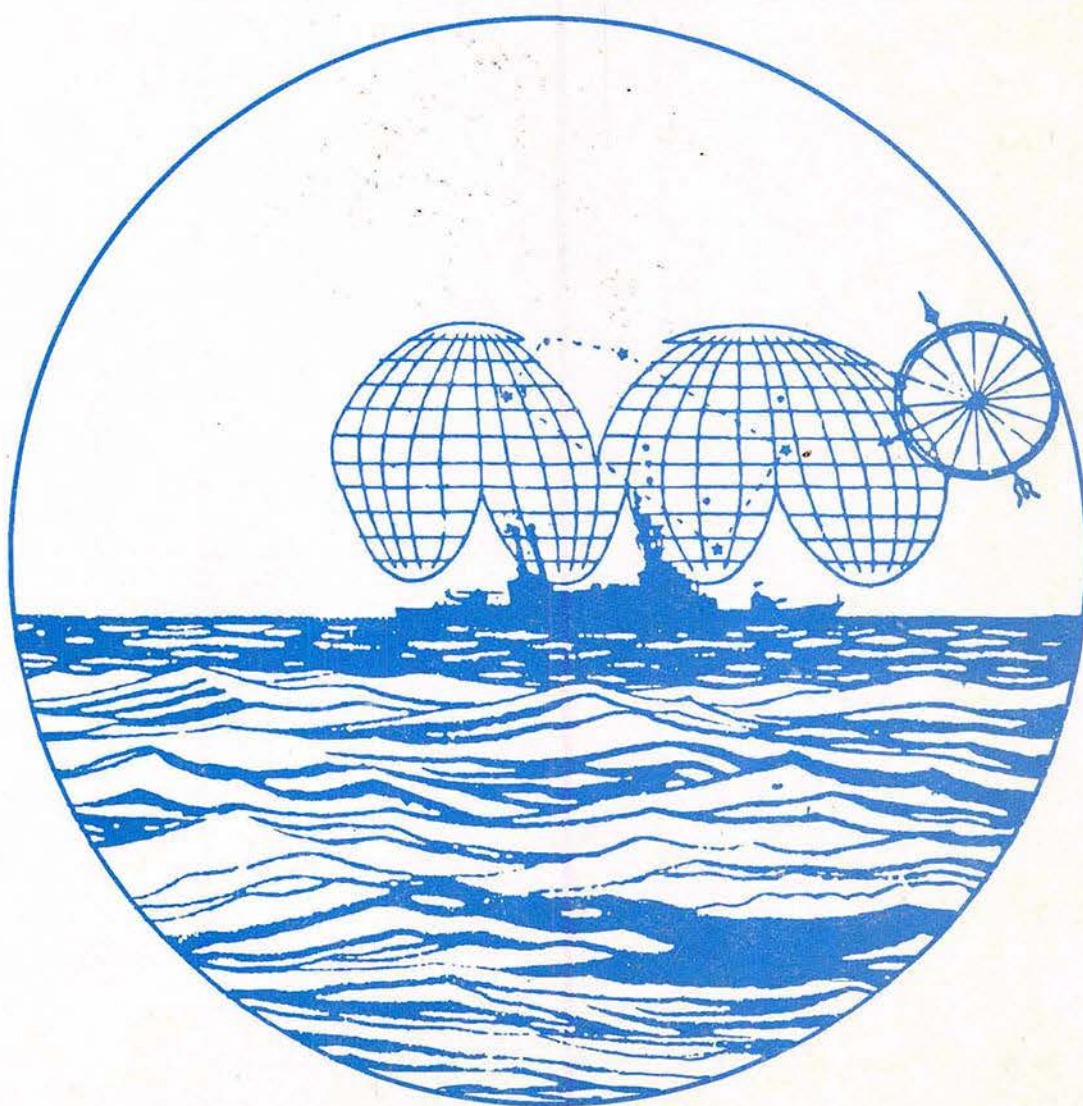


DATOS GEOFÍSICOS  
SERIE A.  
OCEANOGRAFÍA 6

# Variaciones del nivel medio, temperatura y salinidad del mar

Océano Pacífico

Ing. Francisco Grivel Piña  
Ing. Francisco Grivel Villegas



UNIVERSIDAD NACIONAL  
AUTÓNOMA DE MÉXICO  
AVENIDA DE  
MEXICO



345  
4.73

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Datos Geofísicos  
Serie A  
Oceanografía 6

## Variaciones del nivel medio, temperatura y salinidad del mar

Océano Pacífico

Ing. Francisco Grivel Piña  
Ing. Francisco Grivel Villegas



MEXICO  
1991

**INSTITUTO DE GEOFISICA**

*Dr. Gerardo Suárez Reynoso*  
Director

Editores:

*Ing. Francisco Grível Piña*  
Jefe del Servicio Mareográfico

*Ing. Francisco Grível Villegas*

*Francisco Graffé*  
Editor Técnico:

© 1991, Instituto de Geofísica de la UNAM  
Circuito Exterior Ciudad Universitaria  
04510 México D.F.  
Teléfono 550 52 15 Ext. 4361 y 4362  
Fax. (5) 550 24 86  
Telex. 1760197 IGSSME

**Colaboración en la Edición:**

**José Trinidad Guzmán Zuno  
José Alberto Quintana Sandoval  
Felipe Hernández Maguey  
Julio Ibarra Jiménez  
Alicia Esteves  
Lorenzo Pérez  
Luis Ernesto Barrón Romero**

**Se agradece en forma especial a los observadores de campo de la red del Servicio Mareográfico Nacional, a quienes sin su valiosa colaboración esta publicación no sería una realidad.**

## REPORTE DE DATOS OCEANOGRÁFICOS OCEANO PACÍFICO.

En el presente reporte de datos oceanográficos, se dan a conocer los valores medios mensuales del nivel del mar, referidos al cero de la regla de mareas de cada sitio de observación; así como promedios mensuales de temperatura y salinidad. La figura (1) muestra la ubicación de 12 estaciones mareográficas en las costas del Pacífico Mexicano.

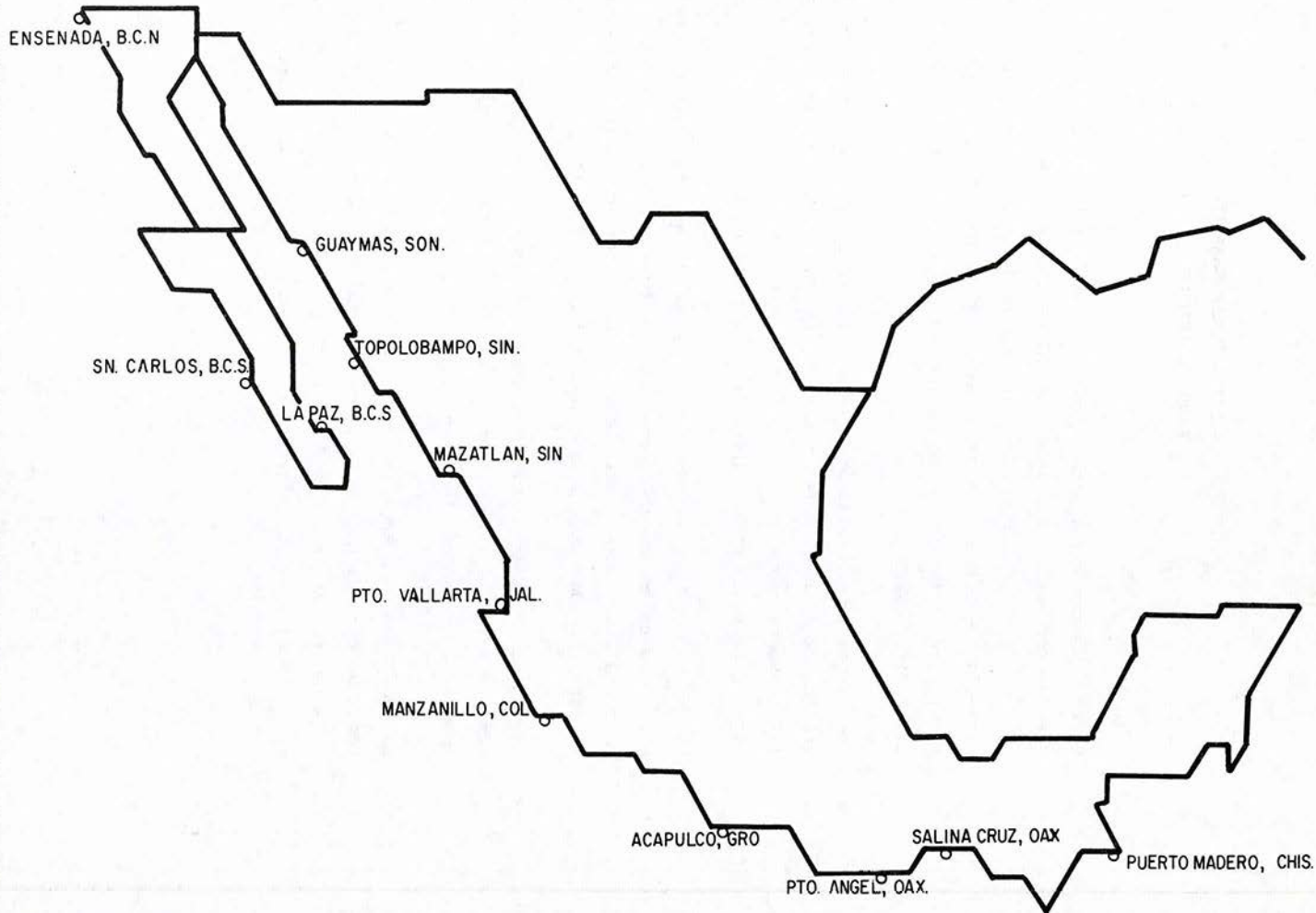
Los datos mareográficos, fueron obtenidos por mareógrafos de gráfica continua y mareógrafos digitales, el control vertical de las observaciones se ha realizado de acuerdo a las especificaciones establecidas Internacionalmente.

La información de la temperatura y salinidad del agua del mar, está basada en observaciones que se realizan en las estaciones mareográficas que mantiene en operación el Servicio Mareográfico del Instituto de Geofísica de la UNAM.

Los datos de temperatura en grados centígrados, se obtuvieron de las lecturas de termómetros hechas en muestras de agua de mar, tomadas a uno o dos pies bajo la superficie.

La salinidad del agua del mar, designada por los símbolos  $^{\circ}/_{00}$ , definida como el número de gramos de sal contenida en 1000 gramos de agua de mar. La salinidad fué obtenida en base a la densidad media mediante un hidrómetro y reducida a una temperatura estandar de  $15^{\circ}\text{C}$ .

# ESTACIONES MAREOGRAFICAS DEL OCEANO PACIFICO Y GOLFO DE CALIFORNIA



MEDIAS MENSUALES DEL NIVEL DEL MAR  
(PIES)

LAT. 31° 51' N

LONG. 116° 38' W

Ano	Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic
52												
53												
54												
55												
56						5.291	5.340	5.406	5.424	5.279	5.330	5.268
57	5.179	5.157	5.061	5.034	5.203	5.412	5.638	5.670	5.555	5.607	5.595	5.576
58	5.461	5.331	5.282	5.275	5.222	5.282	5.327	5.645	5.792	5.812	5.691	5.488
59		5.386	5.221	5.222	5.230	5.402	5.517	5.658	5.756	5.751	5.455	5.644
60	5.231	5.101	5.115	5.162	5.147	5.273	5.444	5.473	5.578	5.438	5.317	5.363
61	5.378	5.178	5.053	5.075	5.024				5.505	5.395	5.257	5.352
62	5.314	5.242	4.965	5.072	5.123	5.246	5.336	5.502	5.761	5.503	5.285	5.362
63	5.223	5.246	4.996	4.950	5.111	5.148	5.144	5.192	5.399	5.133	5.031	5.056
64	4.919	4.691	4.561	4.467	4.431	4.710	5.163	5.525	5.491	5.351	5.198	5.143
65	5.117	5.310	5.115	5.201	4.985	5.200	5.420	5.676	5.736	5.638	5.464	5.598
66	5.418	5.131	5.037	5.149	5.238	5.282	5.459	5.597	5.570	5.518	5.289	5.296
67	5.272	5.179	5.052	4.933	5.084	5.302	5.458	5.591	5.655	5.466	5.547	5.425
68	5.412	5.333	5.039	5.106	5.108	5.137	5.376	5.536	5.630	5.514	5.513	5.406
69	5.510	5.366	5.122	5.144	5.301		5.488	5.695	5.743	5.692	5.660	5.468
70	5.176	5.272	5.254	5.021	5.137	5.242	5.449	5.564	5.567	5.439	5.407	5.222
71	5.210	5.126	4.964	5.077	5.142	5.291	5.535	5.634	5.626	5.530	5.316	5.249
72	5.343	5.151	5.239	5.170	5.161	5.511	5.580	5.715	5.763	5.793	5.679	5.722
73	5.364	5.383	5.091	4.877	5.086	5.250	5.358	5.398	5.391	5.220	5.154	5.123
74	5.182	5.104	5.111	5.159	5.267	5.460	5.542	5.522	5.711	5.451	5.371	5.521
75	5.257	5.099	5.090	5.088	5.065	5.183	5.440	5.382	5.475	5.334	5.294	5.141
76	5.225	5.138	5.075	5.112	5.293	5.423	5.584	5.564	5.916	5.823	5.851	5.777
77	5.737	5.343	5.164	5.132	5.193	5.375	5.541	5.717	5.726	5.774	5.736	5.715
78	5.553	5.483	5.383	5.198	5.254	5.268	5.395	5.544	5.728	5.752	5.639	5.534
79	5.521	5.303	5.183	5.204	5.233	5.385	5.498	5.515	5.608	5.501	5.288	5.429

SERVICIO MAREOGRAFICO  
ENSENADA, B.C.N.

MEDIAS MENSUALES DEL NIVEL DEL MAR  
(PIES)

LAT. 31° 51' N

LONG. 116° 38' W

Año	Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic
80	5.447	5.562	5.245	5.132	5.155	5.297	5.309	5.601	5.608	5.485	5.398	5.387
81	5.374	5.262	5.112	5.186	5.378	5.393	5.580	5.609	5.592	5.583	5.488	5.352
82	5.129	5.167	5.239	5.003	5.406	5.538	5.528	5.576	5.884	5.805	5.929	5.732
83	5.794	5.522	5.166	5.352	5.370	5.641	5.809	5.827	6.035	5.827	5.566	5.368
84	5.330	5.164	5.263	5.182	5.451	5.603	5.785	5.839	6.057	5.563	5.400	5.454
85	5.367	5.260	5.068	5.220	5.122		5.578	5.545	5.676	5.570	5.422	5.313
86	5.384	5.324	5.120	5.143	5.281	5.154	5.397	5.531	5.505	5.568	5.620	5.564
87	5.264	5.473	5.145	5.105	5.259	5.223	5.454	5.564	5.611	5.477	5.524	5.125
88	5.115	5.389	5.302	5.237	5.162	5.223	5.584	5.590	5.564	5.326	5.250	5.234
89	5.198	5.068	5.230	5.317	5.371	5.542	5.779	5.824	6.085	6.015	5.976	5.827
90	5.879	5.902	5.515	5.663	5.615	5.837	6.012	6.061	6.173	6.134		
91												
92												
93												
94												
95												



MEDIAS MENSUALES DE TEMPERATURA DEL AGUA DE MAR °C.

