



Alaska Research Associates, Inc.

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Memorandum

To: Monty Worthington, ORPC AK
From: Marc Bourdon, Tamara McGuire, LGL
Date: August 3, 2010
Re: LGL Monthly Progress Report -July 2010

This is a progress report of a study by LGL Alaska Research Associates, Inc., sponsored by ORPC Alaska to monitor beluga whale presence, relative abundance, and behavior off of the north side of Fire Island, Upper Cook Inlet, Alaska. Information presented in this report provides baseline data on beluga whale presence, relative abundance, and surface behavior in and near the Cook Inlet Tidal Energy Project Proposed Deployment Area. This report covers beluga whale observation activities during July 2010.

Objectives

The study has two primary objectives:

1. Estimate the frequency of occurrence, relative abundance, and surface behavior of beluga whales in and near the proposed Deployment Area during ice-free months of 2010.
2. Provide information to ORPC on beluga whale sightings and locations relative to the Cook Inlet Tidal Energy Project.

Monitoring Effort

Monitoring was conducted on six days during July 2010 (40.56 hours total, Table 1) from the observation site near Race Point, Fire Island. Observation teams chartered a small fixed-wing aircraft to travel daily between Anchorage and Fire Island. Observers looked for belugas during the flights, and had a grid-cell map, a GPS, and a clinometer onboard to record the flight paths and any belugas sighted. Figure 1 displays the flight paths.

Environmental Conditions

Environmental conditions were recorded for every hour of observation during the month of July. Sighting conditions were ranked as good, fair, or poor, based on the presence of wind, whitecaps, sun glare, rain, haze, snow, and fog. Sighting conditions were reported as good on zero days, fair on five days, and poor on one day. Observers were able to see to the far shore (along the Susitna Flats) on all observation days. Mean wind speed was 9.6 km/h, with values ranging from 0-32.9 km/h. Seas were generally calm, with a mean Beaufort Sea State of 1.3 (1 = ripples, without foam crests, and 2 = small wavelets, crests do not break). Mean air temperature was 15.8° C, with values ranging from 12.8° to 22.2° C. Rain was noted during eight hours over two days; fog was noted during four hours over two days.

Vessels and Vessel Activity

All vessel activity in or near the proposed Deployment Area was monitored by the observation crew in July. Vessels were observed transiting in or near the proposed Deployment Area: tugs with barges were seen on three days; a single tug was seen on one day; and a skiff was seen on one day.

Bird Sightings

Observers looked for and recorded birds on the water in and near the proposed Deployment Area during all observation days in July. Approximately 50 gulls (unknown species) were seen on or near the proposed Deployment Area during one day in July.

Beluga Whale Sightings

Belugas were sighted on one of the six observation days in July (Table 2). Belugas were not seen in or near the proposed Deployment Area (Tables 1 and 2). Locations of the sightings during July are shown in Figure 2. Belugas were not seen during any of the crew-transport flights.

Additional Marine Mammal Sightings

No additional marine mammals were sighted.

Upcoming Field Research

Visual monitoring is scheduled to occur one day a week, with an average of seven hours of monitoring per day until August 26. During the period of September 2 through September 8, there will be acoustic monitoring equipment in the water near the proposed Deployment Area. Concurrent visual observations will be held daily during that period in order to compare visual and acoustic monitoring. Following September 8, visual observations will continue twice a week until November 12 (weather permitting).

Table 1. Monitoring effort during July 2010 is summarized by date and location.

Day	Date	Shift Start	Shift Stop	Total Hours of Observation	Belugas Sighted	Belugas sighted in or near the proposed Deployment Area?
1	2010JULY01	9:10	16:10	7.00	NO	NO
2	2010JULY07	9:10	16:10	7.00	NO	NO
3	2010JULY08	9:10	16:10	7.00	NO	NO
4	2010JULY13	9:30	15:30	6.00	NO	NO
5	2010JULY19	9:05	16:02	6.90	NO	NO
6	2010JULY27	9:20	16:00	6.66	YES	NO

Table 2. Beluga whale sightings during July 2010 are summarized by date.

