

# 2001 FIELD and FINAL TIDE NOTE

## Hydrographic Sheet: H-11030

### Cook Inlet

### Woronzof Shoal to Anchorage

NOAA Project No:	OPR-P385-KR-2001 Alaska						
NOAA Contract No:	50-DGNC-0-90003						
The Anchorage, Alaska tide station (945-5920) served as control for the subordinate stations for this project. Datum determinations were made for the subordinate station at Fire Island (945-5912) and for the subordinate station at Port MacKenzie (945-5934). The NTDE 1960-78 was utilized.							
Location and Time Meridian	Name:	Lat (NAD 83)	Long (NAD 83)	Time Meridian:			
	Anchorage:	61° 14' 18"	149° 53' 24"	0° (UTC)			
	Fire Island:	61° 10' 21"	150° 12' 19"	0° (UTC)			
	Port MacKenzie:	61° 16' 03"	149° 55' 01"	0° (UTC)			
Time Period and Datum Reference	Name:	Established:	Removed:	MLLW	MHW	units	
	Anchorage:	<i>established and operated by NOS</i>			0.000	10.549	meters
	Fire Island:	05/24/2001	09/14/2001	0.000	7.953	meters	
	Port MacKenzie:	05/22/2001	09/07/2001	0.000	8.609	meters	
Tide observer	LCMF Incorporated 139 E. 51st Ave. Anchorage, Alaska 99503 (under subcontract to Terra Surveys LLC, Palmer, AK)						
Gauges	Design Analysis H350XL/355 bubbler systems at tertiary tide stations.						
Installation	Each gauge was secured inside a waterproof case, and fastened vertically to a wooden brace above the high water line. A tent covered the gauges at Fire Island. A pre-built shelter covered the installation at Port MacKenzie.  Refer to the tide station packages for additional site specific details of installation.						
Tide staff	None. At Fire Island, spirit leveling was observed between a nearby tidal bench mark and the water. The survey rod was outfitted with a stilling well to dampen wave action. At Port MacKenzie, a galvanized wire rope marked at 0.5m increments with a large iron disk at the end was lowered to the water.						
Benchmarks	The following benchmarks were installed at these sites:  Fire Island: none Port MacKenzie: 5934 A 2001, 5934 B 2001, 5934 C 2001, 5934 D 2001, 5934 E 2001, 5934 F 2001  The following benchmarks were recovered at these sites: Fire Island: Rife 1960, BM 12 1974, BM 13 1974, 5912 C 1998, 5912 D 1998, 5912 E 1998 Port MacKenzie: none						
Levels	Benchmarks were leveled at the installation and removal of each tidal station. The benchmarks and station datums were connected through frequent leveling to the water. The level runs closed within NOS tolerance.						
Final Tidal Zoning	The final tidal zoning from 11/1/01 follows this report (AutoCAD map with notes). This zoning was developed from a numerical analysis of historical bathymetric data.						
Reduction of Multibeam data	Terra Surveys LLC (the prime contractor) was provided preliminary datums developed by LCMF during July 2001 and MLLW correctors throughout the field season. In September, LCMF finalized datums and forwarded all data necessary to reduce soundings to the prime contractor.						