

# **Brief Characterization of the 2009 Subsistence Whaling Season at Cross Island, Alaska**

**Presented at the Open Water Meeting  
Anchorage, 24 March 2010**

**Michael Galginaitis, Applied Sociocultural Research  
907-272-6811    msgalginaitis@alaska.net**

## **Acknowledgments**

**Foremost, to the Nuiqsut whalers and the Nuiqsut Whaling Captains' Association, the residents of Nuiqsut, and the Alaska Eskimo Whaling Commission – without their help and participation the project would not be possible;**

**To the Minerals Management Service for funding the primary research summarized here, and to BPXA for supplemental funding supporting additional analysis;**

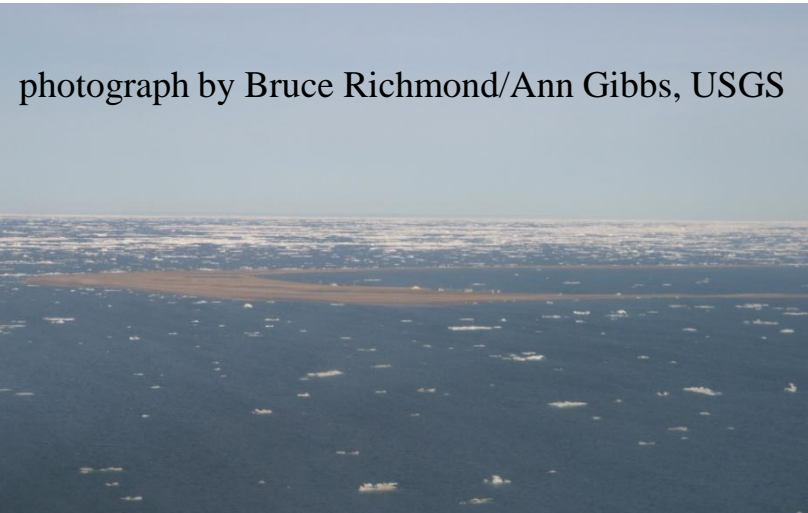
**To LGL and Greeneridge Sciences, for their encouragement and many suggestions; and**

**To industry, for logistical assistance in shipping project supplies to Cross Island.**



Oblique Aerial Photographs, 2006.  
Selected Cross Island Views  
A.E. Gibbs and B.M. Richmond 2009

photograph by Bruce Richmond/Ann Gibbs, USGS



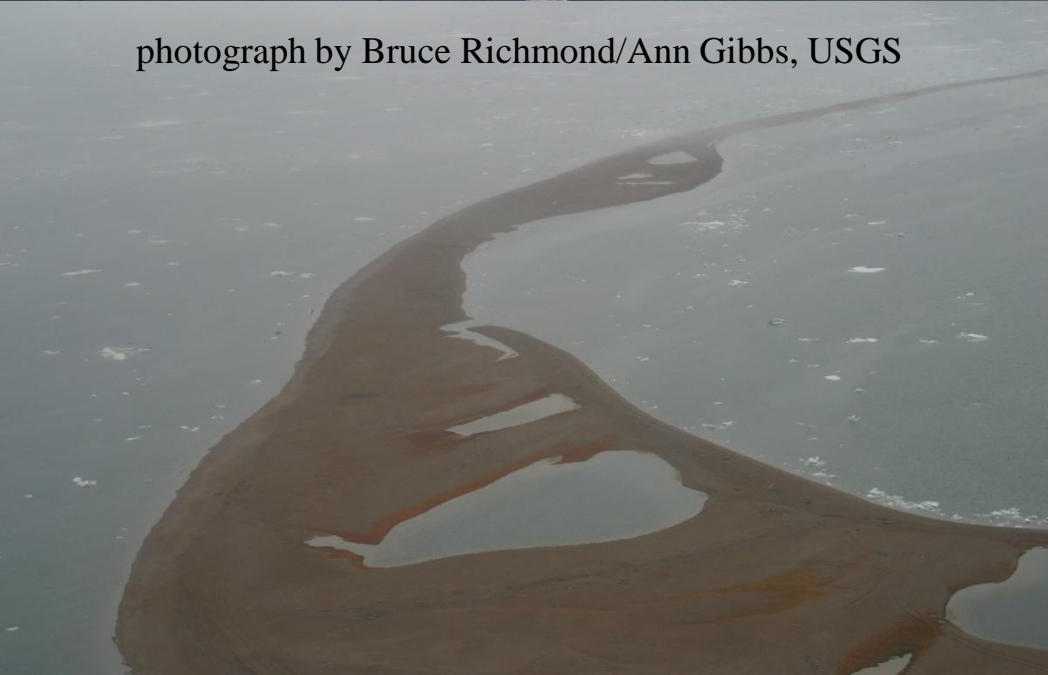
photograph by Bruce Richmond/Ann Gibbs, USGS



USGS Lat: 70 29' 26.18" N Lon: 148 3' 27.57" W UTC: 00:57:15 10 Aug 2006 IMG\_0568.JPG

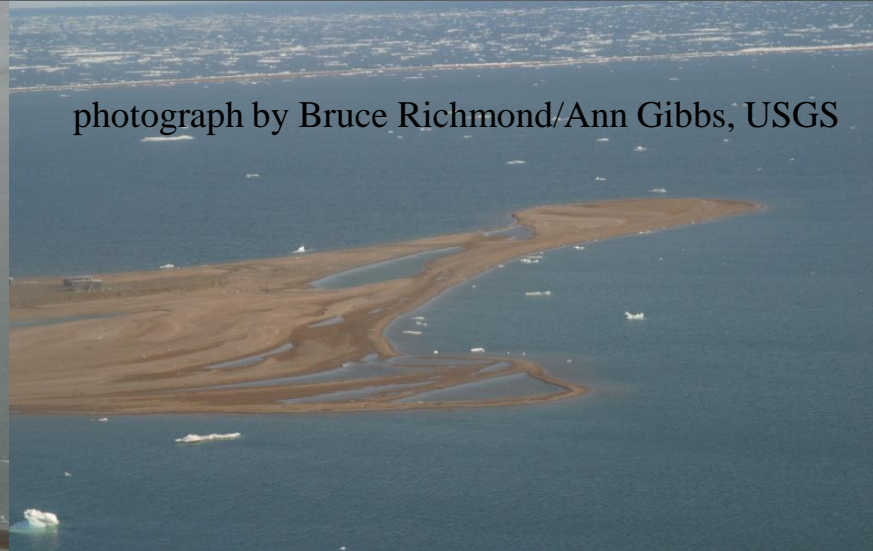
USGS Lat: 70 28' 59.26" N Lon: 147 59' 17.31" W UTC: 22:53:27 07 Aug 2006 IMG\_7624.JPG

photograph by Bruce Richmond/Ann Gibbs, USGS



USGS Lat: 70 29' 53.30" N Lon: 147 58' 37.73" W UTC: 22:54:05 07 Aug 2006 IMG\_7633.JPG

photograph by Bruce Richmond/Ann Gibbs, USGS



USGS Lat: 70 29' 44.06" N Lon: 148 0' 31.26" W UTC: 00:57:57 10 Aug 2006 IMG\_0572.JPG

<http://walrus.wr.usgs.gov/infobank/a/a106ak/html/a-1-06-ak.meta.html>

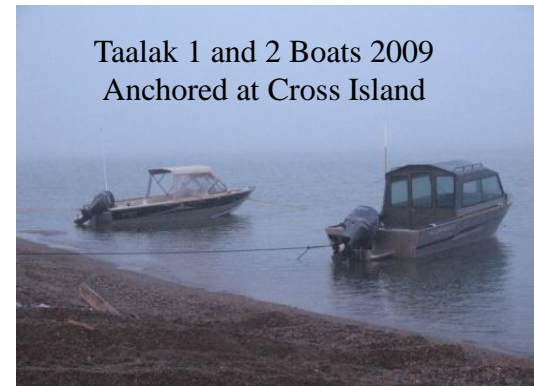
Napageak Boat - 2009  
Leaving to Scout for Whales



