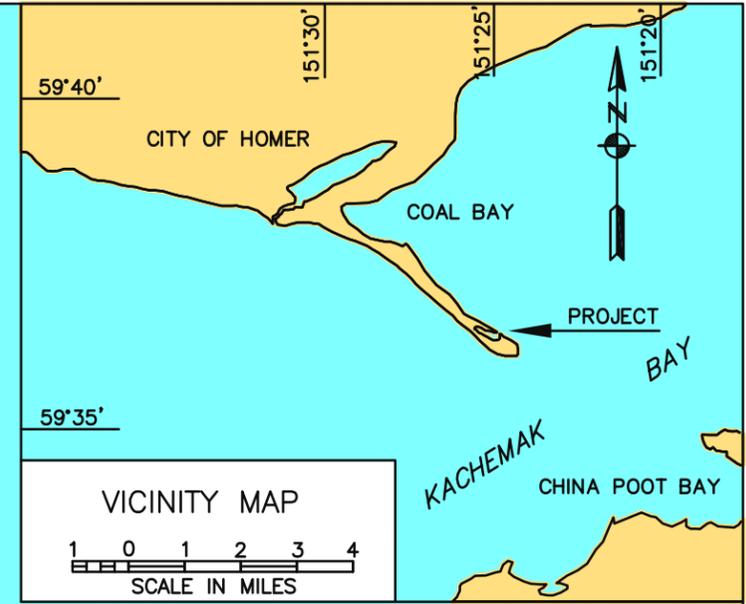
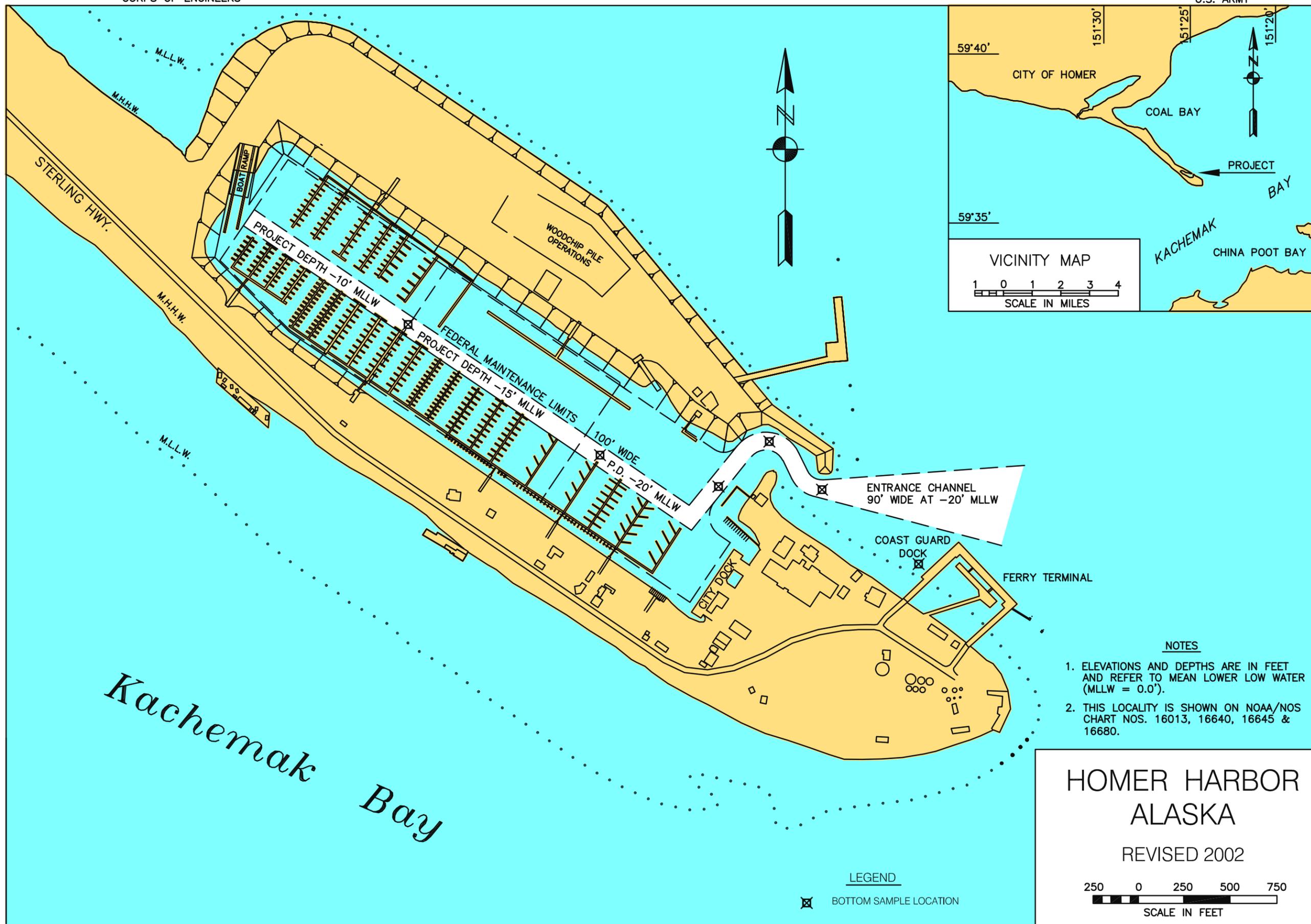


