201	206	300	309	293	291	250	297							
9 JUN	204	144	184	158	200	150	115	166							
16 JUN	167	162	187	151	125	114	209	159							
23 JUN	421	256	186	182	210	399	285	277							
30 JUN	106	140	259	97	91	102	77	126							
7 JUL	117	57	60	85	129	205	217	125							
14 JUL	185	239	170	103	99	159	146	159							
21 JUL	195	103	101	218	214	130	89	161							
28 JUL	46	100	177	197	203	124	142	141							
4 AUG	163	120	119	101	110	154	153	132							
11 AUG	203	226	265	199	230	277	201	230							
18 AUG	171	197	146	140	110	20	42	118							
25 AUG	44	89	100	76	32	50	116	74							
1 SEP	140	221	250	104	114	110	81	147							
8 SEP	124	137	159	169	137	211	173	159							
15 SEP	155	36	30	136	373	147	83	137							
22 SEP	25	-3	-3	39	67	85	203	60							
29 SEP	104	71	100	136	65	91	124	99							
6 OCT	90	171	85	76	90	65	52	91							
13 OCT	27	152	102	10	-9	34	22	48							
20 OCT	46	44	10	-9	-15	9	11	15							
27 OCT	20	36	103	95	70	46	21	58							
3 NOV	90	72	65	27	53	-1	-2	43							
10 NOV	-10	13	143	119	90	55	9	61							
17 NOV	-0	16	19	-3	3	25	3	9							
24 NOV	126	105	100	12	-27	-2	40	64							
1 DEC	205	-19	-89	-42	-5	-10	-12	4							
8 DEC	-3	-7	32	106	-34	-05	-17	-1							
15 DEC	3	113	55	51	135	76	-11	60							
22 DEC	-69	-71	-1	113	109	2	13	22							
29 DEC	19	-19	-51	-27	-20	1	-55	-22							

# COASTAL UPWELLING INDICES, DAILY AND WEEKLY MEANS DURING 1969 AT 33N, 119W

WEEK BEGINNING	DAILY VALUES							WEEKLY MEAN	CUBIC METERS PER SECOND PER 100 METERS OF COASTLINE						
	SUN	MON	TUE	WED	THU	FRI	SAT		-600	-400	-200	0	200	400	600
5 JAN	-23	-15	29	59	18	9	11	12							
12 JAN	-4	-68	10	16	9	9	-18	-6							
19 JAN	-47	-19	119	08	-2	-26	24	19							
26 JAN	106	73	79	21	15	90	81	66							
2 FEB	-6	-77	14	45	124	13	-6	15							
9 FEB	19	2	21	123	80	17	33	43							
16 FEB	7	13	167	103	98	62	67	76							
23 FEB	-18	-44	38	26	11	56	92	23							
2 MAR	92	312	200	107	335	167	37	178							
9 MAR	92	100	56	115	124	46	10	79							
16 MAR	42	70	84	39	41	77	163	76							
23 MAR	59	-73	-57	6	34	61	104	19							
30 MAR	91	203	192	234	96	42	113	139							
6 APR	93	34	64	160	173	119	103	119							
13 APR	304	302	240	106	117	246	51	207							
20 APR	40	81	161	107	250	250	43	130							
27 APR	8	47	160	228	271	312	412	207							
4 MAY	149	35	41	105	66	106	175	104							
11 MAY	264	219	260	250	148	83	142	198							
18 MAY	250	243	267	103	231	269	242	241							
25 MAY	161	222	236	192	110	110	126	100							
1 JUN	90	90	195	198	187	100	252	172							
8 JUN	242	191	221	192	266	223	271	230							
15 JUN	282	193	95	119	178	244	259	196							
22 JUN	194	248	311	132	246	311	209	240							
29 JUN	149	149	140	147	250	310	477	238							
6 JUL	322	235	155	153	160	130	153	188							
13 JUL	213	201	199	143	85	110	141	153							
20 JUL	136	160	143	154	220	285	215	188							
27 JUL	187	171	165	128	150	155	129	159							
3 AUG	135	153	132	93	62	61	05	100							
10 AUG	255	241	191	143	157	184	164	191							
17 AUG	164	220	162	82	103	210	173	159							
24 AUG	121	161	191	185	162	159	126	158							
31 AUG	126	142	105	101	121	104	54	107							
7 SEP	63	136	201	73	86	56	56	99							
14 SEP	97	111	143	114	147	214	317	163							
21 SEP	187	85	110	120	104	131	113	122							
28 SEP	80	133	174	168	364	131	6	160							
5 OCT	1	20	47	137	166	249	127	107							
12 OCT	12	32	101	40	89	295	235	116							
19 OCT	52	53	40	30	53	53	57	40							
26 OCT	91	112	89	2	-11	-9	10	40							
2 NOV	9	16	42	84	26	-1	-77	14							
9 NOV	-77	-113	-96	-63	-9	33	47	-40							
16 NOV	64	6	-129	-153	-46	34	17	-27							
23 NOV	-20	-40	-34	-7	-22	-31	-8	-23							
30 NOV	-12	-1	4	47	28	9	11	12							
7 DEC	11	67	68	10	-3	-1	-21	20							
14 DEC	-8	-4	7	15	8	7	8	6							
21 DEC	70	71	69	50	103	207	249	120							
28 DEC	117	2	-12	2	-31	-77	-33	-5							



# COASTAL UPWELLING INDICES, DAILY AND WEEKLY MEANS DURING 1970 AT 33N, 119W

WEEK BEGINNING	DAILY VALUES							WEEKLY MEAN	CUBIC METERS PER SECOND PER 100 METERS OF COASTLINE						
	SUN	MON	TUE	WED	THU	FRI	SAT		-600	-400	-200	0	200	400	600
4 JAN	20	-46	-70	-50	-02	-70	17	-40							
11 JAN	-2	9	10	47	20	63	134	43							
18 JAN	34	46	29	23	27	20	02	37							
25 JAN	46	31	102	-22	-56	75	61	45							
1 FEB	89	-16	-1	17	23	9	-3	17							
8 FEB	-25	-59	-32	-0	5	103	93	12							
15 FEB	-6	45	216	115	12	5	22	59							
22 FEB	23	8	-21	-19	16	27	-44	-1							
1 MAR	-4	70	69	110	151	26	33	67							
8 MAR	107	149	252	73	37	5	60	90							
15 MAR	155	38	167	44	1	26	14	64							
22 MAR	63	61	94	48	192	31	69	78							
29 MAR	190	150	105	23	06	73	19	93							
5 APR	41	110	190	140	133	154	214	142							
12 APR	106	393	185	106	01	103	212	101							
19 APR	291	248	327	07	66	119	165	106							
26 APR	311	328	168	109	02	12	10	146							
3 MAY	15	49	109	410	311	256	303	220							
10 MAY	377	259	207	295	77	6	41	179							
17 MAY	110	192	311	325	244	144	171	215							
24 MAY	96	113	205	338	311	266	91	194							
31 MAY	50	47	62	179	252	136	151	126							
7 JUN	103	123	246	290	232	316	124	216							
14 JUN	146	299	243	191	102	102	159	199							
21 JUN	124	78	92	110	201	204	297	170							
28 JUN	349	233	60	43	42	100	77	129							
5 JUL	122	96	123	94	57	103	162	100							
12 JUL	103	201	200	195	172	101	67	175							
19 JUL	119	109	125	120	205	166	102	136							
26 JUL	100	147	165	117	159	100	195	153							
2 AUG	159	103	143	152	136	100	04	139							
9 AUG	41	114	71	55	125	127	97	90							
16 AUG	02	116	170	164	173	149	200	153							
23 AUG	193	101	100	120	121	170	276	100							
30 AUG	230	169	194	205	214	264	103	222							
6 SEP	6	44	110	90	72	100	305	114							
13 SEP	337	173	124	40	29	75	103	137							
20 SEP	197	146	10	52	50	-10	-29	50							
27 SEP	-25	-29	6	50	65	25	20	16							
4 OCT	55	134	240	109	1	20	00	96							
11 OCT	54	122	133	114	67	50	57	85							
18 OCT	66	94	117	90	100	93	103	96							
25 OCT	133	52	-44	-55	-10	-3	26	13							
1 NOV	6	11	6	2	27	70	64	20							
8 NOV	7	32	37	74	137	-40	-113	10							
15 NOV	-62	7	16	90	7	6	20	12							
22 NOV	12	16	63	144	132	13	-141	34							
29 NOV	-6	34	16	40	11	15	-11	15							
6 DEC	2	15	54	105	-5	-13	-11	21							
13 DEC	65	83	10	63	90	-43	-1	30							
20 DEC	17	53	1	-7	-27	-25	2	2							
27 DEC	27	17	22	-19	14	149	253	06							

# COASTAL UPWELLING INDICES, DAILY AND WEEKLY MEANS DURING 1971 AT 33N, 119W

WEEK BEGINNING	DAILY VALUES							WEEKLY MEAN	CUBIC METERS PER SECOND PER 100 METERS OF COASTLINE						
	SUN	MON	TUE	WED	THU	FRI	SAT		-600	-400	-200	0	200	400	600
3 JAN	-30	-34	-31	-32	-6	0	11	-17							
10 JAN	8	47	89	47	3	-7	-2	26							
17 JAN	-13	-8	5	51	64	47	34	26							
24 JAN	29	4	-20	-38	-11	-3	-1	-7							
31 JAN	44	95	200	66	22	70	70	82							
7 FEB	16	33	-16	-8	-10	-19	17	1							
14 FEB	71	125	25	110	90	273	120	116							
21 FEB	26	222	107	62	260	51	141	125							
28 FEB	224	120	-45	23	167	65	-24	76							
7 MAR	44	87	158	193	146	129	225	140							
14 MAR	56	45	54	89	-27	3	85	45							
21 MAR	94	90	147	136	90	120	173	123							
26 MAR	63	83	257	83	11	121	117	103							
4 APR	7	50	130	210	175	155	171	129							
11 APR	191	150	150	200	140	209	353	201							
18 APR	233	106	187	389	141	262	461	251							
25 APR	195	60	111	183	130	125	142	135							
2 MAY	66	143	179	274	121	20	49	125							
9 MAY	116	140	144	216	246	263	332	209							
16 MAY	297	145	59	100	374	344	173	214							
23 MAY	173	192	283	293	178	62	115	109							
30 MAY	237	257	269	222	211	177	147	217							
6 JUN	212	337	371	383	227	160	209	272							
13 JUN	211	127	102	107	156	170	204	154							
20 JUN	184	155	225	263	244	206	266	221							
27 JUN	354	271	230	241	247	251	231	262							
4 JUL	275	215	254	251	177	212	204	226							
11 JUL	209	288	166	198	125	79	41	146							
18 JUL	114	119	165	161	120	272	222	168							
25 JUL	231	198	210	132	90	117	84	152							
1 AUG	119	114	75	45	65	105	113	91							
8 AUG	82	67	34	42	87	113	114	77							
15 AUG	111	139	118	100	114	92	84	108							
22 AUG	93	89	85	106	94	106	93	97							
29 AUG	160	234	236	162	159	81	36	155							
5 SEP	80	126	52	51	85	106	72	82							
12 SEP	53	33	41	63	57	22	2	39							
19 SEP	31	120	71	54	47	132	213	95							
26 SEP	94	76	82	106	107	27	18	73							
3 OCT	12	5	-8	15	9	20	24	12							
10 OCT	26	37	41	48	146	257	163	94							
17 OCT	43	6	5	18	19	47	118	36							
24 OCT	162	51	25	160	170	9	7	83							
31 OCT	33	-22	-4	-6	38	18	3	8							
7 NOV	49	26	3	1	-32	141	130	47							
14 NOV	193	77	26	11	-40	-182	-1	12							
21 NOV	18	45	36	70	50	45	112	54							
28 NOV	150	161	42	11	60	134	123	97							
5 DEC	12	179	161	12	60	62	46	76							
12 DEC	69	161	61	43	-110	-71	1	21							
19 DEC	3	-2	-137	-39	-7	-2	53	-18							
26 DEC	5	-8	16	10	-26	-56	-96	-21							

# COASTAL UPWELLING INDICES, DAILY AND WEEKLY MEANS DURING 1972 AT 33N, 119W

WEEK BEGINNING	DAILY VALUES							WEEKLY MEAN	CUBIC METERS PER SECOND PER 100 METERS OF COASTLINE						
	SUN	MON	TUE	WED	THU	FRI	SAT		600	-400	-200	0	200	400	600
2 JAN	-8	-86	-250	-75	-25	2	77	-52							
9 JAN	34	18	18	45	8	-76	-51	-1							
16 JAN	4	22	12	14	31	137	92	44							
23 JAN	94	42	54	95	-4	6	46	33							
30 JAN	-57	-5	7	-86	-98	-1	48	-27							
6 FEB	42	6	-6	-7	-38	-43	3	-6							
13 FEB	68	97	69	54	6	3	38	47							
20 FEB	68	76	103	119	120	83	33	86							
27 FEB	33	186	274	76	120	179	48	120							
5 MAR	-8	66	59	26	41	138	149	68							
12 MAR	93	138	59	5	25	129	185	90							
19 MAR	88	78	95	233	145	56	223	138							
26 MAR	283	153	81	149	44	43	126	126							
2 APR	151	94	53	76	162	168	221	131							
9 APR	225	113	68	183	192	45	48	122							
16 APR	129	389	268	98	77	186	133	168							
23 APR	188	292	157	13	41	139	172	143							
30 APR	53	95	97	177	264	227	282	159							
7 MAY	152	157	268	168	78	52	62	133							
14 MAY	74	146	178	218	343	72	16	148							
21 MAY	81	129	188	229	191	114	56	141							
28 MAY	84	188	68	97	119	148	187	115							
4 JUN	133	74	48	88	167	154	183	121							
11 JUN	196	127	142	139	178	215	219	174							
18 JUN	197	132	122	153	288	144	194	163							
25 JUN	188	137	142	145	113	161	243	161							
2 JUL	285	148	145	143	145	118	124	147							
9 JUL	174	154	113	86	123	154	188	142							
16 JUL	125	86	117	194	188	188	128	124							
23 JUL	158	122	138	134	121	78	72	117							
30 JUL	118	133	211	244	165	88	58	143							
6 AUG	85	122	179	129	88	91	82	118							
13 AUG	118	161	152	151	133	168	67	135							
20 AUG	65	78	129	228	255	131	88	138							
27 AUG	54	33	3	12	63	69	44	48							
3 SEP	48	45	57	178	118	69	183	88							
10 SEP	133	98	85	87	181	96	92	99							
17 SEP	92	52	79	39	51	118	131	88							
24 SEP	119	81	42	44	68	39	91	68							
1 OCT	283	57	21	42	-14	5	16	47							
8 OCT	16	17	6	2	3	6	2	8							
15 OCT	6	9	18	11	86	71	15	38							
22 OCT	28	8	28	15	17	28	46	21							
29 OCT	123	51	7	14	26	27	96	49							
5 NOV	65	-1	45	98	18	53	175	63							
12 NOV	24	-4	28	-1	-2	28	17	18							
19 NOV	61	21	-7	-18	28	16	-33	18							
26 NOV	-5	-21	-18	-185	-69	-21	23	-31							
3 DEC	58	286	37	32	51	47	8	63							
10 DEC	-12	-12	-8	47	-22	-44	-6	7							
17 DEC	8	3	21	11	8	58	25	17							
24 DEC	58	-135	-73	12	213	62	6	19							
31 DEC	49	17	39	75	29	-7	12	38							