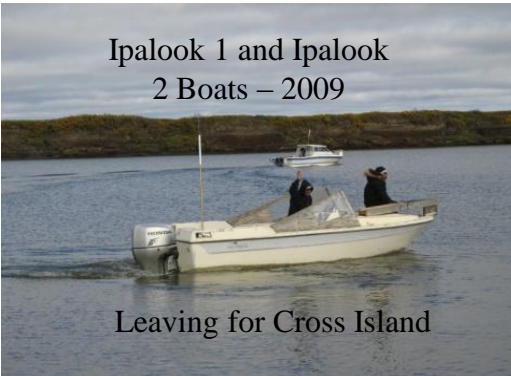
Aqarguin Boat  
At Cross Island



Taalak 1 and 2 Boats 2009  
Anchored at Cross Island

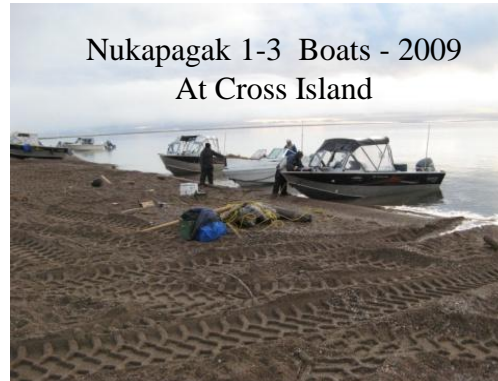


Ipalook 1 and Ipalook  
2 Boats - 2009



Leaving for Cross Island

Nukapagak 1-3 Boats - 2009  
At Cross Island



Oyagak2 and Oyagak1 Boats  
at Cross Island - 2009



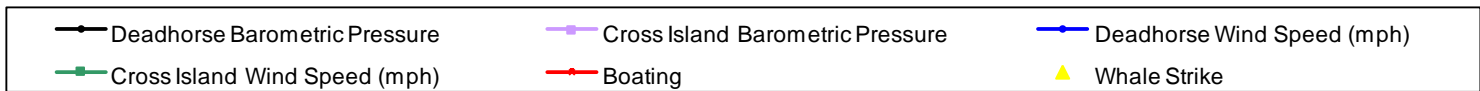
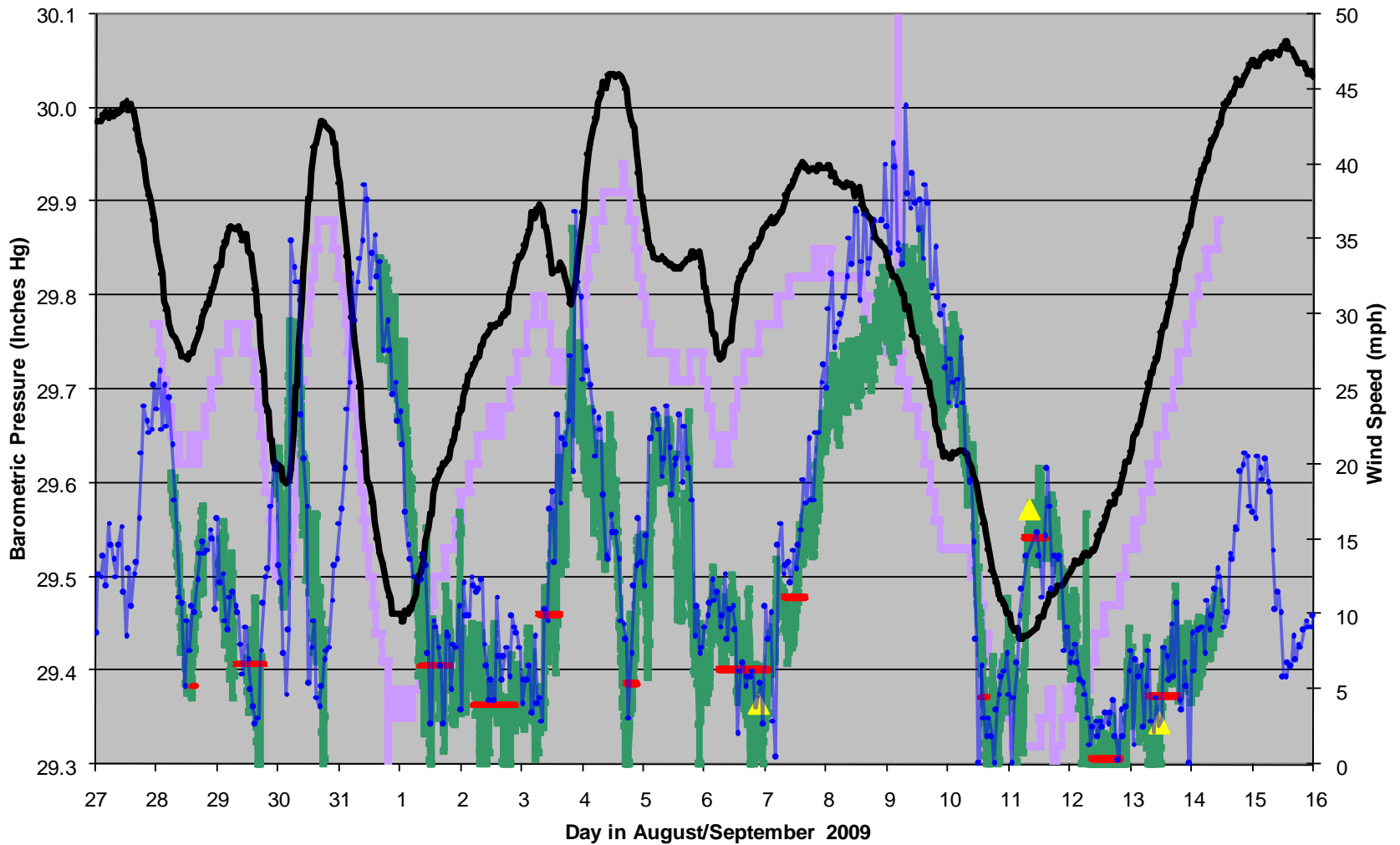
Table 5.1. RECENT HARVEST OF BOWHEAD WHALES NEAR CROSS ISLAND.

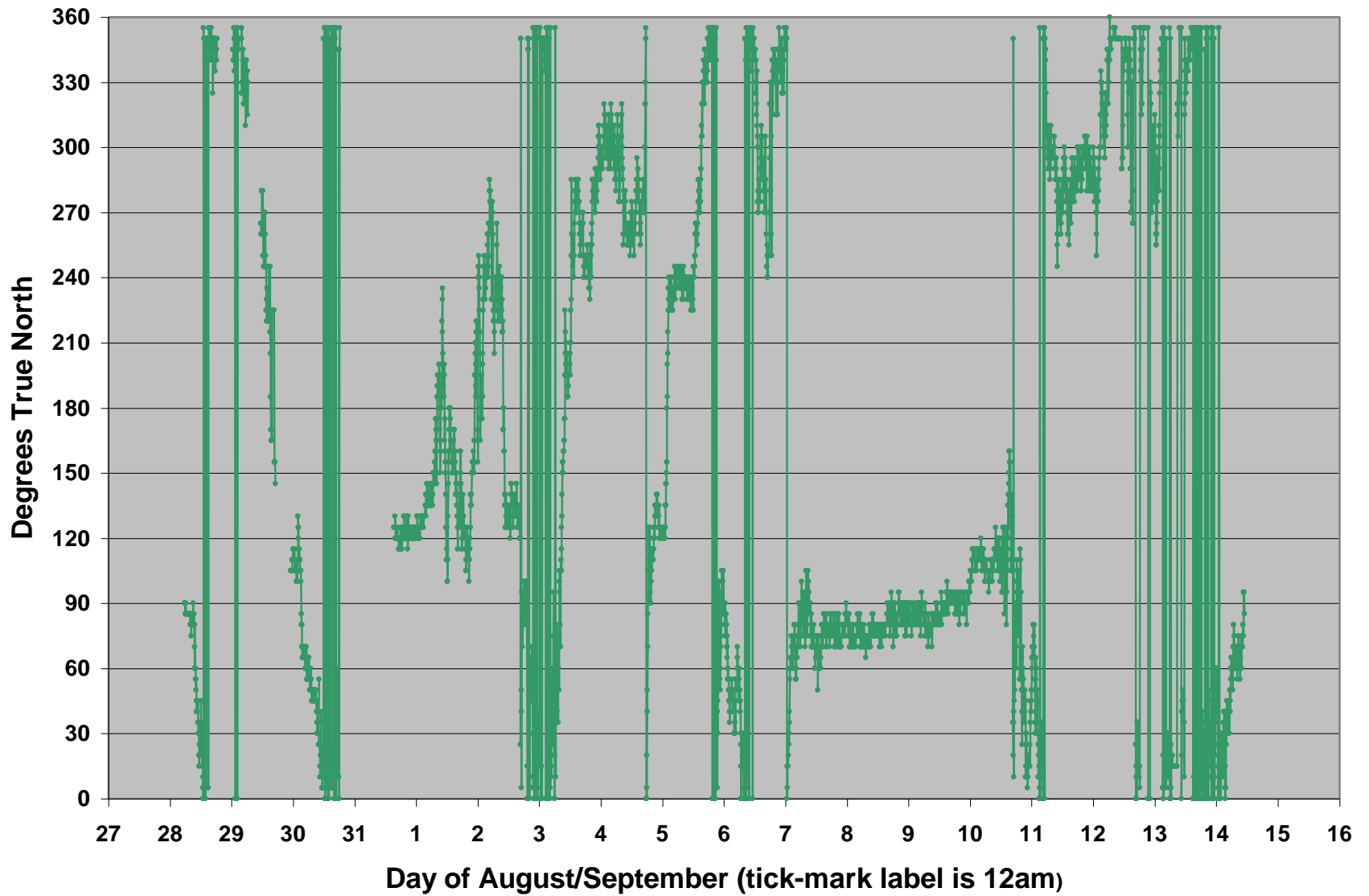
Year	Whales			Notes
	Quota	Landed	Struck & Lost	
1973	NA	1	0	
1982	1	1	0	
1986	2	1	0	
1987	2	1	0	
1989	3	2	2	Oil industry vessel disturbance noted by whalers
1990	3	0	1	Oil industry disturbance noted, also rough seas
1991	3	1	2	Poor weather, adverse ice conditions
1992	3	2	1	
1993	3	3	0	Very favorable whaling conditions
1995	4	4	0	
1996	4	2	0	
1997	4	3	1	
1998	4	4	1	
1999	4	3	0	
2000	4	4	0	Very favorable whaling conditions
2001	4	3	0	Whalers report whales tended to be "skittish"
2002	4	4	1	
2003	4	4	0	Poor weather
2004	4	3	0	Poor weather
2005	4	1	0	Very poor weather, adverse ice conditions, disruption
2006	4	4	0	Adverse ice conditions first half of season
2007	4	3	1	Overall poor weather, little ice, whales close
2008	4	4	0	No ice, generally poor weather and rough/variable sea conditions, whales close to Cross Island
2009	4	2	1	No ice, swells and some difficult sighting conditions, whales relatively distant

**otes:** Years of no harvest and no "struck and lost" are not listed. This does not imply that no whaling effort was made in those years. "Quota" was not applicable prior to 1978. It is not clear from the records (or informants) when the quota for Nuiqsut increased to 2 whales and then to 3 whales (1983–1991 documentation is not definitive. Values provided for these years are best guesses based on inconsistent information).

