

FLIGHT REPORT
ShoreZone Aerial Video Imaging (AVI) Survey
Team Ucluelet (UC)
June 19th, 2023



Beg Islands, Barkley Sound (bc23_uc_00054)

Prepared for:
Department of Fisheries and Oceans

Prepared by:
Sea Change Marine Conservation Society



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This flight report summarizes the field activities of the ShoreZone aerial video imaging survey conducted out of Tofino, British Columbia on June 19th, 2023. The survey was conducted by SeaChange Marine Conservation Society (SC) for the Department of Fisheries and Oceans (DFO). A Bell 206 LR helicopter was chartered from Atleo River Air based in Tofino, British Columbia for the aerial survey. Table 1 provides a summary of field crew affiliations and responsibilities.

Table 1. Flight Personnel and Responsibilities for Team Ucluelet (UC).

Crew Member	Individual / Affiliation	Responsibilities
<i>Geomorphologists</i>	Kalen Morrow SC	Videography, geomorphological attribute commentary, survey planning & coordination, post-flight data processing
<i>Coastal Ecologists</i>	Sarah Cook SC	Digital photography, biological attribute commentary, post-flight data processing
<i>In-Flight Navigators</i>	Seanie Malcolm SC	In-flight navigation, survey planning, post-flight data processing
<i>Pilot</i>	Jason Bertin Atleo River Air	Operation of Bell 206 LR aircraft

The tables and figures on the following pages summarize the extent and location of the 168 km of shoreline imagery collected in Ucluelet Inlet and around the Broken Island Group in Barkley Sound.

All imagery was collected according to the latest ShoreZone protocol (Cook *et al.* 2017). Imagery was collected looking at the shoreline from the left side of the aircraft with the doors removed for better field of view. The helicopter maintained a speed of approximately 100km/hr at an altitude of 100m while at a distance of 100m from the low water line, allowing the imagery to be collected at an oblique angle to the intertidal. The imagery is linked to the 1-second positional fixes collected by the GPS in the helicopter by a date-time code (yyyymmddhhmmss). That flightline shapefile will be provided with the imagery.

A total of 2.0 hours of HD video and 2,380 high resolution photos were collected during the survey. This report contains summary tables and maps for the survey illustrating locations, lengths, and key geographic points. The final deliverables will be provided to DFO on a hard drive and will be posted on the [British Columbia ShoreZone ArcGIS map website](https://www.britishcolumbia.ca/shorezone) which can also be found at www.ShoreZone.org.

Table 2. List of video segments for the June 19th, 2023, Team Ucluelet (UC) ShoreZone aerial imaging survey. Corresponds with Figure 1 on the following page.

Video Number	Location	Page No.
BC23_UC_01	Newcombe Channel, Broken Island Group	4
BC23_UC_02	Felice Channel, Ucluelet Inlet	6