# COASTAL UPWELLING INDICES, DAILY AND WEEKLY MEANS

DURING 1973 AT 33N, 119W

WEEK BEGINNING	DAILY VALUES							WEEKLY MEAN	CUBIC METERS PER SECOND PER 100 METERS OF COASTLINE						
	SUN	MON	TUE	WED	THU	FRI	SAT		-600	-400	-200	0	200	400	600
7 JAN	12	-9	31	20	0	-5	-26	3							
14 JAN	-17	4	54	14	35	233	79	57							
21 JAN	58	-27	-30	-3	86	82	-39	17							
28 JAN	-58	-5	77	81	-14	-63	-56	-5							
4 FEB	-3	-30	-3	5	10	-1	-0	-4							
11 FEB	117	44	20	43	67	51	16	51							
18 FEB	2	-27	-71	-27	-1	-27	-3	-22							
25 FEB	-0	-0	11	65	73	82	70	44							
4 MAR	147	34	45	90	76	106	92	84							
11 MAR	105	64	330	117	16	36	133	116							
18 MAR	101	53	132	91	169	80	67	100							
25 MAR	50	122	182	306	189	91	165	159							
1 APR	332	144	25	8	45	188	113	122							
8 APR	-10	6	50	62	143	204	180	93							
15 APR	134	112	267	388	345	150	36	206							
22 APR	77	186	114	56	80	150	236	130							
29 APR	211	185	87	61	185	252	232	162							
6 MAY	174	177	145	77	50	76	126	118							
13 MAY	137	55	59	139	192	292	200	165							
20 MAY	239	261	220	204	188	381	230	246							
27 MAY	65	37	144	206	199	107	117	125							
3 JUN	173	182	79	90	107	139	256	135							
10 JUN	299	252	149	213	296	226	209	235							
17 JUN	282	189	25	32	56	138	172	116							
24 JUN	182	181	90	195	183	149	150	151							
1 JUL	159	133	119	97	165	203	150	148							
8 JUL	132	153	180	191	171	140	185	166							
15 JUL	156	174	216	214	213	196	194	195							
22 JUL	230	189	103	51	56	64	90	113							
29 JUL	141	117	89	144	117	94	89	112							
5 AUG	81	126	133	150	173	143	157	138							
12 AUG	169	94	107	114	107	106	84	112							
19 AUG	74	74	141	215	231	143	152	147							
26 AUG	116	130	90	73	97	153	114	112							
2 SEP	38	84	163	182	160	154	60	122							
9 SEP	50	69	102	119	115	112	122	98							
16 SEP	134	123	115	92	123	123	160	125							
23 SEP	175	148	55	-37	-36	23	70	57							
30 SEP	82	144	135	67	37	73	83	89							
7 OCT	91	137	81	31	37	13	7	57							
14 OCT	24	67	24	23	30	45	56	38							
21 OCT	28	17	91	67	76	21	-14	41							
28 OCT	25	-6	-61	35	141	83	60	40							
4 NOV	39	25	35	48	20	29	6	29							
11 NOV	5	46	94	38	32	54	54	46							
18 NOV	196	146	84	93	52	34	83	98							
25 NOV	121	74	-19	-28	1	-14	60	29							
2 DEC	76	18	5	2	-20	-9	-22	7							
9 DEC	-50	-40	14	22	54	36	-19	3							
16 DEC	6	83	19	-27	-31	18	105	25							
23 DEC	85	16	52	24	63	74	103	60							

# COASTAL UPWELLING INDICES, DAILY AND WEEKLY MEANS DURING 1967 AT 30N, 119W

WEEK BEGINNING	DAILY VALUES							WEEKLY MEAN	CUBIC METERS PER SECOND PER 100 METERS OF COASTLINE						
	SUN	MON	TUE	WED	THU	FRI	SAT		-600	-400	-200	0	200	400	600
1 JAN	33	18	-7	27	50	60	66	35							
8 JAN	10	1	7	27	27	28	42	20							
15 JAN	51	52	5	6	4	4	-23	14							
22 JAN	-10	23	-24	50	121	50	63	39							
29 JAN	55	33	96	149	185	77	65	94							
5 FEB	76	21	23	9	43	30	20	33							
12 FEB	39	22	61	39	64	21	41	41							
19 FEB	15	5	27	34	11	6	0	15							
26 FEB	53	27	83	41	43	57	50	51							
5 MAR	97	67	60	60	2	-11	-11	39							
12 MAR	-9	23	1	-10	54	70	94	33							
19 MAR	85	104	118	54	87	120	86	93							
26 MAR	10	-16	-14	150	72	2	0	31							
2 APR	10	2	7	25	32	47	84	30							
9 APR	74	63	72	100	59	47	76	71							
16 APR	157	52	52	5	-0	-17	34	40							
23 APR	15	40	93	144	62	52	83	70							
30 APR	129	119	123	81	16	13	17	71							
7 MAY	31	57	160	79	99	150	104	98							
14 MAY	84	58	135	56	77	71	95	82							
21 MAY	57	30	40	95	60	119	165	82							
28 MAY	100	167	186	81	74	59	22	98							
4 JUN	3	13	77	125	117	141	113	84							
11 JUN	77	41	30	51	139	77	29	65							
18 JUN	87	111	85	139	83	91	36	90							
25 JUN	21	40	116	87	130	111	73	83							
2 JUL	36	15	40	16	132	60	67	54							
9 JUL	60	62	109	82	136	80	247	112							
16 JUL	126	33	54	66	150	75	49	79							
23 JUL	44	117	104	31	7	42	47	56							
30 JUL	89	290	76	60	105	36	46	101							
6 AUG	96	102	56	101	85	83	67	96							
13 AUG	76	42	20	51	30	25	12	38							
20 AUG	41	60	93	106	65	74	87	76							
27 AUG	135	97	140	103	46	80	16	68							
3 SEP	30	90	100	41	70	20	54	62							
10 SEP	-15	-16	39	61	32	42	31	25							
17 SEP	60	70	22	2	7	61	91	47							
24 SEP	75	127	67	18	56	49	93	69							
1 OCT	69	45	22	61	171	61	33	66							
8 OCT	14	105	87	14	40	72	52	56							
15 OCT	20	31	46	44	53	54	37	42							
22 OCT	60	14	6	86	125	65	109	68							
29 OCT	99	30	21	50	19	5	48	39							
5 NOV	20	27	11	32	56	10	17	27							
12 NOV	-1	6	8	52	3	-3	-6	8							
19 NOV	-24	-51	-36	-8	20	7	2	-12							
26 NOV	35	27	86	24	6	8	12	20							
3 DEC	11	15	17	46	60	31	7	28							
10 DEC	37	41	64	193	96	57	121	87							
17 DEC	101	16	56	46	32	55	93	57							
24 DEC	20	21	23	0	7	10	20	18							
31 DEC	30	10	48	67	57	53	60	47							

# COASTAL UPWELLING INDICES, DAILY AND WEEKLY MEANS DURING 1968 AT 30N, 119W

WEEK BEGINNING	DAILY VALUES							WEEKLY MEAN	CUBIC METERS PER SECOND PER 100 METERS OF COASTLINE						
	SUN	MON	TUE	WED	THU	FRI	SAT		-600	-400	-200	0	200	400	600
7 JAN	95	25	11	-2	10	2	30	24							
14 JAN	100	54	91	31	2	12	19	44							
21 JAN	25	17	10	22	25	9	0	17							
28 JAN	19	22	-0	-1	15	113	95	38							
4 FEB	29	26	41	43	17	29	44	33							
11 FEB	32	10	-17	-1	-56	-32	1	-9							
18 FEB	50	24	44	111	213	79	9	76							
25 FEB	9	4	36	35	22	24	12	20							
3 MAR	47	94	129	68	3	8	96	64							
10 MAR	169	47	-5	14	24	24	94	53							
17 MAR	119	191	94	72	33	34	61	86							
24 MAR	113	133	179	42	19	19	37	78							
31 MAR	35	10	130	103	64	104	95	78							
7 APR	84	56	107	79	69	35	51	69							
14 APR	97	50	85	164	55	30	123	88							
21 APR	96	100	69	102	02	21	20	71							
28 APR	25	21	49	69	36	45	152	55							
5 MAY	110	01	07	35	10	01	147	80							
12 MAY	62	23	00	19	92	139	153	01							
19 MAY	119	96	95	126	170	140	138	127							
26 MAY	154	191	47	31	67	41	50	83							
2 JUN	106	127	112	64	124	103	07	103							
9 JUN	03	09	00	44	115	00	52	79							
16 JUN	03	05	123	168	103	49	116	104							
23 JUN	199	56	69	53	60	79	101	80							
30 JUN	30	69	107	51	55	30	16	51							
7 JUL	47	42	31	45	68	151	59	63							
14 JUL	58	74	54	60	44	69	46	58							
21 JUL	46	44	16	57	132	64	31	56							
28 JUL	42	162	67	92	107	47	35	79							
4 AUG	40	57	52	30	40	40	24	44							
11 AUG	95	76	163	113	156	114	01	114							
18 AUG	60	90	40	63	96	66	10	63							
25 AUG	10	30	107	76	35	12	37	46							
1 SEP	41	40	45	51	61	40	47	48							
8 SEP	66	159	105	192	175	63	20	123							
15 SEP	49	26	13	22	96	30	41	41							
22 SEP	30	43	30	92	107	46	43	58							
29 SEP	26	14	23	59	35	01	109	50							
6 OCT	71	90	49	50	59	22	2	49							
13 OCT	5	60	152	94	79	66	40	72							
20 OCT	35	51	65	41	15	31	14	36							
27 OCT	43	22	35	55	40	10	30	36							
3 NOV	42	36	52	92	133	41	4	57							
10 NOV	9	10	09	104	133	02	32	66							
17 NOV	17	17	103	57	60	93	55	57							
24 NOV	105	263	149	41	21	45	30	95							
1 DEC	127	60	19	10	13	11	-2	35							
8 DEC	16	11	14	44	27	-9	-8	14							
15 DEC	2	40	107	136	06	69	13	66							
22 DEC	3	-2	5	46	110	5	4	26							
29 DEC	64	41	8	7	39	96	40	42							

# COASTAL UPWELLING INDICES, DAILY AND WEEKLY MEANS

DURING 1969 AT 30N, 119W

WEEK BEGINNING	DAILY VALUES							WEEKLY MEAN	CUBIC METERS PER SECOND PER 100 METERS OF COASTLINE						
	SUN	MON	TUE	WED	THU	FRI	SAT		-600	-400	-200	0	200	400	600
5 JAN	23	10	35	101	27	16	13	32							
12 JAN	-9	-85	18	21	7	-1	-50	-14							
19 JAN	-103	-53	-24	17	-10	-50	-49	-39							
26 JAN	3	44	20	34	65	94	87	50							
2 FEB	49	1	14	-10	71	37	22	26							
9 FEB	13	5	3	133	170	23	9	51							
16 FEB	29	6	142	61	119	37	69	66							
23 FEB	-57	-120	-24	10	6	15	106	-8							
2 MAR	107	228	250	91	245	166	66	166							
9 MAR	72	78	48	86	144	88	31	78							
16 MAR	43	112	104	57	52	18	140	75							
23 MAR	54	-8	0	22	39	57	102	38							
30 MAR	96	115	139	88	37	15	39	76							
6 APR	86	60	57	72	140	93	111	80							
13 APR	301	209	227	99	89	191	67	180							
20 APR	51	26	56	27	238	323	140	123							
27 APR	32	48	125	93	309	171	214	142							
4 MAY	129	56	20	21	36	165	162	84							
11 MAY	194	104	172	144	111	97	120	135							
18 MAY	176	170	150	84	139	195	162	145							
25 MAY	114	150	192	185	42	35	20	108							
1 JUN	46	24	60	100	80	74	100	72							
8 JUN	96	83	60	88	152	154	192	119							
15 JUN	192	84	49	59	75	107	111	96							
22 JUN	134	169	263	60	170	232	208	177							
29 JUN	141	114	92	88	200	226	253	160							
6 JUL	140	112	100	92	95	73	93	102							
13 JUL	135	124	126	93	34	40	86	92							
20 JUL	99	130	81	100	143	161	141	122							
27 JUL	121	121	178	56	77	86	88	105							
3 AUG	124	195	79	54	45	37	31	71							
10 AUG	205	203	125	83	115	149	104	140							
17 AUG	99	159	162	71	204	366	207	181							
24 AUG	61	77	130	128	90	100	107	101							
31 AUG	156	150	137	95	74	64	71	107							
7 SEP	78	160	240	53	47	29	11	90							
14 SEP	26	81	81	96	120	226	246	125							
21 SEP	163	45	73	80	65	86	91	86							
28 SEP	85	145	162	145	241	195	27	143							
5 OCT	12	57	87	142	156	243	189	127							
12 OCT	22	7	30	56	58	172	165	74							
19 OCT	67	63	43	36	39	42	50	49							
26 OCT	53	148	152	25	14	14	21	61							
2 NOV	21	24	21	43	-6	-7	-99	-1							
9 NOV	-67	-165	-140	-103	-27	11	21	-68							
16 NOV	31	52	-22	-4	20	69	50	28							
23 NOV	12	14	12	36	59	48	9	27							
30 NOV	-3	16	60	99	68	21	36	42							
7 DEC	47	44	60	30	15	17	-8	29							
14 DEC	17	13	27	13	5	22	36	19							
21 DEC	61	88	87	73	81	277	264	133							
28 DEC	189	28	-1	10	9	-27	-19	27							