LAT. 31° 51' N

LONG. 116° 38' W

Año	Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic
52												
53												
54												
55												
56					16.2	18.5	20.5	20.8	20.0	18.5	15.8	15.5
57	15.0	15.5	16.0	16.5	17.0	19.5	21.5	22.5	19.5	18.5	16.8	16.5
58	16.0	16.5	16.6	18.5	19.5	19.5	20.5	22.5	21.5	20.5	18.5	16.5
59		15.4	17.0		18.7	20.0	21.7	22.1	21.3	20.3	17.5	16.7
60	14.8	14.7	15.5	16.5	17.5	19.0	20.8	22.0	21.3	17.5	16.6	14.4
61	15.1	15.4	15.2	16.3	16.2	18.1	21.2	20.9	19.9	18.3	14.8	14.3
62	14.0	14.9	14.4	16.5	16.9	17.7	19.7	20.2	20.0	17.6	16.1	15.0
63	14.3	15.5	15.3	15.3	16.8	18.2	20.3	21.6	21.8	19.7	17.5	16.0
64	15.2	15.1	15.0	15.8	18.7	17.8	19.1	21.0	19.1	18.8	15.2	14.1
65	14.1	14.4	15.4	16.6	17.7	16.8	19.5	20.7	19.5	19.4	17.6	15.8
66	14.7	14.5	15.4	16.8	18.1	19.5	21.3	22.5	20.6	18.6	16.5	14.9
67	14.4	15.2	15.9	14.9	17.1	18.3	21.4	22.7	21.5	19.0	17.7	14.6
68	14.0	15.6	16.1	16.8	16.7	19.5	21.1	22.5	20.5	19.1	16.8	14.6
69	15.3	14.9	15.3	16.4	18.3		19.9	21.9	20.8	18.3	17.4	16.0
70	14.0	14.5	15.9	16.7	17.3	18.6	21.3	22.3	19.7	18.0	15.6	14.8
71	13.5	14.2	14.2	15.4	16.8	18.7	20.5	23.4	21.9	17.7	15.2	13.4
72	13.4	13.9	15.5	15.3	17.0	19.6	21.4	22.6	21.2	20.2	17.0	16.2
73	15.4	15.8	15.8	15.6	17.2	19.4	20.5	21.3		17.0	15.6	14.0
74	13.9	14.1	15.0	16.1	17.7	18.5	21.7	21.5	20.3	19.3	16.4	14.6
75	14.1	14.4	13.6	15.1	16.2	17.2	20.1	21.2	19.3	18.2	15.6	14.1
76	14.0	15.2	15.6	15.6	18.2	20.4	20.8	20.2	20.8	20.2	18.7	17.4
77	16.7	16.8	16.0	16.6	17.6	18.9	19.8	21.8	21.9	19.2	17.5	16.5
78	16.4	16.3	16.9	18.0	18.6	19.0	20.2	21.5	20.7	20.7	19.9	14.9
79	14.8	14.9	15.6	16.0	17.6	20.5	20.7	22.0	22.6	18.6	15.8	15.0

SERVICIO MAREOGRAFICO  
ENSENADA, B.C.N.

MEDIAS MENSUALES DE TEMPERATURA DEL AGUA DEL MAR °C.

LAT. 31° 51' N

LONG. 116° 38' W

Año	Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic
80	15.8	16.6	17.3	16.7	17.1	18.6	22.7	22.9	20.9	19.1	16.9	15.5
81	16.2	15.9	16.3	17.0	19.5	21.7	22.9	22.8	20.3	18.3	15.7	15.4
82	14.7	15.4	15.8	16.1	17.3	18.0	20.6	21.3	21.1	19.5	17.2	16.1
83	16.0	16.6	17.2	17.0	17.7	19.0	21.3	22.8	23.0	20.8	19.1	16.2
84	15.9	15.7	16.6	18.2	19.2	20.9	22.8	23.1	23.9	19.8	16.9	15.1
85	14.8	15.4	15.2	16.9	17.6	19.5	22.4	21.6	21.1	19.7	17.2	15.2
86	15.5	15.9	16.9	17.8	19.0	19.9	21.3	21.1	20.8		18.1	16.3
87	15.1	15.5	16.0	17.9	18.4	19.0	19.8	20.7	21.1	19.9	17.8	15.5
88	14.1	15.1	16.7	18.4								
89	13.8	14.3	15.9	18.1	18.1	19.3	20.7	22.7	20.7	18.9	17.3	15.8
90	15.4	14.7	15.5	17.6	19.2	20.6	21.7	22.7	21.3	20.7	18.1	15.8
91												
92												
93												
94												
95												

MEDIAS MENSUALES DE SALINIDAD DEL AGUA DEL MAR ‰.

LAT. 31° 51' N

LONG. 116° 38' W

Año	Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic
52												
53												
54												
55												
56					34.0	33.8	33.8	33.7	33.8	33.8	33.6	33.7
57	33.3	33.4	33.7	33.7	33.7	33.8	34.0	33.7	34.0	33.7	33.7	33.7
58	33.7	33.4	33.4	33.2	34.0	33.8	33.7	33.6	33.6	33.8	33.8	33.8
59		33.7	33.7		34.0	34.1	34.1	34.1	34.1	34.1	34.0	34.0
60	34.0	34.0	34.1	34.0	34.0	34.2	34.1	34.1	34.1	33.4	33.7	33.7
61	33.8	34.0	34.0	34.0	34.4	34.5	34.2	34.1	34.1	34.1	34.0	33.8
62	33.7	33.8	34.0	34.0	34.1	34.7	34.2	34.1	34.2	34.0	34.0	34.0
63	34.1	34.0	34.0	34.1	34.1	34.4	34.2	34.2	34.1	34.0	34.1	34.1
64	34.1	34.2	34.2	34.4	34.2	34.5	34.5	34.4	34.2	34.4	34.1	34.1
65	34.1	34.1	34.0	34.2	34.1	34.2	34.4	34.2	34.1	34.2	33.8	33.7
66	34.0	33.7	34.1	34.2	34.4	34.4	34.4	34.7	34.2	34.2	34.0	33.8
67	34.2	34.0	33.8	34.0	34.2	34.6	34.5	34.4	34.2	34.0	34.0	34.0
68	34.2	34.2	34.1	34.4	34.4	34.5	34.4	34.5	33.3	34.2	34.0	34.1
69	33.8	33.7	33.8	34.2	34.4		34.2	34.4	34.2	34.2	34.0	34.0
70	34.1	34.2	34.0	34.0	34.1	34.5	34.6	34.1	34.1	34.1	34.0	33.6
71	33.7	33.6	33.8	34.0	34.1	34.4	34.4	34.2	34.2	34.2	33.7	33.6
72	34.0	34.0	34.1	34.0	34.2	34.5	34.5	34.5	34.4	34.2	34.1	34.0
73	34.2	34.2	33.6	34.4	34.6	34.7	34.7	34.7	34.7		34.6	34.2
74	34.1	34.2	34.2	34.2	34.5	34.6	34.6	34.5	34.5	34.5	34.2	34.0
75	34.5	34.4	34.1	34.1	34.5	34.7	34.9	34.7	34.6	34.5	34.2	34.4
76	34.4	33.6	34.2	34.5	34.6	34.7	34.7	34.7	34.5	34.6	34.6	34.5
77	34.4	34.4	34.5	34.5	34.4	34.7	34.4	34.7	34.6	34.4	34.4	33.8
78	33.7	32.8	28.1	33.6	34.2	34.5	34.6	34.7	34.2	34.2	33.8	33.3
79	32.7	32.5	33.3	33.8	34.0	34.4	34.4	34.5	34.4	34.1	34.0	34.0

SERVICIO MAREOGRAFICO  
ENSENADA B. C. N.

MEDIAS MENSUALES DE SALINIDAD DEL AGUA DEL MAR ‰.

LAT. 31° 51' N

LONG. 116° 38' W

Año	Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic
80	32.3	29.4	32.7	33.6	34.0	34.2	34.4	34.6	34.5	34.5	34.4	34.4
81	34.2	34.2	33.8	34.0	34.0	34.2	34.2	34.4	33.8	34.1	33.6	33.7
82	33.2	33.3	33.3	33.6	33.0	33.6	34.1	34.5	34.2	34.2	34.0	33.8
83	34.2	32.5	32.0	33.6	33.7	34.4	34.5	34.5	34.2	33.8	34.1	33.8
84	33.8	34.1	34.0	34.4	34.5	34.6	34.7	34.7	34.6	34.4	34.1	33.3
85	33.8	34.0	34.1	34.2	34.4	34.6	34.7	34.6	34.5	34.2	34.1	33.7
86	34.0	34.1	34.1	34.2	34.4	34.5	34.6	34.5	34.2		34.0	33.7
87	33.7	33.8	33.9	34.0	34.4	34.6	34.6	34.5	34.5	34.1	33.0	33.6
88	33.7	33.7	33.8	34.0								
89	34.1	34.1	34.0	34.2	34.4	34.5	34.4	34.5	34.2	34.1	33.7	33.8
90	33.7	33.3	33.7	33.8	34.0	34.1	34.0	34.1	34.0	33.7	33.4	33.6
91												
92												
93												
94												
95												

SERVICIO MAREOGRAFICO NACIONAL

SAN CARLOS, B. C. S.

MEDIAS MENSUALES DEL NIVEL DEL MAR

(PIES)

LAT. 24° 47' N

LONG. 112° 07' W

Año	Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic
52												
53												
54												
55												
56												
57												
58												
59												
60												
61												
62												
63												
64												
65												
66												
67												
68										6.565	6.462	
69												
70				5.635	5.785	5.814	6.073	6.236	6.442	6.316	6.336	6.049
71	5.994	5.831	5.837	5.472	5.393	5.583	5.729	5.959	6.202	4.752	4.485	4.296
72	6.119	6.012	5.530		5.888	6.079	6.103	6.374	6.359	6.433	6.424	6.221
73				5.460	5.350	5.462	5.746	5.974	5.885			
74	6.364	5.831	5.691	5.781	5.832	6.050	6.316	6.495	6.709	6.353	6.278	6.173
75	5.979	5.882	5.834	5.742	5.681	5.836	6.120	6.217	6.475	6.260	6.305	6.079
76	5.986	5.927	5.907	5.888	5.929	6.126	6.475	6.685	6.847	6.710	6.759	6.622
77												
78												
79						5.747	6.041					

SERVICIO MAREOGRAFICO NACIONAL

SAN CARLOS, B. C. S.

MEDIAS MENSUALES DEL NIVEL DEL MAR

(PIES)

LAT. 24° 47' N

LONG. 112° 07' W

Año	Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic
80												
81		6.107	5.815	5.962	5.896	5.880	6.410	6.341	6.498	6.546	6.417	6.252
82	5.892	5.908	5.898	5.942	5.866	5.983	6.284	6.605	6.866	6.936	6.876	
83	6.833	6.541	6.177	6.136	6.356	6.630	7.119	7.135	7.271	6.964	6.696	6.420
84	6.505	6.446	6.397	6.894	6.988	7.234	7.612	5.617	7.148	6.798	6.392	6.443
85	6.611	7.102	6.274	4.576	5.940	6.105	6.294	6.534	6.654	6.665	6.363	6.038
86	6.546	6.108	6.170	5.996	5.824	6.034	6.416	6.616	6.808	6.844	6.876	6.641
87	6.147		6.207	6.178	6.313	6.389	6.833	6.768	5.468			
88												
89												
90												
91												
92												
93												
94												
95												

MEDIAS MENSUALES DE TEMPERATURA DEL AGUA DE MAR °C.

LAT. 24° 47' N

LONG. 112° 07' W

Ano	Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic
52												
53												
54												
55												
56												
57												
58												
59												
60												
61												
62												
63												
64												
65												
66												
67												
68				19.9			25.2	24.9	25.5	24.5	23.2	
69												
70				19.2	19.7	21.0	24.4	25.9	25.7	24.4	22.8	20.2
71	17.9	18.3	17.5	18.8	18.7	20.1	23.7	26.0	17.5	25.0	22.2	
72	18.6	19.9	19.3		19.0	20.8	23.0	27.9	27.4	26.8	22.6	20.7
73				18.5	19.7	19.6	21.4	26.3	23.6			
74		19.2	20.0	20.7	20.9	23.4	26.4	27.4	28.5	25.9	21.8	20.0
75	18.2	18.3	18.9	19.2	19.6	20.7			27.3	24.5	22.9	20.3
76	19.4	20.6	20.3	20.2	22.1	22.6	25.2	28.0	27.8	25.8	23.9	21.0
77	19.1	22.1	21.0									
78												
79												

SERVICIO MAREOGRAFICO  
SAN CARLOS, B.C.S.

MEDIAS MENSUALES DE TEMPERATURA DEL AGUA DEL MAR °C.

LAT. 24° 47' N

LONG. 112° 07' W

Año	Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic
80										23.4		
81							28.0	26.8	27.7	24.2	23.6	20.8
82	19.0	19.5	19.3	20.8	19.4	19.6	24.1	27.3	27.8	25.8	23.4	21.2
83	22.0	21.2	20.5		21.3	23.7	27.8	29.4	26.4	24.1	26.1	20.8
84	24.8	20.8	21.2	21.3	28.3	24.5	26.6	28.7	28.03	25.1	21.9	
85												
86												
87												
88												
89												
90												
91												
92												
93												
94												
95												



MEDIAS MENSUALES DE SALINIDAD DEL AGUA DE MAR <sup>0</sup>/00  
LAT. 24° 47' N LONG. 112° 07' W

Año	Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic
52												
53												
54												
55												
56												
57												
58												
59												
60												
61												
62												
63												
64												
65												
66												
67												
68				35.5			36.0	36.2	36.0	36.0	36.0	
69												
70				36.4	36.6	37.0	37.0	36.8	36.6	35.9	36.3	36.3
71	35.8	35.8	36.0	36.6	36.8	36.7	36.8	35.8	36.0	36.6	36.3	
72	36.0	36.0	36.2		36.3	36.8	35.9	36.6	36.6	36.6	35.9	35.4
73				36.7	36.7	37.0	37.3	37.9	37.6			
74		36.2	36.3	36.4	36.7	37.0	36.6					
75												
76												
77												
78												
79												

SERVICIO MAREOGRAFICO

SAN CARLOS, B.C.S.

MEDIAS MENSUALES DE SALINIDAD DEL AGUA DE MAR <sup>0</sup>/oo.

LAT. 24° 47' N

LONG. 112° 07' W

Año	Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic
80												
81								36.3	35.8	35.4	35.5	35.0
82	35.5	36.0	35.5	34.9	33.7	34.1	36.0	38.1	35.3	35.3	34.5	
83	34.9	34.9	34.5		36.0	35.8	35.6	35.5	34.6	35.0	34.9	34.9
84	35.0	36.2	35.8	35.6	37.2	37.3	37.9	37.2	37.0	35.8	35.0	
85												
86												
87												
88												
89												
90												
91												
92												
93												
94												
95												

LA PAZ, B. C. S.

MEDIAS MENSUALES DEL NIVEL DEL MAR

LAT. 24° 10' N

(PIES)

LONG. 110° 21' W

Año	Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic
52	5.610	5.527	5.328	5.334	5.407	5.622	5.774	6.033	6.220	6.154	6.008	
53			5.335	5.396	5.628	5.771	6.002	6.164	6.306	6.161	5.972	5.756
54	5.513	5.474	5.387	5.486	5.566	5.779	5.956	6.100	6.050	6.009	5.919	5.744
55	5.434	5.386	5.414	5.384	5.520	5.615	5.803	6.083	6.111	5.915	5.771	5.496
56	5.463	5.528	5.419	5.483	5.724	5.673	6.138	6.232	6.202	6.138	6.042	5.600
57	5.435	5.524	5.405	5.483	5.718	5.884	6.321	6.396	6.525	6.240	6.262	5.960
58	5.998	5.642	5.692	5.622	5.896	5.947	6.147	6.398	6.520	6.440	6.198	5.913
59	5.780	5.702	5.585	5.609	5.665	5.865	6.095	6.267	6.442	6.387	6.068	5.875
60	5.561	5.428	5.449	5.452	5.584	5.676	5.910	6.088	6.270	6.185	5.914	5.823
61	5.544											5.650
62	5.495	5.441	5.279	5.486	5.668	5.700	5.966	6.150	6.318	6.305	5.999	5.688
63	5.549	5.482	5.377	5.574	5.673	5.858	6.171	6.383	6.526	6.220	6.093	5.893
64	5.668	5.381	5.292	5.354	5.449	5.417	5.802	6.035	6.193	6.018	5.904	5.583
65	5.521	5.545	5.443	5.511	5.583	5.825	6.171	6.481	6.575	6.351	6.114	6.062
66	5.915	5.526	5.527	5.546	5.698	5.817	5.998	6.158	6.250	6.214	5.970	5.775
67	5.657	5.587	5.407	5.535	5.701	5.833	5.839	6.077	6.254	6.091		
68	5.730	5.550	5.420	5.566	5.606	5.702	5.934	6.206	6.449	6.443	6.163	5.999
69	5.798	5.696	5.721	5.720	5.728	5.842	6.225	6.498	6.566	6.332	6.184	5.847
70	5.615	5.592	5.538	5.523	5.646	5.704	5.924	6.145	6.332	6.208	5.967	5.599
71	5.506	5.412	5.545	5.534	5.625	5.737	6.044	6.227	6.432	6.278	5.913	5.713
72	5.680	5.567	5.630	5.750	5.825	6.116	6.239	6.346	6.634			
73	6.087	5.757	5.672	5.652	5.694	5.710	5.995	6.071	6.043	6.087	5.804	5.683
74	5.552	5.508	5.435	5.648	5.714	5.877	6.150	6.279	6.440	6.136	5.930	5.674
75	5.513	5.565	5.505	5.570	5.493	5.700	5.938	6.030	6.252	6.134	5.976	5.633
76	5.424	5.417	5.509	5.573	5.680	6.076	6.406	6.468	6.647	6.547	6.298	6.017
77	5.760	5.698										
78												
79												

SERVICIO MAREOGRAFICO  
LA PAZ , B.C.S.

