

ITEM OPPORTUNITY SYNOPSIS

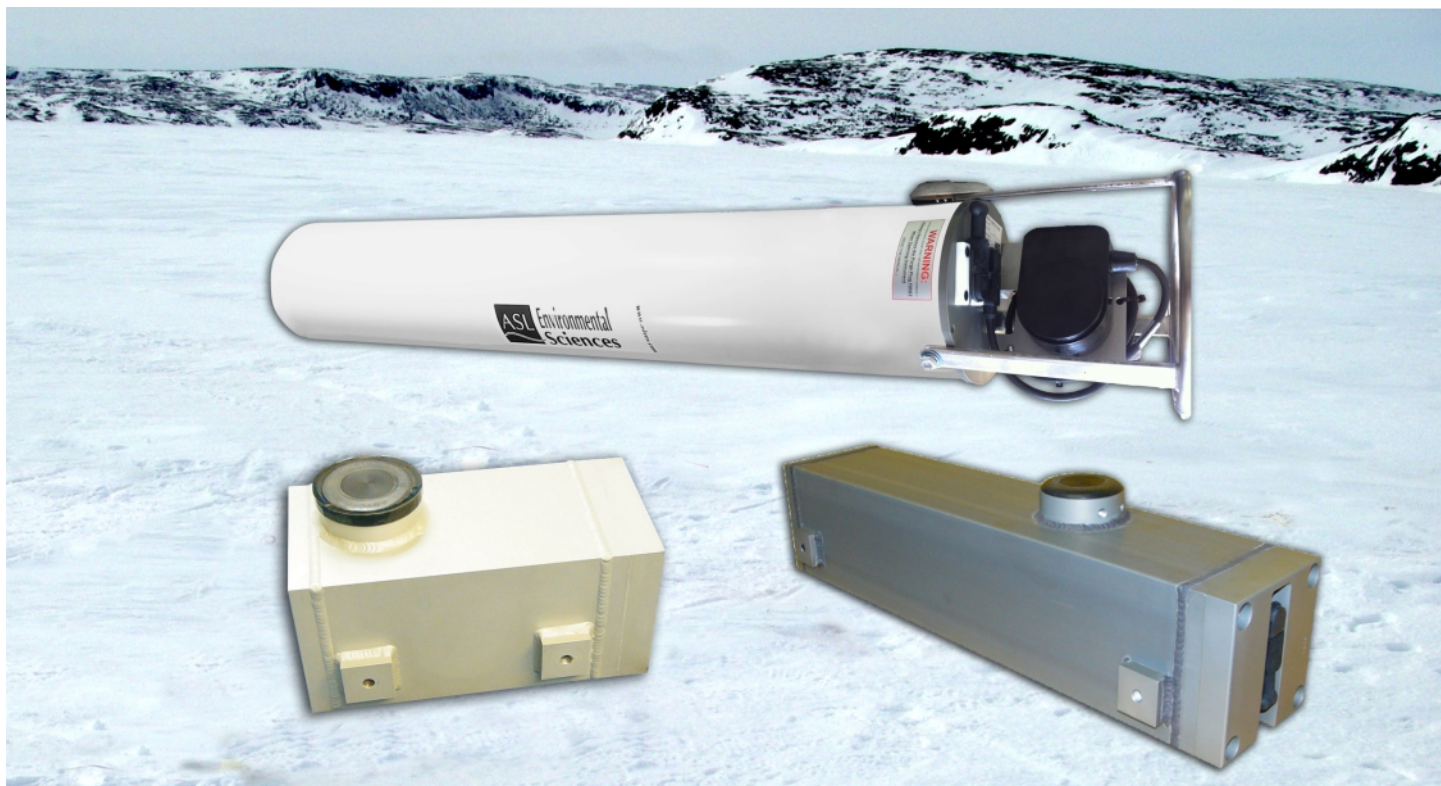
Scouting Number:	2024-172
Name of the item to be scouted:	Environmental Shallow Water Ice Profiler
State item to be used in:	None
Describe the Item:	
<p>Please describe the item application/the end use of the item.</p>	<p>The National Oceanic and Atmospheric Administration (NOAA), Oceanic and Atmospheric Research (OAR), Great Lakes Environmental Research Laboratory (GLERL) is a multidisciplinary environmental research laboratory that provides scientific understanding to inform the use and management of Great Lakes and coastal marine environments. Environmental Sciences Shallow Water Ice Profiler (SWIP) equivalent units are real time acoustic ice profilers for shallow water, which allow scientists to study the effects of these areas with the data provided, in high resolution. The GLERL requires a profiler like the SWIP in order to continue existing data sets in the Great Lakes. The ASL Environmental Sciences SWIP facilitates measurements for river ice cover monitoring for flood control; river, lake and estuary ice research; and frazil ice monitoring near potable and cooling water intakes. It has the ability to monitor and record ice targets at the water's surface, with continuous sampling up to 2 Hz. The instrument has a large on-board data capacity (up to 16 Gbyte), and real-time RS-232 communications or RS-422 for cabled installations > 15 m.</p>
Supplier Information:	
Type of Supplier Being Sought (select from the list below):	
Manufacturer	x
Contract Manufacturer	
Distributor	
Other (Please Specify)	
Reason for Scouting Submission (select from the list below)	
2nd Supplier	
Price	
Re-Shore	
Past supplier no longer available	
New Product Startup	
BABA	x
Other (Please Specify)	
Summary of Technical Specifications and Performance Requirements:	
<p>Describe the manufacturing processes (elaborate to provide as much detail as possible)</p>	<p>Unknown except as provided in attached specs sheet</p>
<p>Provide dimensions / size / tolerances / performance specifications of the item</p>	<p>Features: Monitor and record ice targets at the water surface Record backscatter returns from ice particles suspended in the water column (frazil ice) Up to 2 Hz continuous sampling Excellent horizontal resolution - 542 kHz transducer, 6° beam width Low power requirements (shore power or internal battery pack) Robust low-profile housing Large on-board data capacity(up to 16 Gbyte) by Compact FlashReal-time RS-232 communications or RS-422 for cabled installations> 15 m Versatile Windows-based software for deployment planning and initialization, instrument testing and downloading of stored data Upward Looking Sonar: Operating Frequency: 542 kHz standard; 235 kHz optional Beam Width: 6 degrees standard; 11 degrees optional Sampling Rate: up to 2 Hz Duty Cycle: up to 100% Maximum Range: 20 m Precision: +/- 0.05 m (ice drift) Realtime Clock: Accuracy: +/- 5 min/year Data Storage: Standard: 8 GB Compact Flash Optional: 16 GB Compact Flash Power: External: 8-15 VDC; 1 A (Peak) Internal: 40 Ahr; 200 Ahr Tilt Sensor: Range: +/- 20 degrees Accuracy: +/- 0.5 degrees Precision: 0.01 degrees (noise level) Temperature Sensor: Accuracy: +/- 0.1 degree C Resolution: 0.05 degree C Absolute Pressure Sensor: 3 Bar Strain Gauge Range: 0-20 m Size: External Power: 27cm x 15cm x 15cm 40 Ahr: 62cm x 15cm x 15cm 200 Ahr: 117cm x 17cm x 17cm Optional Features: 235 kHz frequency with 11° beam width (for slush and thermal ice studies) Magnesium/Zinc anodes for fresh/salt water corrosion protection Simple aluminum bottom mounting platform Heated pyramid shaped ice resistant bottom frame Shore-based barometer for draft calculations Polyurethane jacketed cable (max 1200 m long) Armoured cable (max 300 m long) Customized shore-based data management system for SWIP and integrated ADCP Mounting design assistance and equipment available upon request Ice Profiler Processing Toolbox™ software for processing and analysis of SWIP and ADCP ice velocity data sets . Acoustic Profile Analyzer - visualization of acoustic backscatter profiles Data Processing Services</p>
<p>List required materials needed to make the product, including materials of product components, if applicable</p>	<p>Unknown except as provided in attached specs sheet</p>
Are there applicable certification requirements?	
Yes	
No	x

