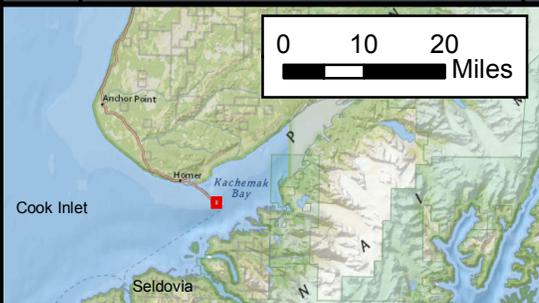
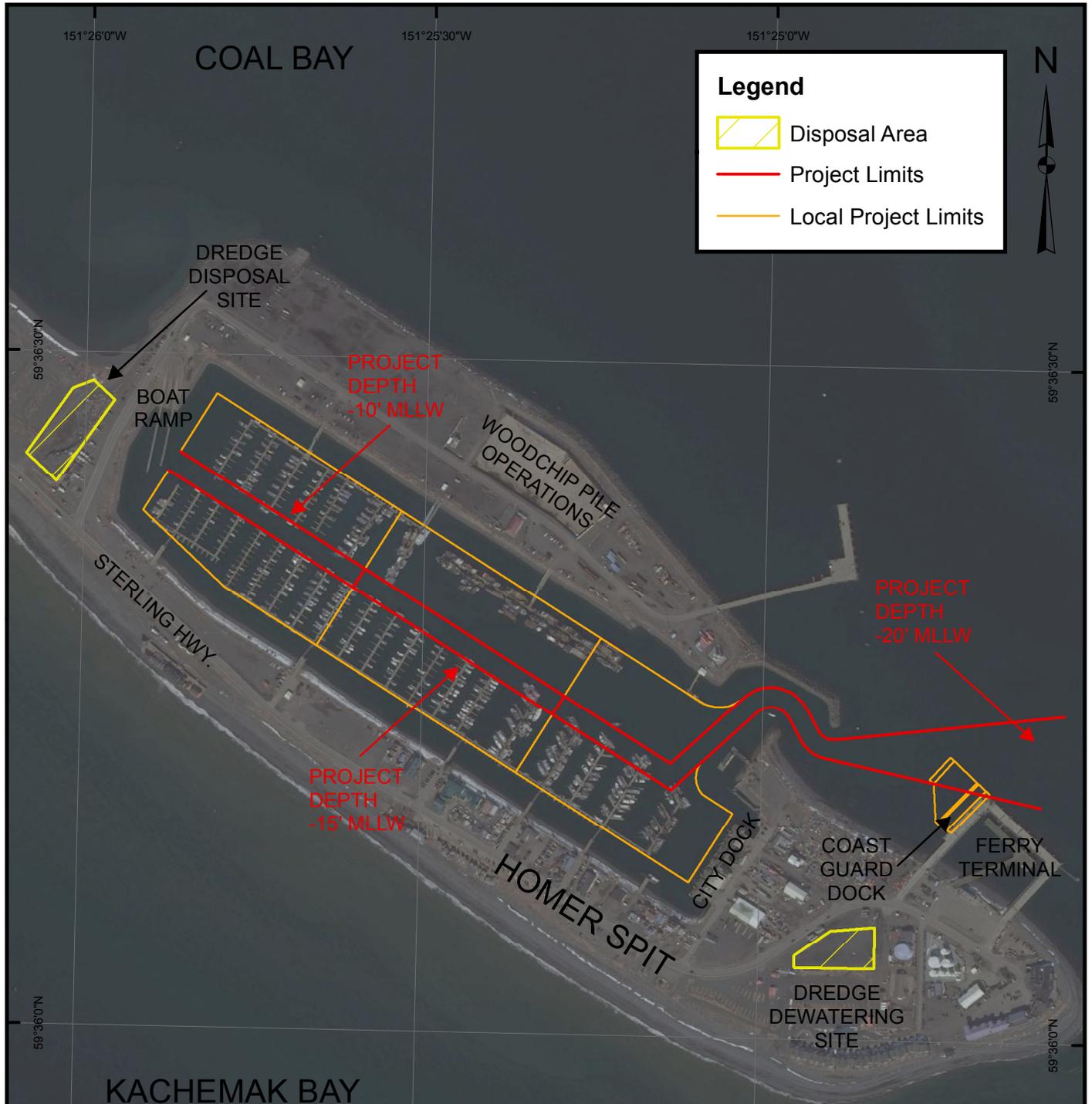


