

EVOSTC ANNUAL PROJECT REPORT

Project Number:..... 070805

Project Title: ShoreZone Mapping for Prince William Sound

PI Name:..... Mandy Lindeberg

Time period covered: FY07: Nov. 14, 2006 - Sept.1, 2007

Date of Report:..... Sept. 1, 2007

Report prepared by: Mandy Lindeberg

Work Performed:

The first phase of ShoreZone mapping in Prince William Sound (PWS) is to acquire the shoreline imagery. This phase was successfully completed during the low tide windows of May and June, 2007 by Coastal & Ocean Resources Inc. (CORI). Two helicopter teams were flying simultaneously during the May window and collected 3,165 km of imagery. Another effort was made during the June tide window and imaged 935 km of shoreline. A total of 4,100 km of shoreline was imaged. The imagery includes 80 hours of georeferenced video and over 25,000 high resolution still photos (Fig. 1). This imagery has been handed over to the principle investigator by CORI in the form of flight reports, GIS track lines, and DVDs of the imagery (video and stills). The flight reports are submitted with this report as separate electronic pdf documents (PWS07_FlightReport_May07.pdf; PWS07_FlightReport_TeamRC_June07.pdf). They can also be downloaded at www.coastalandoceans.com/downloads. The GIS track line and 76 DVDs of imagery have been handed over to the NOAA Fisheries Alaska Regional Office to be posted online.

Future Work:

The second phase of this project is ShoreZone mapping. The next fiscal year will involve CORI reviewing the imagery and developing a ShoreZone biophysical database. The raw imagery was due to be online this fall but we are in the process of transferring statewide imagery from www.coastalska.net website to its new home at the NOAA Fisheries Alaska Regional Office website <http://www.fakr.noaa.gov/maps/szintro.htm>. This was recently agreed to by the Alaska ShoreZone Task Force in an effort to consolidate and find a permanent home for this huge and growing dataset. The PWS imagery will be posted to the new online location this winter.

Coordination/Collaboration:

Additional efforts by various partners such as the RCAC have now closed the gap for PWS ShoreZone imagery. Approximately 1,600 km of western PWS was imaged in 2004 and 1,258 km of the Copper River Delta area was imaged during the June 2007 tide window (Figure 2). Currently there has been 39,483 km of shoreline imaged in Alaska (Figure 3).

Community Involvement/TEK & Resource Management Applications:

Several outreach opportunities have already taken place. During the field effort members of the CORI team met with local leaders such as the village chief of Tatitlek, the PWS Science Center director, ADF&G staff, and PWS hatchery staff to explain how ShoreZone works and share imagery. Jodi Harney of CORI also wrote an article for the Cordova Times informing the public about the PWS ShoreZone

project which was published on May 24, 2007. We have also tentatively arranged with the PWS Science Center to plan a public workshop on ShoreZone in Cordova early next spring.

Information Transfer:

This is the first year of a two year project so no publications or presentations have been developed from the PWS ShoreZone project. During the fall of 2006 the principle investigator gave a short presentation on ShoreZone to a special session of the EVOS TC Herring Restoration Committee. CORI also gave a presentation in June to the PWS RCAC members on ShoreZone and possible applications such as habitat capability modeling. The principle investigator and CORI staff have attended last years Alaska Marine Science Symposium and will also attend the 2008 Symposium.

Budget:

Currently there are no major budget issues for the first year of this two year project.

Figure 1. Sample photos from May 2007 surveys in Prince William Sound.



Figure 2. Extent of ShoreZone imaging and mapping in Prince William Sound.

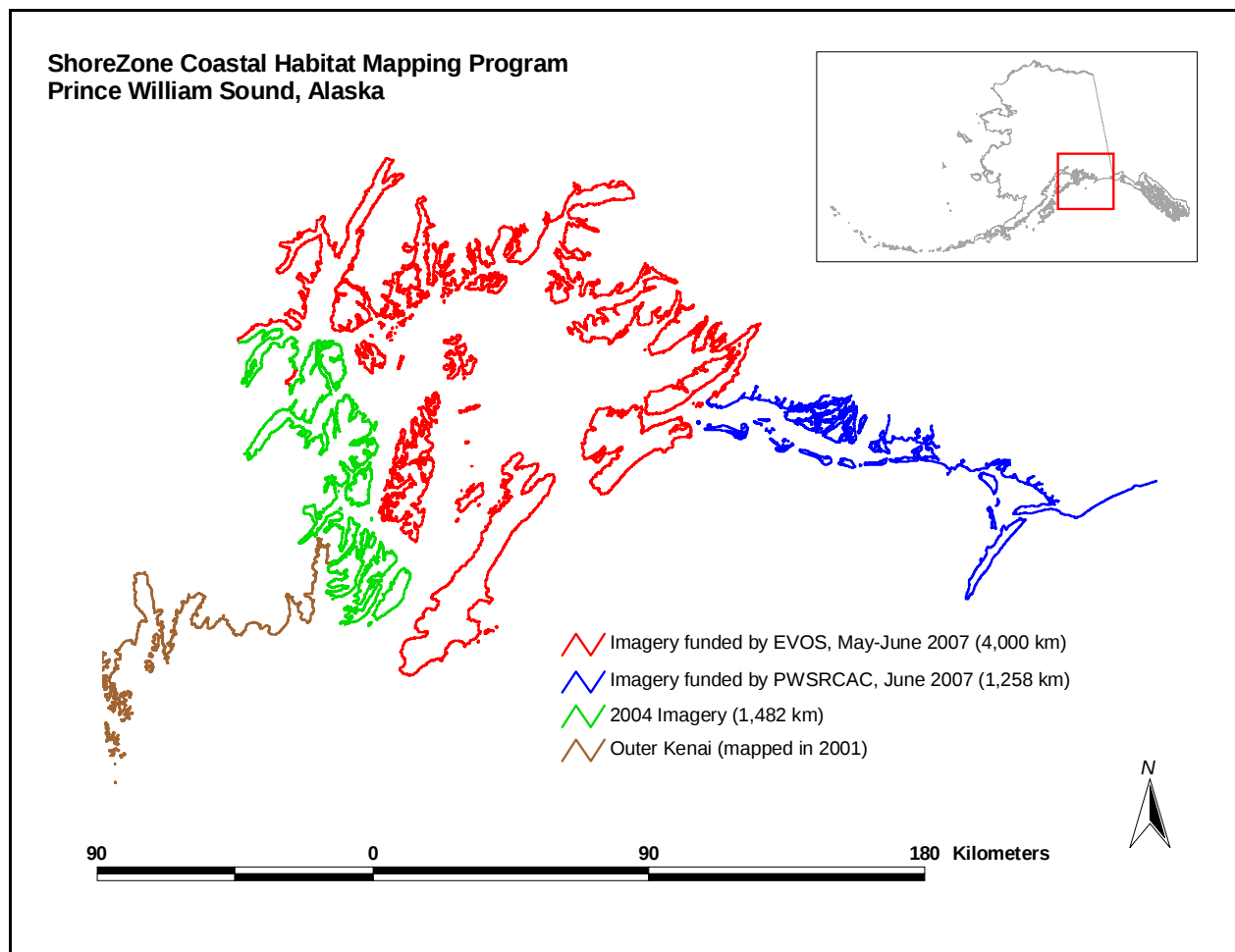
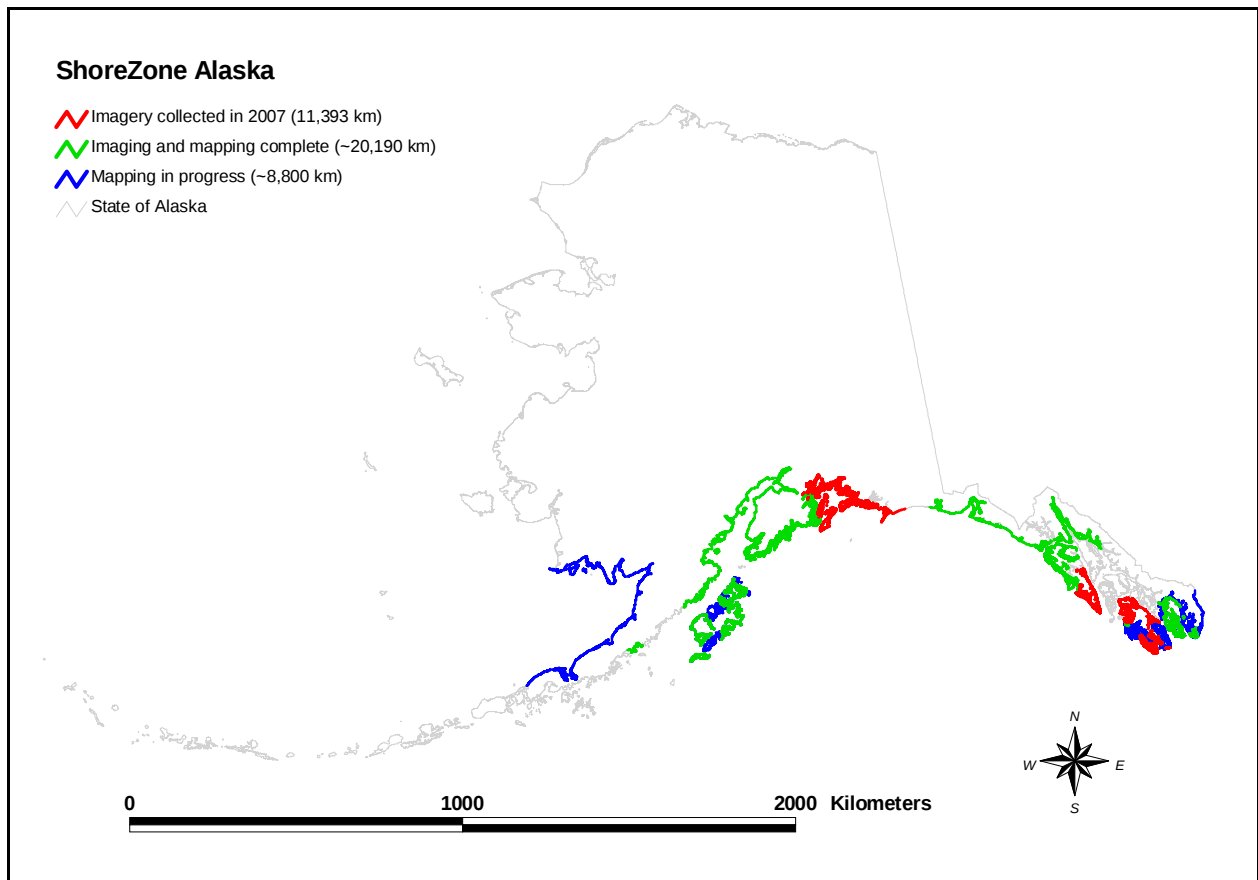


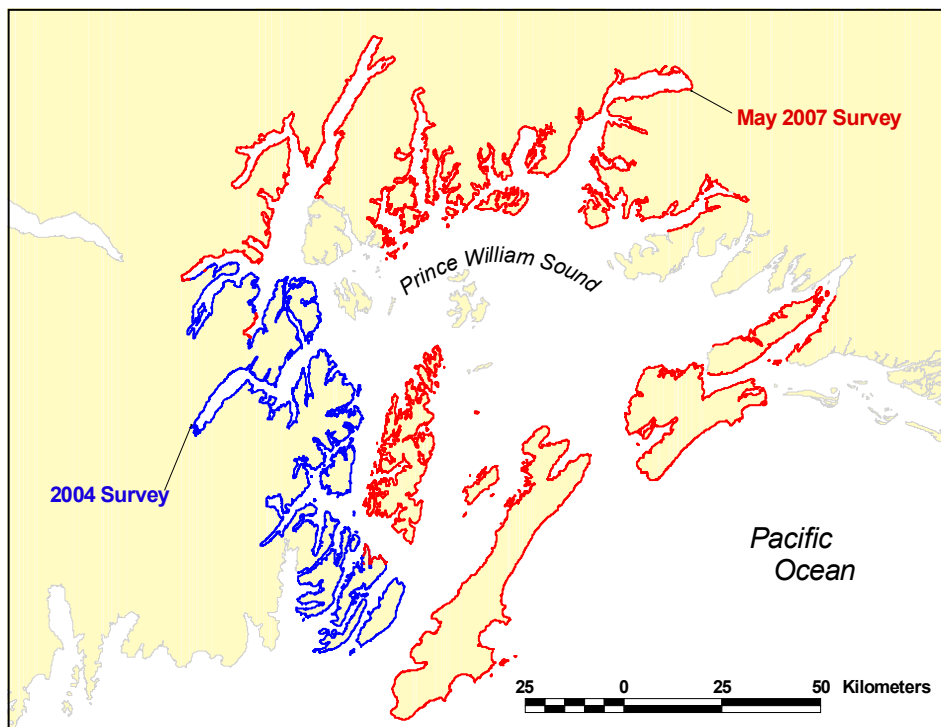
Figure 3. Extent of ShoreZone imaging and mapping in the State of Alaska.



FLIGHT REPORT

ShoreZone Aerial Video Imaging (AVI) Survey

Prince William Sound, Alaska, 15-20 May 2007



Prepared for
NOAA/NMFS
Juneau, Alaska
by



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ShoreZone is a coastal habitat mapping and classification system in which georeferenced aerial imagery is collected specifically for the interpretation and integration of geological and biological features of the intertidal zone and nearshore environment. Oblique low-altitude aerial video and digital still imagery of the coastal zone is collected during summer low tides (zero tide level or lower), usually from a helicopter flying at <100 m altitude. The flight trackline is recorded at 1-second intervals using electronic navigation software and is continuously monitored in-flight to ensure all shorelines have been imaged. Video and still imagery collected are georeferenced and time-synchronized. Video imagery is accompanied by continuous, simultaneous commentary by a geologist and a biologist aboard the aircraft. The imagery and commentary are later used in the definition of discrete along-shore coastal habitat units and the “mapping” of observed physical, geomorphic, sedimentary, and biological features in those units.

The purpose of this flight report is to summarize the field activities of the ShoreZone aerial video imaging (AVI) survey conducted in Prince William Sound, Alaska during the low-tide windows of May and June 2007. The survey was conducted by Coastal & Ocean Resources Inc. (CORI, Sidney, British Columbia) under contract to The National Marine Fisheries Service (NMFS) of NOAA (Auk Bay Lab, Juneau, Alaska). A coastal ecologist from Archipelago Marine Research Ltd. (AMR, Victoria, British Columbia) was sub-contracted by CORI to provide biological expertise. Table 1 provides a summary of the field team and survey manual organization. Table 2 provides a summary of crew affiliations and responsibilities. The aircraft used in this survey was a Bell 206 Jet Ranger and Bell 206 Long Ranger helicopters chartered from Maritime Helicopters in Homer.

The length of shoreline imaged during the survey was **3,165 km** (Title page shows a summary of the 2007 NOAA/NMFS survey). The tables and figures on the following pages summarize, by video tape number, the extent and location of the AVI data and imagery collected. Maps for each tape are annotated with representative geographic names, trackline times (in hh:mm:ss UTC), and photo numbers. UTC time is imprinted on video imagery (provided on DVD with this report).

This manual is organized into four sections to reflect different survey components of the 2007 Prince William Sound 2007 survey program:

Table 1 Survey Components and Organization

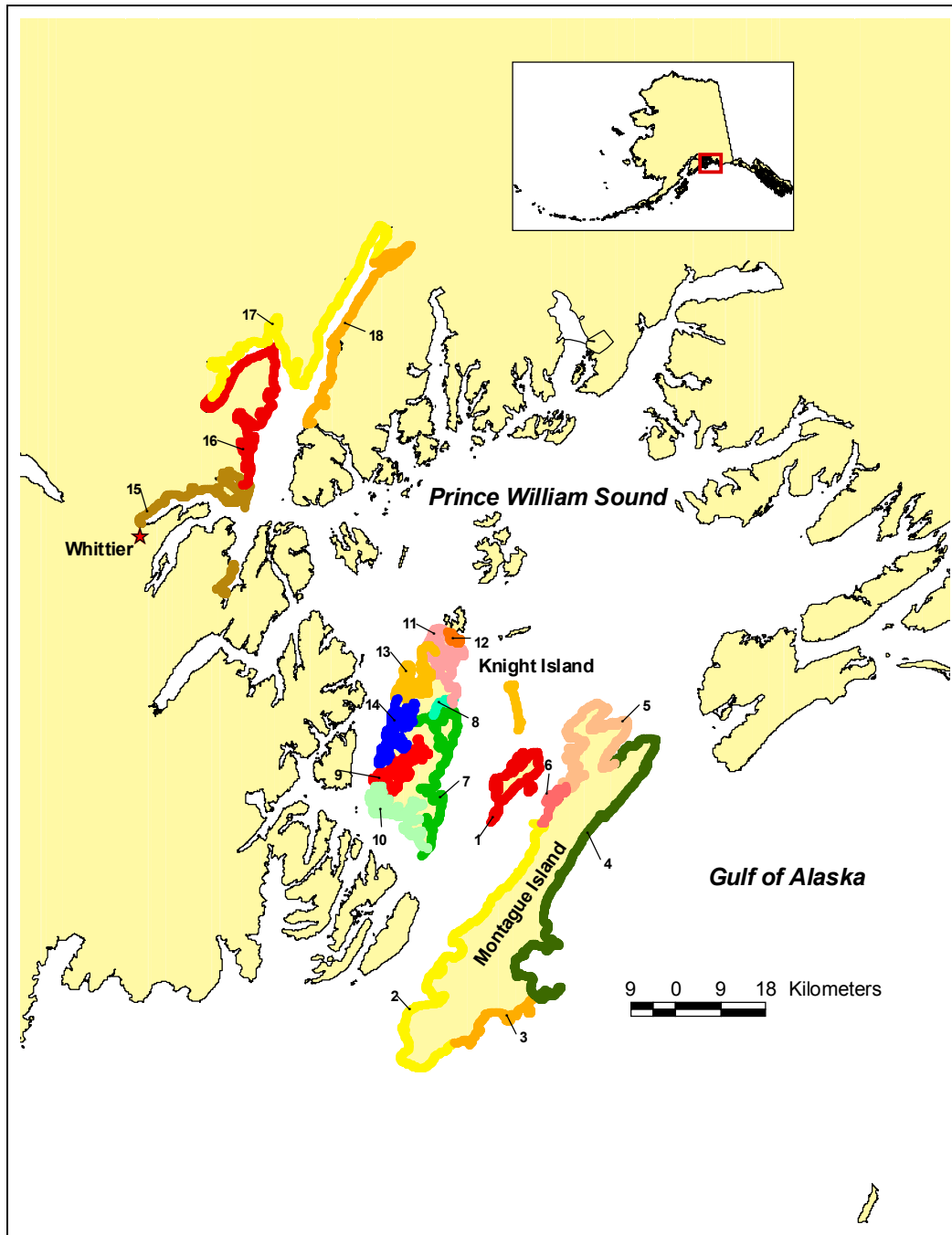
Component	Base	Dates	Tapes/DVD	Pages
Team Chenega	Chenega	15-20 May 2007	NG01 to NG18	7 to 45
Team Cordova	Cordova	15-20 May 2007	DV01 to DV21	47 to 91

Table 2. PWS07 AVI Flight Personnel and Responsibilities (May 07)

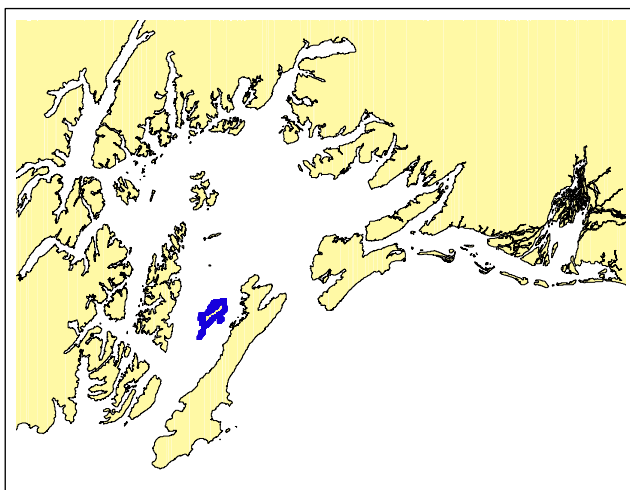
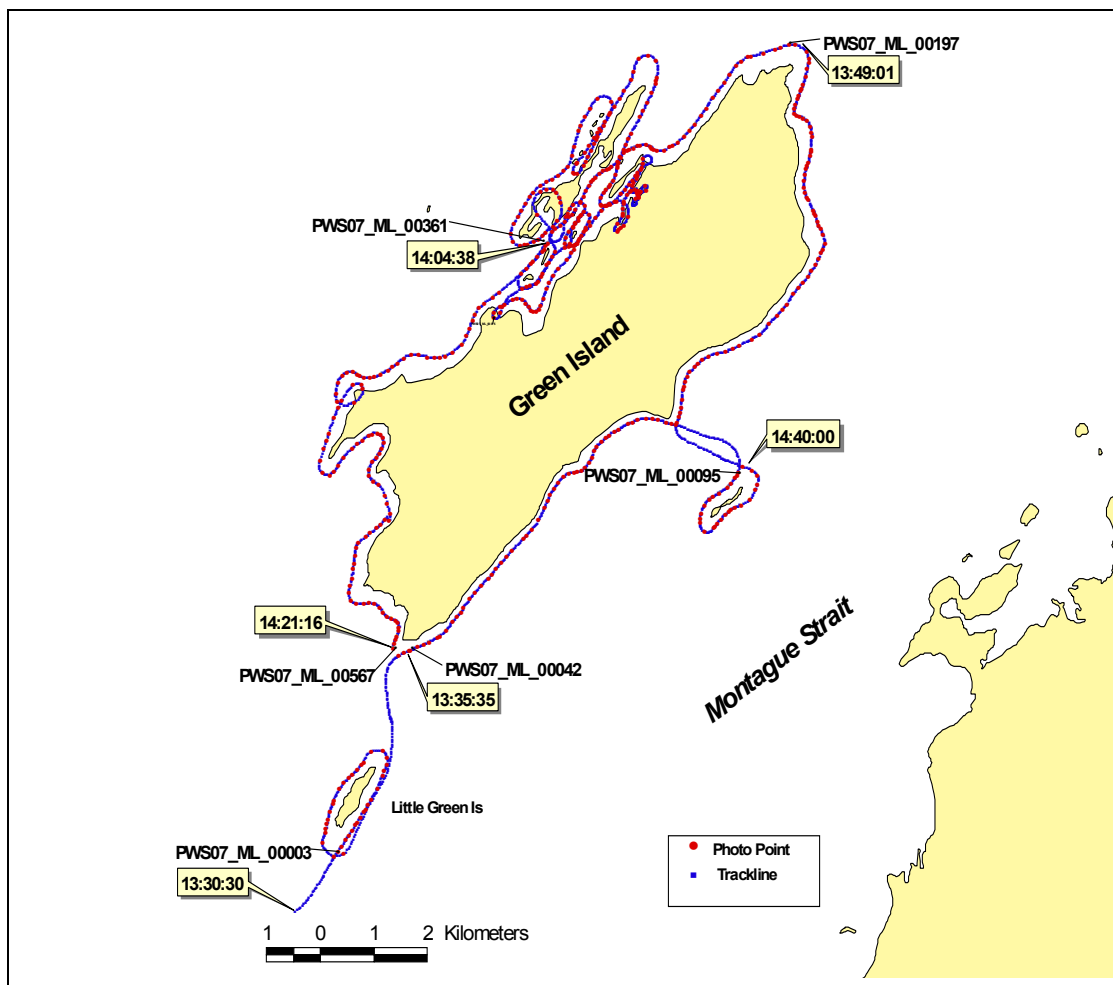
Team	Crew Member	Individual / Affiliation	Responsibilities
<i>Chenega</i>	<i>Geomorphologist</i>	John Harper CORI, Sidney BC	videography, geologic commentary, post-flight data processing
	<i>Coastal Ecologist</i>	Mandy Lindeberg NOAA/NMFS,, Junea, Alaska	digital photography, biologic commentary, post-flight data processing
	<i>Navigator</i>	Sean Daley, CORI, Sidney BC	in-flight navigation, post-flight data processing
	<i>Pilot</i>	Joe Trudo Maritime Helicopters Homer, Alaska	pilot
<i>Cordova I</i>	<i>Geomorphologist</i>	Jodi Harney CORI, Sidney BC	survey coordination, videography, geologic commentary, post-flight data processing, project reporting
	<i>Coastal Ecologist</i>	Mary Morris AMR, Victoria BC	digital photography, biologic commentary, post-flight data processing
	<i>Navigator</i>	Kalen Morrow, CORI, Sidney BC	in-flight navigation, post-flight data processing
	<i>Pilot</i>	Rick Farish Maritime Helicopters Homer, Alaska	pilot

Team Chenega
15 -20 May 2007
DVDs PWS07_NG01 to PWS07_NG18

Team Chenega
15 -20 May 2007
DVDs PWS07_NG01 to PWS07_NG18



Summary flightline map showing the location and extent of specific videotapes/DVDs for the May 2007 Team Chenega survey.



PWS07_NG01
15 May 2007

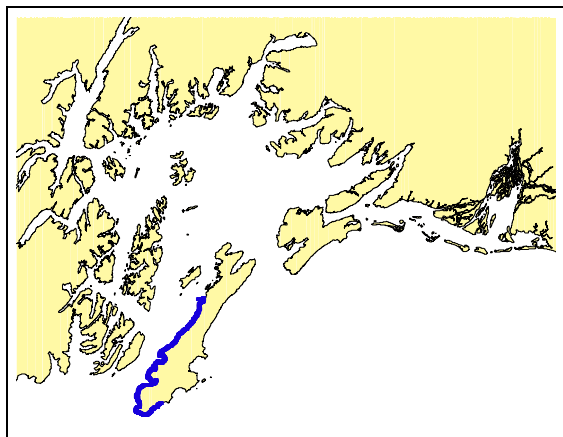
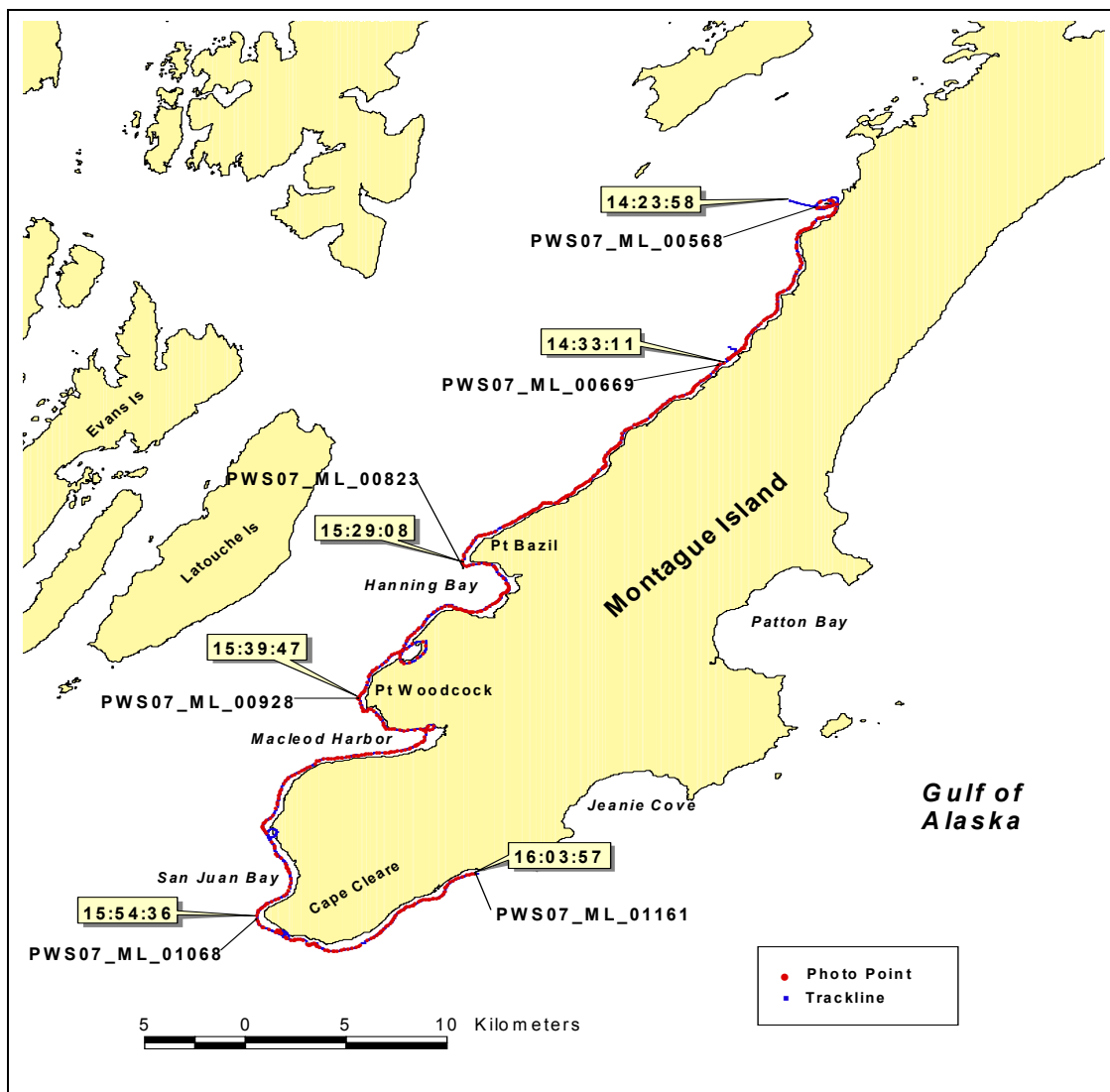
2007 Prince William Sound Aerial Video Imaging Survey
Team Chenega (NG)
Tape Log

Tape Number: PWS07_NG01

General Location: Green Island
Date: 15 May 2007
Time Start: 133030 (UTC) (053030 ADT)
Fuel Break: none
Time Stop: 142045 (UTC) (062045 ADT)
Tape Length: 51:18
Geo: Harper
Bio: Lindeberg
Nav: Daley

Weather: variable ceiling; broken clouds scattered; light winds

Time (UTC)	Location	Photo No.
133030	S tip, Little Green Is	PWS07_ML_00003
133400	N. tip Little Green is	PWS07_ML_00038
133535	S tip, Green Is	PWS07_ML_00042
134000	Channel Is	PWS07_ML_00094
134901	N tip Green Is	PWS07_ML_00197
135704	Gibbon Anchorage	PWS07_ML_00289
140438	S tip eastern islets at Gibbon Anchorage	PWS07_ML_00361
141635	SW tip Green Is	PWS07_ML_00511
142116	S tip Green Is, end of tape	PWS07_ML_00567



PWS07_NG02
15 May 2007

**2007 Prince William Sound Aerial Video Imaging Survey
Team Chenega (NG)
Tape Log**

Tape Number: PWS07_NG02

General Location: Montague Island

Date: 15 May 2007

Time Start: 142358 (UTC) (062358 ADT)

Fuel Break: 143311 (UTC) to 151743 (UTC)

Time Stop: 160357 (UTC) (080357 ADT)

Tape Length: 58:06

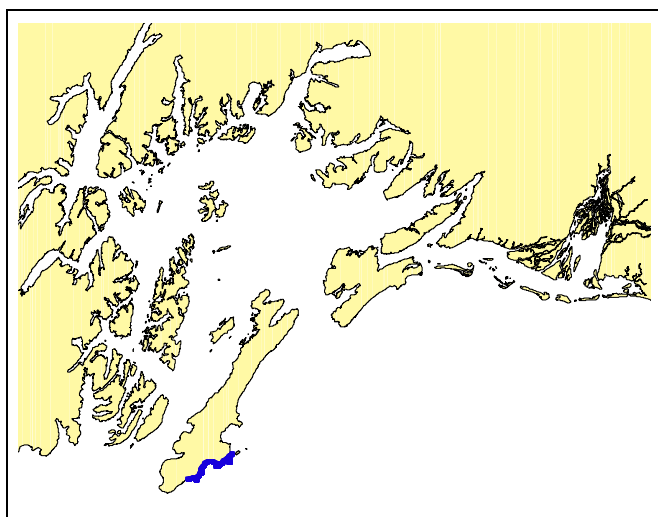
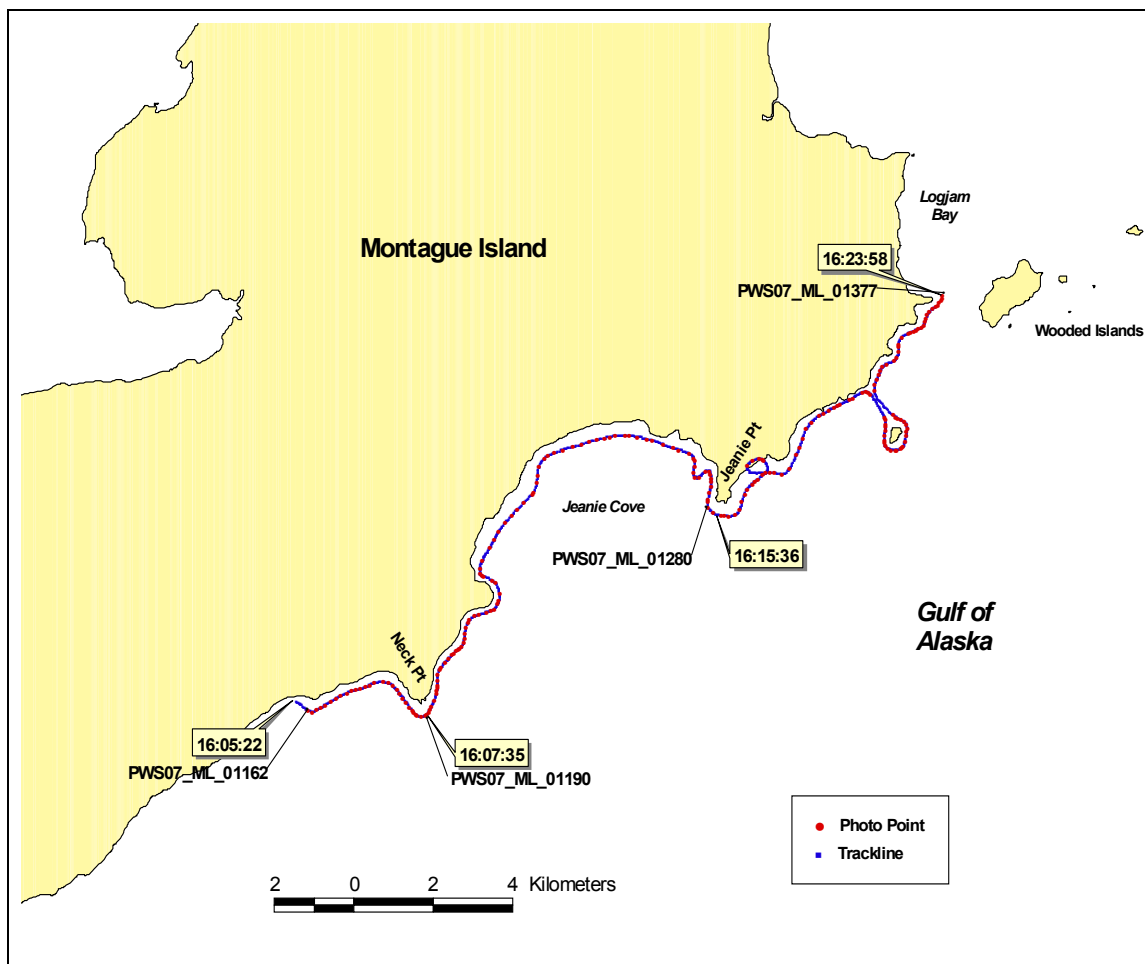
Geo: Harper

Bio: Lindeberg

Nav: Daley

Weather: variable ceiling; broken clouds scattered; light winds

Time (UTC)	Location	Photo No.
142358	Montague Is, S of Port Chalmers	PWS07_ML_00568
143311	Break at river mouth, Montague Is	PWS07_ML_00669
	Fuel break	
151743	Resume at river mouth, Montague Is	PWS07_ML_00670
152908	Pt Bazil, Hanning Bay	PWS07_ML_00823
153947	Pt Woodcock, McLeod Harbor	PWS07_ML_00928
155436	Pt Cleare, S tip of Montague Is	PWS07_ML_01068
160357	E Montague just west of Neck Pt; end of tape	PWS07_ML_01161



PWS07_NG03
15 May 2007

**2007 Prince William Sound Aerial Video Imaging Survey
Team Chenega (NG)
Tape Log**

Tape Number: PWS07_NG03

General Location: eastern Montague Island

Date: 15 May 2007

Time Start: 160458 (UTC) (080458 ADT)

Fuel Break: none

Time Stop: 162357 (UTC) (082357 ADT)

Tape Length: 19:46

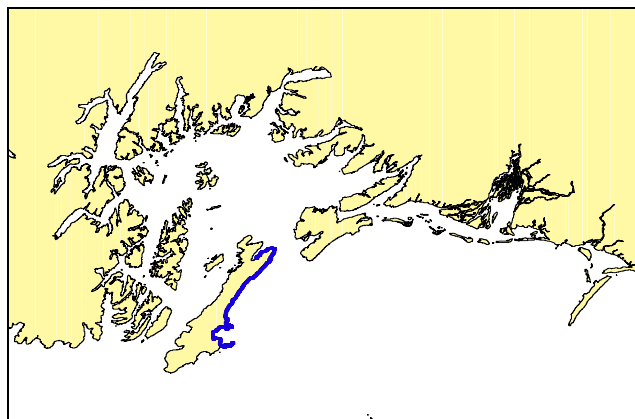
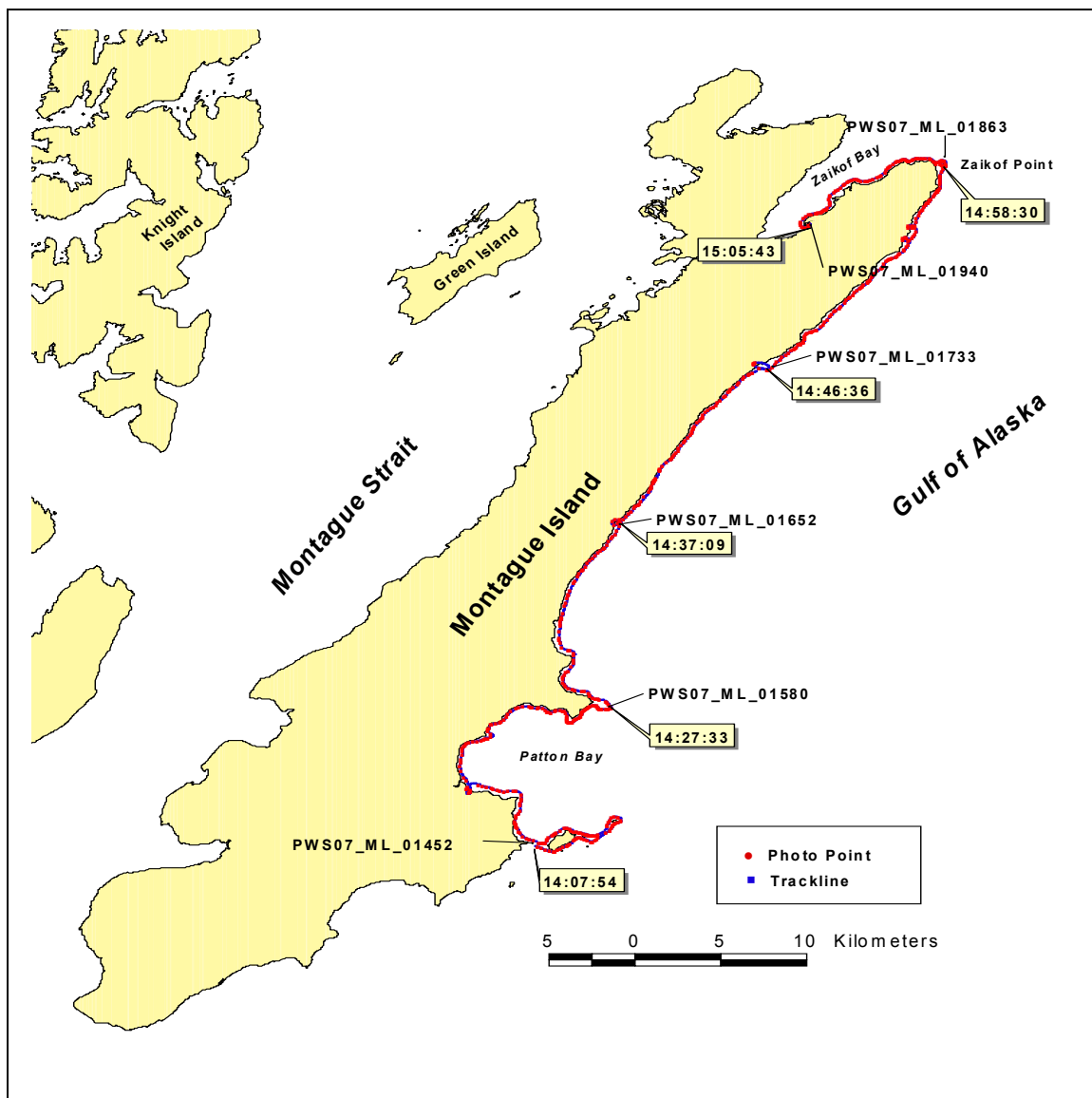
Geo: Harper