Please explain:	
Are there any applicable regulations that apply to the production of this item?	
Yes	
No	x
Please explain:	
Are there any other standards / requirements?	
Yes	
No	x
Please explain:	
NAICS CODES:	
NAICS 1	334519 Other Measuring and Controlling Device Manufacturing
NAICS 2	
Additional Comments:	
Additional technical comments:	Market research performed by technical SMEs in the program office has produced no other products that are similar to the one required. The profiler is unique for profiling shallow ice.
Volume and Pricing:	
Estimated Potential Business Volume (i.e. #units per day, month, year):	One-time purchase
Estimated Target Price/Unit Cost Information:	\$44,640.00
Delivery Requirements:	
When is it needed by? (Immediate, 30 days, 6 months, etc.)	Estimate award of contract no later than end of current fiscal year (by 09/20/2024), with delivery required by 60 days after date of award.
Describe packaging requirements (i.e. individually/group packaging, etc.)	N/A
Where will this item be shipped?	Ann Arbor, MI
Additional Comments:	
Is there other information you would like to include?	This is a Simplified Acquisition, which has a shorter lead time to completion than an action over \$250,000.00. It is expected that this requirement will be awarded within the next 30-60 days, and any timely scouting (requested completed within 15 days from submission) would be appreciated to align with Simplified Acquisition requirements for posting and the Buy American Act Waiver process. Agency contact information for questions on BABA/Buy American compliance: Department of Commerce Point of Contact: Marcelle Loveday, Director, Acquisition Policy & Workforce Office of Acquisition Management MLoveday@doc.gov



