



# ECOMAPPER™

Autonomous Underwater Vehicle



Generate **high-resolution maps**  
**of water quality and bathymetry**  
without getting your feet wet.



## Sensor suite

(pressure sensor and altimeter not shown)



**EcoMapper** is a unique AUV designed specifically for water quality and bathymetry mapping applications.

Monitoring the natural environment can be challenging. We have designed a monitoring platform that will generate the highest-resolution data at a low cost and low risk to your personnel.

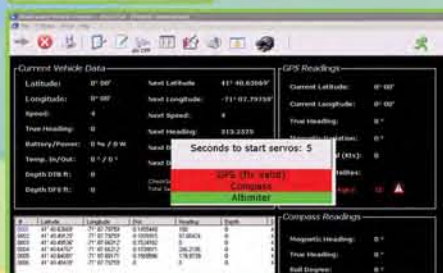
## Key features

- 8 water quality sensors and side-scan sonar are logged continuously as vehicle moves through water column
- Deployable by one person
- Easy and fast mission planning
- 8-hour plus run times at speeds of 2-4 knots
- Side-scan sonar option
- Wi-Fi communication and GPS navigation

## 5 Steps to an EcoMapper Mission



- 1 Using VectorMap software, create a point-and-click mission on a geo-referenced map.



- 2 Start EcoMapper with key fob. Using Windows™ Remote Desktop, load mission onto EcoMapper's UVC Software.



- 3 Place vehicle in water and start mission.





### Baseline Monitoring

- Detailed data on horizontal and vertical planes
- Reduce number of personnel on the water
- Reduce costs to run monitoring program
- Simultaneous bathymetric and water quality mapping



### Source Water Mapping

- Improve knowledge of raw water quality
- Early warning of algal blooms and low DO events
- Make informed treatment decisions
- Reduce water treatment operating costs



### Event Response

- Plan a mission and deploy in less than 30 minutes
- Change missions on the fly
- Get real-time data stream
- Deploy from shore



### Bottom Mapping

- Depth sounder standard
- Side-scan sonar optional
- Simultaneous bathymetric and water quality data
- Requires <1 m water depth



### Point Source and Non-point Source Mapping

- Generate high-resolution map of plume
- Track movement of point source
- Map non-point source impacts to environment
- Monitor impacts by industry or development



- 4 When EcoMapper is on the surface and within Wi-Fi range, view data and monitor progress. Or take manual control over vehicle.



- 5 Retrieve EcoMapper at planned PARK location. Download data via Wi-Fi link; transfer data to preferred graphing software.







[www.ysi.com](http://www.ysi.com)

### US Sales and Support Centers

YSI Integrated Systems & Services  
13 Atlantis Drive  
Marion, MA 02738  
800 363 3269  
+1 508 748 0366  
[systems@ysi.com](mailto:systems@ysi.com)

YSI Incorporated  
1725 Brannum Lane  
Yellow Springs, OH 45387  
+1 937 767 7241  
[environmental@ysi.com](mailto:environmental@ysi.com)

AMJ Environmental  
+1 727 565 2201  
[info@amjenviro.com](mailto:info@amjenviro.com)

YSI Gulf Coast  
+1 225 753 2650  
[gulfcoast@ysi.com](mailto:gulfcoast@ysi.com)

Sontek/YSI  
+1 858 546 8327  
[inquiry@sontek.com](mailto:inquiry@sontek.com)

### Who's Minding the Planet?®

EcoMapper is a trademark of YSI Incorporated. All other trademarks are registered by their respective companies.

© 2008 YSI Incorporated

E87 0608

## Specifications EcoMapper AUV

<b>Dimensions</b>	Length: 60.1 in (152.65 cm); Diameter: 5.8 in (14.73 cm)
<b>Weight (air)</b>	45 lbs (20.41 kg)
<b>Energy</b>	600 WHrs of rechargeable Lithium-Ion batteries (>300 cycles)
<b>Endurance</b>	8 hours at speed of 2.5 knots; battery configuration dependent
<b>Speed Range</b>	1-4 knots
<b>Control</b>	Four independent control planes
<b>External Hook-up</b>	Data: wireless 802.11g Ethernet (up to 200 m comm. distance)
<b>Navigation</b>	Dead reckoning via GPS (WAAS corrected in US) when on the surface
<b>Tracking</b>	Internal data log; programmable resolution
<b>Sensors</b>	Temperature, conductivity, depth, height from bottom, three-axis digital compass
<b>Onboard Electronics</b>	Low-power X86 processor, large 80 GB disk drive for data collection
<b>Software</b>	Windows XP embedded, GUI-based navigation suite
<b>Communication</b>	2.4 GHz radio link when on the surface

### Options

<b>Sensors</b>	Optical dissolved oxygen, turbidity, chlorophyll fluorescence, blue-green algae fluorescence, pH, ORP
<b>Side-Scan Sonar</b>	Imagenex 330 kHz or 330/800 kHz
<b>Security System</b>	Safety float emergency airbag recovery system

## Mapping Service

YSI offers a complete mapping service with the EcoMapper AUV. Please contact us for more information.