MEDIAS MENSUALES DEL NIVEL DEL MAR

LAT. 24° 10' N .

(PIES)

LONG. 110° 21' W

Año	Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic
80												
81			5.397	5.664	5.608	5.611	6.114	6.187	6.172	6.339	6.065	5.943
82	5.500	5.568	5.650	5.646	5.760							
83				5.860	6.215	6.591		6.493	6.600	6.412	6.035	
84				5.377								
85												
86												
87												
88												
89												
90												
91												
92												
93												
94												
95												

MEDIAS MENSUALES DE TEMPERATURA DEL AGUA DEL MAR °C.

LAT. 24° 10' N

LONG. 110° 21' W

Año	Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic
52	20.0	19.5	21.0	22.5	24.5	24.0	27.0	29.0	31.0	29.5	25.5	
53			23.0	22.5	23.5	24.5	27.0	29.5	29.5	28.5	25.5	21.0
54	19.5	20.5	21.7	23.5	23.5	25.0	28.0	29.5	29.8	27.6	25.5	22.0
55	19.0	19.0	21.5	22.0	24.0	25.0	25.0	28.8	28.5	26.5	24.5	21.0
56	20.5	19.5	21.0	22.0	25.5	24.5	29.0	30.0	30.0	28.5	24.5	20.5
57	20.5	21.5	20.5	21.0	23.5	25.0	28.0	29.0	29.5	26.5	24.5	22.0
58	21.0	22.0	21.5	24.0	25.5	26.5	28.0	29.0	30.0	29.0	25.4	23.4
59	21.5	21.4	22.8	24.8	25.4	26.6	28.6	28.8	30.1	28.2	25.5	22.4
60	19.1	19.7	22.7	22.9	24.3	24.9		29.2	30.8	28.5	26.1	22.1
61	20.2											
62	19.9	21.0	21.3	24.4	24.7	26.0	27.9	30.4	29.2		26.1	23.1
63	20.1	21.4	22.1	24.7	26.1	26.1	28.8	30.5	31.0	31.0	25.1	22.2
64	19.1	19.0	20.4	23.4	24.9	23.9	26.8	27.9	28.7	28.6	24.8	21.7
65	19.8	19.1	20.5	23.4	24.6	25.6	28.3	29.5	29.6	28.0	25.9	22.7
66	20.1	19.9	22.0	23.9	24.4	26.8	27.2	29.2	29.5	27.1		21.8
67	19.4	20.2	22.3	23.8	26.0	25.1	27.2	27.3	29.2	27.8		
68		21.5	22.1	23.5	24.6	21.5	27.5	28.2	28.7	28.1	25.1	21.6
69	21.1	20.1	21.8	24.6	24.1	24.1	28.8	29.5	29.6	27.7	25.1	21.7
70	19.7	20.5	21.9	23.0	26.4	25.0	27.2	31.3	29.1	27.2	24.6	21.4
71	19.4	19.6	21.6	24.1	24.4	24.7	27.4	29.6	30.2	28.0	24.8	20.0
72	19.4	20.4	22.0	24.44	25.8			30.2	29.9			
73	20.5	21.6	22.6	23.0	24.4	23.3	25.7	28.7	26.6	27.0	24.0	20.4
74	20.0	19.3	21.3	24.0	24.3	25.1	27.4	29.3	29.7	28.0	24.2	20.3
75	18.2	19.5	20.9	22.4	23.8	24.4	27.0	28.3	29.5	27.4	24.2	20.6
76	18.7	20.7	22.1	22.7	24.2	27.2	27.8	30.0	29.4	26.9	24.7	21.5
77	20.5	21.8	21.5									
78												
79				23.2					29.2	28.3	24.2	20.7

SERVICIO MAREOGRAFICO  
LA PAZ B.C.S.

MEDIAS MENSUALES DE TEMPERATURA DEL AGUA DEL MAR °C.

LAT. 24° 10' N

LONG. 110° 21' W

Año	Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic
80	20.2	21.7										
81		22.1	21.7	24.3	24.7	25.0	25.6		27.1	28.8	25.6	22.0
82	20.1	21.5	23.6	25.8	25.5							
83			24.5	24.5	27.6	29.0	32.2	31.4	31.0	30.4	26.4	
84			25.0	26.1	27.3							
85												
86												
87	20.2	20.7					29.0	30.2	30.3			
88					26.4	29.1						
89												
90												
91												
92												
93												
94												
95												

MEDIAS MENSUALES DE SALINIDAD DEL AGUA DEL MAR ‰.

LAT. 24° 10' N

LONG. 110° 21' W

Año	Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic
52	35.6	35.9	36.0	35.6	36.6	36.0	36.4	35.5	35.9	36.0	36.2	
53			36.8	37.2	37.2	37.1	37.1	36.8	37.1	37.1	36.8	36.8
54	36.7	36.8	37.3	37.5	37.2	36.8	36.6	36.3	36.6	36.2	36.0	36.0
55	35.6	36.0	36.3	36.4	36.3	36.6	36.8	36.6	35.6	35.8	35.9	35.9
56	36.2	36.0	36.4	36.7		37.3	36.8	36.6	36.7	36.4	36.4	36.6
57	35.4	36.7	36.7	36.2	36.6	36.4	36.6	36.0	36.3	36.2	36.2	36.3
58	36.2	36.3	36.4	36.2	36.2	36.3	36.7	36.8	36.3	35.9	35.8	35.8
59	36.0	36.3	36.3	36.8	36.7	36.6	36.6	36.8	36.0	36.3	36.4	36.4
60	36.0	36.4	37.0	36.7	36.8	36.6		36.0	35.9	36.0	35.9	35.8
61	35.1											
62	35.8	35.8	36.2	36.0	36.0	36.0	35.6	35.8	35.4		35.6	35.5
63	35.4	35.6	36.0	36.2	35.9	35.9	35.8	35.8	35.8	35.9	35.8	35.6
64	35.8	35.9	36.0	36.2	36.0	35.8	35.5	35.5	35.5	35.5	35.3	35.4
65	35.5	35.6	35.8	36.2	36.3	35.6	35.5	35.3	35.6	35.8	35.6	35.4
66	35.5	35.6	35.8	36.2	35.6	35.8	35.6	35.5	35.4	35.1		35.5
67	35.4	35.4	35.8	36.2	35.8	35.6	35.6	35.3	35.5	35.1		
68		35.3	35.5	35.8	35.5	35.8	35.8	35.8	35.8	35.3	35.4	35.0
69	35.3	35.0	35.1	35.8	35.5	35.4	35.4	35.3	35.3	35.5	35.5	35.3
70	35.3	35.4	35.8	35.8	35.6	35.5	35.5	36.8	35.8	35.6	35.9	35.5
71	35.5	35.8	33.9	36.0	35.8	35.5	35.4					35.4
72	35.1	35.5	35.8	35.9	36.0			36.0	35.8			
73	35.1	35.3	35.6	35.8	35.8	35.6	35.8	35.9		35.4	35.8	35.8
74	35.4	35.9	35.9	36.0	36.0	36.0	35.8	35.5	35.9	36.3	35.8	35.6
75	35.5	35.5	35.8	36.0	35.8	35.8	35.9	35.9	36.0	35.8	35.8	35.5
76	36.0	35.6	35.8	35.8	36.0	35.5	35.6	35.6	35.3	34.2	35.0	34.2
77	35.4	35.8	35.9									
78												
79				36.3					35.6	35.8	35.6	35.9

SERVICIO MAREOGRAFICO  
LA PAZ, B.C.S.

MEDIAS MENSUALES DE SALINIDAD DEL AGUA DEL MAR<sup>o</sup> /oo.

LAT. 24<sup>o</sup> 10' N

LONG. 110<sup>o</sup> 21' W

Año	Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic
80	35.8	36.2										
81		35.9	36.3	36.3	36.4	36.0	34.9		36.2	35.8	35.8	35.4
82	35.6	35.9	36.3	36.2	36.0							
83			35.8	35.6	36.2	36.0	36.2	35.0	35.4	35.5	35.4	
84			36.0	36.0	36.3							
85												
86												
87	35.3	35.4					32.3	33.2	33.2			
88					39.3	39.4						
89												
90												
91												
92												
93												
94												
95												



SERVICIO MAREOGRAFICO NACIONAL

GUAYMAS, SON.

MEDIAS MENSUALES DEL NIVEL DEL MAR

(PIES)

LAT. 27° 56' N

LONG. 110° 54' W

Año	Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic
52	7.423	7.349	7.231	7.464	7.746	8.257	8.222	8.435	8.441	8.256	7.721	7.461
53	7.517	7.647	7.527	7.650	7.808	8.294	8.715	8.643	8.550	8.051	7.699	7.384
54		7.639	7.314	7.658	7.901	8.345	8.516	8.420	8.310	7.998	7.575	7.647
55	7.534	7.337	7.591	7.556	7.779	8.184	8.495	8.376	8.460	7.975	7.542	7.361
56	7.287	7.106	7.423	7.649	7.900	8.604		8.504	8.473	8.070	7.506	7.479
57	7.394	7.467	7.579	7.650	8.139	8.542	8.812	8.701	8.832	8.319	7.864	7.783
58		7.632	7.810	7.601	8.211						7.680	7.739
59	7.868	7.749	7.576	8.010	7.956	8.523	8.572	8.602	8.805	8.447	7.766	7.659
60	7.307	7.146	7.353	7.518	7.849	8.275	8.557	8.537	8.539	8.296	7.668	7.488
61	7.502	7.528	7.446	7.611	7.871	7.178	8.582	8.462	8.480	8.071	7.514	7.634
62	7.380	7.574	7.154	7.680	7.778	8.214	8.469	8.542	8.722	8.331	7.880	7.719
63	7.408	7.630	7.435	7.661	7.938	8.339	8.808	8.953	8.687		7.907	7.715
64	7.554	7.226	7.327	7.474	7.639	8.107	8.470	8.517	8.539	8.236	7.600	7.527
65	7.532	7.557	7.629	7.734	7.909	8.445	8.692	8.893	8.890	8.342	8.116	7.922
66	7.814	7.310	7.589	7.890	8.100							
67												
68											8.051	7.774
69	7.869	7.620	7.548	7.898	8.249	8.487	8.726	8.979	8.721	8.444	7.811	7.732
70	7.478	7.549	7.653	7.437	7.927	8.235	8.592	8.662	8.617	8.047	7.750	7.400
71	7.412	7.464	7.473	7.733	7.881	8.322	8.620	8.699	8.711	8.303	7.810	7.608
72	7.662	7.576	7.914	7.784	8.167	8.611	8.891	8.898	8.922	8.573	8.402	8.280
73	7.845	7.762	7.578	7.746	7.995	8.471	8.562	8.417	8.422	7.960	7.721	7.523
74	7.452	7.278	7.591	7.738	8.072	8.491	8.796	8.702	8.737	8.093	7.737	7.512
75	7.463	7.520	7.595	7.634	7.806	8.416	8.551	8.626	8.538	7.922	7.732	7.502
76	7.482	7.444	7.648	7.784	8.076	8.757	9.052	8.891	8.895	8.512	8.306	8.096
77	7.798	7.757	7.547	7.611	7.921	8.416	8.754	8.899	8.892	8.689	8.276	
78												
79					7.909	8.154	8.629	8.424	8.729	8.197	7.627	7.670

SERVICIO MAREOGRAFICO NACIONAL

GUAYMAS, SON.

MEDIAS MENSUALES DEL NIVEL DEL MAR

(PIES)

LAT. 27° 56' N

LONG. 110° 54' W

Año	Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic
80	7.630	7.766	7.603	7.650	7.959	8.474	8.621	8.624	9.145	8.536	8.013	7.665
81	8.011	7.644	7.694	7.930	8.349	8.555	8.851	8.876	8.684	8.700	8.052	7.893
82	7.583	7.822	7.887	7.972	8.601	8.873	9.056	9.001	9.367	8.984	8.778	8.768
83	8.713	8.242	7.983	8.370	8.823	9.291	9.371	9.241	9.350		8.330	8.022
84	8.049	7.918	8.061	8.084	8.407	8.890	9.036	9.054	9.031	8.626	7.891	7.921
85	7.821	7.750	7.740	8.010	8.036		8.962	8.903	8.897	8.513	7.976	7.743
86	8.020	7.871	7.788	7.924	8.308	8.605	8.956	8.882	8.945	9.025	8.299	7.920
87	7.850	8.079	7.895	8.080	8.466	9.028	9.328	9.076	9.044	8.554	8.280	7.857
88	7.622	7.683	7.740	7.937	8.062	8.548	8.836	8.860	8.629	8.336	7.746	7.571
89	7.467	7.563	7.846	7.985	8.166	8.774	8.892	8.903	8.912	8.404	8.235	
90												
91												
92												
93												
94												
95												

MEDIAS MENSUALES DE TEMPERATURA DEL AGUA DE MAR °C.

LAT. 27° 56' N

LONG. 110° 54' W

Año	Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic
52	20.1	19.2	18.1	21.0	24.6	28.7	30.6	30.7	30.9	28.6	24.0	16.5
53	16.0	15.7	15.9	18.9	16.0	22.1	28.4	24.0	22.2			
54					26.7	27.9	29.8	30.6	30.8	29.4	23.6	22.5
55	16.8	21.0	23.3	20.9	23.9	29.7	29.7	30.0	31.2	28.6	21.6	19.5
56	19.1	15.8	21.3	18.4	22.1		30.4	30.6	22.8	18.3		16.2
57	17.7	19.7	20.9	23.0	25.6	29.7	32.5	32.7	32.2	27.0	18.6	18.7
58	17.9	19.6	20.8	22.7	25.6					22.1	20.4	19.9
59	18.5	17.7	18.3	24.6	26.4	29.6	32.1	32.0	31.0	27.0	20.7	17.3
60	15.0	15.5	19.5	21.5	25.0	29.8	31.1	30.8	31.3	26.4	22.2	15.7
61	16.6	17.6	19.2	28.8	24.2	29.4	32.0	32.3	30.9	26.7	20.6	17.7
62	15.9	18.7	17.4	22.8	25.5	27.8	32.2	33.2	31.4	28.0	23.8	20.0
63	15.7	19.0	20.6	21.1	25.4	28.9	31.5	31.4	31.2	28.8	23.7	18.8
64	16.3	15.5	17.0	20.4	22.9	29.4	31.5	31.3	30.3	29.0	20.8	17.2
65	16.7	16.6	18.8	23.8	26.2	28.9	31.5	32.2	32.2	26.2	24.1	19.9
66		17.6	20.0	25.0	27.7							
67												
68											23.6	17.4
69	19.0	18.1	25.9	23.0	26.6	29.5	32.1	33.4	31.7	27.1	20.8	18.9
70	16.7	18.0	20.6	22.0	25.1	29.7	32.5	33.1	31.4	26.9	21.4	18.1
71	14.7	17.6	18.0	22.5	25.1	28.2	32.4	31.7	31.9	27.0	21.4	17.3
72	16.5	18.2	23.6	22.8	26.0	30.8	33.0	32.7	31.9	28.6	22.0	19.3
73	17.6	19.5	20.8	22.0	26.7	30.7	31.8	33.2	32.4	27.7	22.5	18.3
74	17.8	16.3	20.3	23.5	25.6	30.6	33.8	35.8	33.2	28.5	22.6	16.9
75	16.0	17.1	19.2	20.8	24.6	29.8	31.6	33.0	32.6	28.0	21.7	16.4
76	15.5	18.4	19.3	22.8	27.0	30.8	32.7	33.0	30.8	28.0	23.6	19.1
77	18.4	20.1	19.3	23.2	26.0	31.4	32.8	33.4	32.0	29.6	25.0	21.6
78												
79					28.8	31.4	32.4	34.1	34.0	31.0	21.4	17.6

SERVICIO MAREOGRAFICO  
GUAYMAS, SON.