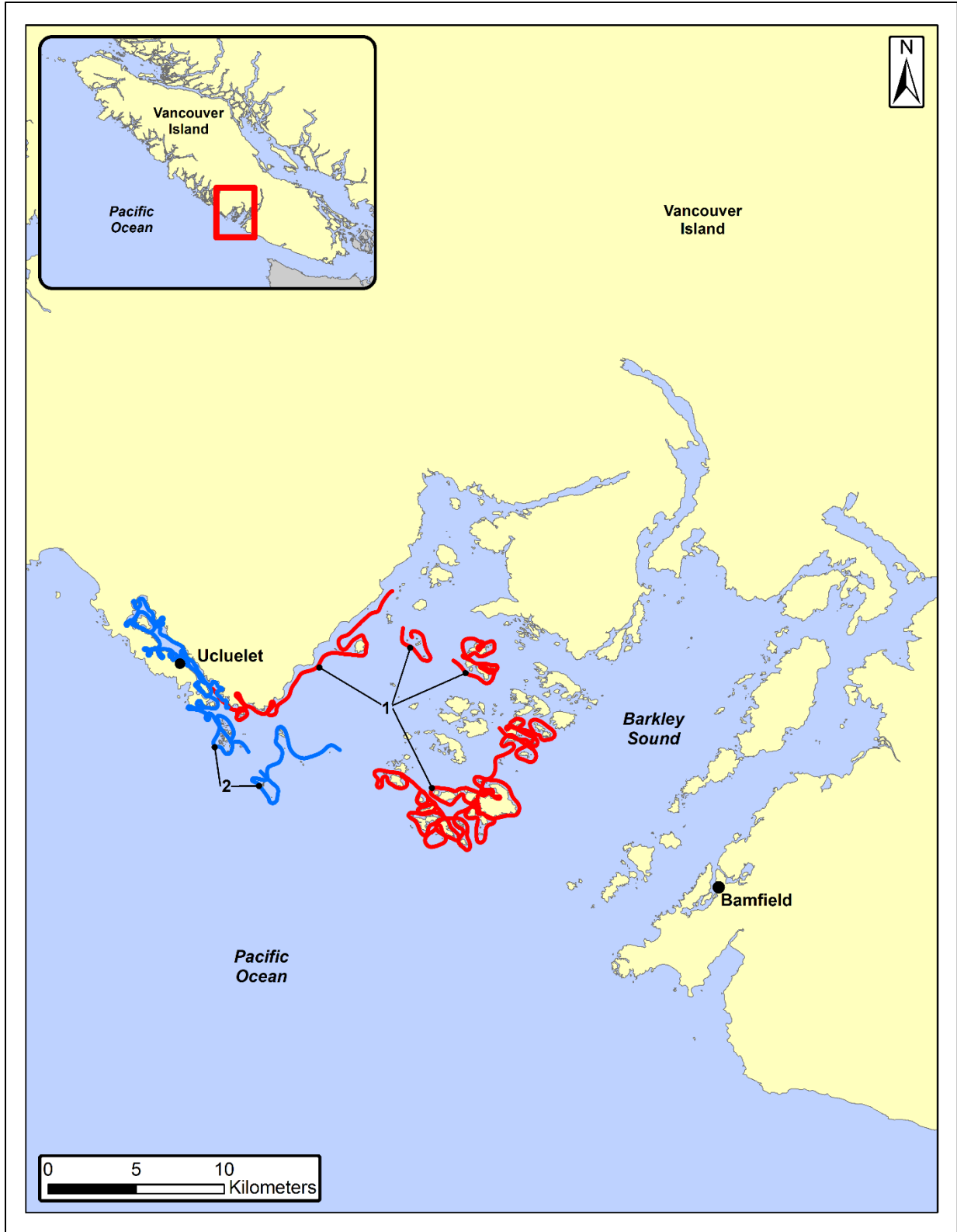


Figure 1. Video location map for the June 19th, 2023, Team Ucluelet (UC) ShoreZone aerial imaging survey conducted out of Tofino, British Columbia.

2023 British Columbia Aerial Video Imaging Survey

Team Ucluelet (UC)

