

4) Height Ratio (Worksheet 2)

4.1) Enter the times and heights of the tide at the reference station in columns 1 and 2 of Worksheet 2. If the first tide in the day is a low tide, start on the first row of the worksheet; if the first tide is a high tide, begin on the second row.

4.2) In the *Secondary Tide Stations* table, find the time difference for high water. Enter this difference in the HW rows of column 3 of worksheet 2.

4.3) Find the time difference for low water, following the same process as in 4.2, and enter the difference in the LW rows of column 3.

4.4) Find the height ratio for high water in the *Secondary Tide Stations* table and enter this ratio in the HW rows of column 4.

4.5) Find the height ratio for low water in the *Secondary Tide Stations* table and enter this ratio in the LW rows of column 4.

4.6) Add or (subtract) the time difference in column 3 to (or from) the time in column 1. Write your answer on the same row in column 5. Continue until all the rows are complete.

4.7) Multiply the height in column 2 by the height ratio in column 4. Write your answer on the same row in column 6. Continue until all the rows are complete.

5) Columns 5 and 6 are now the time and height of tide for the secondary station. Transfer this information to today's page in the Daily Record.

Secondary Tides Calculation (Height ratio) (US)

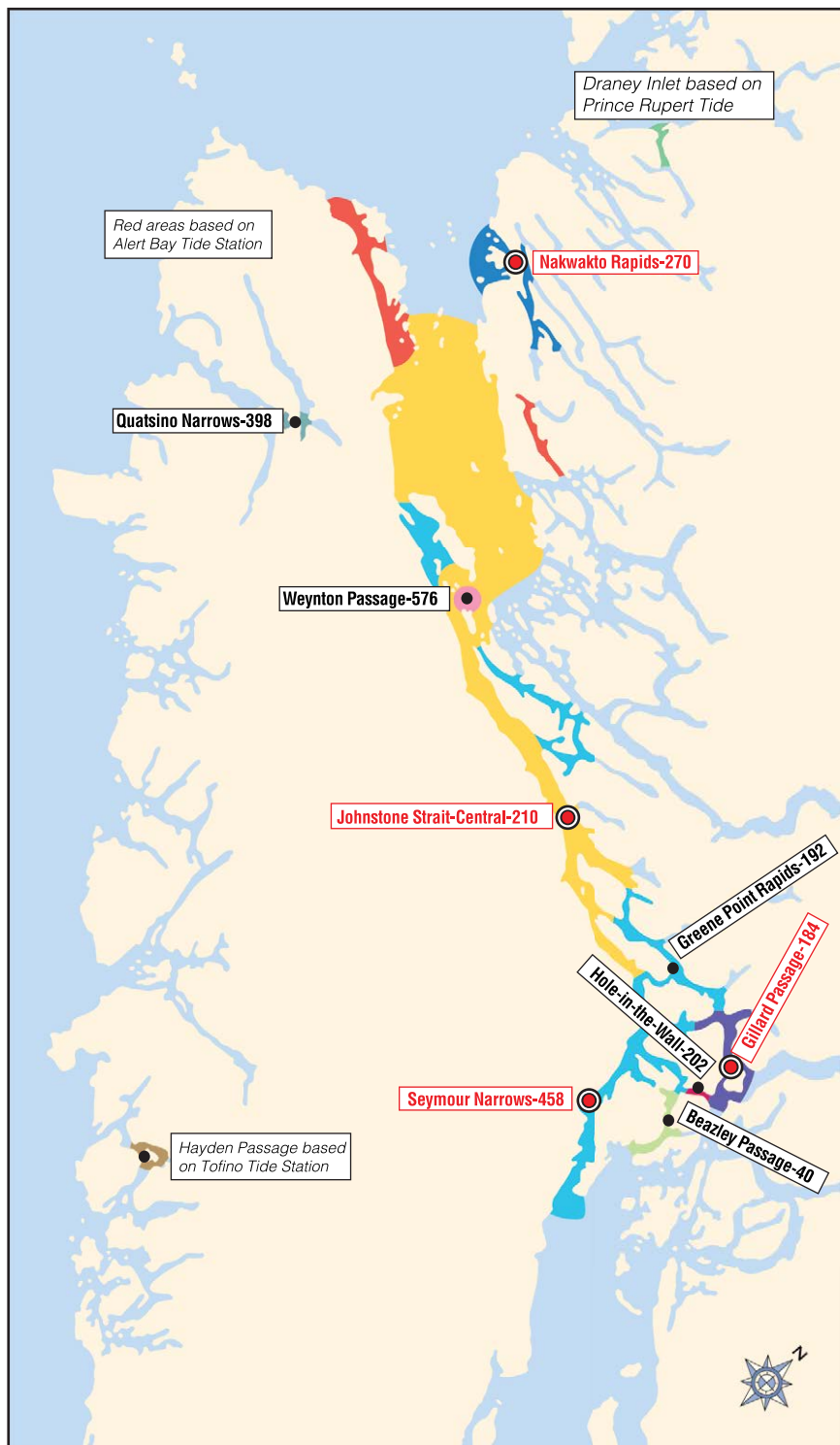
Reference Station:

Date:

Secondary Station:

Worksheet 2

	Reference Station		Corrections		Secondary Station	
	Time <i>Column 1</i>	Height ft / metres <i>Column 2</i>	Time difference hr min <i>Column 3</i>	Height ratio <i>Column 4</i>	Time <i>Column 5</i>	Height ft / metres <i>Column 6</i>
LW			+ -	x	=	=
HW			+ -	x	=	=
LW			+ -	x	=	=
HW			+ -	x	=	=
LW			+ -	x	=	=



2022 PORTS AND PASSES

How to Read the Tables

Reading Tide Tables

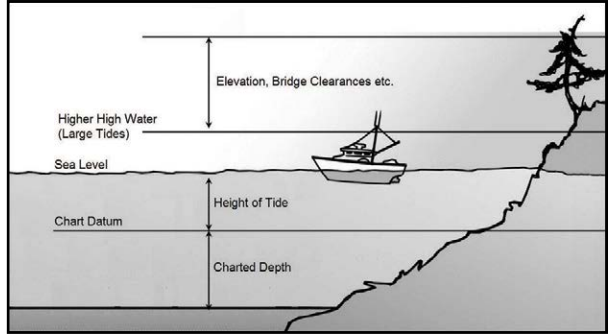
H
O
W

Since the level of the sea surface rises and falls on a regular basis, hydrographers have established a reference plane by which all tidal heights can be measured. This reference plane is the chart (or tidal) datum and is represented on charts as the zero tide level. Depths are measured below the chart datum; the height of tides and intertidal objects, such as rocks and shoals, are measured above it. More information on chart datum can be found on page xxvi.

May			
DAY	TIME	FT	M
1	4:31a	15.7	4.8
	11:52a	1.6	0.5
	6:20p	12.9	3.9
Sat	11:24p	7.5	2.3

T
O
R
E
A
D

The height of tide is the vertical distance between the surface of the sea and chart datum. For example, at a place where the chart shows the depth to be 1m (3.3 ft.) and the predicted low water is 0.6m (2.1 ft.) above chart datum, the actual depth at Low Water would be 1.6m (5.4 ft.).



Reading Current Tables

T
H
E

The shaded column (titled SLK) gives the time of slack current (the time the current turns from ebb to flood or vice versa). At this time, the speed of the current is minimal and there is usually no horizontal movement of surface water. The next column (MAX) displays the time at which the maximum flood or ebb can be expected. The F/E column gives the speed of the current in knots and is labelled either positive (flood) or negative (ebb). You will find the direction of flood in a text box on the map page of every current station.

June			
DAY	SLK	MAX	F/E
1	5:41a	1:47a	-4.0
	9:46a	7:42a	+1.3
	4:18p	1:17p	-3.0
Mon	11:22p	7:54p	+4.2

T
A
B
L
E
S

Special Codes in Current Tables

There are rare occasions (eg. North Inian Pass page 296) when the period of maximum current extends for up to two and a half hours. In those cases, **PORTS AND PASSES** assigns the time of maximum to the beginning of the period of strongest flow and identifies such an occasion with a black border.

DAY	SLK	MAX	F/E
1	5:00p	6:36p	+0.8
Fri	10:36p		

North Inian Pass

Similarly, when there is an extended period of slack or "weak and variable" currents (Juan de Fuca West page 228), **PORTS AND PASSES** identifies the beginning of the period of slack with a black border.