MEDIAS MENSUALES DE TEMPERATURA DEL AGUA DEL MAR °C.

LAT. 27° 56' N

LONG. 110° 54' W

Año	Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic
80	18.0	21.3	21.6	22.1	26.4	29.5	33.9	34.2	33.6	29.1	23.6	19.4
81	20.4	20.5	22.2	22.0	27.6	30.5	33.1	33.9	32.9	26.3	21.0	19.7
82	14.9	18.9	22.1	23.0	24.5	30.5	33.0	34.0	33.0	30.0	23.8	19.0
83	18.4	22.3	23.0	22.5	26.4	29.3	32.3	31.8	32.0		27.9	20.1
84	19.8	21.8	22.1	22.9	25.0	31.7	32.2	32.3	31.4	29.4	24.5	19.7
85	16.5	16.2	20.1	23.4	27.2	29.7	33.0	32.6	31.2	22.3	22.3	19.1
86	19.3	20.9	21.6	22.5	25.2	27.8	28.0	29.5	31.6	28.2		
87	16.8	16.2	16.2	17.6	22.1	26.1	30.8	32.2	31.2	29.0		
88	16.6	17.9	19.2									
89	16.2	18.6	20.8	27.0	27.0	35.1	35.9	35.9	35.6	34.6	32.7	31.5
90	18.0	16.5	20.2	22.0	24.3		29.9	23.7	27.6	28.2	21.7	20.1
91												
92												
93												
94												
95												

MEDIAS MENSUALES DE SALINIDAD DEL AGUA DEL MAR ‰.

LAT. 27° 56' N

LONG. 110° 54' W

Año	Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic
52	36.7	36.4	35.9	36.0	36.6	37.2	37.5	36.3	35.7	36.8	35.6	35.6
53	35.8	35.6	35.3	36.4	35.3	35.9	36.6	34.4	33.4			
54	33.0	34.8	36.6		37.4	37.4	37.6	37.3	37.0	36.2	34.5	34.3
55	33.0	34.8	36.6	36.9	38.3	40.0	39.0	39.2	37.5	36.6	34.8	36.0
56	36.4	35.9	37.2	36.5	35.9		36.9		32.6	33.1		35.4
57	35.1	35.5	35.9	36.2	37.0	36.6	36.6	35.5	36.1	35.1	35.7	35.6
58	35.4	35.6	35.7	36.4	36.7						35.9	35.8
59	35.6	35.9	36.0	36.3	36.6	36.3	36.4	36.0	36.0	35.4	35.8	34.9
60	34.2	34.9	35.3	35.8	36.2	36.6	36.7	35.5	35.5	34.0	32.5	30.8
61	30.8	34.9	35.4	36.0	35.8	36.3	36.6	36.6	35.9	35.5	35.4	35.1
62	34.9	35.0	35.3	35.5	36.2	36.0	36.6	36.8	36.3	36.2	36.0	35.5
63	35.3	35.4	35.7	35.8	36.0	36.6	30.2	27.3	35.1	35.9	35.8	35.4
64							37.6	36.0	36.6	36.7	36.7	36.7
65	36.6	36.7	37.0	36.8	36.4	36.7	37.1	36.4	36.6	35.9	35.9	35.5
66		35.8	35.9	36.4	36.7							
67												
68											33.5	36.4
69	36.0	36.3	36.3	35.8	35.1	34.5	36.7	36.6	36.3	35.9	35.6	35.3
70	35.3	35.5	36.0	36.2	36.2	36.7	36.3	36.3	36.0	35.8	35.5	35.5
71	35.1	35.1	35.4	36.0	36.3	36.7	37.0	28.1	35.8	35.6	35.4	35.3
72	35.1	35.3	36.0	36.2	36.7	36.6	36.6	35.4	35.5	35.5	35.3	34.7
73	34.9	33.8	35.5	35.8	36.4	36.8	37.0	36.4	36.4	36.4	35.6	35.3
74	35.0	34.6	35.3	36.3	36.0	37.0	37.7	37.6	36.6	35.6	34.7	34.7
75	34.7	35.6	35.8	35.8	36.2	36.8	36.8	36.7	36.6	34.6	33.8	35.1
76	35.0	35.3	35.5	36.7	36.2	36.8	36.7	36.4	35.5	34.7	33.0	34.1
77	35.1	35.0	35.8	36.2	36.7	37.2	36.8	34.0	35.9	35.4	35.4	35.5
78												
79								39.0	38.5	36.2	34.0	33.3

SERVICIO MAREOGRAFICO  
GUAYMAS, SON.

MEDIAS MENSUALES DE SALINIDAD DEL AGUA DEL MAR ‰.

LAT. 27° 56' N

LONG. 110° 54' W

Año	Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic
80	35.3	35.8	37.0	36.6	37.4	38.3	37.6	37.5	37.1	35.3	33.4	31.8
81	33.3	32.1	32.7	33.3	34.7	35.8	36.6	36.8	36.4	33.4	31.6	31.4
82	30.3	31.5	32.4	32.8	33.6	35.6	36.4	37.0	36.4	35.0		
83	31.5	32.7	32.7	32.7	34.0	33.8	36.4	36.2	35.9		34.1	31.8
84	31.9	32.4	32.5	32.8	33.6	35.9	36.2	35.8	35.6	34.6	33.0	31.6
85	30.8	30.8	32.0	33.0	34.4	35.5	36.8	36.4	35.9	32.5	32.5	31.5
86	31.6	32.1	32.4	32.7	33.7	34.6	34.6	35.3	36.0	34.5		
87	30.8	30.7	30.7	31.1	32.5	33.8	35.6	36.3	35.6	34.9		
88	30.8	31.2	31.6									
89	30.8	31.4	32.1	34.2	34.4	35.1	35.9	35.9	35.6	34.6	32.7	31.5
90	31.2	30.8	31.9	32.4	33.3		35.4	34.9	34.5	34.4	32.1	31.8
91												
92												
93												
94												
95												

MEDIAS MENSUALES DEL NIVEL DEL MAR.

LAT. 25° 36' N

(PIES)

LONG. 109° 03' W

Año	Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic
56			4.655	4.826	5.240	6.030	5.762	5.790	5.718	5.291	5.168	4.668
57	4.783	4.769	4.828	4.921	5.403	5.869	6.200	6.013	6.114	5.753	5.437	5.327
58	5.587	5.096	5.138	4.834	5.460	5.747	6.040	6.008	6.283	5.719	5.378	5.167
59	5.229	5.057	5.033	5.288	5.138	5.840	5.778	5.951	6.007	5.877	5.116	5.045
60	4.724	4.724	4.849	4.905	5.104	5.494	5.818	5.784	5.851	5.596	4.977	4.914
61	4.947	5.011	4.805	4.978	5.354	5.507	5.915	5.735	5.728	5.422		
62												
63	4.665	4.809	4.638	4.825	5.187	5.629	6.030	5.935	5.946	5.547	5.201	5.076
64	4.985	4.578	4.560	4.698	4.824	5.123	5.590	5.642	5.844	5.422	4.791	4.814
65	4.833	4.062	4.898	5.025	5.112	5.629	5.079	6.101	6.110	5.575	5.355	5.141
66	5.110	4.660	4.847	5.000	5.359	5.560	5.805	5.776	5.733	5.019	4.943	4.713
67	4.750	4.724	4.688	4.700	4.979	5.423	5.676	5.772	5.745	5.358	5.167	4.829
68	4.826	4.935	4.747	4.899	5.094	5.486	5.700	6.014	5.958	5.623	5.365	5.388
69	5.457	5.081	4.955	5.299	5.519	5.710	5.974	6.244	6.026	5.839	5.442	5.417
70	5.102	5.035	4.977	4.780	5.237	5.509	5.926	5.964	5.837	5.529	5.172	4.822
71	4.831	4.895	4.890	5.122	5.251	5.759	5.972	6.126	6.118	5.736	5.767	5.264
72	5.202	5.072	5.293	5.192	5.674	6.016	6.300	6.191	6.353	6.117	6.160	5.972
73	5.541	5.208	5.174	5.241	5.275	5.882	6.364	5.982	5.937	5.500	5.315	5.220
74	5.032	4.906	4.813	5.143	5.768	6.064	6.229	6.223	5.908	5.559	5.375	
75	5.150	5.189	5.218	5.160	5.364	5.904	6.099	6.104	6.228	5.758	5.282	5.175
76	5.213	5.133	5.175	5.320	5.655	6.414	6.206	6.381	6.387	6.126	5.941	5.790
77	5.582		4.964	5.203	5.458	5.952	6.243	6.416	6.269	6.255	6.092	5.924
78	5.812	5.513	5.163	5.313	5.413	5.988	6.186	6.243	6.288	6.191	5.515	5.425
79	5.426											

SERVICIO MAREOGRAFICO  
TOPOLOBAMPO, SIN.

MEDIAS MENSUALES DEL NIVEL DEL MAR  
(PIES)

LAT. 25° 36' N

LONG. 109° 03' W

Año	Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic
80												
81												
82												
83												
84												
85	4.713	4.688	4.629	4.723	5.017	5.366	5.723	5.723		5.348	4.908	4.761
86	4.982	4.812	4.616	4.856	5.055	5.269	5.732	5.655	5.793	5.878	5.393	5.063
87	4.951	5.139					6.142	5.968	5.928	5.536	5.259	4.759
88	5.168	5.199	4.967	5.134	5.344	5.571	5.387	5.767	5.167	4.916		
89	4.611	4.686	4.773	4.913			5.708	5.814	5.795	5.275	5.096	4.851
90	4.840	4.724			5.216			5.824	5.960	5.667		
91												
92												
93												
94												
95												



MEDIAS MENSUALES DE TEMPERATURA DEL AGUA DE MAR °C.

LAT. 25° 36' N

LONG. 109° 03' W

Año	Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic
52												
53												
54												
55												
56			20.0	22.2	25.8	30.0	30.6	31.7	31.7	29.8	22.2	19.4
57	19.4	20.8	21.2	23.8	26.4	29.4	31.7	32.0	31.5	30.5		
58	19.4	21.4	21.2	23.5	26.8	30.2	31.0	31.0	30.0	28.2	23.3	21.6
59	20.0	19.8	20.6	25.0	26.2	29.6	31.1	31.4	31.2	28.9	24.8	20.8
60	16.9	18.0	21.3	23.8	26.4	29.2	30.9	31.2	31.5	28.6	24.7	18.4
61	19.0	20.1	21.2	23.4	25.4	29.9	30.0	31.2	31.2	29.3	24.2	
62					26.2	29.5						
63	18.6	20.2	20.9	22.5	26.3	29.2	30.4	31.1	31.0	30.8	25.4	21.8
64	19.0	18.0	19.1	24.6	24.8	28.4	30.5	31.0	31.1	30.3	24.5	20.1
65	19.3	19.0	20.3	23.0	25.9	28.8	30.9	31.0	30.9	28.0	26.7	21.2
66	19.4	19.2	20.4	26.4	27.5	29.4	30.0	31.0	30.7	28.4	25.0	20.2
67	19.2	21.0										
68					27.7	29.0						
69	19.6	19.4	19.3	23.7	26.1	28.7	30.6	28.4	31.5	28.5	23.8	20.6
70	18.3	20.1	19.3	21.6	28.4	27.6	28.5	28.4				18.5
71				20.5		29.3		30.1				
72						30.7	30.0	30.0	30.4	28.7		
73	18.4	19.2	20.2	21.1	24.5	27.7						
74												
75												
76												
77												
78							31.6	31.8	30.8	30.1	25.2	19.1
79	18.6											

SERVICIO MAREOGRAFICO  
TOPOLOBAMPO, SIN.

MEDIAS MENSUALES DE TEMPERATURA DEL AGUA DEL MAR °C.

LAT. 25° 36' N

LONG. 109° 03' W

Año	Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic
80												
81			22.2		27.2	28.8	31.4					
82												
83												
84							30.6	30.9	30.9	30.9	23.2	19.9
85	18.2	19.1	19.6	24.4	26.1	28.8	30.5	31.4	31.0	28.5	23.0	19.0
86	19.5	20.6	22.3	26.3	26.1	28.8		31.6	31.0	27.7	24.4	20.7
87	18.1	19.7		23.6		29.4	30.9	32.1		30.1	25.6	20.6
88	17.9	19.8	21.2	23.0	25.2	28.7	30.6	31.5	31.5	29.9	24.3	19.5
89	16.2	18.2	22.0	25.8	26.8	29.5		31.5	31.8	29.1	24.6	20.6
90	19.2	18.6	21.1	24.6	27.5	30.8	31.1	31.8	31.2		24.6	19.6
91												
92												
93												
94												
95												

TOPOLOBAMPO, SIN.

MEDIAS MENSUALES DE SALINIDAD DEL AGUA DEL MAR <sup>0</sup>/100.

LAT. 25° 36' N

LONG. 109° 03' W

Año	Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic
52												
53												
54												
55												
56			36.7	36.8	37.2	38.0	37.9	37.2	37.2	37.5	37.2	37.2
57	36.8	37.0	36.8	37.2	37.5	37.9	38.0		37.7	36.7		35.6
58	35.6	35.4	35.6	36.6	37.0	37.2	37.3	36.7	31.0	28.0	33.3	34.2
59	35.1	35.5	35.8	36.0	37.1	37.3	37.3	34.7	33.6	32.6	32.3	34.1
60	34.1	34.5	35.3	36.0	36.7	36.8	37.2	36.3	35.3	35.6	35.8	35.6
61	35.4	35.6	35.9			37.7	37.3	34.5	34.7	33.8	33.7	
62					37.5	37.2						
63	35.8	35.8	36.3	36.8	37.1	37.9	37.5	36.0	35.6	36.6	35.5	35.5
64	35.4	35.4	36.0	36.4	36.8	37.2	37.3	36.8	37.1	36.7	35.8	35.8
65	35.3	35.4	35.6		37.3	37.9	37.5	36.3	35.4	35.6	36.6	36.0
66	35.4	35.5	35.1	36.8	37.1	37.2	37.2	35.9	36.2	36.4	35.5	35.6
67	35.9	35.8										
68					37.0	37.2						
69	35.1	34.6	35.1	37.2	37.7	37.5	37.1	35.4	35.0	34.9	34.7	34.2
70	34.6	35.3	35.1	35.6	37.2	36.0	35.9	34.9				35.5
71				35.4		37.9		36.6				
72						35.1	35.6		33.2	33.2		
73	32.8	33.4	33.4	34.2	35.4	36.0						
74												
75												
76												
77												
78							35.8	34.2	31.0	30.2	30.2	31.6
79	30.8											

SERVICIO MAREOGRAFICO  
TOPOLOBAMPO, SIN.

MEDIAS MENSUALES DE SALINIDAD DEL AGUA DEL MAR <sup>0</sup>/∞∞.

LAT. 25° 36' N

LONG. 109° 03' W

Año	Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic
80												
81			32.8		35.1	37.9	35.0					
82												
83												
84							34.0	29.7	29.1	29.1	32.9	31.8
85	28.4	29.5	31.5	32.8	33.4	34.4	34.7	33.0	33.2	31.6	33.0	33.2
86	32.3	33.2	33.7	35.0	35.5	36.4		35.8	33.3	33.7	34.4	33.3
87	33.8	34.1		36.2		37.0	37.7	36.3		36.3	37.0	35.8
88	33.0	32.9	33.7		34.4	35.5	36.3	35.0	33.3	34.7	33.7	31.6
89	30.8	29.9	30.0	32.4	35.0	36.2	.	33.2	32.3	32.7	33.3	32.5
90	31.5	30.8	31.1	32.1	33.3	34.1	32.3	32.5	32.9		32.1	31.1
91												
92												
93												
94												
95												

MEDIAS MENSUALES DEL NIVEL DEL MAR.