Bio: Lindeberg

Nav: Daley

Weather: variable ceiling; broken clouds scattered; light winds

Time (UTC)	Location	PhotoNo.
160522	E Montague Is, just W of Neck Pt	PWS07_ML_01162
160735	Neck Pt	PWS07_ML_01190
161536	Jeanie Pt	PWS07_ML_01280
162358	Point to W of Wooded Is; end of tape	PWS07_ML_01378



PWS07_NG04
17 May 2007

**2007 Prince William Sound Aerial Video Imaging Survey
Team Chenega (NG)
Tape Log**

Tape Number: PWS07_NG04

General Location: eastern and northern Montague Island

Date: 17 May 2007

Time Start: 140754 (UTC) (060454 ADT)

Fuel Break: none

Time Stop: 150543 (UTC) (070543 ADT)

Tape Length: 56:58

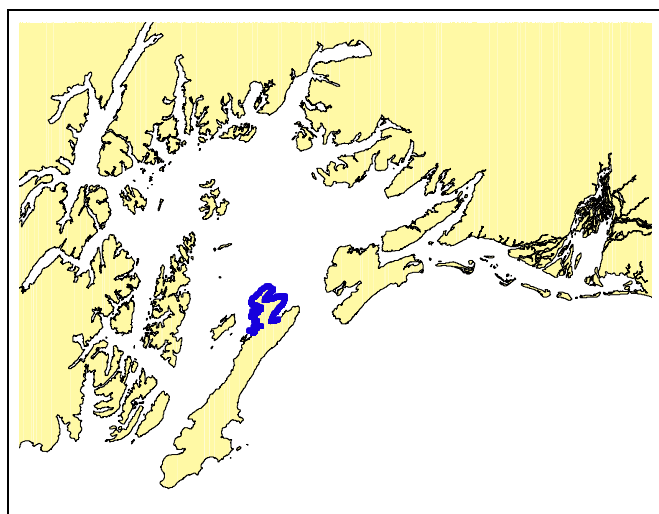
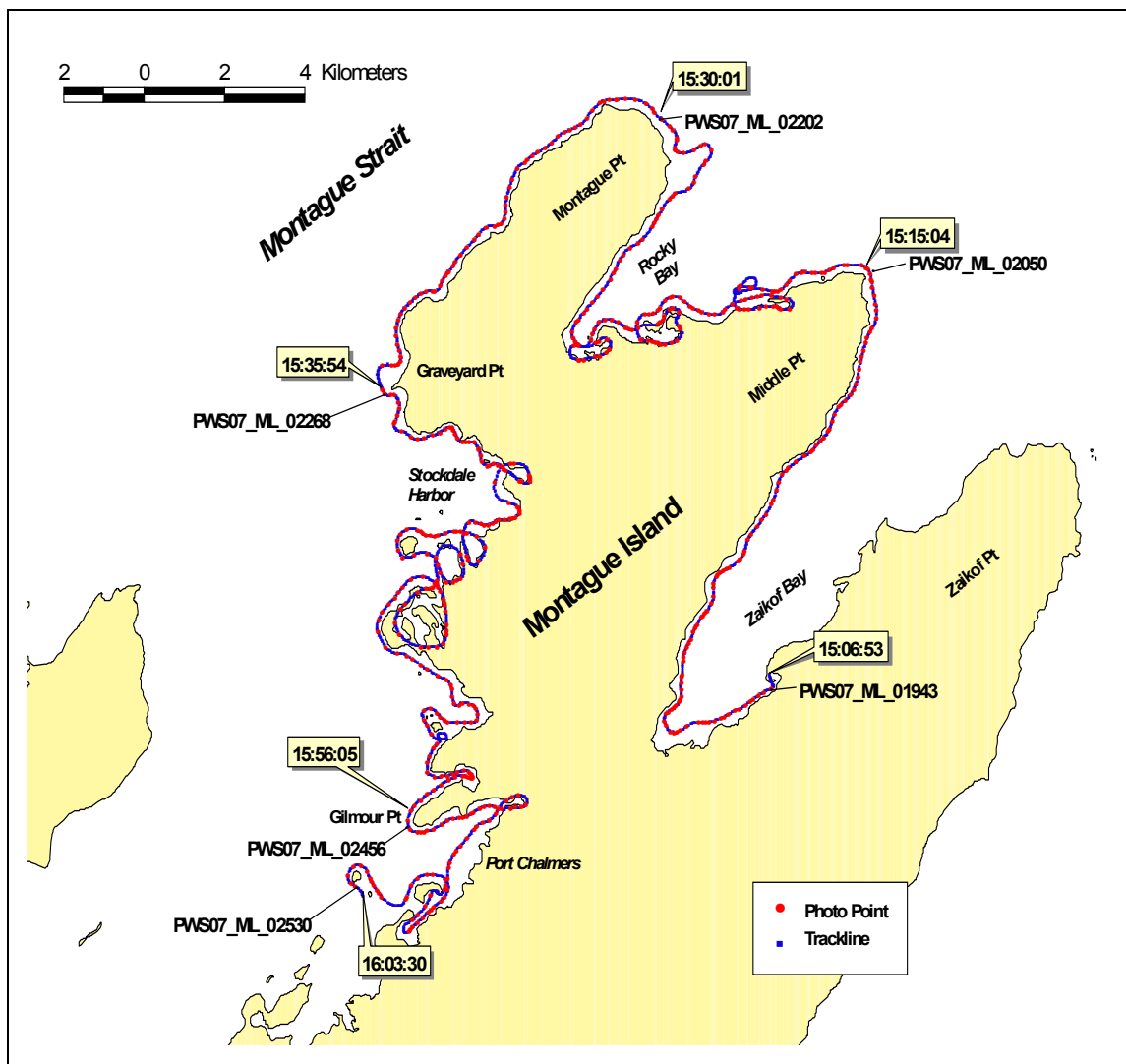
Geo: Harper

Bio: Lindeberg

Nav: Daley

Weather: variable ceiling; broken clouds scattered; light winds

Time (UTC)	Location	Photo No.
140754	E Montague Is, Wooded Islands	PWS07_ML_01380
141923	Nellie Martin River, Patton Bay	PWS07_ML_01491
142736	Box Pt & Box Is	PWS07_ML_01578
145253	Shipwreck SE of Montague Peak	PWS07_ML_01800
145749	Zaikof Pt	PWS07_ML_01852
150356	Head of Zaikof Bay; end of tape	PWS07_ML_01940



PWS07_NG05
17 May 2007

2007 Prince William Sound Aerial Video Imaging Survey

Team Chenega (NG)
Tape Log

Tape Number: PWS07_NG05

General Location: northern Montague Island

Date: 17 May 2007

Time Start: 150653 (UTC) (070653 ADT)

Fuel Break: none

Time Stop: 160330 (UTC) (080330 ADT)

Tape Length: 57:48

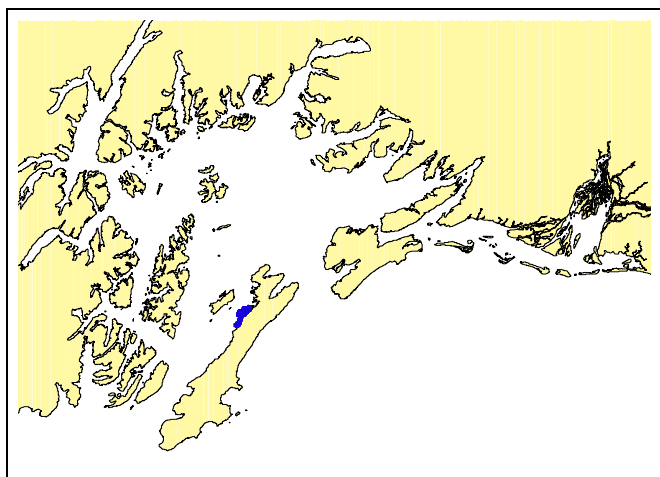
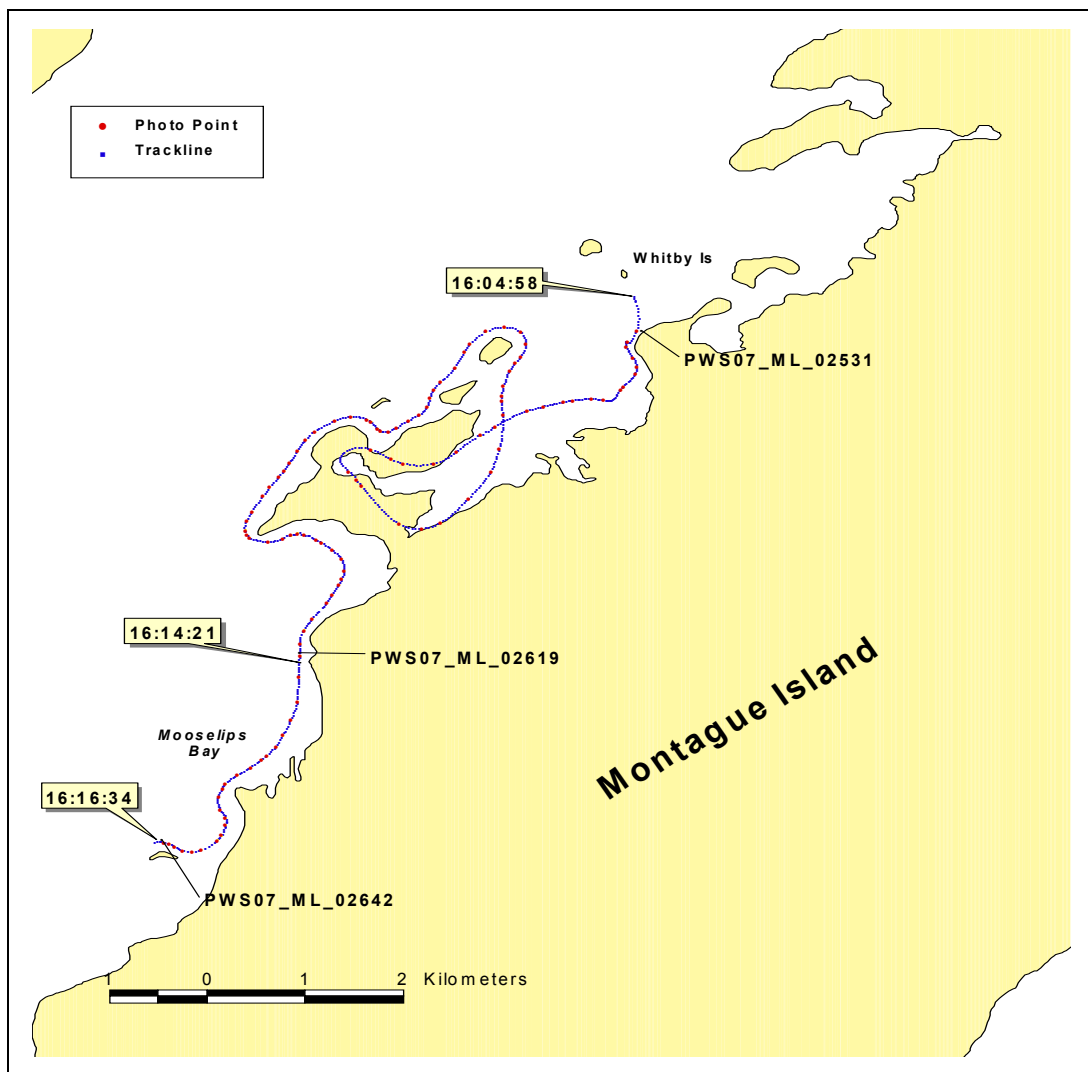
Geo: Harper

Bio: Lindeberg

Nav: Daley

Weather: variable ceiling; broken clouds scattered; light winds

Time (UTC)	Location	Photo No.
150653	Head of Zaikof Bay	PWS07 ML 01943
151504	Middle Pt, N Montague Is	PWS07 ML 02050
153001	Montague Pt, N Montague Is	PWS07 ML 02202
153554	Graveyard Pt	PWS07 ML 02268
155605	Gilmour Pt, Port Chalmers	PWS07 ML 02456
160330	Wilby Is, west Montague Is; end of tape	PWS07_ML_02530



PWS07_NG06
17 May 2007

**2007 Prince William Sound Aerial Video Imaging Survey
Team Chenega (NG)
Tape Log**

Tape Number: PWS07_NG06

General Location: eastern Montague Island

Date: 17 May 2007

Time Start: 160518 (UTC) (080518 ADT)

Fuel Break: none

Time Stop: 161621 (UTC) (081621 ADT)

Tape Length: 12:24

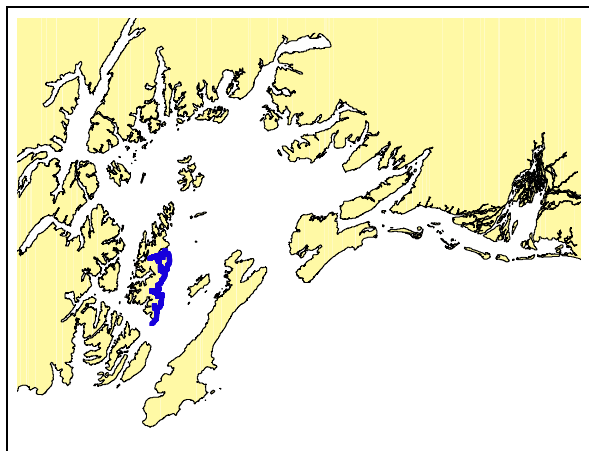
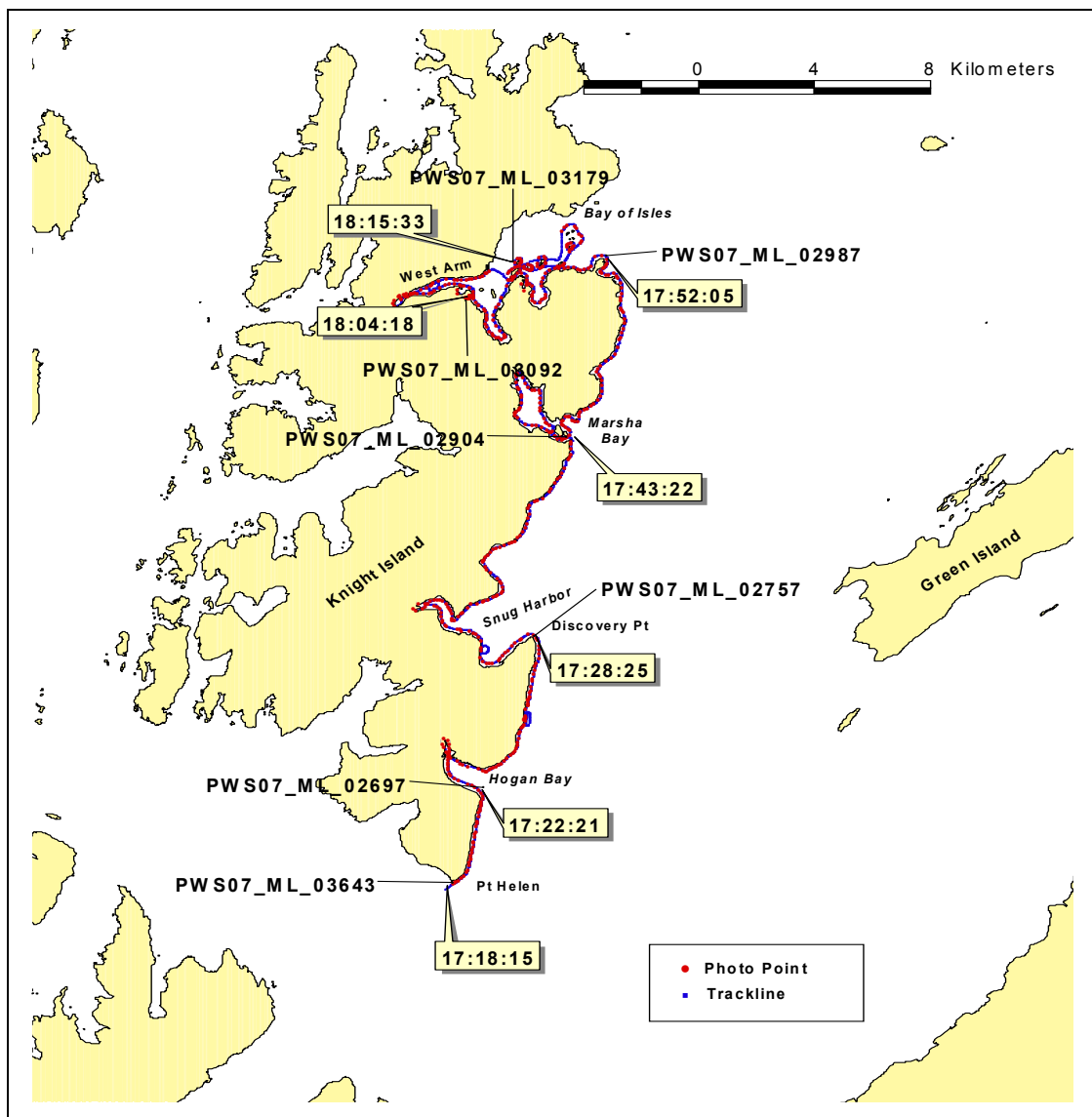
Geo: Harper

Bio: Lindeberg

Nav: Daley

Weather: variable ceiling; broken clouds scattered; light winds

Time (UTC)	Location	Photo No.
160458	Wilby Is, west Montague Is; Start of tape	PWS07_ML_02531
161421	Mooselips Bay	PWS07_ML_02619
161634	Large tomobolo south of Mooselips Bay (start of Tape NG01); end of tape	PWS07_ML_02642



PWS07_NG07
17 May 2007

2007 Prince William Sound Aerial Video Imaging Survey
Team Chenega (NG)
Tape Log

Tape Number: PWS07_NG07

General Location: southeastern Knight Island

Date: 17 May 2007

Time Start: 171815 (UTC) (091815 ADT)

Fuel Break: none

Time Stop: 181533 (UTC) (101533 ADT)

Tape Length: 59:28

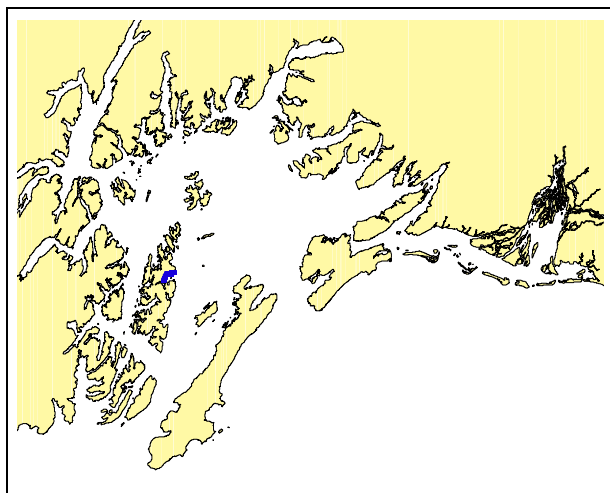
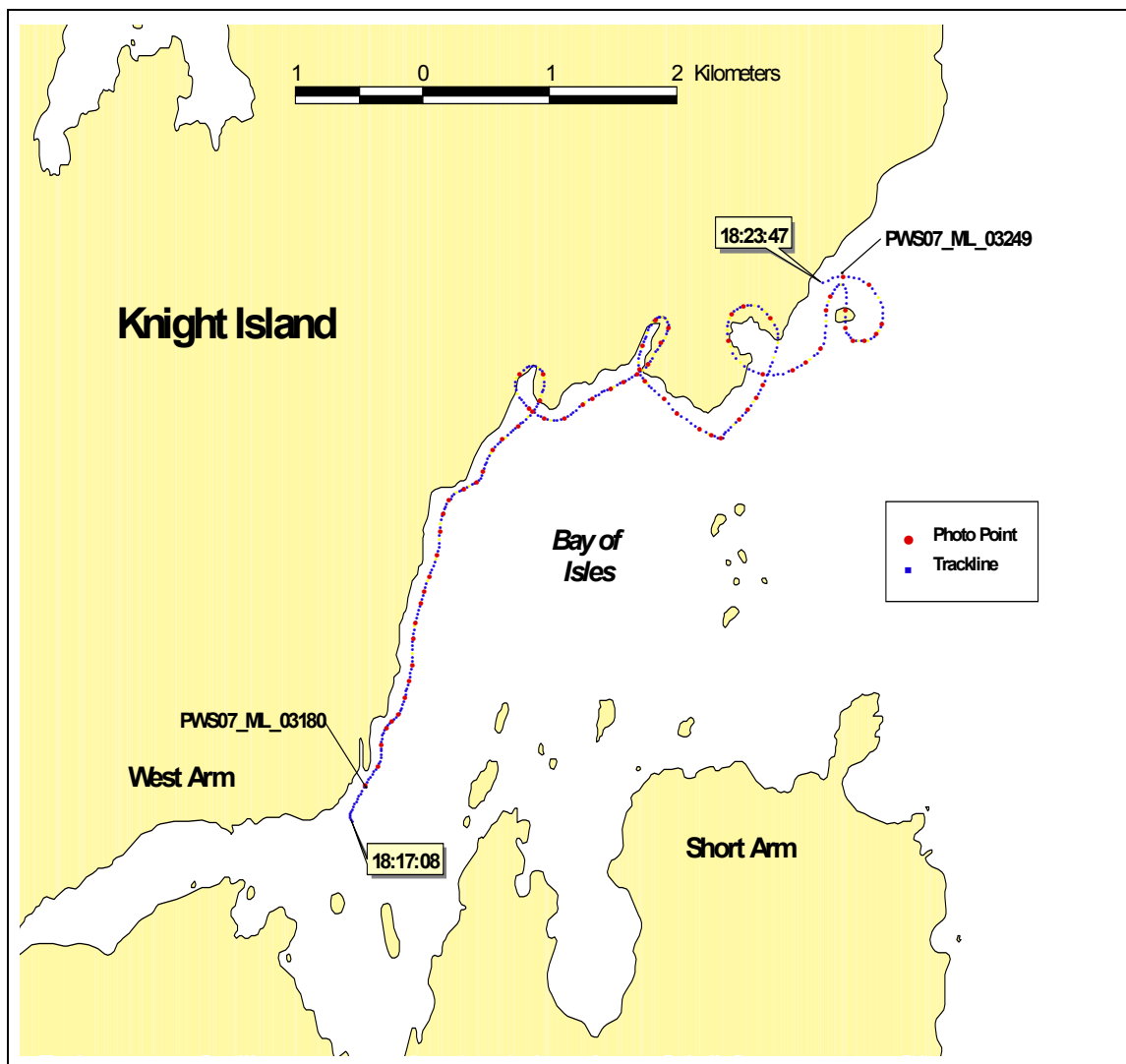
Geo: Harper

Bio: Lindeberg

Nav: Daley

Weather: sunny; light winds

Time (UTC)	Location	Photo No.
171815	Pt. Helen, SE Knight Is	PWS07_ML_02643
172221	Head of Hogan Bay	PWS07_ML_02697
172825	Discovery Pt, Snug Harbour	PWS07_ML_02757
174322	Head of Marsha Bay	PWS07_ML_02904
175205	South entrance to Bay of Isles	PWS07_ML_02987
180418	Head of West Arm, Bay of Isles	PWS07_ML_03092
181533	North entrance to West Arm, Bay of Isles; end of tape	PWS07_ML_03179



PWS07_NG08
17 May 2007

2007 Prince William Sound Aerial Video Imaging Survey
Team Chenega (NG)
Tape Log

Tape Number: PWS07_NG08

General Location: northeast Knight Island

Date: 17 May 2007

Time Start: 181708 (UTC) (101708 ADT)

Fuel Break: none

Time Stop: 182347 (UTC) (102347 ADT)

Tape Length: 7:51

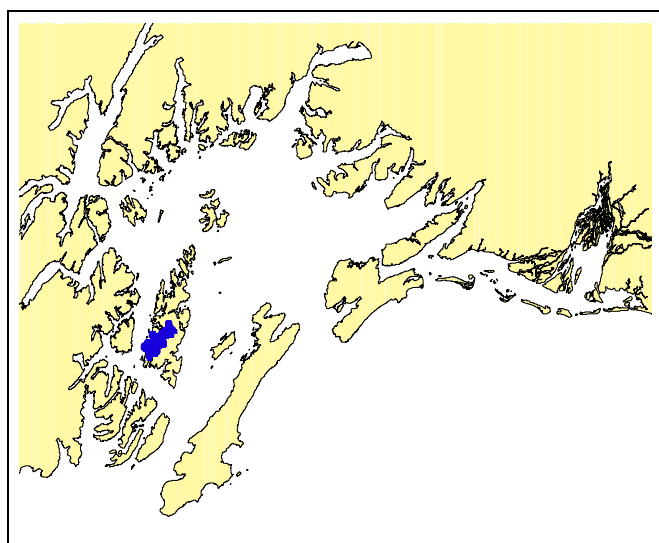
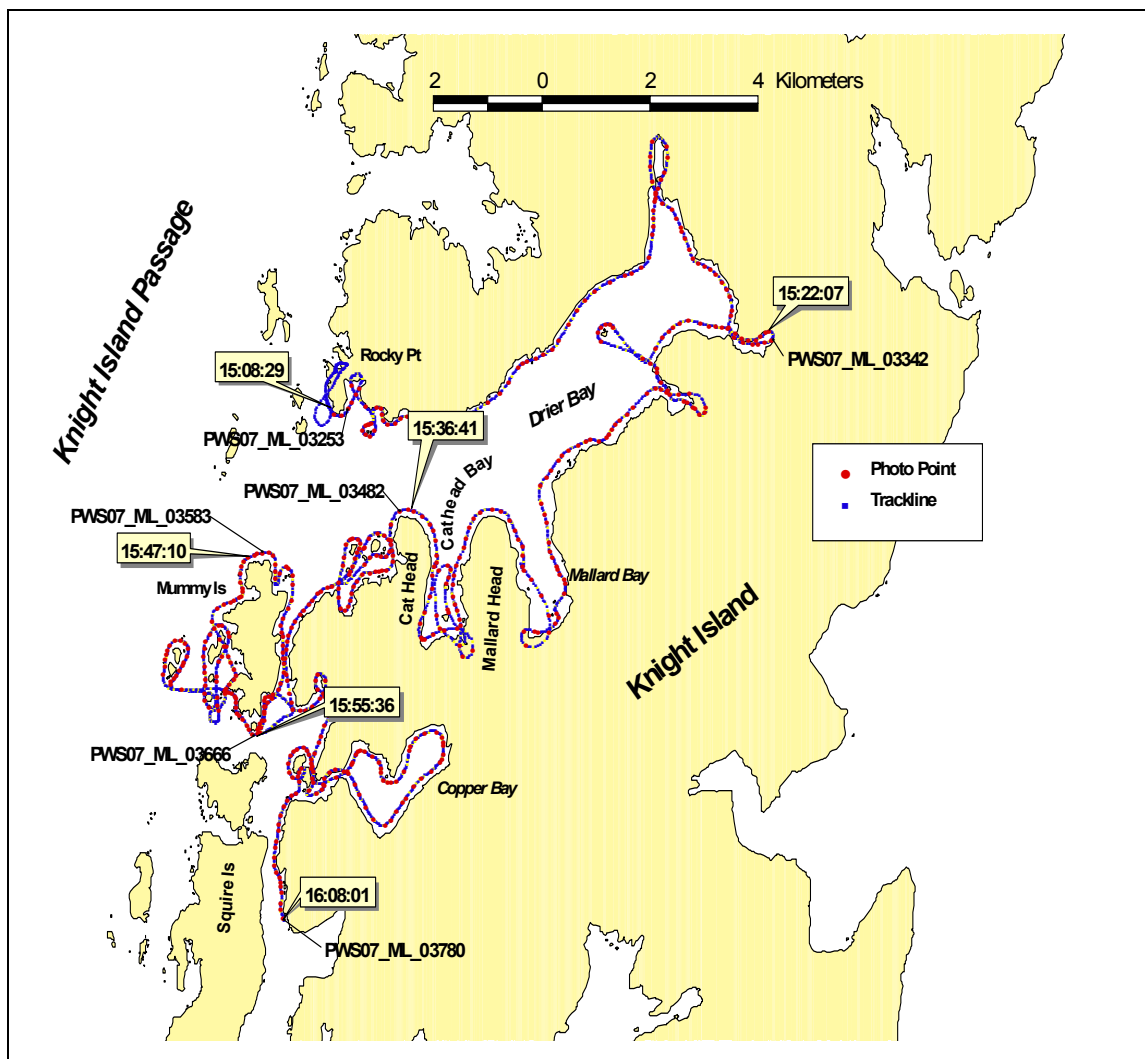
Geo: Harper

Bio: Lindeberg

Nav: Daley

Weather: sunny; light winds

Time (UTC)	Location	Photo No.
181708	North entrance to West Arm, Bay of Isles; start of tape	PWS07_ML_03180
182347	Northern entrance to Bay of Isles; end of tape	PWS07_ML_03249



PWS07_NG09
18 May 2007

2007 Prince William Sound Aerial Video Imaging Survey
Team Chenega (NG)
Tape Log

Tape Number: PWS07_NG09

General Location: Drier Bay, SW Knight Island

Date: 18 May 2007

Time Start: 150829 (UTC) (070829 ADT)

Fuel Break: none

Time Stop: 160801 (UTC) (080801 ADT)

Tape Length: 57:54

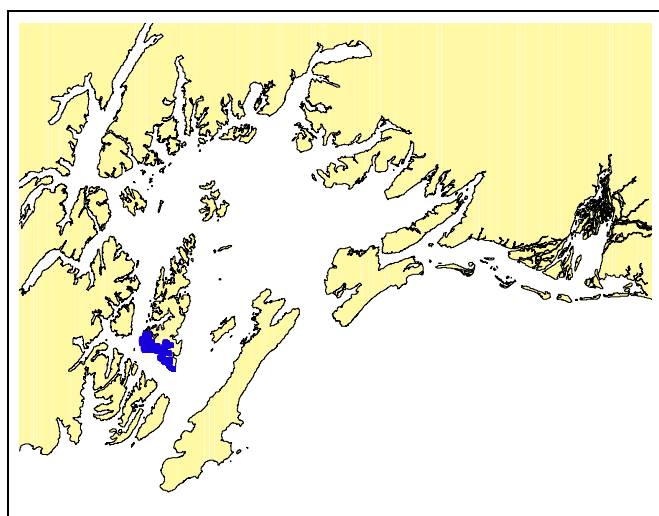
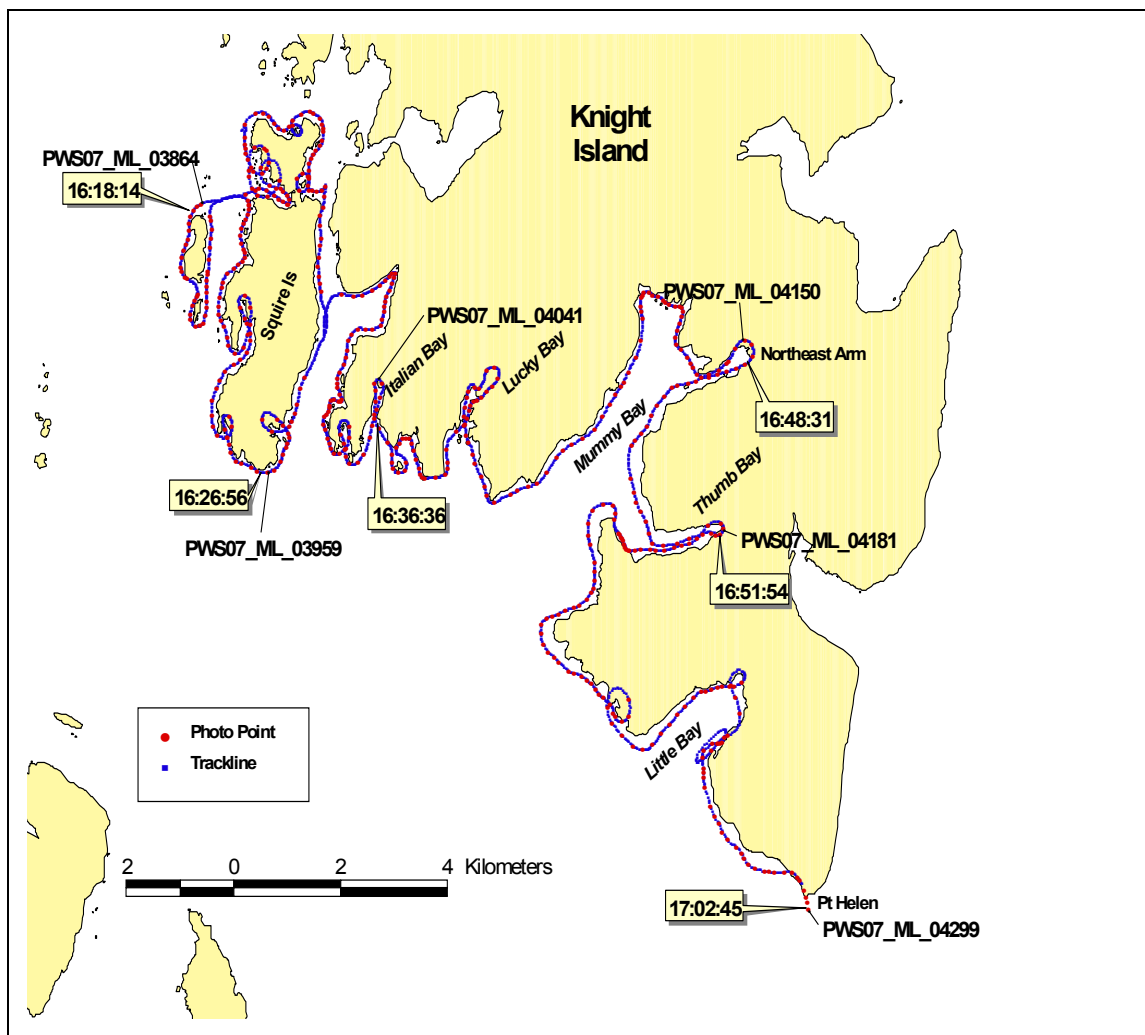
Geo: Harper

Bio: Lindeberg

Nav: Daley

Weather: sunny and calm

Time (UTC)	Location	Photo No.
150829	Rocky Pt, N entrance to Drier Bay	PWS07_ML_03253
152207	Head of Northeast Cove, Drier Bay	PWS07_ML_03342
153641	Cat Head, S entrance to Drier Bay	PWS07_ML_03482
154710	N tip of Mummy Is	PWS07_ML_03583
155536	S tip of Mummy Is	PWS07_ML_03665
160801	Entrance to Deer Cove, SE Knight Is; end of tape	PWS07_ML_03781



PWS07_NG10
18 May 2007

2007 Prince William Sound Aerial Video Imaging Survey
Team Chenega (NG)
Tape Log

Tape Number: PWS07_NG10

General Location: SE Knight Is

Date: 18 May 2007

Time Start: 160925 (UTC) (080925 ADT)

Fuel Break: none

Time Stop: 170209 (UTC) (090209 ADT)

Tape Length: 53:32

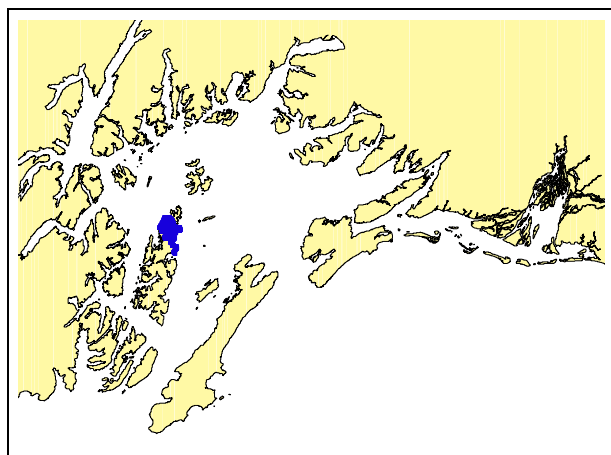
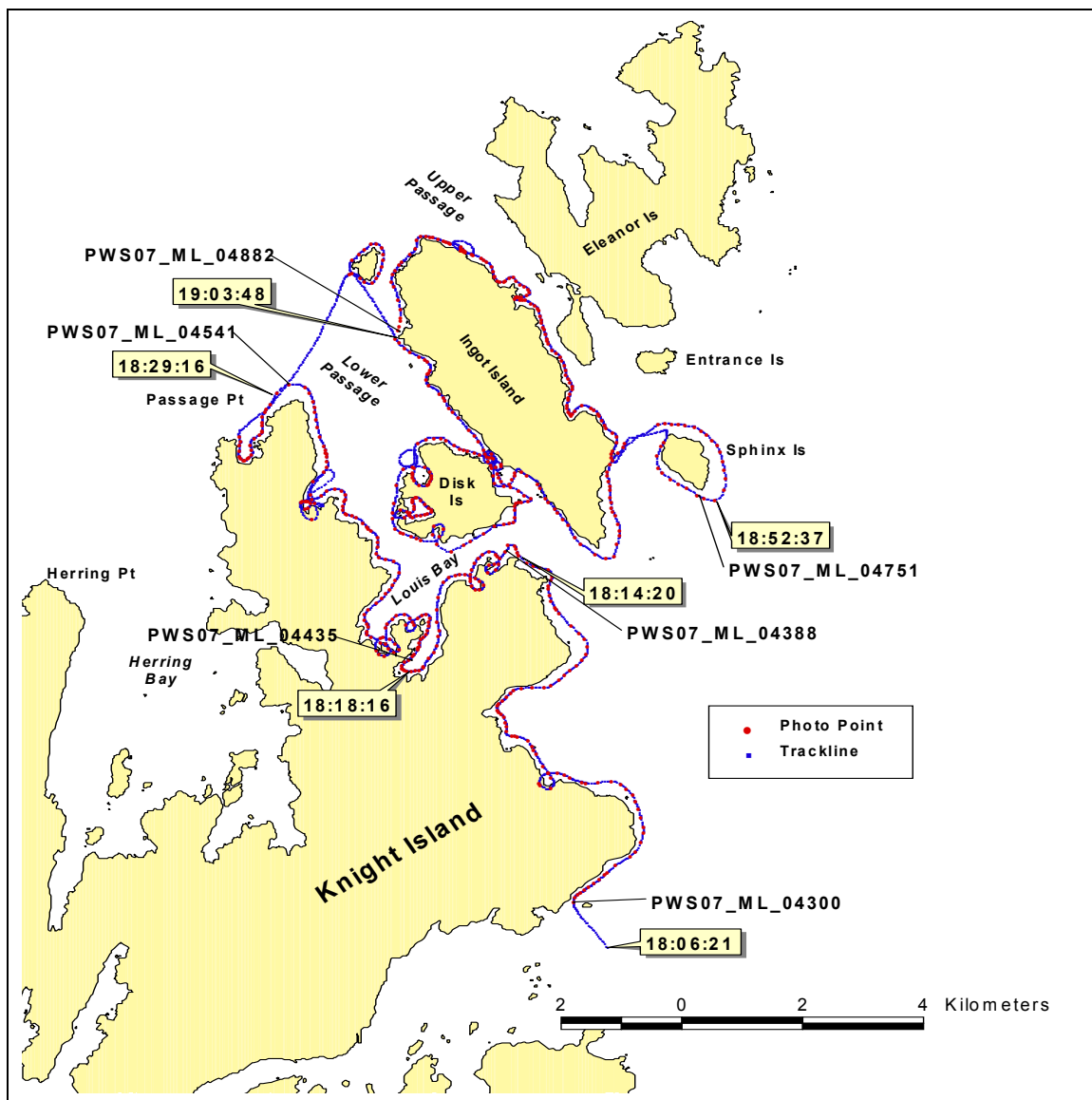
Geo: Harper

