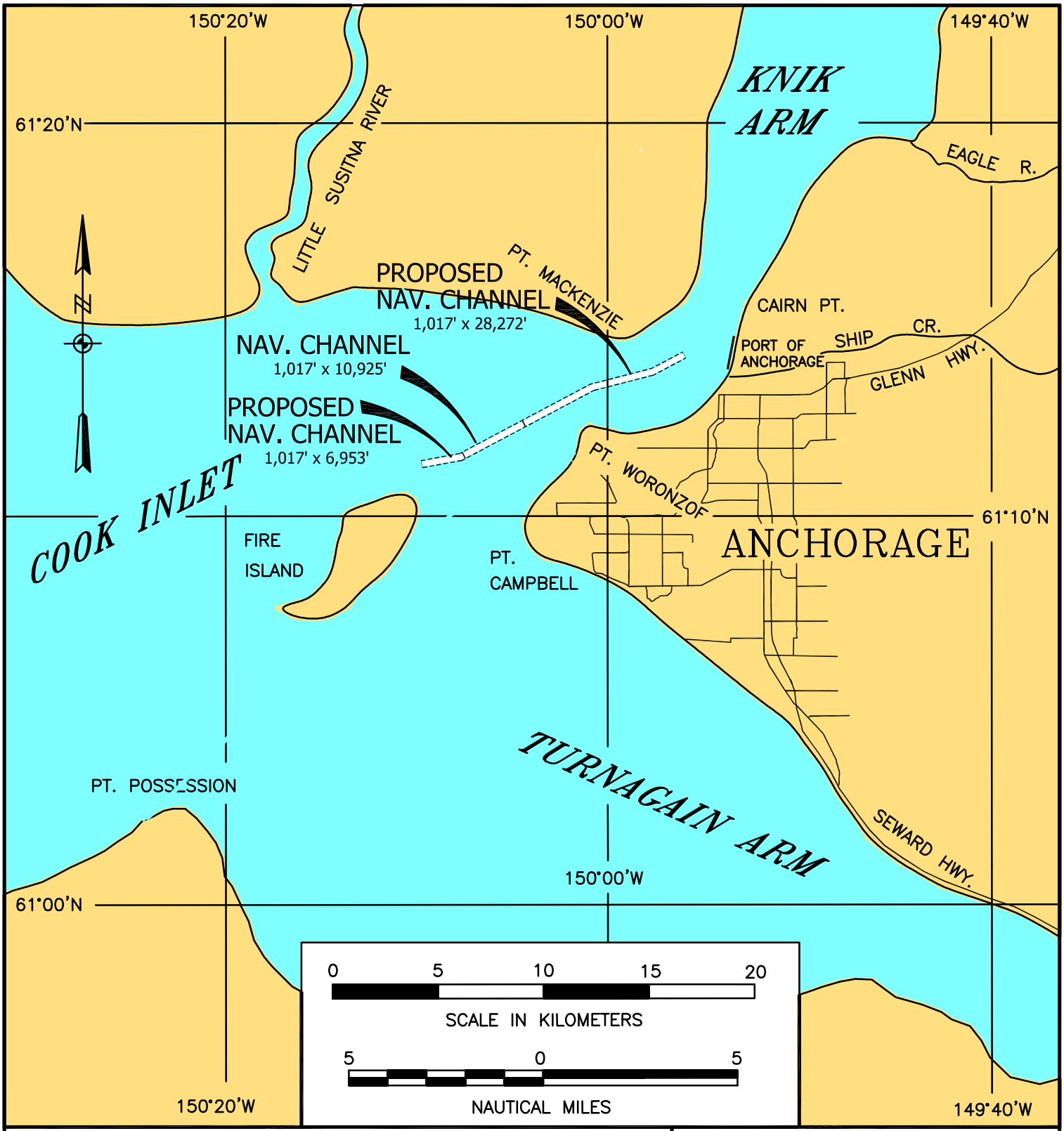
COOK INLET NAVIGATION CHANNEL

CORPS OF ENGINEERS U.S. ARMY



NOTES

1. THIS LOCALITY IS SHOWN ON NOAA CHART NOS. 16660, 16663, AND 16665.
2. PROJECT DEPTH IS AUTHORIZED AT −45 FEET IN REFERENCE TO MEAN LOWER LOW WATER (MLLW).

COOK INLET NAVIGATION CHANNEL 2011

COOK INLET NAVIGATION CHANNEL, ALASKA
(CWIS NO. 10324, 10534)

Condition of Improvement 30 September 2012

AUTHORIZATION: (1) Water Resources Development Act of 1996 (Public Law 104-303, 104th Congress) authorizes the expenditure of $5,700,000 subject to the report of the Chief of Engineers. **(2)** The Energy and Water Development Appropriations Act, 1999 (Public Law 105-245, Oct. 7 1998) increases the project total not to exceed $12,600,000; one third of this total is to be cost shared with the local sponsor. **(3)** Energy and Water Appropriations Act, 2005, states that "The Secretary shall modify the channel in the existing Cook Inlet Navigation Channel approach to Anchorage Harbor, Alaska, to run the entire length of Fire Island Range and Point Woronzof Range and shall modify the depth of that channel to minus 45 Feet mean lower low water. The channel shall be maintained at a depth of minus 45 feet mean lower low water.