DAY	SLK	MAX	F/E
8	4:06p	10:36p	-2.2
Wed	3:30p	6:12p	+0.8

Juan de Fuca West

Where the time is indicated by asterisks (***), this indicates that the time of slack (or minimum flow) is indeterminate.

Secondary Tide Stations

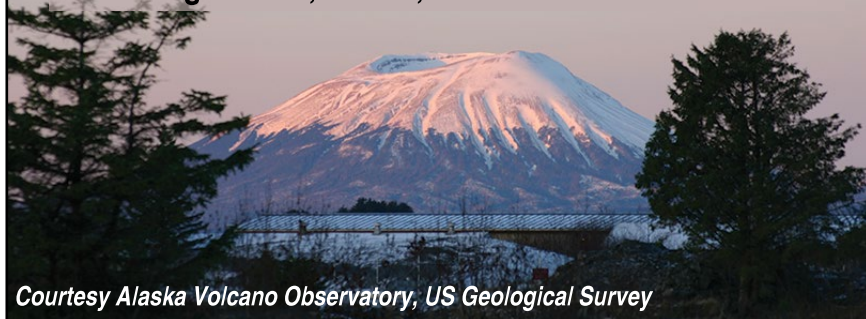
Secondary Port	Position		Time and Height Differences						Range	
			High Water			Low Water				
	Lat N	Long W	Time h min	Mean Tide feet	Large Tide feet	Time h min	Mean Tide feet	Large Tide feet	Mn Tide feet	Lrg Tide feet
Sechelt Inlet	° /	° /								
Egmont	49 45	123 56	+0 03	+0.7	+0.7	+0 01	0.0	-0.3	11.2	17.1
Storm Bay	49 40	123 50	+2 38	-6.2	-6.6	+2 01	-2.3	-0.7	6.6	10.2
Porpoise Bay	49 29	123 46	+2 49	-6.2	-6.9	+1 58	-2.0	-0.3	6.6	8.9
Strait of Georgia East										
Blind Bay	49 43	124 11	+0 05	+1.0	+1.3	+0 01	+0.3	+0.3	11.5	17.4
Saltrey Bay	49 47	124 11	+0 02	+1.0	+1.0	+0 04	+0.3	0.0	11.2	17.1
Powell River	49 52	124 33	+0 04	+1.0	+1.3	+0 08	+0.3	0.0	11.5	17.4
Lund	49 59	124 46	+0 07	+1.3	+1.3	+0 09	+0.3	0.0	11.5	17.4
Twin Islands	50 02	124 56	+0 06	+0.7	+1.3	+0 12	0.0	-0.3	11.5	17.4
Mittenatch Island	49 57	125 00	+0 05	+0.3	+0.7	+0 12	0.0	0.0	10.8	16.7
Strait of Georgia West										
Harmac	49 08	123 51	+0 04	-0.3	-0.3	+0 04	-0.3	-0.3	10.8	16.1
Nanaimo	49 10	123 56	See pages 282-287 for daily predictions at Nanaimo							
Nanoose Bay	49 16	124 08	+0 04	+0.7	+0.7	+0 04	+0.3	0.0	10.8	16.4
Winchelsea Islands	49 18	124 05	+0 05	+0.3	+0.3	+0 04	0.0	0.0	10.8	16.4
Northwest Bay	49 18	124 12	+0 03	+0.7	+0.7	+0 03	+0.3	+0.3	10.8	16.4
French Creek	49 21	124 22	+0 04	+0.3	+0.3	+0 05	-0.3	-0.3	11.2	16.7
Little River	49 44	124 55	+0 04	+0.7	+1.0	+0 07	0.0	-0.3	11.2	17.1
Hornby Island	49 30	124 41	+0 12	+0.7	+0.7	+0 16	+0.3	0.0	10.8	16.7
Denman Island	49 32	124 49	+0 07	+0.7	+0.7	+0 07	0.0	+0.3	11.2	16.4
Comox	49 40	124 56	See pages 104-109 for daily predictions at Comox							
Lasqueti & Texada										
False Bay	49 29	124 21	+0 03	+0.7	+1.0	+0 05	0.0	-0.3	11.2	17.1
Skerry Bay	49 30	124 14	+0 11	0.0	0.0	+0 09	0.0	-0.3	10.5	16.4
Welcome Bay	49 42	124 33	+0 05	+0.7	+1.0	+0 06	-0.3	0.0	11.5	17.1
Blubber Bay	49 48	124 37	+0 09	+1.0	+1.0	+0 10	+0.3	+0.3	11.2	16.7
Desolation Sound										
Okeover Inlet	49 59	124 42	+0 13	+1.6	+1.6	+0 20	+0.7	+0.3	11.5	17.7
Prideaux Haven	50 09	124 40	See pages 120-125 for daily predictions at Desolation Sound							
Channel Island	50 19	124 45	+0 07	+1.3	+1.3	+0 12	+0.3	0.0	11.5	17.4
Redonda Bay	50 16	124 57	+0 10	+0.7	+1.0	+0 12	+0.3	+0.3	11.2	16.7
Heriot Bay	50 06	125 13	+0 09	+0.7	+1.0	+0 11	+0.7	+0.7	10.8	16.4
Gorge Harbour	50 06	124 59	+0 17	+1.6	+2.3	+0 08	+1.0	+0.7	11.5	17.7
Whaletown Bay	50 06	125 03	+0 07	+1.0	+1.0	+0 09	+0.3	0.0	11.2	17.1
Surge Narrows	50 14	125 07	+0 11	+0.7	+1.0	+0 07	0.0	+0.3	11.2	16.7
Bute Inlet										
Orford Bay	50 36	124 52	+0 10	+1.3	+1.3	+0 14	+0.3	0.0	11.5	17.4
Waddington Harbour	50 52	124 50	+0 10	+0.3	+0.3	+0 16	-0.7	-1.0	11.5	17.4