Bio: Lindeberg

Nav: Daley

Weather: sunny and calm

Time (UTC)	Location	Photo No.
160925	Squire Island, Long Channel; start of tape	PWS07_ML_03782
161814	Pt of Rocks, W Squire Is	PWS07_ML_03865
162656	Squire Pt, S Squire Is	PWS07_ML_03959
163101	Head of Deer Cove	PWS07_ML_03985
163636	Head of Italian Bay	PWS07_ML_04040
164831	Head of NE Arm, Mummy Bay	PWS07_ML_04151
165154	Head of thumb Cove, Mummy Bay	PWS07_ML_04181
170245	Pt Helen, Se Knight Is; end of tape	PWS07_ML_04299



PWS07_NG11
18 May 2007

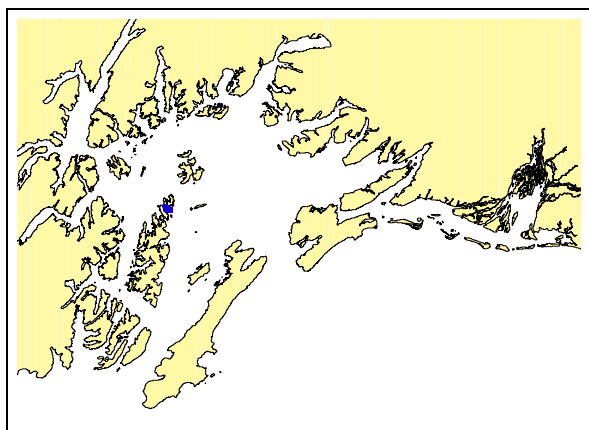
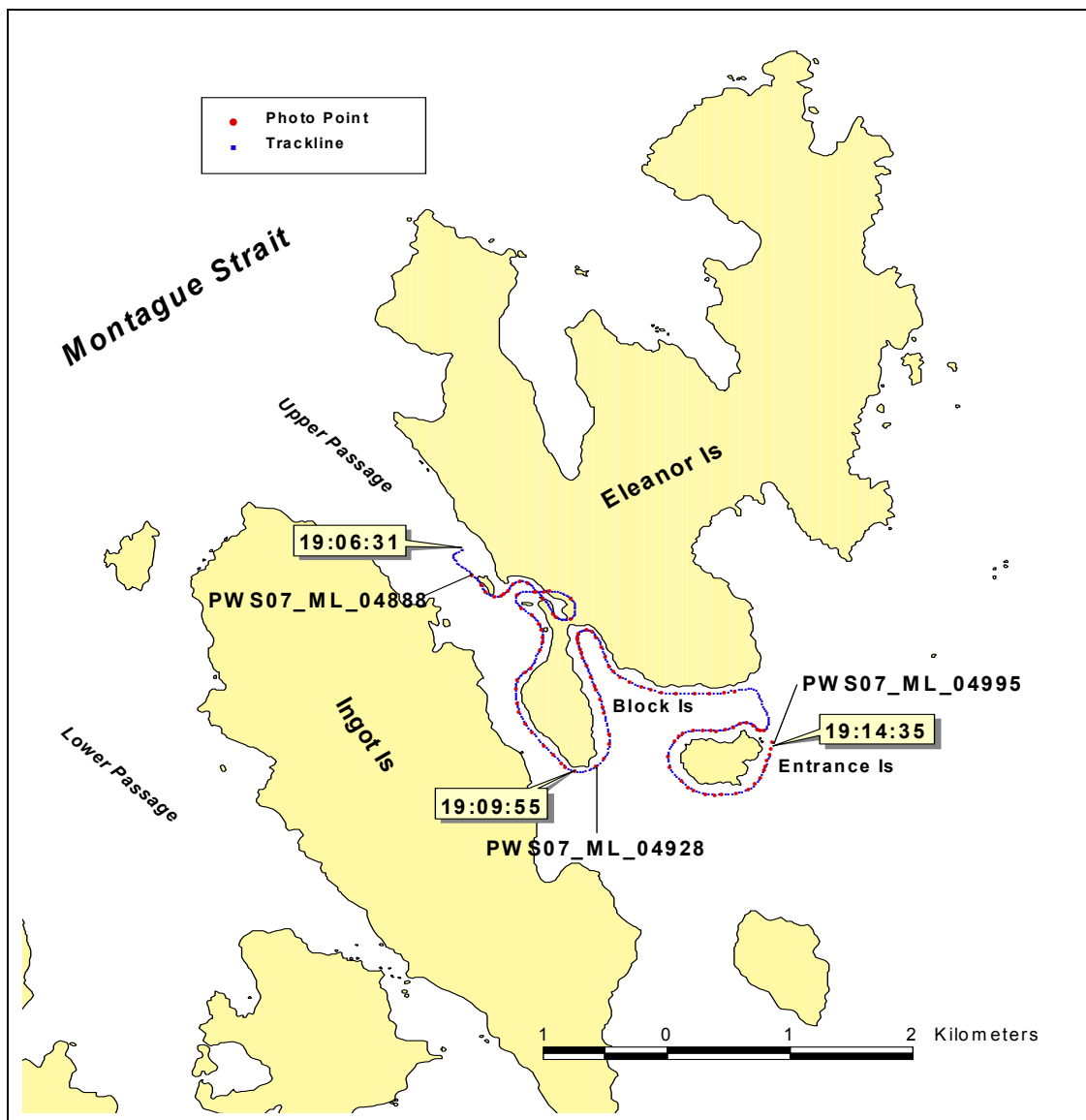
2007 Prince William Sound Aerial Video Imaging Survey
Team Chenega (NG)
Tape Log

Tape Number: PWS07_NG11

General Location: NE Knight Is
Date: 18 May 2007
Time Start: 180621 (UTC) (100621 ADT)
Fuel Break: none
Time Stop: 190348 (UTC) (110348 ADT)
Tape Length: 57:34
Geo: Harper
Bio: Lindeberg
Nav: Daley

Weather: sunny and calm

Time (UTC)	Location	Photo No.
180621	N entrance Bay of Isles; start of tape	PWS07 ML 04300
181420	Entrance to Mew Cove	PWS07 ML 04387
181816	Head of Louis Bay	PWS07 ML 04438
182916	Passage Pt	PWS07 ML 04541
183742	Foul Passage, Ingot Is	PWS07 ML 04602
184143	Lagoon at W Disk Is	PWS07 ML 04641
184954	S tip Ingot Is, Foul Passage	PWS07 ML 04722
185237	S tip Sphinx Is	PWS07 ML 04751
190348	W coast of Ingot Is; end of tape	PWS07 ML 04882



PWS07_NG12
18 May 2007

**2007 Prince William Sound Aerial Video Imaging Survey
Team Chenega (NG)
Tape Log**

Tape Number: PWS07_NG12

General Location: Eleanor Is

Date: 18 May 2007

Time Start: 190631 (UTC) (120631 ADT)

Fuel Break: none

Time Stop: 191430 (UTC) (121430 ADT)

Tape Length: 09:47

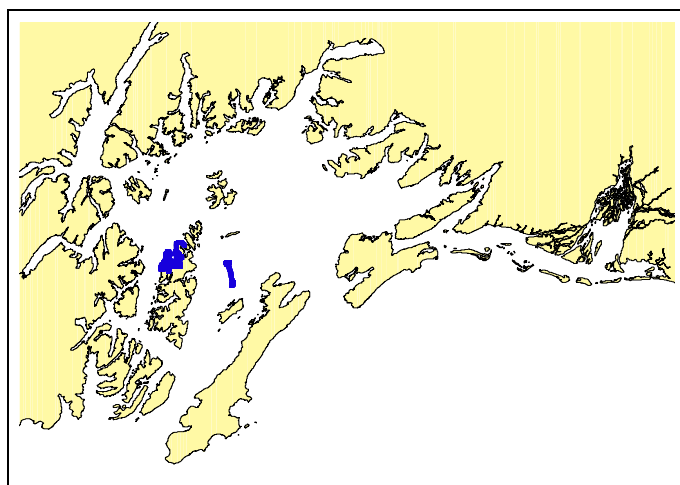
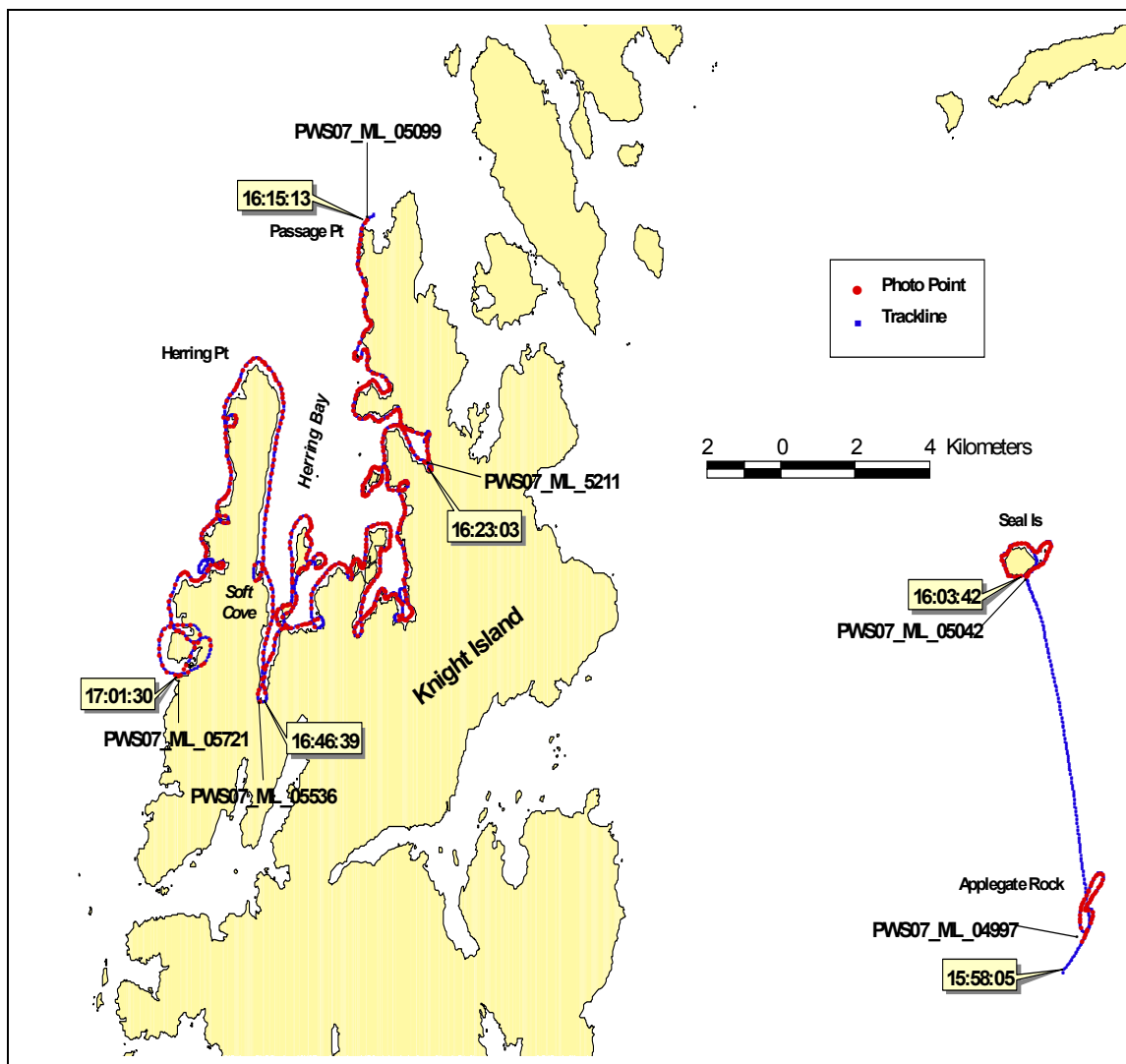
Geo: Harper

Bio: Lindeberg

Nav: Daley

Weather: sunny and calm

Time (UTC)	Location	Photo No.
190631	W Eleanor Is	PWS07_ML_04888
190955	S tip, Block Is	PWS07_ML_04928
191435	S tip, Entrance Is; end of tape	PWS07_ML_04995



PWS07_NG13
19 May 2007

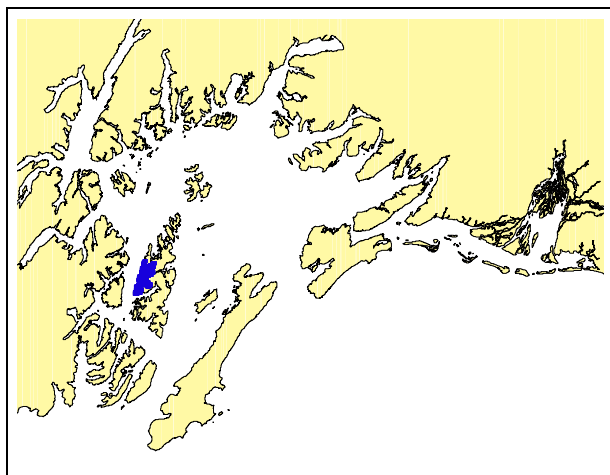
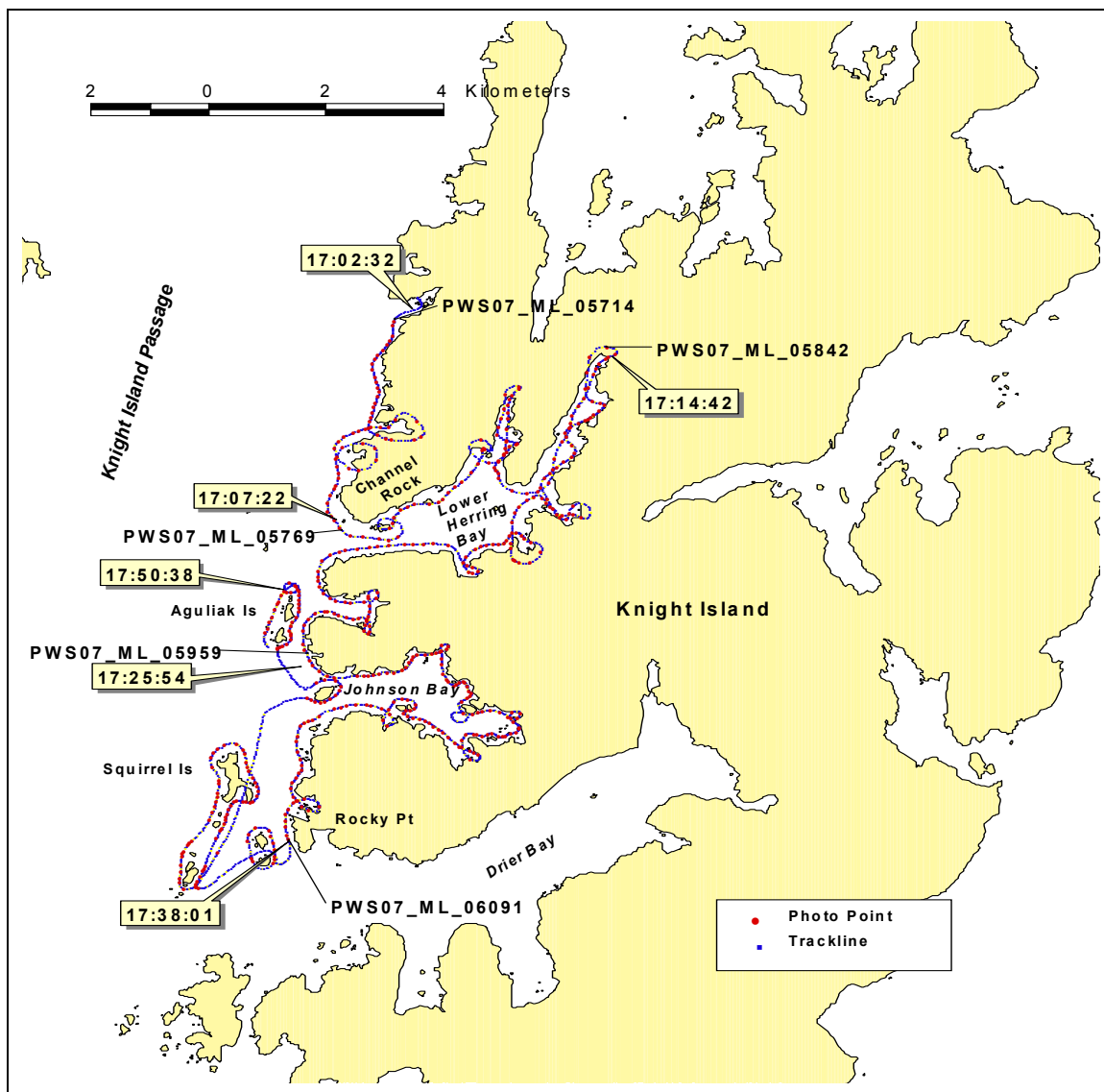
**2007 Prince William Sound Aerial Video Imaging Survey
Team Chenega (NG)
Tape Log**

Tape Number: PWS07_NG13

General Location: NE Knight Is
Date: 19 May 2007
Time Start: 155726 (UTC) (075726 ADT)
Fuel Break: none
Time Stop: 170130 (UTC) (090130 ADT)
Tape Length: 59:18
Geo: Harper
Bio: Lindeberg
Nav: Daley

Weather: sunny and calm

Time (UTC)	Location	Photo No.
155805	Applegate Rock; start of tape	PWS07_ML_04997
	Transit 16:00:35 to 16:03:35	
160342	Seal Island	PWS07_ML_05042
	Transit 16:06:53 to 16:15:12	
161513	Passage Pt, north entrance to Herring Bay	PWS07_ML_05099
162303	Head of small lagoon, east shore of Herring Bay	PWS07_ML_05211
163352	Head of Soft Cove, SE Herring Bay	PWS07_ML_05360
164639	SW corner of Herring Bay	PWS07_ML_05536
165123	Herring Point, NW Herring Bay	PWS07_ML_05596
170130	NW Knight Is; end of tape	PWS07_ML_05712



PWS07_NG14
19 May 2007

2007 Prince William Sound Aerial Video Imaging Survey
Team Chenega (NG)
Tape Log

Tape Number: PWS07_NG14

General Location: W Knight Is, Knight Island Passage

Date: 19 May 2007

Time Start: 170232 (UTC) (090232 ADT)

Fuel Break: none

Time Stop: 175038 (UTC) (095038 ADT)

Tape Length: 49:28

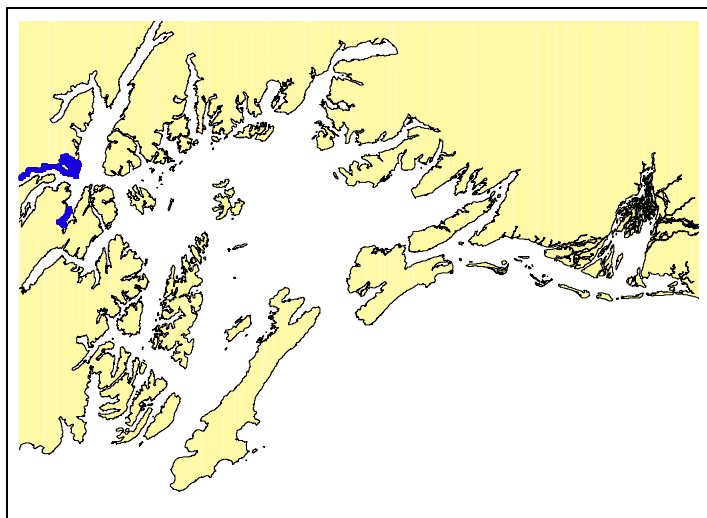
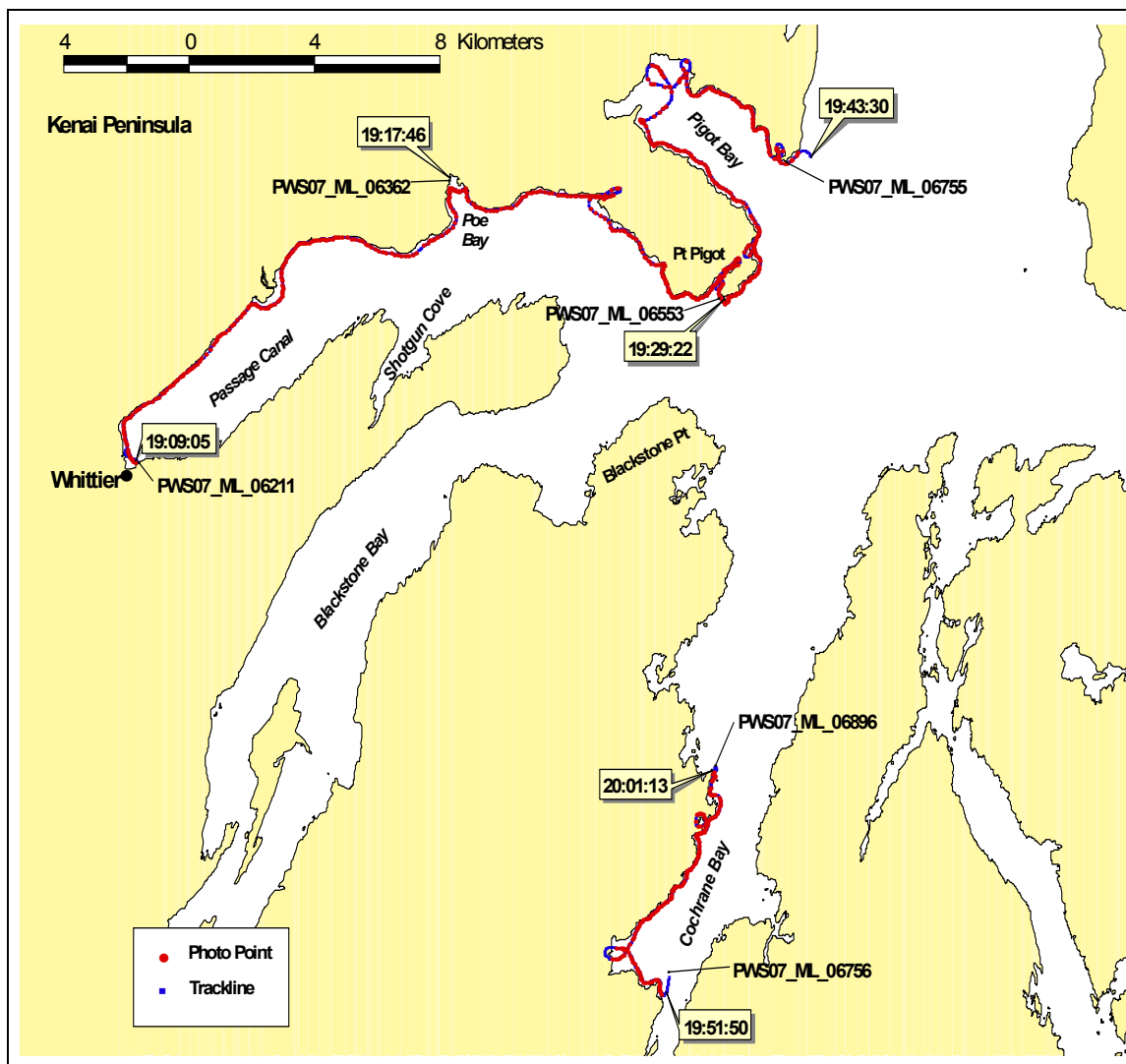
Geo: Harper

Bio: Lindeberg

Nav: Daley

Weather: sunny and calm

Time (UTC)	Location	Photo No.
170232	Small bay between Herring Bay and Lower Herring Bay; start of tape	PWS07_ML_05714
170722	N entrance to Lower Herring Bay	PWS07_ML_05769
171442	NE corner of Lower Herring Bay	PWS07_ML_05842
172214	S entrance to Lower Herring Bay	PWS07_ML_05919
172554	N entrance to Johnson Bay	PWS07_ML_05959
173515	S entrance to Johnson Bay	PWS07_ML_06060
173801	N entrance to Drier Bay	PWS07_ML_06091
174236	N tip Squirrel Is	PWS07_ML_06139
175038	S tip of island just to N of Johnson Bay; end of tape	PWS07_ML_06208



PWS07_NG15
19 May 2007

2007 Prince William Sound Aerial Video Imaging Survey
Team Chenega (NG)
Tape Log

Tape Number: PWS07_NG15

General Location: Passage Canal, Whittier

Date: 19 May 2007

Time Start: 190905 (UTC) (110905 ADT)

Fuel Break: none

Time Stop: 200113 (UTC) (120113 ADT)

Tape Length: 46:33

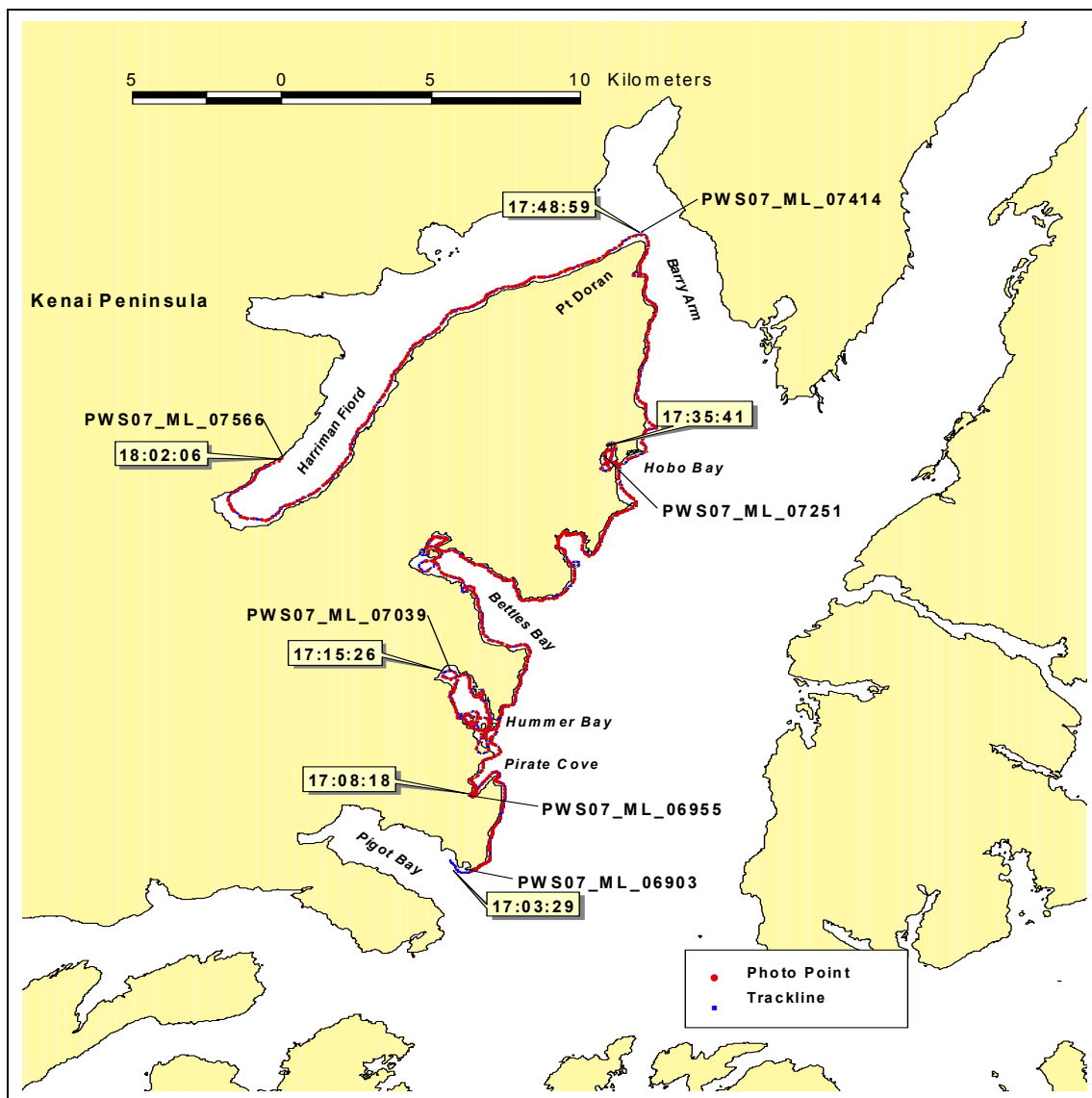
Geo: Harper

Bio: Lindeberg

Nav: Daley

Weather: sunny and calm

Time (UTC)	Location	Photo No.
190905	Whittier airport; start of tape	PWS07_ML_06211
191319	Billings Creek	PWS07_ML_06280
191746	Poe Bay	PWS07_ML_06362
192922	Pigot Pt	PWS07_ML_06553
193722	Head of Pigot Bay	PWS07_ML_06672
194330	Ziegler Cove at entrance to Port Wells	PWS07_ML_06755
	Transit 16:43:30 to 19:51:50	
195150	SW Cochrane Bay	PWS07_ML_06756
200113	W Cochrane Bay; end of tape	PWS07_ML_06896



PWS07_NG16
20 May 2007

2007 Prince William Sound Aerial Video Imaging Survey
Team Chenega (NG)

Tape Log

Tape Number: PWS07_NG16

General Location: SW Port Wells/College Fjord

Date: 20 May 2007

Time Start: 170329 (UTC) (090329 ADT)

Fuel Break: none

Time Stop: 180206 (UTC) (100206 ADT)

Tape Length: 1:00:05

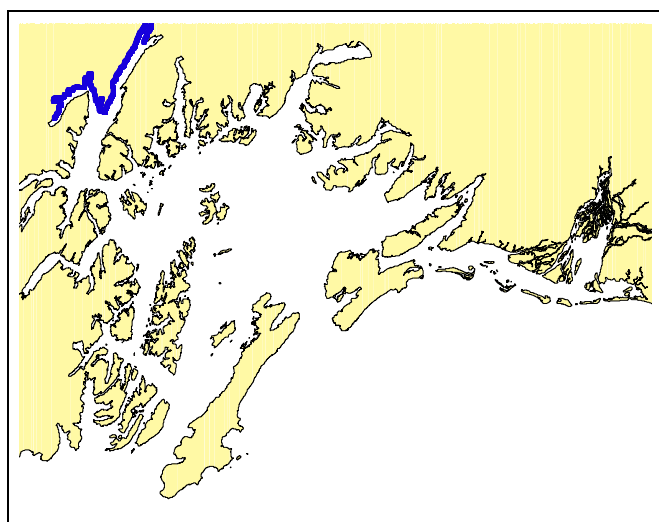
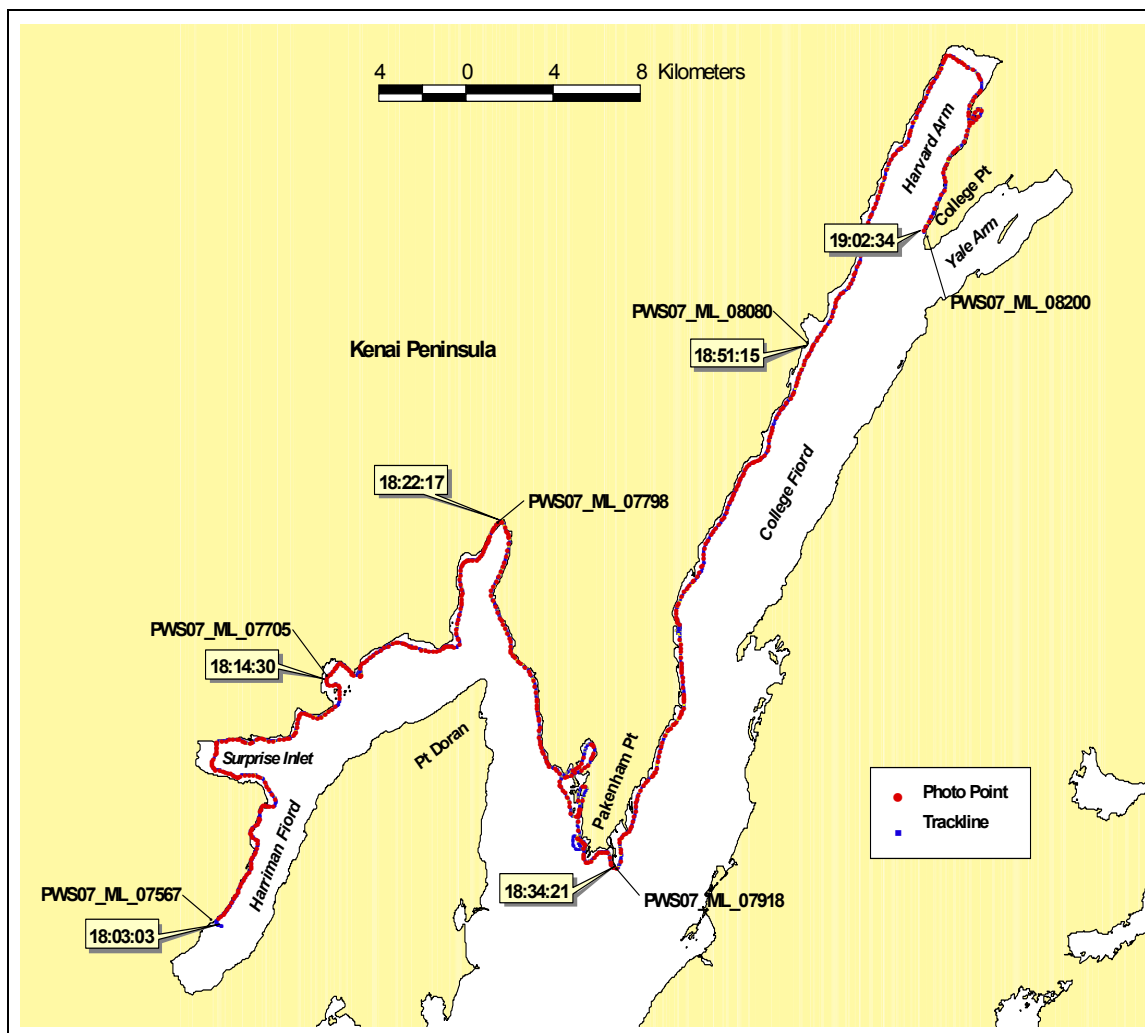
Geo: Harper

Bio: Lindeberg

Nav: Daley

Weather: sunny and calm

Time (UTC)	Location	Photo No.
170329	SW entrance to Port Wells near Ziegler Cove; start of tape	PWS07_ML_06903
170818	Head of Pirates Cove	PWS07_ML_06955
171526	Head of Hummer Bay	PWS07_ML_07039
172716	Head of Bettles Bay	PWS07_ML_07167
173541	Head of Hobo Bay	PWS07_ML_07251
174859	Pt Doran, Harriman Fiord	PWS07_ML_07414
175951	Harriman Glacier	PWS07_ML_07541
180206	SW Harriman Fiord; end of tape	PWS07_ML_07566



PWS07_NG17
20 May 2007

2007 Prince William Sound Aerial Video Imaging Survey
Team Chenega (NG)
Tape Log

Tape Number: PWS07_NG17

General Location: Harriman and College Fiords

Date: 20 May 2007

Time Start: 180303 (UTC) (100303 ADT)

Fuel Break: none

Time Stop: 190234 (UTC) (110234 ADT)

Tape Length: 58:47

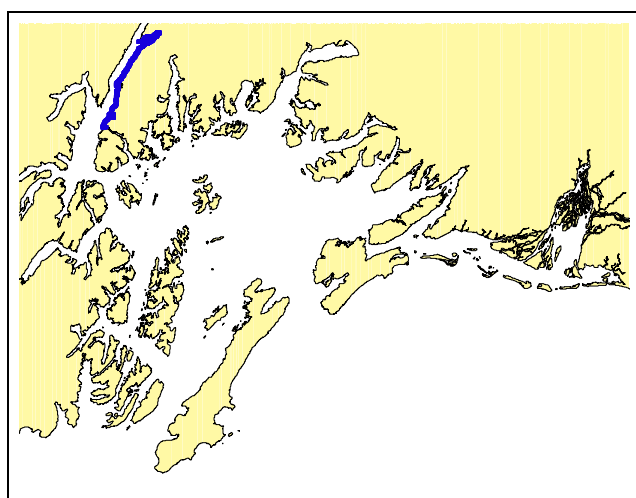
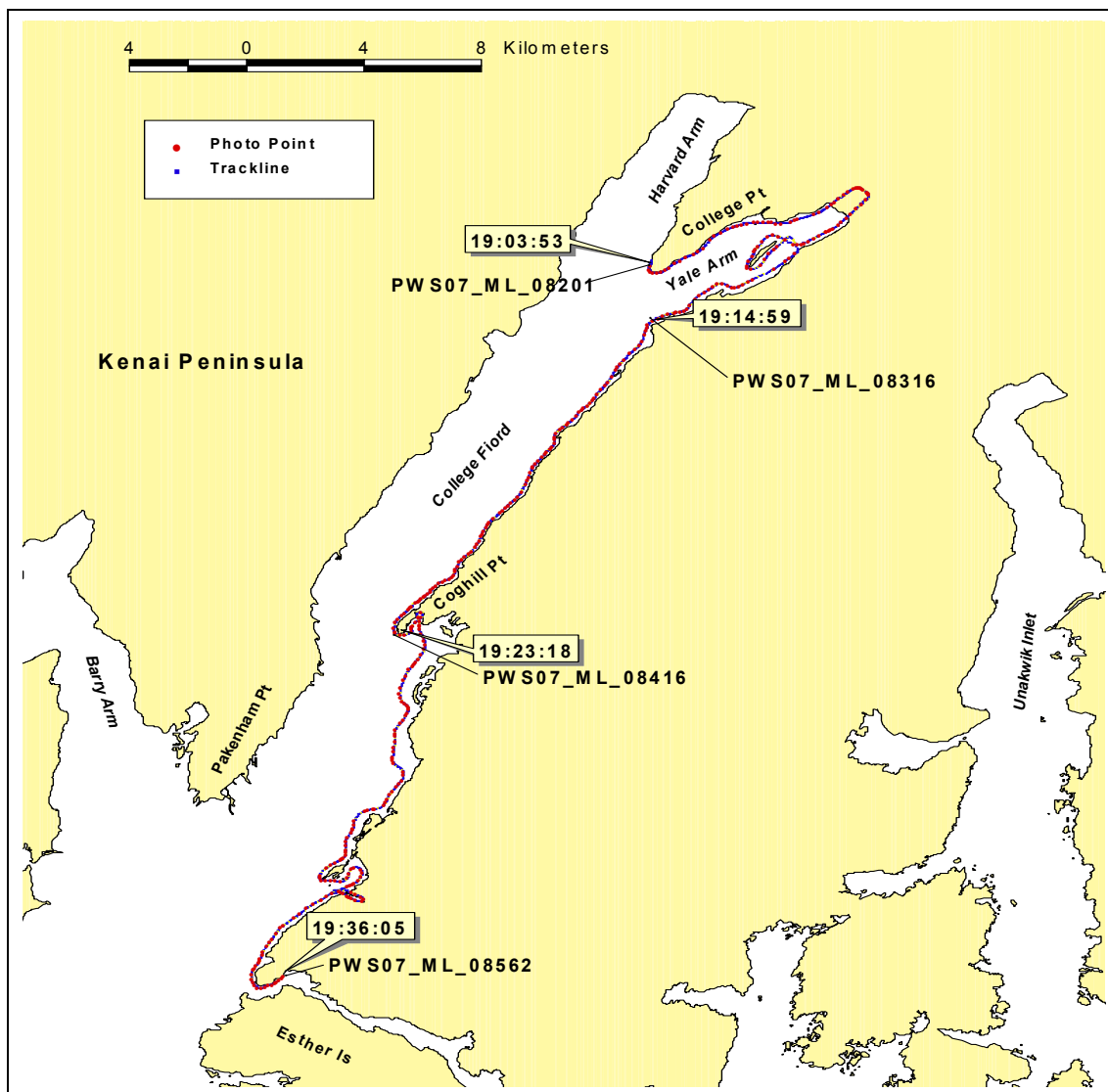
Geo: Harper