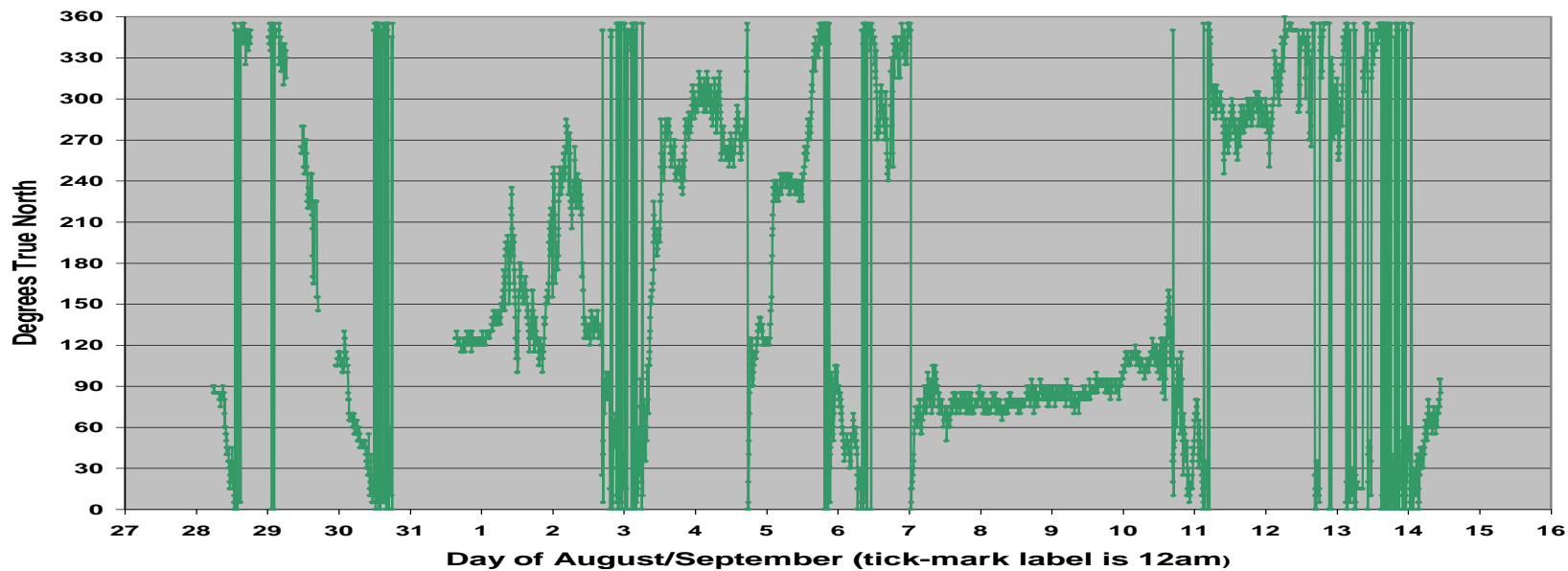
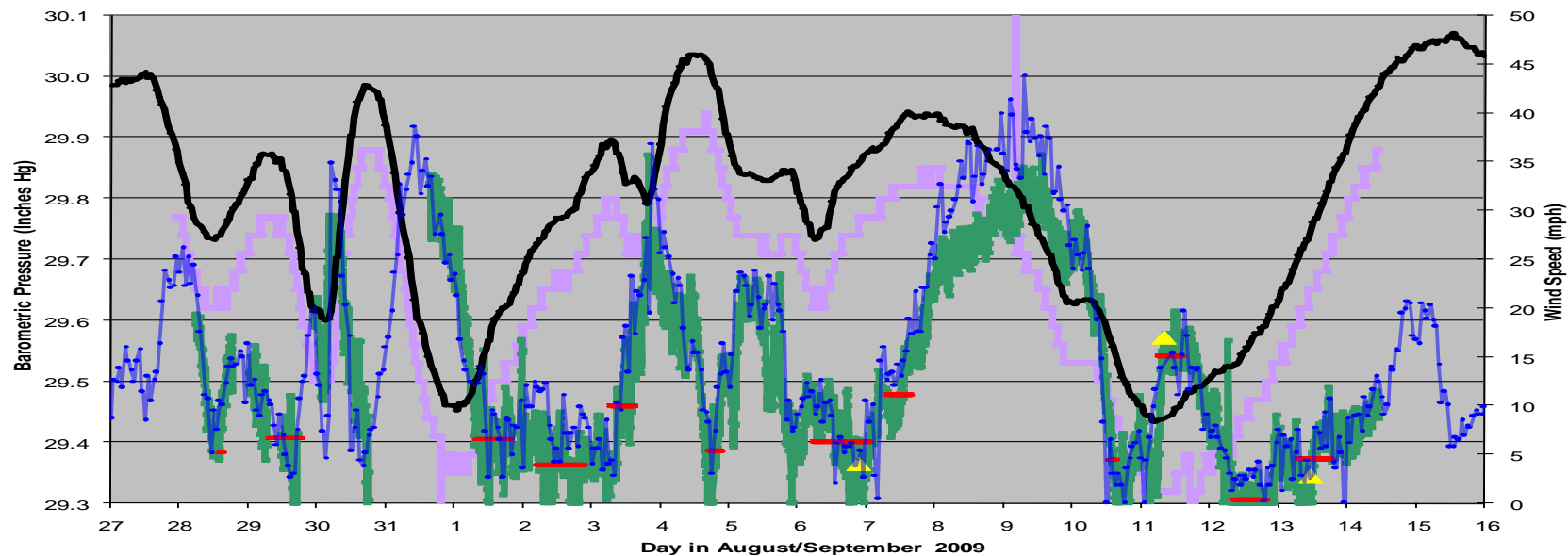
**ources:** Compiled from AEW C records, personal communications with Nuiqsut whalers, and field notes from the 2001–2008 whaling seasons.

Slide deleted pending  
NWCA and AEWC  
approval for publication of  
harvest locations









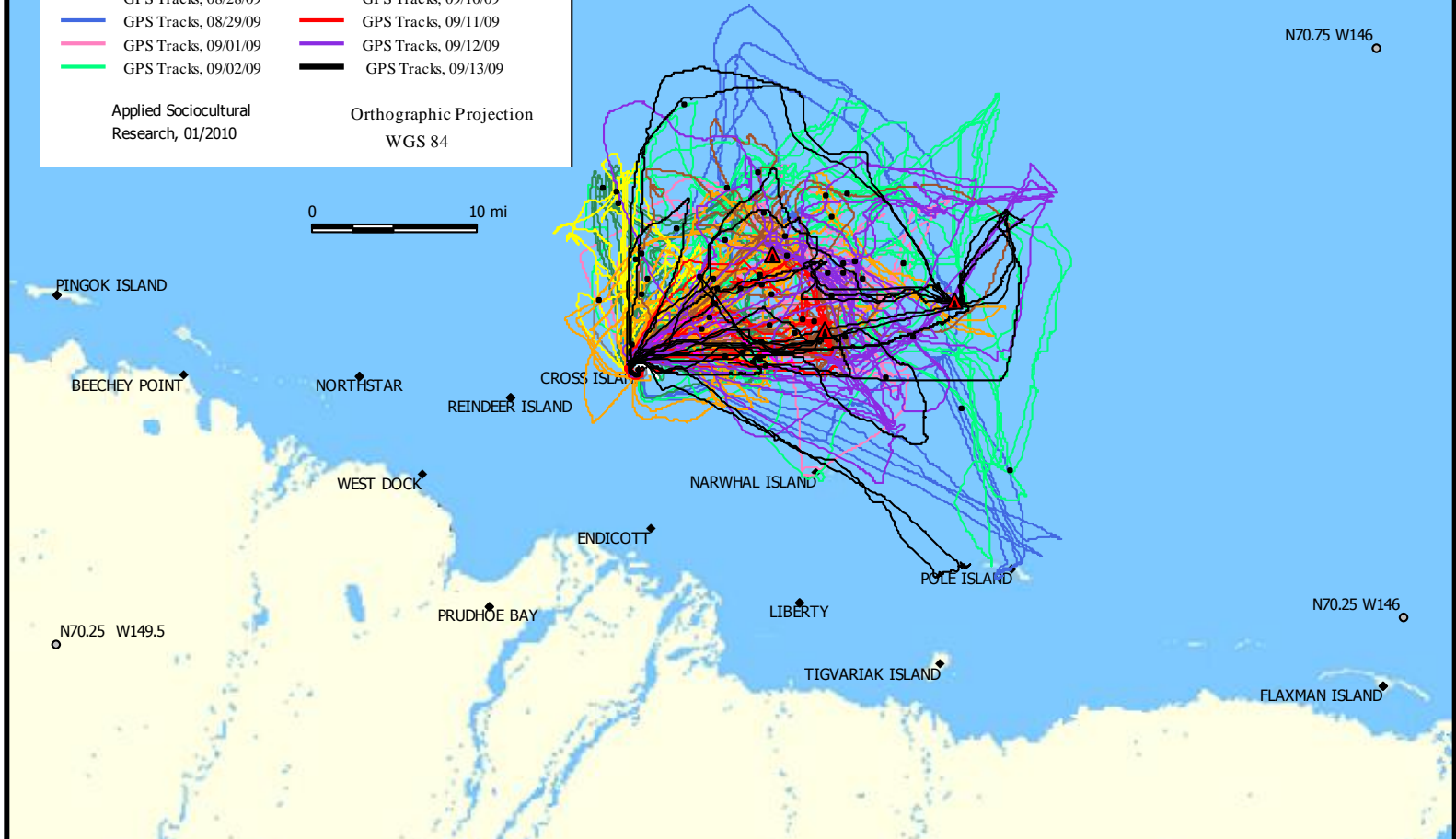
### Cross Island Whaling GPS Tracks 2009, By Days