# **HOMER HARBOR**

CORPS OF ENGINEERS

U.S. ARMY



NOTES

- 1. ELEVATIONS AND DEPTHS ARE IN FEET AND REFER TO MEAN LOWER LOW WATER (MLLW = 0.0').
- 2. THIS LOCALITY IS SHOWN ON NOAA/NOS CHART NOS. 16013, 16640, 16645 & 16680.

LEGEND

⊠ BOTTOM SAMPLE LOCATION

# HOMER HARBOR ALASKA

REVISED 2002



# Kachemak Bay

**HOMER HARBOR, ALASKA**  
(CWIS NO. 80508, 87138, 14432)

Condition of Improvement 30 September 2010

**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.

<b>EXISTING PROJECT:</b>	<u>LENGTH</u>	<u>DEPTH</u>	<u>WIDTH</u>
• Outer Entrance Channel . . . . .	700 ft	-20 ft	varies
• Inner Entrance Channel . . . . .	850 ft	-20 ft	90 ft
• Maneuvering Channel . . . . .	2790 ft	-20,-15,-10 ft	100 ft
• Basin (50 acres) maintained by others . . . . .	2985 ft	-20,-15,-10 ft	720 ft
• Main Breakwater . . . . .	1018 ft		
• Secondary Breakwater . . . . .	238 ft		

**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 a 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.
- 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.

Continues on page 1-16a

**HOMER HARBOR, ALASKA (continued)**

30 September 2010

- 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.
- 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.

Continues on page 1-16b



**HOMER HARBOR, ALASKA (continued)**

30 September 2010

**B. Sampling & Testing**

1. Grab samples from five sites in the Federal project and one at the new Coast Guard berth were collected in July 2002. In the Federal project two samples were located within the maneuvering channel of the basin, one of which was a composite sample, and three samples were taken from the entrance channel. (See project map.)
2. Harbor Sediment Samples. The reported values for all analytes are below the ADEC benchmark criteria with the exception of arsenic and chromium. Arsenic was found in all samples at concentrations from 6 – 14.9 mg/kg compared to the benchmark of 1.8 mg/kg. Chromium concentrations ranged from 16.7 – 56.7 mg/kg with a benchmark of 23 mg/kg.
3. Upland Disposal Site Soil Samples. Six composite samples were taken from the proposed site. All reported analyte values were below the ADEC benchmarks with the exception of arsenic and chromium. Values for arsenic ranged from 3.4 – 6.3 mg/kg, and values for chromium ranged from 15.7 – 54.2 mg/kg with the same benchmarks listed above.
4. Existing Dredge Material Stockpile. Two composite samples were taken from the existing stockpile. The reported concentrations for all analytes are below the benchmark criteria with the exception of arsenic. Values of 4.9 and 5.5 mg/kg were found for arsenic in the two composite samples.

**C. Disposal**

1. The suspended sediments are conveyed via a portable pipeline from the floating dredge plant to a bermed site on the spit.
2. Fines are temporarily contained at a site across the spit from the entrance channel relatively close to the dredging activity; the 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 about 1.5 acres with its center at 59°36'28.684"N 151°25'53.789"W.
3. By local ordinance dredge spoils are to remain on the spit and are used by local interests where needed to maintain the integrity of the spit itself.
4. A Dredged Material Management Plan has been initiated to evaluate disposal requirements for the next 20 years with recommendations implemented in 2009.

**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.

Continues on page 1-16d

**HOMER HARBOR, ALASKA (continued)**

30 September 2010

2. The following permits or authorizations are listed by agency below:

<u>Agency Name</u>	<u>Date of Issue</u>	<u>Date of Expiration</u>
ADF&G	4 Feb 05	31 Dec 07 *
ADEC	6 Jul 93	n/a
ADGC	23 Dec 02	Jan 08
USDOA	28 May 03	n/a
ADOEC	2 Jan 08	2 Jan 2013
ADF&G	16 Nov 09	31 Dec 2012

\* 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.

3. 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



Aerial view of the harbor and entrance channel in 2010.



Surveying the entrance channel in 2010.