Bio: Lindeberg

Nav: Daley

Weather: sunny and calm

Time (UTC)	Location	Photo No.
180303	SW Harriman Fiord; start of tape	PWS07_ML_07567
180850	Surprise Glacier	PWS07_ML_07638
181430	Serpentine Bay & Glacier	PWS07_ML_07705
182217	Barry Glacier	PWS07_ML_07798
183421	Pt Pakenham	PWS07_ML_07918
183946	Opposite Coghill Pt	PWS07_ML_07989
185115	Wellesley Glacier	PWS07_ML_08080
185743	Harvard Glacier	PWS07_ML_08158
190234	College Pt; end of tape	PWS07_ML_08200



PWS07_NG18
20 May 2007

2007 Prince William Sound Aerial Video Imaging Survey
Team Chenega (NG)
Tape Log

Tape Number: PWS07_NG18

General Location: Eastern shore, College Fiord

Date: 20 May 2007

Time Start: 190353 (UTC) (110353 ADT)

Fuel Break: none

Time Stop: 193605 (UTC) (113605 ADT)

Tape Length: 33:15

Geo: Harper

Bio: Lindeberg

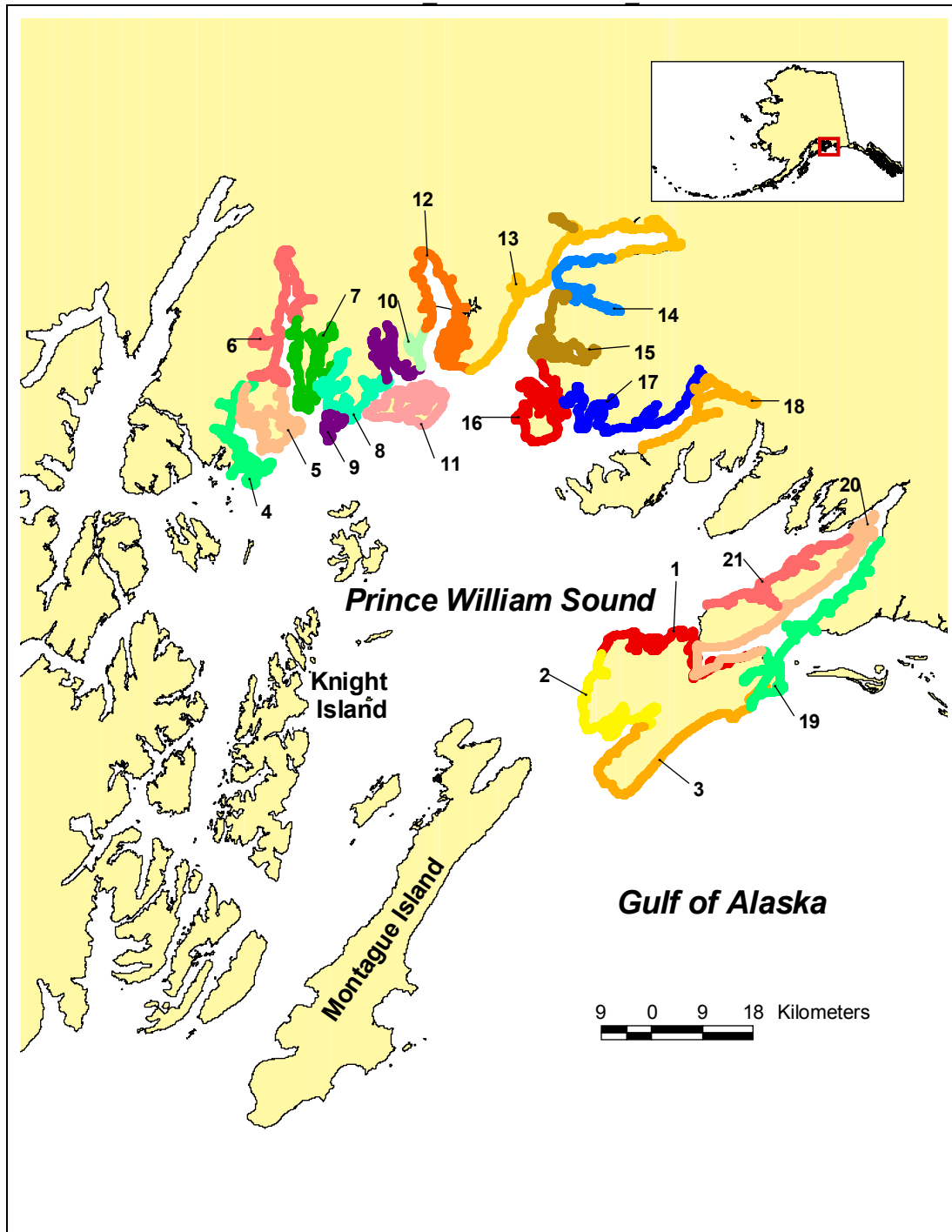
Nav: Daley

Weather: sunny and calm

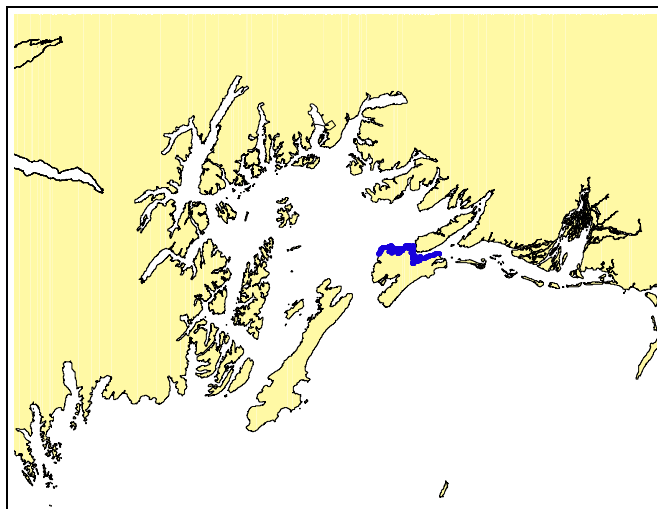
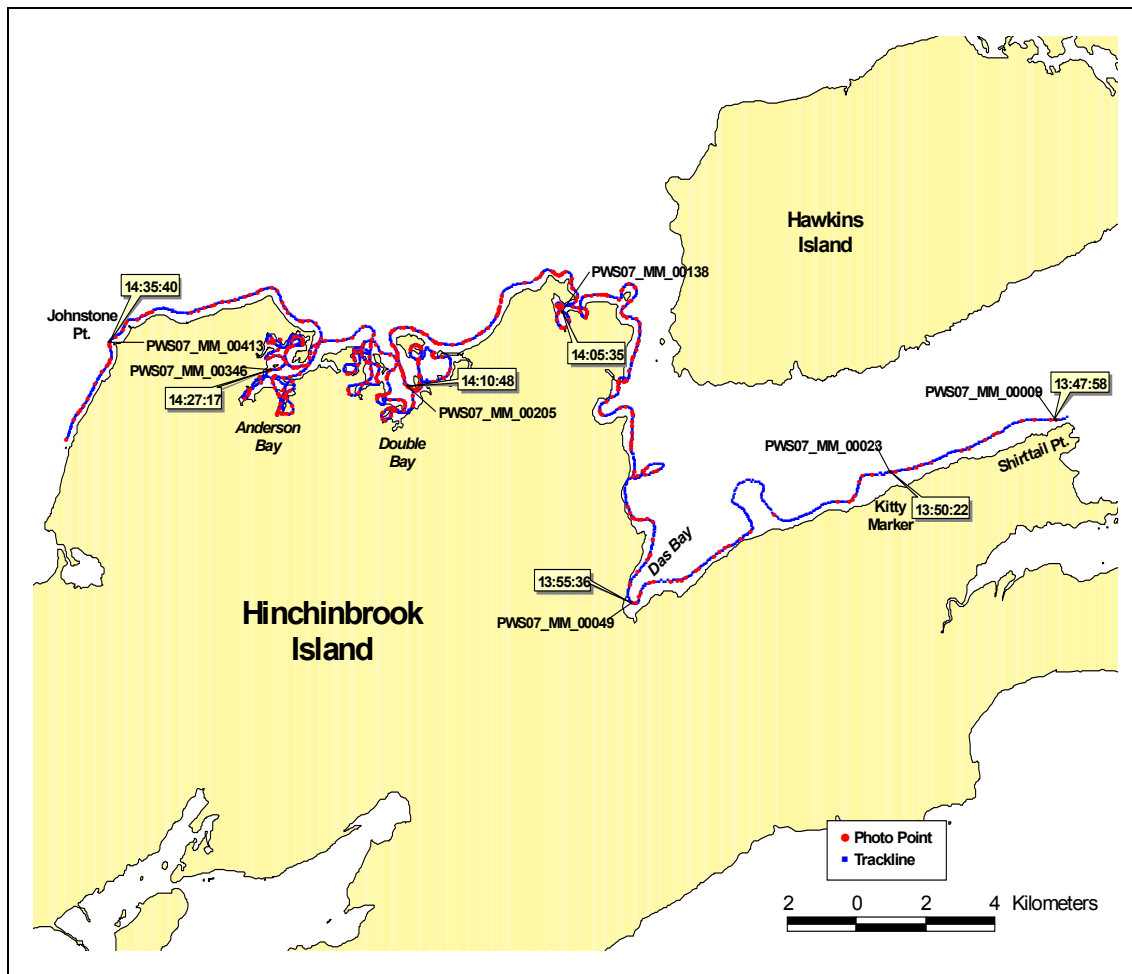
Time (UTC)	Location	Photo No.
190353	College Pt; start of tape	PWS07 ML 08201
190832	Yale Glacier	PWS07 ML 08251
191459	S entrance to Yale Arm (sill)	PWS07 ML 08316
192318	Coghill Pt	PWS07 ML 08416
193016	Tip of spit at Golden	PWS07 ML 08498
193527	N entrance, Esther Passage	PWS07 ML 08552
193605	Esther Passage; end of tape	PWS07 ML 08562

Team Cordova
15 -20 May 2007
DVDs PWS07_DV01 to PWS07_DV21

Team Cordova
15 -20 May 2007
DVDs PWS07_DV01 to PWS07_DV21



Summary flightline map showing the location and extent of specific videotapes/DVDs for the May 2007 Team Cordova survey.



PWS07_DV01
15 May 2007

2007 Prince William Sound Aerial Video Imaging Survey
Team Cordova (DV)
Tape Log

Tape Number: PWS07_DV01

General Location: north Hinchinbrook Island

Date: 15 May 2007

Time Start: 134758 (UTC) (054758 ADT)

Fuel Break: none

Time Stop: 143604 (UTC) (063604 ADT)

Tape Length: 48:14

Geo: Harney

Bio: Morris

Nav: Morrow

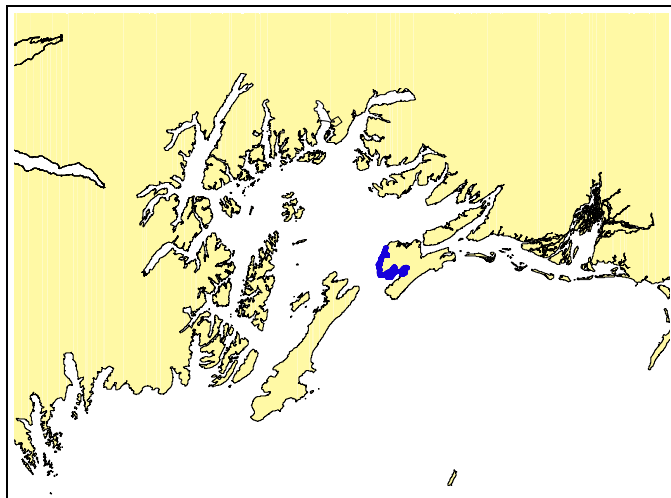
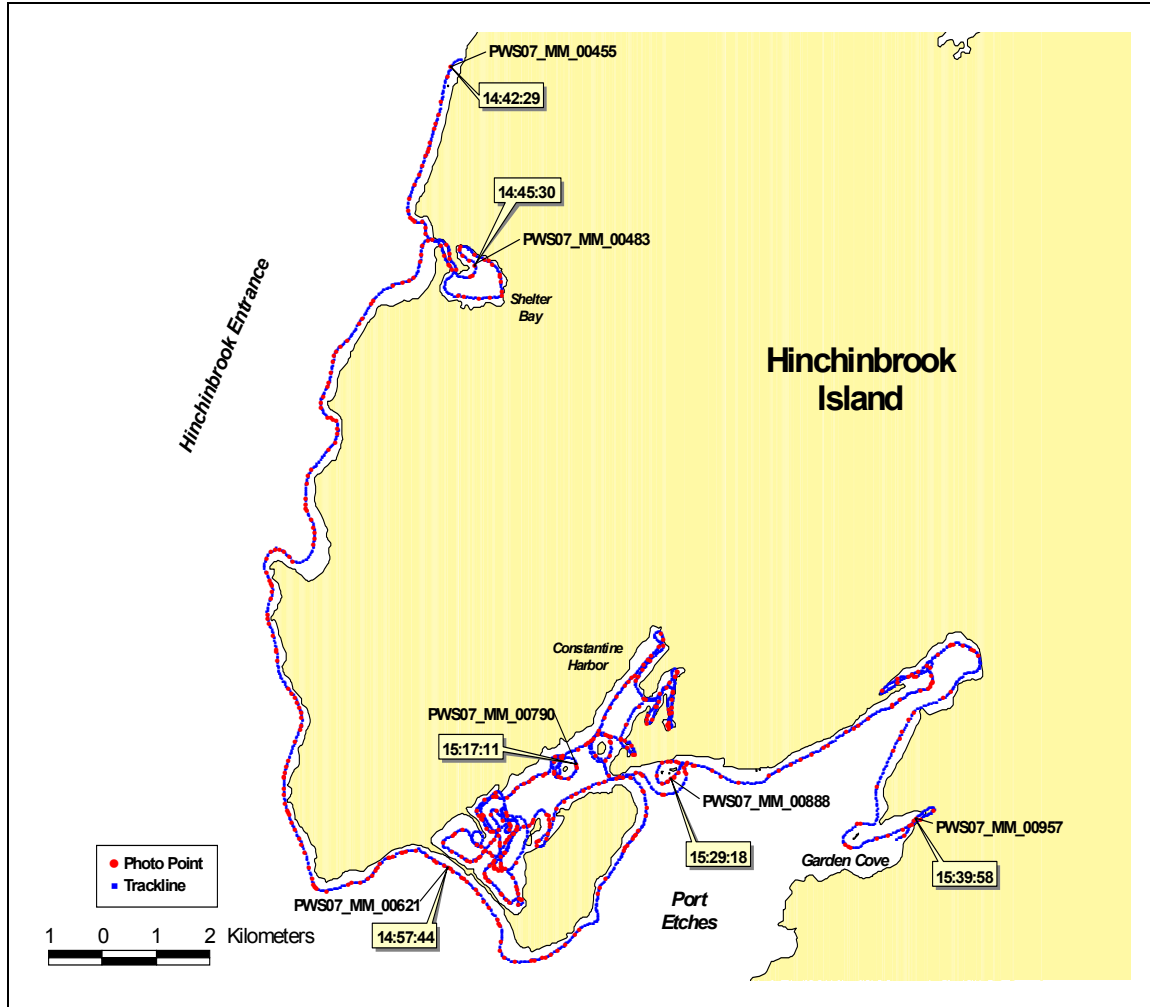
Weather: Overcast with rain; low ceiling; poor visibility

Time (UTC)	Location	Photo No.
134758	Shirttail Pt. (refly)	PWS07_MM_00009
135022	Kitty Marker, mudflats, NE Hinchinbrook	PWS07_MM_00023
135536	Das Bay	PWS07_MM_00049
140535	Yelper Cove	PWS07_MM_00138
141048	Double Bay	PWS07_MM_00205
142717	Anderson Bay	PWS07_MM_00346
143540	Johnstone Point	PWS07_MM_00413

Notes:

Beginning of tape is wide mudflats; re-flew section from 134750 to 135022 when doing Boswell Bay on 20 May (tapes DV19 and DV20).

Lost audio; last good imagery at end was 143604 (at river/inlet); still mappable but may refly this; decide if need to go upriver.



PWS07_DV02
15 May 2007

**2007 Prince William Sound Aerial Video Imaging Survey
Team Cordova (DV)
Tape Log**

Tape Number: PWS07_DV02

General Location: SW Hinchinbrook Island

Date: 15 May 2007

Time Start: 144221 (UTC) (064221 ADT)

Fuel Break: none

Time Stop: 154020 (UTC) (074020 ADT)

Tape Length: 57:59

Geo: Harney

Bio: Morris

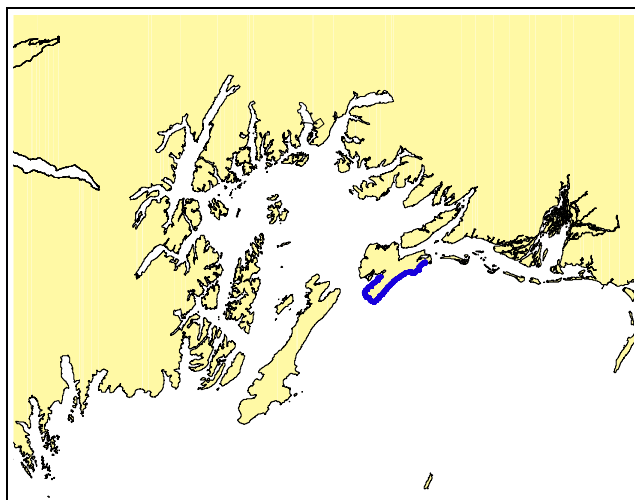
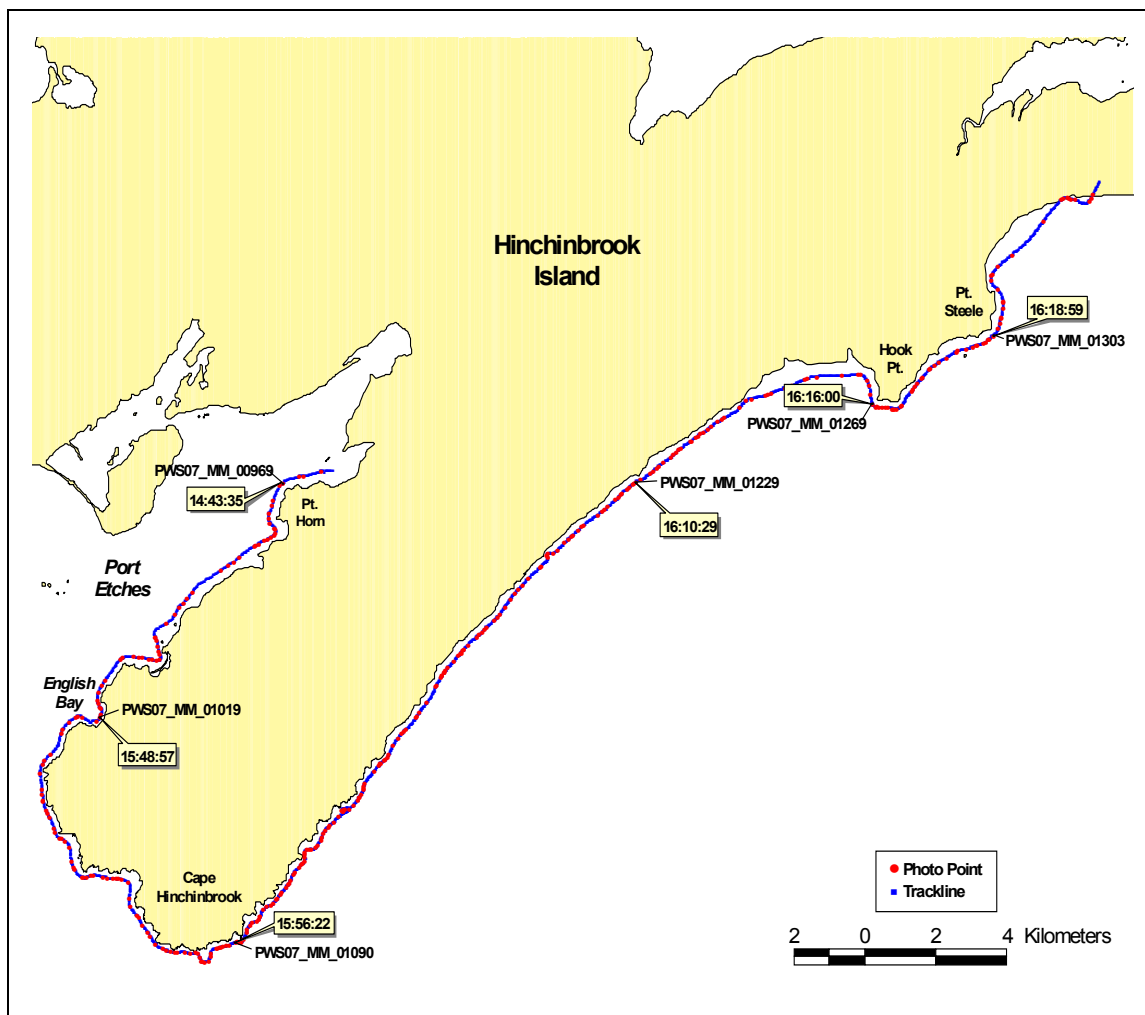
Nav: Morrow

Weather: Overcast with rain; low ceiling; poor visibility

Time (UTC)	Location	Photo No.
144530	Shelter Bay	PWS07_MM_00483
145744	Outside Constantine Harbor	PWS07_MM_00621
151711	Constantine Harbor	PWS07_MM_00790
152918	Sea stacks and platform reefs, Port Etches	PWS07_MM_00888
153303	Port Etches	PWS07_MM_00919
153958	Garden Cove, Port Etches	PWS07_MM_00957

Notes:

Imagery at the end of this tape is better in the next tape.



PWS07_DV03
15 May 2007

2007 Prince William Sound Aerial Video Imaging Survey
Team Cordova (DV)
Tape Log

Tape Number: PWS07_DV03

General Location: Hinchinbrook Island

Date: 15 May 2007

Time Start: 154248 (UTC) (074248 ADT)

Fuel Break: none

Time Stop: 162249 (UTC) (082249 ADT)

Tape Length: 40:01

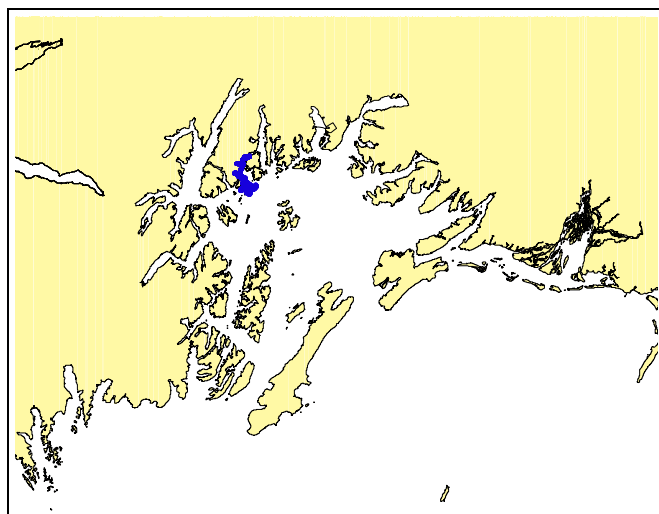
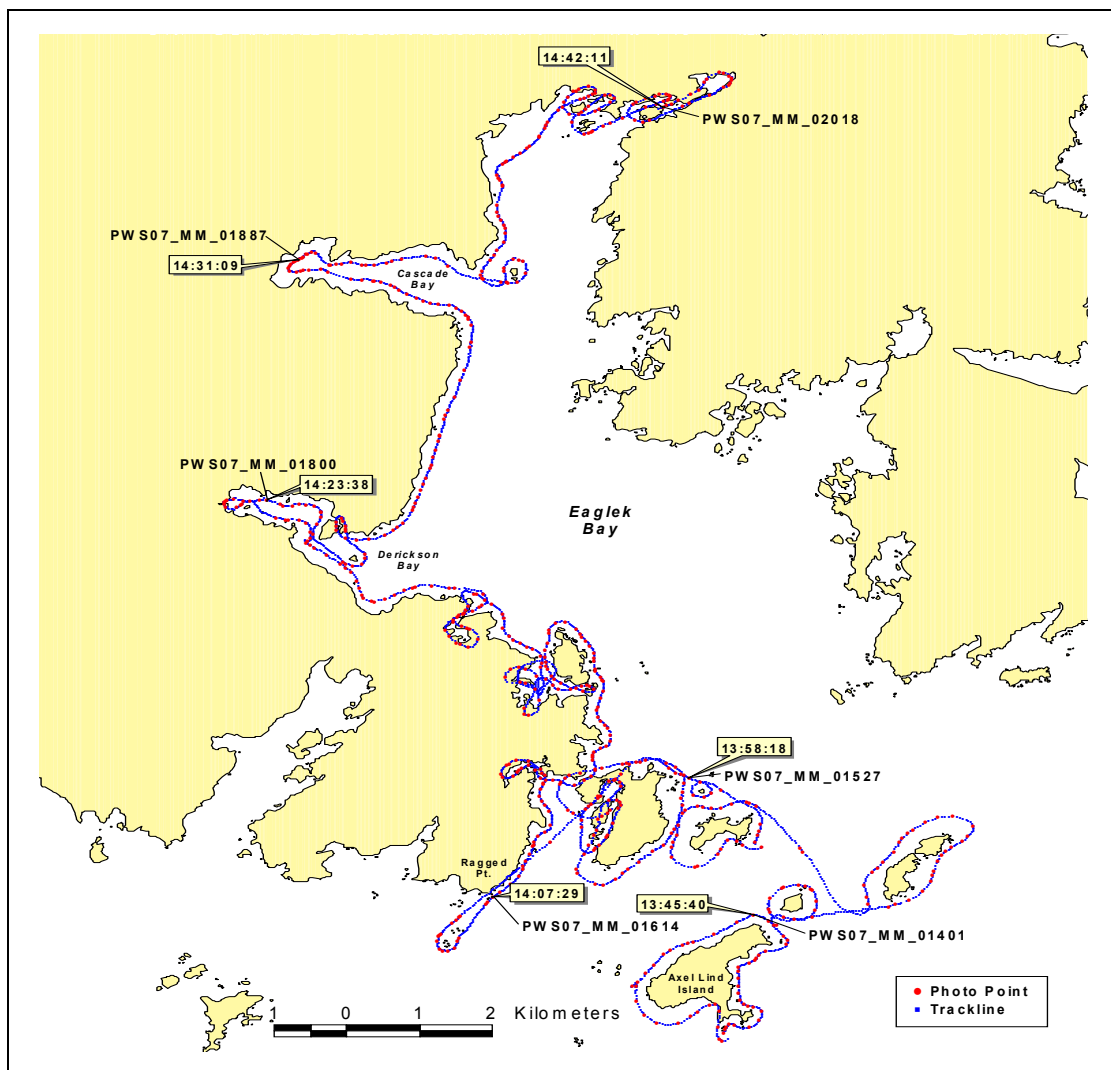
Geo: Harney

Bio: Morris

Nav: Morrow

Weather: Overcast with rain; low ceiling; poor visibility

Time (UTC)	Location	Photo No.
154335	Point Horn, Port Etches	PWS07_MM_00969
154857	English Bay, Port Etches	PWS07_MM_01019
155622	Near Cape Hinchinbrook	PWS07_MM_01090
161029	Outer coast, South Hinchinbrook	PWS07_MM_01229
161600	Hook Point	PWS07_MM_01269
161859	Point Steele	PWS07_MM_01303



PWS07_DV04
16 May 2007

2007 Prince William Sound Aerial Video Imaging Survey
Team Cordova (DV)
Tape Log

Tape Number: PWS07_DV04

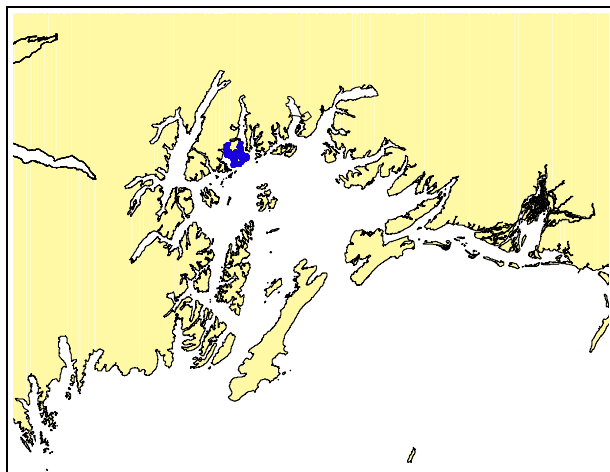
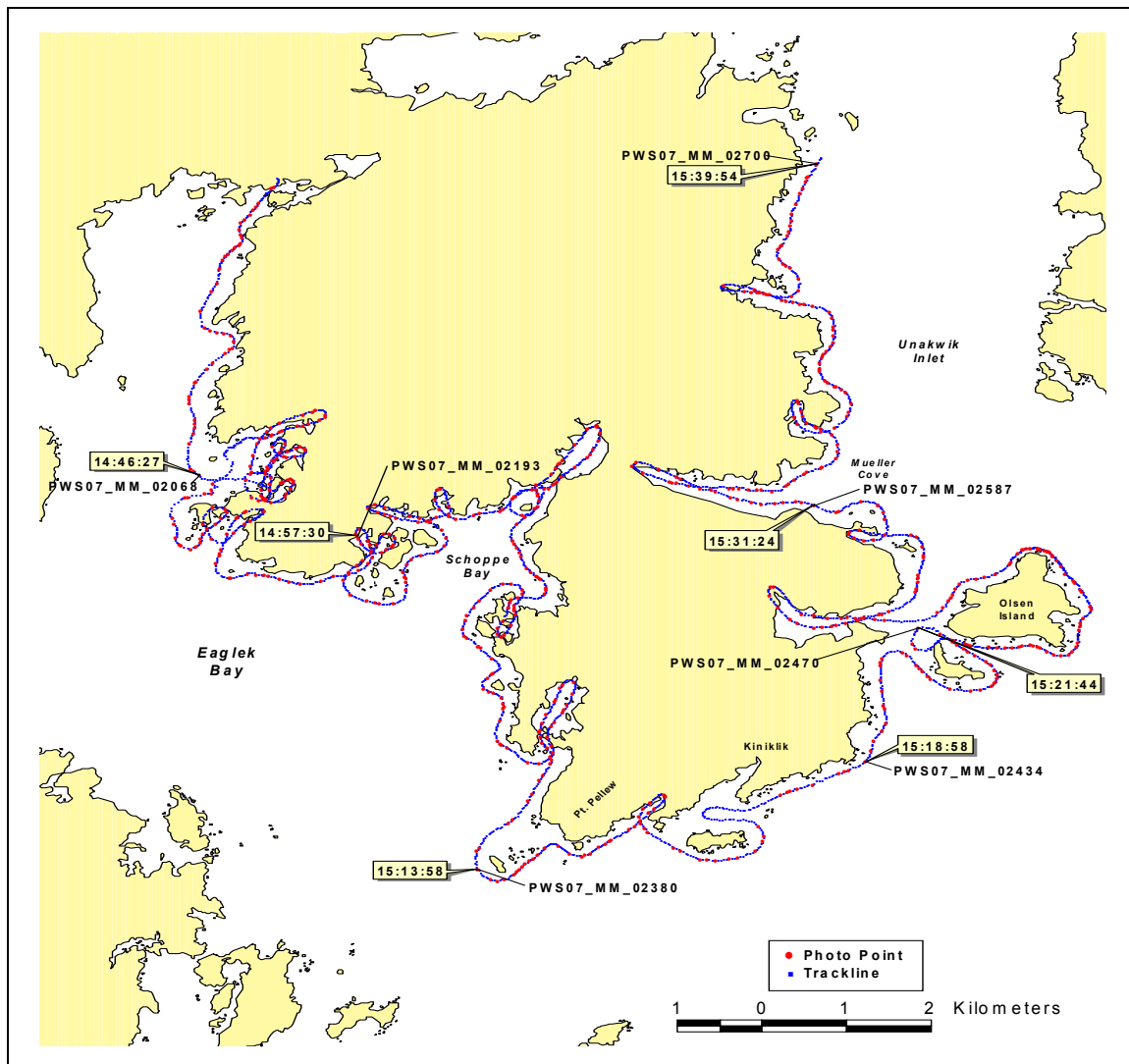
General Location: Eaglek Bay
Date: 16 May 2007
Time Start: 134524 (UTC) (054524 ADT)
Fuel Break: none
Time Stop: 144214 (UTC) (064214 ADT)
Tape Length: 56:50
Geo: Harney
Bio: Morris
Nav: Morrow

Weather: High ceiling; good visibility

Time (UTC)	Location	Photo No.
134540	Axel Lind Island	PWS07_MM_01401
135818	Islets at SW entrance Eaglek Bay	PWS07_MM_01527
140729	Ragged Point, SW Eaglek Bay	PWS07_MM_01614
142338	Derickson Bay	PWS07_MM_01800
143109	Cascade Bay	PWS07_MM_01887
144211	Near head of Eaglek Bay	PWS07_MM_02018

Notes:

Beginning isn't good; look for overlap in track when finishing this island.



PWS07_DV05
17 May 2007

2007 Prince William Sound Aerial Video Imaging Survey
Team Cordova (DV)
Tape Log

Tape Number: PWS07_DV05

General Location: Eaglek Bay, Schoppe Bay

Date: 16 May 2007

Time Start: 144315 (UTC) (064315 ADT)

Fuel Break: end of tape

Time Stop: 153958 (UTC) (073958 ADT)

Tape Length: 56:43

Geo: Harney

Bio: Morris

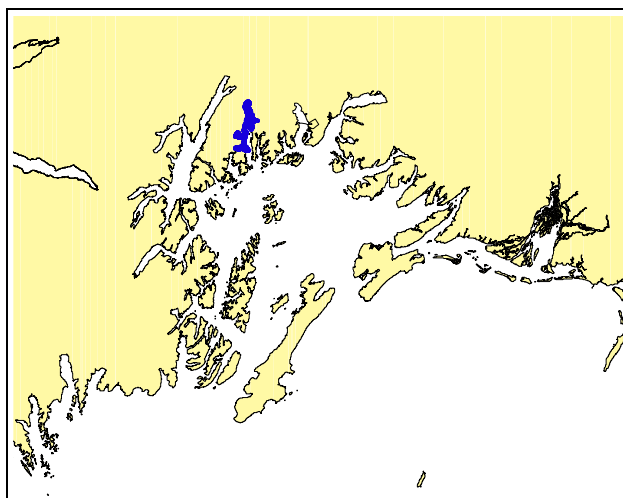
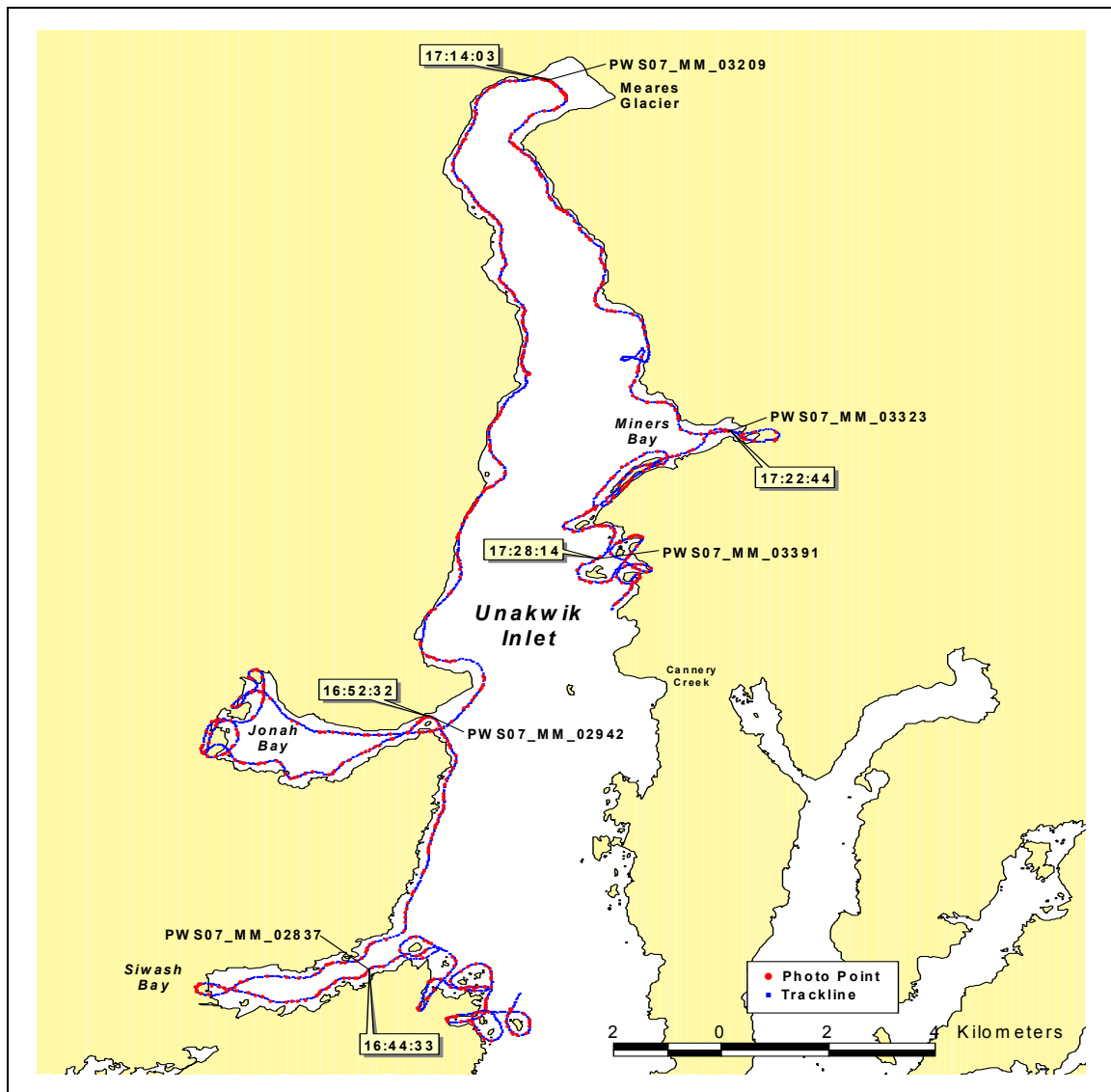
Nav: Morrow

Weather: High ceiling; good visibility

Time (UTC)	Location	PhotoNo.
144627	NE Eaglek Bay	PWS07_MM_02068
145730	Schoppe Bay	PWS07_MM_02193
151358	Pt. Pellew	PWS07_MM_02380
151858	Near Kiniklik	PWS07_MM_02434
152144	Olsen Island	PWS07_MM_02470
153124	Mueller Cove	PWS07_MM_02587

Notes:

Refuel at end of this tape.



