

**ThayerMahan**  
Sea beyond

**UXO/MEC**

Unexploded Ordnance and  
Munitions of Explosive Concern

## Survey, Inspect, Remove, Remediate

**Disposition of All Munitions and Explosives:** With over 900 years of subject matter expertise, ThayerMahan is unrivaled in its experience in combat and live ordnance operations both at sea and ashore worldwide.

- Authored the first U.S. Regulatory Disposition and 15 Munitions Response Plans in accordance with the new Committee on Maritime Transportation System guidance with full approval and operational execution
- Developed remote ordnance lifting systems to conduct “lift and shift” disposition
- Created one of a kind Remote Heading and Azimuth Positioning System (RHAPS) for rapid relocation
- Delivered over 4 million man-hours to date of safe UXO ID and disposition operations on multiple US MEC/UXO projects

### All Types of UXO/MEC



**PROJECTILES**



**SEA MINES**



## Rapidly Enable Access to UXO/MEC Denied Realms

The ThayerMahan team is unmatched in its expertise, and provides the culture, skill set and technologies to eliminate explosive threats wherever they exist. Working with regulators from all aspects of the Committee on Maritime Transportation Security, ThayerMahan's exacting approach to UXO/MEC Identification and Disposition prosecution, Data documentation, ALARP certification, and cradle to grave oversight on recommended procedures and the UXO/MEC campaign has guaranteed the success of any UXO/ MEC operation regardless of size or complexity.



**Explosive ordnance disposal demands exacting and absolute professional ability - which can only be obtained through the hard-earned experience of field operations on land and at sea.**



**Contact Us Today**  
[www.thayermahan.com](http://www.thayermahan.com)





# SEAPICKET

## Fixed Acoustic Monitoring

SeaPicket® is a fixed element of a fully integrated and networked maritime surveillance solution which provides real-time detection, reporting, and tracking of contacts of interest in coordination with other autonomous surveillance elements such as the Outpost® mobile acoustic detection platform.

- Bottom-mounted sonar arrays maximize detection range
- SeaPicket digital signal processing and data management system classifies and reports contacts of interest
- Real-time Shore Communications: Satellite, Cellular, or Marine Band Radio
- Detects & localizes contacts at extended ranges
- Scalable coverage



### Your Advantage

#### Cost Savings

- Cost-effective deployment process - no complex support vessels
- Low maintenance with robust and long endurance design

#### Advanced Technology

- Real-time insights for faster decision-making
- Improved environmental and defense monitoring

#### Leader in Industry Standards

- Export-approved for international defense and research
- Enhanced mission readiness

#### Quality Design

- Smart design for easy deployment and maintenance
- Built to last in the harshest marine environments - years of experience of use in the Atlantic Ocean diverse seasons
- Scalable for global deployment

# SeaPicket Fixed Acoustics

## Know What is Below

Persistence

Six+ months without maintenance

Survivability

Sea State 6

Wide Area Surveillance

Four Systems deliver ~50,000 = km<sup>2</sup> coverage\*\*

\*\* Surface Contact Coverage Area

Surface Platform 1

- Advanced digital signal processing payload
- Encrypted commercial satellite communications
- Persistent energy harvesting buoy

Flex Hose 2

Acoustic Array 3



### ENERGY-HARVESTING & AUTONOMOUS

SeaPicket® operates autonomously with energy harvested from environmental sources, providing long-term functionality without the need for regular maintenance. It has a long dwell time of up to six years, making it an ideal persistent surveillance solution.



### MULTI SENSOR INTEGRATION

Equipped with a combination of acoustic, radar/EW, video, and AIS sensors, SeaPicket® offers comprehensive monitoring capabilities for maritime security.



### LONG-TERM SURVEILLANCE

SeaPicket's autonomous design and energy-efficient sensors allow for persistent surveillance of seaports and the surrounding maritime domain for up to six months continuously gathering critical data.



### CLOUD-BASED MARITIME DATABASE

SeaPicket® collects, processes, and stores maritime identifiers, creating a secure cloud-based database. This data is used to enhance security and provide critical insights to authorities.



### ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING

The platform leverages AI, machine learning, and predictive analytics to analyze vast amounts of maritime data. These technologies help improve decision-making for port security and provide unmatched domain awareness.



Learn More

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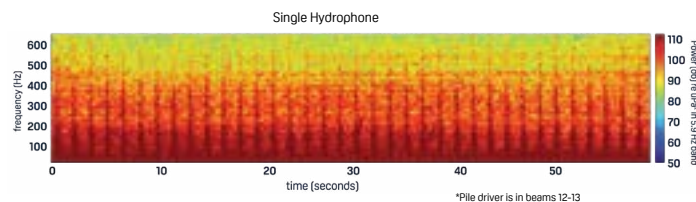
# MARINE MAMMAL MONITORING

CURATED REPORTS FOR BETTER DECISION MAKING

## DETECT, CLASSIFY, LOCALISE, AND TRACK

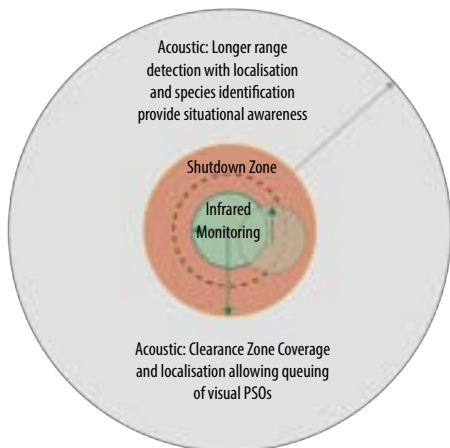
ThayerMahan's Marine Mammal Monitoring (MMM) solution leverages military grade remote passive acoustic monitoring, electro-optical and infrared (EO/IR) cameras, and visual observers to provide an around-the-clock monitoring capability that meets requirements for daytime and nighttime monitoring. Curated contact reports are delivered in near real-time for analysis and decision making.

