

## TIDAL DATA

All data was rounded to the nearest 0.1 foot

Location	HAT <sup>1</sup>	MLLW <sup>1</sup>	HTL <sup>2</sup>	MHW <sup>2</sup>	Vicinity
Adak Island	8.6	3.0	5.6	3.5	
Anchorage	40.9	6.3	34.7	28.4	
Atka	31.8	27.0	4.9	3.2	
Barter Island	2.8	2.1	0.8	0.5	
Bird Island	10.5	1.3	9.2	6.3	
Broad Bight	17.8	10.4	7.3	5.0	South Akutan Island
Burrough Bay	14.0	-6.1	20.0	15.0	North Revillagigedo Island
Cape Chunak	145.0	135.6	9.4	6.9	
Cape Espenberg, Kotzebue Sound	154.0	152.8	1.2	0.9	
Cape Kasilof	18.5	-7.7	26.1	19.5	
Cape Sarichef	9.9	4.0	6.0	4.6	West Unimak Island
Carter Bay, Kuskokwim Bay	26.1	12.9	13.3	8.3	
Castle Bay	34.3	22.8	11.5	8.0	SE of Chignik
Chirikof Island	133.3	122.5	10.9	7.9	
Cold Bay	10.4	0.6	9.7	6.7	
Cordova	22.4	6.3	16.2	11.7	
Craig	17.9	5.3	12.6	9.3	
Dall Point	47.3	41.7	5.6	3.8	
Dolgoi Harbor, Dolgoi Island	28.9	20.4	8.6	6.1	
Elfin Cove	23.7	9.5	14.2	10.1	
Entrance Island	14.5	-3.4	17.8	13.7	
False Bay	19.4	0.6	18.8	14.2	S.E of Hoonah
False Pass	8.4	2.4	6.0	3.9	
Fire Island	36.8	4.0	32.8	26.2	
Golf Island	12.6	0.7	11.9	8.9	
Goodhope Bay	39.3	37.1	2.2	1.6	W. Kotzebue Sound
Green Bight	140.9	134.0	7.0	4.5	W. Akutan Island
Isanotski Strait Entrance	34.3	25.6	8.7	5.9	Near False Pass
Japanese Bay	5.2	-5.3	10.5	7.6	Southern Kodiak Island
Juneau	24.0	3.4	20.6	15.3	
Kaligan Island (North End)	21.6	-2.3	23.9	18.0	
Ketchikan	25.9	6.2	19.7	14.6	
King Cove	13.0	4.0	9.0	6.2	
Kivalina	5.1	3.9	1.2	0.8	NW of Kotzebue
Kodiak Is.	36.8	25.3	11.5	7.9	
Kotzebue	4.3	3.4	0.9	0.6	
Larsen Bay	16.7	-1.0	17.7	12.8	West Side Kodiak Island
Leconte Bay	15.6	-4.2	19.8	15.1	

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Location	HAT <sup>1</sup>	MLLW <sup>1</sup>	HTL <sup>2</sup>	MHW <sup>2</sup>	Vicinity
Mitchell Bay, Target Island	64.6	51.1	13.6	10.3	
Mitrofanina Island	31.1	21.3	9.8	7.0	
Monte Carlo Island	20.1	4.2	15.9	11.8	
Nachalni Island	15.0	-2.5	17.5	12.8	
Nelson Island, Tooksok Bay	38.4	27.0	11.5	9.3	
Neumans Cove, Neuman Island	6.2	0.3	5.9	4.1	
Nikiski	32.2	6.6	25.6	19.9	
Nikolski	9.3	4.1	5.2	3.7	
Nome	5.4	3.7	1.7	1.3	
Ouzinkie, Spruce Island	11.0	-0.1	11.2	8.1	
Popokamute (Kokoamute)	34.6	20.2	14.5	8.9	
Port Alexander	17.8	3.8	14.0	10.1	South Baranof Island
Port Lions	34.0	21.8	12.2	8.5	
Port Mackenzie	43.2	8.0	35.2	28.4	
Port Moller	41.8	29.2	12.6	9.6	
Prudhoe Bay	37.3	35.8	1.5	0.6	
Quinhagak (Kwinak)	60.0	41.8	18.2	9.7	
Red Bluff Bay, Baranof Island	27.7	11.7	16.1	11.9	
Red Dog Dock	6.3	5.2	1.1	0.8	NW of Kotzebue
Rootok Island	25.5	18.5	7.0	4.5	
Saginaw Bay, Kuiu Island	24.6	7.2	17.4	12.9	
Sand Point, Popof Island	40.0	30.5	9.5	6.5	
SE Tigalda Island	28.8	21.5	7.3	4.7	
Seldovia	29.9	6.8	23.1	17.2	
Seward	19.9	6.1	13.8	9.7	
Shishmaref Inlet	4.9	3.6	1.3	0.9	North of Nome
Sitka	17.3	4.5	12.8	9.2	
Skagway	23.4	2.3	21.0	15.7	
Snag Point, Dillingham	65.0	40.7	24.2	18.9	
SW Terror Bay	16.7	-1.7	18.4	13.3	West Side Kodiak Island
The Summit	15.8	-3.3	19.0	14.3	Petersburg
Thoms Point	9.8	-10.2	20.0	15.5	Southern Wrangell Island
Tigalda Bay, Tigalda Island	24.1	19.3	4.9	3.0	
Tin City	4.8	3.6	1.2	0.8	
Trident Bay, Akun Island	32.4	26.3	6.1	3.7	
Turn Point	15.9	-3.8	19.7	15.2	Petersburg
UnAlaska	7.8	2.6	5.2	3.3	
Uzkosti Point	19.2	4.7	14.5	10.4	North Kodiak Island
Valdez	22.4	6.7	15.6	11.2	

