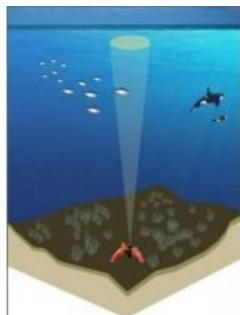


Submersible Echo-sounder Retrieval



Working with NOAA's Northwest Fisheries Science Center (NWFSC), the University of Washington recently retrieved a BioSonics DTX-SUB split-beam echo-sounder after a one-month deployment in northern Admiralty Inlet, WA. The unit was detecting, categorising and counting pelagic fish, invertebrate and marine mammal species in order to determine suitable locations for tidal energy turbines.

The BioSonics DTX-SUB is an autonomous scientific echo sounder packaged in a subsea pressure housing with integrated power management and data storage systems.

"When it's down there, collecting data, it's completely self-contained. There's no line to the surface, no signal to the surface. It's entirely contained in just what you see here," said Jim Thomson, Oceanographer with the University of Washington. The DT-X SUB is being used to detect, categorise, and enumerate pelagic fish, invertebrate, and marine mammal species at the proposed site. The intent is to allow marine hydrokinetic (MHK) site and device developers to install tidal turbines in suitable locations while minimising behavioural effects on aquatic organisms.

After programming the echo sounder configuration and duty cycle at the surface, the echo sounder was deployed to the sea floor affixed to a Seaspider tripod instrument mount. The programmable DT-X SUB system automatically collected and logged water column backscatter data from split beam transducers throughout the month long deployment. The scientific echo sounder was programmed to collect data every other hour in a 10% operational duty cycle, alternating between pinging and sleep modes. This duty cycle maximised temporal coverage and extended battery life for the duration of the deployment. Last week, the system was retrieved using acoustic releases and the data files were downloaded for processing of fish abundance, distribution, and behaviour information.