### Offshore Construction Can't hear a whale

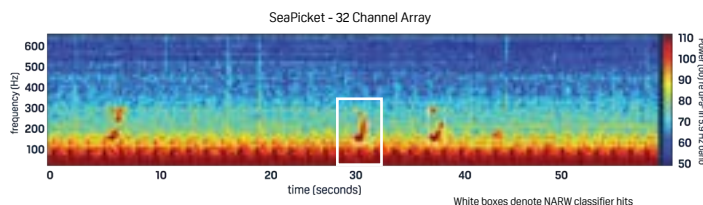


## ThayerMahan's Marine Mammal Monitoring

The ONLY solution that can report whales at night



The ONLY solution to hear whales through pile driving



### Key Features

- Complies with regulatory requirements
- Effective in nighttime conditions
- Wide-area coverage; high-precision localisation
- Robust noise rejection
- Remote operations minimise personnel at sea

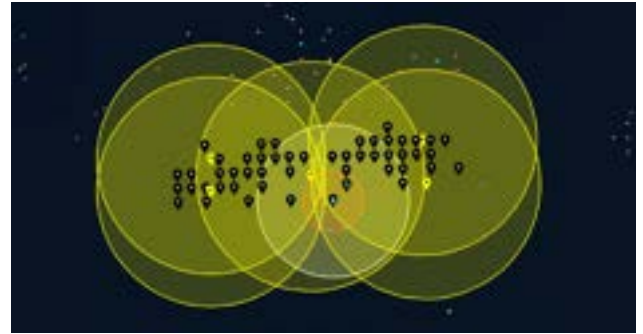
# MARINE MAMMAL MONITORING

## Combined Passive Acoustic and Visual Solution

### UNIQUE & UNEQUAL

- Approved by regulators and deployed for US offshore wind.
- Large bottom mounted arrays “hear through” high noise events.
- Delivers the best Signal-to-Noise Ratio (\*SNR) in the industry.
- Digital beamforming provides precise bearing/location information.
- Thousands of automatic spectrogram and AI-driven auto classifications of North Atlantic Right Whales.
- Curated contact reports in near real-time (< 5 min).
- Support from qualified analysts with more than 500 years of combined U.S. Navy acoustic experience.

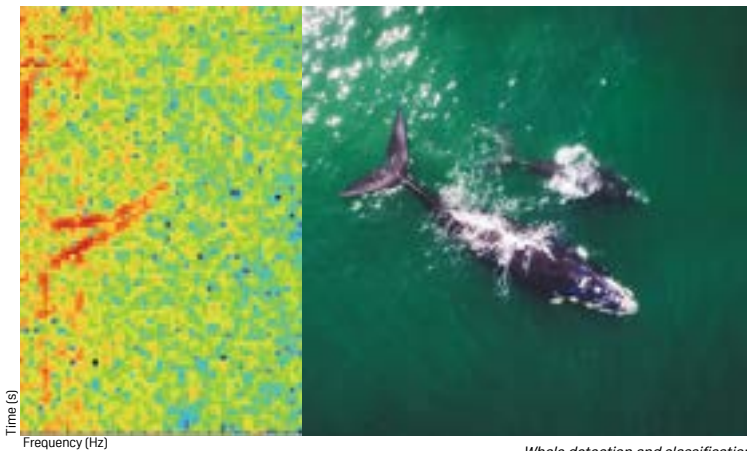
*\*SNR is the best quantitative measure of sonar system performance.*



Five arrays (yellow) cover U.S. monopile installation (black)



Three arrays locate and report a whale



Whale detection and classification

### Enabling Environmental and Regulatory Compliance

- Precision localization and noise rejection help accurately identify marine life and avoid false positives, supporting compliance with environmental regulations.
- Remote operations reduce human error and improve consistency in monitoring, aiding in permitting and reporting accuracy.



**CONTACT US**  
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### Protecting Marine Mammals

- Advanced beamforming enables early and accurate detection of marine mammals, helping to prevent harm and reduce ecological impact.
- Noise rejection ensures signals from marine mammals aren't lost in construction noise, improving detection reliability.

### Minimising Construction Shutdowns

- Our high-precision detection technology significantly reduces false or last-minute alerts, ensuring smoother operations and fewer shutdowns.
- 24/7 remote monitoring ensures continuous situational awareness, reducing downtime and improving cost efficiency.

### Enhancing Operational Planning and Safety

- Pattern-of-life awareness from continuous data collection supports strategic planning and adaptive operations.
- Remote data collection reduces the need for on-water acoustic personnel, enhancing safety and lowering operational risk.