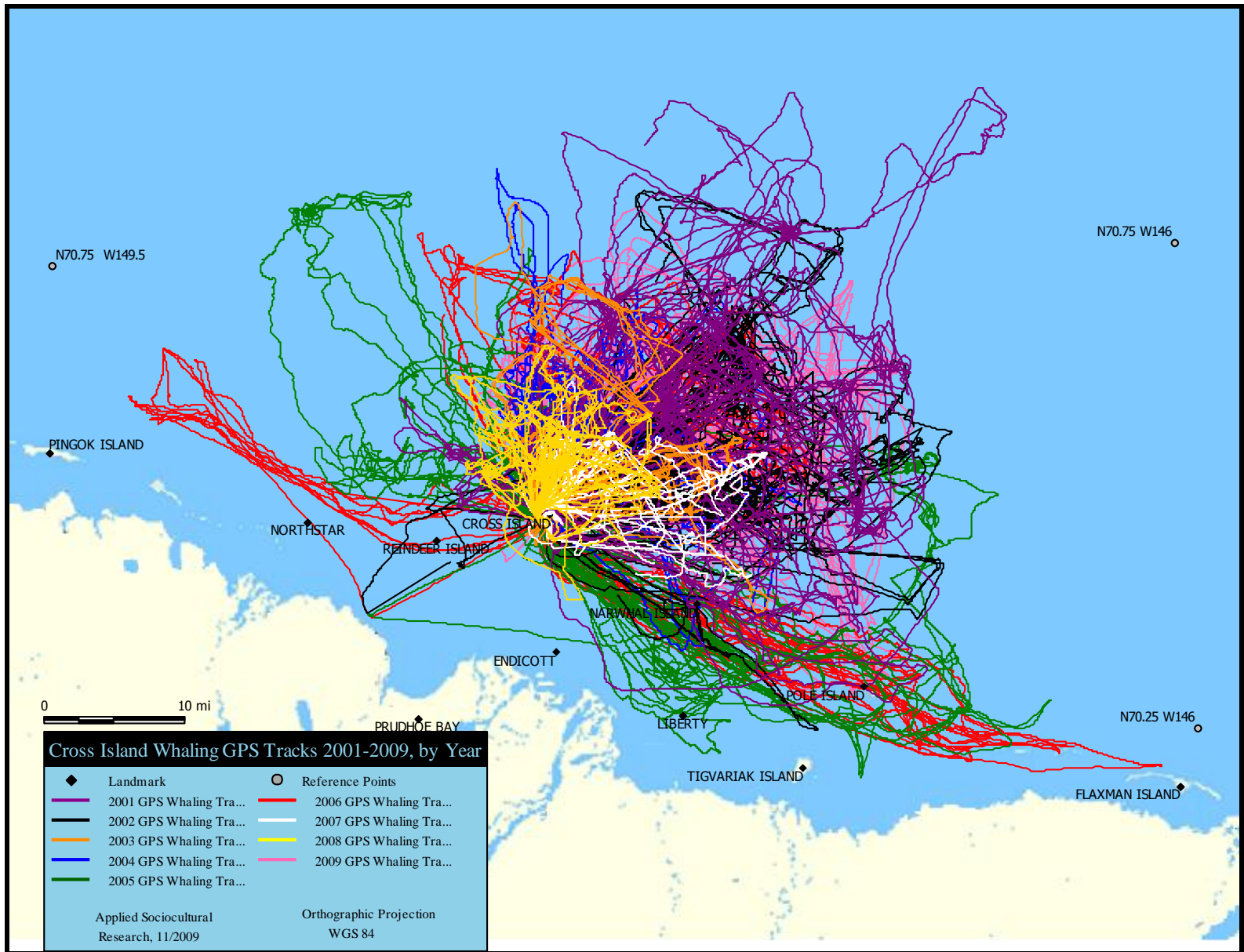
- ◆ Landmark
- Reference Points
- Whale Sightings, 2009
- ▲ Whale Strikes, 2009
- GPS Tracks, 08/28/09
- GPS Tracks, 08/29/09
- GPS Tracks, 09/01/09
- GPS Tracks, 09/02/09
- GPS Tracks, 09/03/09
- GPS Tracks, 09/04/09
- GPS Tracks, 09/06/09
- GPS Tracks, 09/07/09
- GPS Tracks, 09/10/09
- GPS Tracks, 09/11/09
- GPS Tracks, 09/12/09
- GPS Tracks, 09/13/09

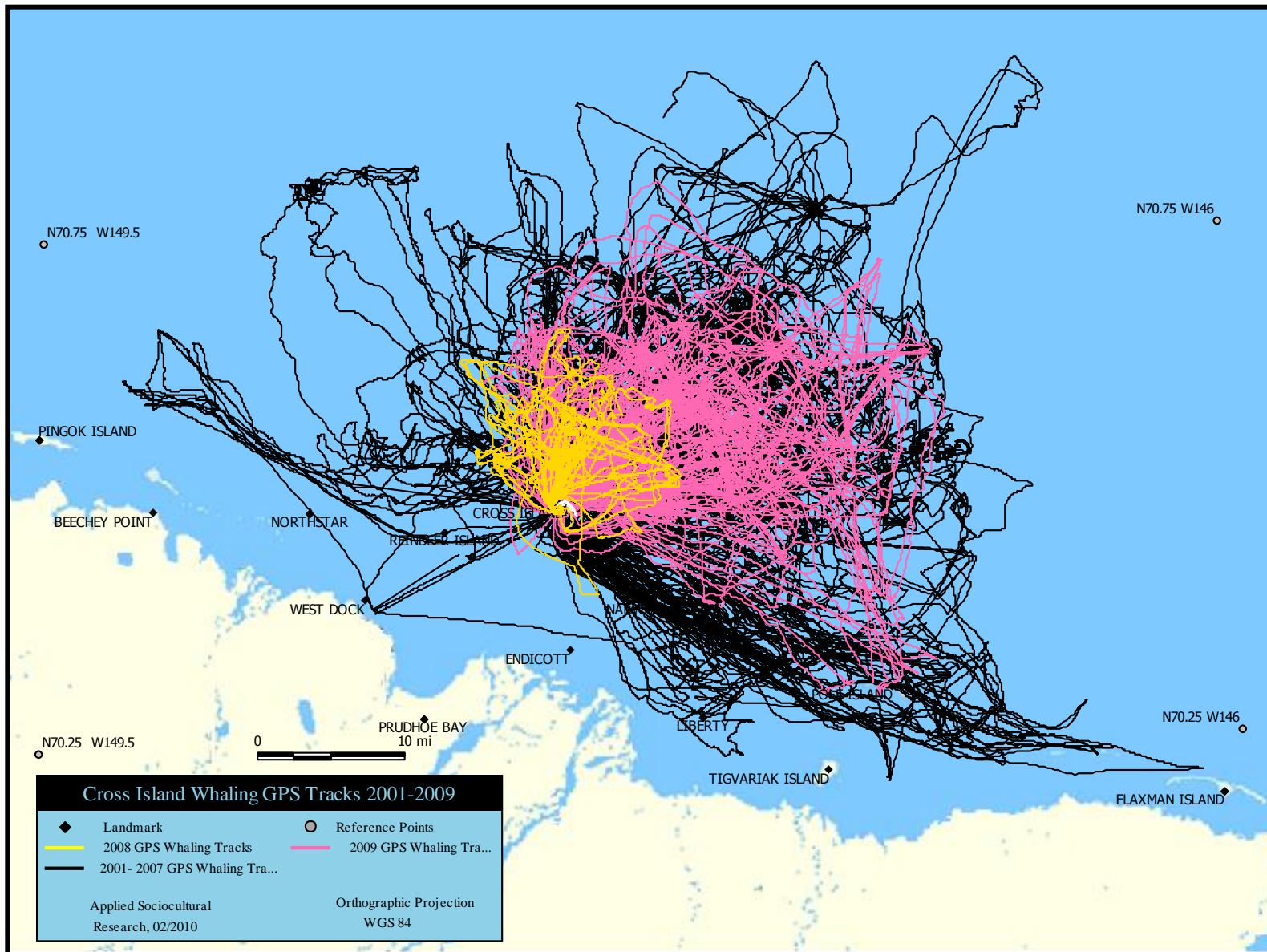
Applied Sociocultural  
Research, 01/2010

Orthographic Projection  
WGS 84

0 10 mi





## Selected Measures of Cross Island Whaling, 2001-2009

Metric		Season								
Measure	Type	2001	2002	2003	2004 <sup>9</sup>	2005 <sup>9</sup>	2006	2007	2008 <sup>10</sup>	2009 <sup>11</sup>
Whales Landed/Whales Struck and Lost	count	3/0	4/1	4/0	3/0	1/0	4/0	3/1	4/0	2/1
Active Crews on Cross Island (maximum)	count	4	3	4	4	5	4	5	6	6
Scouting Boats on Cross Island (maximum)	count	7	9	10	8	8	7	9	12	11
Cross Island Population	average	27.7	26.6	20.4	18.9	29.8	29.2	26	22 (36)	41.85
Length of Season <sup>1</sup>	count	24	23	19	30	27	21	13	14 (7)	20
Average Length of Season/Crew (days on Cross Island)	average	22.5	19.34	13.25	19.25	21	21	10.4	7.3	19.2
Weather Days	count	8-9	4	8	10	11-15	4	3	6 (0)	5 (6)
# days scouting <sup>2</sup>	count	12	15	7	12	9	10	5	5 (5)	12 (10)
# days whales seen <sup>3</sup>	count	9	9	7	6	7	8	4	5	10 (10)
<b>Boats scouting/day</b>	average	4.8	4.3	4.9	3.4	4.0	4.8	3.2	4.8 (5.4)	7.4 (8.6)
# boat days <sup>4</sup>	count	57	65	34	41	35	48	16	29 (27)	89
# boat trips (possible # of GPS tracks) <sup>5</sup>	count	59	67	42	46	48	53	22	33 (31)	113
Actual # of GPS tracks collected	count	49	52	37	44	48	51	20	30	93
Length of trip (miles)	average	84.0	64.3	37.2	45.3	60.7	60.8	30.1	32.1	61.6
Duration of trip (hours:minutes)	average	9:43	7:58	4:31	6:51	7:07	8:13	5:39	5:03	6:43
Furthest point from Cross Island (miles)	average	23.6	19.5	11.6	12.1	19.1	22.2	10.4	8.3	15.8
Strike distance from Cross Island (miles) <sup>6</sup>	average	19.5	13.4	9.3	9.7	25.9	17.0	12	6.5	13.8
Strike Direction from Cross Island –degrees <sup>6,7</sup>	average	64°	67°	56°	36°	82°	59°	80°	05°	70°
Boat Crew Size	average	3.9	3.6	2.9	3.6	4.4	4.3	4.2	3.8	3.6
Total Seasonal Boat Effort (Boat-Hours) <sup>8</sup>	sum	572.9	533.6	162.9	301.2	341.3	427.1	124.3	158.0	751.7
Boat Hours/Strike	average	191.0	106.7	40.7	100.4	341.3	106.8	31.1	39.5	250.6

<sup>1</sup>Number of days with at least one crew on Cross Island - includes day of arrival at and departure from Cross Island.

<sup>2</sup>Number of days when at least one boat went out scouting for whales

<sup>3</sup>Number of days when at least one crew saw whales while scouting from a boat. Blows seen from Cross Island on non-scouting days are not included

<sup>4</sup>Each boat scouting for whales on any given day counts as one “boat day” – regardless of the duration of the trip or if whales are seen or not. \*Thus if 2 boats scout on one day and 4 boats scout on the next, the total for the two days would be 6 boat days.

<sup>5</sup>Some boats made more than one scouting trip on a single day

<sup>6</sup>Includes “struck and lost” whales in 2002 and 2007

<sup>7</sup>Due north is 0 (and 360) degrees, due east is 90 degrees – includes struck and lost as well as landed strikes

<sup>8</sup>Yearly total equals aggregate sum of duration of all whaling trips by all boats. Includes estimates for missing information.