# COASTAL UPWELLING INDICES, DAILY AND WEEKLY MEANS DURING 1970 AT 30N, 119W

WEEK BEGINNING	DAILY VALUES							WEEKLY MEAN	CUBIC METERS PER SECOND FOR 100 METERS OF COASTLINE					
	SUN	MON	TUE	WED	THU	FRI	SAT		-600	-400	-200	0	200	400
4 JAN	23	-14	-45	-29	-58	-73	-5	-28						
11 JAN	1	17	16	39	39	39	125	39						
18 JAN	55	65	59	30	49	26	59	50						
25 JAN	81	63	123	60	31	112	72	77						
1 FEB	63	27	15	31	11	19	7	26						
8 FEB	-7	-61	-20	-1	2	65	62	6						
15 FEB	18	36	171	123	16	16	58	65						
22 FEB	46	7	-38	-10	1	-26	-94	-15						
1 MAR	-41	35	55	76	152	38	33	50						
8 MAR	51	77	134	61	51	14	66	68						
15 MAR	233	44	147	33	7	11	18	66						
22 MAR	60	107	56	68	169	45	41	78						
29 MAR	120	184	76	43	93	68	38	78						
5 APR	68	63	67	77	136	165	192	112						
12 APR	62	188	131	120	28	65	124	108						
19 APR	141	194	100	56	49	128	135	115						
26 APR	155	113	111	100	102	71	83	185						
3 MAY	94	63	73	175	221	232	247	154						
10 MAY	217	178	160	294	233	49	33	167						
17 MAY	118	126	224	287	225	97	94	155						
24 MAY	58	59	94	133	119	161	74	100						
31 MAY	67	54	68	115	118	97	93	91						
7 JUN	93	33	103	153	168	162	91	119						
14 JUN	93	195	163	131	150	131	66	136						
21 JUN	105	60	71	105	200	219	232	143						
28 JUN	247	228	93	39	41	90	79	118						
5 JUL	78	47	79	61	67	92	144	80						
12 JUL	110	210	141	171	180	111	44	139						
19 JUL	56	44	102	84	153	122	83	92						
26 JUL	95	111	89	62	104	160	155	112						
2 AUG	139	129	131	196	170	129	63	137						
9 AUG	49	75	45	74	90	108	57	72						
16 AUG	48	63	117	104	80	111	171	100						
23 AUG	144	163	142	112	120	162	244	155						
30 AUG	287	189	195	243	131	156	163	187						
6 SEP	58	24	88	82	61	144	140	82						
13 SEP	159	125	121	69	28	68	91	94						
20 SEP	147	170	47	70	80	19	32	80						
27 SEP	19	32	22	59	164	73	23	56						
4 OCT	42	86	114	128	39	52	103	81						
11 OCT	96	107	127	96	84	25	87	89						
18 OCT	105	75	65	47	47	57	104	71						
25 OCT	127	98	17	6	4	4	33	41						
1 NOV	14	37	15	4	19	52	69	30						
8 NOV	54	63	80	112	172	11	-1	71						
15 NOV	2	29	54	140	53	21	37	48						
22 NOV	31	58	113	109	48	2	-66	42						
29 NOV	-22	35	12	34	75	63	41	34						
6 DEC	45	29	58	75	57	39	16	46						
13 DEC	60	99	28	24	53	-13	15	39						
20 DEC	4	29	9	3	-2	-1	15	8						
27 DEC	34	61	46	28	90	179	287	104						



# COASTAL UPWELLING INDICES, DAILY AND WEEKLY MEANS DURING 1971 AT 30N, 119W

WEEK BEGINNING	DAILY VALUES							WEEKLY MEAN	-600	CUBIC METERS PER SECOND PER 100 METERS OF COASTLINE				
	SUN	MON	TUE	WED	THU	FRI	SAT			-400	-200	0	200	400
3 JAN	57	20	50	29	34	13	9	51						
10 JAN	13	33	32	14	19	21	95	33						
17 JAN	59	45	32	09	70	69	53	61						
24 JAN	47	30	39	01	115	75	39	61						
31 JAN	70	04	122	76	41	126	133	94						
7 FEB	62	92	75	40	19	14	44	49						
14 FEB	63	110	55	170	105	150	153	119						
21 FEB	36	171	151	04	100	129	140	126						
28 FEB	166	135	14	65	151	06	33	93						
7 MAR	03	107	120	134	135	76	140	114						
14 MAR	102	119	73	122	6	10	07	76						
21 MAR	90	00	126	100	04	01	135	101						
28 MAR	174	05	152	111	45	151	219	123						
4 APR	71	60	97	169	120	106	107	105						
11 APR	111	124	141	171	171	125	103	150						
18 APR	156	6	141	222	133	194	259	160						
25 APR	139	43	71	94	67	91	60	90						
2 MAY	57	75	130	190	60	11	21	81						
9 MAY	133	156	100	204	270	229	203	183						
16 MAY	217	202	120	137	194	179	127	169						
23 MAY	142	140	169	156	09	06	97	125						
30 MAY	122	133	150	126	126	220	114	144						
6 JUN	122	215	216	212	103	01	117	152						
13 JUN	208	143	00	53	79	01	152	115						
20 JUN	156	120	165	100	140	114	136	143						
27 JUN	165	194	102	103	121	90	151	152						
4 JUL	130	99	107	123	124	101	221	142						
11 JUL	197	103	67	105	52	44	25	96						
18 JUL	02	71	133	100	72	123	111	99						
25 JUL	100	114	120	94	49	06	55	00						
1 AUG	53	64	40	30	73	94	49	61						
8 AUG	101	95	12	11	26	42	55	49						
15 AUG	95	111	92	03	67	04	50	81						
22 AUG	77	113	01	92	144	130	163	115						
29 AUG	233	222	210	129	142	70	57	153						
5 SEP	07	117	96	05	96	115	117	102						
12 SEP	100	129	24	44	53	37	39	61						
19 SEP	60	02	05	109	170	170	115	116						
26 SEP	51	91	112	124	103	112	01	96						
3 OCT	63	70	90	72	57	53	103	72						
10 OCT	04	76	136	67	73	55	59	04						
17 OCT	66	35	54	69	06	105	137	79						
24 OCT	95	54	30	124	195	53	39	04						
31 OCT	61	63	55	09	106	42	20	64						
7 NOV	43	40	31	20	77	151	149	74						
14 NOV	263	177	95	43	21	-3	10	00						
21 NOV	35	100	134	159	92	06	135	107						
28 NOV	105	141	07	63	09	130	240	136						
5 DEC	57	104	330	100	62	61	05	120						
12 DEC	72	144	62	01	21	16	17	50						
19 DEC	9	-0	-55	-23	15	-4	34	-4						
26 DEC	17	4	54	91	175	51	17	57						

# COASTAL UPWELLING INDICES, DAILY AND WEEKLY MEANS

DURING 1972 AT 30N, 119W

WEEK BEGINNING	DAILY VALUES							WEEKLY MEAN	CUBIC METERS PER SECOND PER 100 METERS OF COASTLINE					
	SUN	MON	TUE	WED	THU	FRI	SAT		-600	-400	-200	0	200	400
2 JAN	72	34	-17	20	53	30	115	44						
9 JAN	57	73	85	109	23	9	53	58						
16 JAN	61	55	58	33	91	195	217	102						
23 JAN	121	190	43	49	16	54	21	72						
30 JAN	16	10	10	1	13	49	46	21						
6 FEB	34	61	31	-13	-15	10	41	21						
13 FEB	114	105	150	89	23	18	74	83						
20 FEB	94	82	109	156	165	104	52	109						
27 FEB	107	151	210	165	192	233	140	171						
5 MAR	19	57	35	20	87	165	126	73						
12 MAR	131	171	107	29	63	99	160	109						
19 MAR	88	61	54	110	141	109	123	99						
26 MAR	151	89	53	120	52	50	85	86						
2 APR	124	49	21	43	98	185	226	106						
9 APR	198	68	51	106	114	44	32	80						
16 APR	77	159	173	113	93	95	84	113						
23 APR	90	107	167	36	37	120	129	110						
30 APR	51	72	71	73	97	99	107	81						
7 MAY	64	107	200	155	78	73	90	112						
14 MAY	81	79	72	93	164	51	10	78						
21 MAY	89	150	139	160	113	50	51	106						
28 MAY	91	77	40	53	54	75	129	74						
4 JUN	103	73	52	42	102	94	161	90						
11 JUN	267	147	66	55	123	151	115	132						
18 JUN	96	69	54	45	53	71	80	68						
25 JUN	89	82	101	107	68	44	39	76						
2 JUL	51	86	80	82	94	55	63	74						
9 JUL	91	87	75	62	86	57	22	69						
16 JUL	12	0	21	34	28	50	79	34						
23 JUL	150	109	117	193	143	79	46	111						
30 JUL	51	122	159	151	85	51	21	93						
6 AUG	43	34	67	60	47	25	19	43						
13 AUG	84	99	106	141	117	76	31	91						
20 AUG	65	76	115	154	125	66	42	92						
27 AUG	25	43	0	-4	16	12	9	15						
3 SEP	24	4	47	150	67	25	33	50						
10 SEP	43	54	102	82	84	58	47	67						
17 SEP	45	16	53	65	95	116	75	66						
24 SEP	50	56	28	37	43	60	109	58						
1 OCT	150	70	15	24	93	82	2	62						
8 OCT	7	13	11	11	7	17	19	12						
15 OCT	21	11	17	24	100	82	27	40						
22 OCT	21	25	41	25	9	26	55	29						
29 OCT	107	145	20	23	46	44	69	76						
5 NOV	79	17	50	77	59	69	120	67						
12 NOV	26	4	17	4	14	74	62	29						
19 NOV	72	64	27	55	80	62	30	57						
26 NOV	48	31	10	6	16	20	24	22						
3 DEC	49	110	36	36	32	29	27	45						
10 DEC	27	13	16	93	8	23	31	30						
17 DEC	25	48	69	112	68	70	79	67						
24 DEC	144	36	-4	23	179	136	78	85						
31 DEC	252	203	102	69	62	34	46	110						

# COASTAL UPWELLING INDICES, DAILY AND WEEKLY MEANS DURING 1973 AT 30N, 119W

WEEK BEGINNING	DAILY VALUES							WEEKLY MEAN	CUBIC METERS PER SECOND PER 100 METERS OF COASTLINE					
	SUN	MON	TUE	WED	THU	FRI	SAT		-600	-400	-200	0	200	400
7 JAN	39	8	34	70	31	33	10	32						
14 JAN	2	3	20	7	8	184	140	52						
21 JAN	156	31	10	17	92	71	-5	53						
28 JAN	-5	3	150	82	5	-33	-36	24						
4 FEB	-3	-16	-3	6	10	-2	-33	-6						
11 FEB	67	38	33	56	110	119	58	70						
18 FEB	25	5	-9	17	3	-17	-4	3						
25 FEB	4	1	4	37	70	93	116	46						
4 MAR	130	47	38	89	134	154	52	92						
11 MAR	97	106	218	188	21	42	104	111						
18 MAR	97	49	67	55	146	126	64	86						
25 MAR	29	112	134	260	184	97	133	136						
1 APR	200	151	85	141	124	141	150	142						
8 APR	15	19	63	59	124	191	135	87						
15 APR	97	100	136	301	342	163	46	171						
22 APR	92	103	60	31	46	51	34	61						
29 APR	73	101	60	68	56	121	154	91						
6 MAY	103	155	168	47	18	9	32	76						
13 MAY	47	7	17	73	103	153	93	71						
20 MAY	103	111	96	106	122	178	140	123						
27 MAY	113	80	80	58	65	48	49	70						
3 JUN	56	60	90	105	97	85	104	85						
10 JUN	91	118	103	120	175	155	143	129						
17 JUN	205	147	36	42	55	149	194	118						
24 JUN	168	78	36	69	60	55	63	77						
1 JUL	118	94	76	37	62	79	99	81						
8 JUL	81	90	80	79	58	23	33	63						
15 JUL	49	90	118	113	105	110	144	106						
22 JUL	154	140	126	67	8	7	33	76						
29 JUL	38	49	36	97	75	49	24	53						
5 AUG	25	47	54	78	115	106	123	78						
12 AUG	126	52	64	77	61	55	48	69						
19 AUG	51	53	110	198	255	156	102	132						
26 AUG	74	111	100	45	51	68	33	69						
2 SEP	20	39	65	119	214	106	46	87						
9 SEP	2	16	56	60	48	70	72	46						
16 SEP	89	112	95	86	126	132	99	106						
23 SEP	135	136	129	14	4	33	47	71						
30 SEP	43	84	79	105	104	44	28	70						
7 OCT	46	86	87	68	53	35	30	59						
14 OCT	45	95	42	21	42	54	10	48						
21 OCT	14	5	83	154	120	57	22	66						
28 OCT	41	36	-15	32	54	22	37	30						
4 NOV	56	44	84	87	40	37	18	53						
11 NOV	10	51	93	73	58	67	26	54						
18 NOV	139	139	112	74	59	66	74	94						
25 NOV	145	67	19	5	4	-8	45	40						
2 DEC	123	66	63	61	15	26	42	56						
9 DEC	31	9	19	24	50	52	13	28						
16 DEC	43	87	102	12	4	18	121	56						
23 DEC	142	126	98	73	74	95	113	103						

# COASTAL UPWELLING INDICES, DAILY AND WEEKLY MEANS

DURING 1967 AT 27N, 116W

WEEK BEGINNING	DAILY VALUES							WEEKLY MEAN	CUBIC METERS PER SECOND PER 100 METERS OF COASTLINE						
	SUN	MON	TUE	WED	THU	FRI	SAT		-600	-400	-200	0	200	400	600
1 JAN	4	3	7	87	101	18	27	35							
8 JAN	111	53	54	33	7	35	21	45							
15 JAN	12	20	5	0	21	52	30	21							
22 JAN	65	12	22	141	96	52	55	63							
29 JAN	55	157	214	155	92	30	17	104							
5 FEB	64	36	141	34	30	62	19	55							
12 FEB	17	18	36	62	92	22	35	40							
19 FEB	8	11	53	25	8	-6	6	15							
26 FEB	142	116	76	51	5	58	70	74							
5 MAR	105	130	85	103	8	12	24	78							
12 MAR	31	9	22	75	145	87	84	65							
19 MAR	179	59	131	65	90	110	52	99							
26 MAR	18	14	-9	40	70	25	17	25							
2 APR	22	20	13	122	149	79	123	77							
9 APR	104	65	35	99	90	92	46	76							
16 APR	167	103	77	20	64	10	69	87							
23 APR	90	96	179	113	60	66	140	107							
30 APR	150	100	91	65	61	69	-2	90							
7 MAY	61	170	200	200	157	136	01	168							
14 MAY	131	86	122	33	60	96	139	95							
21 MAY	36	132	16	05	197	140	152	108							
28 MAY	107	118	75	80	116	87	44	89							
4 JUN	61	49	124	187	200	101	142	123							
11 JUN	60	42	70	25	97	45	73	60							
18 JUN	250	216	133	154	161	110	10	149							
25 JUN	14	24	101	302	190	146	03	125							
2 JUL	22	29	41	40	125	73	75	58							
9 JUL	44	71	111	51	56	122	164	88							
16 JUL	506	47	26	62	239	36	2	131							
23 JUL	52	141	194	47	7	-33	71	69							
30 JUL	63	297	52	57	00	19	20	85							
6 AUG	9	77	30	154	140	50	59	76							
13 AUG	23	12	22	32	11	-14	14	14							
20 AUG	53	00	207	169	43	63	62	111							
27 AUG	64	20	90	32	66	26	7	46							
3 SEP	277	152	54	11	26	20	157	100							
10 SEP	50	2	57	208	40	116	30	84							
17 SEP	191	132	33	1	27	53	200	92							
24 SEP	113	170	73	47	75	131	295	131							
1 OCT	50	20	14	240	199	51	13	86							
8 OCT	10	103	113	21	60	79	84	73							
15 OCT	19	14	59	21	10	54	174	50							
22 OCT	37	39	46	120	201	31	05	81							
29 OCT	74	24	-34	103	46	7	62	52							
5 NOV	23	17	17	35	77	13	320	73							
12 NOV	51	22	73	36	16	72	21	42							
19 NOV	-8	-2	0	-6	-3	2	-0	-4							
26 NOV	9	9	82	67	24	86	10	41							
3 DEC	9	20	30	50	00	66	-22	36							
10 DEC	32	45	119	44	66	31	50	55							
17 DEC	24	0	6	59	72	34	-13	27							
24 DEC	-40	25	54	9	1	17	22	12							
31 DEC	32	14	40	41	34	51	107	45							

