

NEAH BAY, WASH.

LETTER

FROM

THE SECRETARY OF WAR,

TRANSMITTING,

WITH A LETTER FROM THE ACTING CHIEF OF ENGINEERS, REPORT ON PRELIMINARY EXAMINATION OF HARBOR OF REFUGE AT NEAH BAY, OR AT SUCH OTHER POINT IN THE VICINITY THEREOF AS WILL BEST SUBSERVE THE INTERESTS OF COMMERCE AND NAVIGATION.

JANUARY 23, 1912.—Referred to the Committee on Rivers and Harbors and ordered to be printed.

WAR DEPARTMENT,
Washington, January 22, 1912.

SIR: I have the honor to transmit herewith a letter from the Acting Chief of Engineers, United States Army, dated 20th instant, together with copy of report from Maj. C. W. Kutz, Corps of Engineers, dated April 13, 1911, on preliminary examination of a harbor of refuge at Neah Bay, Wash., or such other point in the vicinity thereof as will best subserve the interests of commerce and navigation, made by him in compliance with the provisions of the river and harbor act of June 25, 1910.

Very respectfully,

H. L. STIMSON,
Secretary of War.

The SPEAKER OF THE HOUSE OF REPRESENTATIVES.

WAR DEPARTMENT,
OFFICE OF THE CHIEF OF ENGINEERS,
Washington, January 20, 1912.

SIR: I have the honor to submit herewith, for transmission to Congress, report dated April 13, 1911, by Maj. C. W. Kutz, Corps of Engineers, on preliminary examination of a harbor of refuge at

Neah Bay, Wash., or such other point in the vicinity thereof as will best subserve the interests of commerce and navigation, called for by the river and harbor act approved June 25, 1910.

The district officer is of opinion that if a harbor of refuge is to be established in this vicinity, it should be at Neah Bay, but at the present time the cost of such a harbor would be excessive when compared with resulting benefits. He therefore considers it inadvisable for the General Government to undertake at the present time the improvement of Neah Bay or other point in the vicinity thereof with a view to the establishment of a harbor of refuge, though he urgently recommends the establishment of additional aids to navigation.

This report has been referred, as required by law, to the Board of Engineers for Rivers and Harbors, to whose accompanying report dated June 5, 1911, attention is invited. The board, with the division engineer, concurs in the unfavorable views of the district officer.

After due consideration of the above-mentioned reports I concur in general with the views of the district officer, the division engineer, and the Board of Engineers for Rivers and Harbors, and therefore, in carrying out the instructions of Congress, I report that the establishment by the United States of a harbor of refuge at Neah Bay, Wash., or vicinity, is not deemed advisable at the present time.

Very respectfully,

EDW. BURR,
Acting Chief of Engineers.

The SECRETARY OF WAR.

PRELIMINARY EXAMINATION OF NEAH BAY, WASH.

UNITED STATES ENGINEER OFFICE,
Seattle, Wash., April 13, 1911.

SIR: In compliance with instructions contained in department letter of August 4, 1910, I have the honor to submit the following report of preliminary examination for harbor of refuge at Neah Bay, Wash., or such other point in the vicinity thereof as will best subserve the interests of commerce and navigation. The authority for this examination is contained in the river and harbor act approved June 25, 1910.

An examination of Neah Bay and that portion of the coast of Washington extending easterly past Clallam Bay was made by Capt. Arthur Williams, Corps of Engineers, on November 24, 1910, accompanied by First Lieut. Joseph H. Earle, Corps of Engineers. A duly advertised public hearing, at which interested parties were present or represented, was held in this office November 5, 1910. A personal examination of Neah Bay and vicinity was made March 2, 1911, the journey from Port Angeles to Neah Bay being made on the life-saving tug *Snohomish*, through the courtesy of its commanding officer, Capt. T. J. Haake, United States Revenue-Cutter Service.

Neah Bay has been considered twice in former years with a view to its improvement as a harbor of refuge. A report on the first examination, authorized by river and harbor act of 1896, is contained in House Document No. 139, Fifth-fifth Congress, second session.

In this report the opinion is expressed that Neah Bay is worthy of improvement as a harbor of refuge and that the improvement is justified by the interests of commerce involved. The division engineer, Col. Suter, concurred in this opinion. This examination was not followed by a survey. The river and harbor act of 1899 called for an examination of Neah Bay in the same terms used in the preceding river and harbor act. The report thereon was made by Capt. Taylor, who had written the first report on this subject, and in it the opinion was again expressed that Neah Bay was worthy of improvement as a harbor of refuge. This opinion was also concurred in by the division engineer, Col. Mansfield. As a result of this second examination a survey was made and estimate of cost prepared, which was published in House Document No. 337, Fifty-sixth Congress, first session.

Clallam Bay, 15 miles east of Neah Bay, was examined with a view to its improvement as a harbor of refuge in 1899. The district officer's report, published in House Document No. 139, Fifty-fifth Congress, second session, was unfavorable to the improvement of Clallam Bay, but referred favorably to a similar improvement for Neah Bay.

Physical conditions in this vicinity have not materially changed since the reports above referred to were written, but for the sake of clearness the following brief description is included in this report:

The entrance to the Strait of Juan de Fuca, about 13 miles wide, lies between Cape Flattery, the extreme northwestern point of the State of Washington, and Bonilla Point, on Vancouver Island. The strait is of great depth at its center, but within $1\frac{1}{2}$ miles of the shore line is generally under 40 fathoms. Neah Bay is inside the entrance to the strait and 5 miles east of Cape Flattery. Notwithstanding the great width and ample depth of water, the entrance to the Strait of Juan de Fuca is regarded by navigators as a dangerous point, an opinion which is borne out by the large number of wrecks that have occurred in that vicinity in former years. The actual conditions at this point can best be described by quoting from the United States Coast Pilot, as follows:

The fogs are generally heavier near the entrance, decreasing in density and frequency up the strait. Near the entrance the fog sometimes stands like a wall, and vessels entering the strait run out of it into clear, bright weather. * * * In summer the prevailing northwesterly winds draw into the strait, increasing toward evening, and at times blowing a 10-knot breeze before midnight; this occurs, however, only when the winds are strong outside, and sailing vessels may be a week from Cape Flattery to Admiralty Inlet, or vice versa. In winter southeasterly winds draw out of the strait, causing a heavy cross sea off the entrance, the heavy southwesterly swell meeting that coming out. Under these conditions vessels, especially sail, make Neah or Clallam Bays and await more favorable weather. The weather off the entrance in winter is, as a rule, exceptionally severe and wrecks are of frequent occurrence; the heavy broken seas are probably due to the shoaling off the entrance, the inequality and velocity of the currents, and the conflict between the wind drawing out of the strait and that along the outer coast.

Neah Bay lies between Koitlah Point and Waaddah Island. It is protected from west, south, and east winds by the mainland, and from northeast winds by Waaddah Island; it is not protected from the north and northwest, but swells due to any westerly storms, even southwest storms, make it uncomfortable for vessels at anchor. The anchorage space is about 1 mile by a half mile, with depths from 20 to 50 feet, and the holding ground is said to be good. Between Waaddah Island and the mainland is a channel 250 yards wide and

22 feet deep, which forms an eastern entrance to the bay and is used habitually by tugs and small boats, including the steamer which comes to Neah Bay from Seattle three times each week.

The only other site in the vicinity which comes within the scope of the examination is Clallam Bay, the objections to which are well set forth in the report on that harbor made in 1895. Port Angeles, lying 56 miles from the cape, has an excellent harbor, with ample protection for vessels in time of storm. It is a natural harbor of refuge, but, in the opinion of navigators, is too far from the entrance to meet all the requirements of commerce and navigation.

Because of its proximity to the entrance of the strait and because of the relative ease with which it can be converted into a secure harbor of refuge Neah Bay presents the most favorable site for an improvement of this character, and if a harbor of refuge is to be established in this vicinity it should unquestionably be built at Neah Bay.

The foreign commerce to and from Puget Sound, except that going to and coming from British Columbia ports, passes through the Strait of Juan de Fuca. All domestic commerce, except a portion of the traffic with Alaska, which uses the channel east of Vancouver Island, also passes through the Strait of Juan de Fuca. There is practically no coastwise commerce that does not enter or leave the straits. The following is a statement of foreign commerce for the years 1904 to 1910, inclusive, as shown by records of the customhouse, district of Puget Sound:

Foreign commerce.

Years.	Number of vessels.		Tonnage.		Value.	
	En- trances.	Clear- ances.	Entrances.	Clearances.	Imports.	Exports.
1904.....	1,908	2,059	1,178,729	1,372,636	\$11,285,096	\$22,756,403
1905.....	1,940	2,034	1,230,207	1,433,703	7,373,323	43,574,821
1906.....	1,975	2,136	1,401,840	1,523,948	13,614,438	48,867,979
1907.....	2,159	2,277	1,545,762	1,736,889	25,353,373	43,288,213
1908.....	2,465	2,642	1,799,602	2,058,994	22,208,814	43,930,857
1909.....	2,671	2,814	1,919,389	2,069,784	26,959,891	26,653,349
1910.....	2,501	2,596	1,766,680	2,049,330	28,910,491	29,889,473

The above table includes vessels entered from and cleared to British Columbia ports, part of which do not pass Neah Bay. For the year ending June 30, 1910, this part of the foreign commerce was as follows:

	Number of vessels.	Tonnage.
Entrances.....	2,347	1,385,871
Clearances.....	2,378	1,510,059

The collector of customs states:

Many of the vessels embraced in the foregoing passed Neah Bay inwards or outwards, or both, although entered or cleared in this district as destined from or to British Columbia. For instance, the steamships of the Pacific Coast Steamship Co., proceeding from San Francisco via Victoria to Puget Sound and the reverse, are entered and cleared, as from and to British Columbia, and the same conditions apply

to other traffic, but I have not sufficient data to estimate what proportion of these vessels and the aggregate tonnage that passed Neah Bay.

Included in this British Columbia commerce there are two regular steamers each way each day between Seattle and British Columbia ports which do not pass Neah Bay and a number of others which use the channel east of Vancouver Island.

The total imports for 1910, which include the receipts at certain subports not on Puget Sound, were as follows:

Imports for 1910.