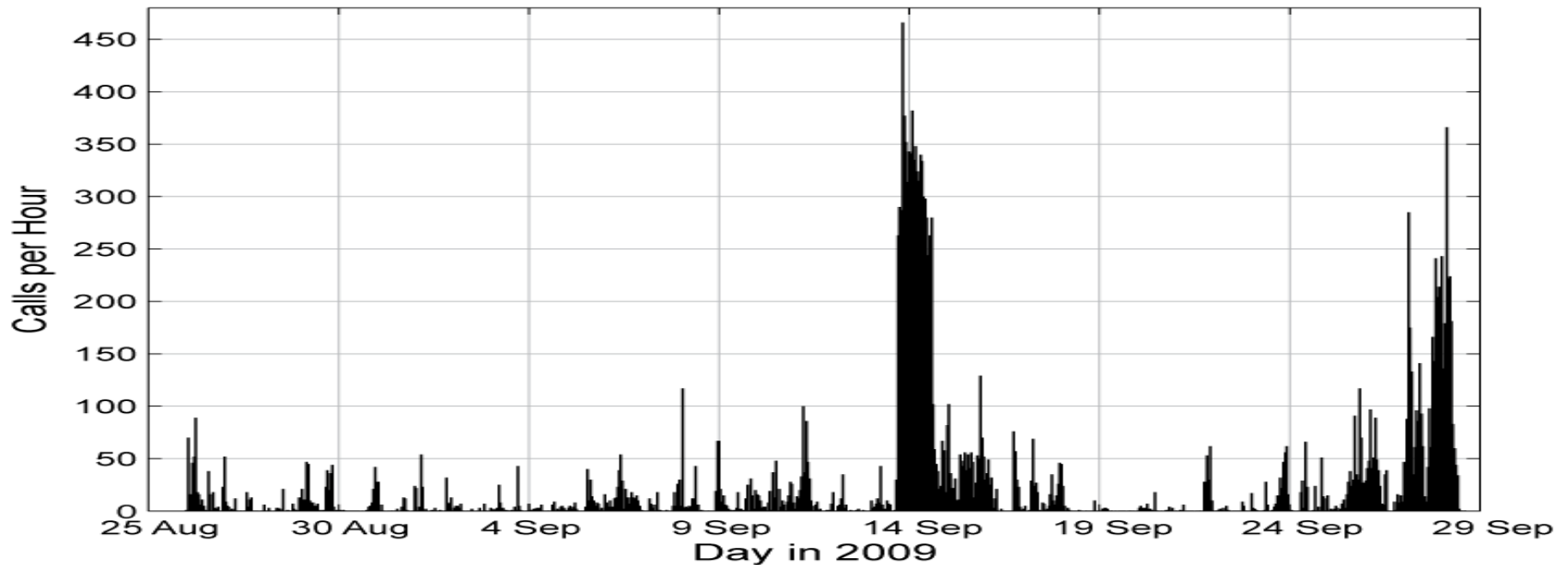
<sup>9</sup>One crew went to Cross Island well before other crews, so total season measures may be somewhat misleading. See 2004 and 2005 Annual Reports.

<sup>10</sup>Figures in parentheses ( ) are values for the 7 days when more than 1 crew was on Cross Island

<sup>11</sup>Figures in parentheses ( ) are values excluding 2 marginal scouting days (1 a “weather” and one a “travel/preparation” day).

Selected Measures of Cross Island Whaling, 2001-2009

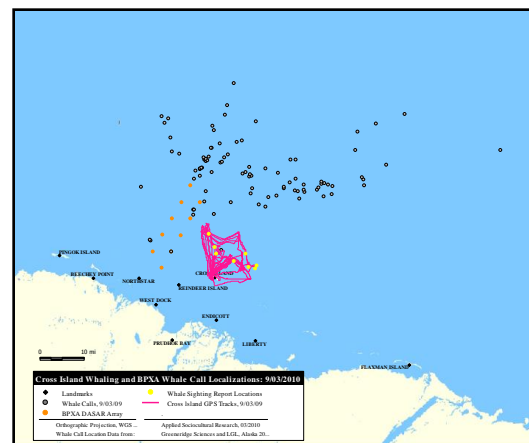
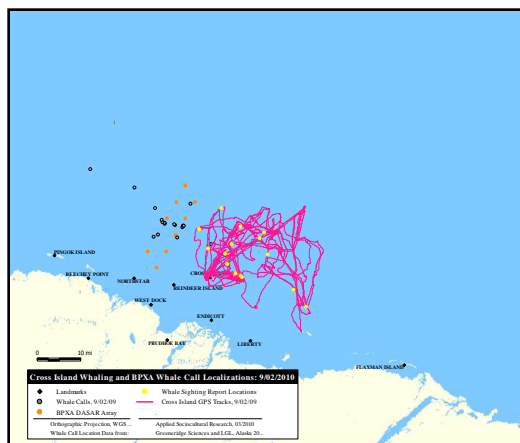
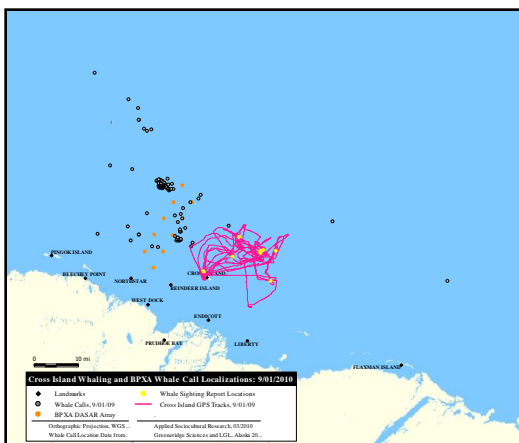
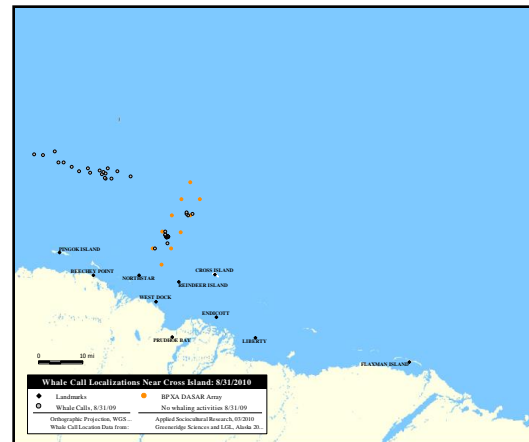
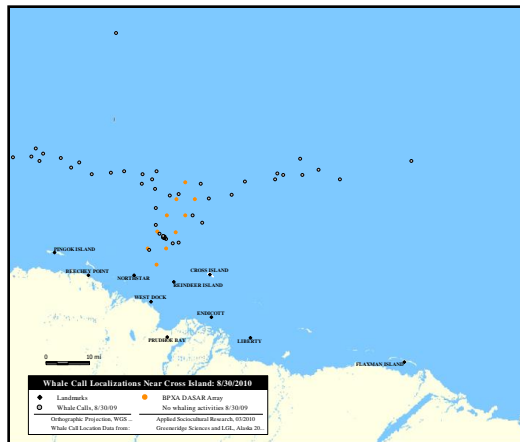
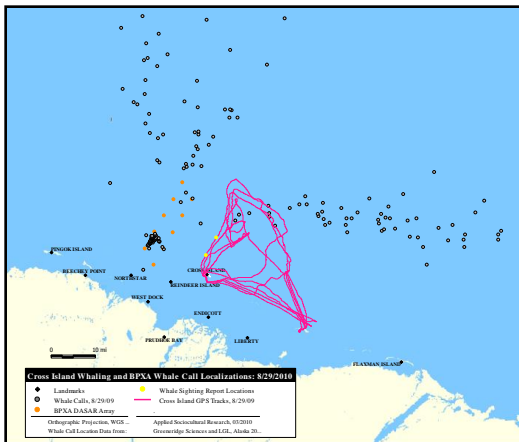
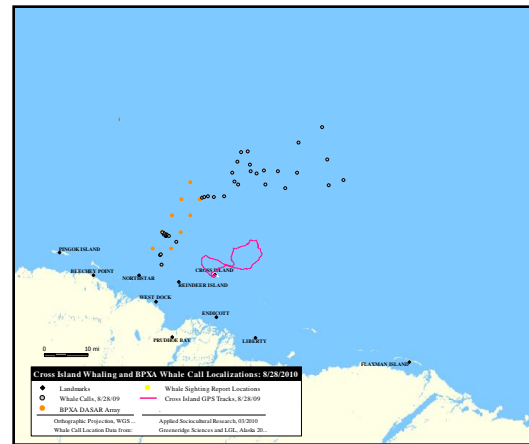
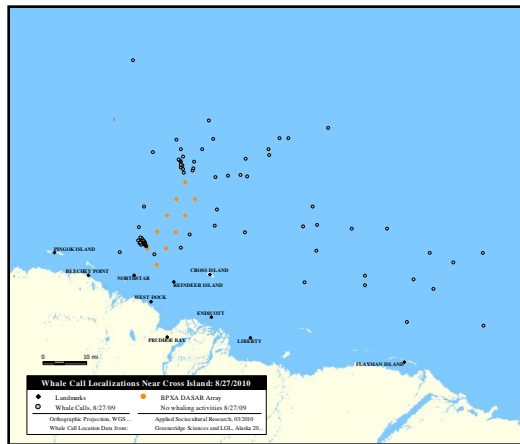
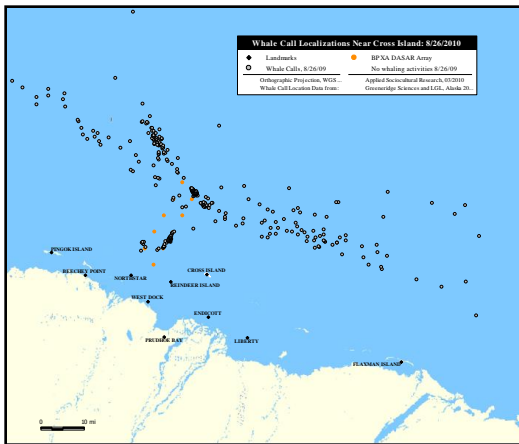
Metric	Season								
Measure	2001	2002	2003	2004	2005	2006	2007	2008	2009
Whales Landed/Whales Struck and Lost	3/0	4/1	4/0	3/0	1/0	4/0	3/1	4/0	2/1
Length of Season	24	23	19	30	27	21	13	14 (7)	20
Average Length of Season/Crew (days on Cross Island)	22.5	19.34	13.25	19.25	21	21	10.4	7.3	19.2
# days scouting	12	15	7	12	9	10	5	5 (5)	12 (10)
# days whales seen	9	9	7	6	7	8	4	5	10 (10)
# boat trips (possible # of GPS tracks)	59	67	42	46	48	53	22	33 (31)	113
Actual # of GPS tracks collected	49	52	37	44	48	51	20	30	93
Length of trip (miles)	84	64.3	37.2	45.3	60.7	60.8	30.1	32.1	61.6
Duration of trip (hours:minutes)	9:43	7:58	4:31	6:51	7:07	8:13	5:39	5:03	6:43
Furthest point from Cross Island (miles)	23.6	19.5	11.6	12.1	19.1	22.2	10.4	8.3	15.8
Strike distance from Cross Island (miles)	19.5	13.4	9.3	9.7	25.9	17	12	6.5	13.8
Total Seasonal Boat Effort (Boat-Hours)	572.9	533.6	162.9	301.2	341.3	427.1	124.3	158	751.7
Boat Hours/Strike	191	106.7	40.7	100.4	341.3	106.8	31.1	39.5	250.6



