

Kodiak
St. Paul Harbor

Condition of Improvements
31 December 2022
St. Paul Harbor
Kodiak, Alaska
(CWIS No. 010168, 072753, 320418)

Authorization (1) Rivers and Harbors Act, 3 September 1954 (House Doc. 465, 83rd Congress, 2nd Session) as adopted, provides for a small boat basin of 11.7 acres at depths of 8 and 12 feet below MLLW, protected by two rock breakwaters of 780 and 1,250 feet in length. (2) Section 5033 of the Water Resources Development Act of 2007 provided authorization stating, “The Secretary shall carry out, on an emergency basis, the necessary removal of rubble, sediment, and rock impeding the entrance to the St. Herman and St. Paul Harbors, Kodiak, Alaska, at a Federal cost of \$2,000,000.”

Table 1

Existing Project	Length ft.	Width ft.	Depth ft.
Entrance Channel	430	Varies	-16
Southeast Breakwater	780		
Southwest Breakwater	1250		
Basin (maintained by others)	11.7 acres		

Project Usage Kodiak, the third largest commercial fishing port in the United States, is a world leader in king crab production and ranks among the top four national ports in halibut production. Saint Paul Harbor has protected moorage for approximately 200 vessels. Kodiak is also an important cargo port and transshipment center. This port is the only large full-service harbor of refuge between Cook Inlet and the Shumagin Islands.

Progress of Work

1957	Construction of the southeast breakwater begins in October; dredging of the small boat basin.
1958	The southeast breakwater is completed in April. Removal of ledge rock from the entrance channel completes the project in July.

Progress of Work

1964	The earthquake of 27 March 1964 causes major damage to the small boat harbor. Repairs to both breakwaters begin in May and are completed in August. Due to subsidence caused by the earthquake, the controlling depth is reportedly 5 feet below project depth for the channel and the basin.
1973	Repairs to the tip of the southeast breakwater are accomplished from February through March.
2002	Multi-beam survey techniques are used to check the three entrances to St. Herman's Harbor, the condition of Near Is. Channel, and the entrance to the small boat basin in Saint Paul's Harbor
2006	Project condition surveys and aerial photography are done for Near Is. Channel and Saint Herman's Harbor.
2009	A tidal datum update and project condition survey are conducted in June for Near Is. Channel, St. Herman's Harbor, and St. Paul Harbor. The project limits for Near Is. Channel are adjusted to align with the wharves and other structures.
2010	Sediment characterization and contract plans and specifications began in support of dredging rocks and sediment from the St. Paul and St Herman's harbors. USACE Comprehensive Evaluation of Project Datums Compliance report completed and recorded in December.
2012	A maintenance dredging contract was awarded to Western Marine Construction to mechanically remove rock in the entrance channels of St. Herman's and St. Paul Harbors. A new irregular shaped entrance channel was established in St. Paul Harbor to establish the dredge limits.
2013	Maintenance dredging removed 10,265 cubic yards of rock from St. Paul and St. Hermans' Harbors. The rock was placed in a -50 feet deep area in St. Herman's Harbor.
2015	A project condition survey was conducted in July.
2020	A project condition survey was conducted in July.

Table 2 Cost to Date

Project	Description	Cost \$
010168	CG PED Appropriations	1,318,308
	CG PED Costs	1,318,308
	CG Appropriations	17,153,750
	CG Costs	17,153,750
	CG Contributed Appropriation	1,843,166
	CG Contributed Costs	1,843,166
	O&M Appropriations	118,586
	O&M Costs	118,586
320418	O&M Appropriations	5,684,433
	O&M Costs	5,684,433

Note: Costs are combined among St. Paul Harbor, St. Herman's Harbor, and Near Island Channel

Table 3 Range of Tides in feet

Current Tide Station	Mean Range	Diurnal Range	Extreme Range
945 7292, Kodiak Island, Womens Bay	6.78	8.78	17.46

NOAA Publication Date: 02/16/2018

Legacy Tide Station	Mean Range	Diurnal Range	Extreme Range
945 7283 Kodiak, St Pauls Harbor	6.65	8.7	16.48

NOAA Publication Date: 01/10/2005

Controlling Depth In July of 2020, the entrance channel at St. Paul Harbor had a shoalest depth of -15.6 feet MLLW. A couple soundings along the eastern side slope of the entrance control at -14.5 feet MLLW.

Maintenance Dredging Supplement

A. Sampling & Testing

1. Samples were collected to characterize the sediments in the proposed dredging prism at St. Paul harbor. Five primary samples were collected using a sand auger in August 2012. Samples consisted of a very fine black silt/clay material.
2. Chemical analysis was conducted using (8) test methods as outlined with results below

Table 4 Chemical Testing

Method	Chemical analysis	Results
6020/7471B	(8) RCRA Metals	(8) of (8) detected; Arsenic 9.3-15 mg/kg, Chromium 40-63 mg/kg, All others below minimum cleanup levels
AK 101	Gasoline Range Organics	All ND (none detect) or below minimum cleanup levels
AK 102/103	Diesel Range Organics / Residual Range Organics	ND or below minimum levels
8081	Pesticides	ND or below minimum levels
8082	Polychlorinated Biphenyls (PCBs)	ND
8260B	Volatile Organic Compounds	ND or below minimum levels
8270C SIM	Polynuclear Aromatic Hydrocarbons	ND or below minimum levels

Project limits are defined by ADEC 18 AAC 75 Method 2 Table B1 and B2 Cleanup Levels and PSDDA Screening Limits.

St. Paul Harbor, Kodiak, Alaska



Oblique of St. Paul Harbor, March 2015



St. Paul Harbor, March 2015