PWS07_DV06
16 May 2007

2007 Prince William Sound Aerial Video Imaging Survey
Team Cordova (DV)
Tape Log

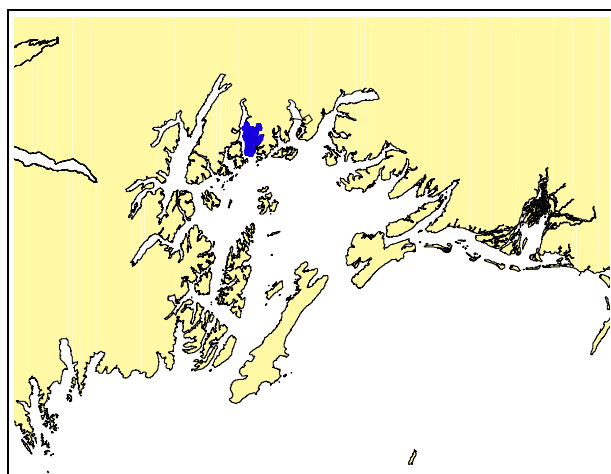
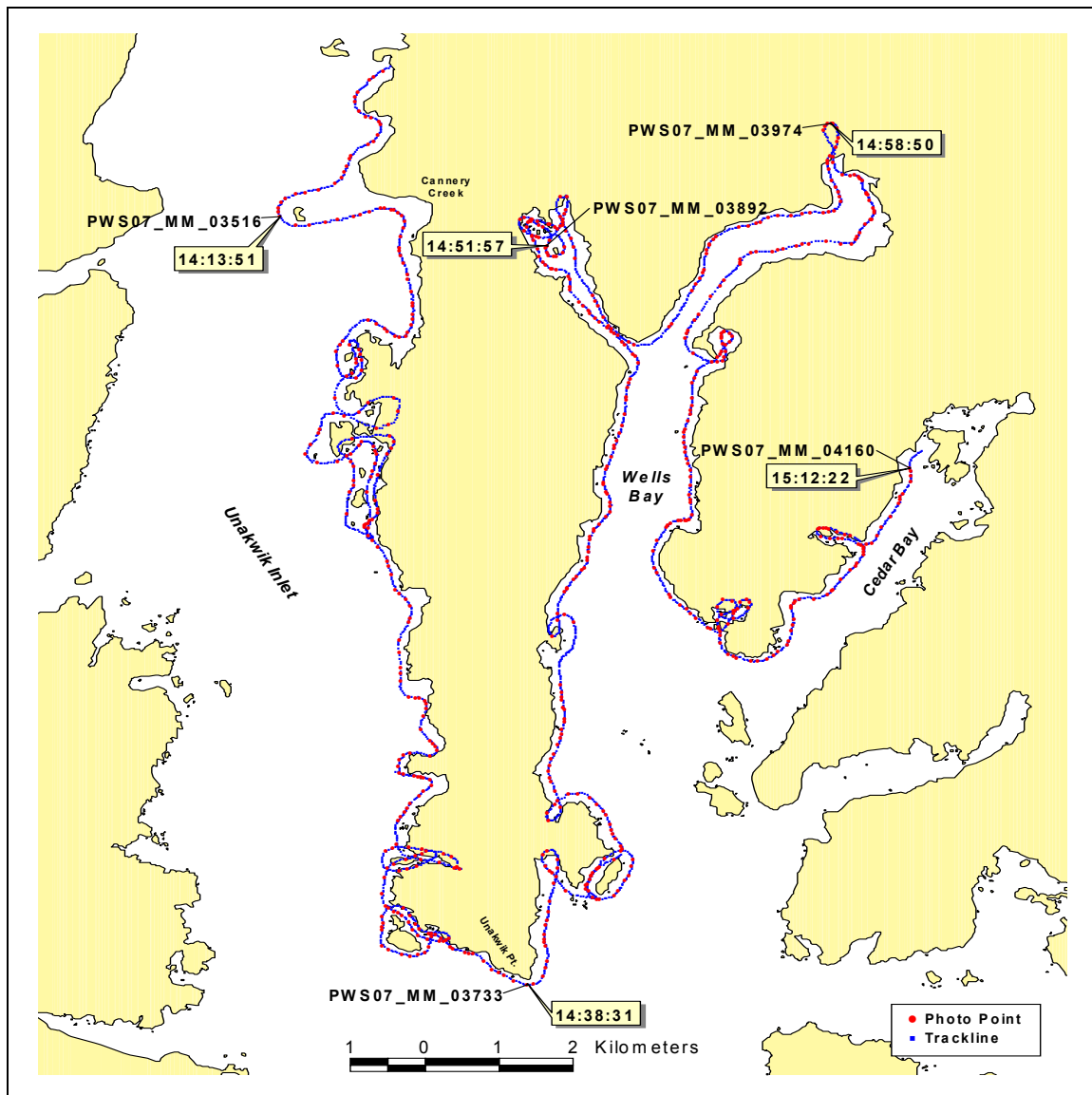
Tape Number: PWS07_DV06

General Location: Unakwit Inlet
Date: 16 May 2007
Time Start: 163514 (UTC) (083514 ADT)
Fuel Break: none
Time Stop: 173214 (UTC) (093214 ADT)
Tape Length: 57:00
Geo: Harney
Bio: Morris
Nav: Morrow

Weather: High ceiling; good visibility

Time (UTC)	Location	Photo No.
164433	Siwash Bay	PWS07_MM_02837
165232	Entrance of Jonah Bay	PWS07_MM_02942
171403	Meares Glacier	PWS07_MM_03209
172244	Miners Bay	PWS07_MM_03323
172814	Unakwik Inlet, just north of Cannery Creek	PWS07_MM_03391

Notes:



PWS07_DV07
17 May 2007

**2007 Prince William Sound Aerial Video Imaging Survey
Team Cordova (DV)
Tape Log**

Tape Number: PWS07_DV07

General Location: SE Unakwit Inlet to Cedar Bay

Date: 17 May 2007

Time Start: 141139 (UTC) (061139 ADT)

Break: 142733 to 143130

Time Stop: 151235 (UTC) (071235 ADT)

Tape Length: 57:36

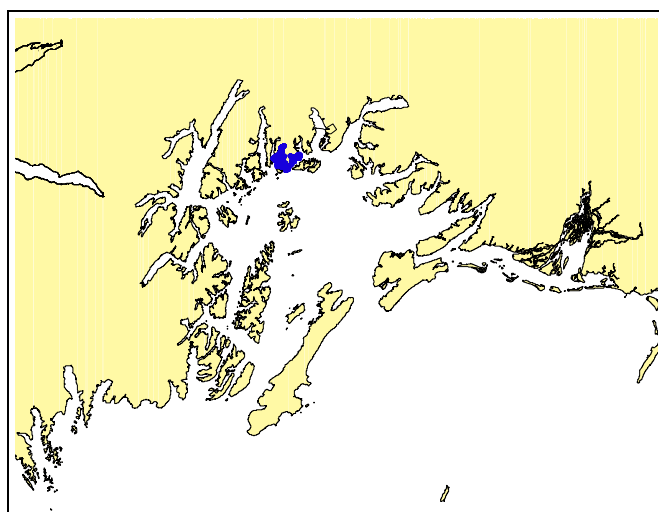
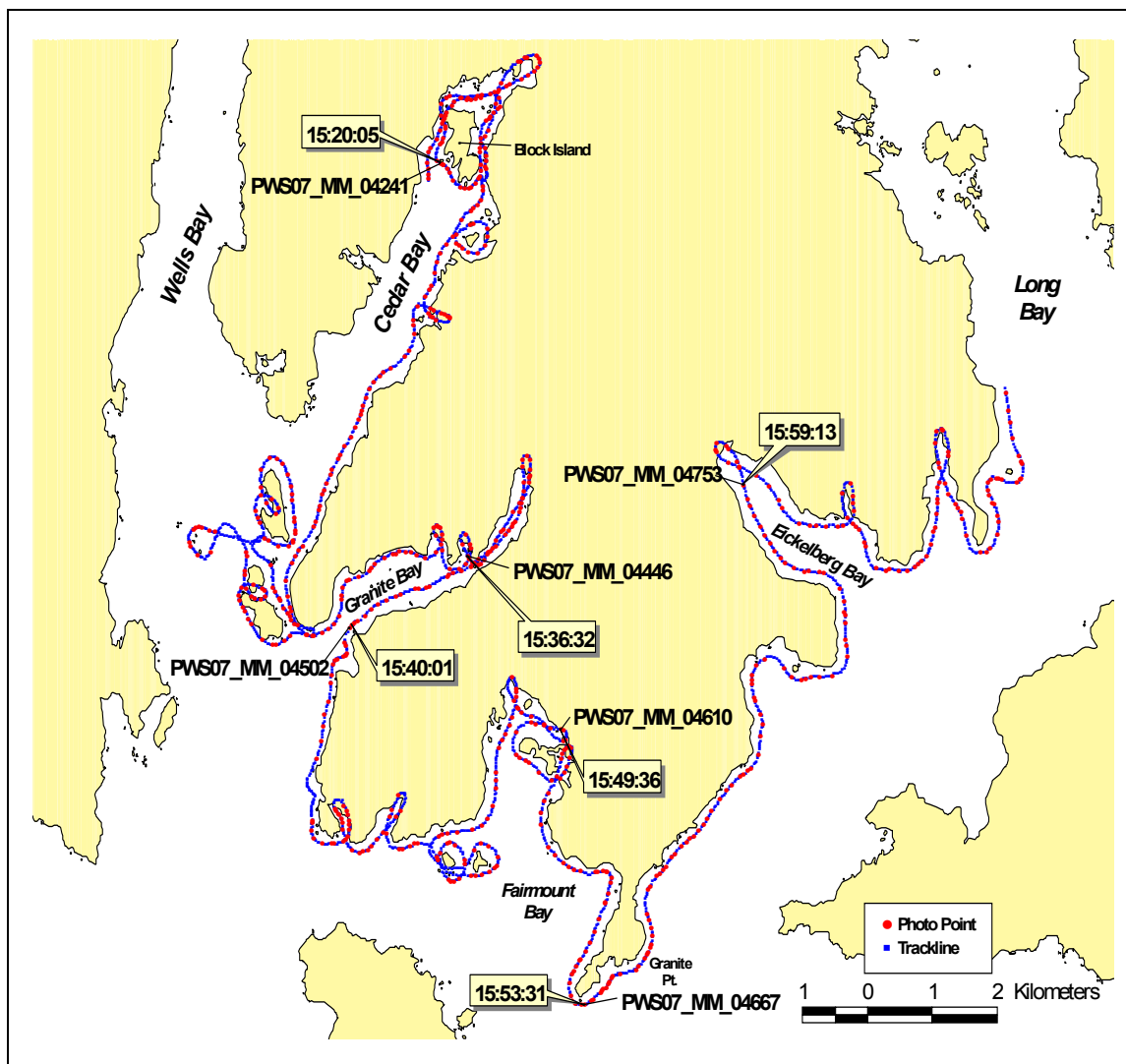
Geo: Harney

Bio: Morris

Nav: Morrow

Weather: High ceiling; moderate visibility; some rain

Time (UTC)	Location	PhotoNo.
141451	Cannery Creek Hatchery	PWS07_MM_03516
143831	Unakwik Point	PWS07_MM_03733
145157	Islet in Wells Bay	PWS07_MM_03892
145850	Estuary, head of Wells Bay	PWS07_MM_03974
151222	Near head of Cedar Bay	PWS07_MM_04160



PWS07_DV08
17 May 2007

**2007 Prince William Sound Aerial Video Imaging Survey
Team Cordova (DV)
Tape Log**

Tape Number: PWS07_DV08

General Location: Cedar Bay to Eickenberry Bay

Date: 17 May 2007

Time Start: 151455 (UTC) (071455 ADT)

Fuel Break: none

Time Stop: 160604 (UTC) (080604 ADT)

Tape Length: 51:09

Geo: Harney

Bio: Morris

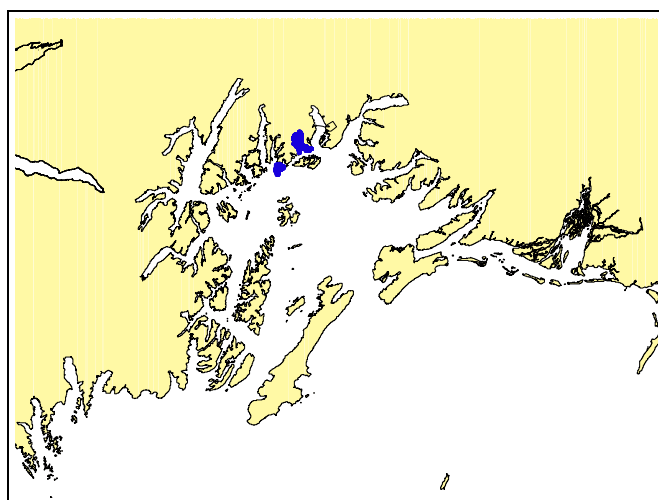
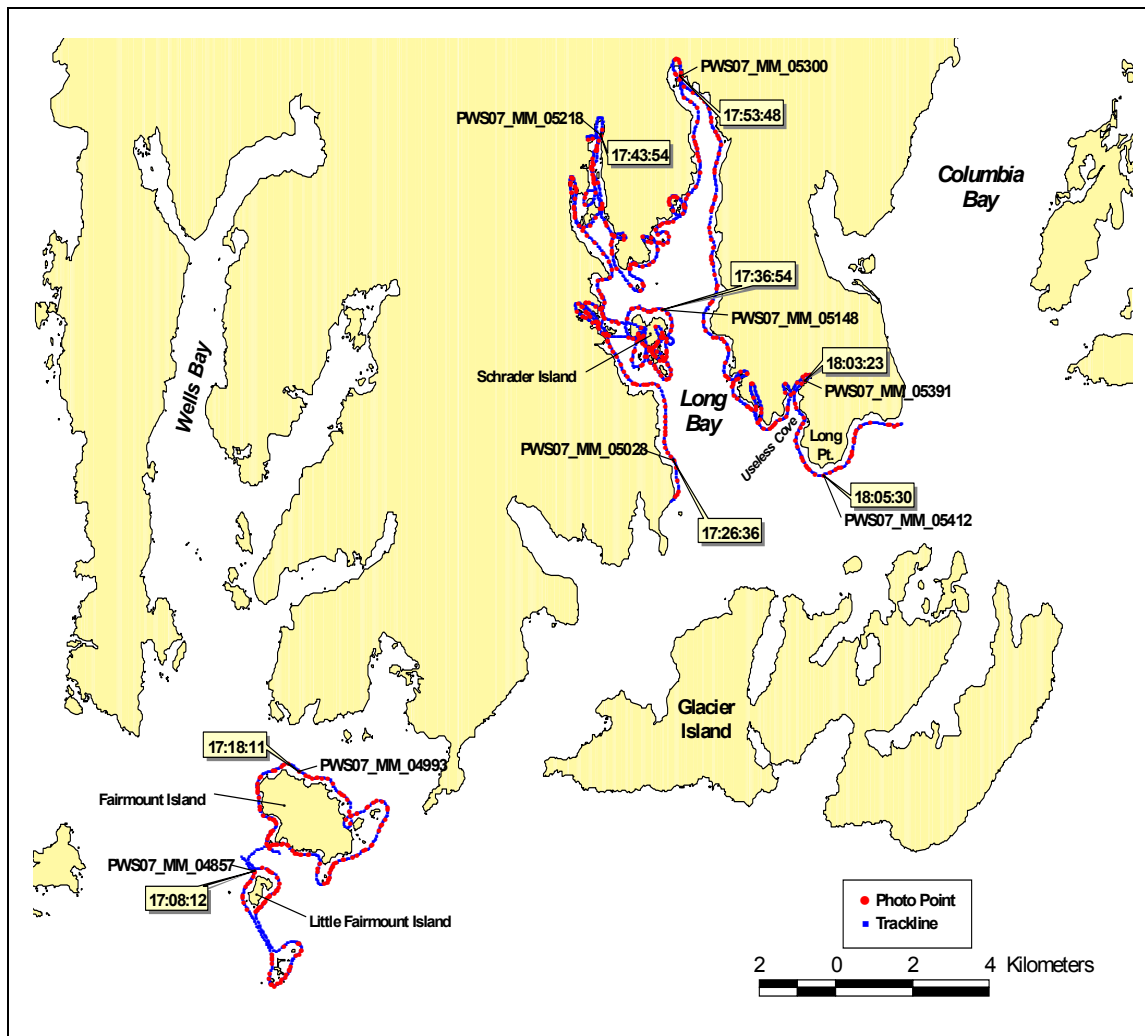
Nav: Morrow

Weather: High ceiling; moderate visibility; some rain

Time (UTC)	Location	Photo No.
152005	Block Island, head of Cedar Bay	PWS07_MM_04241
153632	Granite Bay	PWS07_MM_04446
154001	Granite Bay entrance	PWS07_MM_04502
154936	Fairmount Bay	PWS07_MM_04610
155331	Granite Pt.	PWS07_MM_04667
155913	Eickelberg Bay	PWS07_MM_04753

Notes:

Audio cutting out beginning at 180700; filmed until 180743.
Refuel after this tape.



PWS07_DV09
17 May 2007

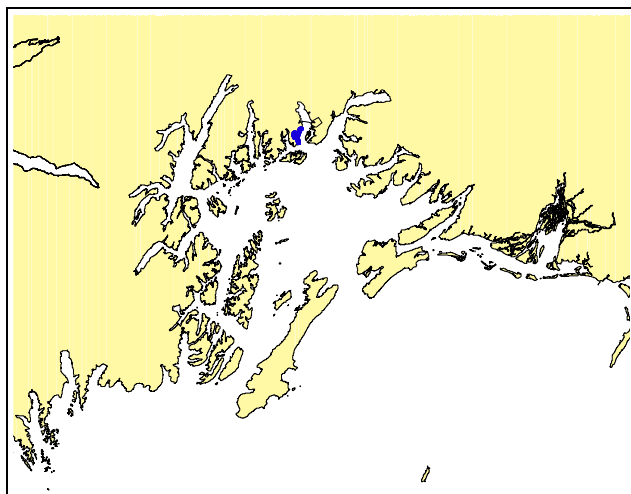
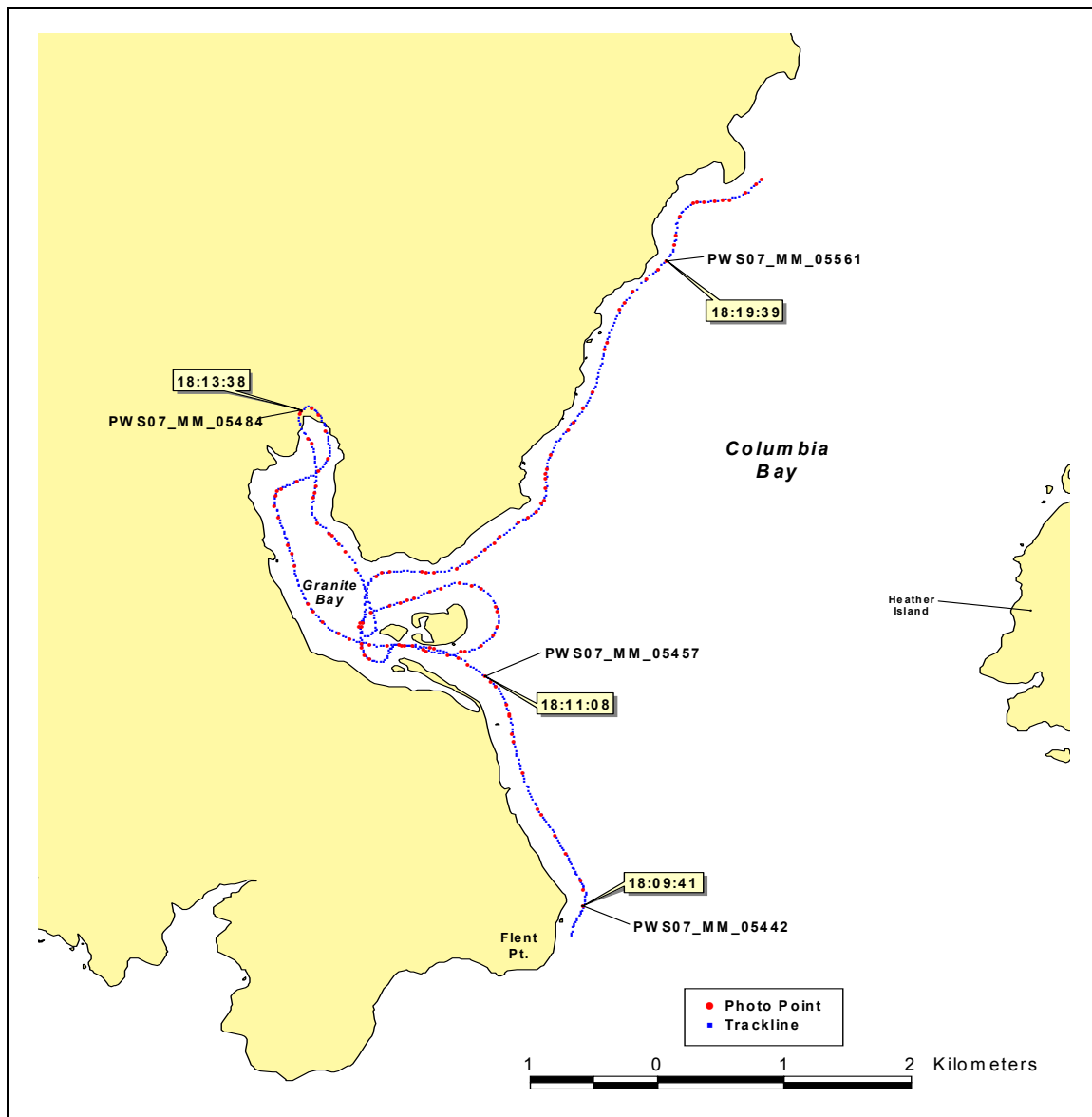
2007 Prince William Sound Aerial Video Imaging Survey
Team Cordova (DV)
Tape Log

Tape Number: PWS07_DV09

General Location: Long Bay
Date: 17 May 2007
Time Start: 170754 (UTC) (090754 ADT)
Fuel Break: none
Time Stop: 180700 (UTC) (100700 ADT)
Tape Length: 53:14
Geo: Harney
Bio: Morris
Nav: Morrow

Weather: High ceiling; moderate visibility; some rain

Time (UTC)	Location	Photo No.
170812	Little Fairmount Island	PWS07_MM_04857
171811	North side of Fairmount Island	PWS07_MM_04993
172636	Lower west entrance Long Bay	PWS07_MM_05028
173654	Schrader Island	PWS07_MM_05148
174354	West arm of upper Long Bay	PWS07_MM_05218
175348	East arm of upper Long Bay	PWS07_MM_05300
180323	Useless Cove	PWS07_MM_05391
180530	Long Pt.	PWS07_MM_05412



PWS07_DV10
17 May 2007

2007 Prince William Sound Aerial Video Imaging Survey
Team Cordova (DV)
Tape Log

Tape Number: PWS07_DV10

General Location: Lower west Columbia Bay

Date: 17 May 2007

Time Start: 180925 (UTM) (100925 ADT)

Fuel Break: none

Time Stop: 182020 (UTM) (102020 ADT)

Tape Length: 10:55

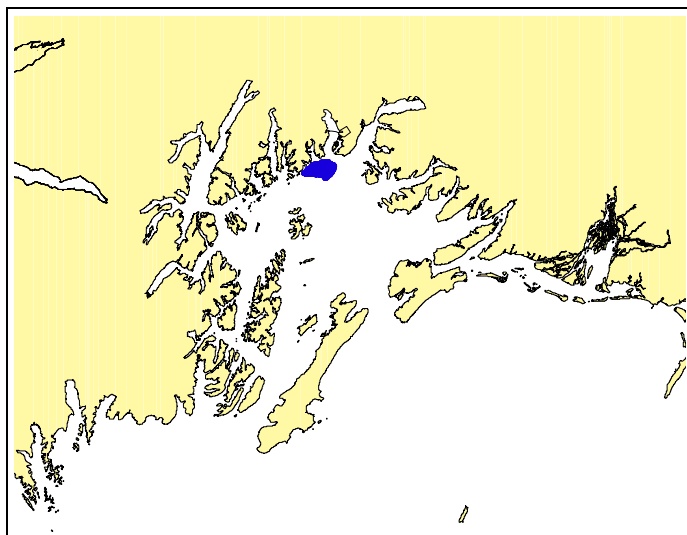
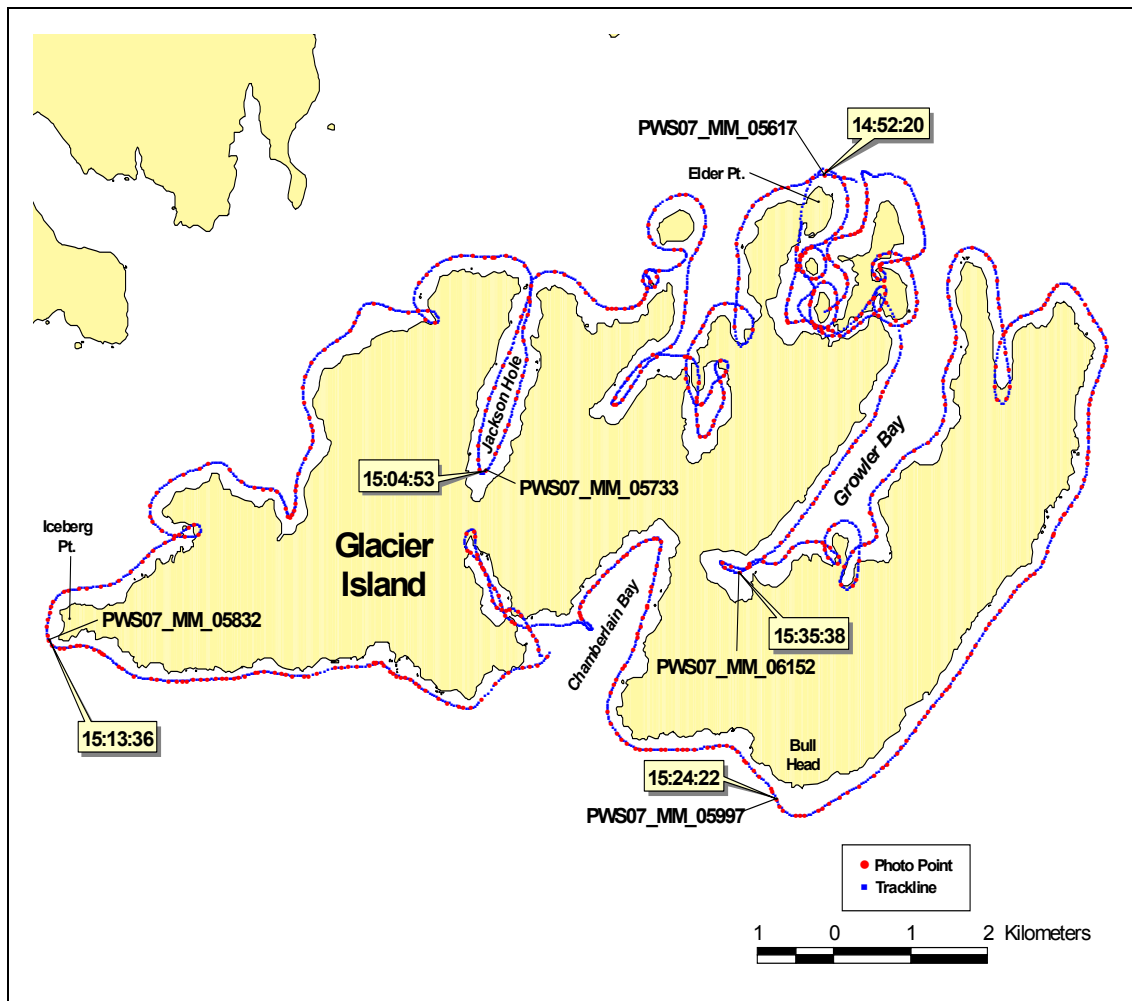
Geo: Harney

Bio: Morris

Nav: Morrow

Weather: High ceiling, moderate visibility, some rain

Time (UTC)	Location	Photo No.
180941	North of Flent Point	PWS07_MM_05442
181108	South entrance Granite Bay	PWS07_MM_05457
181338	Granite Bay (lower west Columbia Bay)	PWS07_MM_05484
181939	West side of Columbia Bay	PWS07_MM_05561



PWS07_DV11
18 May 2007

2007 Prince William Sound Aerial Video Imaging Survey
Team Cordova (DV)
Tape Log

Tape Number: PWS07_DV11

General Location: Glacier Island

Date: 18 May 2007

Time Start: 145224 (UTC) (065224 ADT)

Fuel Break: none

Time Stop: 154834 (UTC) (074834 ADT)

Tape Length: 56:10

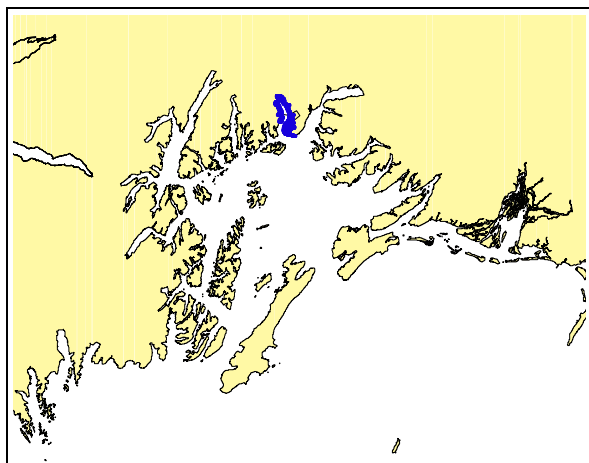
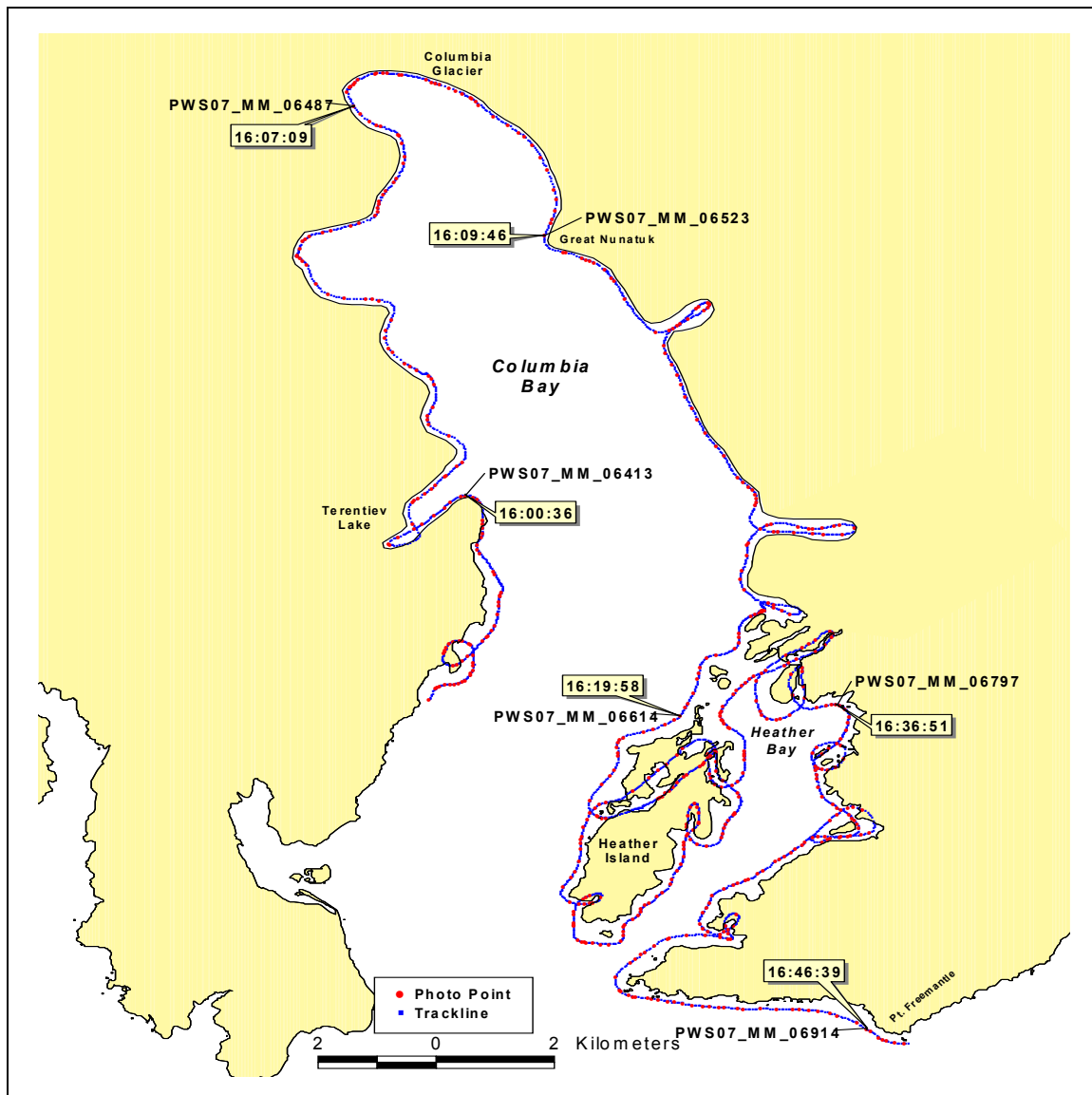
Geo: Harney

Bio: Morris

Nav: Morrow

Weather: High ceiling; overcast

Time (UTC)	Location	Photo No.
145220	Elder Point, north Glacier Island	PWS07_MM_05617
150453	Jackson Hole, Glacier Island	PWS07_MM_05733
151336	Iceberg Point, west Glacier Island	PWS07_MM_05832
152422	Bull Head, SE Glacier Island	PWS07_MM_05997
153538	Growler Bay, Glacier Island	PWS07_MM_05617



PWS07_DV12
18 May 2007

2007 Prince William Sound Aerial Video Imaging Survey
Team Cordova (DV)
Tape Log

Tape Number: PWS07_DV12

General Location: Columbia Bay and Heather Bay

Date: 18 May 2007

Time Start: 155622 (UTC) (075622 ADT)

Fuel Break: none

Time Stop: 164700 (UTC) (084700 ADT)

Tape Length: 50:38

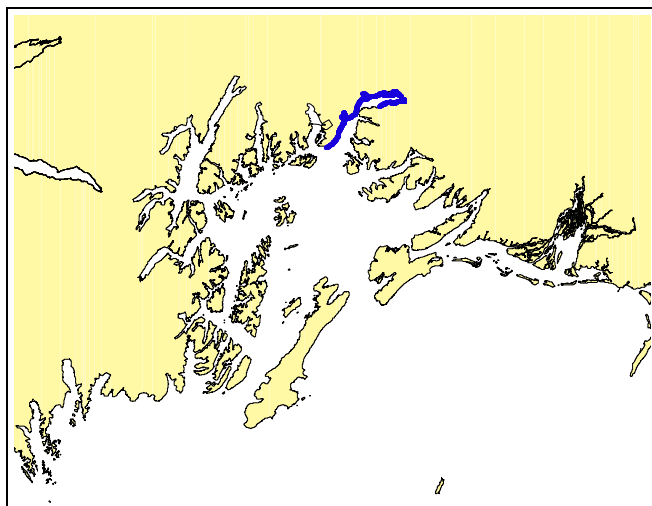
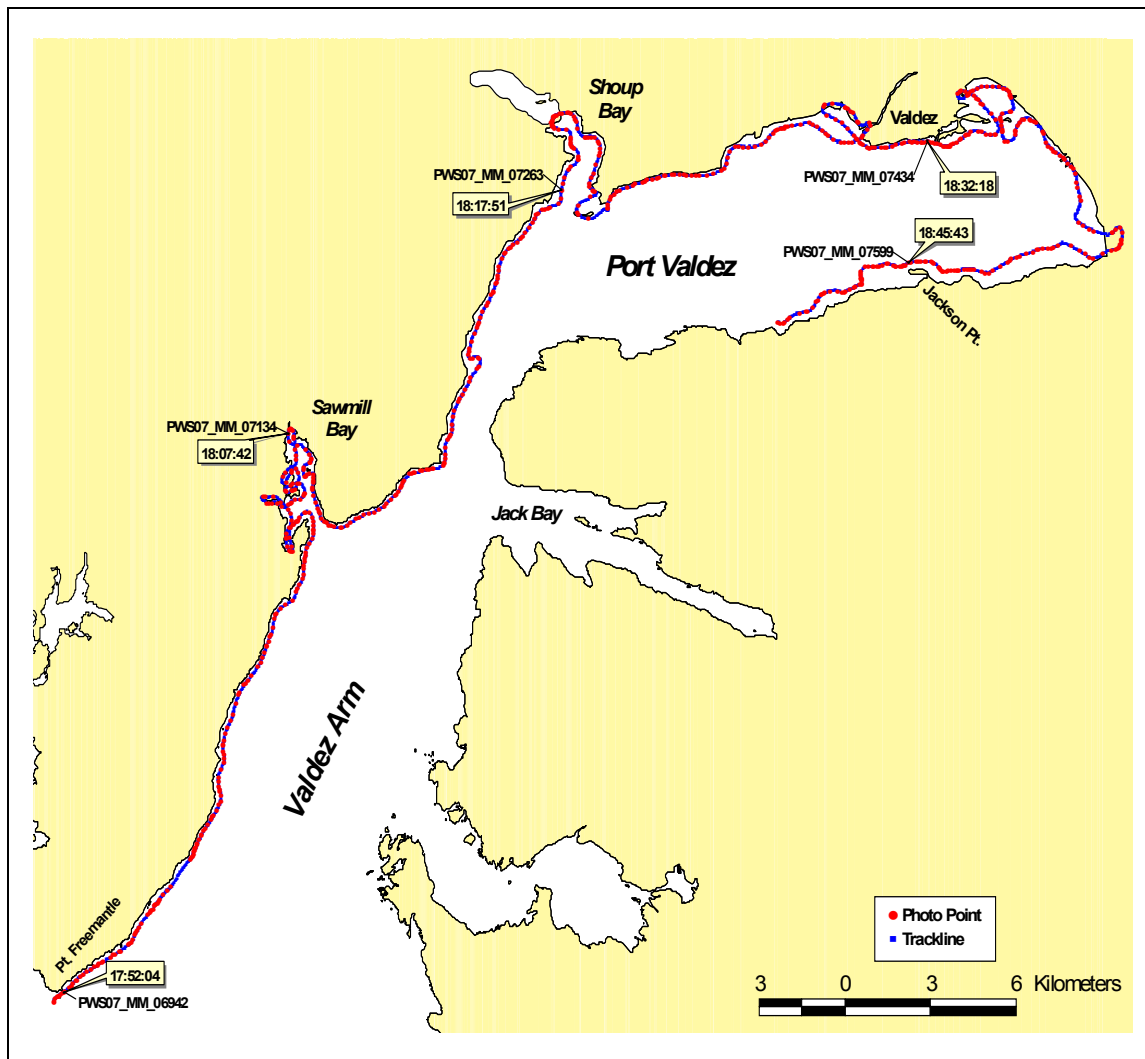
Geo: Harney