Commodities.	Value.	Quantities.		
		As listed.		In short tons.
		Quantity.	Unit.	
Copper ore, matte, and bars	\$3,282,478			116,412
Tea	1,767,538	10,033,034	Pounds...	5,016
Tin in bars, pig, etc	348,472	1,083,092	do.....	541
Cement	129,940	36,273,930	do.....	18,136
Decorated earthenware.....	248,353			11,200
Manila hemp	1,227,846	9,720	Tons.....	9,720
Bags and burlaps	828,872			14,144
Fish and fish products.....	144,278			11,000
Matting	135,331	1,776,682	Yards.....	1,776
Rice	154,861	5,736,934	Pounds...	2,368
Silk, raw and waste.....	15,269,308	4,653,743	do.....	2,327
All other articles.....	5,373,214			113,434
Total	28,970,491			76,074

¹ Estimated.

Of the total imports, those coming from British Columbia were valued at \$5,638,197.

EXPORTS FOR 1910.

The total exports for 1910 which include shipments through certain subports not on Puget Sound, were as follows:

Commodities.	Value.	Quantities.		
		As listed.		In short tons.
		Quantity.	Unit.	
Live stock	\$366,366			6,209
Barley	80,656	112,118	Bushels...	2,691
Oats	289,120	602,729	do.....	9,644
Wheat	4,592,371	4,856,691	do.....	143,701
Wheat flour.....	5,417,231	1,296,681	Barrels...	129,688
Copper and manufacturers of.....	221,397			11,106
Cotton, raw	2,120,267	32,954	Bales.....	8,234
Cotton cloth.....	5,762	45,856	Yards.....	23
Salmon, canned.....	3,331,174	32,406,477	Pounds...	16,203
Fruit.....	673,608			13,472
Hay and feed	355,558	15,164	Tons.....	15,164
Iron and steel and manufacturers of.....	2,578,491			12,892
Leather and manufactures of.....	148,790			372
Paper and manufacturers of.....	328,568			2,054
Meat products.....	1,083,696			2,167
Eggs and dairy products.....	242,546			1,485
Malt liquors.....	67,910			1,905
Tobacco and manufacturers of.....	292,054			1182
Lumber	2,663,810	204,572,000	Feet.....	306,858
All other articles.....	5,030,098			112,575
Total	29,889,473			684,625

Estimated.

Of the total exports, those going to British Columbia were valued at \$8,103,359.

The following statement covers commerce to noncontiguous territory of the United States in 1910:

	Number of vessels.	Tonnage.	Cargo value.
Alaska.....	368	374, 942	\$14, 707, 913
Hawaii.....	94	182, 242	2, 494, 834

Part of the Alaska commerce and all of the Hawaiian commerce passes Neah Bay. No statistical record is kept of the vessels entered from Alaska and Hawaii, but the numbers of vessels and vessel tonnage coming from these countries does not differ materially from the figures given above for the outgoing commerce.

There is no known agency that keeps a record of the domestic commerce to and from contiguous territory passing Neah Bay, but the following table has been compiled from statements of the principal merchants and steamship companies engaged in trade with Californian ports and checked by comparison with the records of the harbor masters of Seattle and Tacoma:

Domestic commerce passing Neah Bay.

Commodities.	Quantities.	
	Imports.	Exports.
1909.		
Building material.....	tons.....	674
Cement.....	do.....	69, 424
Coal.....	do.....	25, 000
Hay.....	do.....	2, 000
Lumber.....	do.....	344, 886
Mixed oils.....	do.....	386, 664
Miscellaneous.....	do.....	284, 520
Total.....	do.....	743, 282
1910.		
Building material.....	tons.....	1, 000
Cement.....	do.....	87, 424
Coal.....	do.....	70, 000
Hay.....	do.....	2, 000
Lumber.....	do.....	343, 987
Mixed oils.....	do.....	543, 644
Miscellaneous.....	do.....	313, 372
Total.....	do.....	947, 440
		758, 868

The best available information as to the total number of vessels passing Neah Bay is found in a record kept by the operator in charge of the United States Weather Bureau station of the number of vessels passing Tatoosh Island. No watch is kept between 8 p. m. and 4.30 a. m., and some vessels pass unobserved in rain and fog, so that the actual number of vessels passing Neah Bay is somewhat greater than that shown in the following table, which was compiled from the daily record:

List of vessels reported by operator in charge of United States Weather Bureau Station as passing Tatoosh Island between 4.30 a. m. and 8 p. m. from July 1, 1908, to June 30, 1910.

Date.	American steamer.	American sail.	American steamer tonnage.	American sail tonnage.	Foreign steamer.	Foreign sail.	Foreign steamer tonnage.	Foreign sail tonnage.	Fishing vessels.	Fish tonnage.	Government vessels.	Barges.	Tonnage.	Total vessels.
1908.														
July.....	54	10	142,490	5,411	24	8	135,423	3,934	8	1,819	7			111
August.....	25	11	93,834	10,061	24	6	97,329	6,939	3	175	8			77
September.....	41	9	120,260	7,512	18	4	65,763	6,540	16	1,600	2			90
October.....	31	17	102,431	15,142	21	16	98,601	32,125	15	1,200	7			117
November.....	27	21	98,016	20,272	16	10	78,824	19,823	16	1,000	2			92
December.....	33	12	98,631	10,262	9	8	37,952	13,020	15	200	2			79
1909.														
January.....	34	19	98,671	17,766	12	4	56,093	4,432			7			76
February.....	25	32	69,850	15,104	21	11	90,253	35,229			4			73
March.....	44	30	135,789	24,324	24	9	106,893	19,042			2			109
April.....	67	42	179,482	32,620	31	6	127,376	9,195	11	350	4	8	12,096	169
May.....	64	27	192,239	22,958	31	6	123,467	9,009			21	18	25,707	167
June.....	79	24	232,779	21,183	32	7	134,466	20,096			7	18	18,013	167
July.....	60	21	155,884	16,831	35	5	145,033	8,354			7	10	11,033	137
August.....	88	21	272,545	17,134	37	8	170,227	19,660	3	415	13	15	18,691	183
September.....	48	23	162,833	17,303	30	3	119,846	1,988			6	5	7,349	115
October.....	54	30	163,430	29,789	30	7	125,912	10,391			9			130
November.....	40	16	143,227	13,965	20	8	84,832	10,531			6			90
December.....	40	26	121,430	25,717	15	6	67,158	11,841			6			93
1910.														
January.....	39	35	100,855	32,159	19	1	86,476	2,550	2		6			102
February.....	58	19	168,101	15,859	12	6	52,924	11,741	1	250	6			102
March.....	53	41	168,912	28,893	20	4	89,452	5,246	1	260	2			121
April.....	63	50	177,176	40,166	27	6	86,251	7,245	4	1,559	2	5	5,578	157
May.....	71	36	190,179	28,925	34	2	156,920	1,248			11	12	12,880	154
June.....	87	40	275,316	27,912	46	8	239,591	13,282	1	150	14	18	20,115	214
Total.....	1,225	612			588	159			96		150	108		

From this table it appears that from 3 to 7 vessels pass the entrance to the Straits each day and that the smaller of these figures represents the average vessel movement during the winter months when weather conditions are most severe.

The Merchants Exchange of Seattle keeps in close touch with the movement of all vessels in the Pacific Northwest, and its records show an average of 5 vessels passing Neah Bay each day with an average tonnage of 2,000. Comparison with the commercial statistics published in Capt. Taylor's survey report of 1899 shows a material increase in the amount of commerce passing Neah Bay, but a decrease in the number of sailing vessels. The number of sailing vessels, foreign and domestic, entered and cleared in the two fiscal years 1896 and 1897 was 912. The number of such vessels reported as passing Tatoosh Island in the two fiscal years 1909 and 1910 was 771. The actual decrease is considerably greater than the above figures indicate for the reason that the statistics of 1896 and 1897 do not include all the vessels passing Tatoosh Island, but only those destined to or from American ports, while the statistics for 1909 and 1910 include sailing vessels to and from British Columbia ports.

Previous reports on the question of creating a harbor of refuge near the entrance to the Straits contain lists of wrecks occurring in that vicinity between 1874 and 1897. To complete the record the following tabular statement, prepared by the General Superintendent of the United States Life-Saving Service, is presented:

Disasters (strandings) to vessels near Cape Flattery from July 1, 1897, to June 30, 1910, as shown by the records of the Life-Saving Service.

Vessel.	Rig.	Flag.	Date of disaster.	Where from and where bound.	Locality of disaster.	Extent of loss.
Matilda	Bark	American	Aug. 19, 1897	Honolulu to Port Townsend	Tatoosh Island	Total.
Washtenaw	Steamship	do	Jan. 1, 1899	San Francisco to Tacoma	Pillar Point	Partial.
Do	do	do	Sept. 26, 1901	Tacoma, Wash., to Oakland, Cal.	Duncan Rock	Do.
Mackinaw	Schooner	do	Oct. 16, 1901	San Francisco to Tacoma	Duncan Rock Shoal	Do.
Elwah	Scow	do	Sept. 1, 1902	Port Angeles to Elwah River	Angeles Point	Total.
Leelanaw	Schooner	do	May 5, 1903	San Francisco to Tacoma	Tatoosh Reef	Partial.
Garland	Steamer	do	June 24, 1903	Port Crescent to Port Angeles, Wash.	Angeles Point	Do.
Tanner	Brig	do	Oct. 24, 1903	San Diego, Cal., to Port Angeles, Wash.	do	Do.
Morning Star	Gasoline sloop	do	Nov. 10, 1903	Seattle to Ozette, Wash.	Sekon Point	Total.
Alma	Schooner	do	Apr. 12, 1904	Port Angeles to Cape Flattery fishing grounds	Neah Bay	Do.
Valencia	Steamship	do	Jan. 22, 1906	San Francisco to Seattle	Vancouver Islands	Do.
Santa Ana	Steamer	do	Oct. 3, 1906	Seattle to Valdez, Alaska	Clallam Bay	Partial.
Skagit	Barkentine	do	Oct. 25, 1906	San Francisco to Port Gamble, Wash.	Clo-oose, near Vancouver Island	Total.
Alice Gertrude	Steamship	do	Jan. 11, 1907	Returning to East Clallam	Clallam Bay	Do.
Spokane	Steamer	do	Feb. 10, 1907	Victoria, British Columbia, to San Francisco	Duncan Rock	Partial.
Winslow	Schooner	do	July 28, 1907	San Francisco to Winslow, Wash.	do	Do.
Hecla	Bark	do	Aug. 10, 1907	San Pedro to Port Townsend	do	Do.
Uncle Jim	Gasoline steamer	do	Oct. 4, 1907	Returning to Port Angeles	Clallam Bay	Do.
Wyadda	Steamer	do	Oct. 24, 1908	Port Gamble to sea	Pillar Point	Unknown.
A. M. Baxter	Scow	do	do	Port Gamble to San Francisco	do	None.
Soquel	do	do	Jan. 22, 1909	Callao, Peru, to Port Townsend	Sea Bird Island	Total.
Pearl	Gasoline launch	do	Feb. 20, 1910	Neah Bay to Port Angeles	Kydaka Point	None.
Edith	Gasoline schooner	do	May 8, 1910	Seattle to Cape Flattery fishing banks	Waaddah Island	Total.
Dorothy	Gasoline launch	do	Aug. 3, 1910	Fishing around Cape Flattery	Neah Bay	Unknown.
Horner	Steamer	do	Aug. 7, 1910	Puget Sound to San Francisco	Waaddah Island	Do.
Waaddah	Gasoline launch	do	Aug. 17, 1910	Fishing	15 miles NW. of Cape Flattery	Do.
Watson	Steamer	do	Sept. 1, 1910	Seattle to San Francisco	Waaddah Island	Partial.
Standard No. 2	Gasoline schooner	do	Sept. 24, 1910	Fishing	15 miles NW. of Cape Flattery	Unknown.