# COASTAL UPWELLING INDICES, DAILY AND WEEKLY MEANS

DURING 1968 AT 27N, 116W

WEEK BEGINNING	DAILY VALUES							WEEKLY MEAN	-600	CUBIC METERS PER SECOND PER 100 METERS OF COASTLINE				
	SUN	MON	TUE	WED	THU	FRI	SAT			-400	-200	0	200	400
7 JAN	100	50	60	45	20	15	81	54						
14 JAN	163	113	85	86	14	37	6	72						
21 JAN	7	-28	17	128	163	3	-1	41						
28 JAN	2	6	21	6	58	101	149	60						
4 FEB	21	-14	43	40	33	8	66	22						
11 FEB	195	31	-4	13	-16	-28	31	32						
18 FEB	64	61	72	195	157	58	11	88						
25 FEB	-6	7	62	29	8	34	-12	17						
3 MAR	27	73	139	65	7	14	36	52						
10 MAR	158	74	28	58	32	51	173	82						
17 MAR	116	118	93	43	102	91	81	92						
24 MAR	66	82	140	43	16	22	50	60						
31 MAR	47	57	187	87	44	102	102	89						
7 APR	103	32	38	20	131	44	10	53						
14 APR	18	61	64	125	115	80	43	72						
21 APR	97	65	65	92	58	69	204	93						
28 APR	12	-8	42	85	60	61	96	50						
5 MAY	139	90	94	78	22	73	89	84						
12 MAY	60	33	75	47	96	120	115	78						
19 MAY	115	91	95	170	121	75	71	106						
26 MAY	103	132	60	30	34	56	86	71						
2 JUN	67	114	82	70	45	69	47	71						
9 JUN	56	47	52	48	87	74	93	65						
16 JUN	144	178	265	142	82	4	41	122						
23 JUN	103	23	75	122	130	57	67	82						
30 JUN	33	100	194	63	40	57	25	74						
7 JUL	56	28	16	51	77	176	92	71						
14 JUL	29	110	40	34	45	122	70	64						
21 JUL	67	28	12	63	159	47	21	57						
28 JUL	85	214	68	63	93	66	52	91						
4 AUG	22	45	52	53	33	53	19	40						
11 AUG	66	238	229	105	236	105	65	163						
18 AUG	84	83	36	28	64	63	-5	50						
25 AUG	-2	37	87	56	48	6	26	36						
1 SEP	42	31	36	100	60	20	24	46						
8 SEP	32	63	137	134	171	49	13	86						
15 SEP	30	51	19	22	65	44	26	38						
22 SEP	46	80	79	56	164	61	55	77						
29 SEP	54	54	128	84	56	122	62	83						
6 OCT	101	78	27	73	56	27	65	61						
13 OCT	38	65	146	109	43	8	31	63						
20 OCT	53	57	56	62	41	23	0	43						
27 OCT	52	59	113	97	55	41	94	73						
3 NOV	84	62	86	103	118	50	8	73						
10 NOV	0	17	71	79	65	86	39	51						
17 NOV	26	9	83	106	62	119	139	78						
24 NOV	84	220	131	42	37	131	33	96						
1 DEC	103	79	60	28	37	22	9	50						
8 DEC	15	37	94	110	111	2	1	53						
15 DEC	17	114	115	136	26	41	94	77						
22 DEC	20	23	10	51	28	115	28	39						
29 DEC	77	26	21	38	66	74	62	52						

# COASTAL UPWELLING INDICES, DAILY AND WEEKLY MEANS DURING 1969 AT 27N, 116W

WEEK BEGINNING	DAILY VALUES							WEEKLY MEAN	CUBIC METERS PER SECOND PER 100 METERS OF COASTLINE						
	SUN	MON	TUE	WED	THU	FRI	SAT		-600	-400	-200	0	200	400	600
5 JAN	18	50	44	193	60	20	36	60							
12 JAN	7	-25	2	17	20	11	-14	3							
19 JAN	0	-13	-1	27	7	-6	4	3							
26 JAN	10	23	6	3	54	73	62	36							
2 FEB	59	12	21	26	44	32	72	38							
9 FEB	63	39	39	47	226	62	20	75							
16 FEB	94	43	75	35	90	19	73	61							
23 FEB	26	7	9	60	29	30	110	40							
2 MAR	103	178	173	122	199	169	65	144							
9 MAR	27	56	109	132	96	125	112	94							
16 MAR	105	120	129	92	26	10	61	81							
23 MAR	74	66	46	82	125	43	161	85							
30 MAR	113	95	126	130	79	53	59	95							
6 APR	95	91	80	61	84	63	121	85							
13 APR	229	189	116	96	60	115	104	134							
20 APR	30	46	46	100	350	330	65	139							
27 APR	15	10	50	30	215	117	113	82							
4 MAY	77	39	26	29	61	130	126	70							
11 MAY	95	69	119	125	110	140	150	116							
18 MAY	171	116	52	119	97	146	99	114							
25 MAY	109	104	175	116	54	43	49	104							
1 JUN	32	36	40	75	137	114	81	74							
8 JUN	95	111	45	56	94	116	120	91							
15 JUN	136	45	40	80	71	114	97	83							
22 JUN	94	123	107	30	45	114	142	95							
29 JUN	92	37	44	94	169	168	128	104							
6 JUL	99	78	64	59	50	52	86	70							
13 JUL	121	64	68	27	11	37	66	56							
20 JUL	114	141	59	46	105	82	33	83							
27 JUL	45	134	156	36	42	104	75	85							
3 AUG	80	74	24	14	12	9	11	32							
10 AUG	153	134	110	70	50	71	58	92							
17 AUG	59	153	155	97	180	160	37	120							
24 AUG	-11	33	134	120	90	84	80	78							
31 AUG	111	161	105	35	53	60	103	90							
7 SEP	106	120	80	10	2	-9	-15	42							
14 SEP	3	19	25	136	111	116	159	81							
21 SEP	140	80	85	107	189	146	92	120							
28 SEP	57	92	66	75	116	151	31	84							
5 OCT	31	113	86	115	199	191	132	124							
12 OCT	14	-19	0	21	51	93	113	40							
19 OCT	79	57	62	48	71	73	96	69							
26 OCT	77	78	130	22	20	36	37	57							
2 NOV	5	10	17	17	3	10	-23	5							
9 NOV	-48	-166	-132	-38	-14	37	3	-51							
16 NOV	12	114	-3	41	25	33	44	38							
23 NOV	22	29	52	43	70	44	0	38							
30 NOV	21	33	24	66	31	65	59	43							
7 DEC	20	11	36	45	65	31	0	31							
14 DEC	18	38	61	27	24	42	79	41							
21 DEC	67	79	44	74	80	116	113	82							
28 DEC	104	86	19	37	20	15	10	42							

# COASTAL UPWELLING INDICES, DAILY AND WEEKLY MEANS DURING 1970 AT 27N, 116W

WEEK BEGINNING	DAILY VALUES							WEEKLY MEAN	CUBIC METERS PER SECOND PER 100 METERS OF COASTLINE						
	SUN	MON	TUE	WED	THU	FRI	SAT		-600	-400	-200	0	200	400	600
4 JAN	14	-13	-23	3	2	0	14	-0							
11 JAN	29	50	42	82	49	69	159	69							
18 JAN	96	94	111	76	54	42	78	79							
25 JAN	100	02	95	68	61	75	78	80							
1 FEB	74	59	43	26	4	52	42	43							
8 FEB	1	-7	-4	17	34	76	62	26							
15 FEB	45	86	146	123	18	-8	29	63							
22 FEB	34	8	-2	-2	12	-5	-25	3							
1 MAR	-14	29	40	76	86	58	53	47							
8 MAR	69	81	100	72	50	41	86	74							
15 MAR	148	40	110	28	3	5	40	53							
22 MAR	107	148	88	87	152	48	55	96							
29 MAR	88	44	71	46	98	53	77	67							
5 APR	97	51	55	45	100	106	94	78							
12 APR	41	104	93	119	31	51	88	75							
19 APR	103	144	81	98	111	122	153	116							
26 APR	119	111	85	108	90	91	138	107							
3 MAY	105	56	81	110	200	139	202	128							
10 MAY	190	130	151	277	207	77	78	161							
17 MAY	212	124	185	178	152	94	65	144							
24 MAY	46	41	71	93	88	84	72	71							
31 MAY	99	31	76	77	72	42	43	63							
7 JUN	71	43	79	147	121	105	46	88							
14 JUN	93	169	136	137	149	98	57	120							
21 JUN	68	26	62	72	135	130	159	94							
28 JUN	150	109	58	36	25	62	60	74							
5 JUL	17	19	53	25	66	96	91	52							
12 JUL	107	118	98	99	88	58	25	82							
19 JUL	36	24	61	44	131	67	42	58							
26 JUL	68	70	69	48	104	133	55	78							
2 AUG	53	68	90	158	176	43	21	87							
9 AUG	15	67	48	62	72	62	24	50							
16 AUG	34	58	66	69	54	68	133	88							
23 AUG	99	68	56	64	94	141	105	102							
30 AUG	128	223	153	85	68	19	52	103							
6 SEP	30	32	79	60	50	71	124	66							
13 SEP	102	107	101	37	24	28	73	68							
20 SEP	69	89	51	53	62	74	98	69							
27 SEP	26	8	12	62	100	29	15	37							
4 OCT	55	97	74	86	82	35	47	68							
11 OCT	79	65	76	76	52	22	89	66							
18 OCT	72	45	34	47	55	43	153	64							
25 OCT	118	108	84	110	37	10	28	71							
1 NOV	17	57	30	11	42	89	126	53							
8 NOV	126	84	105	136	154	37	43	98							
15 NOV	34	42	63	109	28	21	50	50							
22 NOV	115	82	70	61	20	6	3	52							
29 NOV	-1	67	55	59	150	109	54	70							
6 DEC	49	26	43	76	78	75	26	53							
13 DEC	38	129	89	45	53	19	10	55							
20 DEC	20	40	36	31	42	34	48	36							
27 DEC	65	66	73	78	73	80	127	80							

# COASTAL UPWELLING INDICES, DAILY AND WEEKLY MEANS DURING 1971 AT 27N, 116W

WEEK BEGINNING	DAILY VALUES							WEEKLY MEAN	CUBIC METERS PER SECOND PER 100 METERS OF COASTLINE						
	SUN	MON	TUE	WED	THU	FRI	SAT		-600	-400	-200	0	200	400	600
3 JAN	40	64	74	65	47	64	33	56							
10 JAN	29	61	45	58	94	114	92	70							
17 JAN	49	48	35	52	48	68	63	50							
24 JAN	78	60	81	83	51	34	28	57							
31 JAN	64	53	70	63	79	82	83	74							
7 FEB	45	77	95	32	43	20	69	54							
14 FEB	61	97	88	95	69	141	109	93							
21 FEB	47	96	63	46	94	77	151	85							
28 FEB	100	175	64	98	130	100	59	119							
7 MAR	92	91	115	155	136	80	116	112							
14 MAR	150	124	48	79	9	34	76	74							
21 MAR	102	83	122	117	92	103	103	103							
28 MAR	121	110	113	151	86	128	181	127							
4 APR	44	20	44	136	105	81	128	79							
11 APR	144	104	151	104	142	79	94	128							
18 APR	111	67	137	160	108	147	178	129							
25 APR	98	64	61	83	77	103	96	83							
2 MAY	69	100	147	160	42	-1	17	76							
9 MAY	106	129	106	159	212	142	78	133							
16 MAY	100	111	60	109	112	137	116	108							
23 MAY	115	88	88	74	83	94	126	95							
30 MAY	82	116	113	105	104	111	73	101							
6 JUN	93	150	134	136	103	49	83	110							
13 JUN	173	54	64	30	110	83	103	102							
20 JUN	83	75	68	74	70	59	103	75							
27 JUN	93	122	103	118	105	58	72	96							
4 JUL	59	37	33	65	80	70	121	66							
11 JUL	78	90	15	70	34	16	23	47							
18 JUL	152	83	75	20	30	37	47	62							
25 JUL	103	87	92	16	14	35	104	64							
1 AUG	38	20	41	7	-3	14	33	20							
8 AUG	169	25	-6	9	-7	11	19	31							
15 AUG	115	82	30	27	48	58	36	55							
22 AUG	79	51	62	153	94	70	96	86							
29 AUG	136	130	106	97	76	56	46	107							
5 SEP	103	38	84	63	71	77	89	75							
12 SEP	57	94	15	36	66	36	65	54							
19 SEP	78	69	52	130	201	194	189	129							
26 SEP	91	116	152	173	105	122	105	123							
3 OCT	52	82	74	53	23	28	74	55							
10 OCT	34	38	159	61	84	56	46	67							
17 OCT	84	59	138	92	107	121	159	109							
24 OCT	79	23	48	71	94	58	66	63							
31 OCT	45	92	112	142	101	40	85	97							
7 NOV	94	81	114	94	187	177	203	136							
14 NOV	201	103	79	83	31	1	17	74							
21 NOV	76	103	143	126	69	103	122	106							
28 NOV	225	128	73	103	121	192	204	149							
5 DEC	97	109	235	95	118	66	82	113							
12 DEC	127	101	59	88	26	20	9	62							
19 DEC	19	19	6	18	72	53	102	41							
26 DEC	136	82	74	191	100	57	23	96							