Homer Harbor



HOMER HARBOR
ALASKA

10 JANUARY 2014

NOTES:
1. THIS LOCALITY IS SHOWN ON NOAA CHART NOS. 16647, 16646, 16645, 16640, 16013, AND 500.
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Condition of Improvements
 30 December 2014
Homer Harbor, Alaska
 (CWIS No. 014432, 080508, 087138)

Authorization (1) Rivers and Harbors Act, 3 July 1958 (P.L. 85-500 House Doc. 34, 85th Congress, 1st Session) as adopted for the original project, provides for a boat basin (300' x 400') at a depth of -12 feet MLLW and protected by a rubble-mound jetty 850' in length. (2) Rivers and Harbors Act, 19 August 1964 (P.L. 88-451) authorized as amended by the Chief of Engineers, 21 December 1971, provides for construction of a small boat basin within Homer Spit approximately 10 acres in area dredged to a depth of -12 feet MLLW over 2.75 acres and -15 feet MLLW over 7.25 acres, a northerly entrance channel, a main rock breakwater 1,018 feet long, and a secondary rock breakwater 238 feet long; includes provisions for further expansion of the basin.

Table 1

Existing Project	Length (max)	Width (max)	Depth ft.
Outer Entrance Channel	700	varies	-20
Inner Entrance Channel	850	90	-20
Maneuvering Channel	2790	100	-10,-15,-20
Basin (50 acres) maintained by others	2985	720	-10,-15,-20
Main Breakwater	1018		
Secondary Breakwater	238		

Project Usage The small boat basin provides sheltered moorage for approximately 1,525 vessels. The project extends the fishing season an extra four months each year and is an integral part of Homer's economy.

Progress of Work

1961	Harbor dimensions are revised to 180' x 672' with an 840' rock-mound jetty. Dredging and construction of the breakwater begin in September and are curtailed in November.
1962	Work is resumed in May with completion of the dredging in June and the breakwater in September.

Progress of Work

- 1963 Storm damage over the winter requires repair to the breakwater and some basin side slope protection.
- 1964 The earthquake of 27 March 1964 causes major damage to the project. Repair work on the first leg of the breakwater runs from July through August. Harbor restoration commences in August, and the expansion phase begins in November.
- 1965 The expansion phase for harbor enlargement is completed in March. The restoration phase is concluded successfully in May.
- 1968 The basin and protective berm are extended 100 feet by the local government.
- 1969 The basin and protective berm are extended again by local government for an additional 600 feet during FY 69-70 under Corps supervision to insure the integrity of the project.
- 1972 Starting this year maintenance dredging of the entrance channel becomes an annual event.
- 1973 Removal of a submerged portion of the original breakwater begins in June and is completed in August; additional beach protection provides further improvement to the project.
- 1977 From 1977 to 1988, maintenance dredging of the Federal project is conducted by the Corps' pipeline dredge "Warren George".
- 1984 Work begins on a major harbor expansion project to increase the boat basin from 16.5 acres to 50 acres.
- 1985 The harbor expansion project is completed to 50 acres including the construction of a 30 acre staging area and the placement of 130,000 cubic yards of armor rock.
- 1989 Starting this fiscal year maintenance dredging is accomplished by contract.
- 1993 Sampling and testing of harbor sediments is conducted.
- 2002 The entrance channel is dredged under contract. A new ferry terminal and Coast Guard berth are constructed by local interests.
- 2003 The U.S. Coast Guard berth is dredged in June and September for a total of 1,938 yards. Annual maintenance dredging of the federal entrance channel removes 4,438 cubic yards in September. A Dredged Material Management Plan (DMMP) study is initiated.
- 2004 The U.S. Coast Guard berth is dredged in the winter with 8,530 cubic yards removed, and again in September with 2,270 cubic yards for a total of 10,800 yards. Annual maintenance dredging of the federal entrance channel removes 7,289 cubic yards in September. The DMMP work continues.
- 2005 City of Homer passes a resolution on 14 February adapting the base plan identified in the draft DMMP. The September dredging effort shows 5,305 cubic yards removed from the U.S. Coast Guard berth and 8,500 yards removed from the federal entrance channel.