Bio: Morris

Nav: Morrow

Weather: High ceiling; overcast

Time (UTC)	Location	Photo No.
160036	Entrance to Terentiev Lake	PWS07_MM_06413
160709	Columbia Glacier	PWS07_MM_06487
160946	Great Nunatuk	PWS07_MM_06523
161958	Heather Island	PWS07_MM_06614
163651	Heather Bay	PWS07_MM_06797
164639	Point Freemantle	PWS07_MM_06914



PWS07_DV13
18 May 2007

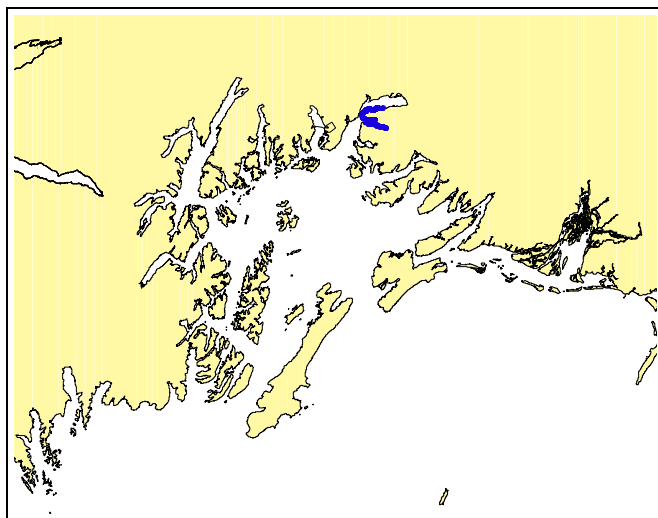
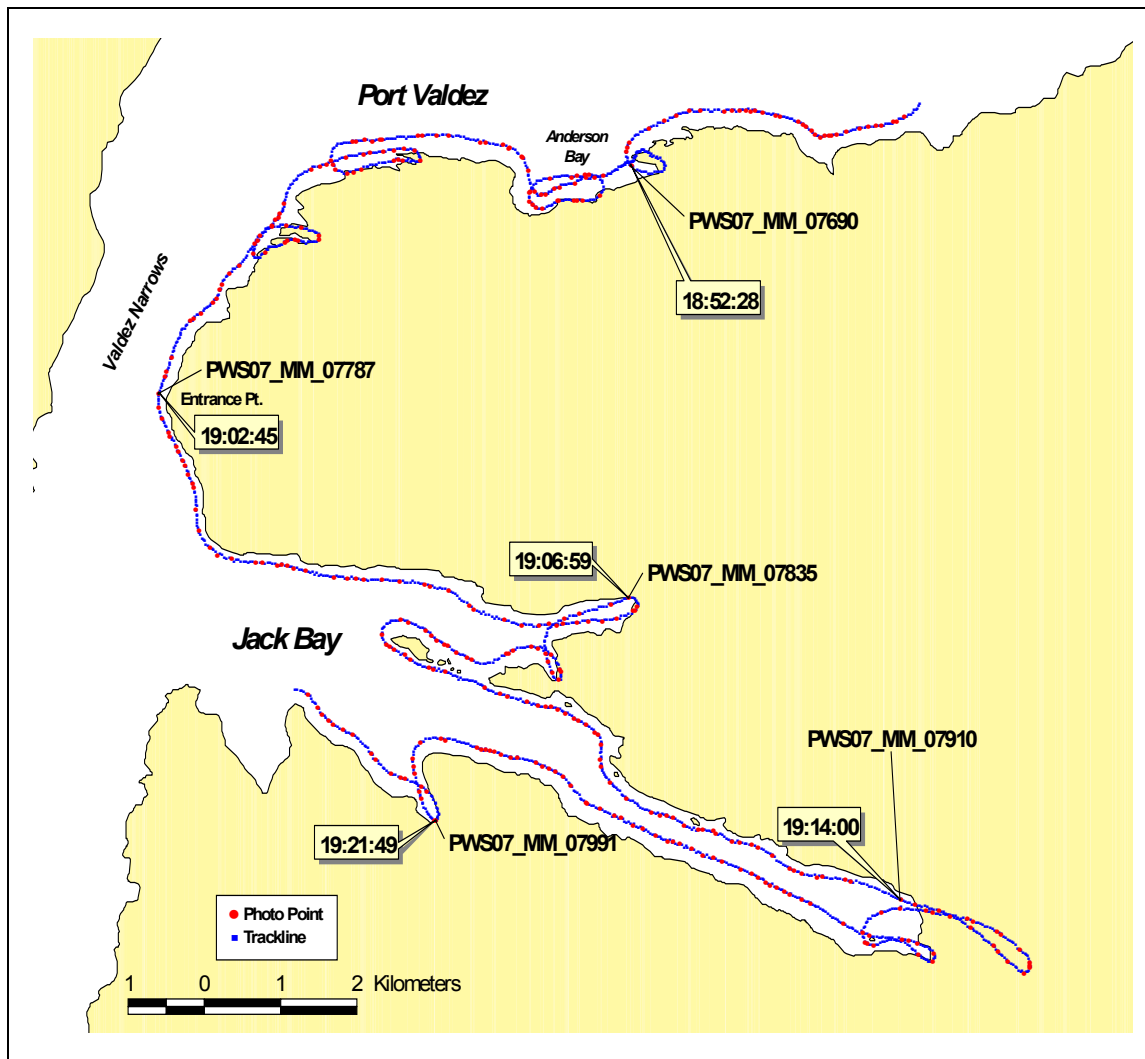
2007 Prince William Sound Aerial Video Imaging Survey
Team Cordova (DV)
Tape Log

Tape Number: PWS07_DV13

General Location: Valdez Arm and Port Valdez
Date: 18 May 2007
Time Start: 175145 (UTC) (095145 ADT)
Fuel Break: none
Time Stop: 184900 (UTC) (104900 ADT)
Tape Length: 57:15
Geo: Harney
Bio: Morris
Nav: Morrow

Weather: High ceiling; overcast

Time (UTC)	Location	Photo No.
175204	Point Freemantle	PWS07_MM_06942
180742	Sawmill Bay	PWS07_MM_07134
181751	Shoup Bay	PWS07_MM_07263
183218	Valdez	PWS07_MM_07434
184543	Jackson Point, (Alaska pipeline terminal)	PWS07_MM_07599



PWS07_DV14
18 May 2007

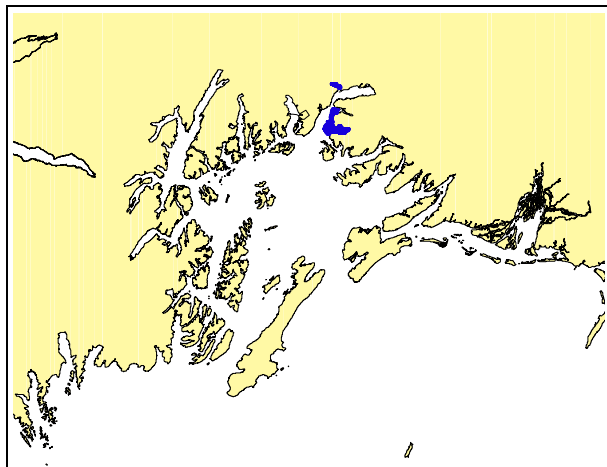
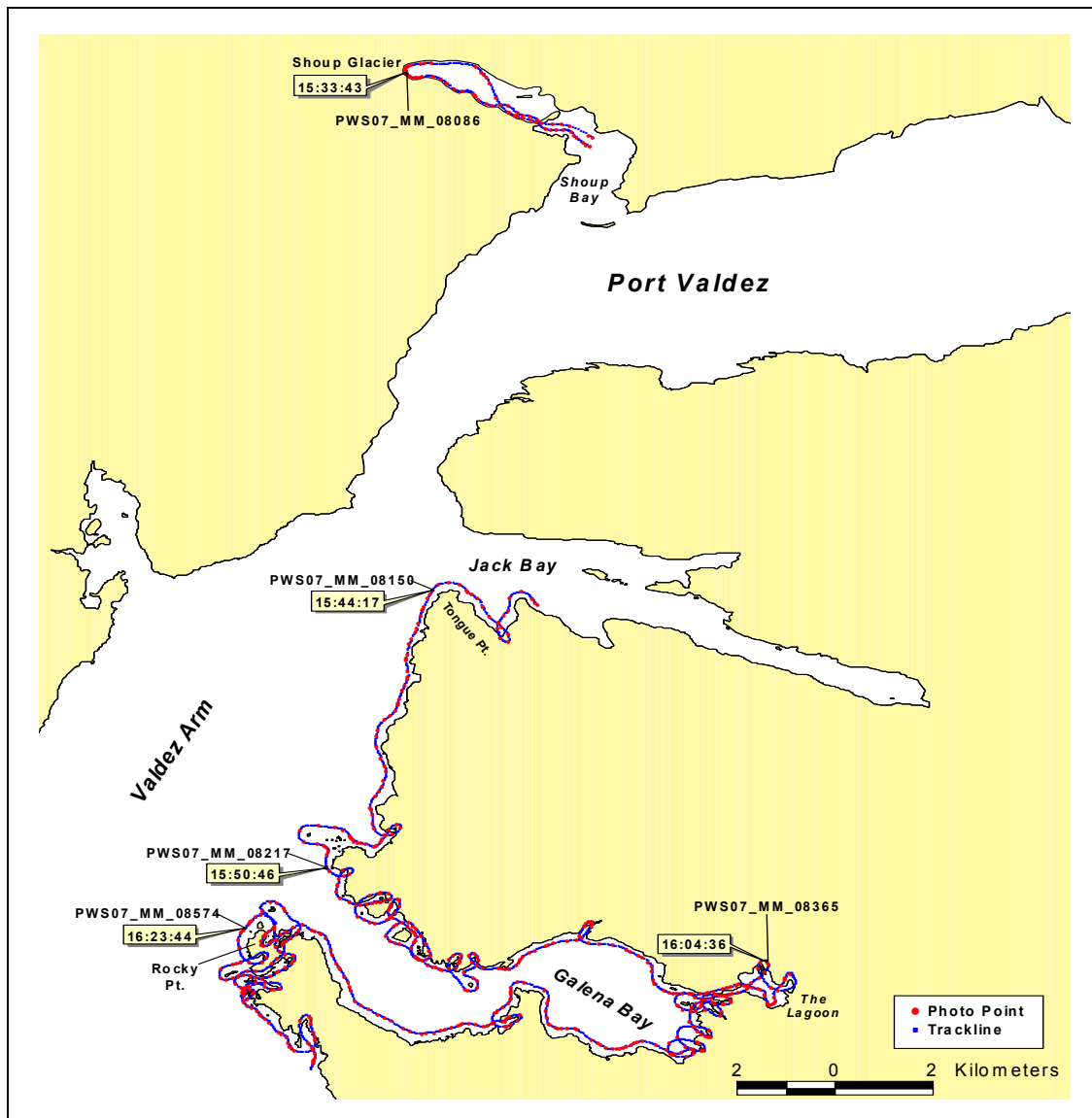
2007 Prince William Sound Aerial Video Imaging Survey
Team Cordova (DV)
Tape Log

Tape Number: PWS07_DV14

General Location: Port Valdez and Jack Bay
Date: 18 May 2007
Time Start: 185000 (UTC) (105000 ADT)
Fuel Break: none
Time Stop: 192311 (UTC) (112311 ADT)
Tape Length: 33:11
Geo: Harney
Bio: Morris
Nav: Morrow

Weather: High ceiling; overcast

Time (UTC)	Location	Photo No.
185228	Anderson Bay, Port Valdez	PWS07_MM_07690
190245	Entrance Point, Valdez Narrows	PWS07_MM_07787
190659	North arm of Jack Bay	PWS07_MM_07835
191400	Head of Jack Bay	PWS07_MM_07910
192149	South shore of Jack Bay	PWS07_MM_07991



PWS07_DV15
18 May 2007

2007 Prince William Sound Aerial Video Imaging Survey
Team Cordova (DV)
Tape Log

Tape Number: PWS07_DV15

General Location: Shoup Glacier, Valdez Arm south of Jack Bay

Date: 19 May 2007

Time Start: 153056 (UTC) (073056 ADT)

Break: 153609 to 154149

Time Stop: 163306 (UTC) (083306 ADT)

Tape Length: 56:28

Geo: Harney

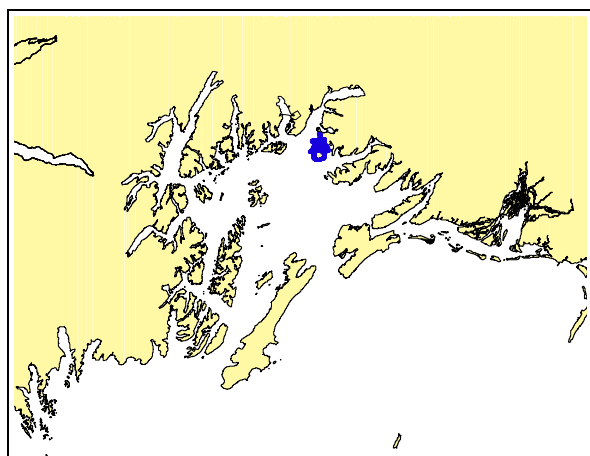
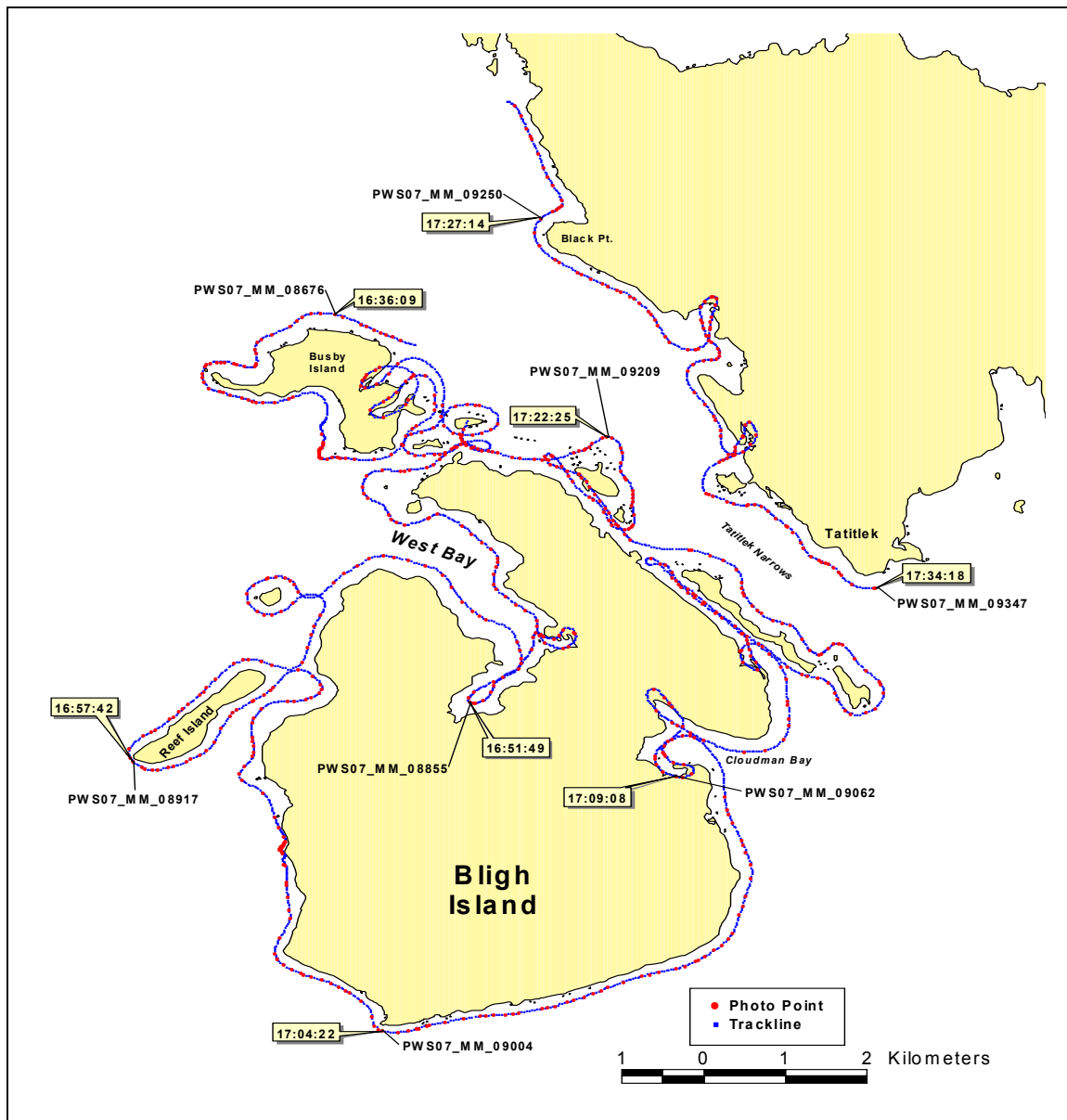
Bio: Morris

Nav: Morrow

Weather: Sunny; clear

Time (UTC)	Location	Photo No.
153343	Shoup Glacier	PWS07_MM_08086
154417	Tongue Point, Jack Bay	PWS07_MM_08150
155046	NW entrance to Galena Bay	PWS07_MM_08217
160436	Lagoon at head of Galena Bay	PWS07_MM_08365
162344	Rocky Point	PWS07_MM_08574

Notes:
Need to add digitizing for shoreline by Shoup Glacier on this tape.



PWS07_DV16
19 May 2007

2007 Prince William Sound Aerial Video Imaging Survey
Team Cordova (DV)
Tape Log

Tape Number: PWS07_DV16

General Location: Bligh and Busby Islands, Tatitlek

Date: 19 May 2007

Time Start: 163530 (UTC) (083530 ADT)

Break: 172343 to 172555

Time Stop: 173419 (UTC) (093419 ADT)

Tape Length: 56:35

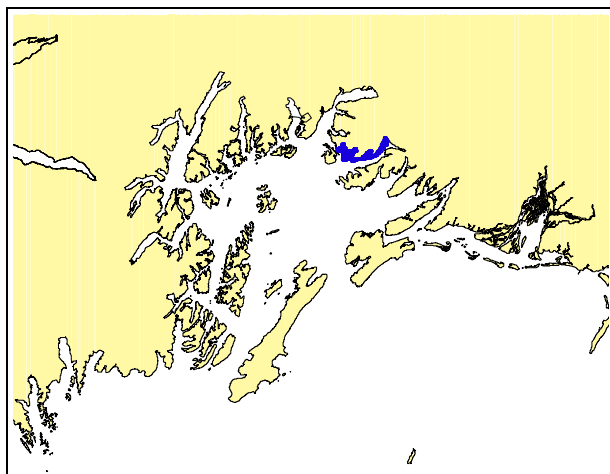
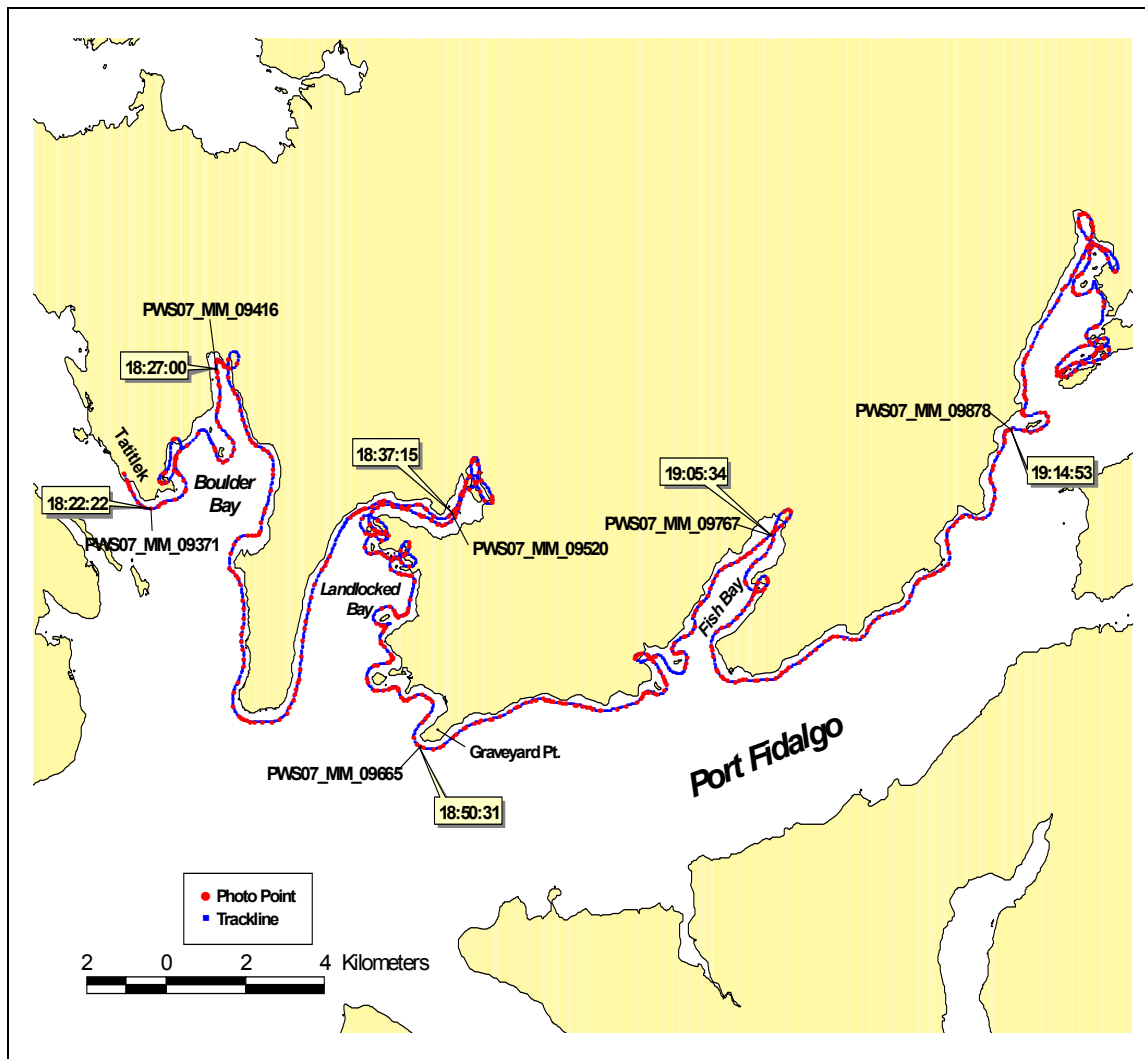
Geo: Harney

Bio: Morris

Nav: Morrow

Weather: Sunny; clear

Time (UTC)	Location	Photo No.
163609	Busby Island	PWS07_MM_08676
165149	West Bay, Bligh Island	PWS07_MM_08855
165742	South Reef Island (west side Bligh Island)	PWS07_MM_08917
170422	South Bligh Island	PWS07_MM_09004
170908	Cloudman Bay	PWS07_MM_09062
172225	Islets in Tatitlek Narrows	PWS07_MM_09004
172714	Black Point	PWS07_MM_09250
173418	Tatitlek	PWS07_MM_09347



PWS07_DV17
19 May 2007

2007 Prince William Sound Aerial Video Imaging Survey
Team Cordova (DV)
Tape Log

Tape Number: PWS07_DV17

General Location: Tatitlek, Boulder Bay to Port Fidalgo

Date: 19 May 2007

Time Start: 182149 (UTC) (102149 ADT)

Break: 185644 to 190348

Time Stop: 192534 (UTC) (112534 ADT)

Tape Length: 56:41

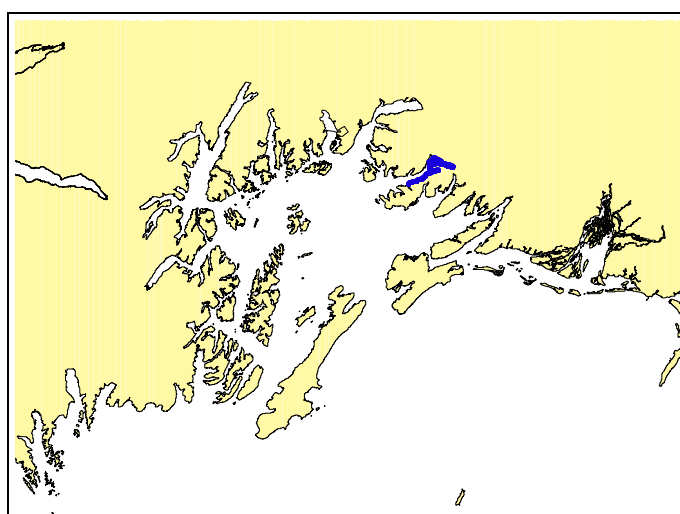
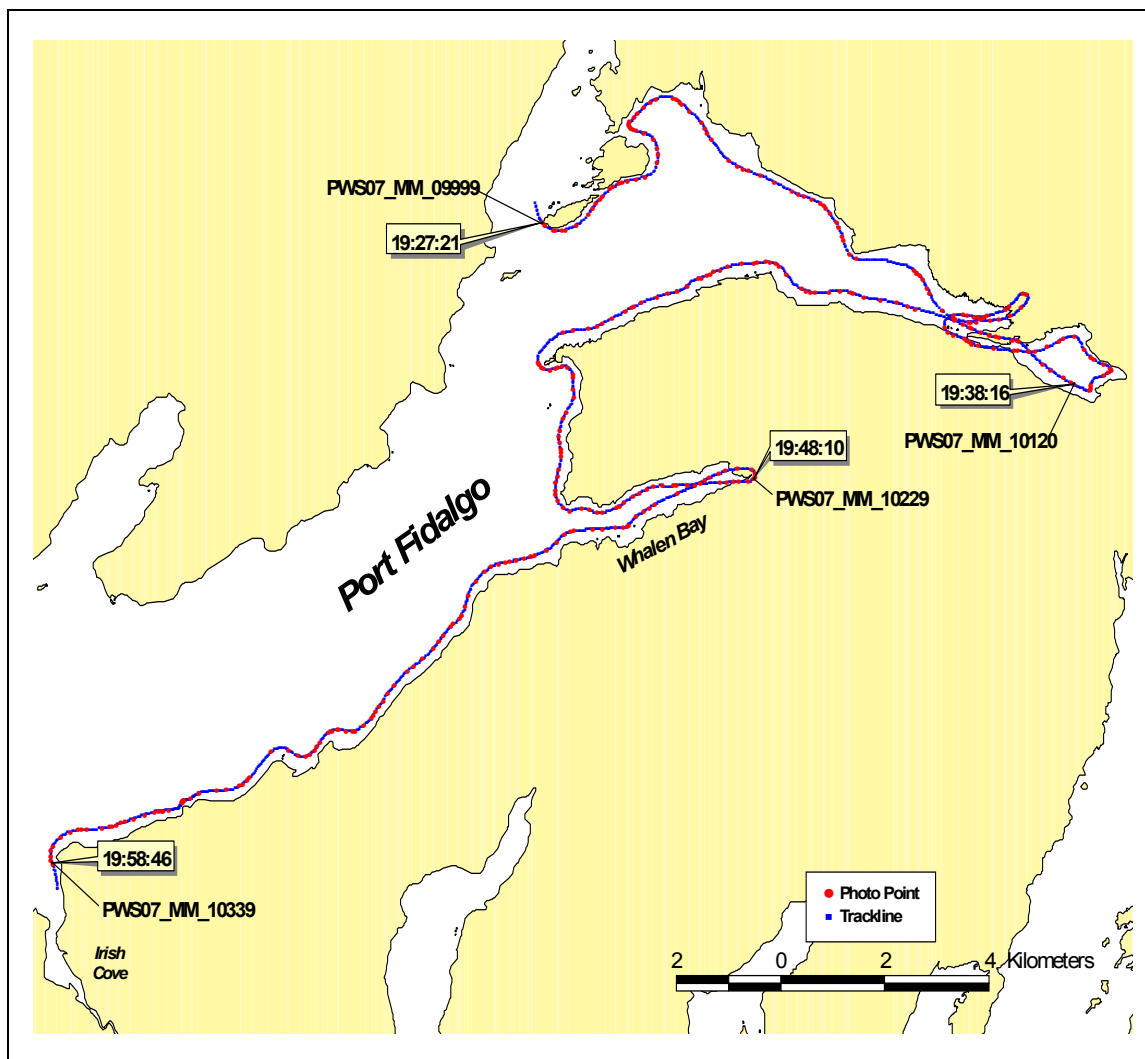
Geo: Harney

Bio: Morris

Nav: Morrow

Weather: Sunny; clear

Time (UTC)	Location	Photo No.
182222	Tatitlek	PWS07_MM_09371
182700	Boulder Bay	PWS07_MM_09416
183715	Landlocked Bay	PWS07_MM_09520
185031	Graveyard Point	PWS07_MM_09665
190534	Fish Bay, Port Fidalgo	PWS07_MM_09767
191453	Port Fidalgo	PWS07_MM_09878



PWS07_DV18
19 May 2007

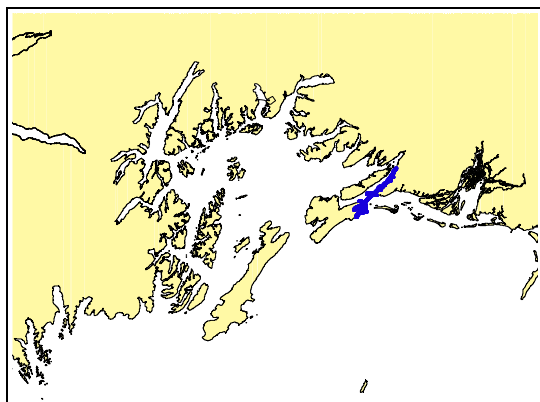
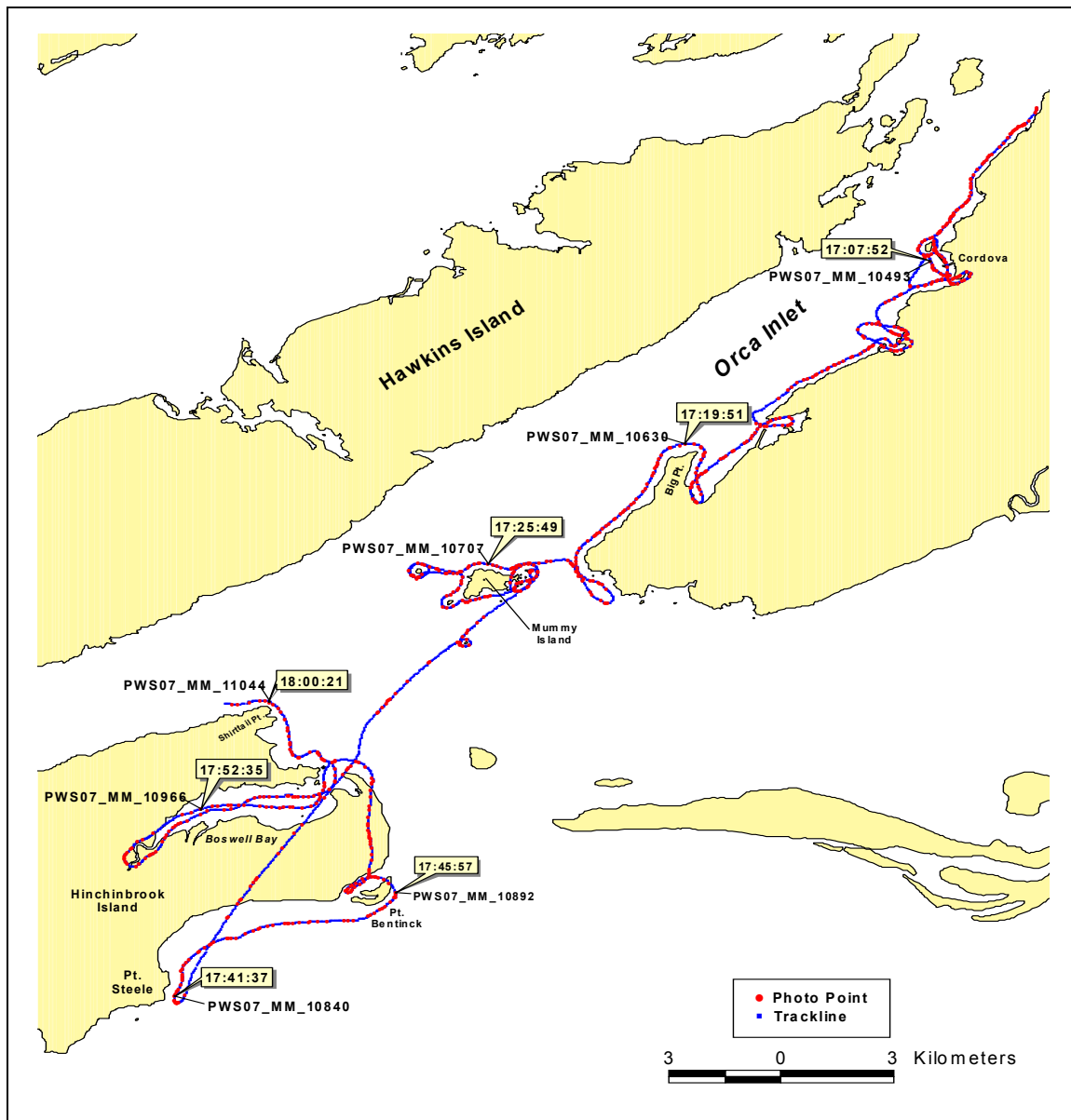
2007 Prince William Sound Aerial Video Imaging Survey
Team Cordova (DV)
Tape Log

Tape Number: PWS07_DV18

General Location: Port Fidalgo
Date: 19 May 2007
Time Start: 192710 (UTC) (112710 ADT)
Fuel Break: none
Time Stop: 195859 (UTC) (115859 ADT)
Tape Length: 31:50
Geo: Harney
Bio: Morris
Nav: Morrow

Weather: Sunny; clear

Time (UTC)	Location	Photo No.
192721	Islet in Port Fidalgo	PWS07_MM_09999
193816	Lagoon at head of Port Fidalgo	PWS07_MM_10120
194810	Whalen Bay	PWS07_MM_10229
195846	Entrance to Irish Cove	PWS07_MM_10339



PWS07_DV19
20 May 2007

2007 Prince William Sound Aerial Video Imaging Survey
Team Cordova (DV)
Tape Log

Tape Number: PWS07_DV19

General Location: Cordova, East Hinchinbrook

Date: 20 May 2007

Time Start: 170031 (UTC) (090031 ADT)

Fuel Break: none

Time Stop: 180058 (UTC) (100058 ADT)

Tape Length: 1:00:18

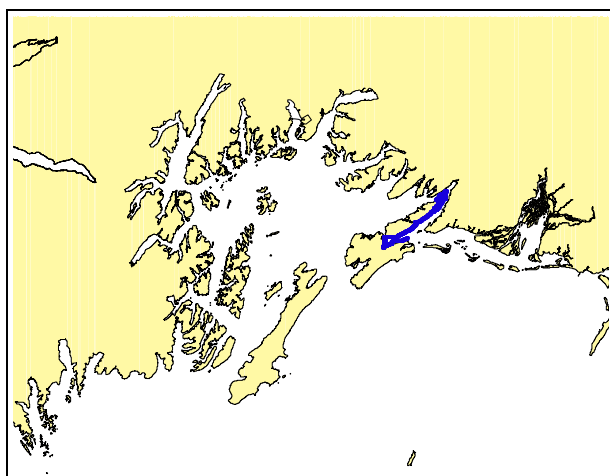
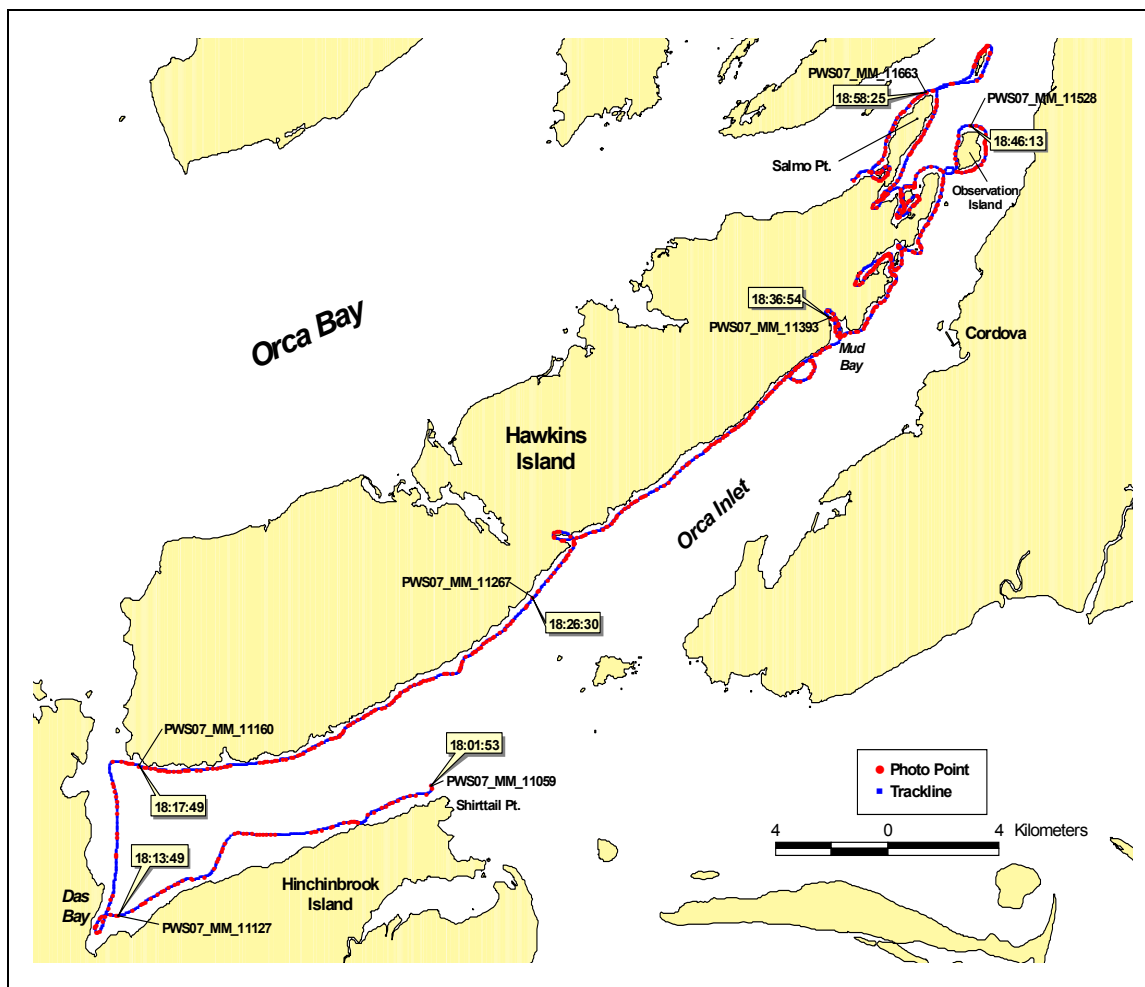
Geo: Harney

