



Thank you for helping to update the Alaska Tidal Datum Portal, improve the National Spatial Reference System, and facilitate public access to Alaska benchmarks!

You can learn more about the NGS GPS on benchmarks campaign [here](http://www.ngs.noaa.gov/OPUS/).

Sharing an OPUS solution is easy! All you need is a high-quality GPS data file (at least 4 hours in duration), a photograph of the mark, a photograph of your occupation in-progress, and a willingness to help improve Alaska geospatial data. You can submit an opus solution here:

<http://www.ngs.noaa.gov/OPUS/> - don't forget to select "share my solution" in the dropdown options.

On the following pages there is a table of coastal areas in Alaska that have tidal datums established, but no published orthometric heights for any of the tidal benchmarks. If you will be in one of these areas with a dual frequency GPS/GNSS receiver, please consider taking some time to help us improve the number of sites included in our portal by sharing a tidal benchmark solution in OPUS DB. To find a tidal benchmark, click on the hyperlink next to the station and scroll to the bottom of the CO-OPS benchmark sheet to the "Tidal Datums" section. Pick any mark on the list (example figure below) that has a published MLLW height.

T I D A L D A T U M S

Tidal datums at AGNES COVE based on:

LENGTH OF SERIES: 2 MONTHS
 TIME PERIOD: August 2001 - September 2001
 TIDAL EPOCH: 1983-2001
 CONTROL TIDE STATION: 9455090 SEWARD, RESURRECTION BAY

Elevations of tidal datums referred to Mean Lower Low Water (MLLW), in METERS:

MEAN HIGHER HIGH WATER	PHHW	=	3.257
MEAN HIGH WATER	PHW	=	2.976
MEAN SEA LEVEL	MSL	=	1.703
MEAN TIDE LEVEL	MTL	=	1.699
MEAN LOW WATER	MLW	=	0.421
MEAN LOWER LOW WATER	MLLW	=	0.000