LAT. 23° 12' N

(PIES)

LONG. 106° 25' W

Año	Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic
52												
53	7.003	6.988	6.856	6.832	7.032	7.449	7.654	7.600	7.712	7.334	7.082	6.979
54	6.903	6.960	6.566	6.848	6.899	7.360	7.672	7.378	7.504	7.201	6.933	6.828
55	6.670	6.604	6.833	6.743	6.971	7.011	7.451	7.505	7.397	7.054	6.722	6.640
56	6.931	6.651	6.653	6.756	7.195	7.818	7.613	7.632	7.521	7.240	7.019	
57		6.899	6.798	6.922	7.299	7.644	7.993	7.808		7.394	6.993	7.466
58	7.682	7.083	7.078	6.807	7.387	7.433	7.223	7.786	8.098	7.545	7.373	7.309
59	7.351	7.178	6.998	7.092	7.028	7.641	7.570	7.778	7.774	7.702	7.208	7.068
60	6.855	6.736	6.762	6.811	6.917	7.205	7.617	7.515	7.651	7.533	7.208	7.022
61	7.044	7.034	6.726	6.725	7.144	7.372			7.394	7.347	6.818	6.998
62	6.960	6.846	6.380	6.741	6.902	7.345	7.545	7.592	7.689	7.425	7.008	6.768
63	6.815	6.818	6.532	6.867	7.149	7.514	7.935	7.782	7.861	7.463	7.220	7.207
64	7.162	6.756	6.555	6.692	6.715	6.873	7.411	7.661	7.706	7.392	6.822	6.827
65	6.961	6.832	6.918	7.008	7.042	7.465	7.708	7.877	7.962	7.445	7.468	7.236
66	7.357	6.891	6.896	6.745	7.049	7.195	7.474	7.579	7.661	7.162	7.094	6.878
67	6.957	6.876	6.711	6.675	6.918	7.258	7.527	7.574	7.564	7.253	7.036	6.810
68	6.902	6.854	6.637	6.729	6.995	6.980	7.410	7.740	7.831	7.816	7.405	7.439
69	7.381	7.092	7.012	7.321	7.354	7.500	7.847	8.097	7.832	7.574	7.327	7.185
70	6.998	6.973	6.778	6.695	7.019	7.155	7.646	7.631	7.760	7.255	7.057	6.733
71	6.693	6.749	6.743	6.916	7.032	7.531	7.637	7.706	7.667	7.471	7.051	6.831
72	6.947	6.771	7.041	6.855	7.533	7.740	8.066	8.033	8.100	7.629	7.887	7.797
73	7.375	7.160	6.707	6.856	6.810	7.348	7.460	7.674	7.694	7.099	6.996	7.075
74	6.805	6.751	6.914	6.941	7.382	7.735	7.690	7.588	7.746	7.131	6.869	7.108
75												
76												
77												
78												
79												

SERVICIO MAREOGRAFICO  
MAZATLAN , SIN.

MEDIAS MENSUALES DEL NIVEL DEL MAR  
(PIES)

LAT. 23° 12' N

LONG. 106° 25' W

Año	Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic
80												
81												
82												
83												
84												
85												
86												
87												
88												
89							8.087	8.245	8.279	7.985	7.754	7.654
90	7.666	7.508	7.597	7.683	7.824	8.194	8.806	8.139	8.390			
91												
92												
93												
94												
95												

MEDIAS MENSUALES DE TEMPERATURA DEL AGUA DE MAR °C.

LAT. 23° 12' N

LONG. 106° 25' W

Año	Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic
52												
53	22.4	21.2	21.1	21.8	23.6	28.4	29.9	30.2	29.9	28.4		22.7
54	21.4	22.4	21.0	23.2	24.2	28.2	29.9	30.2	30.6	29.2	26.5	23.0
55	18.7	17.8	21.6	22.1	23.2	27.3	30.4	29.4	29.0	28.0	23.2	18.3
56	21.9	18.0	19.0	20.5	25.6	29.7	29.8	30.2	30.2	29.2	24.0	
57		21.4	19.7	20.3	23.8	27.7	29.1	29.8		28.2	23.8	
58	24.0	24.0	23.6	23.4	27.1	29.6	30.0	30.4				
59	24.1	22.5	22.8	24.9	25.9		30.2	30.6	30.2	29.8	27.2	23.4
60		19.6	20.9	22.2	23.8		29.4	29.5	30.2	29.7	26.4	22.5
61	22.3	23.3	21.6	23.8	26.5	28.5			30.8	28.8	22.0	22.8
62	21.7	23.6	17.5	19.8	23.4	26.2	29.8	30.3	30.1	29.3	27.2	
63	18.6	18.0	20.5	22.4					30.2	29.2	25.9	23.9
64	22.4	20.6	19.2	21.2	23.5	25.9	28.8	29.9	29.9	29.2	22.9	21.3
65	21.1	20.6	20.6	22.8	25.8	27.9	29.5	30.6		28.9	27.5	25.2
66	23.2	22.3	22.5	23.6	25.0	29.2	30.0	30.4	30.7	28.3	26.9	24.6
67		22.3	21.5	22.3	24.3	28.0	29.7	29.8	30.4	29.4	27.0	20.6
68	22.0	23.1	21.5	21.6	25.6	25.4	28.3	29.2	28.7	28.3	25.8	24.0
69	23.1	22.6	22.5	24.8	26.9	27.1	29.8	30.4	30.0	27.7	25.4	23.0
70	21.5	22.4	21.9	21.6	24.7	27.2	30.1	30.4	29.9	28.6	25.7	22.4
71	19.3	21.1	19.4	21.3	23.5	27.5	29.4	29.3	29.1	27.8	24.9	21.7
72	22.0	21.0	23.1	22.4	25.9	27.0	29.0	30.0	30.8	29.8	26.6	25.3
73	23.7	23.4	22.1	23.0	23.6	26.0	28.8	28.4	29.1	28.8	25.5	20.9
74	20.0	18.0	21.5	22.5	25.4	27.4	28.6	29.8	29.4	28.8	24.5	21.0
75	20.8	21.0	21.8	20.9	23.3	23.3	28.3	28.9	30.0			
76												
77												
78												
79												

SERVICIO MAREOGRAFICO  
MAZATLAN , SIN.

MEDIAS MENSUALES DE TEMPERATURA DEL AGUA DEL MAR °C.

LAT. 23° 12' N

LONG. 106° 25' W

Año	Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic
80												
81												
82												
83												
84												
85												
86												
87						29.7	30.6	30.9	31.2	30.3	27.0	
88	21.6				23.7			30.2	29.8			20.0
89			22.7								26.0	24.0
90	22.2	19.6		23.5	26.8	30.0	31.0	31.0	30.8	27.5	27.4	
91												
92												
93												
94												
95												



MEDIAS MENSUALES DE SALINIDAD DEL AGUA DEL MAR ‰.

LAT. 23° 12' N

LONG. 106° 25' W

Año	Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic
52												
53	34.9	35.0	35.0	35.1	35.5	35.6	34.7	34.6	32.8	34.5		35.3
54	35.1	35.3	35.3	35.5	35.1	35.3	34.6	33.2	34.4	33.6	35.1	35.3
55	35.0	35.0	35.3	35.3	35.1	35.5	34.5	34.4	28.6	33.4	35.3	35.3
56	35.5	35.6	35.8	35.9	35.8	35.9	35.0	34.9	34.7	35.3	34.2	
57		34.9	34.7	35.0	35.0	35.3	34.9	34.2		34.6	32.8	
58	35.0	35.4	35.5	35.8	36.0	35.9	35.1	32.7				
59	34.6	35.0	35.3	35.9	35.5		34.1	30.8	34.0	31.5	34.8	35.4
60		35.0	35.9	35.8	36.3		35.9	35.8	34.6	34.9	35.1	35.6
61	34.9	34.9	35.8	35.9	36.0	35.0			33.3	34.9	34.6	35.9
62	34.9	35.6	35.0	34.9	35.1	35.8	35.3	34.1	33.0	34.2	36.0	
63	33.4	32.9	33.2	33.7					33.3	33.7	34.7	34.6
64	34.5	35.0	35.3	35.3	35.5	35.6	35.0	34.3	33.6	33.6	34.1	34.6
65	34.7	34.6	34.7	34.9	35.0	35.5	34.7	33.4		32.4	34.2	34.5
66	34.2	34.7	34.7	34.9	34.9	35.1	34.9	34.5	33.4	34.6	34.5	35.3
67		34.9	35.1	35.6	36.2	36.3	35.5	33.8	31.0	33.0	34.1	34.2
68	34.5	34.7	34.1	35.1	35.5	35.5	35.5	34.4	30.3	34.5	35.0	34.7
69	35.1	36.0	36.6	36.0	36.6	36.3	35.9	33.6	32.9	34.2	36.4	35.8
70	35.9	37.5	37.0	37.1	37.5	38.5	38.1	36.7	32.8	39.6	41.5	41.5
71	41.5	35.5	37.1	37.2	37.2	37.0	37.0	35.3	29.8	35.8	36.8	37.5
72	37.0	37.3	37.3	37.2	37.5	37.3	36.8	35.6	34.2	34.6	31.9	33.2
73	33.3	34.7	34.6	35.3	35.4	35.4	35.6	35.6	32.5	34.9	34.7	34.6
74	34.6	34.5	35.4	34.7	35.4	35.3	34.2	34.2	32.7	33.3	34.6	34.1
75	34.2	34.5	34.6	35.0	35.1	34.2	34.0	32.5	33.0			
76												
77												
78												
79												

SERVICIO MAREOGRAFICO  
MAZATLAN, SIN.

MEDIAS MENSUALES DE SALINIDAD DEL AGUA DEL MAR ‰

LAT. 23° 12' N

LONG. 106° 25' W

Año	Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic
80												
81												
82												
83												
84												
85												
86												
87						35.6	34.7	34.5	34.4	34.2	33.0	
88	34.6				34.9			32.4	30.0			34.5
89			33.7								34.6	34.2
90	35.6	35.0		35.0	35.3	33.6	31.9	33.2	32.1	32.5	32.5	
91												
92												
93												
94												
95												

## MEDIAS MENSUALES DEL NIVEL DEL MAR.

(PIES)

LAT. 20° 37' N

LONG. 105° 15' W

Año	Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic
52												
53												
54												
55												
56												
57												
58												
59												
60												
61												
62												
63												
64												
65												
66												
67												
68												
69												
70												
71												
72												
73												
74												
75										7.216	6.970	6.937
76	6.956	6.840	6.870	6.906	7.229	7.952	7.985	7.814	7.910	7.590	7.701	7.575
77	7.347	7.172		6.795	7.052	7.331	7.605	7.707	7.733	7.732	7.500	7.353
78												
79												

SERVICIO MAREOGRAFICO  
PUERTO VALLARTA, JAL.

MEDIAS MENSUALES DEL NIVEL DEL MAR.  
(PIES)

LAT. 20° 37' N

LONG. 105° 14' W

Año	Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic
80												
81												
82												
83												
84												
85	7.238	6.886	6.856	6.753	7.266	7.279	7.625	7.584	7.578	7.442	7.051	7.076
86		7.045	6.882	6.968	7.200	7.394	7.738	7.473	7.846	7.731	7.290	
87		7.869	7.430	7.147	7.057	7.567	7.896	7.741	7.978	7.614	6.900	7.041
88	6.944	6.931	6.770	7.061				7.685	7.392		6.677	6.770
89	6.407	6.487	6.858	6.885	7.161	7.728	7.593	7.731	7.741		7.249	7.156
90	7.274	7.448	7.375	7.211	7.336	7.675	7.889			7.737		7.370
91	7.306	7.216	6.893	7.064								
92												
93												
94												
95												

SERVICIO MAREOGRAFICO  
PUERTO VALLARTA, JAL.

MEDIAS MENSUALES DE TEMPERATURA DEL AGUA DEL MAR °C.

LAT. 20° 37' N

LONG. 105° 14' W

Año	Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic
80												
81							30.1	30.8	26.3			
82												
83									30.5	30.7	28.8	24.4
84	25.9	24.7	24.8	25.5	26.7	29.9		30.7	30.3	28.8	26.3	25.8
85	23.0	22.4	23.3	23.8	25.4	29.7	30.4	31.6	31.4	30.5	27.5	23.3
86	24.2	25.0	23.1	26.0	26.6	27.6	29.7	31.0	31.0		29.2	28.0
87	24.6	24.4	25.0	25.0	26.3	29.2	30.9	31.2	31.1	30.1	29.0	25.8
88	24.5	23.7	23.7	23.8	24.8	27.7	28.4	28.8	29.0	28.8	25.7	23.0
89	22.3	23.8	24.7	26.2	27.6	29.5	28.6	29.6	30.0	29.8	27.3	24.5
90	25.4	24.3	25.0	26.9	28.3	30.8	30.7			30.9		27.8
91	25.4	25.6	25.2									
92												
93												
94												
95												

SERVICIO MAREOGRAFICO  
PUERTO VALLARTA, JAL.

MEDIAS MENSUALES DE LA SALINIDAD DEL AGUA DEL MAR. ‰.

LAT. 20° 37' N

LONG. 105° 14' W

Año	Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic
80												
81							21.7	21.4	21.0			
82												
83									27.6	33.7	35.1	34.2
84	36.0	35.3	36.0	36.2	36.8	36.8		31.1	30.8	34.0	36.2	36.3
85	36.7	37.1	37.0	36.8	37.6	35.5	30.7	27.7	29.9	32.7	35.9	36.0
86	36.7	36.4	36.2	37.2	36.6	34.7	34.2	35.1	35.4		34.5	34.6
87	36.6	33.8	36.4	36.4	37.5	36.2	34.6	32.3	32.3	32.5	30.4	34.7
88	35.3	35.6	36.4	36.2	36.2	36.8	37.1	32.5	32.3	31.4	32.4	34.9
89	36.0	36.8	36.8	36.6	37.2	38.1	33.7	35.0	35.8	36.4	34.7	35.4
90	36.3	36.7	36.7	37.2	37.1	35.1	31.6			32.8		35.9
91	35.5	35.6	36.4									
92												
93												
94												
95												

SERVICIO MAREOGRAFICO NACIONAL

MANZANILLO, COL.

MEDIAS MENSUALES DEL NIVEL DEL MAR

(PIES)

LAT. 19° 03' N

LONG. 114° 20' W

Año	Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic
52												
53												
54	6.752	6.729	6.285	6.566	6.491	6.942	7.179	6.913	7.032	6.872	6.695	6.730
55	6.564	6.504	6.008	6.319	6.646	6.492	6.987	7.140	7.211	7.102	6.670	6.849
56	6.672	6.474	6.435	5.550	6.883	7.430	7.229	7.155		6.928	6.858	6.568
57	6.667	6.596	6.481	6.696	7.086	7.333	7.641	7.444	7.443	7.296	7.323	7.297
58	7.414	6.937	6.926	6.544	7.011	7.027	7.308	7.298	7.479	7.131	7.109	7.078
59	7.028	6.961	6.827	6.811	6.840	7.239	7.085	7.279	7.287	7.273		
60									7.099	7.193	6.668	6.855
61	6.853	6.780	6.443	6.415	6.742	6.830	7.281	7.097	7.153	6.965	6.625	6.826
62	6.698	6.501	6.174	6.427	6.653	7.050	7.124	7.281	7.251	7.097	6.813	6.601
63	6.692	6.558	6.423	6.641	6.835	7.145	7.417	7.428	7.384	7.087	7.051	7.011
64	6.937	6.622	6.392	6.420	6.359	6.582	7.066	7.104	7.179	6.926	6.585	6.551
65	6.749	6.644	6.763	6.732	6.736	7.204	7.341	7.453	7.444	7.143	7.199	6.978
66	7.233	6.703	6.739	6.352	6.737	6.934	7.118	7.208	7.277	6.977	7.909	6.716
67	6.900	6.638	6.493	6.347	6.604	6.971	7.174	7.158	7.052	6.850	6.890	6.626
68	6.784	6.592	6.194	6.406	6.684	6.612	7.099	7.288	7.309	7.368	6.953	7.142
69	7.053	6.834	6.764	6.964	6.831	7.090	7.308	7.388	7.351	7.101	7.041	6.954
70	6.876	6.844	6.470	6.356	6.506	6.812	7.042	7.002	7.084	6.919	6.688	6.525
71	6.467	6.571	6.437	6.485	6.595	7.080	7.138	7.194	7.162	7.151	6.856	6.826
72	6.874	6.648	6.756	6.563	7.154	7.332	7.594	7.546	7.642	7.431	7.761	7.772
73	7.277	7.071	6.593	6.798	6.640	7.142	7.218	7.153	7.055	6.847	6.736	6.800
74	6.673	6.696	6.761	6.653	7.092	7.325	7.361	7.376	7.428	6.988	6.762	6.891
75	6.793	6.767	6.730	6.604	6.714	7.017	7.179	7.214	7.186	6.926	6.810	6.681
76	6.887	6.623	6.757	6.641	6.995	7.686	7.666	7.453	7.543	7.250	7.459	7.440
77	7.171	6.725	6.745	6.648	6.820	7.094	7.397	7.534	7.428	7.425	7.257	7.208
78	7.130	7.043	6.670	6.634	6.527	6.951	7.233	7.242	7.281	7.174	6.787	7.040
79		6.727	6.748	6.541	6.646	6.786	7.220	7.134	7.118	7.162	6.841	7.137

SERVICIO MAREOGRAFICO NACIONAL

MANZANILLO, COL.