Progress of Work

- 2006 The U.S. Coast Guard berth is dredged in April and again in September along with the Federal entrance channel. The Coast Guard quantity totaled 7,072 cubic yards and the entrance channel 5,000 yards. The DMMP work continues toward a final draft for Division Office review.
- 2007 The Coast Guard berth is dredged in April and September, totaling 8,000 cubic yards, and the Federal entrance channel is dredged in September totaling 8,500 cubic yards.
- 2008 In August 2008 a pre-dredge survey was conducted. 4,218 cubic yards of material was removed from the harbor entrance channel. An additional 3,025 cubic yards was also removed from the U.S. Coast Guard berth. A post-dredge survey was conducted in September 2008.
- 2009 Dredging of the U.S. Coast Guard berth removes 5,240 cubic yards of material. No maintenance dredging within the Federal Maintenance Limits is performed this year due to the absence of an approved disposal site. A project condition survey of the entrance channel and Coast Guard berth is conducted in September.
- 2010 Hydraulic and clamshell dredging removed a total of 8,200 cubic yards from the USCG dock in May and September. Hydraulic dredging removed 8,600 cubic yards from the entrance channel in September. A spring condition survey of the entrance channel was conducted in May. Pre and post surveys were conducted for both the spring and fall dredge events.
- 2011 Hydraulic dredging removed a total of 1,177 cubic yards from the USCG Dock in April and September. Hydraulic dredging removed 4,427 cubic yards from the entrance channel and an additional 4,578 cubic yards from the -20 inner harbor channel for a total of 9,007 cubic yards removed. In November 2011, about 10,000 cubic yards was excavated with shore based equipment for a sediment trap between the piers of the Pioneer Dock; this excavation should trap sediments before they enter the USCG Hickory Berth and entrance channel.
- 2012 In the entrance channel 4,662 cubic yards was removed with an additional 8,613 cubic yards from the -15 portion of the inner harbor channel for a total of 13,275 cubic yards. Hydraulic dredging removed a total of 1,956 cubic yards from the USCG dock in September under a cost reimbursable agreement with USCG. Dredging was performed by Alaska Marine Excavating under the first year of a five-year contract. USACE Comprehensive Evaluation of Project Datums Compliance report completed and recorded in September.
- 2013 Annual maintenance dredging removed 1,381 cubic yards from the entrance channel and 1,005 cubic yards from the USCG's Hickory Berth in September
- 2014 Annual maintenance dredging was conducted in September for the entrance channel and the realignment dredging of the inner channel was also completed. The USCG's Hickory Berth was also dredged in September. Material was dewatered and hauled to the City's stockpile site on the Homer Spit.

Table 2 Cost to Date

Project	Description	Cost \$
80508	CG Appropriation	17,594
	CG Costs	0
	O&M Appropriation	12,845,754
	O&M Costs	12,652,180
	Rehab Appropriation	67,974
	Rehab Costs	67,974
87138	CG Appropriation	3,486,677
	CG Costs	3,486,677
	CG Contributed Appropriation	10,021,437
	CG Contributed Costs	10,021,437

Table 3 Range of Tides in feet

Tide Station	Mean Range	Diurnal Range	Extreme Range
945 5557 Homer AK	15.83	18.32	31.3

Controlling Depth In 2014, the -20 feet MLLW area of the entrance channel has a controlling depth of -17.1 feet MLLW. The -15 feet MLLW area of the entrance channel has a controlling depth of -12.5 feet MLLW. The -10 feet MLLW area of the entrance channel has a controlling depth of -11.3 feet MLLW.