NEAH BAY, WASH.

The two wrecks in Neah Bay, and possibly the three wrecks at Clallam Bay, could have been avoided with a harbor of refuge at Neah Bay, but it is not evident that such a harbor would have prevented any of the other wrecks listed. One of the wrecks in Clallam Bay, that of the steamer *Alice Gertrude*, is described by Capt. Kalstrom as follows:

On the evening of January 11, 1907, when within sight of the lights at Neah Bay, with a strong wind blowing, my chief engineer reported that one of the steam connections in the engine room was leaking. Had there been a safe anchorage in Neah Bay I could have run my ship in there and in half an hour been in perfect safety. As it was, I was compelled to put about and seek anchorage farther up the Straits. When about opposite Clallam Bay, a blinding snowstorm having come up in the meantime, my ship was driven on the rocks and became a total wreck.

Another disaster (not included in the above list), which would apparently have been avoided with a harbor of refuge at Neah Bay, is described as follows by one of the advocates of this project:

A few years ago a bark, the *Cowlitz*, anchored in Neah Bay, when a storm came up and her tug attempted to tow her back to Clallam Bay. As she arrived opposite this bay her hawsers parted and she was carried out to sea and nothing heard from her afterwards.

The list includes a number of wrecks on Waaddah Island, nearly all of which (certainly the two in 1910) were due to the lack of a foghorn and suitable lights at the end of the island.

Vessels approaching the coast in time of severe storm, particularly sailing vessels, have difficulty in entering the Straits and frequently put back to sea. Such vessels, if they succeeded in entering the Straits, would not (unless disabled) attempt to gain refuge in Neah Bay, as there is no reason why they should not proceed to their destinations.

The benefit to incoming vessels that would result from increased protection at this point would be in the greater certainty of finding a tug in waiting and the assurance of a protected harbor close at hand in case they became disabled. To outgoing sailing vessels a harbor of refuge would be a great convenience during the winter months, as they could be towed to Neah Bay on an ebb tide and then await favorable conditions before putting to sea. Sudden changes in the weather now make it necessary at times for such vessels after arriving at the entrance to run back to Clallam Bay or Port Angeles for shelter.

As a waiting port for outgoing vessels a well-protected harbor at Neah Bay is less necessary than it was 12 years ago, as steam vessels have increased in size, the number of sailing vessels has decreased, the weather signals on the straits are more numerous, and the wireless telegraph prevents interruption of communication between Tatoosh Island and points inland.

A harbor of refuge in this vicinity is advocated by all the navigation interests on Puget Sound and by the leading commercial organizations of the principal cities situated on its waters.

Port Angeles, situated on the Strait of Juan de Fuca, 65 miles east of Neah Bay, alone dissents from this view, its commercial club alleging:

- (1) That there is no necessity for a harbor of refuge at Neah Bay.
- (2) That even were such a harbor desirable, it is impracticable to construct and maintain the breakwater required to create it.

(3) That it would be impossible for vessels to enter such a harbor during a westerly gale, as it would be necessary to bring them broadside to the storm.

(4) That Port Angeles, with its large and safe anchorage, can accommodate all vessels that require protection.

Neah Bay is the rendezvous for a large number of fishing boats which operate outside of the straits. Some of these vessels are schooners of several hundred tons burden, but the large part of them are gasoline boats of 15 tons each, carrying 8 men to a boat. At times they are driven out of the bay and compelled to seek shelter at Clallam or Port Angeles, though they often find shelter in coves or in the lee of Waaddah Island.

A thoroughly protected harbor would be a great convenience to these boats, and it is not improbable that when the Government Indian and military reservations surrounding Neah Bay are thrown open to settlement this industry will so increase as to warrant in itself some additional protection. In other words, a harbor of refuge at Neah Bay would also serve as a fishing harbor, similar to those built in recent years on the coast of Scotland. It would also serve for the development of local commerce, and logs now rafted from points near Neah Bay to points on Puget Sound would be cut into timber on the shores of Neah Bay.

Neah Bay in its present condition serves a very useful purpose, as the following list of vessels which sought shelter in it will show:

Number and class of vessels that anchored at Neah Bay during the year 1909.

Months.	Steam vessels.	Sail vessels.	Tugs.	Barges.	Government vessels.	Total.
January.....	2	11			4	17
February.....	5	23	1	1	3	33
March.....	2	12			3	17
April.....	1	10		2	1	14
May.....		1	3	2	2	8
June.....	2	5		4	3	14
July.....				4		4
August.....		3		1		4
September.....	1	2			1	4
October.....	1	3			2	6
November.....		7	1			8
December.....	3	12			1	16
Total.....	17	89	5	14	20	145

It is true that occasionally such vessels in Neah Bay are compelled to weigh anchor and seek better shelter farther east, but this they have nearly always succeeded in doing, as there is no record of any vessels having been driven on the beach in Neah Bay, except one or two small fishing schooners.

Even without a breakwater, Neah Bay would be used considerably more than it is if additional aids to navigation were provided. The whistling buoy off Waaddah Island and the small light on it have not been sufficient to prevent several vessels from being wrecked at this point, and it is the general belief of navigators that a larger light on Waaddah Island and range lights as a guide into the harbor would greatly increase its usefulness.

When the life-saving tug *Snohomish* was assigned to duty in the Strait of Juan de Fuca several years ago, it was proposed to establish for her use a coal and supply depot on Waaddah Island, and contract was let for a pile wharf. Underlying rock made it impossible to drive piles and the station was established at Port Angeles instead.

This failure to build a pile wharf on a rock bottom at Waaddah Island has been construed by advocates of a breakwater to mean that it is impossible to maintain a supply wharf in Neah Bay unless additional protection is provided. This is not believed to be true. Pile launching ways have been maintained at the life-saving station for several years without damage. A wharf is maintained in Clallam Bay and a wharf on the beach in Neah Bay would be but little more exposed than a wharf at Clallam Bay. There is none there now, because the local commerce is not sufficient to justify the construction of a heavy substantial wharf as it would have to be.

As to the violence of wave action in Neah Bay during storms, the captain of the *Snohomish*, who has been there practically all winter, states that at no time was it so rough that the *Snohomish* could not have remained at anchor. Commercial boats, which are not so strongly built, might not have been equally successful. Furthermore, conditions this winter are said to have been unusually good.

Concerning the need of a harbor of refuge at Neah Bay, the following expressions of opinion are of value:

Capt. J. H. Quinan, United States Revenue-Cutter Service, now assistant inspector United States Life-Saving Service, Portland, Oreg., states:

As to the establishment of a harbor of refuge at Neah Bay, I am a firm believer that it should be done. It would be a boon for shipping, especially vessels outward bound, as the nearest harbor of any account is Port Angeles, 50 miles away. The holding ground at Neah Bay is good, and what is needed is protection from the westerly gales and consequent swell. I feel competent to express myself, as I have anchored in the harbor a number of times, and while I was there in command of the U. S. Revenue Cutter *Tahoma*, having relieved the *Snohomish* for a short period.

On the other hand, Capt. T. J. Haake, United States Revenue-Cutter Service, in command of the life-saving tug *Snohomish*, a vessel which has spent practically its entire time at Neah Bay during the past winter, stated in response to a direct question that in his judgment the benefits that would result from the creation of a harbor of refuge at Neah Bay would not be sufficient to warrant the expenditure.

The advantages of a harbor of refuge at Neah Bay may be summarized as follows:

(1) It would form a waiting port for the convenience of outgoing sailing vessels and barges.

(2) It would form a haven for vessels disabled off Cape Flattery—admittedly a dangerous point.

(3) It would be of great advantage to the fishing fleet which operates outside the entrance.

(4) With the throwing open to settlement of the Government Indian and military reservations surrounding Neah Bay, considerable local commerce would develop if the harbor were protected.

The number of sailing vessels in use on these waters is steadily decreasing and there is every prospect that the decline will continue. This decline is not offset as on the Atlantic coast by a corresponding increase in barge traffic. Five or six sailing vessels were converted

into barges a few years ago for the purpose of conveying rock from Puget Sound to Grays Harbor to be used in construction of the North Jetty, and the Standard Oil Co. operates two oil barges between California and Puget Sound.

With only a limited barge traffic in existence or in prospect, with only 771 sailing vessels passing Neah Bay in the last two years (an average of one every other day outbound), and with the reasonable certainty of a further decrease in this class of vessels, I am of the opinion that the advantages which outgoing sailing vessels and barges would derive from being able to wait at all times in Neah Bay instead of Port Angeles are not sufficient to justify the construction of a harbor of refuge, designed primarily as a waiting port. Considered as a haven for disabled vessels, such a harbor would undoubtedly be of value, but a study of the wreck statistics does not indicate that the saving to commerce would be commensurate with the investment.

When the country immediately surrounding Neah Bay is thrown open to settlement, some artificial protection to this harbor will be desirable for the safety of the commerce which will follow the building of sawmills and fish canneries on Neah Bay, but no such local development is in prospect.

In view of the above, the conclusion is reached that the creation of a harbor of refuge at Neah Bay, Wash., or at such other point in the vicinity thereof as will best subserve the interests of commerce and navigation, is a work not worthy of being undertaken by the United States at the present time. It is urgently recommended, however, that a fog signal and larger light on Waaddah Island and range lights leading into Neah Bay be provided in order that full use may be made of the shelter to be found there throughout the greater part of the year.

