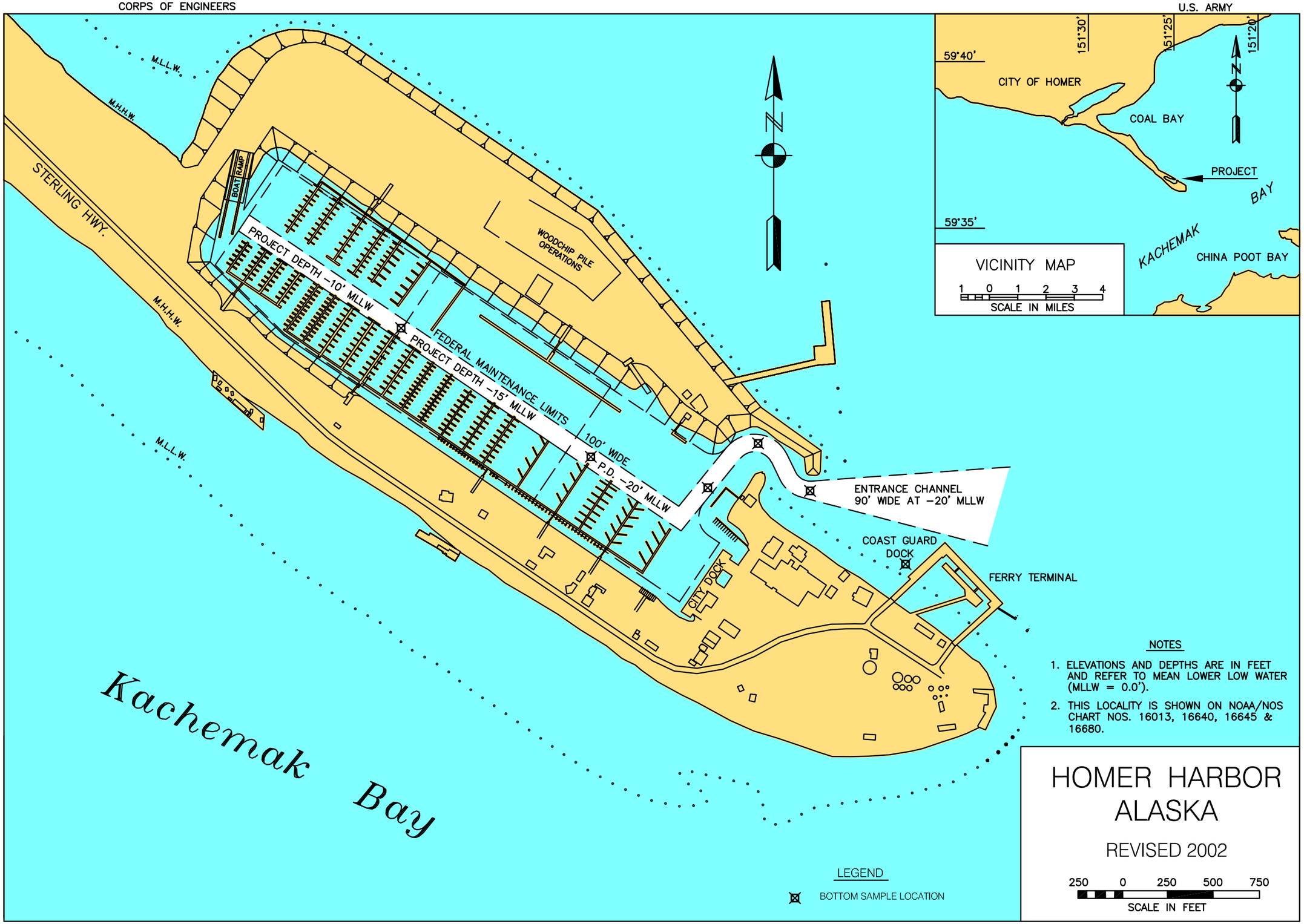
HOMER HARBOR

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.

HOMER HARBOR ALASKA

REVISED 2002

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

Condition of Improvement 30 September 2011

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.

EXISTING PROJECT:	LENGTH	DEPTH	WIDTH
• 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.

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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.

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.

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COST TO DATE:

CG Appropriation 87138	$3,486,677
CG Costs 87138	$3,486,677
CG Contributed Appropriation 87138	$10,021,437
CG Contributed Costs 87138	$10,021,437
CG Contributed Appropriation 80508	$0
CG Contributed Costs 80508	$0
O&M Appropriation 80508	$11,090,419
O&M Costs 80508	$10,700,024
Rehab Appropriation	$67,974
Rehab Costs	$67,974

RANGE OF TIDE:

Mean Range	Diurnal Range	Extreme Range
15.8'	18.3'	32.2'

CONTROLLING DEPTH: A depth of -18.5 feet MLLW controls the entrance channel. There is a depth of 13.3 feet in the harbor near the transition to the 15 foot project depth The Controlling Depth for the 15 foot Project Depth area is 11.3 feet. The Controlling Depth for the 10 foot Project Depth area is 11.7 feet.

DREDGED QUANTITIES AND CONTRACT COSTS

Item	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Quantity Cubic Yards	8,500	4,386	0	8,600	9,005
Contract Cost	$238,946	$224,483	$0	$65,500	$325,657

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.

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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 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 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.

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

Agency Name	Date of Issue	Date of Expiration
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 Small Boat Harbor, Homer Alaska

Alaska State Ferry at Homer (top) and Homer SBH pictures taken in July 2011.

Homer Small Boat Harbor, Homer Alaska

Dredging USCG dock in Homer in 2009.

Homer Harbor in July 2011.

Homer Small Boat Harbor, Homer Alaska

Homer Harbor dredging in August 2011.

Homer Small Boat Harbor, Homer Alaska

Homer Harbor boat launch (top) picture and USCG Hickory picture in Homer 2011.