# COASTAL UPWELLING INDICES, DAILY AND WEEKLY MEANS DURING 1972 AT 27N, 116W

WEEK BEGINNING	DAILY VALUES							WEEKLY MEAN	CUBIC METERS PER SECOND PER 100 METERS OF COASTLINE						
	SUN	MON	TUE	WED	THU	FRI	SAT		-600	-400	-200	0	200	400	600
2 JAN	95	55	33	82	66	95	89	74							
9 JAN	83	85	100	72	7	35	79	66							
16 JAN	87	47	101	54	121	151	110	96							
23 JAN	126	58	24	76	99	117	91	85							
30 JAN	68	28	45	45	171	171	104	91							
6 FEB	109	115	98	17	10	15	22	55							
13 FEB	59	46	130	81	50	50	107	77							
20 FEB	96	117	180	152	135	50	40	111							
27 FEB	106	163	210	165	117	167	147	155							
5 MAR	39	172	58	85	206	205	147	130							
12 MAR	128	115	76	58	100	113	168	109							
19 MAR	106	56	61	84	124	92	48	82							
26 MAR	83	119	108	207	81	103	107	115							
2 APR	89	51	51	58	161	250	224	126							
9 APR	206	82	67	102	172	76	55	120							
16 APR	121	147	165	249	177	171	103	162							
23 APR	120	216	224	59	43	106	142	130							
30 APR	96	91	106	94	134	136	152	116							
7 MAY	120	171	198	165	105	91	112	138							
14 MAY	62	52	62	81	111	93	64	75							
21 MAY	172	165	157	150	158	111	72	141							
28 MAY	68	53	12	19	32	45	69	45							
4 JUN	79	43	44	68	75	91	170	83							
11 JUN	226	101	38	40	83	161	101	107							
18 JUN	123	91	64	52	74	148	114	95							
25 JUN	103	125	147	96	53	77	83	97							
2 JUL	92	121	150	71	97	47	75	93							
9 JUL	150	134	100	49	89	38	-1	81							
16 JUL	-2	22	31	78	91	74	77	53							
23 JUL	105	62	83	64	41	8	-8	50							
30 JUL	20	58	66	60	47	33	17	43							
6 AUG	18	11	47	37	28	17	41	28							
13 AUG	63	91	111	118	103	76	37	86							
20 AUG	54	49	43	64	49	34	36	47							
27 AUG	14	-16	-102	-4	26	7	2	-10							
3 SEP	12	15	93	111	50	33	65	54							
10 SEP	92	84	152	77	65	41	92	86							
17 SEP	75	43	107	75	85	45	20	64							
24 SEP	30	37	24	35	65	92	60	50							
1 OCT	76	76	5	-40	5	25	26	25							
8 OCT	43	33	55	51	36	41	42	43							
15 OCT	40	15	13	9	59	77	30	36							
22 OCT	33	34	35	53	13	27	66	37							
29 OCT	166	123	37	39	63	35	61	75							
5 NOV	67	26	44	82	65	65	87	62							
12 NOV	29	20	34	11	17	54	53	31							
19 NOV	60	60	56	60	81	77	60	68							
26 NOV	54	22	8	23	53	33	10	29							
3 DEC	28	95	48	22	24	13	39	38							
10 DEC	63	54	32	75	46	57	71	57							
17 DEC	43	35	83	109	40	59	67	63							
24 DEC	99	18	-10	-3	119	142	57	60							
31 DEC	174	245	114	41	77	55	35	100							

# COASTAL UPWELLING INDICES, DAILY AND WEEKLY MEANS DURING 1973 AT 27N, 116W

WEEK BEGINNING	DAILY VALUES							WEEKLY MEAN	CUBIC METERS PER SECOND PER 100 METERS OF COASTLINE						
	SUN	MON	TUE	WED	THU	FRI	SAT		-600	-400	-200	0	200	400	600
7 JAN	35	37	58	118	124	63	22	65							
14 JAN	3	16	49	42	25	134	133	58							
21 JAN	129	52	45	80	74	104	52	76							
28 JAN	15	12	126	112	11	-11	-8	37							
4 FEB	9	13	12	14	43	17	-0	16							
11 FEB	34	64	49	81	123	84	51	69							
18 FEB	63	17	-54	2	30	9	13	11							
25 FEB	21	26	37	53	88	107	96	61							
4 MAR	129	70	45	76	100	151	69	91							
11 MAR	40	95	93	123	56	76	86	81							
18 MAR	90	63	61	66	167	149	86	97							
25 MAR	58	119	103	107	154	111	153	126							
1 APR	179	158	104	153	244	107	115	151							
8 APR	40	45	71	68	91	159	149	89							
15 APR	112	91	122	181	227	94	28	122							
22 APR	57	128	122	40	43	67	23	68							
29 APR	51	79	58	84	43	74	140	76							
6 MAY	117	107	85	29	25	21	44	61							
13 MAY	60	25	41	74	122	182	125	90							
20 MAY	91	122	105	87	95	147	115	109							
27 MAY	77	68	74	51	45	55	48	60							
3 JUN	63	71	59	102	110	65	118	85							
10 JUN	89	116	65	46	80	99	87	83							
17 JUN	130	114	35	34	39	63	93	72							
24 JUN	94	50	61	112	79	56	65	74							
1 JUL	94	43	14	27	36	30	41	42							
8 JUL	44	99	80	48	43	24	34	53							
15 JUL	55	98	116	63	133	180	141	112							
22 JUL	127	61	27	19	3	15	28	40							
29 JUL	21	25	25	24	33	24	26	25							
5 AUG	31	45	74	69	83	80	71	65							
12 AUG	56	16	40	55	49	31	37	40							
19 AUG	16	28	67	140	175	114	140	97							
26 AUG	115	150	101	72	80	89	71	96							
2 SEP	60	103	164	108	218	61	22	117							
9 SEP	18	59	133	95	61	82	97	78							
16 SEP	82	81	84	77	87	133	87	90							
23 SEP	117	101	95	48	-1	32	26	60							
30 SEP	45	74	87	93	97	34	41	67							
7 OCT	65	100	112	75	55	51	47	72							
14 OCT	45	64	25	16	54	80	66	50							
21 OCT	52	41	122	139	75	44	36	73							
28 OCT	36	30	9	21	38	25	27	26							
4 NOV	67	50	96	74	65	97	97	79							
11 NOV	40	74	103	133	100	119	42	88							
18 NOV	127	140	85	58	55	92	69	89							
25 NOV	93	60	78	13	11	0	34	41							
2 DEC	169	90	85	71	21	29	35	71							
9 DEC	24	14	18	32	113	105	33	48							
16 DEC	53	63	71	35	26	14	95	51							
23 DEC	120	90	62	43	74	90	64	80							

# COASTAL UPWELLING INDICES, DAILY AND WEEKLY MEANS

DURING 1967 AT 24N, 113W

WEEK BEGINNING	DAILY VALUES							WEEKLY MEAN	CUBIC METERS PER SECOND PER 100 METERS OF COASTLINE						
	SUN	MON	TUE	WED	THU	FRI	SAT		-600	-400	-200	0	200	400	600
1 JAN	26	0	12	77	156	-7	-5	37							
8 JAN	205	55	89	-10	20	4	2	52							
15 JAN	2	22	3	-4	7	44	26	14							
22 JAN	53	-2	45	117	51	46	6	45							
29 JAN	7	53	50	45	17	20	18	31							
5 FEB	28	39	55	36	57	40	7	37							
12 FEB	9	5	-11	29	23	27	21	15							
19 FEB	11	24	13	13	15	-41	9	6							
26 FEB	62	86	51	22	-5	10	20	36							
5 MAR	100	132	46	25	15	-9	13	46							
12 MAR	112	34	26	112	29	63	56	62							
19 MAR	173	37	39	55	42	51	50	64							
26 MAR	13	15	15	-2	50	27	95	31							
2 APR	51	110	65	121	139	59	100	93							
9 APR	50	65	30	41	72	92	37	55							
16 APR	71	124	93	60	75	83	118	90							
23 APR	82	80	145	63	87	59	150	96							
30 APR	106	62	26	14	30	43	8	41							
7 MAY	64	123	102	210	213	151	93	138							
14 MAY	63	63	26	14	24	71	194	65							
21 MAY	91	99	9	51	90	131	120	84							
28 MAY	106	204	62	89	90	37	77	95							
4 JUN	60	59	84	120	160	82	114	98							
11 JUN	84	24	45	90	63	90	160	80							
18 JUN	210	129	134	107	102	30	8	116							
25 JUN	-37	-21	95	377	201	92	46	108							
2 JUL	23	31	35	37	59	49	111	49							
9 JUL	25	50	45	6	29	156	54	53							
16 JUL	232	16	46	64	177	9	2	78							
23 JUL	55	100	75	-7	-1	12	83	46							
30 JUL	160	80	50	26	26	19	30	50							
6 AUG	22	55	29	24	95	52	67	49							
13 AUG	21	23	42	4	-6	-79	1	1							
20 AUG	72	113	240	116	21	30	77	95							
27 AUG	36	10	-1	-45	-10	-25	4	-4							
3 SEP	136	77	5	-3	13	45	166	63							
10 SEP	129	23	65	120	23	84	13	65							
17 SEP	77	114	34	24	107	130	266	108							
24 SEP	64	117	70	84	96	100	206	118							
1 OCT	177	110	14	107	216	43	-8	105							
8 OCT	3	42	55	-9	13	39	36	26							
15 OCT	46	15	-7	-9	13	-15	30	11							
22 OCT	52	35	53	63	66	135	153	80							
29 OCT	129	1	-81	110	39	63	13	40							
5 NOV	30	23	35	37	49	11	170	52							
12 NOV	42	31	22	10	6	29	50	28							
19 NOV	23	-1	-5	5	-6	-10	-31	-4							
26 NOV	-7	29	14	50	17	74	4	26							
3 DEC	-6	4	16	21	41	72	-9	20							
10 DEC	53	16	90	-23	1	12	30	27							
17 DEC	26	-11	-22	16	34	-25	-21	-0							
24 DEC	4	31	73	-12	-3	-31	-33	4							
31 DEC	-36	-20	6	21	11	10	19	2							

# COASTAL UPWELLING INDICES, DAILY AND WEEKLY MEANS DURING 1968 AT 24N, 113W

WEEK BEGINNING	DAILY VALUES							WEEKLY MEAN	CUBIC METERS PER SECOND PER 100 METERS OF COASTLINE						
	SUN	MON	TUE	WED	THU	FRI	SAT		-600	-400	-200	0	200	400	600
7 JAN	50	32	9	32	19	31	18	27							
14 JAN	-9	-4	8	18	8	-2	20	6							
21 JAN	43	-3	-9	23	83	-19	-34	12							
28 JAN	-22	-8	17	37	70	69	26	27							
4 FEB	4	-4	11	8	1	-37	20	-1							
11 FEB	133	-5	-5	-8	-34	-21	16	11							
18 FEB	21	54	57	63	54	21	-25	35							
25 FEB	-36	27	9	10	17	22	-40	1							
3 MAR	-26	11	26	32	-3	3	73	17							
10 MAR	153	89	13	29	-4	26	83	55							
17 MAR	48	25	71	52	19	45	37	42							
24 MAR	15	54	40	23	9	16	34	28							
31 MAR	62	54	103	11	29	48	127	66							
7 APR	75	55	4	-1	70	31	-4	33							
14 APR	27	65	46	63	278	40	41	80							
21 APR	52	43	37	34	49	43	163	64							
28 APR	18	8	51	79	43	79	97	53							
5 MAY	107	110	30	69	79	30	110	81							
12 MAY	61	35	53	113	87	76	55	69							
19 MAY	70	66	85	104	37	42	37	63							
26 MAY	53	77	25	103	92	132	69	79							
2 JUN	33	60	58	56	20	17	33	42							
9 JUN	13	50	17	31	70	60	72	51							
16 JUN	135	161	49	3	-30	9	24	49							
23 JUN	57	7	40	62	90	35	33	49							
30 JUN	20	20	87	57	19	45	-61	29							
7 JUL	-357	-83	11	53	81	107	36	-19							
14 JUL	5	45	4	0	11	67	53	26							
21 JUL	73	20	34	70	90	20	51	52							
28 JUL	46	99	82	35	37	25	93	59							
4 AUG	81	31	39	22	18	16	16	31							
11 AUG	53	63	220	100	262	69	53	121							
18 AUG	95	30	16	10	36	12	-73	17							
25 AUG	3	14	23	37	10	14	20	16							
1 SEP	53	30	56	46	25	21	18	37							
8 SEP	36	41	29	59	95	24	13	42							
15 SEP	41	50	103	19	29	58	35	50							
22 SEP	53	37	36	18	137	63	56	58							
29 SEP	41	123	137	127	27	48	34	77							
6 OCT	66	173	54	60	24	16	57	64							
13 OCT	20	142	149	120	19	-10	-9	63							
20 OCT	53	15	21	17	15	-4	-3	16							
27 OCT	3	54	77	66	22	57	73	50							
3 NOV	31	78	42	29	44	26	14	38							
10 NOV	13	25	5	66	86	41	56	42							
17 NOV	49	25	20	44	18	73	129	51							
24 NOV	25	100	123	44	34	103	40	67							
1 DEC	74	115	46	41	12	6	-1	42							
8 DEC	1	22	76	140	60	29	-5	46							
15 DEC	70	137	99	26	30	10	79	66							
22 DEC	0	36	-18	26	3	46	18	17							
29 DEC	10	6	-2	11	53	26	23	20							

# COASTAL UPWELLING INDICES, DAILY AND WEEKLY MEANS

DURING 1969 AT 24N, 113W

WEEK BEGINNING	DAILY VALUES							WEEKLY MEAN	CUBIC METERS PER SECOND PER 100 METERS OF COASTLINE						
	SUN	MON	TUE	WED	THU	FRI	SAT		-600	-400	-200	0	200	400	600
5 JAN	-22	0	17	79	59	71	34	34							
12 JAN	16	-18	3	5	-7	43	11	8							
19 JAN	7	25	15	10	2	6	6	10							
26 JAN	14	19	24	-0	8	34	70	24							
2 FEB	22	3	-1	65	33	30	53	29							
9 FEB	57	91	26	15	114	62	49	59							
16 FEB	265	120	18	10	49	15	79	82							
23 FEB	115	30	27	41	34	55	86	55							
2 MAR	60	72	93	177	104	62	84	97							
9 MAR	44	44	50	71	36	93	121	66							
16 MAR	111	106	81	26	9	-1	114	64							
23 MAR	121	102	44	49	120	9	20	66							
30 MAR	16	32	40	86	137	86	46	63							
6 APR	56	63	103	51	64	36	66	63							
13 APR	103	71	63	81	80	51	112	92							
20 APR	9	49	135	124	303	141	16	111							
27 APR	15	20	34	75	16	41	51	36							
4 MAY	62	81	23	26	40	76	50	49							
11 MAY	54	35	30	68	70	105	103	80							
18 MAY	125	41	77	50	49	101	96	78							
25 MAY	123	82	80	53	62	35	56	72							
1 JUN	23	16	34	45	113	75	99	59							
8 JUN	111	143	52	32	49	42	90	74							
15 JUN	62	41	23	71	76	43	11	47							
22 JUN	23	73	39	22	14	29	61	37							
29 JUN	32	17	20	110	139	37	24	54							
6 JUL	53	35	11	7	14	16	54	27							
13 JUL	72	26	29	-4	3	11	42	26							
20 JUL	84	60	21	7	34	16	10	34							
27 JUL	9	27	50	16	25	93	16	34							
3 AUG	20	16	37	-12	-23	-11	1	4							
10 AUG	23	32	22	10	14	19	6	18							
17 AUG	31	46	45	90	80	58	-47	43							
24 AUG	-116	8	58	70	39	16	32	15							
31 AUG	33	35	54	3	16	28	21	27							
7 SEP	49	39	41	33	-67	-16	-10	10							
14 SEP	-4	2	43	105	100	60	66	55							
21 SEP	41	37	60	96	94	83	10	60							
28 SEP	17	6	-4	-5	-10	12	-6	1							
5 OCT	-3	59	31	40	112	93	70	60							
12 OCT	-8	-32	-1	1	-1	16	4	-3							
19 OCT	24	19	20	8	-23	-10	-2	4							
26 OCT	13	5	20	-2	2	16	1	8							
2 NOV	-6	-15	-6	-7	3	10	-0	-3							
9 NOV	6	-26	-33	10	-10	23	5	-5							
16 NOV	-34	-8	-13	57	26	3	2	5							
23 NOV	12	8	24	7	10	-1	-37	3							
30 NOV	-11	6	17	-1	7	24	33	10							
7 DEC	11	-11	25	4	33	1	-1	9							
14 DEC	26	23	16	10	54	23	30	26							
21 DEC	34	37	15	34	36	47	53	37							
28 DEC	36	26	19	36	20	13	10	23							