Very respectfully,

C. W. KUTZ,
Major, Corps of Engineers.

The CHIEF OF ENGINEERS, UNITED STATES ARMY
(Through the Division Engineer).

[First indorsement.]

UNITED STATES ENGINEER OFFICE,
NORTHERN PACIFIC DIVISION,
San Francisco, Cal., May 10, 1911.

Respectfully forwarded to the Chief of Engineers, United States Army.

In my opinion a harbor of refuge at Neah Bay is desirable if it could be constructed at a reasonable cost. In the report of the survey of Neah Bay submitted by the district officer and forwarded to the Secretary of War on January 20, 1900, the cost of the necessary breakwater was given as \$1,111,907.50. The division engineer recommended more ample anchoring ground, which would bring the estimated cost to \$1,873,154. Consideration of the unit prices assumed in these estimates would indicate that it is not likely better prices could be obtained to-day, and, in view of the general increase in cost of labor, the cost might be greater.

It is not thought that the benefit to commerce or navigation would warrant this large cost and the conclusions of the present district officer are approved.

JOHN BIDDLE,
*Colonel, Corps of Engineers,
Division Engineer.*

[Third indorsement.]

THE BOARD OF ENGINEERS FOR RIVERS AND HARBORS,
Washington, June 5, 1911.

Respectfully returned to the Chief of Engineers, United States Army.

This inquiry has in view the improvement of Neah Bay or such other point in the vicinity thereof as will best subserve the interests of commerce and navigation. Neah Bay is located about 5 miles east of the outer entrance to San Juan de Fuca Straits. Experience in this vicinity has shown that the locality is dangerous to navigation. Clallam Bay, 15 miles east of Neah Bay, is the only other point in the vicinity worthy of any consideration as a harbor of refuge, but it is not as well adapted for this purpose as Neah Bay, and the district officer states that if a harbor of refuge is to be established in this vicinity it should be at Neah Bay. At Port Angeles, 56 miles from the entrance to the straits, there is a natural harbor of refuge, but on account of the distance from the entrance it does not meet all requirements. Neah Bay has been examined and surveyed under former direction of Congress, and estimates already submitted indicate that the establishment of a suitable harbor of refuge would cost not less than \$1,000,000, and probably nearer \$2,000,000.

The commerce passing this locality is large and important, as indicated by the data given within. While this commerce has increased materially during the past 10 or 12 years, it is notable that the number of sailing vessels, which are the class in greatest need of a harbor of refuge, has decreased. The number of wrecks occurring in the vicinity of the entrance to the straits since 1897 is reported as 28, of which number the district officer states 5 might have been avoided had there been a protected harbor at Neah Bay. It appears that a number of these wrecks were due to the lack of sufficient effective aids to navigation. These have been improved in recent years, however, and the district officer urgently recommends that additional aids be established in the vicinity of Neah Bay.

The greatest value of a harbor of refuge at this locality would be to outgoing sailing vessels, as it would give an opportunity for them to lie near the entrance to the straits and wait for favorable weather conditions before putting to sea. Incoming vessels would not have much need for the harbor unless disabled, in which event it would be of value. The harbor would be of advantage to a number of fishing vessels which operate outside the straits, and in the opinion of the district officer the fishing industry may increase with the future developments and opening up of the country adjacent to Neah Bay to such an extent as to warrant some protection in itself.

The harbor serves a useful purpose in its present condition, as indicated by the table giving the number of vessels seeking shelter in 1909, from which it appears that 145 vessels anchored there, of

which number 89 were sailing vessels. It is stated within that the harbor of refuge would be used to a greater extent if additional aids to navigation were installed.

While a harbor of refuge at this locality would undoubtedly be of value, the board believes, from the facts and information now before it, that the cost of such a harbor would be excessive when compared with resulting benefits, and therefore it concurs in the opinion of the district officer and the division engineer that at the present time it is not advisable for the General Government to undertake the improvement of Neah Bay or other point in the vicinity thereof with a view to the establishment of a harbor of refuge.

In response to the district officer's notification of his unfavorable report a number of communications from commercial organizations at the principal towns on Puget Sound, advocating the improvement, have been received and given consideration. In compliance with law, the board reports that there are not questions of terminal facilities, water power, or other subjects that have any material bearing on the improvement under consideration.

For the board:

WM. T. ROSSELL,
Colonel, Corps of Engineers,
Senior Member of the Board.

LETTER OF RAILWAY AND MARINE NEWS, A PAPER PUBLISHED IN SEATTLE, WASH.

SEATTLE, December 17, 1910.

GENTLEMEN: Having made a thorough and extended study of the needs of a harbor of refuge at Neah Bay, Wash., at the entrance of the Straits of Juan de Fuca, we desire to most emphatically indorse this plan as absolutely necessary for the protection of a large percentage of the constantly increasing commerce passing in and out of Puget Sound. We desire to place on record, in connection with the petition of Puget Sound shipping and business men, our indorsement of that petition asking for a reconsideration of the Neah Bay project. We are familiar with what data has been collected for your information and we believe that it will prove the need of this improvement and the unanimity of opinion among practical men as to the value which it will be to shipping interests.

We believe that the report of Capt. Harry Taylor on this matter, rendered some 10 years ago, thoroughly explains conditions as they are to-day. The only change is that within the last decade the amount of shipping passing in and out of the straits has increased greatly, particularly the fishing fleet, which would benefit in a large degree by the establishment of a harbor of refuge such as is suggested.

At the recent hearing held by the local engineer officer, the Neah Bay project was taken up the same afternoon as were two or three other purely local improvements. Consequently, the Neah Bay improvement appeared to have a local interest, and for this reason it did not receive the attention that it deserved nor the indorsement that otherwise would have come from other ports on Puget Sound.

Very frequently the weather off this coast is so boisterous and dangerous that even large ships are unable to put to sea. Frequently they anchor in Neah Bay, although that is anything but a safe place for them, as it is greatly exposed to the sweep of the ocean and the southerly winds which prevail in winter. Sometimes conditions are so severe that vessels for a week or more are unable to pass out to sea. The record showing the amount of tonnage which is thus compelled to seek anchor in Neah Bay is incomplete, as during the worst weather the telegraph wires from the weather stations are down, fog frequently obstructs the view of the observers, and the observers do not report the smaller fishing vessels which pass in and out constantly. Therefore Neah Bay in its present exposed condition is a rendezvous for a much larger fleet than the figures show, and were the harbor of refuge built there is no question that it would be of the greatest benefit to shipping and would undoubtedly save a great deal of valuable shipping property and probably many lives.

It is probably known to your honorable board that the U. S. life saving tug *Snohomish* is unable to lie at anchor at Neah Bay in heavy weather, at which time her services are needed more than any other time close to the entrance of the straits, where she can render aid to distressed shipping with the least delay. With a harbor of refuge she could make Neah Bay her permanent headquarters and thus be of the greatest service to the maritime interests of these waters. The necessity of a harbor of refuge is also emphasized by the experiences of the life saving-station at this point, where, as is well known, it has been impossible to maintain wharfs and ways, owing to the great swell in the bay.

Owing to the great importance of this matter, the rapidly increasing importance of Puget Sound commerce, and the concensus of opinion among shipping men as to the need of the improvement, we trust that you will give this matter your full and fair consideration, believing that it should be referred back for further examination and a report thereon. Trusting that you will be able to grant the requests made by Puget Sound shipping men, to which we heartily subscribe, we beg to remain,

Yours, very truly,

RAILWAY AND MARINE NEWS,
Per ROBERT C. HILL, *Marine Editor.*

The BOARD OF ENGINEERS FOR RIVERS AND HARBORS.

LETTER OF PORT ANGELES COMMERCIAL CLUB.

PORT ANGELES, WASH., *December 24, 1910.*

GENTLEMEN: As stated in our telegram of the 21st instant, we protest against the construction of a breakwater at Neah Bay as an unjustifiable expenditure of public funds. Clallam Bay, within 15 miles east of Neah Bay, has good holding ground, is fairly well protected, and is large enough to accommodate all shipping that may seek refuge in stormy weather, without any expenditure of public funds.

Further, we are morally certain that a breakwater such as is proposed for Neah Bay, from Waddah Island westerly to a point on the mainland, can not be constructed so that it will maintain its position one stormy season. The bottom of that part of the straits is of smooth rock and dips sharply toward the main body of the straits, northerly; hence there is nothing to hold any dumped rock in place, and the enormous waves that sweep into Neah Bay would soon distribute the rubble rock over the bottom of the Straits of Fuca.

To prove our contention we wish to cite a case where private capitalists attempted to construct a breakwater at Port Crescent some years ago. This place is 50 miles farther up the straits than Neah Bay and not nearly as much exposed to the heavy ocean swell as that place. This work was in charge of practical, competent engineers and they had all the latest improved machinery and hoists with which to handle the enormous rocks which were dumped into Crescent Bay. They had tunneled under a mountain of rock and placed a schooner load of powder in the tunnel and the blast had broken up the rock so that they could get any size that was possible to handle with the heavy cranes and hoists, and for two years everything went lovely with the breakwater; but one night in the month of December a fair-sized storm came up and lo and behold there was no breakwater next morning, no sign of it nor any sign of where it had gone, and to-day the regular passenger steamers which trade up and down the straits pass immediately over the place where the breakwater stood. We repeat, we see no reason or need for building a breakwater at Neah Bay, for the reason as already stated—Clallam Bay is within 15 miles of Neah Bay, with good holding ground and large enough to accommodate all shipping that may desire to seek refuge.

All along the strait we have Government signal stations at which colored flags are flown in daylight and colored lights are burned at night. These stations are maintained at Port Angeles, Port Crescent, Clallam Bay, Neah Bay, and Tatoosh Island. Shipping see these signals all along the line. With the signal stations above enumerated to look to for information no vessel has any excuse for passing Port Angeles or Clallam Bay at the farthest, in threatening weather, and when it is safe for a vessel to make the entrance to the Strait of Fuca it is very easy for them to make some of the natural harbors farther up the strait.

With reference to the necessity of a breakwater on account of the life-saving station, which is located at Neah Bay, and the life-saving tug *Snohomish*, which is stationed there, we beg to state: The life-saving station is now located on the mainland under the lee of Waddah Island, and is in first-class working order at the present time without any additional expense to the Government. The *Snohomish* is a vessel built to stand

any weather, with ground tackle capable of holding her anywhere she can get bottom, and in case of heavy blows she can always find a lee under Waddah Island, as there is a channel all around this island.