Bio: Morris

Nav: Morrow

Weather: Sunny; clear

Time (UTC)	Location	Photo No.
170752	Cordova	PWS07_MM_10493
171951	Big Point, Orca Inlet	PWS07_MM_10630
172549	Mummy Island	PWS07_MM_10707
174137	Pt. Steele, SE Hinchinbrook Island	PWS07_MM_10840
174557	Pt. Bentinck, SE Hinchinbrook Island	PWS07_MM_10892
175235	Boswell Bay	PWS07_MM_10966
180021	Shirttail Point, NE Hinchinbrook Island	PWS07_MM_11044



PWS07_DV20
20 May 2007

2007 Prince William Sound Aerial Video Imaging Survey
Team Cordova (DV)
Tape Log

Tape Number: PWS07_DV20

General Location: Hawkins Island

Date: 20 May 2007

Time Start: 180151 (UTM) (100151 ADT)

Break: 180348 to 180758

Time Stop: 190208 (UTM) (110208 ADT)

Tape Length: 56:05

Geo: Harney

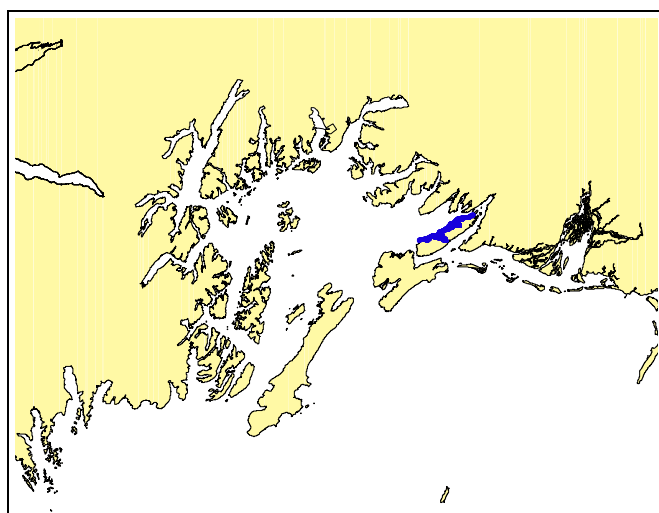
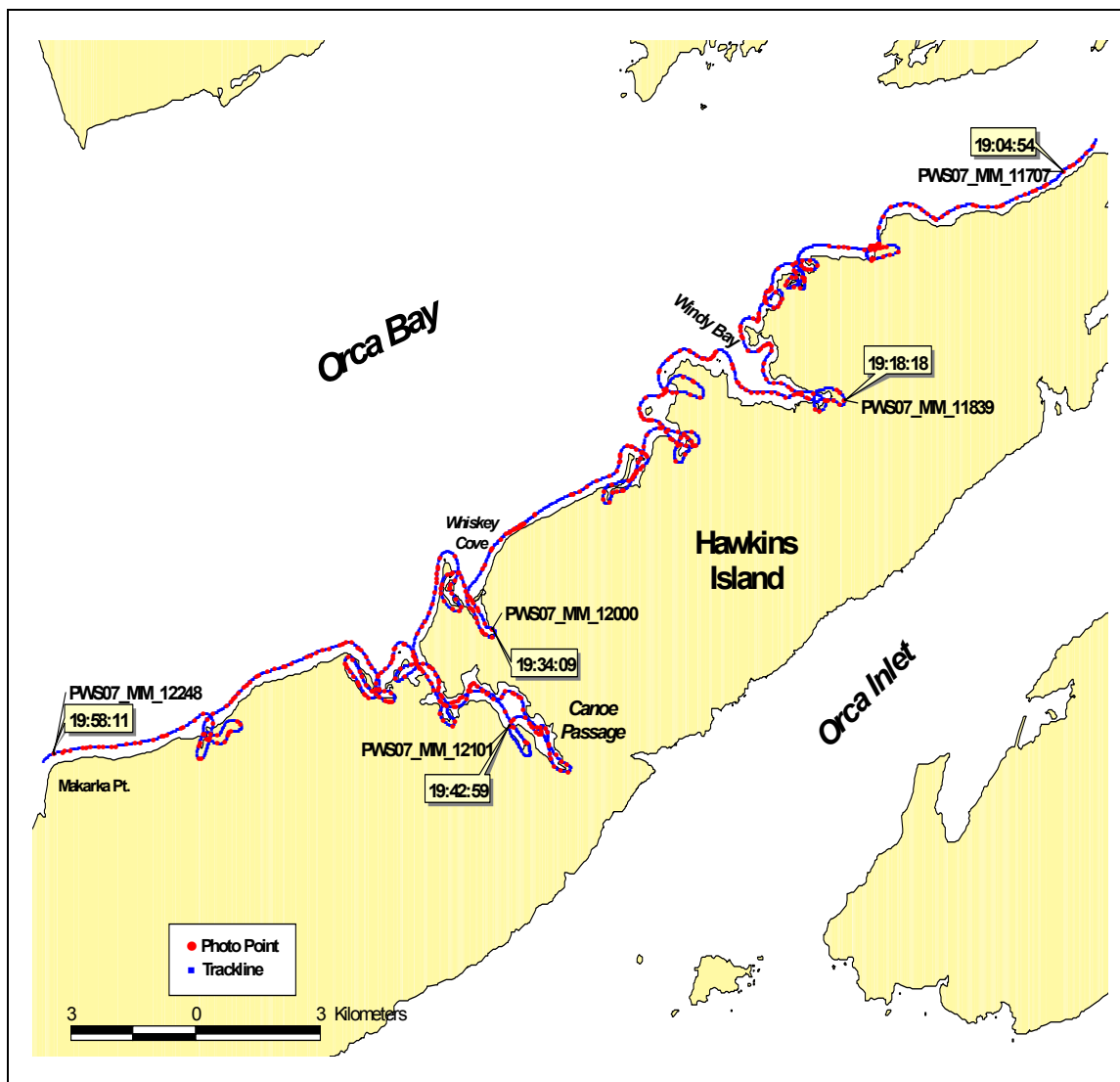
Bio: Morris

Nav: Morrow

Weather: Sunny; clear

Time (UTC)	Location	Photo No.
180153	Shirttail Pt., NE Hinchinbrook Island	PWS07_MM_11059
181349	Das Bay	PWS07_MM_11127
181749	SW Corner Hawkins Island	PWS07_MM_11160
182630	South Hawkins Island, Orca Inlet	PWS07_MM_11267
183654	Mud Bay	PWS07_MM_11393
184613	Observation Island	PWS07_MM_11528
185825	Salmo Point, north Hawkins Island	PWS07_MM_11663

Notes:
No refuel during tide.



PWS07_DV21
20 May 2007

2007 Prince William Sound Aerial Video Imaging Survey
Team Cordova (DV)
Tape Log

Tape Number: PWS07_DV21

General Location: Hawkins Island

Date: 20 May 2007

Time Start: 190415 (UTC) (110415 ADT)

Fuel Break: none

Time Stop: 195820 (UTC) (115820 ADT)

Tape Length: 54:05

Geo: Harney

Bio: Morris

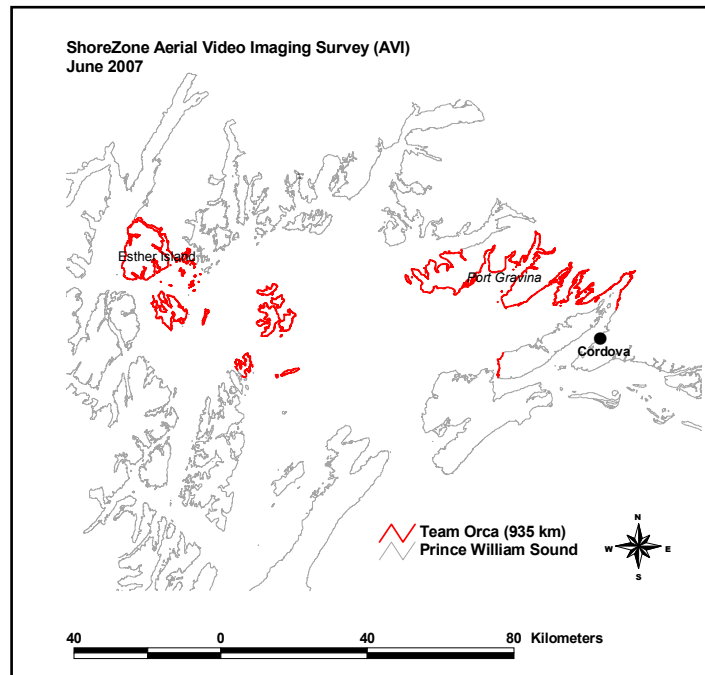
Nav: Morrow

Weather: Sunny; clear

Time (UTC)	Location	Photo No.
190454	NE Hawkins Island	PWS07_MM_11707
191818	Windy Bay, Hawkins Island	PWS07_MM_11839
193409	Whiskey Cove, Hawkins Island	PWS07_MM_12000
194259	Canoe Passage, Hawkins Island	PWS07_MM_12101
195811	Makarka Point, NW Hawkins Island	PWS07_MM_12248

Notes:
No refuel during tide.

FLIGHT REPORT
ShoreZone Aerial Video Imaging (AVI) Survey
Prince William Sound: Team Orca
May 31 - June 4, 2007



Prepared for
NOAA National Marine Fisheries Service
and the North Pacific Research Board
by



COASTAL & OCEAN RESOURCES INC.

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ph: 250.655.4035, web: www.coastalandoceans.com, email: jodi@coastalandoceans.com

ShoreZone is a coastal habitat mapping and classification system in which georeferenced aerial imagery is collected specifically for the interpretation and integration of geological and biological features of the intertidal zone and nearshore environment. Oblique low-altitude aerial video and digital still imagery of the coastal zone is collected during summer low tides (zero tide level or lower), usually from a helicopter flying at <100 m altitude. The flight trackline is recorded at 1-second intervals using Fugawi electronic navigation software and is continuously monitored in-flight to ensure all shorelines have been imaged. Video and still imagery collected are georeferenced and time-synchronized. Video imagery is accompanied by continuous, simultaneous commentary by a geologist and a biologist aboard the aircraft. The imagery and commentary are later used in the definition of discrete along-shore coastal habitat units and the “mapping” of observed physical, geomorphic, sedimentary, and biological features in those units.

The purpose of this flight report is to summarize the field activities of the ShoreZone aerial video imaging (AVI) survey conducted in **Prince William Sound** during the low-tide window of **May 31 – June 4, 2007**. The survey was conducted by Coastal & Ocean Resources Inc. (CORI, Sidney, British Columbia) under contract with NOAA National Marine Fisheries Service (NMFS). A coastal ecologist from Archipelago Marine Research Ltd. (AMR, Victoria, British Columbia) was sub-contracted by CORI to provide biological expertise. Table 1 provides a summary of crew affiliations and responsibilities.

The length of shoreline imaged during the survey and delivered with this report is **935 km**. The tables and figures on the following pages summarize, by video tape number, the extent and location of the AVI data and imagery collected. The aircraft used in this survey was a Bell 206 Jet Ranger helicopter chartered from Maritime Helicopters in Homer. Imagery collected from the helicopter is flown looking onshore out of the left side of the aircraft. Maps for each tape are annotated with representative geographic names, trackline times (in hh:mm:ss UTC in 24-hour clock time), and photo numbers. The six-digit UTC time is imprinted on the video imagery that is provided on DVD with this report. The shapefiles and GIS data that accompany this report on CD illustrate the flight trackline positions at 1-second intervals (displayed by tape number), as well as the digitized shoreline segments flown.

Table 1. ShoreZone AVI Flight Personnel and Responsibilities (Team Orca - RC).

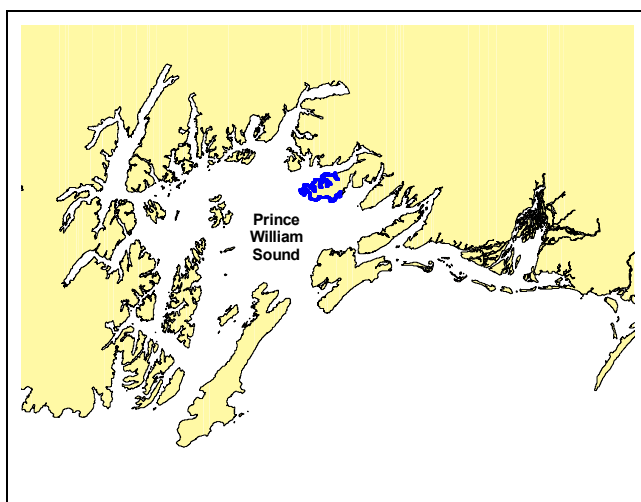
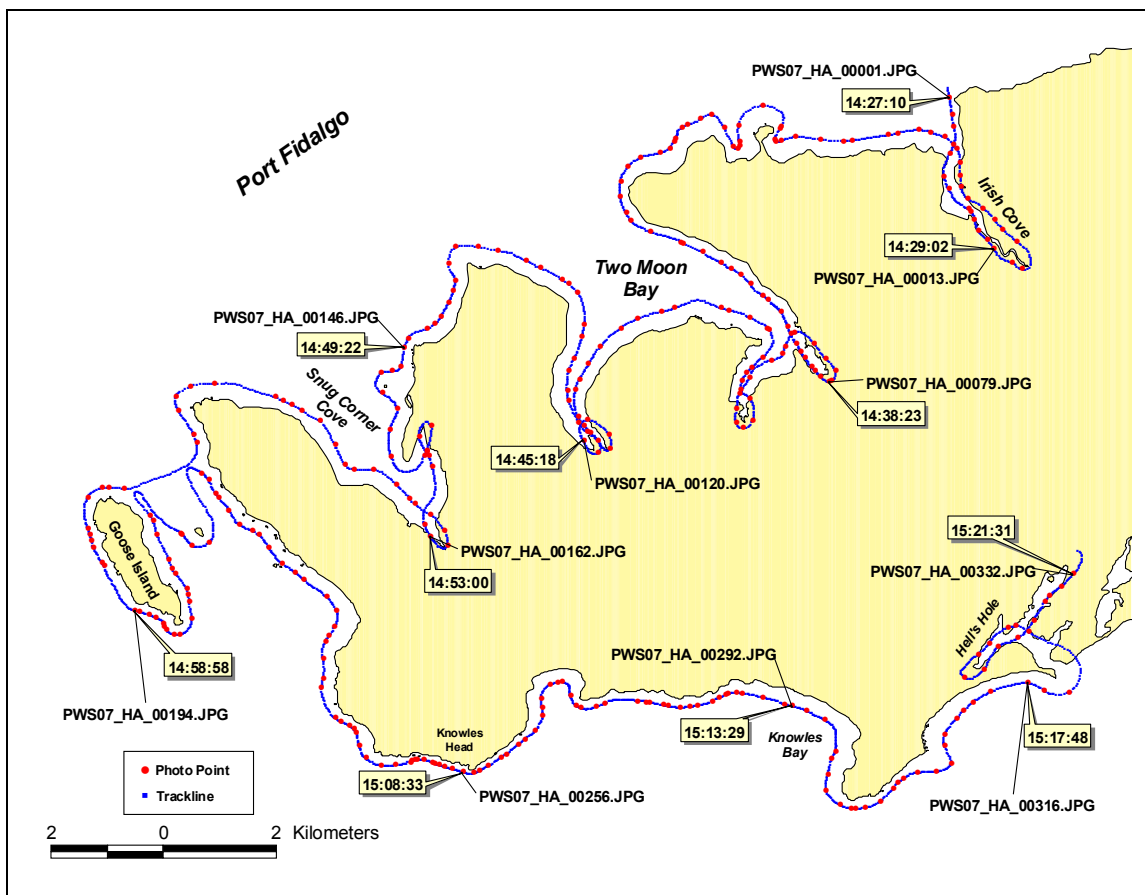
Crew Member	Individual / Affiliation	Responsibilities
<i>Geomorphologist</i>	Jodi Harney CORI, Sidney BC	survey coordination, videography, geologic commentary, post-flight data processing, project reporting
<i>Coastal Ecologist</i>	Heather Anderson AMR, Victoria BC	digital photography, biologic commentary
<i>Navigator</i>	Kalen Morrow CORI, Sidney BC	in-flight navigation, post-flight data processing
<i>Pilot</i>	Rick Farish Maritime Helicopters Juneau, Alaska	Jet Ranger Helicopter piloting

**2007 Prince William Sound Aerial Video Imaging Survey
Team Orca (RC)**

**Survey Maps and Tape Logs
May 31 - June 4, 2007**

DVDs PWS07_RC01 to PWS07_RC12

Flight trackline map showing the location and extent of specific videotapes (DVDs) for the May 31 - June 4, 2007 Team Orca survey of Prince William Sound.



PWS07_RC_01
31 May 07

**2007 Prince William Sound Aerial Video Imaging Survey
Team Orca (RC)
Tape Log**

Tape Number: PWS07_RC_01

General Location: Irish Cove (Lower Port Fidalgo) to Hell's Hole (Knowles Bay)

Date: 31 May 2007

Time Start: 142704 (UTC) (0627 ADT)

Fuel Break: none

Time Stop: 152147 (UTC) (0721 ADT)

Tape Length: 54:43

Geo: Harney

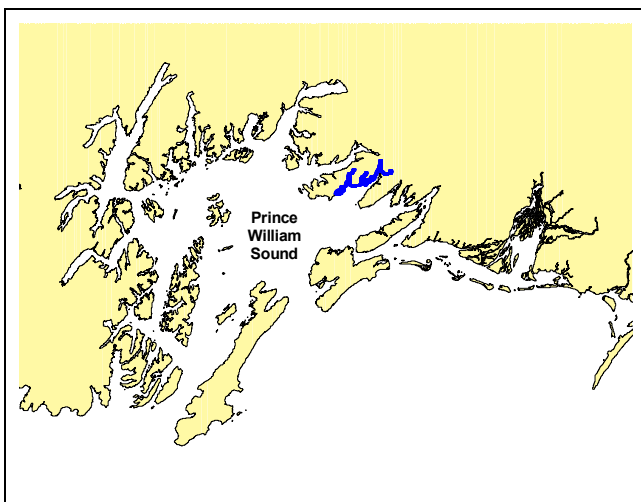
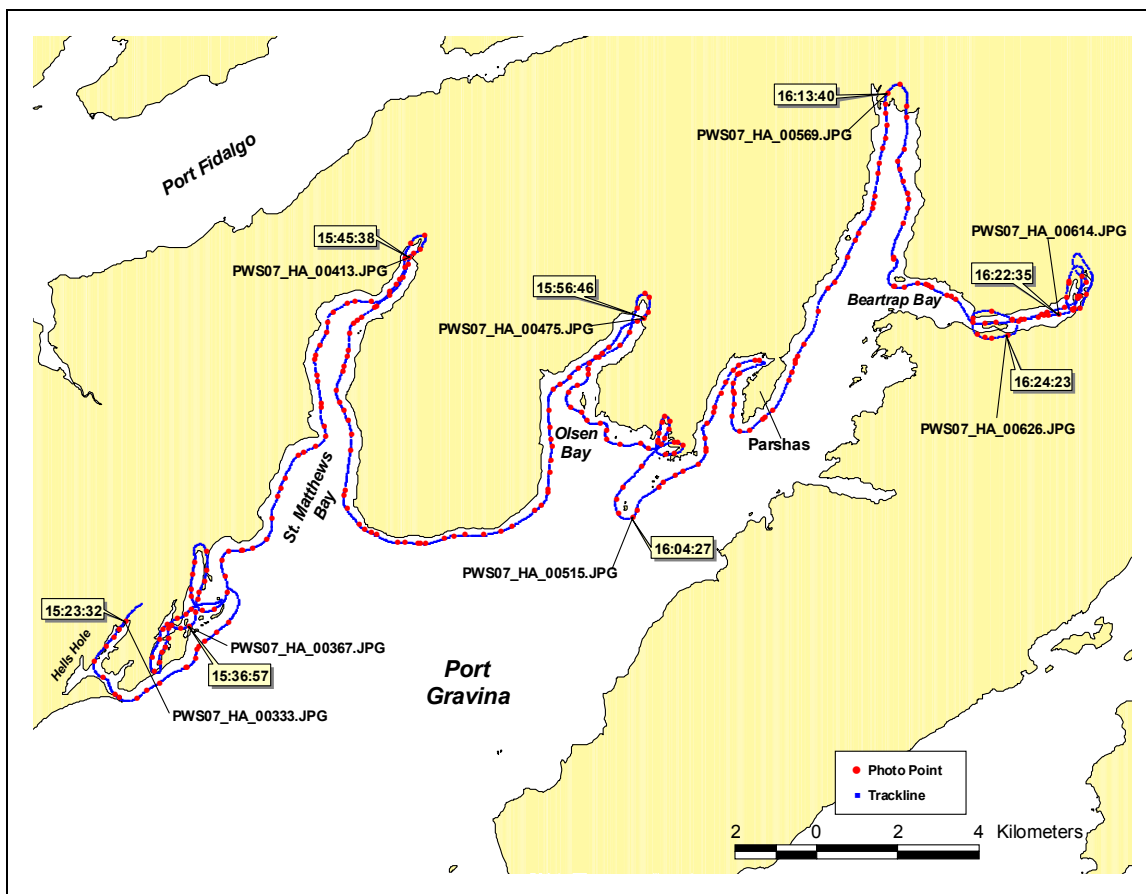
Bio: Anderson

Nav: Morrow

Weather: Rain, wind, high ceiling, good visibility

Time (UTC)	Location	Photo No.
142710	North entrance Irish Cove; start of tape	PWS07_HA_00001.JPG
142902	Head of Irish Cove	PWS07_HA_00013.JPG
143823	East Two Moon Bay	PWS07_HA_00079.JPG
144518	West Two Moon Bay	PWS07_HA_00120.JPG
144922	Entrance Snug Corner Cove	PWS07_HA_00146.JPG
145300	Head of Snug Corner Cove	PWS07_HA_00162.JPG
145858	Goose Island	PWS07_HA_00194.JPG
150833	Knowles Head	PWS07_HA_00256.JPG
151329	Knowles Bay	PWS07_HA_00292.JPG
151748	Outside Hell's Hole	PWS07_HA_00316.JPG
152131	Hell's Hole; end of tape	PWS07_HA_00332.JPG

Imagery and survey begin at endpoint of tape DV18 from 19May07.



PWS07_RC_02
31 May 07

**2007 Prince William Sound Aerial Video Imaging Survey
Team Orca (RC)
Tape Log**

Tape Number: PWS07_RC_02

General Location: Hell's Hole (Knowles Bay) to Beartrap Bay (Port Gravina)

Date: 31 May 2007

Time Start: 152312 (UTC) (0723 ADT)

Fuel Break: 152746 to 153323

Time Stop: 162433 (UTC) (0824 ADT)

Tape Length: 55:42

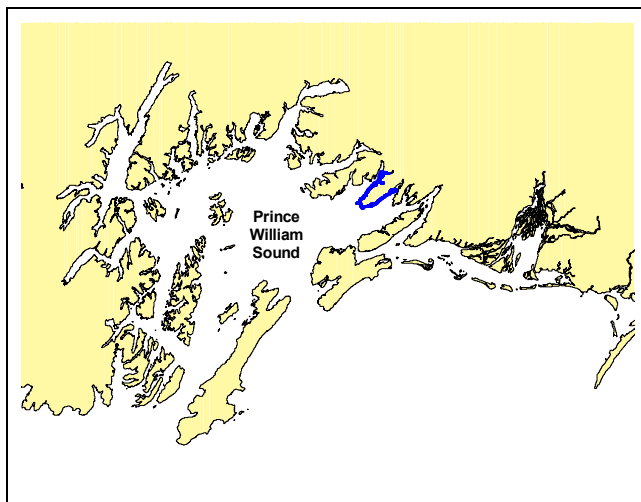
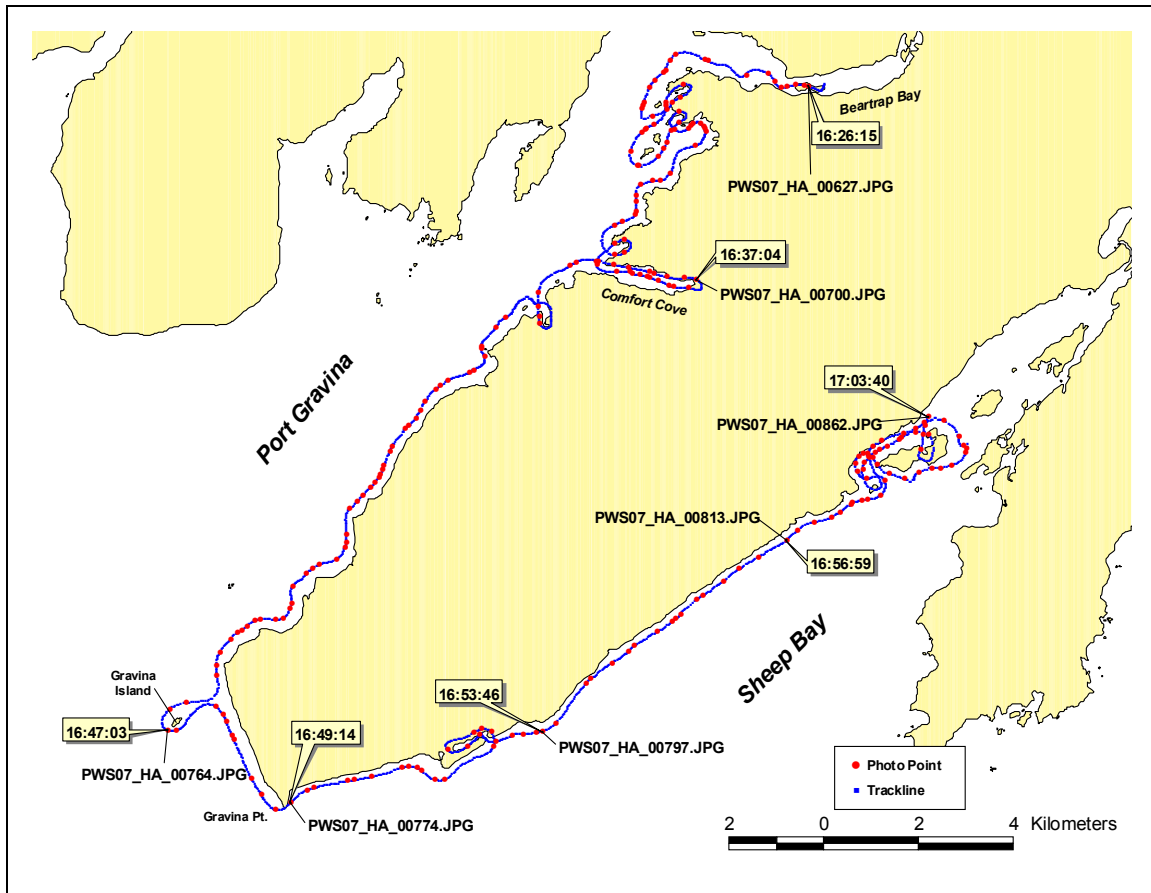
Geo: Harney/Morrow

Bio: Anderson

Nav: Morrow/Harney

Weather: Rain, wind, high ceiling, good visibility

Time (UTC)	Location	Photo No.
152332	Hell's Hole (Knowles Bay); start of tape	PWS07_HA_00333.JPG
	Transit 152746 to 153323	
153657	Hell's Hole	PWS07_HA_00367.JPG
154538	St. Matthews Bay	PWS07_HA_00413.JPG
155646	Olsen Bay	PWS07_HA_00475.JPG
160427	Islands off Parshas	PWS07_HA_00515.JPG
161340	Head of Port Gravina (Gravina River)	PWS07_HA_00569.JPG
162235	Beartrap Bay	PWS07_HA_00614.JPG
162423	Beartrap Bay (Port Gravina); end of tape	PWS07_HA_00626.JPG



PWS07_RC_03
31 May 07

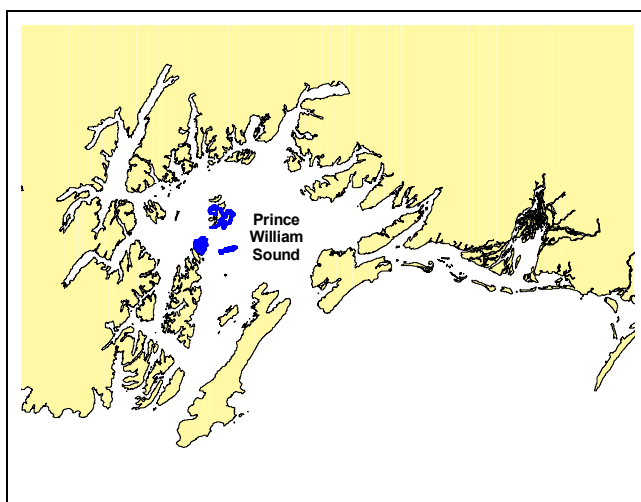
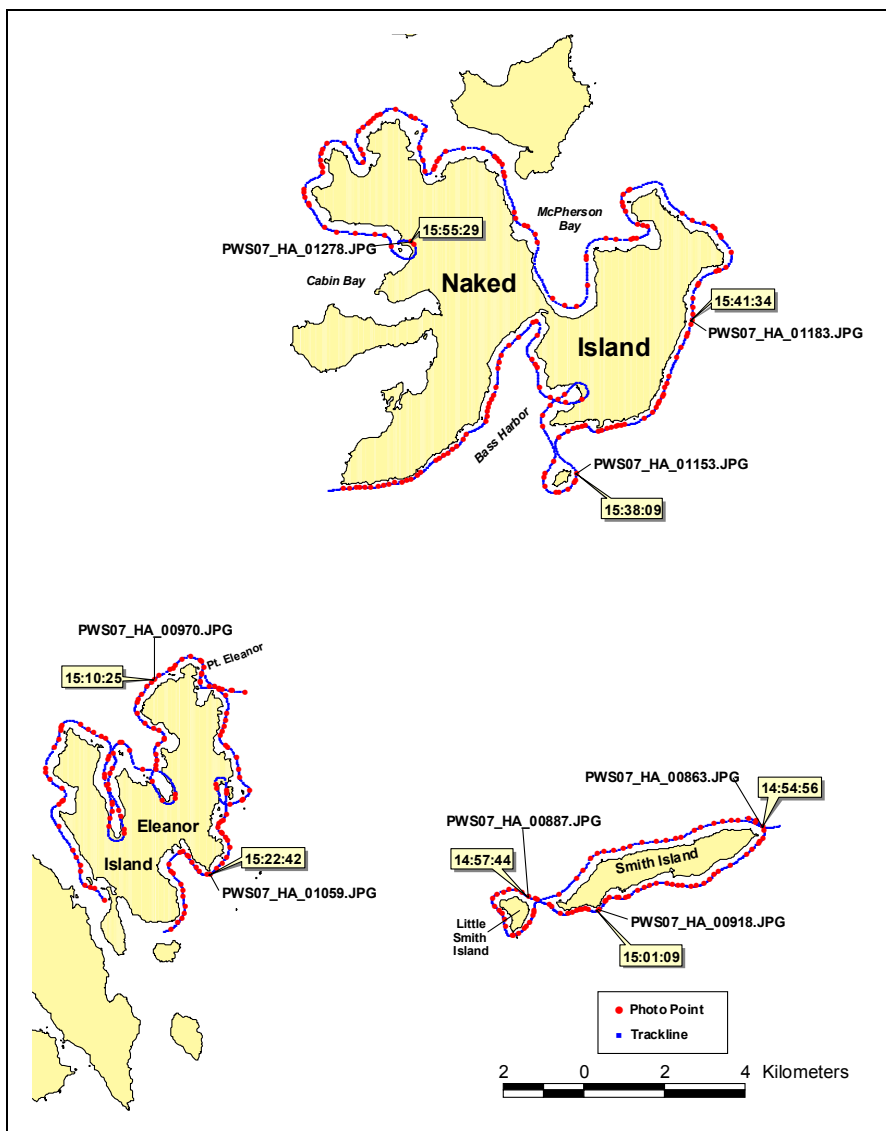
2007 Prince William Sound Aerial Video Imaging Survey
Team Orca (RC)
Tape Log

Tape Number: PWS07_RC_03

General Location: Beartrap Bay (Port Gravina) to Sheep Bay
Date: 31 May 2007
Time Start: 162556 (UTC) (0825 ADT)
Fuel Break: none
Time Stop: 170340 (UTC) (0903 ADT)
Tape Length: 37:44
Geo: Morrow
Bio: Anderson
Nav: Harney

Weather: Rain, wind, high ceiling, good visibility

Time (UTC)	Location	Photo No.
162615	Beartrap Bay; start of tape	PWS07_HA_00627.JPG
163704	Comfort Cove	PWS07_HA_00700.JPG
164703	Gravina Island	PWS07_HA_00764.JPG
164914	Gravina Point	PWS07_HA_00774.JPG
165346	Lower/northwest side of Sheep Bay	PWS07_HA_00797.JPG
165659	West side of Sheep Bay	PWS07_HA_00813.JPG
170340	Near head of Sheep Bay; end of tape	PWS07_HA_00862.JPG



PWS07_RC_04
01 June 07

2007 Prince William Sound Aerial Video Imaging Survey
Team Orca (RC)
Tape Log

Tape Number: PWS07_RC_04

General Location: Smith Island, Eleanor Island, Naked Island

Date: 1 June 2007

Time Start: 145442 (UTC) (0654 ADT)

Fuel Break: none

Time Stop: 155545 (UTC) (0755 ADT)

Tape Length: 53:03

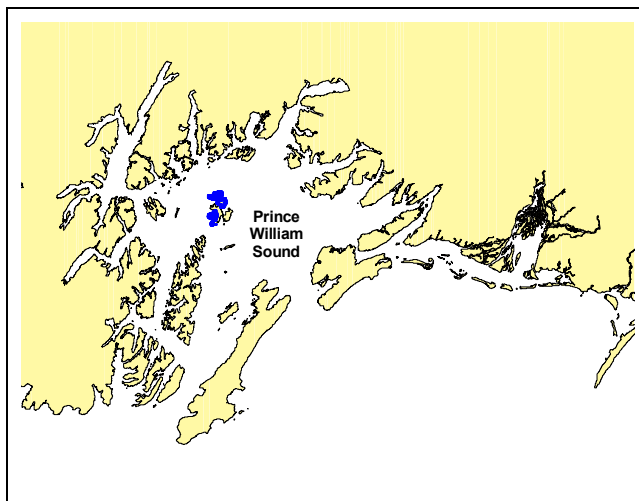
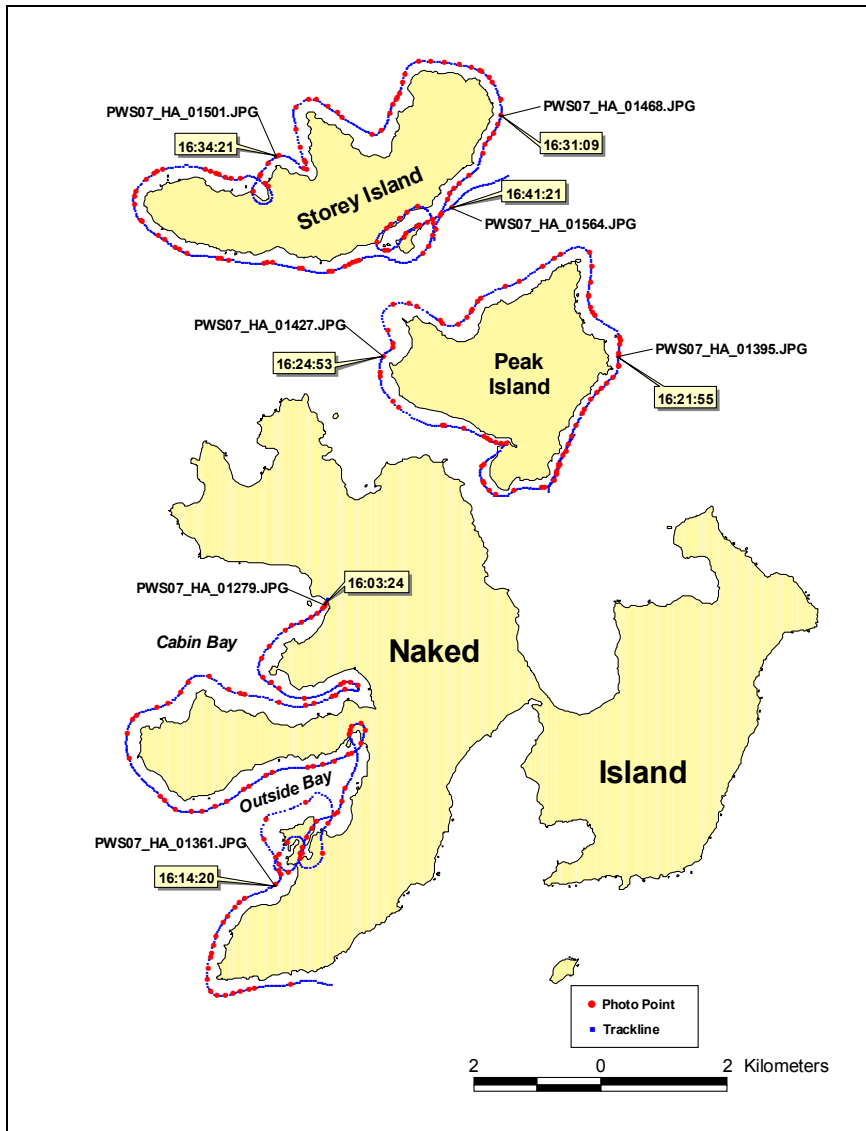
Geo: Harney

Bio: Anderson

Nav: Morrow

Weather: Rain, wind, high ceiling, good visibility

Time (UTC)	Location	Photo No.
145456	East end Smith Island; start of tape	PWS07_HA_00863.JPG
145744	Little Smith Island	PWS07_HA_00887.JPG
150109	South Smith Island	PWS07_HA_00918.JPG
	Transit 150452 to 150854	
151025	Pt. Eleanor, northern Knight Island	PWS07_HA_00970.JPG
	Transit 151944 to 152040	
152242	Eleanor Island, northern Knight Island	PWS07_HA_01059.JPG
	Transit 152655 to 152951	
153809	South Naked Island	PWS07_HA_01153.JPG
154134	East Naked Island	PWS07_HA_01183.JPG
155529	Cabin Bay, Naked Island; end of tape	PWS07_HA_01278.JPG



PWS07_RC_05
01 June 07

2007 Prince William Sound Aerial Video Imaging Survey
Team Orca (RC)
Tape Log

Tape Number: PWS07_RC_05

General Location: Naked, Peak, and Storey Islands

Date: 1 June 2007

Time Start: 160312 (UTC) (0803 ADT)