Secondary Current Stations

Current Station	Dir. of Flood	Position		Time Differences				Speed Ratio		Avg Speed		
		Lat N	Long W	Trn to Fld	Max Fld	Trn to Ebb	Max Ebb	Fld	Ebb	Max Fld	Max Ebb	
	° True	° /	° /	h min	h min	h min	h min			kn	kn	
Peril Strait												
Kakul Narrows	025	57 22	135 42	+0 55	+1 05	+0 12	+0 18	0.1	0.3	0.9	1.3	
Point Siroi	059	57 25	135 35	+0 31	+0 11	+0 23	+0 15	0.3	0.4	1.7	1.9	
Middle Point	010	57 26	135 35	-0 09	-0 37	-0 35	-0 06	0.2	0.4	1.4	2.1	
Big Rose Is (0.2 mi SE)	042	57 27	135 32	+0 02	+0 11	-0 02	-0 24	0.3	0.4	1.9	2.2	
Povorotni Is (0.23 mi WSW)	323	58 31	135 34	-0 17	+0 15	+0 09	-0 37	0.2	0.2	0.9	1.1	
Tlevak Strait												
Lively Islands W *	175	55 14	133 06	-0 07	-0 21	-0 14	-0 20	0.5	0.7	3.2	3.2	
Tlevak Narrows, Turn Pt E	120	55 16	133 07	-0 18	-0 31	-0 34	-0 37	0.6	1.1	3.6	5.6	

* NE of the Lively Islands, it is reported that the current sets constantly to the NW, being stronger when the main stream west of the island sets to the NW.

Mount Edgecumbe, Alaska, as seen from Baranof Island.



Courtesy Alaska Volcano Observatory, US Geological Survey

Aleksandr Baranov

Born in St. Petersburg, Russia, to a merchant family, Baranov was appointed manager of the Shelkov Fur Trading Company on Kodiak Island. During his tenure, he was shipwrecked on Attu Island and, where previous expeditions had perished, he and his men prospered. He became the manager of the Russian-America Company in 1799, effectively becoming the governor of Alaska. Under his leadership, settlements were established at Kodiak (Pavlovskaya) in Prince William Sound, Yakutat Bay, Sitka (New Archangel) and even Fort Ross in northern California. Though his tenure featured conflict with natives and Russians alike, he is remembered as the founder of Russian America. Baranov died at sea in 1819 during his return to retirement in Russia.



Caption: The only known likeness of Aleksandr Baranov, by Mikhail Tikhonov, 1818.

