

Ketchikan Bar Point Harbor

Condition of Improvements
31 December 2022
Bar Point Harbor
Ketchikan, Alaska
(CWIS No. 087071)

Authorization (1) River and Harbor Act of 1930 (46 Stat. 918) as modified by the River and Harbor of 1954 (P.L. 83-780) (authorizing the project as described in the report of the Chief of Engineers dated April 8 1954). Provides for the dredging of a small boat basin at Bar Point, 17.91 acres in area, to depths of -15 feet MLLW except where rock would be encountered along the shoreward side where a minimum depth of -6 feet would be provided, and construction of three rock breakwaters 700, 1,100 and 450 feet in length, topped by concrete gravity walls. (2) Further modified by a project approved on 29 June 1978 under Section 107 of the River and Harbor Act of 1960 (P.L. 86-645). Bar Point Harbor is expanded with the construction of two concrete floating breakwaters of 963 and 120 feet in length to enclose a locally constructed and maintained basin of about 25 acres to include a non-dredged entrance and maneuvering channel to -15 feet MLLW.

Table 1

Existing Project	Length ft.	Width ft.	Depth ft.
South Basin	17.91 acres		-10, -15
Entrance & Maneuvering Channel	Varies	100	-15
Southeast Breakwater	700		
West Breakwater	1100		
Long Floating Breakwater	963		
Short Floating Breakwater	120		

Project Usage Bar Point Harbor, known locally as Bar Harbor, is used as a base of operations for commercial fishing and is capable of accommodating 520 vessels. Combined with Thomas Basin, the projects are also used by more than 100 transient fishing boats.

Progress of Work

1957	Construction of Bar Point Basin begins in November with work on the Southeast Breakwater. The concrete gravity walls have been deleted during design and compensated for by increased breakwater elevation.
1958	Bar Point Basin (south) is successfully completed in November.
1979	Work begins on the north basin expansion in April. The 450-foot breakwater is subsequently de-authorized in November.
1980	After repair of wind damage, the floating breakwaters are completed in place in April.
1994	A condition survey of the harbor is performed in January and February. The U.S. Navy is hired under contract to inspect the floating breakwaters.
1996	The Navy is contracted to rehabilitate the floating breakwaters.
2001	A condition survey of the harbor is conducted with multi-beam techniques in April.
2003	Anchor blocks for the floating breakwaters are located by survey.
2004	A condition survey of the harbor is conducted in July.
2005	Aerial photography is taken of the harbor in April.
2008	The floating breakwaters were inspected by the U.S. Army dive team.
2009	Repair to the floating breakwater by the Army dive team includes realignment/replacing the wire tension ropes, replaced missing and badly corroded anchor chains, repositioned anchor blocks, adjusted slack in anchor chains, replaced wooden fender system, and repaired concrete damage.
2012	The large floating breakwater was damaged following a storm in early March. Corps personnel and the 544th Army Dive Team found that several of the wire tension cables failed. The Army Dive Team replaced the tension cables, interconnecting hardware, and neoprene bumpers for all modules on the large floating breakwater in July and August. The Dive Team also removed marine growth from both floating breakwaters and conducted an inspection of the anchor chains. The inspection revealed that two anchor chains were broken while 18 additional chains were in need of replacement. A condition survey of the harbor was conducted in July.
2013	A Value Engineering Study was conducted in February to evaluate alternatives for replacing the floating breakwaters. The 544th Army Dive Team conducted an inspection of the anchor chains and prepared new connection points for the anchor blocks in August and September. The Dive Team also inspected the tension cables and interconnecting hardware for all modules on the large floating breakwater. Several of the cables were re-tensioned during the inspection. "Comprehensive Evaluation of Project Datums" Compliance report completed and recorded in February.

Progress of Work

- 2014 The 7th Army Dive Team conducted an inspection and repairs of the floating breakwaters beginning in mid-August. A total of 24 anchor chains were replaced, 2 on the small breakwater and 22 on the large breakwater. The Dive Team also finished repairs of the anchor chain connection points to the anchor blocks. A contract was awarded to Pool Engineering to provide a crane for lift support and barge for staging dive equipment and construction materials. Repairs were completed in early November when the Dive Team inspected the tension cables and interconnecting hardware for all modules on the large floating breakwater.
- 2015 The City reports over-topping of the rock breakwaters during a storm in January. A condition survey is completed for the project in July and August.
- 2020 A grounded/sunken vessel is reported on the seaward side of the southeast breakwater in January. Concept design alternatives are evaluated through an A/E task order for replacement of the floating breakwaters. A condition survey is also conducted in May.
- 2021 An A/E completed a design for replacement floating breakwaters.

Table 2 Cost to Date

Project	Description	Cost \$
87071	CG Appropriations	2,829,865
	CG Costs	2,829,865
	CG Contributed Appropriations	1,318,421
	CG Contributed Costs	1,318,421
	O&M Appropriations	18,473,879
	O&M Costs	2,685,440

Table 3 Range of Tides in feet

Tide Station	Mean Range	Diurnal Range	Extreme Range
945 0460 Ketchikan AK	12.97	15.45	26.57

NOAA Publication Date: 09/27/2011

Controlling Depth In May 2020 a depth of -4.3 feet MLLW controls near the toe of the boat launch ramp in the -15 foot basin. A depth of +1.5 feet MLLW controls near the launch ramp as well for the -10 foot basin. Some minor areas above project depth are present in both portions of the basin, primarily along the side slopes or transitions. Some obstructions also exist within the harbor which are documented in this condition survey.

Bar Point Harbor, Ketchikan, Alaska



Looking Southeast from the West breakwater, August 2015



Looking Northwest from the West breakwater, August 2015

Bar Point Harbor, Ketchikan, Alaska



Large floating breakwater protecting the expanded harbor, August 2015



Looking Northwest across the expanded harbor, August 2015