The necessity of a dock for coaling purposes for the tug *Snohomish* has been entirely eliminated by the Government building a fine dock with coal bunkers at Port Angeles for the use of that vessel, and since the *Snohomish* is equipped with wireless equipment, which is always in connection with the wireless at Tatoosh Island, there seems to be no real reason why she should lay at that place at all times.

There are a great many thousand passengers who cross the strait from Seattle to Vancouver and Victoria each year, as well as the thousands who cross on their way to Alaska. These thousands of passengers deserve some protection, as the loss of life at the time of the sinking of the *Clallam* would prove (the *Clallam* sank about 15 miles east of Port Angeles). The recent accident which happened to the Alaska liner *Northwestern*, which was driven ashore about 20 miles east of Port Angeles, is another proof of this. If the *Snohomish* had been at or near Port Angeles at the time of the loss of the *Clallam* there would have been no need of any loss of life, as the vessel drifted at the mercy of the waves for hours, and the people on the shore had knowledge of its condition. There are many other wrecks and accidents which could be referred to, but we only mention the most recent.

The *Snohomish* should have a cruising ground between Neah Bay and Port Angeles, where her coal bunkers are located, so as to give the greatest amount of protection to the greatest number of people.

If it were possible to construct a breakwater that would maintain its position at Neah Bay, it would be suicidal for any ship to attempt to make the harbor under such weather conditions as sometimes prevail in and about Neah Bay, as when the wind is blowing 40 to 60 miles an hour no master of any vessel in his right mind would attempt to bring his ship broadside to the storm to make Neah Bay. Thus in bad weather no ship could be taken in or out of Neah Bay, and in good weather there would be no need of a harbor of refuge at that point.

Please note section 4 of the protest, appeal, and petition against Capt. Arthur Williams's unfavorable report. It starts out with "The country around and tributary to Neah Bay is rich in timber and agricultural resources," etc. Pray what connection has the timber and agricultural resources with a harbor of refuge at Neah Bay?

Please read carefully the next paragraph: "This improvement would benefit not only the commerce of Puget Sound but the commerce of the entire Pacific coast. At the present writing there is no harbor north of San Francisco Bay, in our 900 miles of coast line, in which vessels can seek shelter in storm, unless they enter the Straits of Fuca and pass through their entire length to the main body of Puget Sound." What malicious falsehood; Port Angeles Harbor is considered one of the best harbors in the world. It has been so declared by many shipmasters and shipmasters in general. You will find proof to that effect by looking up the reports filed with the Navy Department at Washington, D. C., made by many United States admirals, who have visited Port Angeles Harbor with their ships, and also by reference to the Government charts.

Port Angeles Harbor has the best of holding ground—no shoals or rocks. Sailing vessels may sail in or out without the assistance of tugboats.

About 10 years ago this same breakwater scheme was planned by a railway company and urged on under cover of the Seattle Chamber of Commerce. Just the same scheme is at present being foisted upon the public by the attempt of the Chamber of Commerce of Seattle to have the unfavorable report of Capt. Williams set aside. Doubtless you have the resolution on file in your office adopted by the Seattle Chamber of Commerce February 16, 1909, at the recommendation of the Hon. Thomas Burke, chairman of the committee on national affairs, a member of that chamber of commerce, and an old employee (attorney) of the Hill system of railways.

Another private interest is at work in this breakwater scheme at Neah Bay. The Northwestern Contract Co., of Seattle, owners of Waldron Island quarry and numerous old ships that have been dismantled and are now used as barges under the name of the Alaska Barge Co., who are furnishing sand rock to the Government for the Grays Harbor Jetty, seem to be the chief promoters, as they are very active in having this protest and petition signed.

A photograph of a letter from that company, urging people to sign that petition, will go forward by mail under separate cover, addressed to "The Board of Engineers for Rivers and Harbors, 507 Colorado Building, Washington, D. C." It speaks for itself. Your honorable board will see who the people are that hope to be benefited by this attempt at constructing a breakwater at Neah Bay at public expense.

A number of different transportation companies have signed the protest and appeal, and these signatures will stand investigation. Some of them are practically out of

existence and several of the others are controlled by the parties who seem to be interested in securing a contract for the Northwestern Contract Co. to dump rock into the Pacific Ocean at Government expense.

We inclose two editorials on the breakwater subject which will show you what the local press think of the proposition.

In conclusion, gentlemen, we beg to say, like Chairman Burton (the Senator from Ohio) when he investigated this proposition some 10 years ago declared, we would deem the construction of a breakwater at Neah Bay "an unjustifiable expenditure of public funds."

Respectfully,

PORT ANGELES COMMERCIAL CLUB.
LEWIS LEVY, *President*.

P. S.—We are inclosing copy of protest and appeal so that you may have it at hand for reference.

THE BOARD OF ENGINEERS FOR RIVERS AND HARBORS.

PROTEST, APPEAL, AND PETITION.

Board of Engineers for Rivers and Harbors, Washington, D. C.:

We hereby protest against the action of Capt. Arthur Williams, Corps of Engineers, United States Army, in reporting unfavorably on the proposed improvement at Neah Bay, Wash.

First. We protest because Capt. Williams was here only temporarily for four months and was not familiar with the importance, the urgent necessity, the great general benefit, and the interest felt in this work in all cities of Puget Sound.

Second. We protest because at the only meeting called for the purpose of hearing an expression from those interested in the execution of this improvement this matter was grouped with three items of purely local (Seattle) interest, and was taken up last after a long discussion of the other local matters and no one outside of the city of Seattle was heard on the subject. A matter of this importance and such general benefit to so large a district deserves a meeting by itself without the distraction of other topics and without the suggestion that it is being held in the interest of any one city.

In making this protest we do not question Capt. Williams's sincerity of purpose. It should be borne in mind, however, that he came to this station from the work on the Columbia River Jetty, and in the district tributary to Portland the intense jealousy of Puget Sound there prevalent affects involuntarily the opinions of the most unbiased.

We appeal from the unfavorable report of Capt. Williams's and in this connection state:

First. As to the present and prospective importance of the project and benefit to commerce likely to result from the proposed improvement, we refer to Capt. Harry Taylor's report embodied in House Document No. 337, Fifty-sixth Congress, first session, which is the best and most complete statement of the conditions demanding this improvement yet prepared. He says in transmitting this report:

"In my opinion there is no river and harbor work now in progress in this State, or contemplated, as far as my knowledge extends, which is of so much importance to the general commerce of the State as the construction of a harbor of refuge at Neah Bay."

Since Capt. Taylor's report was made the commerce of Puget Sound has grown steadily and rapidly until to-day it is one of the first four ports of the entire United States in the volume of its tonnage, and fully three-quarters of this total passes in and out of the Strait of Juan de Fuca and would be protected by this improvement. The port of Puget Sound has been for many years the first port in the United States in the volume of sailing tonnage. The lumber and wheat passing out of this port every year are carried in sailing vessels, which need the protection offered by this improvement even more than do steamers.

A further and very important branch of Puget Sound shipping which would benefit by this improvement is the fishing industry. Off the entrance of the Strait of Juan de Fuca and to the north and west an ever-increasing fleet of fishing vessels congregates. These small craft use Neah Bay as a rendezvous as much as weather conditions will permit. Each year sees its toll of lives lost and property destroyed for want of protection in this harbor.

Second. The present administration is on record repeatedly as favoring legislation beneficial to the American merchant marine. This being true the Neah Bay project should receive favorable consideration from any officer loyal to the administration, for the port of Puget Sound has been for years the only important American port where

the tonnage of American vessels exceeded the tonnage of foreign vessels. Any general improvement to the conditions here, therefore, is directly in favor of American shipping and in line with the administration's policy.

Third. The United States Government has appropriated from time to time funds for the maintenance of a life-saving station at Neah Bay. In connection therewith many attempts have been made to drive piles and maintain a wharf at this place without success, because of the fierceness of the seas and the strength of the tidal currents. With this improvement in place this life-saving station would be greatly facilitated in its work. Also, in 1908 the United States Government built and dispatched the life-saving tug *Snohomish* for this station, but without this improvement it is impossible to coal this tug at this point or to replenish other necessary supplies, and she is often compelled to leave there, sometimes even when most needed, for the purpose of obtaining these. With the construction of this improvement wharves, bunkers, and warehouses could be erected and this tug could be there the year round in readiness for any call.

Fourth. The country around and tributary to Neah Bay is rich in timber and agricultural resources, but only sparsely inhabited for want of transportation facilities. Much of this territory tributary to this bay is held in a Government reserve. The rugged mountain range occupying most of the Olympic Peninsula makes it doubtful if railroads will build to this point in many years. The country near Cape Flattery, therefore, will probably remain undeveloped until this improvement is constructed, because it is now impossible to maintain a wharf, and freight and passengers can only be handled to and from steamers entering this bay by means of small boats in calm weather. This improvement, therefore, would not only assist the interest of shipping and fisheries, but it would benefit the inhabitants of the entire region, and, further, it would add greatly to the value of the public domain.

This improvement would benefit not only the commerce of Puget Sound but the commerce of the entire Pacific coast. At the present writing there is no harbor north of San Francisco Bay in our 900 miles of coast line in which vessels can seek shelter in storm except they enter the Straits of Fuca and pass through their entire length to the main body of Puget Sound. Sailing vessels, barges, and often steamers destined for the Columbia River or Grays Harbor in bad weather are compelled to run for shelter to Puget Sound or San Francisco as indicated. With the improvement of Neah Bay at Cape Flattery a convenient protection would be offered to such vessels, saving them from 150 to 200 miles in the detour they are thus compelled to make in seeking shelter. As evidence of the conditions prevalent at this point we refer to the attached statement of wind velocity taken from the reports of the United States weather observer at Tatoosh Island, which is about 4 miles to the westward from this bay. This statement extends over the period from January 1, 1909, to July 1, 1910, and includes only those dates where the wind blew to exceed 25 miles an hour. These observations show 38 days on which the wind blew 40 miles an hour or more, 14 days when it blew 50 miles an hour or more, and 6 days when it blew 60 miles an hour or more.

We petition your honorable body to refer this matter back to Maj. C. W. Kutz, the officer regularly in charge in this district, to whom during the last two years many letters on this subject have been addressed and through whose hands two petitions to the Washington State delegation in Congress in its favor have passed.

We further petition that he be instructed to make a new survey and plan of the improvement and an estimate of cost based on present prices of labor and material.

THE MANUFACTURERS' ASSOCIATION OF SEATTLE,

By A. F. McEWAN, *President*.