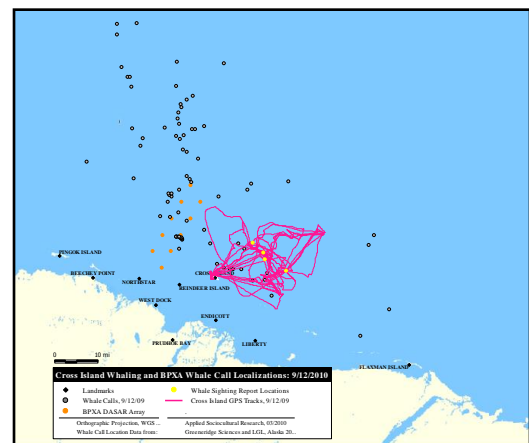
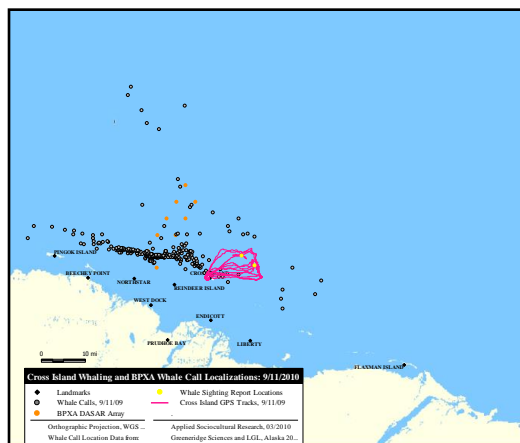
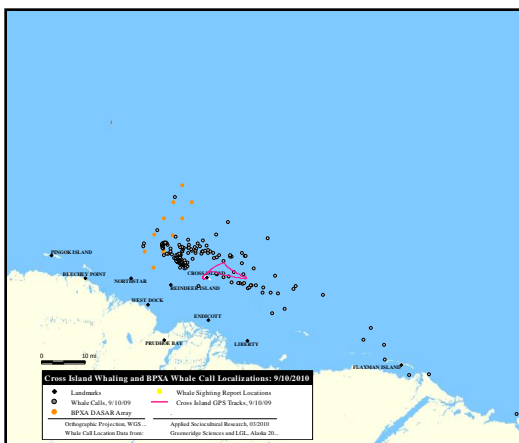
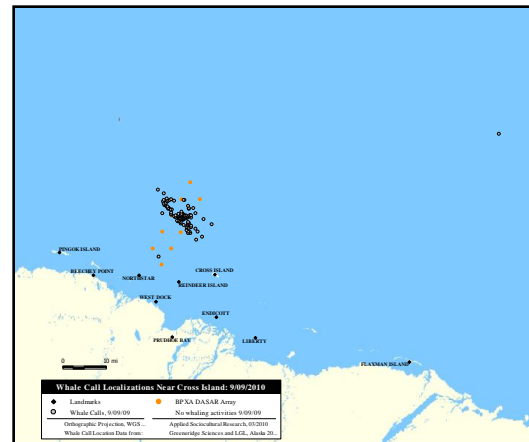
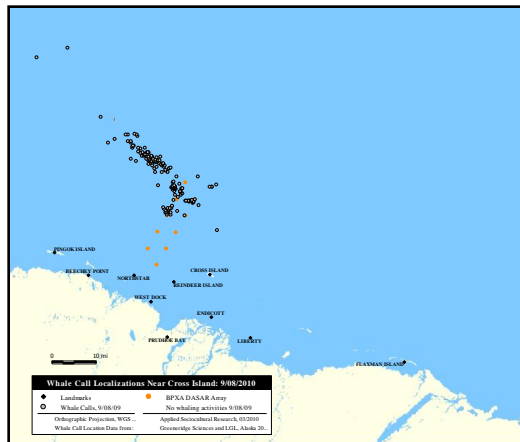
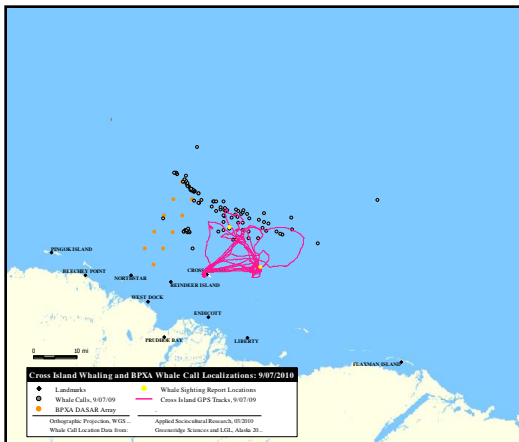
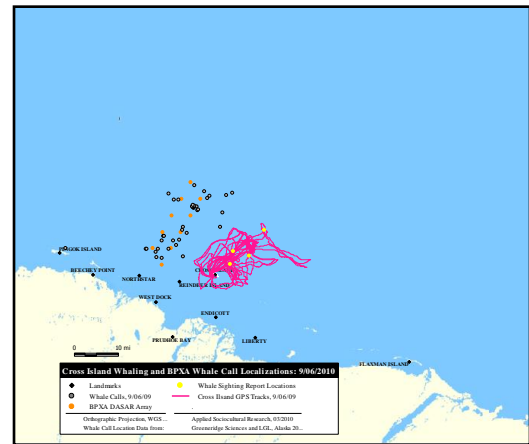
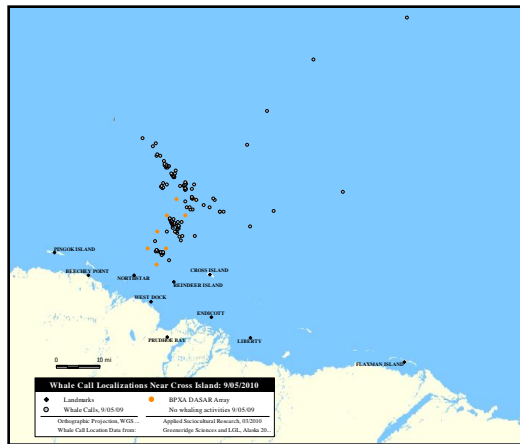
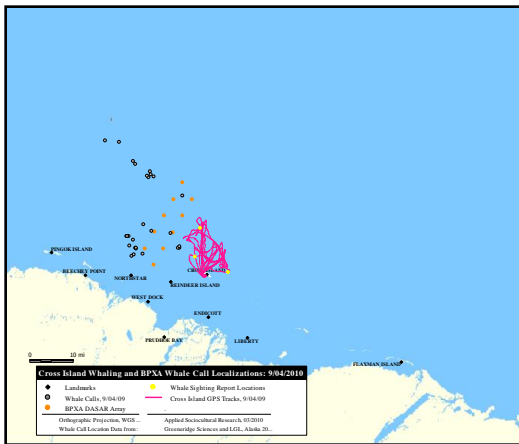
Year	Total calls detected at C/EB	Length of DASAR recording season (days)	Mean # calls per day
2001 (EB)	1624	25	65
2002 (EB)	4317	24	180
2003 (EB)	21,726	30	724
2004 (EB)	26,546	27	989
2005 (EB)	951	29	33
2006 (EBa)	331	18	18
2007 (EBa)	9076	36	250
2008 (C)	39,550	30	1337
2009 (C)	6859	33	205