Date	Time	White	Gray	Calves	Unknown	Total	Group	1° Activity ¹	2° Activity	Spread ²	Direction ³	Formation ⁴	Belugas sighted within or near proposed Deployment Area?
2010JULY27	09:38 - 15:55	14	1	0	0	15	1	U	U	U	U	U	No

¹ Activity				² Spreads (Body Length)		³ Direction		⁴ Formations	
Traveling	T	Resting	R	<1	1	Variable	V	Circular	C
Socialize	S	Spy Hop	SH	1-3	3	Unknown	U	Parallel	P
Dive	D	Milling	M	4-7	7	North	N	Linear	L
Feeding Observed	FO	Other	O	8-12	12	South	S	Echelon	E
Feeding Suspected	FS	Unknown	U	>13	13	East	E	No Formation	NF
				Unknown	U	West	W	Unknown	U

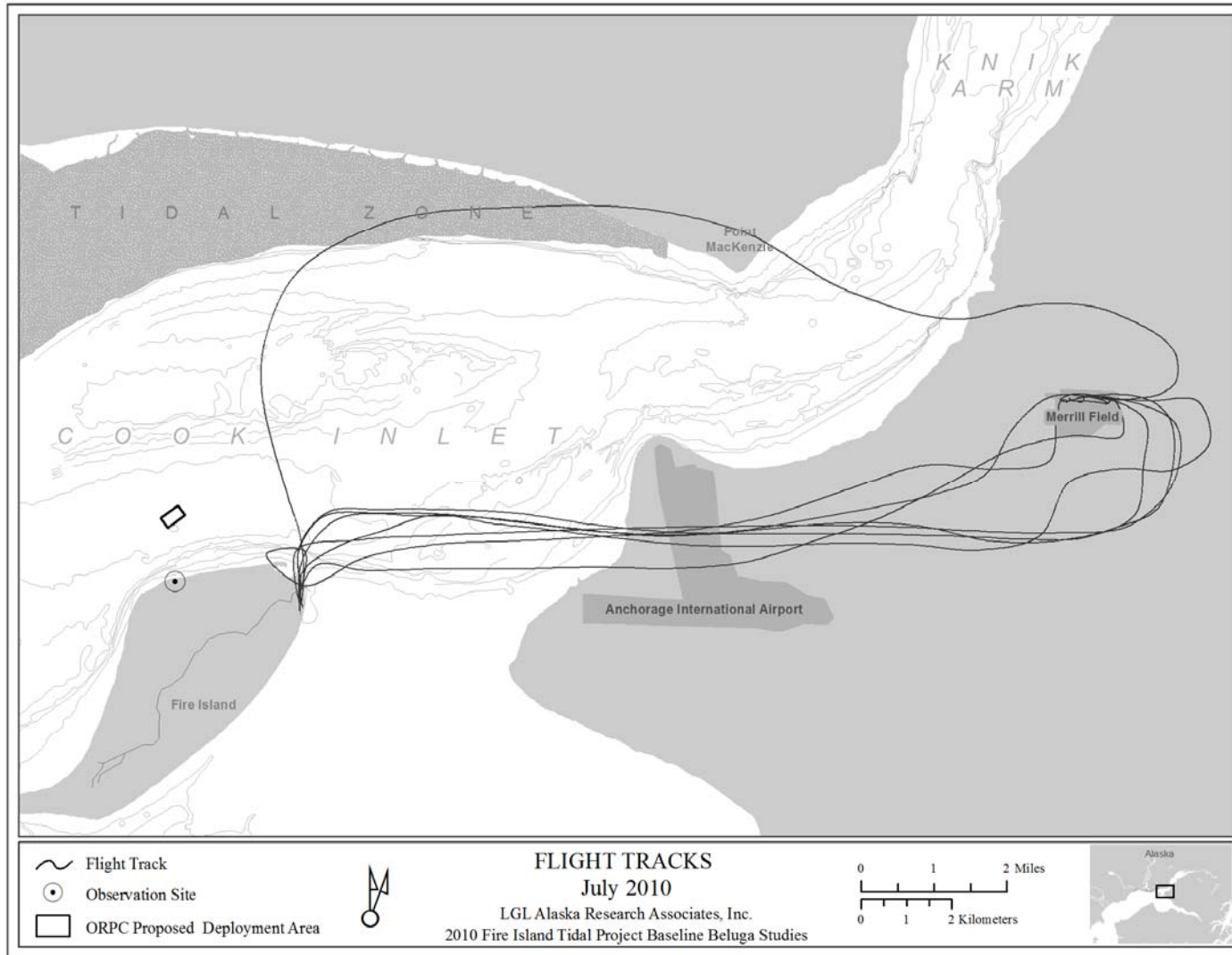


Figure 1. Paths of crew-transport flights in July 2010.