MEDIAS MENSUALES DEL NIVEL DEL MAR

(PIES)

LAT. 19° 03' N

LONG. 114° 20' W

Año	Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic
80	7.098	7.199	6.748	6.780	7.002	7.161	7.415	7.370	7.519	6.961	7.014	6.914
81	6.962	6.683	6.522	6.804	6.812	6.960	7.292	7.290	7.094	7.446	6.971	7.005
82	6.797	7.100	6.902	7.064	7.165	7.264	7.617	7.473	7.851	7.852	7.922	7.975
83												
84												
85												
86												
87												
88	6.584	6.306	6.091	6.170								
89												
90												
91												
92												
93												
94												
95												



MEDIAS MENSUALES DE TEMPERATURA DEL AGUA DE MAR °C.

LAT. 19° 03' N

LONG. 114° 20' W

Año	Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic
52												
53	25.5			25.4	24.9	27.0	28.6	30.1	30.5		28.7	28.1
54	26.8	27.5	24.2	25.0	25.1	27.7	29.6	30.1	29.9	28.0	27.1	
55		24.5	21.4	21.0		26.8	27.4	29.7	28.9	27.5	25.7	24.4
56	25.8	25.4	24.8		27.8	29.5	29.5	29.9	29.8	29.7	29.8	29.4
57	30.0	28.6	25.1	24.0	28.3	28.7	29.1	30.0	29.0	29.3	29.0	29.0
58	27.6	26.5	26.5	26.2	26.9	28.3	29.5	29.7	29.4	29.2	27.8	27.8
59	26.5	26.7	27.0	27.0	28.2	29.5	30.0	30.0	30.2			
60									29.0	29.5	28.5	26.5
61	26.5	25.5	23.5	23.2	25.7	27.4	29.4	29.9	29.4	30.1	26.9	25.6
62	26.0	24.9	20.9	22.6	25.8	27.4	29.3	29.9	29.5	29.2	28.0	25.7
63	26.1		23.6	25.3	26.8	28.6	26.2	29.9	29.7	29.2	27.7	26.9
64	26.4	25.8	23.8	25.4	24.3	25.5	28.3	29.4	29.6	29.2	27.2	25.2
65	24.7	23.5	24.1	24.9	26.6	27.5	29.3	29.4	29.6	29.1	29.2	27.0
66	26.5	25.6	25.4	22.5	24.9	27.0	29.3	29.4	29.7	28.6	28.1	25.4
67	25.2	24.8	25.2	23.4	24.6	26.3	29.1	29.6	29.3	27.5	27.8	25.5
68	25.6	25.1	21.8	22.7	26.0	24.7	28.7	29.8	29.5	29.2	27.9	26.7
69	26.1	25.7	25.4	25.6	25.4	27.5	29.3	29.1	29.1	27.6	28.8	25.3
70	25.2	25.5	24.0	22.4	25.1	26.8	28.9	29.2	28.3	28.7	26.4	24.9
71	23.4	23.8	22.3	24.0	23.8	27.7	29.4	29.4	28.2	28.2	27.4	26.0
72	26.0	24.5	25.4	25.4	28.3	28.8	30.1	30.3	30.0	29.1	29.3	27.8
73	26.9	27.0	24.8	24.6	25.1	27.0	29.1	29.3	29.1	27.9	26.4	25.8
74	24.4	24.0	24.3	23.9	25.4	28.5	29.2	28.6	29.1	28.4	27.4	27.0
75	25.4	25.9	25.5	24.8	26.0	27.8	28.6	29.0	28.9	28.7	27.8	27.1
76	25.9	25.8	24.5	23.7	26.3	29.1	29.2	29.5	29.4	28.7	28.0	27.1
77	26.8	26.4	26.2	25.6	26.5	27.5	29.4	29.5	29.8	29.5	28.5	27.6
78	26.8	26.4	25.8	25.3	24.8	28.7	29.8	30.4	29.7	30.3	28.3	26.8
79		26.7	24.6	25.0	25.5	27.4	29.0	29.8	28.7	29.5	27.2	27.2

SERVICIO MAREOGRAFICO  
MANZANILLO, COL.

MEDIAS MENSUALES DE TEMPERATURA DEL AGUA DEL MAR °C.

LAT. 19° 03' N

LONG. 114° 20' W

Año	Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic
80	26.3	26.8	25.1	24.4	24.9	27.5	29.5	28.7	29.5	28.7		26.6
81	25.5	25.4	22.9	23.3	24.4	25.5	28.8	29.1	29.1	29.4	27.4	26.4
82	25.2	26.1	25.3	26.8	26.5	28.2	29.2	29.6	29.6	29.2	28.4	27.0
83												
84												
85												
86				24.5	25.0	25.0	29.3				28.5	27.2
87	25.6	25.0	24.3	25.4	25.1	29.1	29.6	29.2	29.9	29.6	28.3	26.8
88	25.9	25.0	23.9	24.2								
89	24.6	25.0	24.2	23.5	24.7	27.0	29.1	29.4	29.7	29.9	28.1	26.2
90	26.0	25.4	26.4	27.3	28.0	29.7	30.0	30.0	30.0	29.6	28.8	28.2
91												
92												
93												
94												
95												

MEDIAS MENSUALES DE SALINIDAD DEL AGUA DEL MAR ‰.

LAT. 19° 03' N

LONG. 114° 20' W

Año	Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic
52												
53	34.6			34.9	34.7	35.3	35.8	35.9	34.5		35.9	35.8
54	36.3	35.3	35.0	35.5	35.5	35.0	35.5	35.1	34.5	34.7	34.4	
55		35.3	34.6	34.6		34.7	34.7	33.3	32.3	29.2	31.2	33.0
56	33.8	35.5	35.5		35.7	36.2	36.0	35.1	35.0	35.0	35.0	34.7
57	35.0	35.5	35.1	35.3	36.5	35.4	35.4	34.6	34.3	34.5	34.1	34.1
58	33.8	34.2	34.2	35.3	34.7	34.9	34.5	34.1	33.4	33.2	32.0	33.8
59	34.6	35.0	34.9	35.0	35.4	34.7	34.0	34.0	34.0			
60									34.6	34.5	34.5	34.6
61	34.5	34.7	35.1	35.3	35.1	34.9	34.6	34.9	34.1	34.2	34.5	34.9
62	34.7	35.0	35.3	35.4	35.4	35.3	34.4	34.5	32.0	31.6	33.2	34.4
63	35.1		35.4	35.4	35.4	35.1	34.4	34.5	33.4	32.1	34.0	34.7
64	35.8	35.0	35.1	35.5	35.4	35.4	34.7	34.7	34.4	34.1	35.0	35.1
65	35.0	35.3	35.1	35.1	35.0	35.1	34.7	34.5	34.1	34.7	34.7	34.7
66	34.7	35.0	35.1	35.3	35.1	35.0	34.6	34.4	34.4	33.7	34.4	34.7
67	32.7	33.4	34.7	35.3	35.3	35.3	35.0	34.4	33.3	30.4	33.4	34.7
68	35.0	35.3	35.1	35.6	35.0	35.0	34.7	34.7	32.3	32.5	33.7	34.2
69	34.2	34.2	35.1	35.3	35.1	35.1	34.9	33.2	31.8	25.6	28.5	30.0
70	33.0	34.1	34.5	35.0	34.7	34.2	34.0	32.5	30.8	29.1	31.1	33.2
71	34.4	34.4	34.6	34.6	34.6	34.2	34.1	34.1	31.9	28.6	29.7	32.0
72	33.0	34.2	34.5	34.6	34.6	34.0	34.4	33.8	33.4	33.7	33.4	32.8
73	32.8	33.8	34.4	34.5	34.4	34.6	34.4	34.1	32.8	33.3	34.2	34.0
74	34.4	34.2	34.5	34.9	34.7	33.4	34.0	33.8	32.0	32.3	34.5	34.7
75	34.7	34.5	35.3	35.1	35.0	34.6	34.1	33.7	32.7	32.7	34.5	34.9
76	35.5	34.9	35.1	35.1	35.0	34.6	33.2	33.8	33.3	35.0	33.4	32.5
77	34.0	34.4	34.2	35.0	35.3	35.4	34.6	34.4	34.5	34.5	34.6	35.3
78	35.3	35.4	35.4	35.8	35.8	35.5	34.5	35.0	34.0	33.7	34.7	35.0
79		35.0	35.0	34.9	35.1	35.4	34.6	34.0	33.2	34.7	34.4	34.4

SERVICIO MAREOGRAFICO  
MANZANILLO, COL.

MEDIAS MENSUALES DE SALINIDAD DEL AGUA DEL MAR ‰.

LAT. 19° 03' N

LONG. 114° 20' W

Año	Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic
80	34.2	34.2	34.7	34.6	34.5	34.6	35.0	34.3	34.1	33.8	34.1	34.6
81	34.2	33.8	34.5	34.2	34.2	34.4	35.6	35.3	32.1	34.7	35.0	35.4
82	35.4	34.7	34.7	35.1	34.9	35.5	34.7	35.1	34.6	35.0	34.2	31.1
83												
84												
85												
86					33.4	33.6	33.2				33.7	34.1
87	34.2	34.2	34.0	34.6	34.4	34.9	34.0	33.8	34.5	34.0	34.5	35.0
88	34.9	34.9	35.3	35.5								
89							31.9	31.9	31.8	32.1	31.2	31.2
90	31.4	31.2	32.1	32.7	33.4	34.7	35.3	35.0	32.9	34.7	35.1	35.1
91												
92												
93												
94												
95												

SERVICIO MAREOGRAFICO NACIONAL

ACAPULCO, GRO.

MEDIAS MENSUALES DEL NIVEL DEL MAR  
(PIES)

LAT. 16° 50' N

LONG. 99° 55' W

Año	Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic
52	4.562	4.220	3.997	4.154	4.208	4.341	4.422	4.678	4.578	4.710	4.369	4.537
53	4.368	4.470	4.347	4.352	4.476	4.748	4.825	4.761	4.665	4.560	4.519	4.449
54	4.339	4.325	3.806	4.252	4.418	4.653	4.908	4.673	4.798	4.484	4.318	4.311
55	4.370	4.271	4.374	4.218	4.518	4.409	4.726	4.710	4.315	4.324	4.183	4.330
56	4.466	4.265	4.379	4.417	4.803	5.025	4.850	4.890	4.798	4.656	4.604	4.410
57	4.489	4.468	4.354	4.718	4.976	5.113	5.454	5.182	5.139	4.943	4.955	4.925
58	5.064	4.641	4.630	4.290	4.701	4.724	4.935	4.922	4.987	4.656	4.789	4.716
59	4.687	4.631	4.525	4.599	4.463	4.783	4.722	4.898	4.895	4.826	4.567	4.551
60	4.466	4.328	4.162	4.310	4.286	4.647	4.846	4.799	4.742	4.933	4.285	4.550
61	4.556	4.422	4.249	4.156	4.583	4.593	4.900	4.760	4.780	4.617	4.318	4.601
62	4.428	4.277	3.996	4.276	3.981	4.046	4.013	4.122	4.011	3.850	3.679	3.557
63	3.606	3.452	3.461	3.585	3.873	4.087	4.283	4.302	4.188	4.045	3.912	4.058
64	3.858	3.618	3.380	3.415	3.398	3.536	4.039	3.990	4.110	3.934	3.433	3.577
65	3.683	3.478	3.812	3.732	3.620	4.117	4.199	4.235	4.344	4.080	4.050	3.946
66	4.141	3.620	3.700	3.379	3.807	3.851	4.023	4.033	4.086	3.835	3.828	3.701
67	3.856	3.514	3.383	3.390	3.656	3.892	4.185	4.027	4.020	3.906	3.803	3.703
68	3.808	3.578	3.394	3.543	3.804	3.725	4.117	4.342	4.327	4.394	4.067	4.134
69	4.062	3.883	3.911	4.090	4.028	4.178	4.265	4.214	4.099	3.720	3.949	3.738
70	3.910	3.889	3.519	3.507	3.581	3.932	4.076	4.042	4.171	5.994	3.786	3.586
71	3.617	3.574	3.587	3.666	3.831	4.236	4.219	4.258	4.162	4.128	3.871	3.919
72	3.942	3.824	3.884	3.844	4.490	4.517	6.603	4.326	4.417	4.213	4.502	4.562
73	4.012	3.811	3.338	3.500	3.452	3.980	3.850	3.823	3.669	3.531	3.595	3.521
74	3.386	3.398	3.471	3.407	3.882	4.199	4.014	4.116	4.094		3.536	3.655
75	3.654	3.608	3.735	3.571	3.609	3.866	3.931	3.965	3.899	3.762	3.617	3.520
76	3.666	3.256	3.493	3.609	4.008	4.563	4.517	4.233	4.323	4.091	4.303	4.219
77	3.979	3.848	3.616	3.607	3.743	4.049	4.262	4.164	4.157	4.163	4.109	4.108
78	3.980	4.014	3.515	3.609	3.560	3.919	4.104	4.088	4.069	3.972	3.686	3.861
79	3.925	3.642	3.773	3.571	3.802	3.832	4.109	4.183	4.065	4.138	3.874	4.084

SERVICIO MAREOGRAFICO NACIONAL

ACAPULCO, GRO.