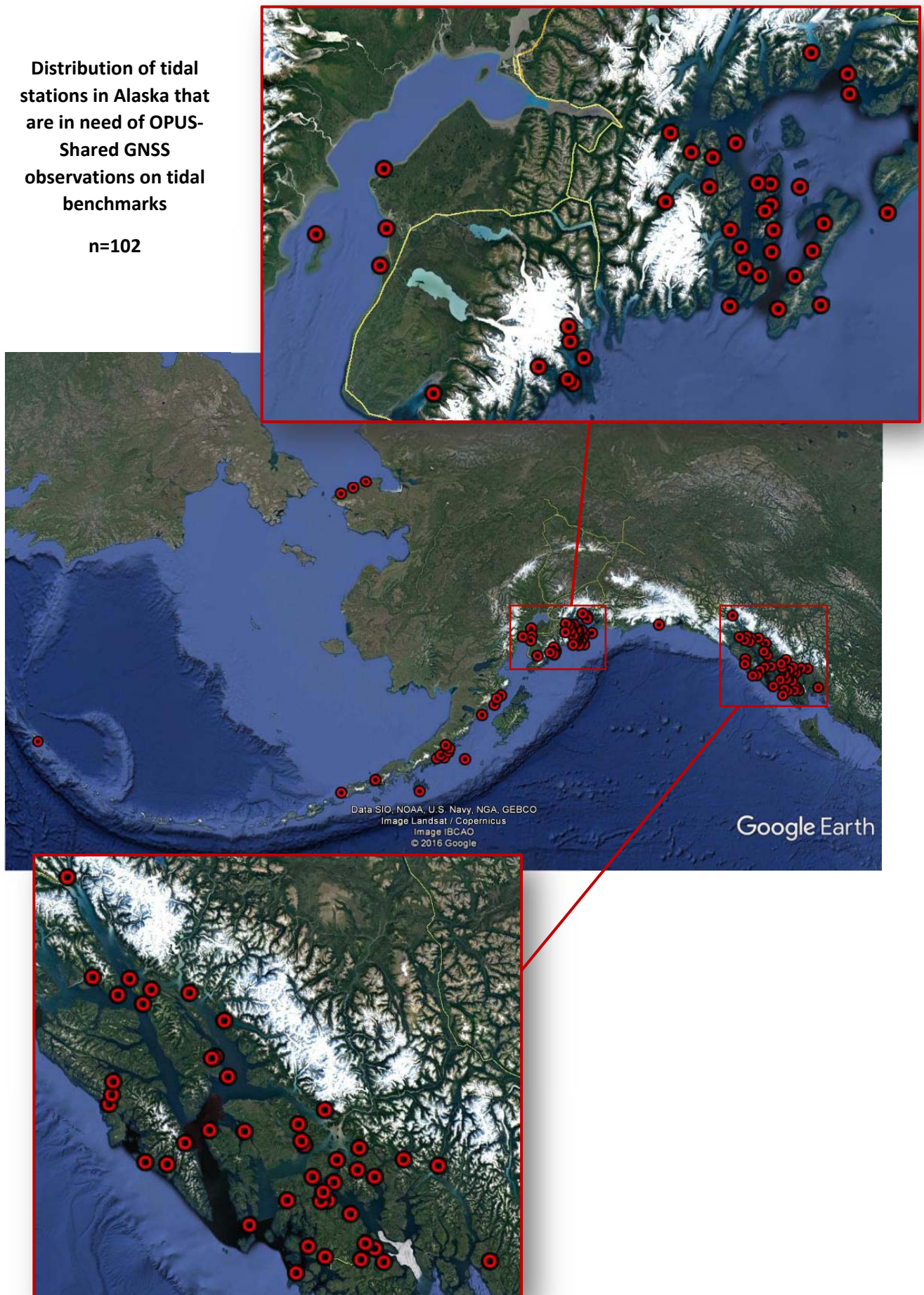
ANY OF THESE

Bench Mark Elevation Information

Stamping or Designation	In METERS above:	
	MLLW	PHW
5120 A 2001	6.850	3.874
5120 B 2001	6.023	3.046
5120 C 2001	5.581	2.604
5120 D 2001	6.029	3.053
5120 E 2001	4.363	1.386

Distribution of tidal stations in Alaska that are in need of OPUS-Shared GNSS observations on tidal benchmarks

n=102



Station Name	Latitude	Longitude	Tidal Benchmark Sheet
Boca De Quadra	55.116700	-130.798000	<u>9450305</u>
Saltery Cove, Skowl Arm	55.401700	-132.328000	<u>9450495</u>
Hollis Anchorage, Kasaan Bay	55.480000	-132.645000	<u>9450544</u>
Steamboat Bay, Noyes Island	55.533300	-133.637000	<u>9450578</u>
Kasaan, Kasaan Bay, Clarence Strait	55.535000	-132.397000	<u>9450581</u>
Shinaku Inlet	55.592917	-133.152000	<u>9450618</u>
Lindeman Cove	55.601700	-132.512000	<u>9450625</u>
Nossuk Bay	55.721667	-133.350000	<u>9450711</u>
Ratz Harbor, Clarence Strait	55.880000	-132.595000	<u>9450815</u>
Beck Island, Clarence Strait	56.046700	-132.862000	<u>9450906</u>
Kuiu Island, Affleck Canal	56.036900	-134.115000	<u>9450913</u>
Burrough Bay, Behm Canal	56.038333	-131.095000	<u>9450914</u>
Thorne Island	56.058300	-132.968000	<u>9450938</u>
Thoms Point	56.118300	-132.078000	<u>9450970</u>
Blashke Island	56.126700	-132.895000	<u>9450973</u>
Shakan Strait (Northeast End)	56.148300	-133.460000	<u>9450987</u>
Point Harrington, Clarence Strait	56.178300	-132.697000	<u>9451005</u>
Bradfield Canal	56.183300	-131.572000	<u>9451012</u>
Village Rock, Zimova Strait	56.220000	-132.297000	<u>9451037</u>
Bushy Island, Snow Passage	56.276700	-132.985000	<u>9451074</u>
Reef Point, Stikine Strait	56.353300	-132.553000	<u>9451124</u>
Madan Bay	56.392200	-132.169000	<u>9451152</u>
Point Lockwood, Wrangell Narrows	56.558300	-132.963000	<u>9451263</u>
Beecher Pass, Wrangell Narrows	56.595000	-132.987000	<u>9451287</u>
Dorothy Cove	56.721700	-135.075000	<u>9451376</u>
Mountain Point (Cannery)	56.740000	-132.958056	<u>9451409</u>
Golf Island, Necker Islands	56.786700	-135.393000	<u>9451421</u>
Leconte Bay	56.788300	-132.502000	<u>9451422</u>
Entrance Island, Keku Strait	56.811700	-133.787000	<u>9451438</u>
Red Bluff Bay, Baranof Island	56.856667	-134.723333	<u>9451467</u>
Saginaw Bay, Kuiu Island	56.903333	-134.303056	<u>9451497</u>