ASL Environmental
Sciences

Shallow Water Ice Profiler (SWIP)TM



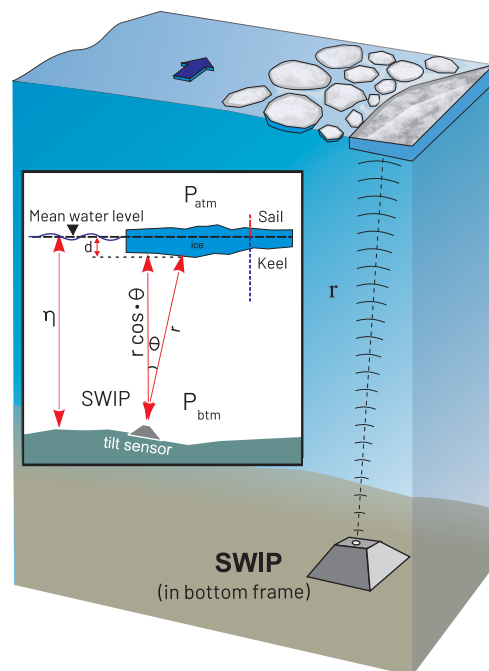
Applications

In-situ measurements are essential for understanding and monitoring lake, river and tidal ice dynamics. The SWIP now facilitates measurements for applications such as:

- River ice cover monitoring for flood control
- River, lake and estuary ice research
- Frazil ice monitoring near potable and cooling water intakes

Features

- Monitor and record ice targets at the water surface
- Record backscatter returns from ice particles suspended in the water column (frazil ice)
- Up to 2 Hz continuous sampling
- Excellent horizontal resolution - 542 kHz transducer, 6° beam width
- Low power requirements (shore power or internal battery pack)
- Robust low-profile housing
- Large on-board data capacity (up to 16 Gbyte) by Compact Flash
- Real-time RS-232 communications or RS-422 for cabled installations > 15 m
- Versatile Windows-based software for deployment planning and initialization, instrument testing and downloading of stored data



Typical SWIP deployment



ASL Environmental
Sciences

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SWIP Specifications

Shallow Water Ice Profiler (SWIP)™

UPWARD LOOKING SONAR

	(Standard)	(Optional)
Operating Frequency	542 kHz	235 kHz
Beam Width	6°	11°
Sampling Rate	up to 2 Hz	
Duty Cycle	up to 100%	
Maximum Range	20 m	
Precision	± 0.05 m (ice draft)	

REALTIME CLOCK

Accuracy	± 5 min/year
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DATA STORAGE

Standard	8 GB Compact Flash
Optional	16 GB Compact Flash
	(External) (Internal)
POWER	8-15 VDC 40 Ahr
	1 A (Peak) 200 Ahr

TILT SENSOR

Range	± 20°
Accuracy	± 0.5°
Precision	0.01° (noise level)

TEMPERATURE SENSOR

Accuracy	± 0.1°C
Resolution	0.05°C

ABSOLUTE PRESSURE SENSOR

3 Bar Strain Gauge	
Range	0 - 20 m

SIZE

External Power	27 cm x 15 cm x 15 cm
40 Ahr	62 cm x 15 cm x 15 cm
200 Ahr	117 cm x 17 cm x 17 cm

OPTIONAL FEATURES

- 235 kHz frequency with 11° beam width (for slush and thermal ice studies)
- Magnesium/Zinc anodes for fresh/salt water corrosion protection
- Simple aluminum bottom mounting platform
- Heated pyramid shaped ice resistant bottom frame
- Shore-based barometer for draft calculations
- Polyurethane jacketed cable (max 1200 m long)
- Armoured cable (max 300 m long)
- Customized shore-based data management system for SWIP and integrated ADCP
- Mounting design assistance and equipment available upon request
- Ice Profiler Processing Toolbox™ software for processing and analysis of SWIP and ADCP ice velocity data sets.
- Acoustic Profile Analyzer - visualization of acoustic backscatter profiles
- Data Processing Services

Example Ice Draft Measurements

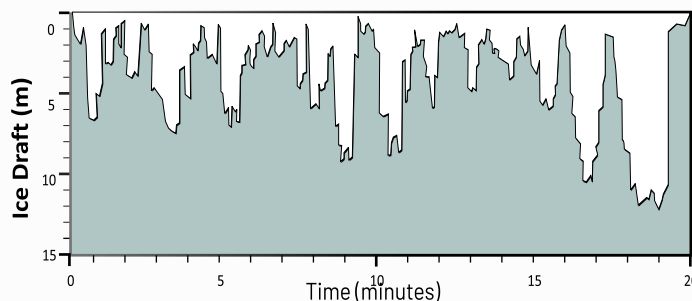


Photo courtesy of Dr. Eliisa Lotsari, U. Eastern Finland

Mounting Considerations

- Position instrument within ± 15° of horizontal
- Verify transducer tilt at deployment
- Planning for ice impact and anchor ice issues
- Installing with divers recommended