MEDIAS MENSUALES DEL NIVEL DEL MAR

LAT. 16° 50' N

(PIES)

LONG. 99° 55' W

Año	Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic
80	3.870	3.897	3.648	3.686	4.184	3.999	4.252	4.111	4.266	3.814	3.868	3.804
81	3.803	3.550	3.436	3.746	3.723	4.033	4.048	4.247	3.971	4.274	3.807	3.844
82	3.703	3.942	3.792	3.848	4.049	4.177	4.520	4.437	4.589	4.870	4.716	4.903
83	4.877	4.132	4.011	4.410	4.749	4.961	4.725	4.497	4.650	4.324	4.059	3.974
84	4.071	3.872	3.968	3.703	4.043	4.272	4.361	4.383	4.284	4.185	3.902	3.936
85	3.588	3.589	3.536	3.409	3.539	4.056	4.090	4.168	4.313	4.189	3.816	3.852
86	4.063	3.540	3.356	3.598	3.812	3.993	4.397	4.224	4.331	4.403	4.411	4.129
87	4.177	4.342	3.877	4.059	4.135	4.533	4.680	4.513	4.611	4.326	4.121	4.163
88	4.036	3.849	3.796	3.766	3.588	4.031	4.016	4.188	3.932			
89	3.866						4.922	4.264		4.185		4.036
90		3.820	4.019	3.838	4.172	4.314	4.495	4.408	4.435	4.109	3.980	3.841
91												
92												
93												
94												
95												

MEDIAS MENSUALES DE TEMPERATURA DEL AGUA DEL MAR °C

LAT. 16° 50' N

LONG. 99° 55' W

Año	Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic
52	29.0	27.6	26.3	28.8	27.0	27.0	29.1	30.0	29.6	24.4	27.5	27.1
53	26.8	26.2	26.5	25.7	27.8	29.5	30.0	30.3	30.2	29.2	28.9	28.2
54	27.6	27.2	24.6	25.4	26.7		29.5	29.7	29.4	28.3	27.1	26.6
55	25.5	25.3	25.8	25.1	26.8	27.3	26.4	29.3	27.3	25.6	28.8	26.3
56	26.3	25.8	25.4	26.1	28.2	29.2	29.7	30.0	29.5	29.2	28.6	27.9
57	27.4	27.7	24.6	25.6	29.4	29.6	30.2	30.4	29.8	29.9	29.6	29.0
58	27.6	27.4	28.1	26.5	28.6	29.0	30.3	30.6	30.4	29.8	29.1	28.7
59	28.0	28.0	28.7	28.9	28.7	30.1	30.0	30.1	30.3	29.9	28.8	28.0
60	27.2	26.6	25.6	25.3	25.3	28.0	29.6	29.8	29.3	29.4	28.2	28.2
61	27.8	26.9	25.7	24.8	27.4	29.1	29.5	29.8	29.6	29.7	29.7	27.1
62	26.8	26.5	24.3	25.4	26.7	28.3	29.1	30.0	29.8	29.1	28.5	27.2
63	27.5	25.9	25.9	25.4	27.8	29.8	29.4	29.9	29.8	29.5	28.6	28.2
64	27.7	26.7	26.0	26.0	24.7	27.3	28.8	29.5	29.8	29.4	27.2	26.4
65	26.7	25.2	26.0	26.8	27.3	28.8	28.4	29.5	29.4	29.3	29.0	27.3
66	27.1	27.3	27.8	24.9	27.9	28.4	29.3	29.7	26.6	28.6	28.4	27.3
67	26.8	25.5	25.7	24.6	26.0	28.4	29.5	29.8	29.5	29.0	28.6	26.2
68	26.9	25.6	24.6	24.1	27.2	26.4	29.0	30.0	30.0	29.7	29.3	28.9
69	27.9	27.7	27.7	28.5	28.4	29.7	30.0	29.0	29.0	28.3	28.4	27.4
70	27.6	28.0	26.0	25.2	25.9	29.0	29.4	29.3	28.9	29.5	28.5	27.1
71	25.9	25.9	24.8	25.6	26.2	29.2	30.0	29.5	29.3	29.7	28.9	28.2
72	27.2	26.5	26.2	26.6	29.2	29.2	30.3	30.9	30.8	30.3	30.1	29.6
73	29.0	28.6	26.5	27.4	27.2	30.0	29.8	30.0	29.1	28.1		27.5
74	26.6	26.8	27.8	26.1	28.2	29.6	30.3	30.5	29.7	29.7	28.7	28.4
75	27.1	27.8	27.4	28.0	28.0	29.9	29.4	29.5	29.1	29.2	28.7	27.0
76	28.3	27.9	26.9	27.2	26.8	29.1	30.2	30.2	30.0	29.8	29.3	28.4
77	28.3	27.9	26.9	27.2	26.8	29.1	30.2	30.2	30.0	29.8	29.3	28.4
78	27.8	28.0	26.7	27.1	25.8	29.1	29.8	30.1	29.3	28.9	27.9	28.4
79	28.0	27.2	27.0	26.5	27.7	28.3	29.8	30.2	28.2	28.8	28.7	28.5

SERVICIO MAREOGRAFICO  
ACAPULCO, GRO.

MEDIAS MENSUALES DE TEMPERATURA DEL AGUA DEL MAR °C

LAT. 16° 50' N

LONG. 99° 55' W

Año	Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic
80	27.7	27.7	26.4	27.8	28.3	29.9	30.6	29.9	29.8	30.2	28.5	28.4
81	27.4	26.9	24.7	25.7	25.4	27.6	29.4	29.3	29.3	29.8	28.9	27.6
82	26.7	27.9	27.2	28.0	29.0	28.7	30.0	30.2	30.2	29.6	29.5	28.7
83	27.9	27.3	26.8	27.6	28.2	30.6	30.9	30.6	29.7	29.8	29.3	28.1
84	28.1	27.9	28.1	26.6	28.2	30.1	29.5	26.9	28.4	29.0	28.3	27.4
85	26.9	26.2	25.3	23.3	24.8	28.6	29.5	29.8	29.8	29.8	28.8	28.5
86	28.2	26.6	24.0	28.4	28.0	27.5	30.1	30.2	29.8	29.7	29.6	29.1
87	28.2	27.8	27.6	27.6	28.0	30.4	30.4	30.0	30.4	30.6	29.7	29.1
88	28.4	27.0	26.6	24.8	22.1	26.0	27.3	27.1	27.9		29.4	
89	27.0						29.7	28.9	29.5			27.8
90		27.7	28.6	29.5	30.1	30.5	30.3	30.6	30.2	30.6	31.0	31.0
91												
92												
93												
94												
95												



MEDIAS MENSUALES DE SALINIDAD DEL AGUA DEL MAR ‰ .

LAT. 16° 50' N

LONG. 99° 55' W

Año	Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic
52	34.2	34.0	34.5	34.5	34.4	33.6	33.3	32.9	32.5	32.1	33.3	33.4
53	33.7	33.8	34.5	34.5	34.4	33.6	33.3	32.9	32.5	32.1	33.3	33.4
54	34.5	34.4	34.6	34.6	34.9		32.8	33.4	32.5	32.0	33.8	34.1
55		34.0				34.5	31.1	32.9	31.0	32.0	33.4	34.0
56	34.0	34.4	34.5	34.5	34.5	33.0	33.2	33.4	32.5	33.2	33.8	34.1
57	34.4	34.2	34.5	34.6	34.6	34.1	33.7	33.0	32.7	33.2	33.6	33.8
58	33.6	33.8	34.2	34.4	34.5	34.1	33.3	33.0	32.1	32.1	32.1	33.4
59	33.7	34.2	34.1	34.2	34.5	33.6	33.7	33.3	33.0	32.5	33.4	33.4
60	33.8	34.1	34.2	34.5	34.5	34.6	33.7	33.2	32.0	32.1	33.2	33.6
61	34.0	34.1	34.2	34.4	34.5	34.0	33.4	33.7	31.8	33.6	32.5	33.6
62	33.8	34.0	34.2	34.6	34.6	33.7	33.2	33.6	32.5	32.3	33.4	33.8
63	33.8	34.0	34.2	34.6	34.6	33.7	33.2	33.6	32.5	32.3	33.4	33.8
64	34.1	34.2	34.4	34.2	34.4	34.2	33.1	33.3	32.5	32.9	33.7	34.1
65	34.4	34.5	34.5	34.5	34.5	34.1	33.7	33.6	33.8	32.9	33.4	33.8
66	33.8	34.2	34.4	34.5	34.6	34.0	34.0	33.3	32.4	32.5	33.4	34.0
67	34.1	34.2	34.4	34.5	34.6	34.5	34.6	33.7	32.9	32.3	33.8	34.0
68	33.6	34.0	34.0	34.1	34.1	33.8	33.7	33.6	33.0	32.1	33.4	33.4
69	33.6	33.7	33.8	34.0	34.1	34.2	33.3	31.2	30.2	32.3	33.2	33.3
70	33.6	33.8	34.2	34.2	34.4	34.1	33.7	32.0	30.4	31.8	33.0	34.5
71	35.5	35.5	35.4	36.2	36.0	35.3	35.4	34.9	33.0	34.5	35.0	35.3
72	35.0	35.5	35.5	35.8	35.8	35.4	34.9	35.3	35.3	35.5	35.3	35.3
73	35.4	35.4	35.6	35.9	36.2	35.1	35.1	34.5	32.4	34.0		35.1
74	35.5	35.9	35.8	36.3	36.2	34.5	34.5	34.7	32.3	34.5	35.6	35.4
75	35.6	35.9	36.0	36.0	32.6	35.3	35.1	35.0	32.7	35.5	36.0	36.2
76	36.3	36.2	36.4	36.2	36.2	35.3	35.4	35.4	35.6	34.4	35.1	35.3
77	35.5	35.5	35.6	35.9	36.8	36.4	36.8	36.0	35.8	35.6	35.8	36.2
78	36.0	36.4	36.8	36.7	37.0	36.4	36.0	35.5	34.7	34.9	35.8	36.0
79	35.6	36.2	37.1	36.8	36.6	35.9	35.3	35.4	32.8	34.2	34.7	35.5

SERVICIO MAREOGRAFICO  
ACAPULCO, GRO.

MEDIAS MENSUALES DE SALINIDAD DEL AGUA DEL MAR ‰ .

LAT. 16° 50' N

LONG. 99° 55' W

Año	Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic
80	33.8	35.6	35.4	35.4	35.8	35.7	35.3	34.0	34.1	33.2	34.9	34.5
81	35.3	35.3	35.0	34.7	34.2	34.1	33.6	32.3	32.4	32.3	33.7	34.5
82	35.3	34.7	35.6	34.6	34.6	34.0	34.2	34.5	34.9	34.4	34.9	34.6
83	34.4	34.5	34.3	34.0	34.2	34.0	33.3	33.6	32.5	33.2	33.8	34.2
84	33.7	34.4	34.7	34.5	34.5	34.0	34.0	34.7	28.2	34.1	34.7	34.9
85	35.1	35.3	35.9	36.0	35.9	35.3	34.5	34.5	34.9	34.5	35.5	35.5
86	36.3	36.2	36.7	37.5	36.8	36.6	35.8	35.6	32.4	32.9	33.3	34.0
87	34.2	34.1	33.8	34.2	34.6	33.8	33.6	32.7	33.7	33.8	33.7	33.7
88	33.5	33.5	32.6	32.7	32.0	34.0	33.1	30.6	30.6		32.4	
89	33.1						34.0	33.4		33.4		34.6
90		34.5	33.3	32.5	33.0	32.1	31.4	32.8	31.9	32.3	32.5	32.5
91												
92												
93												
94												
95												

SERVICIO MAREOGRAFICO NACIONAL

PUERTO ANGEL, OAX.

MEDIAS MENSUALES DEL NIVEL DEL MAR

(PIES)

LAT. 15° 39' N

LONG. 96° 30' .6W

Año	Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic
52												
53												
54												
55												
56												
57												
58												
59												
60												
61												
62												
63												
64												
65												
66												
67	4.727	4.558	4.386	4.465	4.934	5.018	5.198	5.044	4.972		4.685	4.567
68								5.106	5.299	5.282	4.866	4.967
69	5.014	4.790	4.739	5.067	5.103	5.147	5.225	5.255	5.094	4.853	5.004	4.768
70	4.824	4.584	4.450	4.504	4.560	4.822	4.757	4.665	4.817	4.737	4.671	4.492
71	4.569	4.468	4.508	4.445	4.318	4.461	4.959	4.938	4.791	4.788	4.684	4.788
72	4.744	4.672	4.803	4.894	5.365	5.425	5.596					
73									4.627	4.728	4.553	4.880
74	4.621	4.309	4.194	4.569	5.206	5.350	4.759	5.034	4.557	4.624	4.499	4.461
75	4.207	4.476	4.547	4.771	4.795	4.556	4.956	4.968		4.226		4.506
76	4.595	4.454	4.679	4.590	4.843	5.149	5.571	5.313	5.408	5.030	5.373	5.068
77	5.055	4.735	4.730	4.775	4.958							5.160
78	5.020	4.956	4.746		4.840	4.893	5.238	5.305	5.111	5.094	4.846	5.186
79												

SERVICIO MAREOGRAFICO NACIONAL

PUERTO, ANGEL, OAX.

MEDIAS MENSUALES DEL NIVEL DEL MAR

(PIES)

LAT. 15° 39' N

LONG. 96° 30' W

Año	Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic
80	4.730	4.855	4.726	4.617	4.951	5.250	5.180	5.045	5.177	4.873	4.845	4.738
81	4.649	4.481	4.426	4.686	4.842	5.043	4.783	5.032	4.816	5.012	4.656	4.612
82	5.016	4.864	4.669	4.826	4.872	5.116	5.180	5.210	5.409	5.570		
83												
84	4.861	4.999	4.638			5.536	5.782					
85			4.778	4.801	4.771	5.123	5.285	5.199	5.043	4.795	4.593	4.559
86			4.317	4.842	5.067	5.012	5.206	5.173	5.009	4.788		
87												
88												
89												
90												
91												
92												
93												
94												
95												

MEDIAS MENSUALES DE TEMPERATURA DEL AGUA DE MAR °C.

LAT. 15° 39' N

LONG. 96° 30' W

Año	Ene	Feb	Mar	Abr	May	Jun	Júl	Ago	Sep	Oct	Nov	Dic
52												
53												
54												
55												
56												
57												
58												
59												
60												
61												
62	26.2	26.7	27.0	25.7					29.3	29.0	27.5	26.2
63					28.9	30.3	29.4		29.4	30.0		
64				26.4	26.6	28.9		29.5	29.3	28.9	27.6	26.6
65	26.0	26.3	24.9	28.2		29.7	29.9	29.5	29.9	29.0	27.1	
66	27.4	27.7	27.9		29.3		30.0	29.1	30.0	28.7	26.5	27.4
67	24.8	26.1	25.6	29.0	29.2	28.2	29.9	28.7				
68									29.2	29.1	27.5	27.5
69	27.7	27.6	27.5	29.1	29.5	30.0	30.2	30.4	29.2	29.0	27.6	27.2
70	27.7	28.2	27.0	26.4	27.8	29.6	29.5	30.0	29.5	29.1	27.2	27.5
71	27.1	27.0	26.2	26.1	27.8	30.2	30.1	29.8	29.3	29.0	29.0	27.4
72	26.5	27.0	27.4	28.0	30.6	29.0	30.0	30.0	29.3	29.5	28.3	26.2
73										28.7	27.2	25.6
74	26.8	26.1	25.5	25.4	27.7	28.9	29.0	28.9	28.4	27.2	27.5	27.4
75		25.7	25.9	27.4	28.1	27.8	28.9	28.9	28.5	27.2	26.8	26.3
76	25.2	26.1	25.0	26.3	28.5	29.0	29.2	29.4	29.2		28.0	27.3
77	27.2	25.8	25.5	27.2	27.8	29.4			29.6	28.1	28.0	26.7
78	25.8	25.9	26.4	26.9	27.8	29.0	28.6	29.6	29.1	27.9	26.5	26.9
79												

SERVICIO MAREOGRAFICO  
PUERTO ANGEL, OAX.

MEDIAS MENSUALES DE TEMPERATURA DEL AGUA DEL MAR °C.

LAT. 15° 39' N

LONG. 96° 30' W

Año	Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic
80	26.9	26.6	26.3	27.8	27.4	29.6		29.4	28.7	28.9	28.0	28.6
81	26.4	26.8	26.3	26.4	28.0	28.5	28.7	28.9	28.8	29.7	27.8	25.7
82	26.4	26.9	27.3	27.0	28.8	29.1	29.2	29.0	29.2	28.3	27.3	25.9
83	27.0	27.1	26.8	28.0	29.3	29.5	30.3	30.4	28.0	29.9	29.4	28.7
84	28.0	28.8	28.0	26.7	29.6	28.5	28.3	28.1	28.6	29.5	28.5	28.6
85												
86												
87												
88												
89												
90												
91												
92												
93												
94												
95												

MEDIAS MENSUALES DE SALINIDAD DEL AGUA DE MAR ‰

LAT. 15° 39' N

LONG. 96° 30' W

Año	Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic
52												
53												
54												
55												
56												
57												
58												
59												
60												
61												
62	34.2	34.2	34.5	35.0					33.2	33.2	33.2	33.3
63					34.7	34.7	32.1		32.1	33.3		
64				34.6	34.7	34.2		33.6	32.5	32.5	33.6	33.6
65	34.2	35.0	34.4	34.6		34.2	34.7	34.4	34.4	34.0	34.2	
66	34.5	35.0	35.0		34.5		33.8	32.8	34.4	34.5	34.5	35.4
67	34.5	35.3	35.0	35.3	34.7	34.4	33.3	34.0				
68									33.3	33.3	34.2	34.0
69	34.2	34.5	35.0	35.0	34.9	34.7	34.6	33.6	31.8	32.8	33.4	34.1
70	33.7	33.6	34.7	34.0	34.5	34.4	34.0	35.0	34.0	34.6	34.9	35.0
71	35.9	35.8	36.0	35.9	36.0	35.8	35.5	35.3	34.9	34.7	35.0	34.7
72	35.3	35.4	35.6	35.6	35.4	35.3	35.5	35.5	35.0	35.3		
73										34.6	35.3	35.3
74	35.5	35.9	36.2	36.4	36.2	34.2	34.4					
75												
76												
77												
78												
79												

SERVICIO MAREOGRAFICO  
PUERTO ANGEL, OAX.