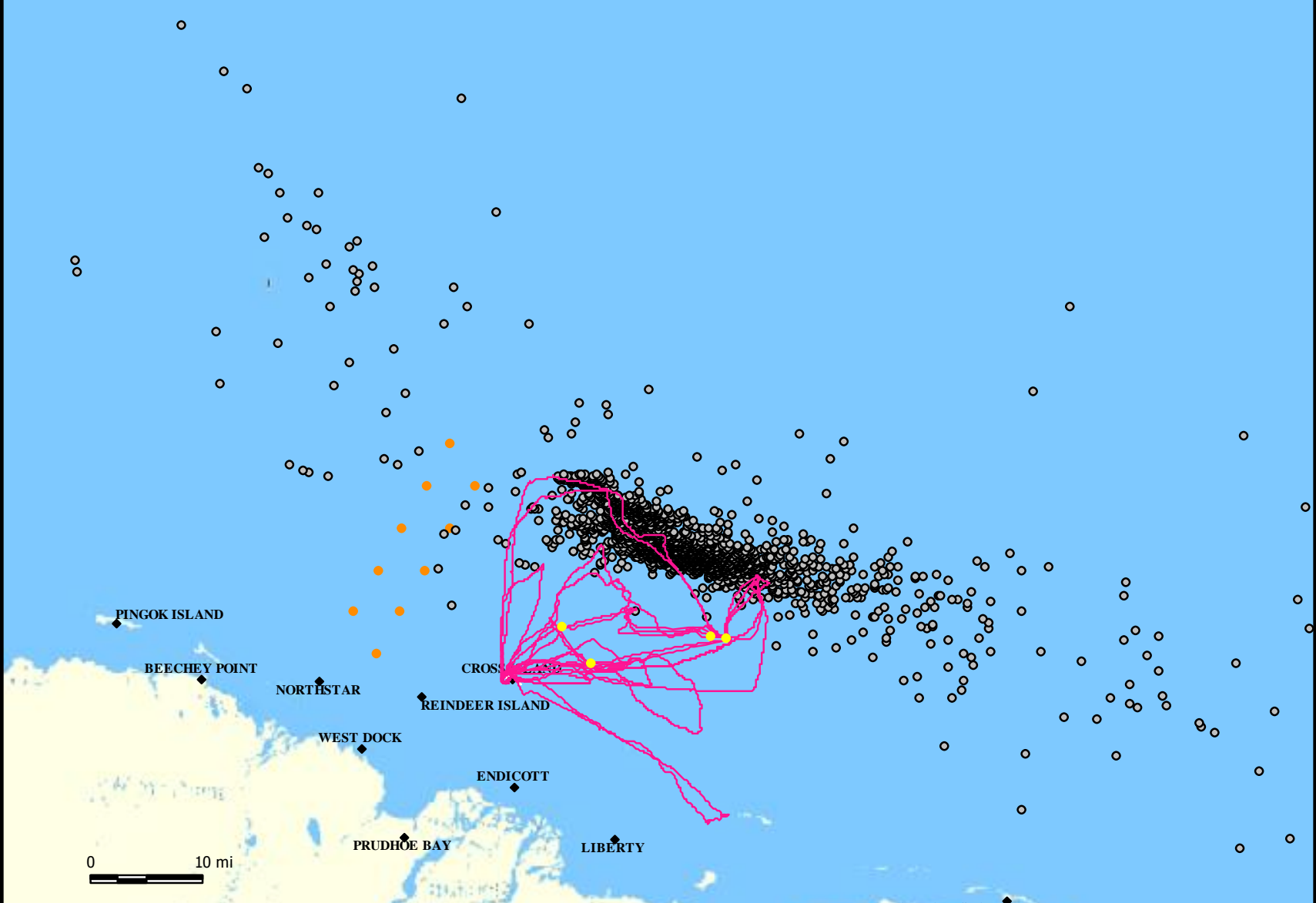
ABOVE: Hourly detection rate of whale calls as a function of time in late Aug to late Sep 2009. Total number of calls considered in this diagram was 19,772. Tick-marks on X-axis represent midnight (local daylight time). The highest call detection rate was 466 calls/hour on 13 Sep between 20:00 and 21:00.

LEFT: Year-to-year comparison of bowhead whale call counts at DASAR location C (2008, 2009) and EB (2001–2007). Also shown for each year is the length of the recording season (which depends on the deployment period and functionality of the DASAR), and the mean number of calls detected per day. When dividing the total number of calls by the season length, discrepancies with the listed mean number of calls per day may arise from rounding error.





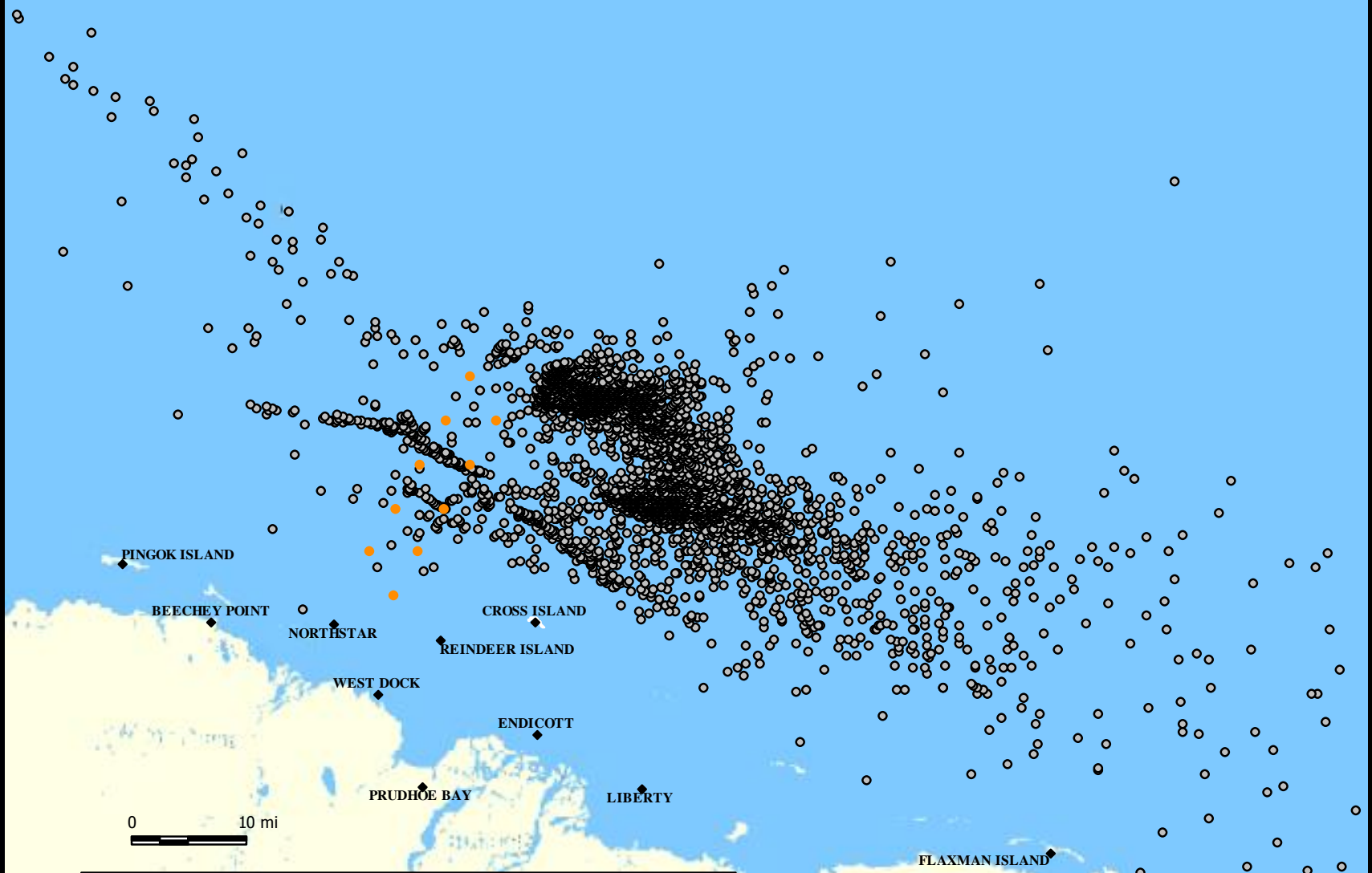




**Cross Island Whaling and BPXA Whale Call Localizations: 9/13/2010**

- ◆ Landmarks
- Whale Calls, 9/13/09
- BPXA DASAR Array
- Whale Sighting Report Locations
- Cross Island GPS Tracks, 9/13/09

Orthographic Projection, WGS... Applied Sociocultural Research, 03/2010  
 Whale Call Location Data from: Greeneridge Sciences and LGL, Alaska 20...