EXISTING PROJECT:	LENGTH	WIDTH	DEPTH
• Original Channel	10,925 ft	1,017 ft	-38 feet
• Proposed Channel Modification (full approach) . .	46,150 ft	1,017 ft	-45 feet

PROJECT USAGE: The channel provides additional time for the passage of deep draft vessels to and from the Port of Anchorage.

PROGRESS OF WORK:

1996 - The construction site and disposal area are surveyed. Pre-construction engineering and design work are initiated.
1997 - Ship tracking studies over the winter of 96-97 confirm the project dimensions. Plans and specifications are begun.
1998 - A Project Cooperation Agreement is signed with the Municipality of Anchorage in January. The construction contract is awarded in December.
1999 - Dredging operations remove 576,934 yards from the project.
2000 - The project is physically completed in September with the removal of an additional 882,609 cubic yards of material.
2001 - Three condition surveys are conducted at the beginning of June, August, and November.
2002 - The project is surveyed in May, July, and September.
2003 - Condition surveys are conducted in May, July and early October.
2004 - Condition surveys are completed in June and October with multi-beam equipment.
2005 - Survey coverage is increased along the Woronzof and Fire Island range lines in accordance with new authorization and the concern of shippers. 9,950 linear meters were surveyed at a width of 920 meters in May and September with full coverage multi-beam surveys.

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COOK INLET NAVIGATION CHANNEL, ALASKA (continued)

30 September 2012

2006 - One full coverage multi-beam survey was conducted in August covering 7 and ¼ miles of channel, an extension of about 1 mile from last year to cover the concerns of shippers.

2007 - A new best-fit channel alignment was created covering 8 ¾ miles along the Woronzof and Fire Island range lines. A multi-beam survey of the entire project was conducted in August.

2008 - A multi-beam condition survey was conducted in August.

2010 - A multi-beam condition survey was conducted by Terrasond in July. Until a cost shared decision document can be funded and prepared for the entire authorized project area, the maintenance dredging authority currently remains limited to stations 69+52 thru 178+77 (based on the proposed project limit stationing found in the July survey).

2012 - A condition survey was completed in June; 4.1 million cubic yards of sand and gravel require dredging. Environmental documents and a geotechnical investigation were started in preparation for maintenance dredging.

COST TO DATE:

GI PED Appropriation	$307,252
GI PED Costs	$307,252
CG Appropriation	$8,409,492
CG Costs	$8,409,492
CG Contributed Appropriation	$2,498,971
CG Contributed Costs	$2,498,971
O&M Appropriation	$8,443,079
O&M Costs	$762,013

RANGE OF TIDE:	Mean Range	Diurnal Range	Extreme Range
Fire Island	24.0'	26.9'	38.9'
Anchorage	26.2'	29.2'	41.0'

CONTROLLING DEPTH: Depths of -28 to -30 feet MLLW controls throughout the channel between stations 108+00 and 150+00, June 2012.

Note: This project is subject to the strong tidal influence found in the upper Cook Inlet. Variation in available depth may occur over time. The information above is not provided for navigation purposes.

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COOK INLET NAVIGATION CHANNEL, ALASKA (continued)

MAINTENANCE DREDGING SUPPLEMENT:

A. General

1. Nothing to report for 2012. Dredging will begin in 2013.

B. Sampling & Testing

1. Twelve primary samples were taken out of the Westport dredge hopper outfalls from two trial dredging areas, October 2012.
2. Chemical analysis was conducted using (10) test methods as outlined with results below:

Method AK101	Gasoline Range Organics	All below project screening limits
Method AK102/103	Diesel Range Organics/ Residual Range Organics	none detected (ND)
Series 6000-7000's	(8) RCRA Metals	(8) of (8) detected Arsenic 5.4 - 6.8 ppm, all others below minimum levels
Method 9060	Total Organic Carbon	1200-1700 ppm
Method 8260B	Volatile Organic Compounds	Methylene Chloride 0.018 ppm associated with the Trip Blank, all others ND
Method 8081A	Pesticides	ND
Method 8082	Polychlorinated Biphenyls	ND
Method 8270D	Semi-volatile Organics	ND or below minimum levels
Method D2216	Percent Moisture	69 – 77 %

Project limits are defined by ADEC 18 AAC 75 Method 2 Table B1 and B2 Cleanup Level and PSDDA Users Manual Table 5-1 Screening Level.

C. Disposal

1. Dredged material is transported by hopper barge to a deep water site, dumped, and dispersed by tidal activity. Water depths ranged from -38 to -90 feet MLLW (2012) in the site.