Secondary Current Stations

Current Station	Dir. of Flood	Position		Time Differences				Max Rate		% Ref Rate	
		Lat N	Long W	Trn to Fld	Max Fld	Trn to Ebb	Max Ebb	Fld	Ebb	Fld	Ebb
Gorge-Tillicum Bridge	°True	° /	° /	h min LW	h min	h min HW	h min	kn	kn	%	%
	290	48 27	123 24	+3 15	-	+1 15	-	5.0	7.0	-	-

Secondary Tide Stations

Secondary Port	Position		Time and Height Differences						Range		
			High Water			Low Water					
	Lat N	Long W	Time	Mean Tide	Large Tide	Time	Mean Tide	Large Tide	Mn Tide	Lrg Tide	
	° /	° /	h min	feet	feet	h min	feet	feet	feet	feet	
Pedder Bay	48 20	123 33	-0 20	-0.3	0.0	-0 16	-0.3	0.0	0.0	5.9	10.5
William Head	48 20	123 32	-0 05	-0.3	-0.7	-0 08	0.0	+0.7	0.0	5.6	9.5
Esquimalt	48 26	123 27	+0 03	0.0	0.0	+0 04	0.0	0.0	0.0	5.9	10.5
Clover Point	48 24	123 21	+0 19	0.0	0.0	+0 01	0.0	0.0	0.0	6.2	10.5
Portage Inlet	48 27	123 25	+1 36*	-4.9	-5.2	+2 51*	-1.6	0.0	0.0	3.0	4.9
Oak Bay	48 25	123 18	+0 58	+0.7	+0.3	+0 18	0.0	0.0	0.0	6.6	10.8

* **PORTAGE INLET:** There is a great variation in the time differences with Victoria. A long stand at high water is followed by a small drop to the next low water. The low water occurs at or near 6.0 feet on the rising tide at Victoria. The range of tide is about 50% of that at Victoria.



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Secondary Current Stations

Current Station	Dir. of Flood	Position		Time Differences				Speed Ratio		Avg Speed	
		Lat N	Long W	Trn to Fld	Max Fld	Trn to Ebb	Max Ebb	Fld	Ebb	Max Fld	Max Ebb
Ernest Sound	True	o /	o /	h min	h min	h min	h min			kn	kn
McHenry Ledge (1mi N)	045	55 48	132 18	-0 09	-0 17	-0 27	+0 04	0.6	1.0	2.0	2.0
Blanche Rock	035	56 05	132 05	+0 11	+0 03	-0 07	+0 24	0.6	1.0	2.0	2.0
Point Warde	045	56 11	131 58	+0 16	+0 08	-0 02	+0 29	0.6	1.0	2.0	2.0
Blake Channel											
Blake Island	330	56 13	131 55	+0 21	+0 13	+0 03	+0 34	0.8	1.2	2.5	2.5
The Narrows	225	56 22	132 06	+0 31	+0 23	+0 13	+0 44	0.9	1.4	3.0	3.0
Channel Island, North	140	56 23	132 10	+0 31	+0 23	+0 13	+0 44	0.6	1.0	2.0	2.0
Point Highfield	095	56 30	132 23	+0 06	-0 02	-0 12	+0 19	0.5	0.7	1.5	1.5
Zimovia Strait											
No Name Is, near	330	56 09	132 09	+0 16	+0 08	-0 02	+0 29	0.5	0.8	1.6	1.6