MEDIASUALES DE SALINIDAD DEL AGUA DE MAR ‰.

LAT. 15° 39' N

LONG. 96° 30' W

Año	Ene	Feb	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic
80											
81											
82						33.2	32.8	33.6	31.8	31.2	31.8
83	31.1	31.0	31.2	31.8	31.9	32.3	32.4	31.2	32.0	31.8	31.8
84	31.6	31.5	31.1	31.5	31.6	31.4	31.3	31.6	31.9	31.4	31.5
85											
86											
87											
88											
89											
90											
91											
92											
93											
94											
95											



SERVICIO MAREOGRAFICO NACIONAL

SALINA CRUZ, OAX.

MEDIAS MENSUALES DEL NIVEL DEL MAR

(PIES)

LAT. 16° 10' N

LONG. 95° 12' W

Año	Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic
52	4.084	4.143	4.386	4.068	4.357	4.559	4.574	4.833	4.663	4.318	4.264	4.221
53	4.110	4.477	4.360	4.537	4.672	4.861	4.802	4.787	4.554	4.371	4.153	4.180
54	4.155	4.182	3.894	4.243	4.461	4.677	4.731	4.535	4.515	4.134	4.045	3.988
55	4.052	4.004	4.268	4.374	4.636	4.579	4.754	4.666	4.555	4.038	3.959	4.052
56	4.189	4.141	4.202	4.536	4.725	4.866	4.765	4.696	4.584	4.359	3.981	3.996
57	4.192	4.303	4.280	4.808	4.928	5.164	5.144	4.982	4.903	4.666	4.649	4.420
58	4.780	4.451	4.431	4.432	4.679	4.793	4.833	4.928	4.949	4.534	4.502	4.246
59	4.357	4.727	4.404	4.451	4.681	4.613	4.557	4.933	4.681	4.611	4.141	4.180
60	4.196	3.955	5.892	4.427	4.362	4.676	4.821	4.674	4.592	4.763	4.043	4.119
61	4.011	4.141	4.221	4.102	4.610	4.557	4.735	4.697	4.602	4.289	3.955	4.353
62	3.932	4.037	3.954	4.087	4.382	4.706	4.697	4.710	4.722	4.409	4.156	4.095
63	4.116	4.001	4.259	4.414	4.745	4.854	4.916	5.118	4.902	4.450	4.363	4.347
64	4.193	4.206	4.088	4.003	4.196	4.296	4.703	4.505	4.585	4.058	3.951	4.171
65	4.185	4.316	4.566	4.554	4.500	4.905	4.733	4.884	5.158	4.543	4.510	4.430
66	4.484	4.136	4.108	4.241	4.490	4.482	4.733	4.720	4.684	4.311	4.005	4.024
67	4.094	3.968	3.993	3.999	4.278	4.629	4.788	4.620	4.576	4.308	4.130	3.900
68	4.060	3.793	3.735	4.158	4.382	4.446	4.694	4.784	5.019	4.720	4.396	4.377
69	4.574	4.430	4.379	4.886	4.744		4.964	4.962	4.883	4.601	4.509	4.443
70	4.343	4.027	4.092	4.037	4.194	4.298						
71				3.998	4.491	4.868	4.923	4.709	4.556	4.167	4.194	4.562
72	4.349	4.067	4.795	4.493	5.016	5.066	5.191	4.998	5.072	4.828	5.145	4.939
73	4.283	4.163	4.133	4.254	4.251	4.620	4.504	4.503	4.356	4.180	3.925	3.997
74	4.176	3.869	4.230	4.668								
75	4.267	4.444	4.527	4.565	4.577	4.642	4.748	4.635	4.520	4.458	4.284	4.340
76	4.072	4.031	4.479	4.589	5.044	5.297	5.073	4.858	5.027	4.608	4.639	4.685
77	4.381	4.274	4.342	4.257	4.689	4.813	4.749	4.834	4.990	4.707	4.689	4.752
78	4.368	4.157										
79			4.664	4.420	4.356	4.646	4.927	4.765	4.660	4.756	4.243	4.522

SERVICIO MAREOGRAFICO NACIONAL

SALINA CRUZ, OAX.

MEDIAS MENSUALES DEL NIVEL DEL MAR

(PIES)

LAT. 16° 10' N

LONG. 95° 12' W

Año	Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic
80												
81												
82												
83			4.861	5.334	5.669	5.620						4.513
84	4.136	4.234	4.404	4.432	4.812	4.829	4.986	4.983	4.825	4.683	4.137	4.262
85	3.812		4.248	4.190	4.502		4.676	4.933	4.791	4.723	4.228	4.363
86	4.115	4.116	3.834	4.215	4.465	4.632						4.342
87	4.317	4.593	4.384	4.322	4.795	5.037	5.118	4.942	4.978	4.319	4.368	4.529
88	4.061	4.313								4.214	4.209	4.049
89	4.030	3.990	3.895	4.212	4.514	4.895	4.524	4.754	4.361	4.324	4.341	4.012
90	4.353	4.218	4.261	4.291	4.685	4.572	4.722	4.692	4.743	4.422		4.168
91												
92												
93												
94												
95												

MEDIAS MENSUALES DE TEMPERATURA DEL AGUA DE MAR °C.

LAT. 16° 10' N

LONG. 95° 12' W

Año	Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic
52			27.0	25.3	27.4	28.0	27.4	28.8	28.7	24.0	24.9	22.6
53	22.5	23.5				30.2	29.0	29.0	28.5	26.0	23.5	24.0
54	24.5	23.2	23.7	25.5	28.5	29.0	29.0	29.3	29.1	25.5	24.3	21.7
55	25.2	21.8	25.9	27.5	27.9	28.1			28.3	29.4		
56		24.9	25.2		27.7	27.3	28.8	28.3	28.7	25.7	22.8	23.4
57	24.0	24.5	25.5	26.4	29.3	30.0	28.9	28.9	27.0	26.7	26.4	21.5
58	24.0	24.5	26.5	28.0	28.0	29.4	30.0	29.5	29.5	28.5	26.5	24.0
59	23.2	27.0	27.0	27.0	29.2	29.5	28.5	29.4	29.2	28.2	22.0	22.5
60	23.7	23.2	23.4		28.4	29.5	29.0	29.4	28.8	28.7	22.6	21.2
61	21.9	23.8	25.6	26.0	29.6	29.2	28.9	28.4	28.9	24.9	22.7	24.8
62	22.2	25.5	24.9	23.5	27.3	29.9	28.9	29.2	29.4	27.7	24.2	23.8
63	23.4	21.8	24.9	27.2	28.2	30.8	29.7	28.9	28.9	25.6	24.9	22.2
64	23.2	24.7	26.1	27.1	27.5	28.9	28.7	29.6	29.6	24.3	23.6	23.1
65	23.2	24.0	25.3	28.3	28.9	29.5	27.7	29.0	29.5	27.0	24.5	24.3
66	24.0	23.7	23.3	27.9	29.0	29.1	29.4	30.0	29.6	26.6	21.2	20.9
67	22.3	22.3	23.8	26.0	27.5	28.0	28.4	29.0	28.4	23.3	23.3	25.1
68	22.7	21.9	21.3	27.4	29.1	29.6	28.7	27.9	29.2	27.2	24.4	24.0
69	24.9	26.0	25.2	28.1	29.5				28.1	26.4	23.1	23.8
70	24.9	21.2	24.8	26.7	25.9	28.1						
71			27.2	23.7	29.0	29.8	29.2	29.3	29.0	29.0	25.5	28.0
72	24.6	23.3	26.7	29.0	30.0	29.4	29.1	28.3	29.0	27.2	29.1	25.8
73	25.0	23.9	27.2	27.1	28.0	29.9	28.9	29.5	28.9	27.0	24.5	21.2
74	25.7	23.3	25.2	26.0	29.5	29.0	29.1					
75							25.8	24.5	23.0	21.2	18.6	18.2
76	21.5	16.8	21.8	27.2	29.0	29.4	28.8	28.2	28.6	28.1	24.8	23.4
77	23.6	22.7	25.0	24.6	26.3							
78												
79			25.6	28.6	29.4	26.9	29.4	28.1	27.7	25.8	23.8	22.4

SERVICIO MAREOGRAFICO

SALINA CRUZ, OAX.

MEDIAS MENSUALES DE TEMPERATURA DEL AGUA DEL MAR °C.

LAT. 16° 10' N

LONG. 95° 12' W

Año	Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic
80												
81												
82												
83												
84	20.9	22.4	23.4	26.0	28.0	28.6	28.7	28.6	28.4	27.6	21.9	24.0
85	22.0		23.6	24.8	28.1		29.0	29.4	29.2	28.4	23.8	23.1
86	21.8				28.6	27.4	27.6					25.8
87	23.2	24.3	26.0	25.0	28.2	29.2	29.5	29.1	29.1	24.8	24.1	26.1
88	22.8	20.9										
89		23.0	22.5	24.8	28.5	29.7	28.6	29.8	28.4	26.5	26.0	23.6
90	24.1	24.3	24.5	27.1	30.3	29.6	29.4	29.1	29.3	27.4	23.0	23.5
91												
92												
93												
94												
95												

MEDIAS MENSUALES DE SALINIDAD DEL AGUA DEL MAR ‰.

LAT. 16° 10' N

LONG. 95° 12' W

Año	Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic
52			34.4	31.9	34.5	33.2	33.3	33.2	32.3	33.3	33.8	34.1
53	34.5	34.7				34.0	33.8	34.4	34.4	34.1	34.9	35.1
54	35.1	34.7	35.0	34.7	34.7	34.2	33.7	34.5	33.2	32.8	34.6	34.6
55	34.4	34.9	35.4	34.9	35.3	33.2			30.2	32.7		
56		35.3	34.5		34.3	33.7	33.4	33.8	33.7	33.8		33.8
57	34.4	34.5	34.4	34.9	34.7	34.2	34.2	33.8	33.8	33.7	34.1	34.4
58	34.2	34.4	34.6			33.6	33.2	33.4	32.8	32.7	33.7	34.1
59	34.2	33.8	34.1	34.5	34.6	33.8	33.8	34.2	34.1	34.2	34.2	34.6
60	34.5	34.6	34.9		34.9	34.4	33.3	32.8	32.9	32.8	34.2	34.5
61	34.5	34.4	34.7	34.7	34.7	34.5	34.1	34.1	33.7	33.7	33.6	33.7
62	34.2	34.2	33.7	34.5	34.5	33.8	33.6	33.7	32.8	32.8	33.2	34.1
63	34.5	34.1	34.2	34.2	34.5	34.1	34.0	33.4	33.0	33.8	34.1	34.6
64	34.4	34.5	34.5	34.6	34.9	34.4	34.0	33.4	32.9	34.0	34.5	34.5
65	34.6	34.7	34.6	26.0	34.5	34.1	34.4	34.4	34.1	33.7	34.6	34.2
66	34.4	34.5	34.7	34.7	34.0	33.6	33.6	32.8	32.9	33.2	35.4	34.6
67	34.6	34.9	34.7	34.5	34.7	33.8	34.1	34.1	33.2	34.0	34.4	34.1
68	35.3	35.1	35.8	36.0	35.5	35.4	35.0	33.7	33.8	34.2	35.3	35.4
69	35.3	35.3	36.0	34.7	34.6				31.4	32.5	34.6	33.8
70	34.5	35.0	34.9	34.5	34.6	34.2						
71			34.7	34.7	35.0	34.4	34.2	33.4	32.4	33.3	34.5	33.7
72	34.1	34.6	34.5	34.7	34.2	33.3	34.0	34.5	33.7	32.9	33.7	34.7
73	34.1	34.4	34.0	34.5	34.0	33.8	33.0	33.3	33.0	32.9	33.7	34.0
74	34.4	34.0	34.4	34.5	32.9	33.2	33.0					
75							32.9	33.0	31.9	32.9	33.6	33.4
76	33.7	33.8	33.4	34.6	35.0	34.4	34.0	34.4	34.2	34.6	35.5	35.0
77	34.9	35.0	34.7	35.0	34.6							
78												
79			35.3	35.8	36.7	36.0	35.9	35.9	32.9	36.0	36.6	37.0

SERVICIO MAREOGRAFICO  
SALINA CRUZ, OAX.

MEDIAS MENSUALES DE SALINIDAD DEL AGUA DEL MAR °/ ‰.

LAT. 16° 10' N

LONG. 95° 12' W

Año	Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic
80												
81												
82												
83												
84	34.6	34.7	35.1	34.0	34.9	33.6	34.6	33.2	32.8	34.7	34.2	34.9
85	35.0		35.3	35.0	35.0		34.9	34.5	35.0	35.1	36.6	36.3
86	37.0				34.6	33.7	35.0					34.0
87	34.2	34.5	34.9	35.3	34.5	34.5	34.0	33.7	34.6	34.6	34.2	34.6
88	35.3	35.0										
89		33.2	33.8	34.5	33.6	31.9	33.2	32.9	32.1	32.3	32.8	31.8
90	33.7	33.2	33.7	33.4	32.5	31.9	32.8	33.4	32.8	32.9	33.3	33.2
91												
92												
93												
94												
95												

SERVICIO MAREOGRAFICO  
PUERTO MADERO, CHIS.

MEDIAS MENSUALES DEL NIVEL DEL MAR  
(PIES)

LAT. 14° 42' N

LONG. 92° 26' W

Año	Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic
80												
81												
82												
83												
84												
85			7.511	7.496	7.672	8.000	7.955	8.104	7.947	8.009	7.615	7.322
86	7.252	7.416	7.353	7.298	7.736	7.970	8.209	7.951	8.128	8.143	8.270	7.864
87	7.906	8.053	7.698	7.941	8.014	8.259	8.347	8.211	8.156	8.143	7.919	8.044
88	7.747	7.731	7.443	7.567	7.449	7.814	7.738	7.875	7.697	7.722	7.526	7.651
89	7.507	7.598	7.223	7.480	7.598	7.928	7.748	7.839	7.738	7.756	7.722	7.500
90	7.964	7.749	7.760	7.669	8.028			7.840	7.872	7.769	7.691	7.636
91	7.655	7.594	7.252	7.304								
92												
93												
94												
95												

SERVICIO MAREOGRAFICO  
PUERTO MADERO, CHIS.

MEDIAS MENSUALES DE TEMPERATURA DEL AGUA DE MAR °C.

LAT. 14° 42' N

LONG. 92° 26' W

Año	Ene	Feb.	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic
80												
81												
82												
83												
84												
85			29.5	29.5	30.5					29.7	29.1	28.3
86	27.9	23.9	28.6	28.5	28.7	27.5	28.2	28.3	29.1		30.2	29.4
87	29.2	29.5	29.4	29.7	29.9	30.2	30.5	31.2	31.8	32.2	31.1	30.5
88	30.0	29.5	29.8	29.9	30.6	30.6	31.2	30.0	28.6	30.4	30.3	29.6
89	29.3	29.9	29.2	29.8	29.7	29.8	30.1	31.6	30.3	30.8	30.3	
90	29.8	29.8	30.4	30.6	29.9			31.1	30.7	30.5	30.1	31.4
91		29.8	29.3	29.8								
92												
93												
94												
95												



SERVICIO MAREOGRAFICO  
PUERTO MADERO, CHIS.

MEDIAS MENSUALES DE LA SALINIDAD DEL AGUA DEL MAR ‰.

LAT. 14° 42' N

LONG. 92° 26' W

Año	Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic
80												
81												
82												
83												
84												
85			33.0	33.4	27.4	23.9	20.4	11.8	16.2	17.6	14.2	29.5
86	33.7	34.1	32.9	32.5	32.5						28.5	32.4
87	32.9	32.4	32.7	32.4	32.3	14.6	14.4	9.8	12.4	14.2	29.7	32.5
88	33.2	33.2	33.7	34.0	34.0	23.7	14.6	13.6	7.9	14.2	28.0	32.1
89	32.9	33.2	33.6	33.3	25.9	21.6	24.0	13.6	10.1	19.2	20.5	
90	32.1	32.5	27.1	24.6	25.2			16.5	13.7	11.8	9.6	
91		31.9	34.0	33.6								
92												
93												
94												
95												

***Variaciones del nivel medio, temperatura y salinidad del mar (Oceano Pacífico)***, se terminó de imprimir el mes de octubre de 1991 en los talleres de ***Impretei***, Almería No. 17, Col. Postal, 03410, México D.F.

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