# COASTAL UPWELLING INDICES, DAILY AND WEEKLY MEANS DURING 1970 AT 24N, 113W

WEEK BEGINNING	DAILY VALUES							WEEKLY MEAN	CUBIC METERS PER SECOND PER 100 METERS OF COASTLINE					
	SUN	MON	TUE	WED	THU	FRI	SAT		-600	-400	-200	0	200	400
4 JAN	-4	-24	-23	8	4	15	31	1						
11 JAN	31	65	54	58	38	43	146	61						
18 JAN	47	42	38	70	45	28	17	39						
25 JAN	38	39	31	30	4	6	34	26						
1 FEB	65	73	13	12	-14	33	22	29						
8 FEB	2	-12	-12	2	43	83	42	21						
15 FEB	16	28	50	26	-16	-55	-33	1						
22 FEB	-6	5	5	-10	17	-2	-4	1						
1 MAR	8	15	26	57	58	56	34	36						
8 MAR	47	49	87	81	45	28	39	54						
15 MAR	89	13	57	16	8	14	44	33						
22 MAR	57	55	57	74	72	26	23	52						
29 MAR	63	33	57	46	54	26	67	49						
5 APR	94	36	31	23	67	29	43	46						
12 APR	55	47	28	47	13	74	107	52						
19 APR	79	97	61	136	59	93	115	91						
26 APR	74	88	104	119	93	81	52	87						
3 MAY	57	37	32	65	98	96	141	75						
10 MAY	114	47	56	103	74	16	58	67						
17 MAY	135	93	89	105	76	52	49	86						
24 MAY	42	28	71	84	89	59	73	64						
31 MAY	64	22	35	55	42	16	45	40						
7 JUN	33	51	44	102	99	51	39	60						
14 JUN	57	97	64	56	56	41	23	56						
21 JUN	35	25	8	22	34	43	52	31						
28 JUN	42	72	46	7	23	16	33	34						
5 JUL	5	17	44	60	68	38	32	38						
12 JUL	49	14	38	24	34	6	3	24						
19 JUL	7	3	7	25	61	10	-11	15						
26 JUL	-3	16	12	27	67	21	-23	16						
2 AUG	7	22	50	95	55	17	6	36						
9 AUG	1	24	7	15	23	14	3	12						
16 AUG	11	16	18	8	12	11	15	13						
23 AUG	45	27	8	5	43	82	105	45						
30 AUG	76	52	27	-9	-159	-54	-47	-16						
6 SEP	5	23	29	42	32	49	40	31						
13 SEP	23	40	11	-8	-11	-3	14	11						
20 SEP	9	17	16	11	11	63	53	26						
27 SEP	18	-5	8	19	40	17	4	14						
4 OCT	29	49	29	17	41	7	8	26						
11 OCT	34	21	33	15	15	8	45	24						
18 OCT	17	8	12	19	20	22	65	24						
25 OCT	104	113	76	99	48	8	2	63						
1 NOV	16	3	-12	-60	-30	3	53	-4						
8 NOV	72	64	48	55	57	28	24	50						
15 NOV	13	10	8	12	4	14	18	11						
22 NOV	63	35	10	8	6	7	3	20						
29 NOV	-6	61	76	46	94	37	20	48						
6 DEC	13	15	11	38	50	57	31	31						
13 DEC	17	68	79	54	41	23	7	40						
20 DEC	28	40	63	39	57	39	33	42						
27 DEC	45	13	61	42	40	33	57	44						

# COASTAL UPWELLING INDICES, DAILY AND WEEKLY MEANS DURING 1971 AT 24N, 113W

WEEK BEGINNING	DAILY VALUES							WEEKLY MEAN	CUBIC METERS PER SECOND PER 100 METERS OF COASTLINE						
	SUN	MON	TUE	WED	THU	FRI	SAT		-600	-400	-200	0	200	400	600
3 JAN	75	55	54	51	12	46	30	46							
10 JAN	17	56	73	98	137	137	34	79							
17 JAN	32	50	27	11	12	53	98	40							
24 JAN	82	47	110	87	48	21	29	61							
31 JAN	58	44	38	69	63	56	35	53							
7 FEB	48	85	57	27	25	21	50	45							
14 FEB	25	35	50	39	51	129	93	61							
21 FEB	49	48	29	29	61	68	103	55							
28 FEB	131	100	83	129	53	46	23	92							
7 MAR	61	36	72	123	146	90	125	93							
14 MAR	135	67	47	25	0	35	32	50							
21 MAR	64	46	156	74	86	80	64	81							
28 MAR	121	111	83	77	109	92	79	96							
4 APR	3	16	21	79	78	68	68	50							
11 APR	60	63	94	126	110	55	60	81							
18 APR	67	81	139	143	149	74	105	108							
25 APR	83	72	66	92	87	84	103	84							
2 MAY	52	110	103	135	48	15	62	75							
9 MAY	101	99	90	170	235	86	50	120							
16 MAY	57	63	43	61	50	67	114	66							
23 MAY	113	87	66	41	53	134	147	92							
30 MAY	47	75	122	93	103	67	73	83							
6 JUN	120	123	120	102	140	49	105	110							
13 JUN	103	87	93	134	150	72	53	100							
20 JUN	19	24	10	21	21	16	49	23							
27 JUN	42	68	53	72	86	21	30	54							
4 JUL	29	16	47	98	22	29	54	42							
11 JUL	23	39	12	19	22	20	29	23							
18 JUL	43	43	20	-8	53	21	12	28							
25 JUL	84	84	60	2	7	30	100	51							
1 AUG	10	0	-3	-153	-119	-32	27	-39							
8 AUG	59	-34	-21	67	-17	-6	1	7							
15 AUG	74	35	19	21	50	43	27	38							
22 AUG	56	55	61	72	64	62	41	59							
29 AUG	44	16	61	69	-79	-36	-25	7							
5 SEP	114	28	37	-55	26	43	50	35							
12 SEP	42	57	27	50	55	14	47	42							
19 SEP	61	34	54	129	140	103	70	86							
26 SEP	95	-7	-14	21	54	57	195	57							
3 OCT	57	65	25	57	10	56	67	49							
10 OCT	46	15	105	20	42	26	11	38							
17 OCT	21	111	86	61	61	94	109	78							
24 OCT	26	52	101	45	19	53	78	53							
31 OCT	121	102	206	93	75	21	90	101							
7 NOV	71	43	64	55	61	49	82	61							
14 NOV	90	71	41	126	55	-2	8	56							
21 NOV	71	126	67	42	46	57	65	68							
28 NOV	116	49	76	135	77	165	124	106							
5 DEC	78	46	60	79	151	51	40	72							
12 DEC	92	144	91	67	1	25	12	62							
19 DEC	7	17	9	33	54	45	67	33							
26 DEC	44	43	47	137	86	19	31	58							

# COASTAL UPWELLING INDICES, DAILY AND WEEKLY MEANS DURING 1972 AT 24N, 113W

WEEK BEGINNING	DAILY VALUES							WEEKLY MEAN	CUBIC METERS PER SECOND PER 100 METERS OF COASTLINE					
	SUN	MON	TUE	WED	THUR	FRI	SAT		-600	-400	-200	0	200	400
2 JAN	56	61	15	31	35	124	116	63						
9 JAN	137	91	86	48	13	36	63	67						
16 JAN	53	15	12	18	73	92	84	50						
23 JAN	59	53	41	47	65	68	150	70						
30 JAN	24	58	26	31	141	76	84	62						
6 FEB	93	147	106	55	27	5	17	65						
13 FEB	28	22	100	85	62	3	8	43						
20 FEB	63	78	66	57	28	17	33	49						
27 FEB	47	91	101	151	97	150	72	101						
5 MAR	43	86	56	89	130	217	115	105						
12 MAR	48	102	53	72	77	121	107	81						
19 MAR	137	27	84	77	78	91	48	76						
26 MAR	54	125	153	109	109	57	97	114						
2 APR	67	26	53	69	140	232	130	105						
9 APR	124	50	77	107	105	97	63	109						
16 APR	86	110	118	216	114	135	102	125						
23 APR	92	191	137	84	68	67	94	104						
30 APR	72	63	109	112	68	68	119	89						
7 MAY	124	144	168	129	101	112	127	128						
14 MAY	55	45	74	98	118	132	116	80						
21 MAY	164	136	147	115	129	110	56	124						
28 MAY	31	43	23	26	49	58	74	43						
4 JUN	63	30	30	107	91	91	207	90						
11 JUN	255	85	48	57	100	206	113	121						
18 JUN	97	55	54	97	100	132	100	92						
25 JUN	74	89	88	49	41	95	157	85						
2 JUL	82	49	63	29	43	35	74	54						
9 JUL	152	108	54	28	33	21	3	56						
16 JUL	3	8	51	72	129	76	70	57						
23 JUL	45	32	56	27	8	-224	-96	-22						
30 JUL	16	33	24	13	7	3	-16	11						
6 AUG	4	13	38	18	17	6	47	18						
13 AUG	53	41	26	18	25	28	16	26						
20 AUG	21	11	6	23	8	17	39	18						
27 AUG	-94	-543	-47	38	35	-1	-4	-61						
3 SEP	11	84	172	145	66	62	79	88						
10 SEP	107	86	104	58	18	27	68	67						
17 SEP	56	28	33	65	51	28	7	37						
24 SEP	42	27	23	38	91	104	24	58						
1 OCT	28	16	-88	-271	-235	17	73	-67						
8 OCT	72	77	83	36	43	27	34	53						
15 OCT	7	2	4	9	30	59	37	21						
22 OCT	17	13	16	19	10	-2	38	15						
29 OCT	67	151	64	34	63	28	32	64						
5 NOV	54	23	15	23	45	37	63	44						
12 NOV	37	16	25	9	15	44	56	29						
19 NOV	45	38	28	37	32	66	58	44						
26 NOV	29	25	8	18	28	27	23	28						
3 DEC	28	55	52	15	18	12	27	28						
10 DEC	43	56	41	68	54	48	17	44						
17 DEC	22	8	46	68	19	26	25	29						
24 DEC	33	18	-42	-21	72	105	57	28						
31 DEC	57	52	43	43	44	67	27	47						



# COASTAL UPWELLING INDICES, DAILY AND WEEKLY MEANS DURING 1973 AT 24N, 113W

WEEK BEGINNING	DAILY VALUES							WEEKLY MEAN	CUBIC METERS PER SECOND PER 100 METERS OF COASTLINE						
	SUN	MON	TUE	WED	THU	FRI	SAT		-600	-400	-200	0	200	400	600
7 JAN	3	7	13	56	29	12	1	17							
14 JAN	5	17	38	58	35	124	131	57							
21 JAN	63	73	49	40	51	96	83	66							
28 JAN	16	14	57	96	8	-2	-6	26							
4 FEB	12	41	34	14	54	27	18	29							
11 FEB	19	82	81	73	65	44	30	57							
18 FEB	31	-5	-115	-28	45	48	38	1							
25 FEB	13	22	52	56	55	74	57	47							
4 MAR	94	124	78	64	97	205	95	108							
11 MAR	17	62	64	115	100	72	29	65							
18 MAR	48	46	68	72	151	114	93	85							
25 MAR	68	93	102	114	165	175	135	122							
1 APR	190	143	110	60	159	90	121	128							
8 APR	62	49	37	35	61	89	139	67							
15 APR	65	69	131	134	161	59	23	93							
22 APR	39	91	119	49	36	62	29	61							
29 APR	48	83	114	100	49	45	101	76							
6 MAY	128	79	57	53	44	57	54	67							
13 MAY	77	28	33	70	119	164	103	85							
20 MAY	91	147	94	80	113	102	97	104							
27 MAY	103	64	66	57	42	65	61	65							
3 JUN	66	80	37	58	40	112	131	75							
10 JUN	101	105	90	65	46	36	74	74							
17 JUN	77	117	54	63	62	44	34	64							
24 JUN	26	16	39	72	39	32	48	39							
1 JUL	58	19	2	21	19	28	33	28							
8 JUL	55	72	67	38	58	35	36	51							
15 JUL	81	69	70	50	43	127	116	80							
22 JUL	71	30	3	-8	-5	45	27	25							
29 JUL	3	-21	9	6	22	21	29	10							
5 AUG	48	54	53	42	38	57	52	48							
12 AUG	24	6	18	38	59	38	18	28							
19 AUG	6	12	64	105	89	51	118	62							
26 AUG	115	116	106	103	102	110	114	109							
2 SEP	122	215	229	183	157	21	14	135							
9 SEP	17	86	110	92	47	42	55	64							
16 SEP	38	42	36	32	48	71	77	48							
23 SEP	81	122	292	124	-8	28	18	93							
30 SEP	18	29	77	59	46	25	36	40							
7 OCT	66	64	115	81	56	68	36	72							
14 OCT	53	56	18	25	61	75	43	47							
21 OCT	26	47	158	112	34	41	35	64							
28 OCT	45	19	25	3	18	35	33	27							
4 NOV	34	86	74	35	56	25	38	49							
11 NOV	27	48	52	75	55	93	92	63							
18 NOV	96	189	73	70	55	103	124	101							
25 NOV	94	56	116	8	2	6	46	47							
2 DEC	138	83	77	56	2	6	25	54							
9 DEC	11	5	28	78	127	81	31	52							
16 DEC	43	25	42	21	29	3	48	30							
23 DEC	122	97	72	29	45	47	42	65							