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<b>Location</b>	<b>HAT<sup>1</sup></b>	<b>MLLW<sup>1</sup></b>	<b>HTL<sup>2</sup></b>	<b>MHW<sup>2</sup></b>	<b>Vicinity</b>
<b>Village Cove, St. Paul Island</b>	5.4	1.3	4.1	3.1	
<b>Warm Springs Bay</b>	22.1	4.9	17.2	12.9	East Baranof Island
<b>West Raspberry Island</b>	18.6	0.3	18.3	13.2	NW Kodiak Island
<b>Whittier</b>	15.7	-0.1	15.8	11.3	
<b>Windy Cove</b>	14.5	-2.1	16.6	12.2	Imuruk Basin
<b>Wooded Island</b>	21.1	8.1	13.0	9.3	Ouzinkie, Kodiak Island
<b>Yakutat Bay</b>	14.5	1.4	13.0	9.2	

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## Data Source:

New HTL data was gathered utilizing the newest National Oceanic Atmospheric Administration (NOAA) Epoch data located at <https://tidesandcurrents.noaa.gov/stations.html>

## Definitions:

**National Tidal Datum Epoch (NTDE)** refers to the specific 19-year period adopted by the National Ocean Service as the official time segment over which tide observations are taken and reduced to obtain mean values (e.g., mean lower low water, etc.) for tidal datum's. It is necessary for standardization because of periodic and apparent secular trends in sea level. The present NTDE is 1983 through 2001 and is actively considered for revision every 20-25 years.

**Highest Astronomical Tide (HAT)** refers to the highest predicted astronomical tide expected to occur at a specific tide station over the NTDE.

**High Tide Line (HTL)** means the line of intersection of the land with the water's surface at the maximum height reached by a rising tide. The high tide line may be determined, in the absence of actual data, by a line of oil or scum along shore objects, a more or less continuous deposit of fine shell or debris on the foreshore or berm, other physical markings or characteristics, vegetation lines, tidal gages, or other suitable means that delineate the general height reached by a rising tide. The line encompasses spring high tides and other high tides that occur with periodic frequency but does not include storm surges in which there is a departure from the normal or predicted reach of the tide due to the piling up of water against a coast by strong winds such as those accompanying a hurricane or other intense storm. (33 CFR 328.3)

**Mean Lower Low Water (MLLW)** the average of the lower low water height of each tidal day observed over the NTDE. For stations with shorter series, comparison of simultaneous observations with a control tide station is made in order to derive the equivalent datum of the NTDE. (Source: Center for Operational Oceanographic Products and Services)

**Mean High Water (MHW)** the average of all the high water heights observed over the National Tidal Datum Epoch. For stations with shorter series, comparison of simultaneous observations with a control tide station is made in order to derive the equivalent datum of the NTDE. (Source: Center for Operational Oceanographic Products and Services)

**Mean Sea Level (MSL)** the arithmetic mean of hourly heights observed over the NTDE. Shorter series are specified in the name; e.g. monthly mean sea level and yearly mean sea level. (Source: Center for Operational Oceanographic Products and Services)

Most contour lines use MSL as their datum, or 0' elevation. Most tidal charts and tables use MLLW as their datum. Plans need to include which datum the information is based upon.

**Method used to obtain new HTL data:** NOAA does not identify HTL datum, which is a jurisdictional boundary under Section 404 of the Clean Water Act in the Corps' Regulatory Program. To obtain high tide lines in the Alaska District, the Corps uses NOAA HAT referenced to a MLLW datum (where MLLW = 0.00'), as follows.

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NOAA HAT – MLLW = HTL

Example Anchorage: 40.93' (HAT) – 6.27' (MLLW) = 34.7' HTL

NOAA DATUM MHW – MLLW = MHW

Example: 34.7' (NOAA MHW) – 6.27' (MLLW) = 28.4' MHW

Note that:

<sup>1</sup>HAT and MLLW are referenced to the station datum for each NOAA tide station.

<sup>2</sup>HTL and MHW are referenced to MLLW, where MLLW is set as the 0.00' contour (the same Datum utilized in Nautical and Tidal Charts).

All data was rounded to the nearest 0.1-foot.

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For locations that do not have available HAT data available the Corp will use the closest tide station. Should tidal software become available in the future it will be utilized as an additional source for calculating HTL and MHW.