INTERNATIONAL STEAMSHIP CO.,

THE INLAND NAVIGATION CO.,

By JOSHUA GREEN, *President*.

THE PUGET SOUND NAVIGATION CO.,

By FRANK E. BURNS, *General Manager*.

(And 43 others.)

SEATTLE, WASH., January 9, 1909.

HON. LEVI ANKENY,
S. H. PILES,
W. L. JONES,
F. W. CUSHMAN,
W. E. HUMPHREY,

Washington Delegation in Congress, Washington, D. C.

GENTLEMEN: Puget Sound is the foremost port on the Pacific coast. More vessels and of greater tonnage, both coastwise and foreign, pass the entrance to the Straits of Fuca than to any other body of water on this coast. Climatic conditions are such at Cape Flattery that at present inward-bound vessels are frequently delayed many days because of the absence of a harbor of refuge where seagoing tugs can pick them up and tow them to port. Outward-bound vessels are often compelled, on encountering a gale off the cape, to turn back and retrace their steps against an ebbing tide to Royal Roads or Port Angeles, a distance of 75 miles.

If a harbor of refuge is established near the cape, these risks and delays will be largely overcome and such disasters as have occurred in this vicinity in the past, with great loss of life and property, will be almost entirely avoided in the future; with the return of good weather after a storm, even damaged vessels could repair and proceed safely on their way.

Neah Bay, at Cape Flattery, is now an unprotected sheet of water just in the midst of the storm center. The tides rush back and forth through it, and the winds dash its surface into foam. In the entrance to this bay is Waddah Island. By building a breakwater from the western end of this island to the mainland a perfectly protected harbor could be created at a point where it would be of the most service to this vast commerce.

All this has been fully and exhaustively reported to Congress by Capt. Harry Taylor's report of the year 1900, on pages 4505 to 4511, where he recommended in the following terms the construction of a series of breakwaters at the northern entrance to Neah Bay, at an estimated cost of approximately \$2,000,000, and the creation of a harbor of refuge for vessels caught in just such storms.

"The survey of Neah Bay shows that it is well adapted for conversion into a harbor of refuge. At a distance of about three-fourths of a mile from the inside of the bay a reef projects out from the western shore for a distance of about one-half mile. A breakwater constructed along this reef would have a solid foundation, would be in only a moderate depth of water and would protect an area of 94.4 acres having a depth of 30 feet or more, an area of 241 acres having a depth of 24 feet or more, and an area of 388 acres having a depth of 18 feet or more."

In his letter transmitting this report, he says:

"In my opinion, there is no river and harbor work now in progress in this State, or contemplated, as far as my knowledge extends, which is of so much importance to the general commerce of the State as the construction of a harbor of refuge as Neah Bay."

In forwarding Capt. Taylor's report, the division engineer, Col. S. M. Mansfield, says:

"The opinion of the district officer (Capt. Taylor) that the proposed improvement is a worthy one and is justified by the interests of commerce involved is concurred in."

After which he goes on to outline an improvement on Capt. Taylor's plans by which the area protected, as above set forth, can, he says, be "quite doubled" at a very little additional expense by constructing one long breakwater instead of three smaller ones, as Capt. Taylor recommended.

It is now eight years since Capt. Taylor made this report which Congress had called for, but as yet nothing has been attempted. In the meantime the foreign commerce from Puget Sound has increased phenomenally, as the figures for 1898 and 1908 will show, viz:

	Vessels.	Tons.
Entrances from foreign ports:		
For year ending June 30, 1898.....	1,725	1,045,701
For year ending June 30, 1908.....	2,465	1,799,602
Clearances for foreign ports:		
For year ending June 30, 1898.....	1,867	1,183,400
For year ending June 30, 1908.....	2,642	2,058,994

Accurate data regarding the domestic commerce from this port is not easily obtainable, but it is a well-known fact that the coastwise and Alaska commerce from this port has increased in a far greater degree even than the foreign.

A necessity exists for this purely national harbor of refuge, and we, the undersigned, earnestly petition you to lend your best efforts to obtain a substantial appropriation of, say, \$500,000 at this session of Congress, with a provision that the local United States engineer enter into a contract for the completion or construction of breakwater at Neah Bay along the lines recommended by Col. S. M. Mansfield at a cost of (in round numbers) \$2,000,000, in order that the work may be immediately started and completed within a reasonable time. Too many lives and too much property are exposed to these hazards without such a harbor of refuge located in this locality, and the emergency is too great to longer delay.

Respectfully, yours,

McCABE & HAMILTON (INC.),
By N. B. JORDON, *Vice President.*
THE WASHINGTON STEVEDORE CO. (INC.),
By E. A. QUIGLER.
OREGON & WASHINGTON STEAM NAVIGATION CO.,
By CHAS. D. SCOTT, *Secretary and Treasurer.*

(And eleven others.)

COPIES OF RESOLUTIONS FAVORING THIS IMPROVEMENT ADOPTED BY THE CHAMBERS OF COMMERCE OF SEATTLE, BELLINGHAM, AND EVERETT, IN FEBRUARY, 1909.

SEATTLE, WASH., February 16, 1909.

The Honorable Chamber of Commerce of Seattle:

GENTLEMEN: Your committee on national affairs, to whom was referred the attached petition from the shipping concerns of Puget Sound, praying that a harbor of refuge be constructed by the Federal Government in Neah Bay, at the entrance of the Straits of Fuca, as outlined and recommended by the officials of the War Department in the year 1900, beg leave to recommend the adoption by this chamber of the following resolution upon said matter, to wit:

"Resolved, That the Chamber of Commerce of the city of Seattle strongly approves and urges the construction by the Federal Government of a harbor of refuge in Neah Bay at the entrance of the Straits of Fuca, as outlined and recommended to Congress in the year 1900 by the officials of the War Department, said plans and recommendations being based upon a thorough investigation by said officers of the need and of the feasibility of said improvement in the interest of Puget Sound and foreign commerce.

"Resolved further, That we commend to the consideration of the proper Federal officers the petition of a large number of shipping concerns engaged in foreign commerce, out of the port of Puget Sound, praying for the early construction of this proposed harbor of refuge in Neah Bay."

Respectfully submitted.

THOMAS BURKE, *Chairman.*

Adopted by the Seattle Chamber of Commerce February 16, 1909.

C. B. YANDELL, *Secretary.*

RESOLUTIONS ADOPTED BY THE BELLINGHAM CHAMBER OF COMMERCE.

Whereas Puget Sound is the foremost port of the Pacific coast, accomodating more vessels than any other port on the Pacific; and

Whereas climatic conditions render the entrance to the Straits of Juan de Fuca extremely dangerous at times, as well as frequently causing loss of time to vessels because of rendering retreat to safe ports needful; and

Whereas a harbor of refuge near the entrance would save time, goods, ships, and lives, in case of stress or storm; and

Whereas an excellent location for such harbor, which could be successfully constructed and maintained, at comparatively small cost, is found at Neah Bay: Therefore, be it

Resolved by the Bellingham Chamber of Commerce, That the construction of such refuge is a necessity, and that the Federal Government be, and hereby is, respectfully petitioned to cause the same to be constructed.

Adopted this 20th day of February, 1909.

BELLINGHAM CHAMBER OF COMMERCE.
LOOMIS BALDREY, *Secretary.*

RESOLUTION ADOPTED BY EVERETT CHAMBER OF COMMERCE.

EVERETT, WASH., *February 27, 1909.*

Resolved, That the Chamber of Commerce of the city of Everett strongly approves and urges the construction by the Federal Government of a harbor of refuge in Neah Bay, at the entrance of the Straits of Fuca, as outlined and recommended to Congress in the year 1900 by the officials of the War Department, said plans and recommendation being based upon a thorough investigation by said officers of the need and of the feasibility of said improvement in the interest of Puget Sound and foreign commerce.

J. BRUCE GIBSON, *Vice President.*

Attest:

ELMER E. JOHNSTON, *Secretary.*

THREE LETTERS FAVORING THE IMPROVEMENT OF NEAH BAY.

[First: A circular addressed to the Washington State delegation in Congress.]

SEATTLE, WASH., *January 10, 1910.*

SIR: We wish you to refer to series of resolutions adopted during February, 1909, by the chambers of commerce of Seattle, Bellingham, and Everett, and a petition forwarded herewith to the Washington delegation in Congress (copies of which are attached), urging the necessity of an immediate appropriation of funds for the construction of the breakwaters to complete the harbor of refuge at Neah Bay, Wash., as recommended and reported on to Congress by Capt. Harry Taylor, in his report for the year 1900, to House of Representatives, Document No. 337, of the Fifty-sixth Congress, first session.

The life-saving tug *Snohomish*, which was built expressly for the Neah Bay station, finds it impracticable to lie at this point without protection which this improvement would furnish.

At the time of the *Materhorn* disaster a few weeks ago, the *Snohomish* was at Port Townsend, fully 100 miles away, and much of the time she lays at either that point or Port Angeles, 75 miles from Neah Bay. With the construction of this harbor of refuge, she would have a permanent berth in Neah Bay. All supplies would be delivered to her there, and she would be at all times in readiness to render aid whenever needed to the thousands of vessels passing out and in of the Straits of Fuca.

Do not overlook the fact that this is a great national undertaking, for in every year in its history Puget Sound has had the distinction, unique among all American ports, of having greater amount of American than of foreign tonnage employed in the commerce across the seas. How great that distinction is may be judged by the fact that, taking the country as a whole, American tonnage in foreign trade is less than 10 per cent of the total. In American sail tonnage Puget Sound is and has been the first American port; in American steam tonnage it is second only to New York; in total volume of sail tonnage in foreign trade New York again alone exceeds it, and, for that matter, Puget Sound is rapidly becoming the second port in the United States in the total volume of its tonnage.

The entrance to a port of this magnitude in northern waters and on a rough bleak coast must have all the protection possible as an insurance on the vast capital involved in the trade.

In the desire to reestablish the glory of the American merchant marine, the first step should be to protect what is to-day the greatest existing American fleet, namely, that passing each year by Neah Bay to the port of Puget Sound.

THE INLAND NAVIGATION Co.,

By JOSHUA GREEN.

PACIFIC TOW BOAT Co.,

By W. R. CHESLEY, *Manager.*

OREGON & WASHINGTON STEAM NAVIGATION Co.,

By CHAS. D. SCOTT, *Secretary and Treasurer.*

(And 10 others.)

[Second: A letter from a steamboat captain who has been operating vessels regularly into Neah Bay for the last 20 years.]

