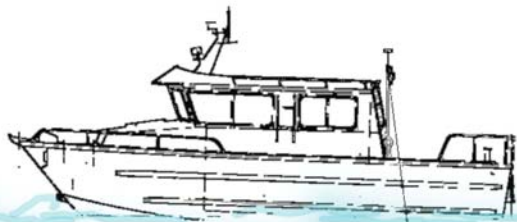


SEABED IMAGING AND MAPPING SYSTEM



The **Seabed Imaging and Mapping System (SIMS)** consists of a towed video camera that images the seabed and is positioned with real-time differential GPS (DGPS). A specialized seabed classification system allows precision mapping of the nearshore substrate, flora and fauna as well as identification of specific seabed targets.

SIMS is an effective and versatile tool for conducting nearshore biophysical baseline investigations, environmental impact assessments and monitoring requirements as well as linear corridor or resource identification. Of increasing value is its application to groundtruth acoustic bottom classification surveys such as sidescan sonar.



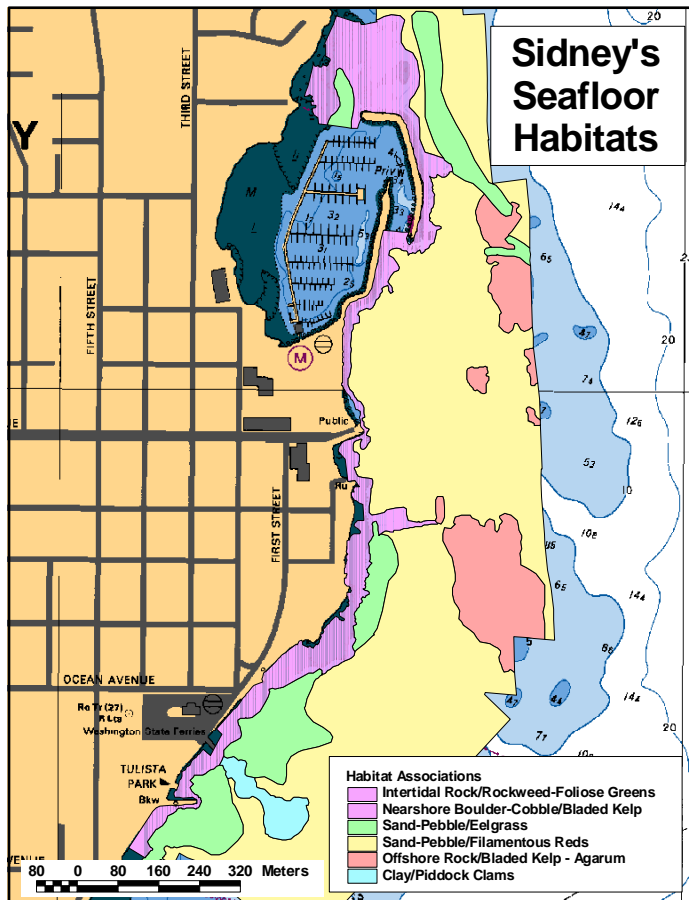
ARCHIPELAGO
MARINE RESEARCH LTD.

For more information, contact **ARCHIPELAGO MARINE RESEARCH LTD.** Tel: (250) 383-4535
www.archipelago.ca

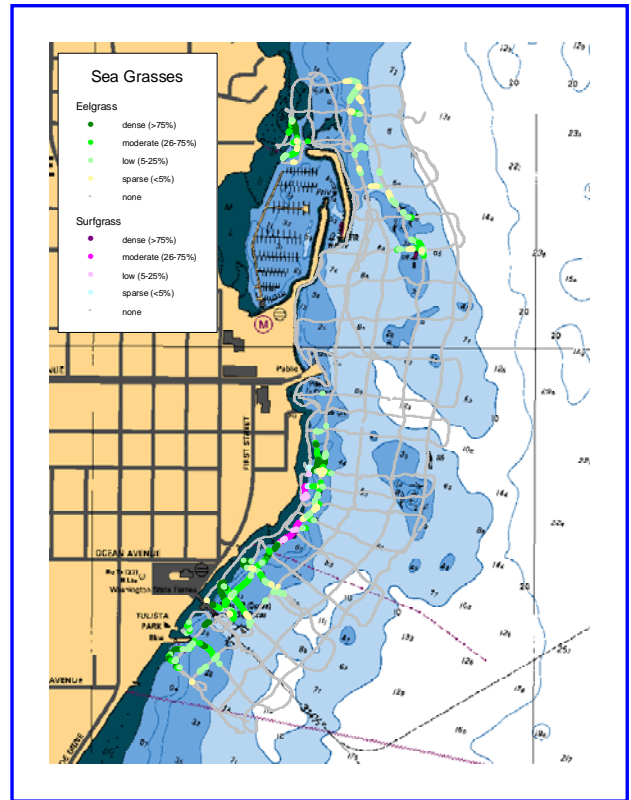
IMAGERY PRODUCTS



Video image capture indicating substrate type and presence of different sea urchin species at 0.7m water depth. Note DGPS coordinates and date stamp.



Habitat associations delineated from sidescan sonar and SIMS survey information.



SIMS survey tracklines showing presence of eelgrass and surf grass as classified by biologist.

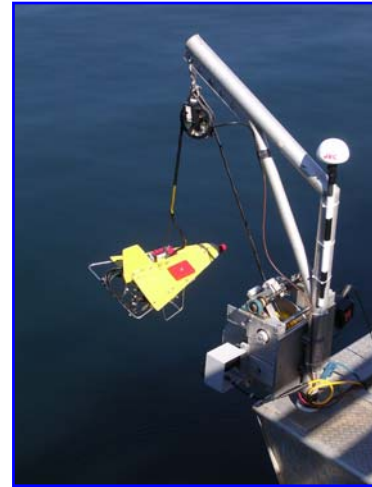


Video image of submarine cable in 12.4m water depth showing early colonization of cable by encrusting epifauna.

TECHNICAL SPECIFICATIONS

Applications

- Nearshore habitat inventories
- Outfall, cable or pipeline corridors
- Repetitive surveys for compliance monitoring
- Regional resource inventories (e.g. eelgrass)
- Shallow subtidal searches (e.g. SAR, equipment recovery)
- Ground-truth acoustic bottom classification surveys (e.g. sidescan sonar, QTC view, Roxanne)



Equipment Features

- Towed, low-light video camera
- Optimized for shallow-water (<40m)
- 1 – 1.5 knot tow speed
- DGPS burn-in to miniDV recorder
- Real-time trackline plotting through ArcView
- Automated data logging of depth and DGPS
- Highly portable, 12vDC power
- Dual green laser light visual scale – provides size of features and speed over ground estimates
- Tow altitude is remotely adjusted through joy-stick controlled winch

Processing Products

- Classification of substrate, flora, and mobile and sessile fauna
- Second by second database (Access 2000) and ArcView GIS integration for geo-referenced mapping and analysis
- Interactive CD-ROMs and web-based GIS products (e.g. Harbours Ecological Inventory and Rating www.crd.bc.ca/watersheds/harbours_atlas/heir.htm)