Table 4 Dredged Quantities and Contract Costs

Year	Quantity (cubic yards)	Cost \$
2008	4,386	224,483
2010	8,600	65,500
2011	9,005	325,657
2012	13,275	488,588
2013	1,381	279,437
2014	6,205	447,478

Maintenance Dredging Supplement

A. General

1. Homer harbor is an annual dredging project under a multi-year contract; Ninilchik is awarded under the same contract.
2. The Federal entrance channel and the Coast Guard Dock are subject to shoaling and require annual maintenance. The remainder of the mooring basin is maintained by local interests.
3. The dredging window runs from 16 July to 30 April; dredging typically begins the second week in September and runs for about (2) weeks.
4. Dredging is conducted with a hydraulic cutterhead and pipeline suction dredge.

B. Sampling & Testing

1. Samples were collected to characterize the sediments that would be dredged as part of the harbor realignment. A total of eight primary samples from four locations were collected from the harbor entrance and continued to the northwest end of the harbor in April 2013.
2. Chemical analysis was conducted using (9) test methods as outlined with results below

Table 5 Chemical Testing

Method	Chemical analysis	Results
6020/7471	(8) RCRA Metals	(8) of (8) detected; Arsenic 9.5-12 mg/kg, Chromium 27-57 mg/kg, All others below minimum cleanup levels
8081	Pesticides	All ND (non-detected) or below minimum cleanup levels
8082	Polychlorinated Biphenyls (PCBs)	ND
AK 101	Gasoline Range Organics	All ND or below cleanup levels
AK 102/103	Diesel Range Organics / Residual Range Organics	All below cleanup levels
8260	Volatile Organic Compounds	ND or below cleanup levels
8270	Semi-Volatile Organic Compounds	All ND or below cleanup levels

* Project limits are defined by ADEC 18 AAC Method 2 Table B1 and B2 Cleanup Levels.

C. Disposal

1. The suspended sediments are conveyed via a portable pipeline from the floating dredge plant to a bermed dewatering site on the spit.
2. The dewatering site area is roughly 240 feet by 270 feet, about 1.5 acres, with its center at 59°36'02.116"N 151°24'43.665"W. The spoils are later transported by truck to a more permanent holding area at the far end of the harbor near the boat ramp; the area is roughly 120 by 550 feet, also on about 1.5 acres with its center at 59°36'28.684"N 151°25'53.789"W.
3. The removal of excavation of gravel, gravel fill or fill material from any beach or from any portion of the Homer Spit is regulated by the City of Homer (Homer City Code 19.12.030), and per city code, no such material was permitted to leave the Homer Spit. However, on March 14, 2011, the City of Homer passed Ordinance 11-09 amending Homer City Code 19.12.050 (Exceptions) providing for the use and disposal of dredged material in the following order of priority:
 - a. Replacement of material removed from City beaches by storms or erosion.
 - b. Fill to improve City port and harbor facilities on the Homer Spit.
 - c. Sale for use as fill on privately owned or leased property on the Homer Spit.
 - d. Emergency repairs or erosion.
 - e. Sale for use as fill material at locations off the Homer Spit.
4. A Dredged Material Management Plan has been initiated to evaluate disposal requirements for the next 20 years with recommendations implemented in 2013.

D. Environmental Permits and Reports

1. The Final Environmental Impact Statement (FEIS) was issued in 1974. The Corps completed an Environmental Assessment in 1978 (with FONSI) and another Environmental Assessment was completed in January 1982. A Final Coordination Act Report was circulated by the U.S. Fish and Wildlife Service in June 1979.
2. The following permits or authorizations have been issued for current dredging operations:

Table 6 Environmental Permits

Agency Name	Date of Issue	Date of Expiration
AK Department of Environmental Conservation	January 9, 2013	January 9, 2018
AK Department of Fish and Game	October 30, 2012	December 31, 2016

3. The Homer small boat harbor is located in the Kachemak Bay Critical Habitat Area, and as such is subject to continuing agency review and monitoring. A 404 permit is active.

4. Water Quality: Five physical parameters were measured through the water column at three locations within the federal project, April 1992; temperature, salinity, pH, oxidation-reduction potential (ORP), and conductivity were measured in the field. No chemical analysis was conducted.

Homer Harbor, Homer, Alaska



Oblique of Homer Harbor, 2002.



Homer Harbor dredging operations, 6 September 2014.

Homer Harbor, Homer, Alaska



Homer Harbor entrance dredging next to USCGC Hickory, 4 September 2014.



Homer Harbor entrance dredging operations, 6 September 2014.