FEBRUARY 2, 1910.

SIR: I wish to call your attention to the benefits to be derived from the improvement of Neah Bay, Wash., by the construction of breakwaters, as laid out in the plans of Capt. Harry Taylor in his report for the year 1900, as amended and improved

upon by Col. Mansfield, at that time division engineer, United States Army. In the opinion of the writer, this bay offers the greatest opportunity for a harbor of refuge on the entire Pacific coast line of this country. With the completion of the improvement as outlined by Col. Mansfield, this would be the only bay on the Pacific Ocean in our 800 miles of coast line north of San Francisco into which vessels of all sizes could put and lie with perfect safety in any kind of weather. I give this as my opinion, after 20 years of experience as captain on the vessels of this company running into this bay.

As I understand it in Col. Mansfield's plan, the outer line of the breakwater would be at about right angles with the natural break of seas into this bay, and with its construction there would be no line of breakers to interfere with a vessel entering the bay in any storm. This is a very important benefit, not to be derived under the original plan of Capt. Taylor. At the present time it is impossible to lie with safety in this bay in any serious storm, as the swells strike a vessel broadside, causing her to roll dangerously. In my many years of experience on the run to the Cape I have found it very often too rough to land even in small boats. The condition there is such that at present it is impossible to maintain a wharf as a landing place for vessels. With the construction of this breakwater this bay would become a most popular anchorage ground for the vast commerce of this region, as there is an abundance of fresh water. Other supplies could be furnished vessels very economically, lying there, if the anchorage were made safe. As it is, this bay is in constant use whenever the weather permits. For example, on my last trip there were five ships at anchor there, among others, the *W. F. Babcock*, *Robt. Hein*, and the lighthouse tender *Manzanita*.

It is a matter of great regret that the United States life saving station at this bay should be so handicapped by the failure of the Government to construct this breakwater as to be of very little service in cases of emergency.

It has happened many times that vessels have been wrecked in the vicinity of Cape Flattery when this breakwater would have assured them perfect safety. As an illustration, a few years ago a bark, *Cowlitz*, anchored in Neah Bay, when a storm came up and her tug attempted to tow her back to Clallam Bay. As she arrived opposite this bay, her hauser parted and she was carried out to sea and nothing heard from her afterwards.

As a personal experience, I can tell you about the wreck of the steamer *Alice Gertrude*, of which I was captain. On the evening of January 11, 1907, when within sight of the lights of Neah Bay, with a strong wind blowing, my chief engineer reported that one of the steam connections in the engine room was leaking. Had there been safe anchorage in Neah Bay, I could have run my ship in there and in half an hour been in perfect safety. As it was, I was compelled to put about and seek anchorage farther up the straits. When about opposite East Clallam, a blinding snowstorm having come up in the meantime, my ship was driven on the rocks and became a total wreck.

The above are only two of many accidents which have occurred in this neighborhood, and it is the hope of every sea captain navigating the waters of the Straits of Fuca that this breakwater will be built and a first-class harbor of refuge established in this bay without delay. No improvement which you have before your office at this time will be of so much general benefit to the shipping of the Pacific Northwest.

Yours, respectfully,

KALSTROM,
Captain Steamer "Bellingham."

Approved:

PUGET SOUND NAVIGATION Co.,
By C. H. J. STOLTENBERG.

Maj. C. W. KUTZ, *Corps of Engineers.*

[Third. A statement at some length of the necessity for and benefits to be derived from this improvement. by the Seattle head of the Great Northern Steamship Co.]

SEATTLE, WASH., February 8, 1910.

DEAR SIR: We note that there is considerable activity among the different shipping interests of the Northwest in their endeavor to again call our Government's attention to the necessity of establishing a harbor of refuge at Neah Bay, Wash.

The Great Northern Steamship Co., which I have the honor to represent as marine superintendent, has been requested to lend their aid in bringing this matter to the attention of Congress by submitting a report to the Engineering Corps, which will, in a simple way, illustrate the writer's knowledge of the Pacific coast, its shipping, and harbors.

During 1881 and 1882 the writer made monthly calls at Neah Bay to land supplies and from the above date to 1898 semimonthly trips from San Francisco to Puget

Sound. From San Francisco to Port Angeles on the Straits of Fuca there does not exist along the coast a safe harbor for a ship to anchor in, i. e., one that is protected from summer and winter gales. Coastwise shipping has no protection whatever after leaving San Francisco northbound and after Port Angeles southbound. It is of frequent occurrence that sailing vessels, both domestic and foreign, have towed to Cape Flattery, and after getting to the cape found the weather stormy, unfit to proceed to sea, which necessitated towing back to Clallam or to Port Angeles to await a more favorable opportunity to proceed on their voyage. We have known many instances when this performance has been repeated two or three times before the ship made her final departure. Had there been a harbor of refuge at Neah Bay much expense and annoyance to owners would have been obviated.

Small coastwise steamers many times go to the cape and find the weather bad, steam back into the straits, and wait for a favorable opportunity to pass out of the straits. If they had an anchorage like Neah Bay to go to, what a great saving to the owners could be effected.

Then, again, if the anchorage at Neah Bay was protected by a breakwater, it would be the means of better protection to vessels that trade regularly, and to the United States Government vessels that are stationed there for the purpose of protecting life and property. No vessel can lay at Neah Bay with any comfort during the southeast and southwest gales.

We are all familiar with the life-saving station that is now quartered on Waddah Island. It is a fact that it is not a safe place for a station in its present exposed condition. If the breakwater was built as recently planned, a protection would be guaranteed against all kinds of weather. With a sea wall established, wharves could be built where vessels of small tonnage could lie with safety. A coaling station could be placed there from which the United States cutters could replenish their fuel supply, also their fresh-water supply. At present these supplies are at least 120 miles up the sound, and it means a loss of from three to five days for a Government steamer to make the trip from Neah Bay to Seattle and return; and it has happened that their assistance was badly needed during their absence, and I contend that this condition should not exist during the winter months. A vessel should be in constant attendance at Neah Bay.

We have quite a fishing fleet operating off the cape, and it will increase each year. These little vessels are compelled to come into the straits when the weather is bad; sometimes they are compelled to seek a safe anchorage, and to do this they have to run up the straits 35 or 40 miles before an anchorage is reached. If Neah Bay had a protected harbor they would be 60 miles nearer their base of operations.

These are small items, but they are conclusive proof that a harbor is badly needed at the west entrance of the Straits of Fuca and at this time its commercial value is practically covered up.

Neah Bay is contiguous to the Quilleyute Valley, and if the transportation of supplies could be easily effected it would add to the value of the surrounding country very materially.

Government signal stations could be placed on the promontory and all the telegraphing, wireless and other lines, could be then made more effective. At the present the cable between the mainland and the Island of Tatoosh is out of commission a great deal of the time. Occasionally the rush of seas through the narrow channel separating Tatoosh Island from the mainland causes such a commotion that it is almost impossible to keep the telegraphic cable intact. Frequently our attention is called to a shipwreck or a disabled steamer in the vicinity of Cape Flattery. The loss of life has been exceedingly heavy from the various wrecks on the Vancouver shore, and it is the opinion of our practical seamen that if a life-saving steamer had been in close touch with the cape and its environments many lives could have been saved.

Our Government a few years ago responded to the call of our people for better protection of shipping in these waters. We got a steamer and a life-saving station. The life-saving station was placed on Waddah Island, but it has proven that when heavy gales prevail outside of the cape Waddah Island is not a safe place to launch a life-saving boat from. The same condition exists with the steamer that was built for the same purpose as the life-saving station, that of protection of life and property. As I have stated before, the steamer finds that the anchorage of Neah Bay is not a haven of safety in stormy weather, consequently she is forced to steam around the entrance to the straits until her fuel is gone, then there is nothing left for her to do but to steam back to Seattle or other ports up the straits to replenish her fuel supply; and it is usually the case that her services are seriously needed when she is away, and these conditions will continue until a coaling station is established at Neah Bay.

With the present existing conditions no coaling station is possible without a protecting wall to ward off the force of the heavy seas that come into the Straits during the stormy weather. Piers can not be built that will stand the rough usage that they would receive from the open sea.

In conclusion I will state that it is my opinion that there is no place on the Pacific coast from Mexico to Alaska where a harbor of refuge is so badly needed as at the entrance of the Straits of Fuca. Our shipping is increasing from year to year and it is natural to suppose that marine casualties will increase in like proportion. No one but the practical seamen can appreciate the importance of aids to navigation at the entrance of the Straits of Fuca.

We could make many suggestions of improvement in our help to navigators in these waters. There is no port in the world that is so badly neglected as is the port of Puget Sound, and you will agree with me that Puget Sound is second to none in the world's commerce.

Yours truly,

C. C. LACY,
Marine Superintendent.

Maj. C. W. KUTZ, *Corps of Engineers.*

LIST OF VESSELS SEEKING THE PROTECTION OF NEAH BAY AND OTHER POINTS IN THE IMMEDIATE VICINITY, AS REPORTED BY THE UNITED STATES WEATHER OBSERVER AT TATOOSH ISLAND DURING THE YEAR 1909.

[NOTE.—These observations are only made during the hours of daylight and are often handicapped by reason of fog and hazy weather. Further, on many occasions the wires break, making these reports impossible. It should be also borne in mind that the hundreds of fishing craft which would benefit by this improvement are entirely omitted from these reports.]

1909.