The four corners of the disposal site are defined as follows:

Northwest = N61° 11' 18.40", W150° 08' 57.98";
Northeast = N61° 11' 18.45", W150° 08' 04.43";
Southwest = N61° 10' 59.01", W150° 08' 57.89";
Southeast = N61° 10' 59.07", W150° 08' 04.35".

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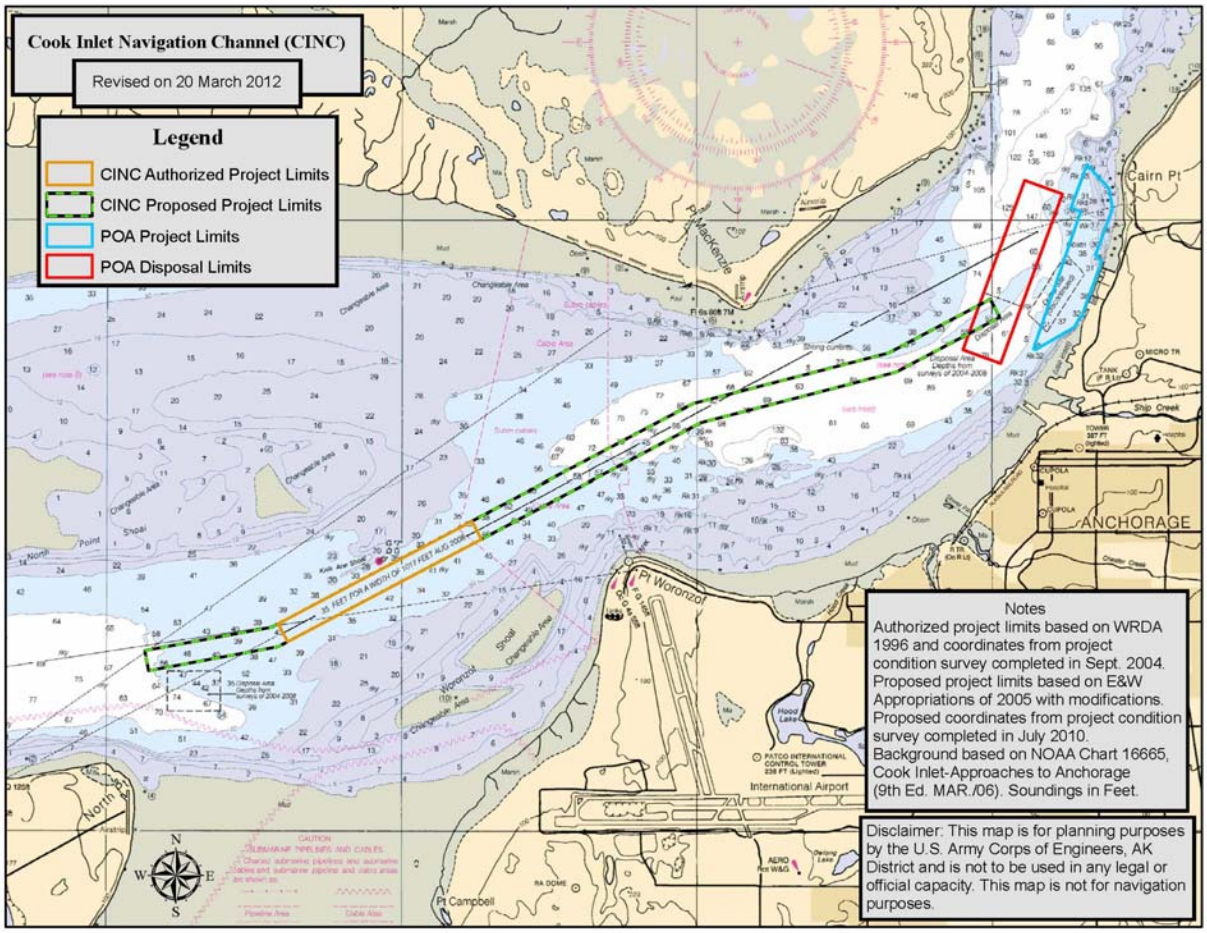
COOK INLET NAVIGATION CHANNEL, ALASKA (continued)

D. Environmental Permits and Reports

1. An environmental assessment was completed by the Corps in February 1996, followed by a Finding of No Significant Impact (FONSI) in April 1996. In 1999 additional coordination was undertaken to further consider impacts to beluga whales. The 1999 coordination concluded that the environmental documentation did not require supplementation or revision.

Cook Inlet Navigation Channel



CINC map on Navigation Chart and ice flow in the channel 2005.

Cook Inlet Navigation Channel

Sample Bin of Material Collected 2012,-Poorly Graded Sand

Recording Data On Sample Bin, 2012

Cook Inlet Navigation Channel

Westport (Manson) dredge collecting test dredge material, 2012

Westport (Manson) dredge collecting test dredge material, 2012