The Brothers, Stephens Passage	57.295000	-133.797000	9451785
Scraggy Island	57.340000	-135.707000	9451805
Sergius Narrows	57.410000	-135.627000	9451853
Cannery Wharf, Gambier Bay	57.483300	-133.960000	9451906
Good Island, Gambier Bay	57.486700	-133.898000	9451909
Provorotni Island, Pogibshi Point	57.515000	-135.555000	9451936
Holkham Bay, Stephens Passage	57.760000	-133.603000	9452067
Taku Harbor	58.068300	-134.012000	9452123
Young Bay	58.183300	-134.587000	9452249
Hawk Inlet Entrance	58.085000	-134.777000	9452294
Barlow Cove, Lynn Canal	58.321700	-134.878000	9452318
Swanson Harbor	58.215000	-135.127000	9452368
Taiyasanka Harbor	59.301700	-135.428000	9452434
Excursion Inlet (South End)	58.416700	-135.447000	9452437
Moraine Bay	59.930000	-141.363000	9453443
Cape Hichinbrook	60.238300	-146.648000	9454329
Busby Island	60.898300	-146.782000	9454374
Bligh Island	60.806700	-146.798000	9454381
Columbia Glacier, Columbia Bay	61.023300	-147.085000	9454460
Port Chalmers	60.241800	-147.249000	9454511
Perch Point, Montague Island	60.126700	-147.395000	9454561
Wooded Island	59.875000	-147.403000	9454562
Seal Island	60.425000	-147.410000	9454564
Montague Island	60.025000	-147.592000	9454616
Louis Bay	60.461700	-147.672000	9454642
South Arm, Knight Island, Bay of Isles	60.366700	-147.700000	9454652
Snug Harbor, Knight Island	60.250000	-147.717000	9454662
Point Helen, Knight Island	60.153300	-147.767000	9454671
Port Audrey	60.343300	-147.768000	9454673
Macleod Harbor	59.890000	-147.795000	9454674
Herring Point, Knight Island, Prince William Sound	60.475000	-147.792000	9454691
Latouche	60.053300	-147.907000	9454713
Perry Island (South Bay)	60.671700	-147.932000	9454721

Guguak	60.100000	-148.038000	9454751
Bainbridge Point	60.196700	-148.042000	9454755
Chenega Island (S.W. End)	60.283300	-148.113000	9454777
Applegate Island	60.623300	-148.165000	9454794
Point Erlington, Erlington Island	59.938300	-148.227000	9454814
Blue Fjord, Port Nellie Juan	60.491700	-148.242000	9454818
Cochrane Bay, Pr. William Sound	60.663300	-148.357000	9454851
Blackstone Bay, Pr. William Sound	60.765000	-148.523000	9454907
Kings Bay Inside, Prince William Sound	60.456700	-148.665000	9454951
Bear Cove, Aialik Peninsula, Kenai Penin	59.801700	-149.615000	9455128
Aialik Bay, North End	59.953300	-149.715000	9455145
Aialik Sill, Aialik Bay	59.885000	-149.718000	9455146
Camp Cove, Harris Penninsula	59.693300	-149.748000	9455151
Crater Bay, Harris Bay	59.713300	-149.787000	9455159
Upper Northwestern Fiord	59.790000	-150.032000	9455204
Bear Cove, Kachemak Bay	59.725000	-151.023000	9455595
Cape Kasilof, Cook Inlet	60.336700	-151.380000	9455711
Kaligan Island (North End), Cook Inlet	60.511700	-151.952000	9455732
Chinulna Point, Cook Inlet	60.503300	-151.283000	9455735
Boulder Point	60.776667	-151.245000	9455777
Nukshak Island, Shelikof Strait	58.391700	-153.958000	9456717
Aguchik Island, Kukak Bay	58.290000	-154.270000	9456901
Takli Island, Shelikof Strait	58.063300	-154.477000	9456992
Puale Bay	57.706700	-155.393000	9458209
Chowiet Island	56.051700	-156.698000	9458519
Unavikshak Island	56.491700	-157.740000	9458762
Nakchamik Island, Chignik Bay	56.351700	-157.812000	9458779
Kujulik Bay (North Shore)	56.613300	-157.983000	9458819
Chankliut Island	56.146700	-158.107000	9458849
Castle Bay	56.231700	-158.347000	9458907
Hump Island, Kuiukta Bay	56.113300	-158.598000	9458964
Bird Island, Shumagin Bank	54.835000	-159.760000	9459251
Cold Bay	55.208333	-162.698333	9459949

Attu, Massacre Bay	52.840000	173.195000	9460150
Cape Sarichef, Unimak Island	54.600000	-164.928000	9462787
Ikpek Lagoon	65.893300	-167.273000	9469626
Shishmaref Inlet Inside	66.170000	-166.207000	9469804
Lagoon at 165 West	66.461700	-165.055000	9469982
Boca De Quadra	55.116700	-130.798000	9450305
Saltery Cove, Skowl Arm	55.401700	-132.328000	9450495
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