Video: BC23_UC_01

Date: 19 June 2023

General Location: Newcombe Channel, Broken Island Group

Time Start (UTC): 14:44:16

Geo: Morrow

Time End (UTC): 16:03:02

Bio: Cook

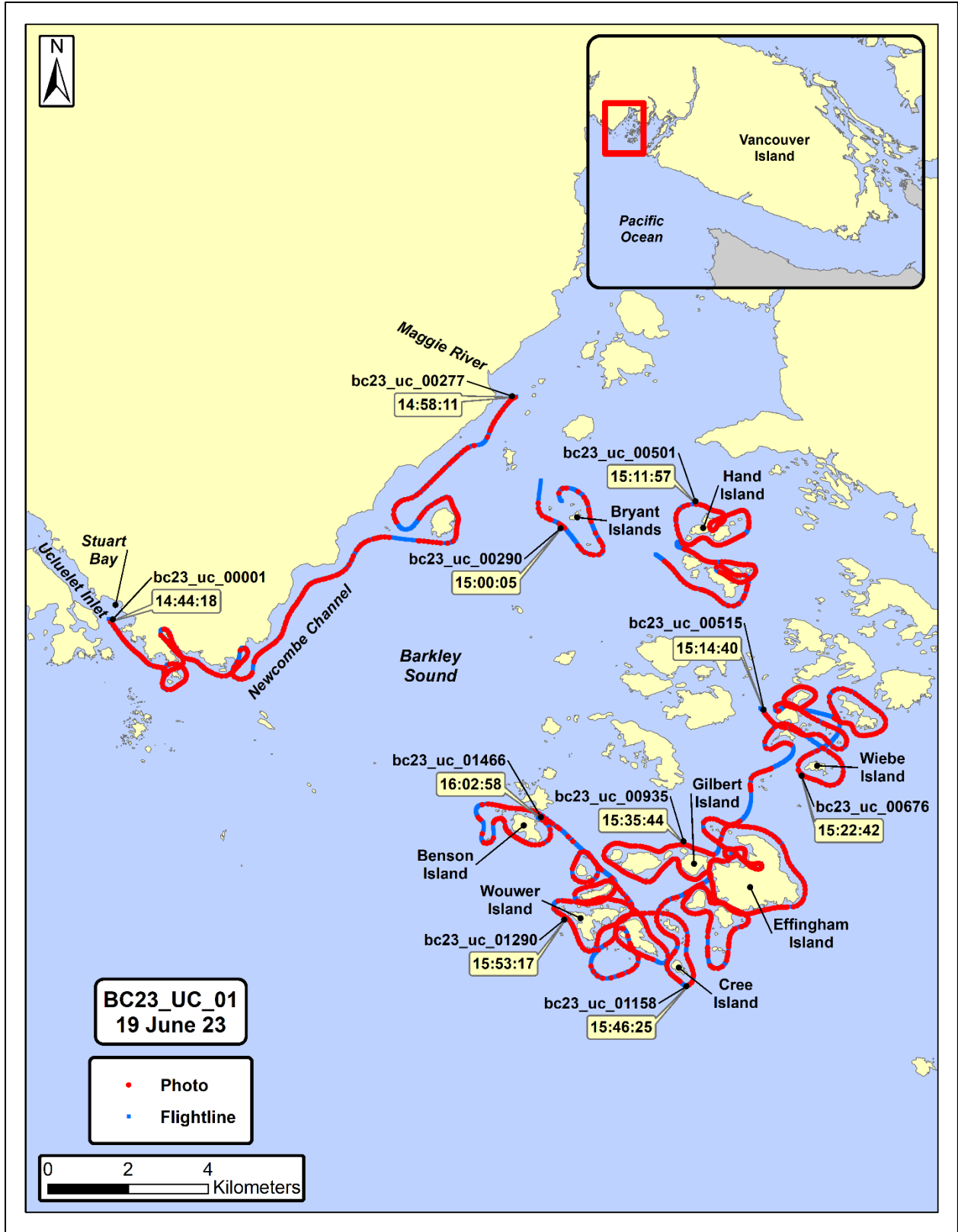
Video Length: 1 hr 14 min 18 sec

Nav: Malcolm

Weather: High overcast

Pilot: Bertin

Time (UTC)	Location	Photo
14:44:18	Stuart Bay	bc23_uc_00001
14:58:11	Maggie River	bc23_uc_00277
Video Break: 14:58:13 to 14:59:17		
15:00:05	Bryant Island	bc23_uc_00290
Video Break: 15:02:15 to 15:03:47		
15:11:57	Hand Island	bc23_uc_00501
Video Break: 15:12:45 to 15:14:35		
15:14:40	Mullins Island	bc23_uc_00515
15:22:42	Wiebe Island	bc23_uc_00676
15:35:44	Gilbert Island	bc23_uc_00935
15:46:25	Cree Island	bc23_uc_01158
15:53:17	Wouwer Island	bc23_uc_01290
16:02:58	Benson Island	bc23_uc_01466



2023 British Columbia Aerial Video Imaging Survey

Team Ucluelet (UC)