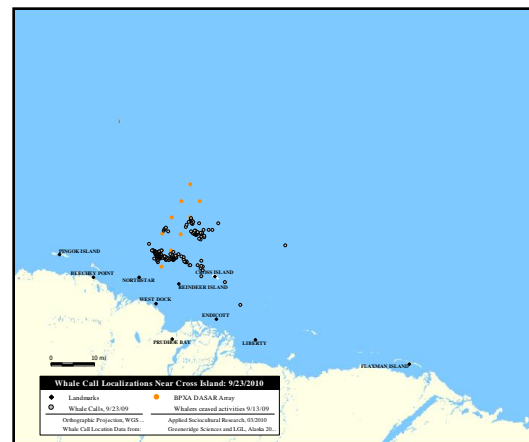
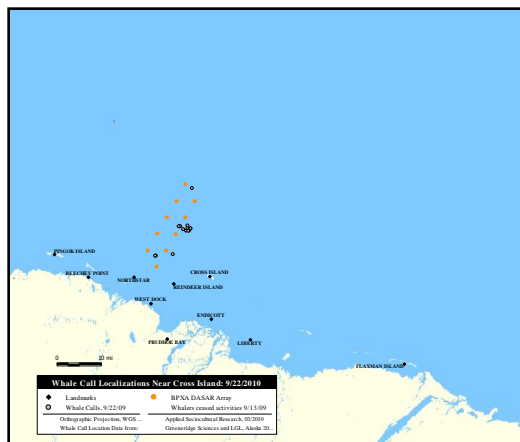
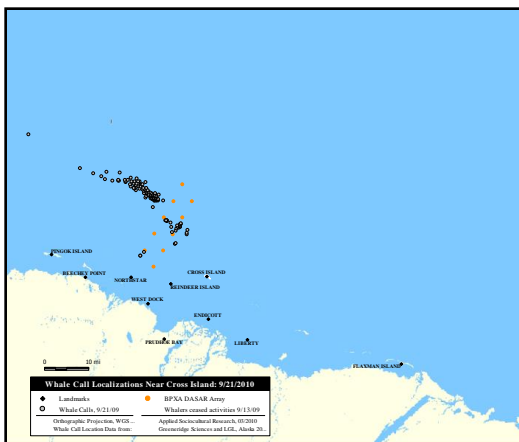
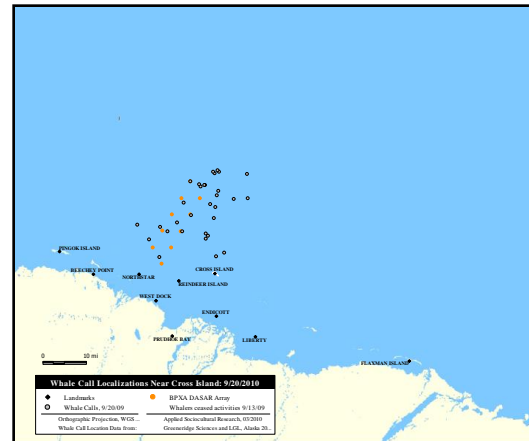
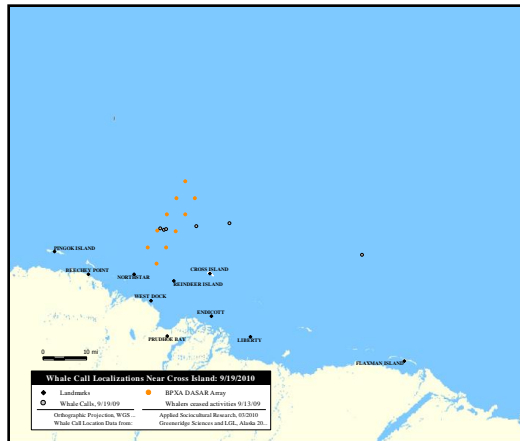
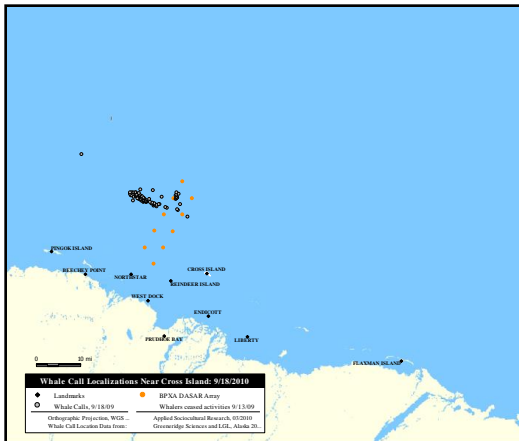
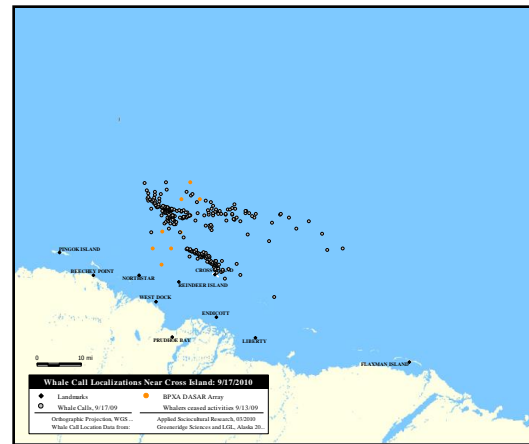
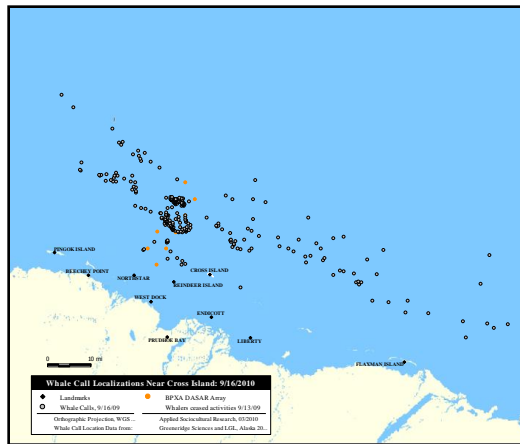
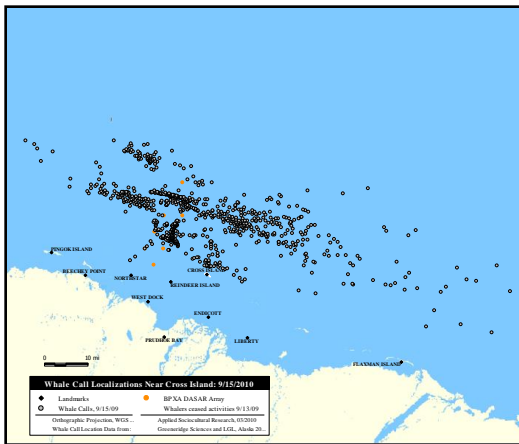
**BPXA Whale Call Localizations: 9/14/2010**

◆ Landmarks	● Whale Sighting Report Locations
● Whale Calls, 9/14/09	— Cross Island GPS Tracks (none)
● BPXA DASAR Array	.

---

Orthographic Projection, WGS...  
 Whale Call Location Data from:

Applied Sociocultural Research, 03/2010  
 Greeneridge Sciences and LGL, Alaska 20...



Non-whaling vessels encountered by Cross Island whaling boats, Cross Island 2009 Subsistence Whaling Season

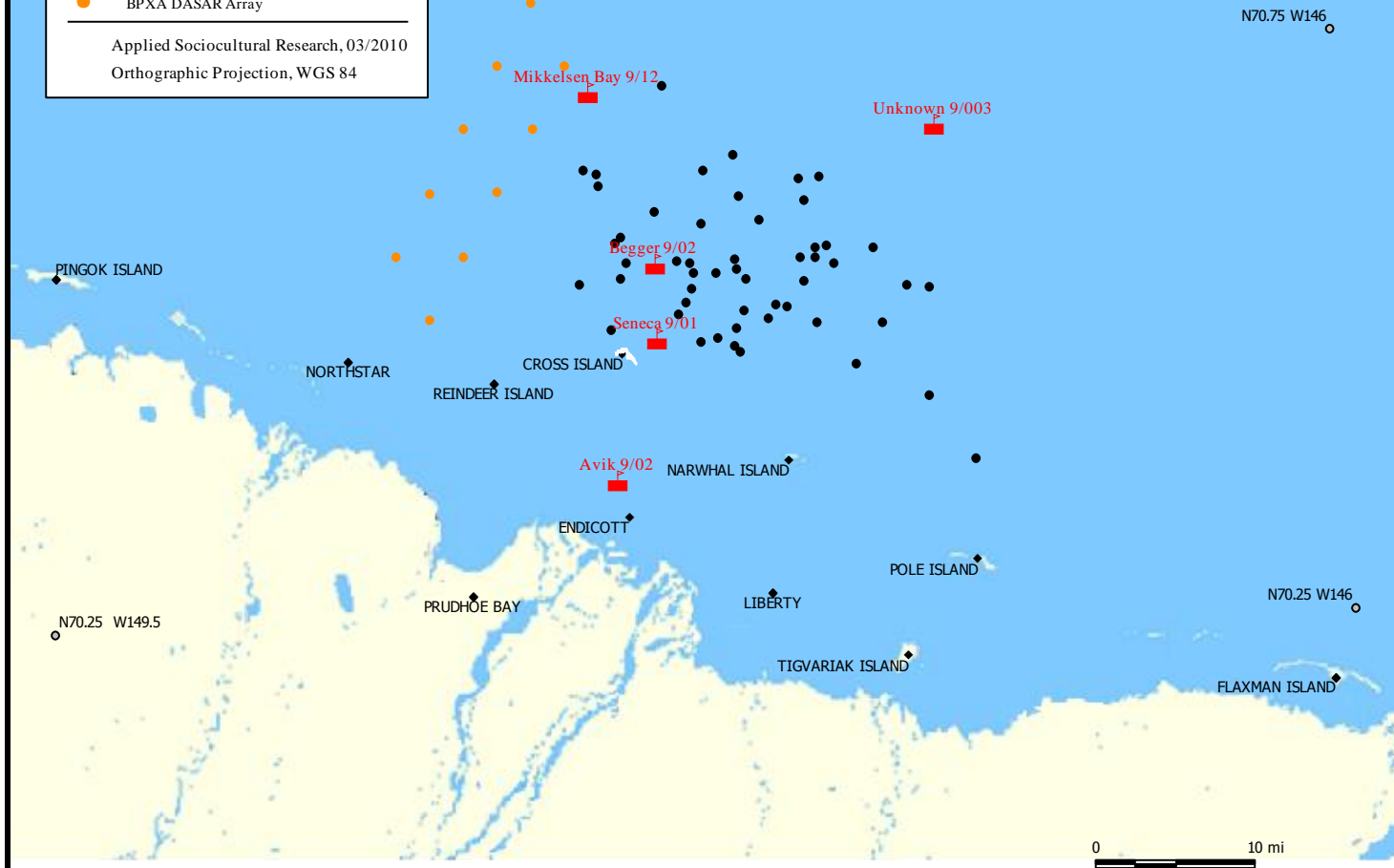
Date	Time	Vessel or Incident	Other Notes
9/01	12:19	<i>Seneca</i> barge (Crowley)	NE of Cross Island, traveling to the west. Vessel Conflict Incident report filed with Deadhorse Com Center and AEWG about 12:38pm (Hickey 2009a). First seen from Cross Island and then reported by whaling vessels out on the water.
9/02	05:59	<i>Avik</i> barge (Crowley)	Several miles south of Cross Island, reported by whaling vessels out on the water and Vessel Conflict Incident filed (Hickey 2009b).
9/02	20:40	<i>Begger</i> (private yacht)	Roughly 10 km (6 mi) north of Cross Island, reported by whaling vessel on the water. Vessel Conflict Incident files with the Deadhorse Com Center about 21:13 (Hickey 2009b).
9/03	06:58	Unidentified barge	Whalers reported that the barge was about 8 km (5 mi) away from them, straight North, and was “kind of loud”, so they went east away from the barge. They think that the barge was going toward Barrow (west overall) and was moving pretty fast. They reported it to the Dead-horse Com Center but no Vessel Conflict Incident was filed.
9/12	14:12	<i>Mikkelsen Bay</i> (ACS vessel)	Reported by whaling vessel on the water. The <i>Bay</i> -class vessel was moving west, so the whaling vessel turned around and went the other way (SE) to join the other whalers. Reported to the Deadhorse Com Center who in turn contacted the <i>Mikkelsen Bay</i> . The <i>Mikkelsen Bay</i> immediately aborted its activities in the Northstar DASAR array and returned to West Dock, with a short stop at Northstar. It is not clear from the researcher’s notes whether the other boats had also encountered a vessel (or seen this one) earlier in the day.

**Note:** This table lists only those vessel encounters made known to the researcher and so is not necessarily complete. It also is not a complete listing of all non-whaling vessel traffic in the Cross Island area during the 2009 whaling season.

### Cross Island Whale and Vessel Sightings, 2009

- ◆ Landmark
- Reference Points
- 2009 Whale Sighting Reports
- Vessel Sightings
- BPXA DASAR Array

Applied Sociocultural Research, 03/2010  
Orthographic Projection, WGS 84



Preparing Unalik  
September 2009, Cross Island  
Taalak Whale (*uunalik*)

QUESTIONS?