Thoms Place											
Village Islands	315	56 13	132 19	+0 16	+0 08	-0 02	+0 29	0.5	0.7	1.5	1.5
East Point, East of	010	56 23	132 24	+0 06	-0 02	-0 12	+0 19	0.5	0.8	1.7	1.7
Cordova Bay											
Dewey Rocks (2mi W)	005	54 45	132 32	-0 34	-0 42	-0 52	-0 21	0.3	0.5	1.0	1.0
Webster Point (1mi W)	005	54 58	132 38	-0 29	-0 37	-0 47	-0 16	0.5	0.8	1.7	1.7
Mellen Rock (1mi E)	010	55 02	132 39	-0 24	-0 32	-0 42	-0 11	0.6	1.0	2.0	2.0
Tlevak Strait											
McFarland Islands	340	55 04	132 57	-0 19	-0 27	-0 37	-0 06	0.5	0.8	1.7	1.7
Sukkwaw Narrows	323	55 12	132 49	-0 29	-0 45	-0 20	-0 09	0.4	0.6	1.4	1.2
The Sentinels (1mi W)	335	55 11	133 01	-0 19	-0 27	-0 37	-0 06	0.5	0.8	1.6	1.6
Ulloa Channel											
Waterfall Cannery	155	55 18	133 15	-0 19	-0 27	-0 37	-0 06	0.6	1.0	2.0	2.0
Meares Passage											
Meares Island, S of	090	55 15	133 11	-0 19	-0 27	-0 37	-0 06	0.7	1.0	2.1	2.1
Millar Rocks	030	55 12	133 15	-0 29	-0 37	-0 47	-0 16	0.4	0.6	1.2	1.2
Bucarelli Bay to Davidson Inlet											
Point Arboleda (1mi W)	020	55 19	133 29	-0 24	-0 32	-0 42	-0 11	0.4	0.7	1.4	1.4
Craig Cannery	010	55 29	133 09	-0 14	-0 22	-0 32	-0 01	0.3	0.5	1.0	1.0
Klawock Narrows, N of Fish Egg Is	100	55 30	133 11	-0 18	-0 36	+0 14	+0 02	0.2	0.4	0.5	0.8
Saint Nicholas Ch (S end)	022	55 27	133 38	-1 47	-1 48	-1 27	-1 35	0.5	0.7	1.4	1.4
Portillo Channel	345	55 30	133 26	-4 41	-4 06	-3 56	-4 16	0.1	0.2	0.4	0.3
Saint Nicholas Chan N	016	55 32	133 34	-2 09	-1 51	-1 49	-2 02	0.2	0.2	0.6	0.5
San Christoval Rock	308	55 34	133 18	-4 36	-4 58	-4 38	-4 23	0.4	0.6	1.4	1.3
Arriaga Passage (W end)	062	55 34	133 44	+0 09	-0 33	-0 08	+0 17	0.2	0.3	0.7	0.7
San Christoval Chan, Larz light (0.25mi N)	315	55 35	133 20	-4 34	-5 02	-4 07	-4 19	0.2	0.2	0.7	0.5
Boca De Finas	125	55 42	133 35	See www.portsandpasses.com/updates.html							
Dead Tree Point	154	55 45	133 40	+4 00	+3 34	+3 30	+3 46	0.2	0.4	0.4	0.4
Whale Rock (1.0mi SE)	080	55 50	133 41	+0 18	-0 39	-0 07	+0 17	0.1	0.3	0.4	0.6
Tonowek Narrows	037	55 46	133 20	-1 34	-2 06	-1 29	-1 40	0.8	1.1	2.5	2.3
Karheen Passage, W of Cob Is.	161	55 48	133 19	+0 36	+0 01	+0 32	+0 30	0.4	0.8	1.3	1.6