Video: BC23_UC_02

Date: 19 June 2023

General Location: Felice Channel, Ucluelet Inlet

Time Start (UTC): 16:04:36

Time End (UTC): 16:50:44

Video Length: 45 min 34 sec

Weather: High overcast

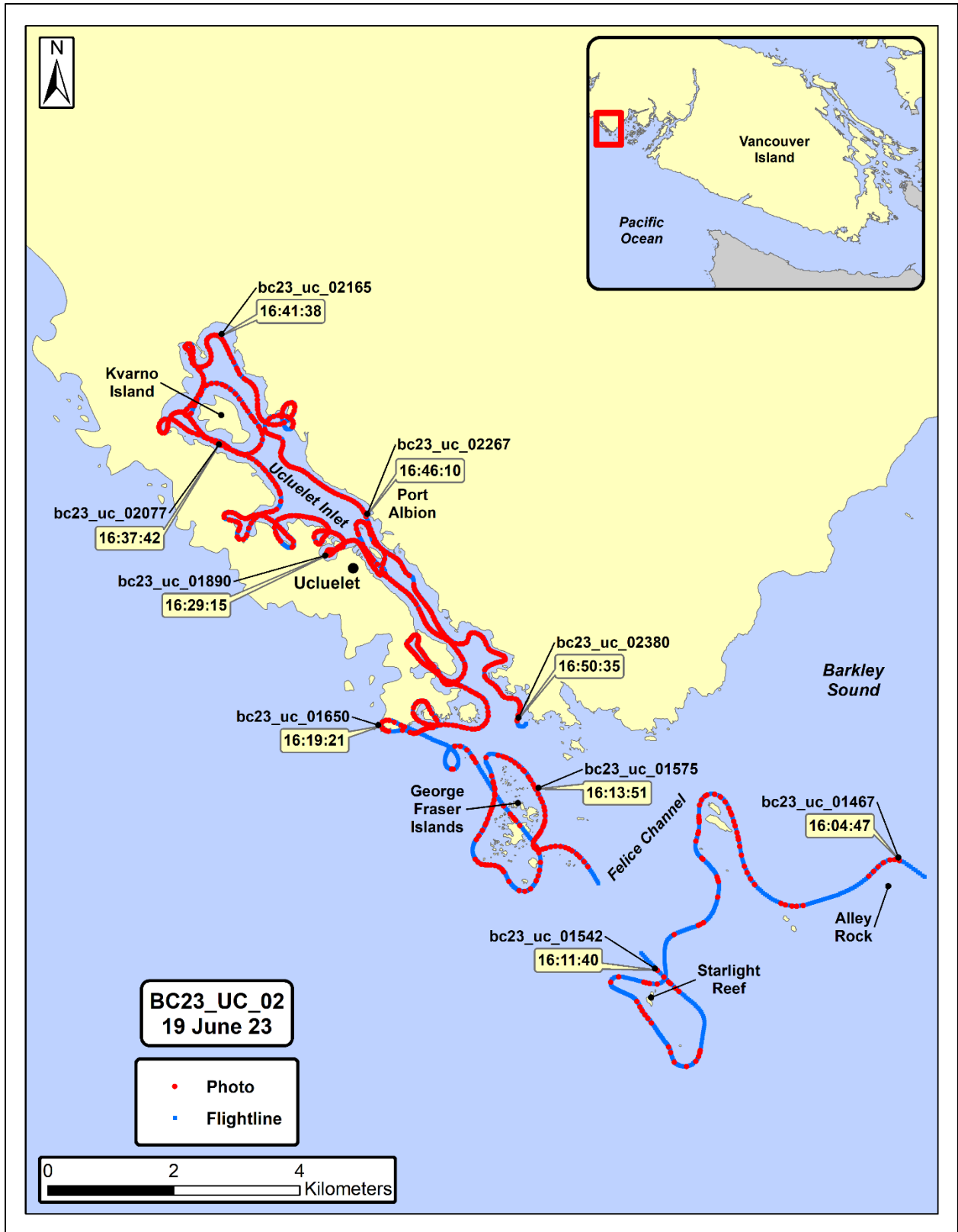
Geo: Morrow

Bio: Cook

Nav: Malcolm

Pilot: Bertin

Time (UTC)	Location	Photo
16:04:47	Alley Rock	bc23_uc_01467
16:11:40	Starlight Reef	bc23_uc_01542
Video Break: 16:11:51 to 16:12:25		
16:13:51	George Fraser Islands	bc23_uc_01575
16:19:21	Amphitrite Point	bc23_uc_01650
16:29:15	Ucluelet Harbour	bc23_uc_01890
16:37:42	Kvarno Island	bc23_uc_02077
16:41:38	Ucluelet Inlet	bc23_uc_02165
16:46:10	Port Albion	bc23_uc_02267
16:50:35	Entrance to Ucluelet Inlet	bc23_uc_02380



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References

Cook, S.E., Daley, S., Morrow, K. and Ward, S. 2017. ShoreZone Coastal Imaging and Habitat Mapping Protocol. Prepared for NOAA Fisheries, Alaska Regional Office, Juneau, Alaska. 78p.

Acknowledgments

The ShoreZone program is a partnership of scientists, GIS specialists, web specialists, First Nations, non-profit organizations, and governmental agencies. We gratefully acknowledge the support of organizations working in partnership for the ShoreZone effort, including: Department of Fisheries and Oceans (OPP Coastal Environmental Baseline Program, PIER Program, and DFO Science), BC Ministry of Environment & Climate Change Strategy, Prince Rupert Port Authority, Pacific Northwest LNG, Metlakatla First Nation, Nisga'a Lisims Government, Gitxaala Nation, Tsleil-Waututh Nation and Musqueam Indian Band.

Access and Use Constraints

Any hardcopies or published data sets utilizing ShoreZone products shall clearly indicate their source. If the user has modified the data in any way, the user is obligated to describe the types of modifications performed. The user specifically agrees not to misrepresent ShoreZone data, nor to imply that changes made were approved by the ShoreZone program or its partners.

To ensure distribution of the most current public information or for correct interpretation, contact the ShoreZone project manager at Sea Change Marine Conservation Society (www.seachangesociety.com). At the time of publication, that person is Kalen Morrow (kalen@seachangesociety.com).

To effectively and appropriately use ShoreZone data, the user shall refer to the current ShoreZone Coastal Imaging and Habitat Mapping Protocol (Cook *et al.* 2017).



Spring Cove, Ucluelet Inlet (bc23_uc_01770)