# COASTAL UPWELLING INDICES, DAILY AND WEEKLY MEANS DURING 1967 AT 21N, 107W

WEEK BEGINNING	DAILY VALUES							WEEKLY MEAN	CUBIC METERS PER SECOND PER 100 METERS OF COASTLINE						
	SUN	MON	TUE	WED	THU	FRI	SAT		-600	-400	-200	0	200	400	600
1 JAN	79	86	22	11	-22	48	22	35							
8 JAN	-37	3	-92	-66	-54	74	84	-12							
15 JAN	-1	-48	32	50	64	45	39	26							
22 JAN	52	147	89	74	77	32	39	73							
29 JAN	54	83	34	12	2	-3	105	41							
5 FEB	60	57	35	47	-12	119	63	54							
12 FEB	-73	-15	-15	45	199	45	73	36							
19 FEB	64	123	18	39	43	73	48	58							
26 FEB	43	-8	-144	-18	17	63	62	2							
5 MAR	125	323	92	90	27	59	24	106							
12 MAR	77	61	99	30	51	-1	32	50							
19 MAR	20	126	122	25	-5	76	57	60							
26 MAR	79	14	20	60	90	130	239	91							
2 APR	74	27	20	50	392	258	153	140							
9 APR	282	70	357	181	404	70	37	200							
16 APR	54	117	103	579	230	198	192	212							
23 APR	107	108	169	456	51	95	708	242							
30 APR	172	189	166	226	17	153	116	148							
7 MAY	401	119	352	408	511	103	65	280							
14 MAY	91	144	-58	26	66	73	120	67							
21 MAY	32	-14	-14	29	22	123	50	34							
28 MAY	27	237	52	154	194	47	140	122							
4 JUN	15	21	194	136	192	45	50	93							
11 JUN	93	110	140	95	130	70	-10	92							
18 JUN	-4	34	95	60	20	78	-56	32							
25 JUN	-30	21	36	34	19	98	31	29							
2 JUL	6	34	39	-3	15	-4	-8	11							
9 JUL	-14	29	7	12	42	14	30	17							
16 JUL	10	61	31	92	151	-17	-14	46							
23 JUL	35	-32	-27	-24	69	56	13	13							
30 JUL	-7	-19	-5	57	12	-14	3	4							
6 AUG	7	-1	15	1	-71	19	23	-1							
13 AUG	-30	-19	-4	8	-14	-29	32	-8							
20 AUG	14	7	86	-34	-7	14	-10	10							
27 AUG	-62	-59	-89	-424	-272	11	60	-119							
3 SEP	132	3	-1	-5	37	116	-47	33							
10 SEP	30	2	40	-13	35	-32	-13	9							
17 SEP	-41	9	37	26	7	16	37	13							
24 SEP	-7	-10	39	32	134	6	-10	26							
1 OCT	-26	200	7	-3	-23	-16	-9	18							
8 OCT	-7	-45	-37	-103	-164	109	4	-35							
15 OCT	6	-237	-206	-55	-35	-5	-19	-79							
22 OCT	-4	5	57	16	0	138	224	62							
29 OCT	6	-28	-49	-11	86	-10	-94	-14							
5 NOV	23	12	51	-12	24	14	-8	15							
12 NOV	-106	-90	-72	-26	20	37	6	-33							
19 NOV	-4	17	27	47	26	1	12	18							
26 NOV	-1	70	7	25	25	68	50	35							
3 DEC	1	49	42	22	92	3	-12	28							
10 DEC	105	32	4	-5	-200	-29	125	5							
17 DEC	144	12	30	27	63	-4	-83	27							
24 DEC	-01	5	6	22	55	86	-9	12							
31 DEC	-20	22	-12	119	51	40	6	29							

# COASTAL UPWELLING INDICES, DAILY AND WEEKLY MEANS DURING 1968 AT 21N, 107W

WEEK BEGINNING	DAILY VALUES							WEEKLY MEAN	CUBIC METERS PER SECOND PER 100 METERS OF COASTLINE					
	SUN	MON	TUE	WED	THU	FRI	SAT		-600	-400	-200	0	200	400
7 JAN	-4	10	47	3	52	42	-290	-19						
14 JAN	-145	-73	-10	-3	50	0	-37	-31						
21 JAN	30	-20	-125	-6	0	-36	-52	-31						
28 JAN	11	-2	-8	-10	90	-104	-5	-3						
4 FEB	22	142	-61	-70	32	-42	-20	1						
11 FEB	0	63	37	35	45	-4	52	33						
18 FEB	121	07	33	46	47	-4	21	50						
25 FEB	40	46	51	55	-41	53	16	33						
3 MAR	-171	-07	-36	36	10	6	46	-27						
10 MAR	207	257	-43	-26	60	124	110	111						
17 MAR	109	42	246	91	102	-69	-01	74						
24 MAR	17	99	436	121	315	61	19	152						
31 MAR	214	212	115	109	73	55	66	121						
7 APR	04	03	110	55	55	71	164	09						
14 APR	344	76	01	136	252	110	03	155						
21 APR	350	169	294	120	465	143	207	251						
28 APR	96	50	65	57	22	140	363	115						
5 MAY	150	116	44	62	97	146	139	109						
12 MAY	47	160	146	47	99	100	32	90						
19 MAY	42	37	4	50	91	107	62	56						
26 MAY	121	67	53	-5	50	80	175	77						
2 JUN	37	142	81	02	101	163	173	111						
9 JUN	196	134	61	56	24	14	10	72						
16 JUN	13	-2	-21	-41	23	11	53	5						
23 JUN	24	5	96	40	4	12	33	31						
30 JUN	50	12	-26	-21	-36	-97	-122	-34						
7 JUL	-00	-33	100	22	5	40	34	15						
14 JUL	15	0	10	-4	29	-1	0	9						
21 JUL	-14	17	30	16	10	2	-10	8						
28 JUL	-2	23	4	2	39	9	-1	10						
4 AUG	26	6	-12	-15	-0	60	44	14						
11 AUG	100	10	10	26	41	-46	-67	11						
18 AUG	-47	14	35	-7	-9	-40	-1	-8						
25 AUG	53	10	12	-2	-20	6	55	17						
1 SEP	62	32	11	-19	-12	-59	-9	1						
8 SEP	-9	16	-66	-232	-342	-54	9	-97						
15 SEP	29	41	15	13	17	45	41	29						
22 SEP	-10	-27	-14	-11	-22	-6	-10	-15						
29 SEP	3	-13	-135	6	117	60	23	9						
6 OCT	13	-1	10	-07	-50	72	19	-2						
13 OCT	37	-34	34	46	53	23	10	24						
20 OCT	6	2	17	11	-65	-69	-55	-22						
27 OCT	-1	-4	-20	-20	12	9	33	2						
3 NOV	15	13	26	41	20	47	93	38						
10 NOV	26	-13	-13	9	69	05	107	30						
17 NOV	37	20	56	-17	-0	36	16	20						
24 NOV	-17	5	22	41	117	55	120	49						
1 DEC	57	50	59	-35	-24	13	51	24						
8 DEC	-102	1	15	10	99	50	-51	3						
15 DEC	-42	19	6	20	-0	-7	1	-1						
22 DEC	-5	-104	-29	-23	30	120	137	10						
29 DEC	19	74	4	0	42	37	-0	25						

# COASTAL UPWELLING INDICES, DAILY AND WEEKLY MEANS DURING 1969 AT 21N, 107W

WEEK BEGINNING	DAILY VALUES							WEEKLY MEAN	CUBIC METERS PER SECOND PER 100 METERS OF COASTLINE						
	SUN	MON	TUE	WED	THU	FRI	SAT		-600	-400	-200	0	200	400	600
5 JAN	-69	-9	16	33	14	51	13	8							
12 JAN	-6	41	-4	11	64	107	37	36							
19 JAN	53	15	272	122	108	58	22	92							
26 JAN	0	15	43	32	116	63	143	60							
2 FEB	115	13	-11	4	61	146	63	56							
9 FEB	56	180	113	60	-0	04	93	83							
16 FEB	166	547	18	37	45	237	146	142							
23 FEB	77	81	61	26	73	73	99	70							
2 MAR	143	99	34	181	120	270	159	126							
9 MAR	71	38	160	102	72	173	187	126							
16 MAR	303	127	31	20	65	46	136	104							
23 MAR	150	55	-17	-18	-4	24	20	31							
30 MAR	16	4	-21	65	50	156	59	47							
6 APR	25	43	46	114	109	140	131	88							
13 APR	27	115	220	144	156	63	73	114							
20 APR	42	57	70	107	25	41	72	59							
27 APR	66	33	70	7	20	153	142	72							
4 MAY	107	153	157	162	223	70	53	133							
11 MAY	53	30	96	123	70	48	34	64							
18 MAY	22	13	17	16	19	43	26	22							
25 MAY	2	32	35	8	35	47	165	46							
1 JUN	263	230	134	213	80	114	83	160							
8 JUN	96	184	161	74	136	172	135	137							
15 JUN	115	10	47	47	64	5	47	47							
22 JUN	43	150	210	98	95	70	76	107							
29 JUN	19	4	8	13	-7	-19	-33	-3							
6 JUL	-36	-184	-23	-1	9	56	147	-5							
13 JUL	91	3	-5	12	37	28	17	18							
20 JUL	5	15	8	35	30	20	35	21							
27 JUL	134	147	34	40	129	12	-10	68							
3 AUG	-5	-28	-6	-89	-33	-8	1	-24							
10 AUG	-2	-11	-36	-20	-4	-4	-12	-14							
17 AUG	-2	24	14	-1	3	-145	-363	-67							
24 AUG	153	0	9	-0	7	23	-1	28							
31 AUG	-31	47	-106	-154	-302	-307	-56	-155							
7 SEP	-14	-32	-261	-212	-5	-6	3	-75							
14 SEP	0	25	12	28	-20	2	-23	2							
21 SEP	41	25	-9	-21	-10	-20	8	2							
28 SEP	-93	-166	-74	-82	-74	-20	10	-72							
5 OCT	00	88	18	-6	-20	-141	-60	-9							
12 OCT	37	79	25	59	83	51	14	49							
19 OCT	22	11	38	42	30	53	33	33							
26 OCT	39	0	4	21	40	5	-4	16							
2 NOV	-19	79	38	16	18	10	16	23							
9 NOV	18	11	5	19	26	2	-14	10							
16 NOV	-14	-11	61	2	-318	-80	-11	-54							
23 NOV	-5	5	-8	-5	39	-10	-45	-3							
30 NOV	-93	-63	-46	9	40	42	50	-9							
7 DEC	54	83	62	69	0	-54	5	33							
14 DEC	11	-7	7	10	17	41	44	18							
21 DEC	17	21	12	27	22	12	61	25							
28 DEC		173	76	80	97	65	10	76							

# COASTAL UPWELLING INDICES, DAILY AND WEEKLY MEANS DURING 1970 AT 21N, 107W

WEEK BEGINNING	DAILY VALUES							WEEKLY MEAN	CUBIC METERS PER SECOND PER 100 METERS OF COASTLINE						
	SUN	MON	TUE	WED	THU	FRI	SAT		-600	-400	-200	0	200	400	600
4 JAN	6	43	94	-15	-3	-25	33	19							
11 JAN	89	126	230	133	121	123	67	126							
18 JAN	96	18	30	93	55	47	8	51							
25 JAN	2	27	20	10	40	-2	13	16							
1 FEB	65	89	0	-21	-22	15	25	22							
8 FEB	10	-17	-23	-21	56	0	9	5							
15 FEB	94	12	7	5	30	-27	-144	-3							
22 FEB	52	70	52	37	63	136	47	63							
1 MAR	19	130	94	107	143	259	250	144							
8 MAR	57	132	153	173	121	86	65	113							
15 MAR	52	61	44	63	95	132	199	84							
22 MAR	112	93	66	93	99	20	99	64							
29 MAR	139	130	127	100	69	115	102	124							
5 APR	105	32	60	90	211	06	120	99							
12 APR	39	115	150	176	63	161	231	135							
19 APR	292	152	116	140	209	22	127	151							
26 APR	159	117	138	162	103	117	66	135							
3 MAY	-15	19	39	35	81	97	104	51							
10 MAY	135	144	50	33	-1	23	20	58							
17 MAY	30	0	13	50	77	61	103	48							
24 MAY	66	08	95	161	137	66	201	120							
31 MAY	90	69	12	17	62	90	61	60							
7 JUN	14	42	56	102	133	82	115	78							
14 JUN	153	02	89	46	47	39	46	71							
21 JUN	35	3	15	42	13	15	25	21							
28 JUN	-11	-20	-1	1	13	23	9	2							
5 JUL	-2	29	21	17	-1	23	36	18							
12 JUL	24	10	9	36	21	-19	21	9							
19 JUL	-79	-5	42	31	13	-80	-33	-17							
26 JUL	-10	-2	-2	15	-41	-105	-35	-26							
2 AUG	10	4	27	-2	-83	-94	35	-13							
9 AUG	50	33	30	26	17	13	9	26							
16 AUG	2	-10	-2	10	5	14	13	5							
23 AUG	13	41	0	1	7	0	1	11							
30 AUG	-32	-22	-215	-205	-150	-22	10	-101							
6 SEP	44	26	22	42	19	11	23	26							
13 SEP	10	-1	-42	-66	-32	-1	-1	-19							
20 SEP	-3	11	20	19	15	-0	32	14							
27 SEP	-153	-53	-57	0	16	4	-9	-32							
4 OCT	-1	17	-18	30	70	15	35	22							
11 OCT	44	10	13	25	-2	-6	-18	10							
18 OCT	-14	-8	-36	20	22	41	35	0							
25 OCT	60	60	52	26	31	2	25	39							
1 NOV	9	-29	-243	-302	-303	-143	4	-155							
8 NOV	0	-1	-7	27	37	50	46	23							
15 NOV	-175	-103	-0	6	7	-1	7	-37							
22 NOV	33	12	-65	-33	20	16	-1	-2							
29 NOV	-32	-11	-17	11	-1	-41	-10	-16							
6 DEC	-72	-57	-13	-41	-1	43	3	-20							
13 DEC	-11	-10	96	21	-7	6	37	19							
20 DEC	17	47	10	32	-11	3	-0	13							
27 DEC	4	19	37	65	-19	-6	27	10							