Secondary Current Stations

Current Station	Dir. of Flood	Position		Time Differences				Speed Ratio		Avg Speed	
		Lat N	Long W	Trn to Fld	Max Fld	Trn to Ebb	Max Ebb	Fld	Ebb	Max Fld	Max Ebb
	° True	° /	° /	h min	h min	h min	h min			kn	kn
Tuxekan Passage (0.2mi S of Tuxekan)	323	55 53	133 15	-3 34	-3 32	-1 42	-3 05	0.3	0.2	0.8	0.4
Token Bay	064	56 00	133 27	-0 22	-0 09	-0 09	-0 24	0.2	0.2	0.6	0.5
El Capitan Passage											
Skookumchuck Pass	025	55 55	133 19	-0 06	-0 19	-0 11	+0 03	0.7	1.0	2.2	2.1
The Narrows, West of Aneskett Point	065	56 10	133 20	+4 57	+5 37	+5 54	+5 37	0.2	0.1	0.5	0.3
El Capitan Strait, NW entrance	073	56 09	133 27	-0 17	-0 28	+0 05	+0 05	0.3	0.4	0.9	0.9
Sumner Strait											
Warren Channel	349	55 56	133 50	-1 33	-2 00	-1 36	-1 11	0.6	1.3	2.0	2.7
Decision Passage	055	56 00	134 07	+0 08	-0 24	-0 24	-0 08	0.3	0.6	0.9	1.2
Shakan Strait, W end	152	56 08	133 35	-0 31	-0 44	-0 19	-0 13	0.3	0.4	0.9	0.9
Shakan Strait Rock	062	56 08	133 30	-0 12	-0 20	-0 14	-0 14	0.1	0.2	0.4	0.4
Dry Pass	115	56 10	133 24	+3 29	+2 31	+2 34	+4 03	0.1	0.1	0.3	0.2
Beauclerc Is Lt (1mi E)	070	56 15	133 49	+0 09	-0 41	-1 30	-1 28	0.1	0.4	0.4	0.9
Helm Rock	074	56 23	133 40	-0 54	-2 27	-2 44	-1 16	0.5	1.4	1.6	3.0
Sumner Island, East	352	56 24	133 45	-1 40	-0 38	-0 39	-0 56	0.4	0.5	1.3	1.1
The Eye Opener	103	56 23	133 15	+0 21	-0 35	-1 35	-0 47	0.2	1.0	0.7	2.2
Vichnefski Rock Light	050	56 27	133 01	-0 32	-0 58	-1 00	-0 47	0.6	1.1	1.9	2.2
Blaquiere Pt (1mi SSW)	045	56 33	132 34	-0 08	+0 23	-0 20	+0 23	0.3	0.5	1.1	1.0
Keku Strait (Rocky Pass)											
South entr Keku Strait	005	56 34	133 43	+0 57	+0 13	-0 25	-0 32	0.3	0.6	0.9	1.2
Eagle Island (0.5mi SE)	000	56 36	133 41	-0 04	-0 24	-0 49	+0 43	0.5	1.0	1.6	2.0
Devils Elbow	285	56 38	133 41	-0 18	-0 09	-0 41	+0 13	0.8	0.8	2.4	1.8
Summit Island, West of Cucumber Reef (0.2mi NW)	185	56 41	133 44	+1 48	+1 43	+2 10	+1 46	0.7	1.2	2.2	2.6
	110	56 47	133 46	+0 11	+0 16	+0 04	+0 11	0.4	0.8	1.4	1.9
Wrangell Narrows											
Point Lockwood	000	56 33	132 58	+0 06	-0 02	-0 12	+0 19	0.9	1.4	3.0	3.0
Spike Rock	005	56 36	132 59	+0 06	-0 02	-0 12	+0 19	1.5	2.1	4.7	4.3
South Ledge	037	56 37	132 58	+0 07	-0 30	-0 05	+0 27	0.5	1.4	1.7	2.9
Rock Point	335	56 41	132 56	+0 06	-0 02	-0 12	+0 19	0.3	0.5	1.0	1.0
Blunt Point	160	56 47	132 59	+0 31	+0 23	+0 13	+0 44	1.1	1.6	3.6	3.4
Turn Point	220	56 48	132 59	+0 31	+0 23	+0 13	+0 44	1.4	1.8	4.3	3.8
Prolewy Rocks	240	56 49	132 57	+0 31	+0 23	+0 13	+0 44	1.1	1.6	3.6	3.4
Frederick Sound *											
Cosmos Pt (0.5mi E)	180	56 40	132 36	+1 55	+1 15	+0 25	+0 42	0.1	0.2	0.4	0.5
Turnabout Island	080	57 07	133 55	-1 01	-0 59	-0 47	-0 51	0.4	0.5	1.4	0.9
Stephens Passage											
The Brothers (2mi E)	025	57 18	133 43	+0 11	+0 03	-0 07	+0 24	0.3	0.5	1.0	1.0
Tracy Arm Bar	060	57 47	133 38	+0 26	-0 17	-0 12	+0 32	0.3	1.2	1.0	2.4
Midway Island	335	57 50	133 50	+0 21	+0 13	+0 03	+0 34	0.3	0.5	1.0	1.0
Point Arden	355	58 09	134 08	+0 26	+0 18	+0 08	+0 39	0.3	0.5	1.0	1.0
Taku Inlet (0.2mi off Flat Point)	039	58 20	134 03	+0 48	+0 11	-0 12	+0 07	0.2	0.5	0.7	1.0

WRANGELL NARROWS

* Observations in Frederick Sound during the summer months indicate that the current usually flows to the NW, the speed varying with the tide. The current flows to these only on large tides.