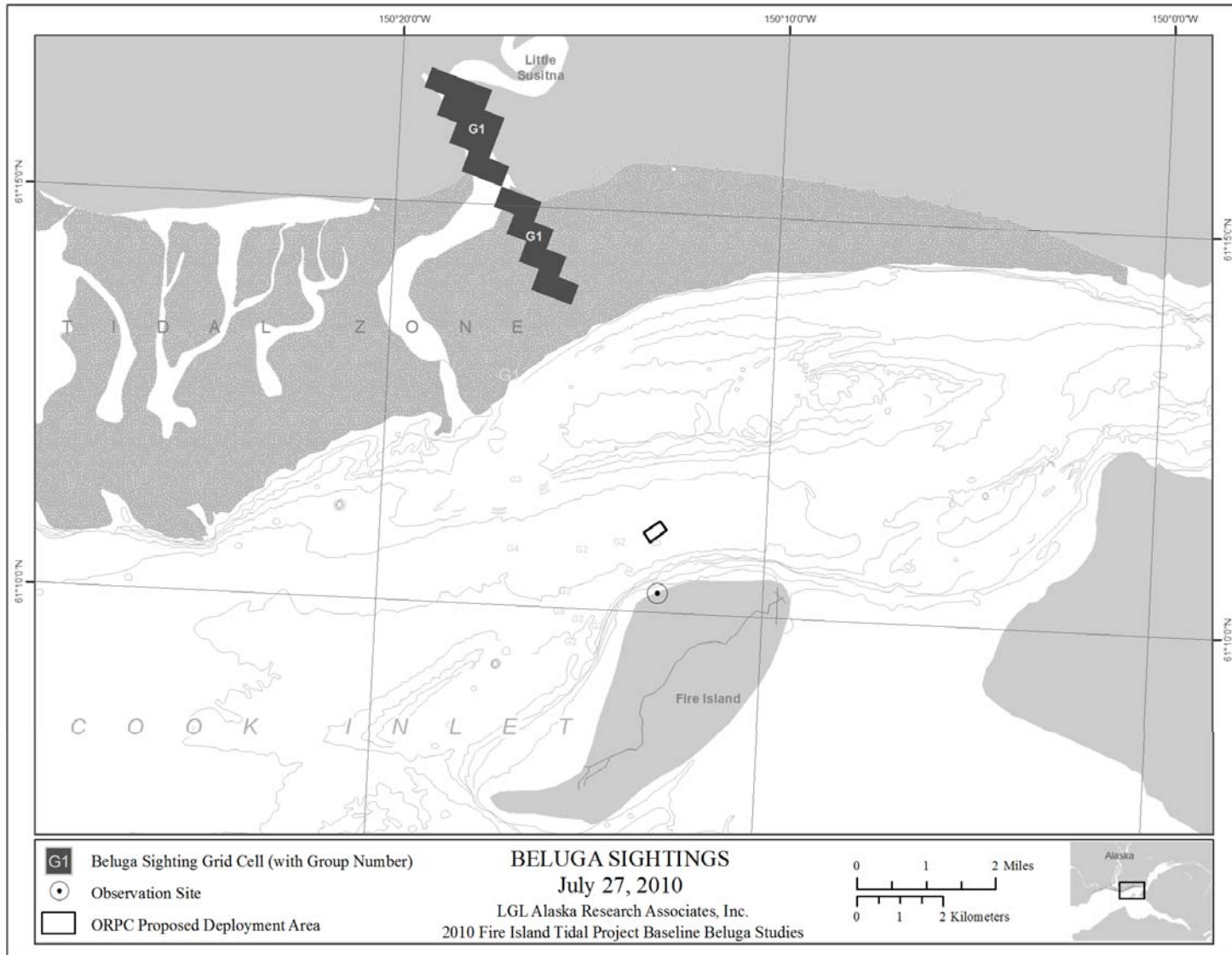


Figure 2. Locations of beluga whales sighted on July 27, 2010.