# COASTAL UPWELLING INDICES, DAILY AND WEEKLY MEANS DURING 1971 AT 21N, 107W

WEEK BEGINNING	DAILY VALUES							WEEKLY MEAN	CUBIC METERS PER SECOND PER 100 METERS OF COASTLINE						
	SUN	MON	TUE	WED	THU	FRI	SAT		-600	-400	-200	0	200	400	600
3 JAN	119	91	66	49	10	49	65	64							
10 JAN	33	2	32	61	59	12	-14	26							
17 JAN	12	45	-15	-56	20	45	31	19							
24 JAN	59	52	-2	-5	2	39	31	25							
31 JAN	89	3	-19	26	69	24	48	34							
7 FEB	65	-6	-9	-30	14	14	-55	-0							
14 FEB	5	17	0	32	115	60	92	48							
21 FEB	103	49	26	03	01	142	79	81							
28 FEB	173	203	264	-6	-33	25	00	102							
7 MAR	-10	-16	9	59	100	122	193	65							
14 MAR	170	53	15	17	74	14	-27	45							
21 MAR	36	50	32	24	33	45	51	40							
28 MAR	79	46	5	34	69	22	9	30							
4 APR	0	-6	-54	-112	-25	18	-14	-26							
11 APR	-30	3	43	20	01	60	61	34							
18 APR	122	185	223	223	266	156	157	190							
25 APR	164	272	230	241	215	06	36	177							
2 MAY	30	27	76	00	96	74	61	61							
9 MAY	01	20	26	92	41	16	32	46							
16 MAY	66	66	142	71	149	109	97	100							
23 MAY	97	99	72	47	70	66	156	88							
30 MAY	122	120	153	149	60	20	34	96							
6 JUN	31	58	42	104	00	117	70	72							
13 JUN	46	47	62	04	13	3	21	39							
20 JUN	26	3	9	7	2	16	30	13							
27 JUN	02	70	40	22	-4	34	22	40							
4 JUL	21	33	40	-2	15	10	-13	15							
11 JUL	-5	-2	3	2	30	9	29	10							
18 JUL	12	14	0	11	-14	62	53	20							
25 JUL	34	100	5	-11	2	16	-0	22							
1 AUG	1	-61	-50	-24	6	9	-20	-24							
8 AUG	-202	-61	-09	-30	3	7	9	-53							
15 AUG	26	12	12	41	6	20	19	19							
22 AUG	24	10	7	9	-4	-22	-5	3							
29 AUG	-32	10	78	-56	-45	-11	54	1							
5 SEP	33	23	-190	-0	-14	5	16	-19							
12 SEP	23	9	16	-2	3	12	20	11							
19 SEP	4	19	11	20	-2	10	-13	8							
26 SEP	-539	-182	-6	6	32	62	40	-81							
3 OCT	119	76	23	-9	-35	-5	-11	23							
10 OCT	-23	-102	-1	-10	4	40	-7	-15							
17 OCT	40	65	103	29	19	32	-13	40							
24 OCT	-20	2	32	19	15	77	105	32							
31 OCT	-23	43	40	50	-40	3	20	13							
7 NOV	-0	-90	41	-66	-49	20	25	-30							
14 NOV	40	90	59	73	50	45	16	55							
21 NOV	16	162	113	44	40	65	40	71							
28 NOV	20	46	175	72	62	33	72	70							
5 DEC	103	143	33	04	141	113	141	108							
12 DEC	50	50	101	40	22	6	-10	40							
19 DEC	60	40	-22	-60	-29	-15	-35	-9							
26 DEC	6	14	51	07	69	51	90	51							

# COASTAL UPWELLING INDICES, DAILY AND WEEKLY MEANS DURING 1972 AT 21N, 107W

WEEK BEGINNING	DAILY VALUES							WEEKLY MEAN	CUBIC METERS PER SECOND PER 100 METERS OF COASTAL LINE						
	SUN	MON	TUE	WED	THU	FRI	SAT		-600	-400	-200	0	200	400	600
2 JAN	46	51	129	77	102	10	70	70							
9 JAN	67	90	35	02	95	52	42	67							
16 JAN	-76	31	20	41	154	146	105	60							
23 JAN	90	81	44	48	76	32	75	65							
30 JAN	105	169	106	176	57	-11	33	102							
6 FEB	100	150	78	84	27	50	106	96							
13 FEB	67	03	145	216	61	0	-43	77							
20 FEB	29	2	-5	15	100	60	44	37							
27 FEB	64	41	121	165	146	69	45	93							
5 MAR	-4	66	41	09	49	10	34	41							
12 MAR	65	39	31	51	145	170	111	87							
19 MAR	105	02	76	90	79	45	8	02							
26 MAR	00	101	223	101	122	91	25	118							
2 APR	46	34	35	27	75	109	40	52							
9 APR	30	14	95	106	140	140	104	101							
16 APR	50	00	30	06	193	155	60	97							
23 APR	74	56	62	54	95	24	32	57							
30 APR	10	76	44	5	3	19	67	32							
7 MAY	101	07	95	65	61	01	72	60							
14 MAY	60	37	58	73	47	33	33	54							
21 MAY	61	59	120	64	23	16	13	51							
28 MAY	5	11	22	40	20	09	26	30							
4 JUN	9	0	9	113	72	110	126	65							
11 JUN	160	07	00	103	101	116	99	110							
18 JUN	42	43	112	90	62	61	31	63							
25 JUN	122	52	4	35	13	42	26	42							
2 JUL	22	4	-1	9	4	16	11	9							
9 JUL	14	3	7	10	22	6	3	9							
16 JUL	10	13	33	9	15	11	11	14							
23 JUL	2	6	-4	0	-42	-29	-11	-11							
30 JUL	-4	-2	-14	-9	-3	-29	-34	-13							
6 AUG	-13	7	7	0	7	4	24	6							
13 AUG	11	1	-7	0	16	42	15	11							
20 AUG	-10	-22	7	9	7	-27	-105	-20							
27 AUG	-222	-20	27	-10	-16	7	31	-30							
3 SEP	15	27	22	30	10	5	25	19							
10 SEP	44	41	11	2	7	11	3	17							
17 SEP	-7	-17	11	0	1	1	29	4							
24 SEP	53	62	37	14	0	2	-3	23							
1 OCT	-4	-19	-44	-19	-15	66	50	2							
8 OCT	23	34	20	-15	-10	11	-4	7							
15 OCT	-36	-9	13	10	-6	5	0	-2							
22 OCT	36	23	0	1	33	-2	57	6							
29 OCT	-52	5	40	72	35	10	41	21							
5 NOV	47	61	-27	10	60	34	35	32							
12 NOV	114	57	12	31	37	57	48	51							
19 NOV	11	-5	-47	-65	-27	7	49	-11							
26 NOV	19	40	-4	-7	-11	-2	43	11							
3 DEC	60	31	55	6	14	73	119	52							
10 DEC	20	39	75	30	139	-13	-217	12							
17 DEC	-63	4	54	59	37	20	15	10							
24 DEC	-21	-17	-96	-73	-12	43	31	-21							
31 DEC	53	-7	49	48	16	31	13	27							

# COASTAL UPWELLING INDICES, DAILY AND WEEKLY MEANS DURING 1973 AT 21N, 107W

WEEK BEGINNING	DAILY VALUES							WEEKLY MEAN	CUBIC METERS PER SECOND PER 100 METERS OF COASTLINE						
	SUN	MON	TUE	WED	THU	FRI	SAT		-600	-400	-200	0	200	400	600
7 JAN	10	22	-8	33	8	-4	-22	6							
14 JAN	-25	6	0	29	31	30	187	38							
21 JAN	152	73	45	9	65	139	52	77							
28 JAN	-17	-79	0	86	65	6	-4	8							
4 FEB	17	31	14	19	33	112	52	40							
11 FEB	20	78	106	73	39	2	109	61							
18 FEB	2	-4	-19	-21	87	179	31	36							
25 FEB	33	40	0	16	38	42	07	36							
4 MAR	63	115	104	133	112	136	216	125							
11 MAR	16	40	200	107	243	33	5	103							
18 MAR	38	58	90	76	91	122	210	99							
25 MAR	79	52	75	166	156	160	119	117							
1 APR	141	67	70	55	15	158	93	86							
8 APR	45	21	-13	16	27	24	54	25							
15 APR	111	104	132	137	124	132	84	118							
22 APR	134	82	112	85	80	-3	24	73							
29 APR	96	167	131	42	7	24	47	73							
6 MAY	145	129	59	59	59	78	16	78							
13 MAY	10	9	6	57	64	56	75	40							
20 MAY	98	145	104	98	124	166	135	126							
27 MAY	141	45	31	21	104	95	58	71							
3 JUN	139	92	30	2	35	149	48	72							
10 JUN	51	113	176	62	71	67	66	87							
17 JUN	110	132	47	21	16	-1	1	48							
24 JUN	8	18	45	31	16	28	47	28							
1 JUL	43	11	16	17	13	14	21	19							
8 JUL	75	12	26	42	36	79	49	45							
15 JUL	25	36	29	34	27	33	16	28							
22 JUL	2	-129	-54	3	59	56	-14	-11							
29 JUL	-166	-3	20	4	17	10	9	-16							
5 AUG	12	44	14	12	24	36	32	25							
12 AUG	-10	3	10	36	17	8	-23	6							
19 AUG	-14	-0	19	-4	-11	0	14	1							
26 AUG	8	0	3	47	36	72	68	34							
2 SEP	76	108	95	40	70	25	30	63							
9 SEP	57	51	7	40	49	58	39	43							
16 SEP	17	26	5	26	39	6	8	18							
23 SEP	-18	-395	-122	12	15	35	13	-66							
30 SEP	17	10	28	37	6	-9	-2	12							
7 OCT	4	41	40	73	94	87	50	57							
14 OCT	5	5	-1	-3	3	-1	-2	1							
21 OCT	1	-7	-2	10	5	-42	15	-3							
28 OCT	4	-10	7	-19	-38	4	28	-3							
4 NOV	27	8	1	21	25	-5	-57	3							
11 NOV	-11	5	-1	25	15	8	41	12							
18 NOV	43	114	68	14	38	111	122	73							
25 NOV	65	67	52	-121	-28	-15	-15	1							
2 DEC	37	89	31	12	6	-39	-17	17							
9 DEC	-6	-10	18	84	93	52	12	35							
16 DEC	-8	13	55	14	-53	-12	40	7							
23 DEC	134	111	64	58	27	41	83	74							







648. Weight loss of pond raised channel catfish (*Ictalurus punctatus*) during holding in processing plant vats. By Donald C. Greenland and Robert L. Gill. December 1971, iii + 7 p., 3 figs., 2 tables. For sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.
649. Distribution of forage of skipjack tuna (*Euthynnus pelamis*) in the eastern tropical Pacific. By Maurice Blackburn and Michael Laurs. January 1972, iii + 16 p., 7 figs., 3 tables. For sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.
650. Effects of some antioxidants and EDTA on the development of rancidity in Spanish mackerel (*Scombrus maculatus*) during frozen storage. By Robert N. Farragut. February 1972, iv + 12 p., 6 figs., 12 tables. For sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.
651. The effect of pre-mortem stress, holding temperatures, and freezing on the biochemistry and quality of skipjack tuna. By Ladell Crawford. April 1972, iii + 23 p., 3 figs., 1 table. For sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.
653. The use of electricity in conjunction with a 12.5 meter (Headrope) Gulf of Mexico shrimp trawl in Lake Michigan. By James E. Ellis. March 1972, iv + 10 p., 11 figs., 1 table. For sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.
654. An electric detector system for recovering internally tagged menhaden, genus *Brevoortia*. By R. O. Parker, Jr. February 1972, iii + 7 p., 3 figs., 1 appendix table. For sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.
655. Immobilization of fining salmon and trout by decompression. By Doyle F. Sutherland. March 1972, iii + 7 p., 3 figs., 2 tables. For sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.
656. The calico scallop, *Argopecten gibbus*. By Donald M. Allen and T. J. Costello. May 1972, iii + 19 p., 9 figs., 1 table. For sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.
657. Making fish protein concentrates by enzymatic hydrolysis. A status report on research and some processes and products studied by NMFS. By Malcolm B. Hale. November 1972, v + 32 p., 15 figs., 17 tables, 1 appendix table. For sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.
658. List of fishes of Alaska and adjacent waters with a guide to some of their literature. By Jay C. Quast and Elizabeth L. Hall. July 1972, iv + 47 p. For sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.
659. The Southeast Fisheries Center bionumeric code. Part I. Fishes. By Harvey R. Bullis, Jr., Richard B. Roe, and Judith C. Gatlin. July 1972, xi + 95 p., 2 figs. For sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.
660. A freshwater fish electro-motivator (FFEM) its characteristics and operation. By James E. Ellis and Charles C. Hoopes. November 1972, iii + 11 p., 9 figs.
661. A review of the literature on the development of skipjack tuna fisheries in the central and western Pacific Ocean. By Frank J. Hester and Tamio Otsu. January 1973, iii + 13 p., 1 fig. For sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.
662. Seasonal distribution of tunas and billfishes in the Atlantic. By John P. Wise and Charles W. Davis. January 1973, iv + 24 p., 13 figs., 4 tables. For sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.
663. Fish larvae collected from the northeastern Pacific Ocean and Puget Sound during April and May 1967. By Kenneth D. Waldron. December 1972, iii + 16 p., 2 figs., 1 table, 4 appendix tables. For sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.
664. Tagging and tag recovery experiments with Atlantic menhaden, *Brevoortia tyrannus*. By Richard L. Kroger and Robert L. Dryfoos. December 1972, iv + 11 p., 4 figs., 12 tables. For sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.
665. Larval fish survey of Humboldt Bay, California. By Maxwell B. Eldridge and Charles F. Bryan. December 1972, iii + 8 p., 8 figs., 1 table. For sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.
666. Distribution and relative abundance of fishes in Newport River, North Carolina. By William R. Turner and George N. Johnson. September 1973, iv + 23 p., 1 fig., 13 tables. For sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.
667. An analysis of the commercial lobster (*Homarus americanus*) fishery along the coast of Maine. August 1966 through December 1970. By James C. Thomas. June 1973, v + 37 p., 18 figs., 11 tables. For sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.
668. An annotated bibliography of the cunner, *Tautoglabrus adspersus* (Walbaum). By Fredric M. Serchuk and David W. Frame. May 1973, iii + 43 p. For sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.
669. Subpoint prediction for direct readout meteorological satellites. By I. E. Eber. August 1973, iii + 7 p., 2 figs., 1 table. For sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.
670. Unharvested fishes in the U.S. commercial fishery of western Lake Erie in 1969. By Harry D. Van Meter. July 1973, iii + 11 p., 6 figs., 6 tables. For sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.
671. Coastal upwelling indices, west coast of North America, 1946-71. By Andrew Bakun. June 1973, iv + 103 p., 6 figs., 3 tables, 45 appendix figs. For sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.
672. Seasonal occurrence of young Gulf menhaden and other fishes in a northwestern Florida estuary. By Marlin E. Tagatz and E. Peter H. Wilkins. August 1973, iii + 14 p., 1 fig., 4 tables. For sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.
673. Abundance and distribution of inshore benthic fauna off southwestern Long Island, N.Y. By Frank W. Stumble, Jr. and Richard B. Stone. December 1973, iii + 50 p., 2 figs., 5 appendix tables.
674. Lake Erie bottom trawl explorations, 1962-66. By Edgar W. Bowman. January 1974, iv + 21 p., 9 figs., 1 table, 7 appendix tables.
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