Secondary Current Stations

Current Station	Dir. of Flood	Position		Time Differences				Speed Ratio		Avg Speed	
		Lat N	Long W	Trn to Fld	Max Fld	Trn to Ebb	Max Ebb	Fld	Ebb	Max Fld	Max Ebb
Gastineau Channel	°True	° /	° /	h min	h min	h min	h min			kn	kn
Point Salisbury, West	318	58 13	134 15	+0 22	+0 43	+0 44	+0 18	0.1	0.1	0.3	0.3
Juneau Harbor, N of	319	58 18	134 25	+0 11	+0 22	-0 04	-0 04	0.2	0.5	0.5	1.0
Point Young	308	58 13	134 34	-0 12	+0 15	+1 56	+0 51	0.1	0.2	0.3	0.4
Piling Point, East of	140	58 20	134 47	-0 33	-0 26	+0 15	+0 11	0.1	0.2	0.4	0.3
Chatham Strait											
Cape Ommaney Lt (5mi E)	005	56 10	134 31	-0 14	-0 22	-0 32	-0 01	0.3	0.5	1.0	1.0
Point Ellis (4mi W)	350	56 34	134 27	-0 04	-0 12	-0 22	+0 09	0.5	0.7	1.5	1.5
Kingsmill Pt Lt (3mi W)	355	56 50	134 31	+0 01	-0 07	-0 17	+0 14	0.6	1.0	2.0	2.0
Point Gardner Lt (2mi W)	350	57 01	134 40	+0 06	-0 02	-0 12	+0 19	0.6	1.0	2.0	2.0
Danger Pt Lt (3mi W)	350	57 31	134 42	+0 16	+0 08	-0 02	+0 29	0.5	0.7	1.5	1.5
Kootznahoo Inlet											
Turn Pt, Kootznahoo Inlet	105	57 30	134 35	+0 56	+0 48	+0 38	+1 09	2.2	2.9	6.9	6.1
S Passage Pt (3mi E)	175	57 46	134 50	+0 16	+0 08	-0 02	+0 29	0.5	0.7	1.5	1.5
Point Augusta, ESE	344	58 02	134 52	-0 02	-0 04	+0 01	+0 54	0.2	0.3	0.5	0.6
Hawk Inlet, Hawk Point	355	58 06	134 47	+0 18	-0 20	-0 17	+0 28	0.2	0.9	0.8	1.9
Sitka Sound											
Biorka Channel	045	56 50	135 30	+0 47	+0 20	+0 15	+0 13	0.1	0.2	0.4	0.4
Western Channel	029	57 03	135 24	+0 10	-0 20	-0 09	+0 09	0.1	0.2	0.3	0.4
Sitka Harbor, channel off Harbor Island	333	57 03	135 20	-0 58	-1 17	-2 02	-1 16	0.1	0.2	0.3	0.4
Krestof Sound											
West Channel (narrows)	242	57 09	135 35	-0 43	-0 51	-1 01	-0 30	0.4	0.5	1.3	1.1
East Channel (narrows)	051	57 10	135 33	-0 30	-0 32	-0 48	-0 23	0.4	0.7	1.3	1.4
Olga Strait											
Creek Point (0.44miSE)	319	57 13	135 30	+0 12	-0 24	+0 02	+0 27	0.4	0.6	1.3	1.2
Neva Strait											
Whitestone Narrows, S of Whitestone Pt	161	57 15	135 34	-0 24	-0 30	-0 07	-0 04	0.4	0.4	1.0	0.8
Wyvill Reef	150	57 16	135 35	-0 27	-0 30	-0 04	-0 13	0.5	0.7	1.6	1.4
Salisbury Sound											
Sinitstin Island	095	57 21	135 46	-0 19	-0 27	-0 37	-0 06	0.5	0.7	1.5	1.5
Peril Strait											
Ostioa Is Lt (1mi N)	280	57 35	135 27	+0 06	-0 02	-0 12	+0 19	0.6	1.0	2.0	2.0
Point Benham (1mi E)	310	57 29	135 11	+0 06	-0 02	-0 12	+0 19	0.6	1.0	2.0	2.0
Lindenberg Head	280	57 27	135 02	+0 06	-0 02	-0 12	+0 19	0.6	1.0	2.0	2.0
Fairway Island	265	57 27	134 53	+011	+0 03	-0 07	+0 24	0.6	1.0	2.0	2.0
Khaz Bay to Cape Cross											
Ebow Passage, S of Klag Island	042	57 37	136 06	+0 29	+0 08	+0 44	+0 54	0.5	0.4	1.7	0.9
Point Hogan, S Passage	058	57 41	136 15	+0 09	-0 45	+0 33	+0 55	0.1	0.2	0.4	0.5

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