Fuel Break: none

Time Stop: 164158 (UTC) (0841 ADT)

Tape Length: 32:50

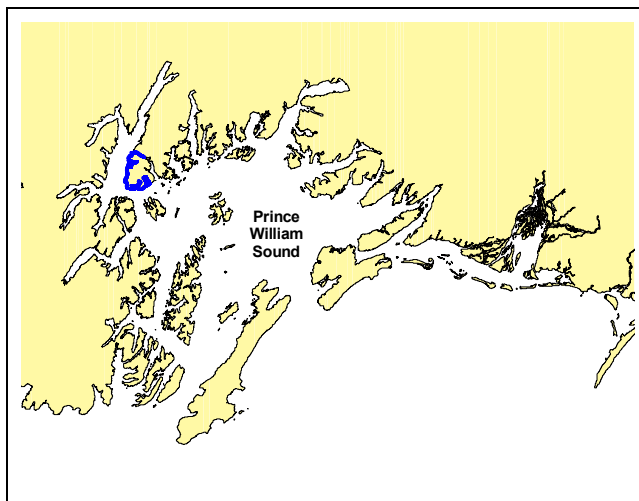
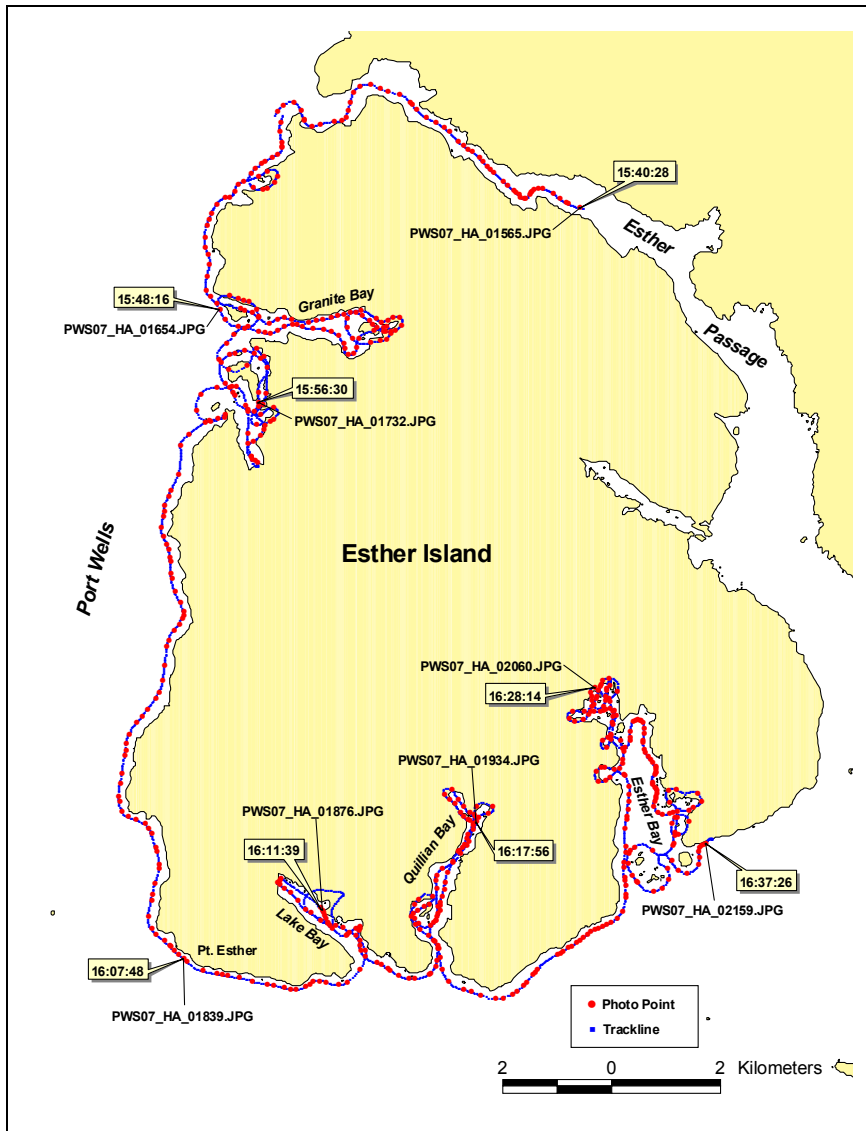
Geo: Morrow

Bio: Anderson

Nav: Harney

Weather: Rain, wind, high ceiling, good visibility

Time (UTC)	Location	Photo No.
160324	Cabin Bay, Naked Island; start of tape	PWS07_HA_01279.JPG
161420	Outside Bay, SW Naked Island	PWS07_HA_01361.JPG
	Transit 161621 to 162026	
162155	East Peak Island	PWS07_HA_01395.JPG
162453	West Peak Island	PWS07_HA_01427.JPG
	Transit 162806 to 162953	
163109	East Storey Island	PWS07_HA_01468.JPG
163421	North Storey Island	PWS07_HA_01501.JPG
164121	South Storey Island; end of tape	PWS07_HA_01564.JPG



PWS07_RC_06
02 June 07

2007 Prince William Sound Aerial Video Imaging Survey
Team Orca (RC)
Tape Log

Tape Number: PWS07_RC_06

General Location: Esther Island

Date: 2 June 2007

Time Start: 154025 (UTC) (0740 ADT)

Fuel Break: none

Time Stop: 163750 (UTC) (0837 ADT)

Tape Length: 57:25

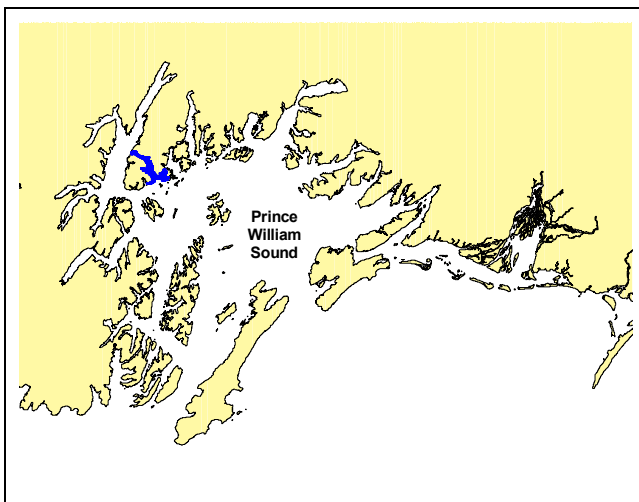
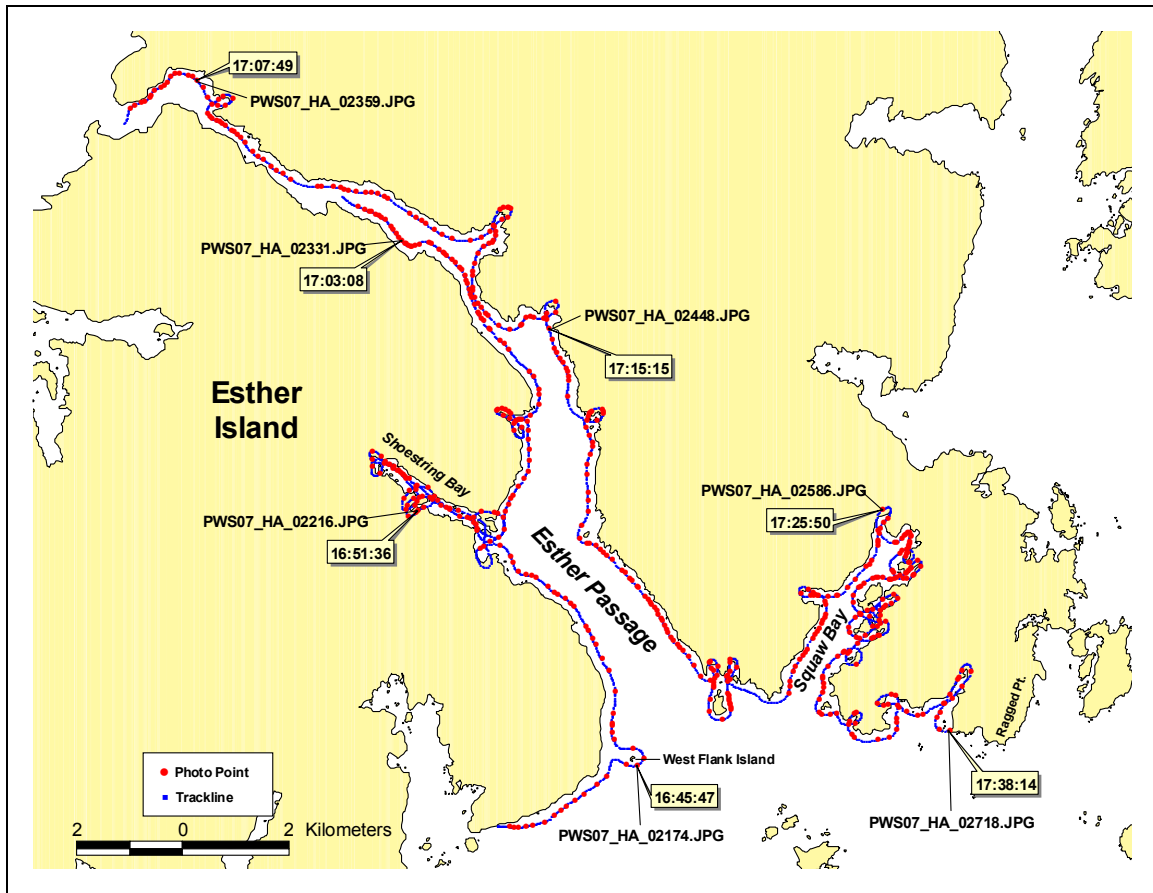
Geo: Harney

Bio: Anderson

Nav: Morrow

Weather: Rain, wind, high ceiling, good visibility

Time (UTC)	Location	Photo No.
154028	Esther Passage; start of tape	PWS07_HA_01565.JPG
154816	Granite Bay, Esther Island	PWS07_HA_01654.JPG
155630	Granite Bay, Esther Island	PWS07_HA_01732.JPG
160748	Pt. Esther, SW Esther Island	PWS07_HA_01839.JPG
161139	Lake Bay Hatchery, Esther Island	PWS07_HA_01876.JPG
161756	Tidal falls, Quillian Bay, South Esther Island	PWS07_HA_01934.JPG
162814	Esther Bay	PWS07_HA_02060.JPG
163726	SE Esther Island; end of tape	PWS07_HA_02159.JPG



PWS07_RC_07
02 June 07

2007 Prince William Sound Aerial Video Imaging Survey
Team Orca (RC)
Tape Log

Tape Number: PWS07_RC_07

General Location: Esther Island, Esther Passage, Squaw Bay

Date: 2 June 2007

Time Start: 164333 (UTC) (0843 ADT)

Fuel Break: none

Time Stop: 173815 (UTC) (0938 ADT)

Tape Length: 52:15

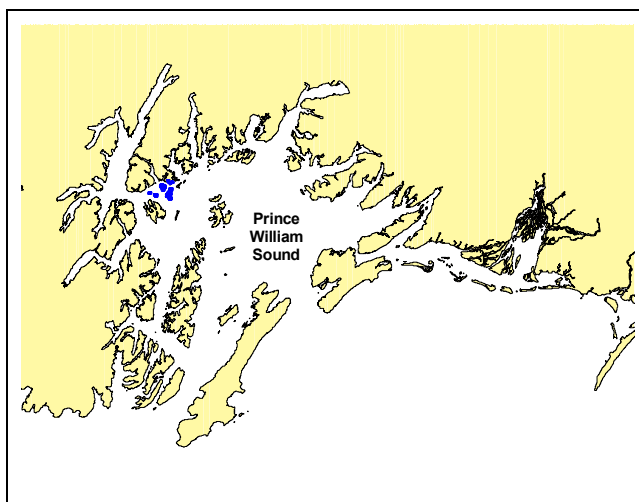
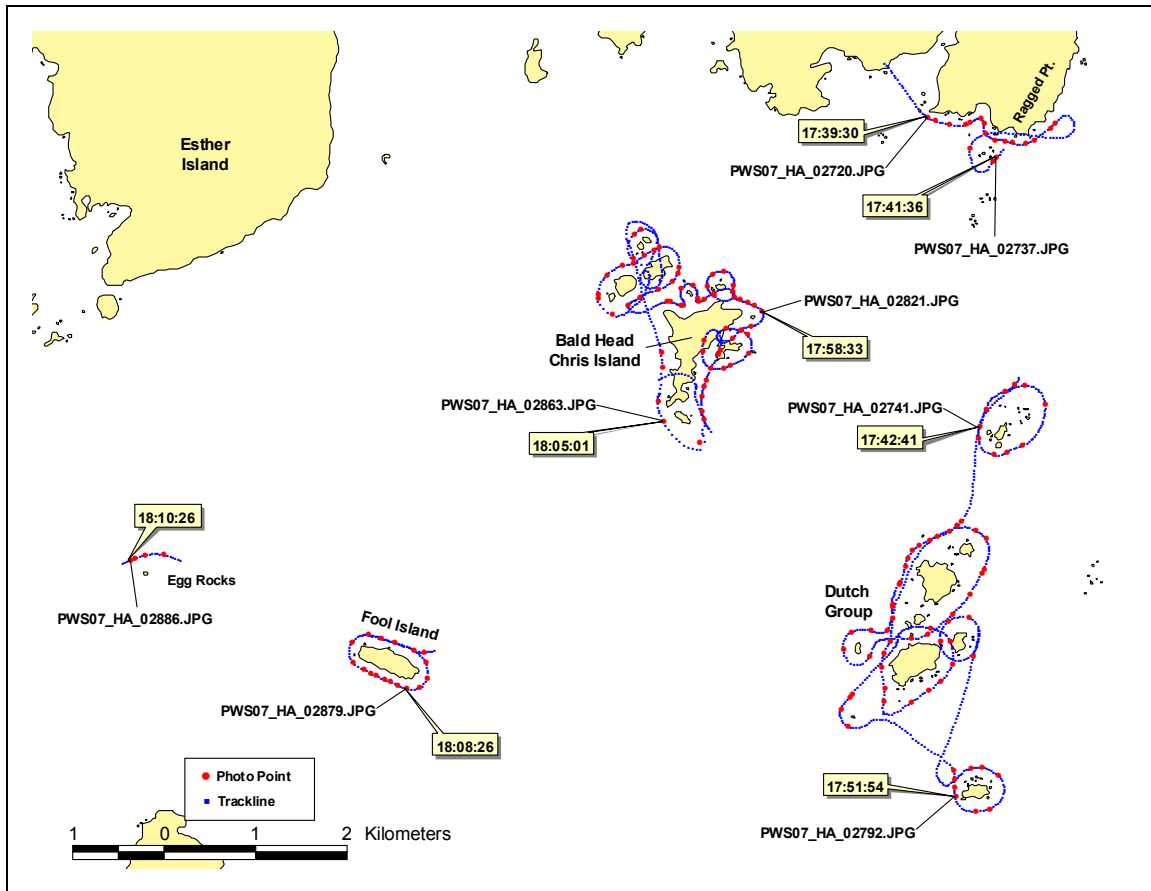
Geo: Morrow

Bio: Anderson

Nav: Harney

Weather: Rain, wind, high ceiling, good visibility

Time (UTC)	Location	Photo No.
164547	West Flank Island, SE Esther Island	PWS07_HA_02174.JPG
165136	Shoestring Bay, East Esther Island	PWS07_HA_02216.JPG
170308	Esther Passage; NW side of Esther Island	PWS07_HA_02331.JPG
	Transit 170406 to 170631	
170749	Esther Passage; north side of passage	PWS07_HA_02359.JPG
171515	Esther Passage; north side of passage	PWS07_HA_02448.JPG
172550	Squaw Bay	PWS07_HA_02586.JPG
173814	West of Ragged Point; end of tape	PWS07_HA_02718.JPG



PWS07_RC_08
02 June 07

2007 Prince William Sound Aerial Video Imaging Survey
Team Orca (RC)
Tape Log

Tape Number: PWS07_RC_08

General Location: Ragged Point, Dutch Group, Bald Head Chris Island, Fool Island

Date: 2 June 2007

Time Start: 173908 (UTC) (0939 ADT)

Fuel Break: none

Time Stop: 181029 (UTC) (1010 ADT)

Tape Length: 25:25

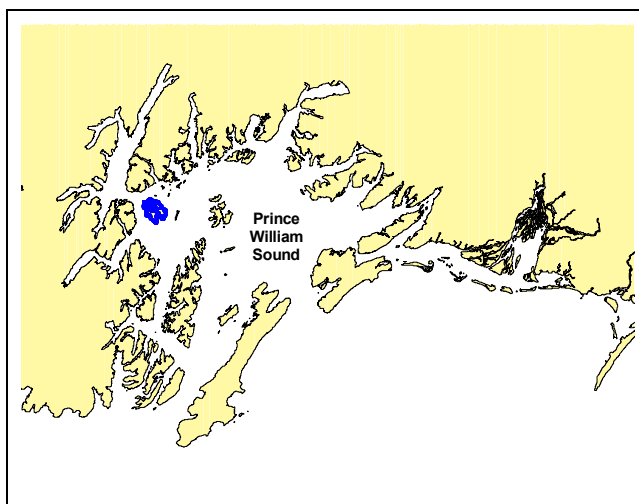
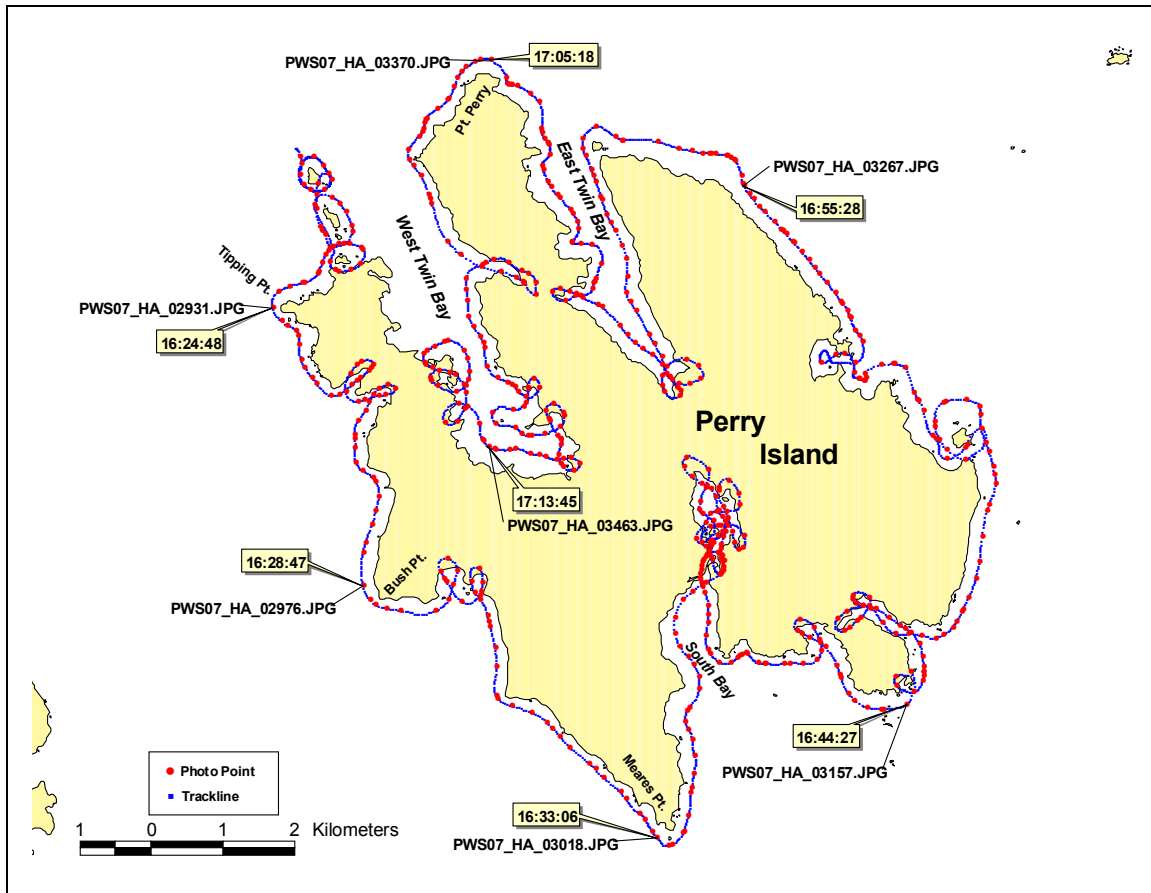
Geo: Morrow

Bio: Anderson

Nav: Harney

Weather: Rain, wind, high ceiling, good visibility

Time (UTC)	Location	Photo No.
173930	West of Ragged Point; start of tape	PWS07_HA_02720.JPG
174136	Islands off Ragged Point	PWS07_HA_02737.JPG
	Transit 174139 to 174311	
174241	North islands of Dutch Group	PWS07_HA_02741.JPG
175154	South island of Dutch Group	PWS07_HA_02792.JPG
	Transit 175431 to 175614	
175833	East Bald Head Chris Island	PWS07_HA_02821.JPG
180501	South Bald Head Chris Island	PWS07_HA_02863.JPG
	Transit 180548 to 180725	
180826	Fool Island	PWS07_HA_02879.JPG
	Transit 180906 to 181005	
181026	Egg Rocks; end of tape	PWS07_HA_02886.JPG



PWS07_RC_09
03 June 07

2007 Prince William Sound Aerial Video Imaging Survey
Team Orca (RC)
Tape Log

Tape Number: PWS07_RC_09

General Location: Perry Island

Date: 3 June 2007

Time Start: 161910 (UTC) (0819 ADT)

Fuel Break: none

Time Stop: 171630 (UTC) (0916 ADT)

Tape Length: 57:20

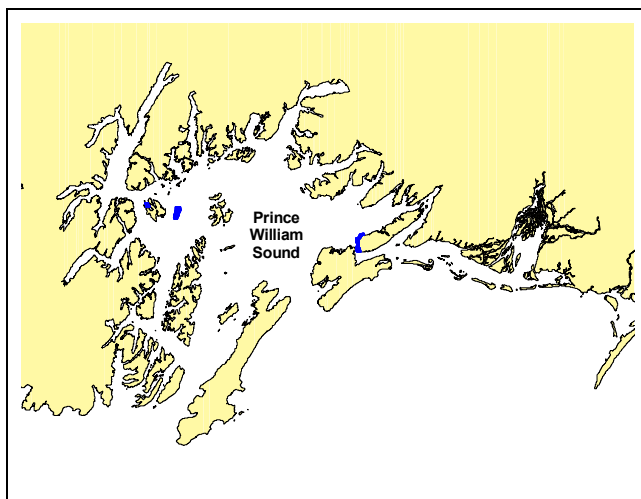
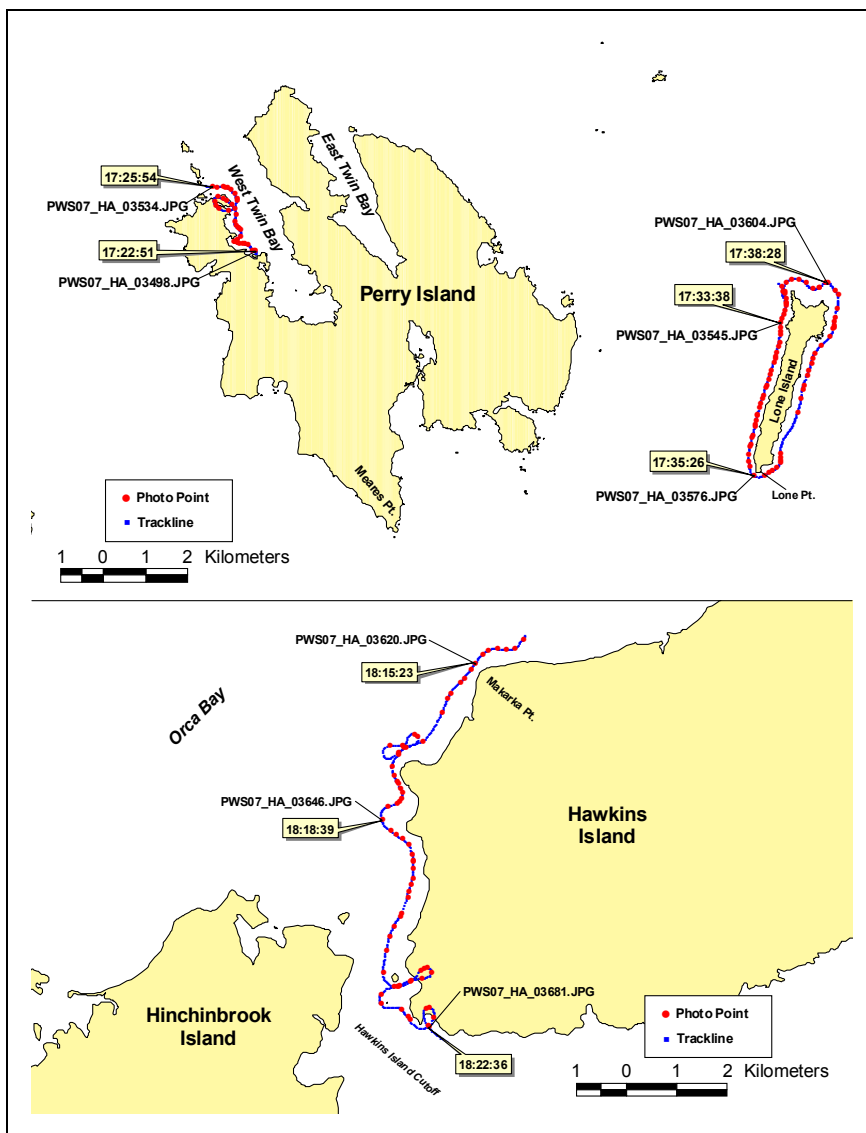
Geo: Harney

Bio: Anderson

Nav: Morrow

Weather: Rain, wind, high ceiling, good visibility

Time (UTC)	Location	Photo No.
162448	Tipping Point, NW Perry Island	PWS07_HA_02931.JPG
162847	Bush Point, West Perry Island	PWS07_HA_02976.JPG
163306	Meares Point, South Perry Island	PWS07_HA_03018.JPG
164427	SE corner Perry Island	PWS07_HA_03157.JPG
165528	NE corner Perry Island	PWS07_HA_03267.JPG
170518	Point Perry, North Perry Island	PWS07_HA_03370.JPG
171345	West Twin Bay, Perry Island; end of tape	PWS07_HA_03463.JPG



PWS07_RC_10
03 June 07

**2007 Prince William Sound Aerial Video Imaging Survey
Team Orca (RC)
Tape Log**

Tape Number: PWS07_RC_10

General Location: Perry Island, Lone Island, West Hawkins Island

Date: 3 June 2007

Time Start: 172240 (UTC) (0922 ADT)

Fuel Break: none

Time Stop: 182322 (UTC) (1023 ADT)

Tape Length: 18:34

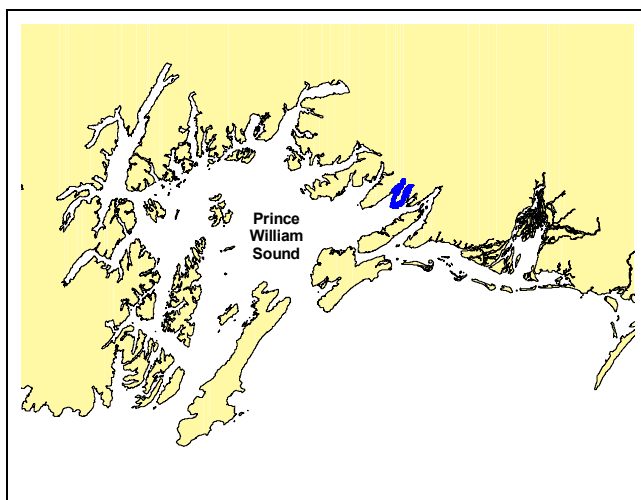
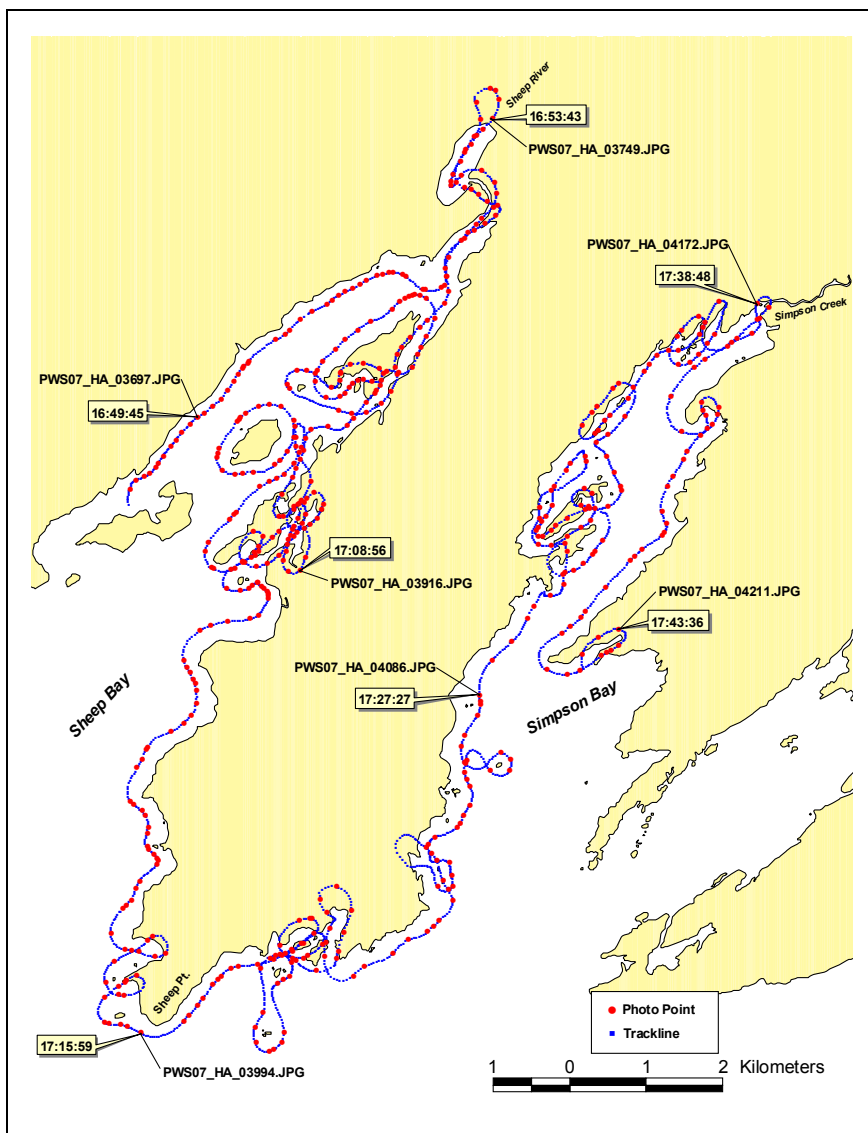
Geo: Morrow

Bio: Anderson

Nav: Harney

Weather: Rain, wind, high ceiling, good visibility

Time (UTC)	Location	Photo No.
172251	West Twin Bay, Perry Island; start of tape	PWS07_HA_03498.JPG
172554	West Twin Bay, Perry Island	PWS07_HA_03534.JPG
	Transit 172602 to 173301	
173338	NW Lone Island	PWS07_HA_03545.JPG
173526	Lone Point, South Lone Island	PWS07_HA_03576.JPG
173828	North Lone Island	PWS07_HA_03604.JPG
	Transit 173926 to 181431	
181523	Makarka Point, NW corner Hawkins Island	PWS07_HA_03620.JPG
181839	West Hawkins Island, wide mud flats	PWS07_HA_03646.JPG
182236	SW corner Hawkins Islands; end of tape	PWS07_HA_03681.JPG



PWS07_RC_11
04 June 07

2007 Prince William Sound Aerial Video Imaging Survey
Team Orca (RC)
Tape Log

Tape Number: PWS07_RC_11

General Location: Sheep Bay, Simpson Bay

Date: 4 June 2007

Time Start: 164845 (UTC) (0848 ADT)

Fuel Break: none

Time Stop: 174402 (UTC) (0944 ADT)

Tape Length: 55:17

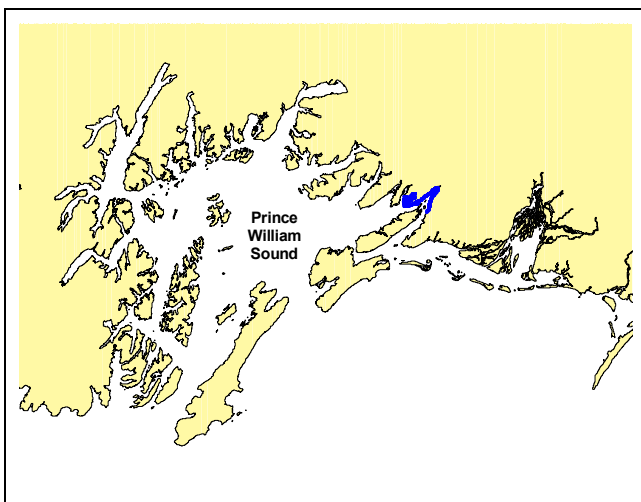
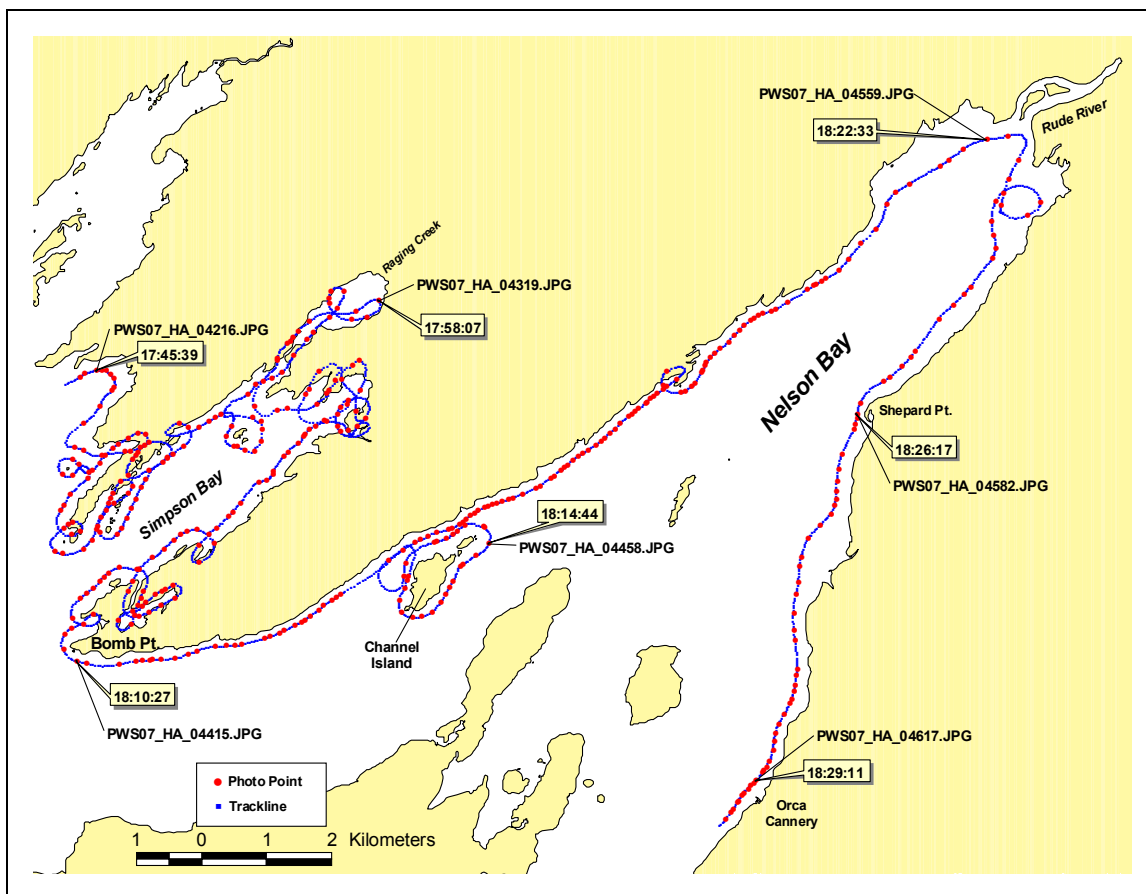
Geo: Morrow

Bio: Anderson

Nav: Harney

Weather: Rain, wind, high ceiling, good visibility

Time (UTC)	Location	Photo No.
164945	West side of Sheep Bay; start of tape	PWS07_HA_03697.JPG
165343	Sheep River, head of Sheep Bay	PWS07_HA_03749.JPG
170856	East side of Sheep Bay	PWS07_HA_03916.JPG
171559	Sheep Point	PWS07_HA_03994.JPG
172727	West side of West Arm of Simpson Bay	PWS07_HA_04086.JPG
173848	Sheep Creek, head of West Arm of Simpson Bay	PWS07_HA_04172.JPG
174336	West Arm of Simpson Bay; end of tape	PWS07_HA_04211.JPG



PWS07_RC_12
04 June 07

2007 Prince William Sound Aerial Video Imaging Survey
Team Orca (RC)
Tape Log

Tape Number: PWS07_RC_12

General Location: Simpson Bay, Nelson Bay
Date: 4 June 2007
Time Start: 174520 (UTC) (0945 ADT)
Fuel Break: none
Time Stop: 182940 (UTC) (1029 ADT)
Tape Length: 44:20
Geo: Morrow
Bio: Anderson
Nav: Harney

Weather: Rain, wind, high ceiling, good visibility

Time (UTC)	Location	Photo No.
174539	West Arm of Simpson Bay; start of tape	PWS07_HA_04216.JPG
175807	Head of East Arm of Simpson Bay, Raging Creek	PWS07_HA_04319.JPG
181027	Bomb Point	PWS07_HA_04415.JPG
181444	Channel Island	PWS07_HA_04458.JPG
182233	Head of Nelson Bay, Rude River	PWS07_HA_04559.JPG
182617	Shepard Point, East side of Nelson Bay	PWS07_HA_04582.JPG
182911	Orca Cannery; end of tape	PWS07_HA_04617.JPG

**2007 Prince William Sound Aerial Video Imaging Survey
Team Orca (RC)**

**Sample Photos
May 31 - June 4, 2007**

Team Orca Sample Photos (May 31 - June 4, 2007)

	
Head of Irish Cove PWS07_HA_00013.JPG	Goose Island PWS07_HA_00194.JPG
	
Knowles Bay PWS07_HA_00292.JPG	Outside Hell's Hole PWS07_HA_00365.JPG
	
Head of Port Gravina PWS07_HA_00569.JPG	Beartrap Bay PWS07_HA_00629.JPG
	
Comfort Cove PWS07_HA_00700.JPG	Gravina Island PWS07_HA_00764.JPG

Team Orca (RC) Sample Photos (May 31 – June 4, 2007)

	
Little Smith Island PWS07_HA_00887.JPG	East Naked Island PWS07_HA_01183.JPG
	
Bush Point, West Perry Island PWS07_HA_02977.JPG	South Perry Island PWS07_HA_03111.JPG
	
West Twin Bay, Perry Island PWS07_HA_03496.JPG	Sheep Bay PWS07_HA_03934.JPG
	
East Simpson Bay PWS07_HA_04389.JPG	Head of Nelson Bay, Rude River PWS07_HA_04557.JPG