- Jan. 1. Departed, cutter, *Manning*.
- Jan. 2. Weather thick.
- Jan. 4. Departed, schooner *Snow & Burgess*.
- Jan. 5. Wires down.
- Jan. 6. Wires down.
- Jan. 7. Steamer *Bellingham* anchored until weather moderates.
- Jan. 8. Anchored, steamers U. S. *Manning* and *Heather*.
- Jan. 9. Anchored, steamers U. S. *Manning* and *Heather*.
- Jan. 9. Anchored, steamers U. S. *Manning* and *Heather*.
- Jan. 11. Departed, steamer U. S. *Manning*; arrived, s. schooner *Majestic*.
- Jan. 14. Anchored, steamer *McArthur*.
- Jan. 15. Anchored, bark *Sardana*, ship *Hovding*; cutter *Manning* sailed to scene of wreck of French ship *Alice*; arrived, four-mast schooner, unknown.
- Jan. 17. Anchored, schooner *Oliver J. Olson* and *Camano* and U. S. *Manning*.
- Jan. 18. Anchored, schooner *Oliver J. Olson* and *Camano* and U. S. *Manning*.
- Jan. 19. Anchored, schooner *Oliver J. Olson* and *Camano* and U. S. *Manning*.
- Jan. 19. Bark *Sardana* and *Hovding* and *McArthur* still at anchor.
- Jan. 22. Departed, steamer *Camano*.
- Jan. 23. Departed, ship *Hovding*, U. S. *Manning* with life-saving crew to scene of wreck of schooner near Sea Bird Rock; arrived, steamer *Meteor*.
- Jan. 24. Arrived, U. S. *Manning* with survivors of wrecked schooner *Soquel* and captain's dead wife and child.
- Jan. 25. Departed, bark *Sardana*, U. S. *Manning* with survivors and bodies of wrecked *Soquel*.
- Jan. 27. Anchored, *Chas. E. Falk* and *Lyman D. Foster*.
- Jan. 28. Departed, *Chas. E. Falk* and *Lyman D. Foster*.
- Jan. 30. Anchored, ships *Ditton* and *Kymance*.
- Feb. 1. Anchored, schooner *Spokane*.
- Feb. 2. Anchored, barkentine *Good News* and schooner *Spokane*.
- Feb. 2. Ships *Ditton* and *Kymance* still at anchor.
- Feb. 3. Departed, barkentine *Good News* and schooner *Spokane*.
- Feb. 3. Anchored, *Mary E. Foster*.
- Feb. 4. Departed, *Mary E. Foster*; anchored, schooner *Ida May*; arrived and departed, steamer *Jupiter*.
- Feb. 5. Arrived, schooner *Salem*; *Ditton* and *Kymance* still anchored, also *Willie R. Hume*.
- Feb. 6. *Ditton*, *Kymance*, *Willie R. Hume*, *Granada*, *Balboa*, and the Umatilla Reef Lightship anchored.
- Feb. 7. Umatilla Reef Lightship departed.
- Feb. 8. *Balboa* passed out; *Kymance*, *Willie R. Hume*, and *Granada* departed.
- Feb. 8. Arrived, French bark *Champigny*.
- Feb. 9. Departed, French bark *Champigny*; arrived, s. schooner *Chas. Nelson* and schooner *Crescent*.

1909.

- Feb. 10. Arrived, steamer *Beckenham*.
 Feb. 11. Ship *Ditton* departed; arrived and anchored, cutter *Manning*.
 Feb. 12. *Manning* still anchored.
 Feb. 13. *Manning* still at anchor.
 Feb. 14. Arrived, schooner *Tiverton* and schooner *Alpena*.
 Feb. 15. *Manning*, *Tiverton*, and *Alpena* still anchored; schooner *Snow & Burgess* and bark *Albert* arrived.
 Feb. 16. *Jupiter* still at anchor.
 Feb. 17. *Alpena* passes out; *Tiverton* departed; steamer *Maverick* arrived.
 Feb. 18. Schooner *Oakland* arrived, also *McArthur*.
 Feb. 19. Barkentine *Aurora* anchored.
 Feb. 20. *Jupiter*, *Aurora*, and *McArthur* still anchored; *Aurora* departed.
 Feb. 21. Departed, *Jupiter*.
 Feb. 22. Arrived, steamer *Elsa*.
 Feb. 23. Tug *Independent* with scow at anchor.
 Feb. 24. Steamer *Selja* arrived.
 Feb. 26. Ship *Elwell* anchored.
 Feb. 28. Anchored, barkentine *Lanhiana*, bark *Carradale*; departed schooner *Stimson* bark *Carradale*, ship *Arranmore*. Later all these returned on account of weather.
- Mar. 1. Above all anchored.
 Mar. 2. *Arranmore* and *Carradale* departed.
 Mar. 3. *Forrester* and *Lanhiana* at anchor.
 Mar. 4. Schooner *Kona* arrived, also schooner *Chas. Nelson*.
 Mar. 5. Barkentine *Lanhiana*, schooner *Forrester*, schooner *Alice Cook* departed, also schooner *Stimson*. *Manning* anchored.
 Mar. 6. Arrived, *Endeavor*; *Manning* departed.
 Mar. 7. Schooner *Camano* arrived.
 Mar. 8. Arrived, schooner *O. M. Kellogg* and schooner *David Evans*.
 Mar. 9. Departed, *David Evans*. Anchored schooner *Snow & Burgess*.
 Mar. 10. Anchored, U. S. *Manning*.
 Mar. 16. Anchored, bark *Albert*.
 Mar. 17. Arrived, steamer *Hazel Dollar*; departed bark *Albert*.
 Mar. 20. Arrived, Union Oil steamer *Roma*.
 Mar. 21. Arrived, barkentine *John Smith*.
 Mar. 22. Arrived, *Ruth E. Godfrey* schooner.
 Mar. 23. Departed, *Ruth E. Godfrey*.
 Mar. 25. Arrived, *Manning*.
- Apr. 1. Arrived, schooner *Nokomis*, schooner *Bainbridge*; *Manning* anchored.
 Apr. 2. Arrived, four-mast ship *Shorbek*.
 Apr. 3. Arrived, ship *Marborough Hill*.
 Apr. 4. Anchored, barge *James Drummond*. Arrived schooner *Nelson*.
 Apr. 10. Anchored, schooner *Crescent*.
 Apr. 13. Anchored, schooner *O. M. Kellogg*, schooner *Maid of Orleans*, barge *Carondelet*.
 Apr. 14. Departed, barge *Carondelet*.
 Apr. 15. Departed, *Maid of Orleans* and *O. M. Kellogg*.
 Apr. 17. Arrived, barkentine *Chas. F. Croker*.
 Apr. 20. Anchored, U. S. *Heather*.
 Apr. 21. Arrived, steamer *St. Croix*.
 Apr. 29. Arrived, schooner *Mahukuha*.
 May 20. Anchored, U. S. *Heather* and *Snohomish*.
 May 21. *Snohomish*, departed.
 May 25. Anchored, yawl *Argo*.
 May 28. Life-saving power boat *Audious* towed schooner *Godfrey*.
 May 29. Anchored, barge *Carondelet*, tug *Grayling*.
 May 30. Anchored, barge *Carondelet*; *Big Bonanza* and launch *Skiddo* in distress.
 May 31. Departed, *Carondelet* and *Skiddo*.
 June 1. Anchored, ship *Amphritite*.
 June 5. Anchored, barge *St. James*.
 June 6. Departed, barge *Big Bonanza*.
 June 7. Departed, U. S. *Snohomish* for Seattle.
 June 9. Arrived, s. schooners *Wasp* and *Rainier*.
 June 10. Anchored, ship *Elwell*.
 June 12. Arrived, ship *Tarpenbeck*.
 June 14. Departed, ship *Elwell*.

1909.

- June 17. Anchored, barge *James Drummond*.
 June 20. Anchored, *James Drummond* and U. S. *Snomish*. Arrived U. S. *Heather* and schooner *Robert R. Hind*.
 June 23. Departed, barge *James Drummond*; anchored barge *Palmyra*, U. S. *Snomish* and U. S. *Columbine*.
 June 24. Arrived, schooner *R. W. Bartlett*; departed barge *Palmyra* and U. S. *Columbine*.
 June 25. Arrived, U. S. *Snomish*.
 July 8. Anchored, barge *Big Bonanza*.
 July 23. Anchored, barge *Hayden Brown*.
 July 30. Arrived, barges *Palmyra* and *James Drummond*.
 Aug. 10. Arrived, barkentine *James Johnson*, s. schooner *Thos. L. Wand*.
 Aug. 13. Arrived, schooner *Fred J. Wood*.
 Aug. 30. Arrived, barge *Big Bonanza*.
 Sept. 4. Departed, barge *Big Bonanza*; steamer *Cape Finnisterre* anchored on account of weather.
 Sept. 5. Departed, steamer *Cape Finnisterre*.
 Sept. 12. Arrived, barkentine *Retriever*.
 Sept. 21. Anchored, U. S. *Heather*.
 Sept. 25. Departed, U. S. *Heather*.
 Sept. 28. Arrived, schooner *A. F. Coats*.
 Oct. 3. Arrived, schooner *Susie Plummer*.
 Oct. 15. Arrived, schooner *Forest Home*, s. schooner *Olson & Mahoney*.
 Oct. 18. Arrived, schooner *Robert R. Hind*.
 Oct. 26. Arrived, U. S. *Manning*.
 Oct. 28. Arrived, U. S. *Columbine*.
 Nov. 4. Arrived, gasoline launch *Kenewick*.
 Nov. 9. Arrived, schooner *Boralis*.
 Nov. 12. Anchored, barkentine *Makiweli* and schooner *Forest Home*.
 Nov. 13. Departed, *Makiweli*.
 Nov. 18. Anchored, schooner *Balboa*.
 Nov. 25. Anchored, *Lottie Bennet*, *Nokomis*, *Balboa*, and *Genevieve*.
 Nov. 27. Departed, *Nokomis*, *Lottie Bennet*, and *Balboa*.
 Nov. 30. Wires down.
 Dec. 1. *Nokomis*, *Lottie Bennet*, *Expansion*, and *Genevieve* compelled to return and anchor.
 Dec. 2. Departed, *Nokomis*, *Lottie Bennet*, and *Genevieve*. Quillayute Indians report wreckage 6 miles north of Quillayute River.
 Dec. 3. Capt. Olson, Umatilla lightship, arrived with eight members of crew of ship *Matterhorn*, which foundered 70 miles southwest of lightship; three lives lost.
 Dec. 5. Arrived, U. S. *Snomish* from Port Townsend, where she was at the time of the wreck.
 Dec. 9. Wires down. Later anchored, steamer *Tiverton* and schooner *Honopui*.
 Dec. 11. Arrived, schooner *Ethel Zane*.
 Dec. 12. Anchored, *Camano*, *Georgian*, *Honopui*; departed, *Ethel Zane*.
 Dec. 13. Arrived, s. schooner *Fairhaven*, bark *Olympic*, barkentine *Veneta*, and *Alice McDonald*.
 Dec. 14. Sailed, schooner *Honopui*, *Camano*, *Alice McDonald*, *Olympic*, *Georgiana*.
 Dec. 18. Arrived, s. schooner *Shasta*.
 Dec. 22. Schooner *Susie Plummer* is in distress and abandoned 60 miles west by south of Cape Flattery.
 Dec. 23. Steamer *Minnesota* reports passing derelict latitude 49° 20' north, longitude 128° 30' west. Dismasted and waterlogged; no signs of life.

1910.

- Jan. 1. Wires down.