

# Sediment Management

## Rapid Seafloor Reconnaissance and Assessment Through Innovative Optical Coring Technology



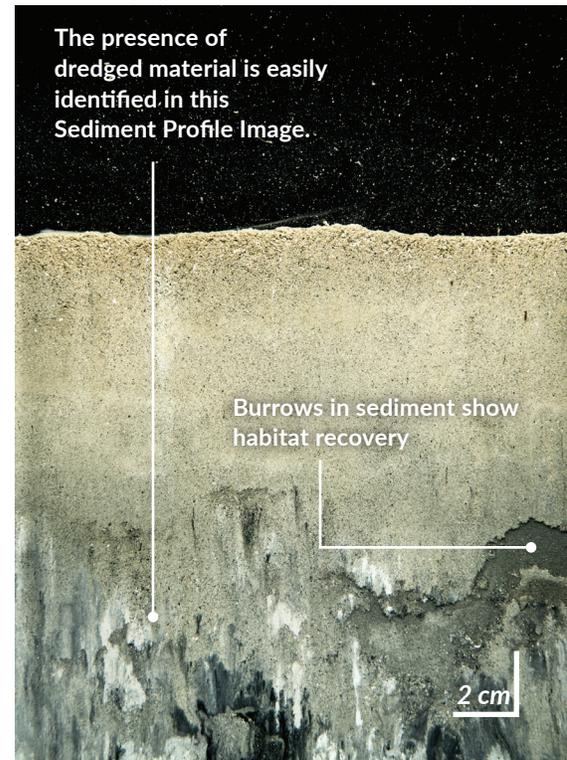
**INSPIRE Environmental assesses the health of the seafloor**, delivering high-quality, cost-effective solutions across a wide range of sediment management issues in marine and aquatic environments for commercial and government clients.

Our **Sediment Profile Imaging** and **Plan View** camera system enables us to interpret seafloor images in real-time, facilitating swift, adaptive sampling that allows immediate survey adjustments based on sediment characteristics and presence of dredged material. SPI images provide easily understandable results that allow managers to convey complicated scientific material to diverse audiences.

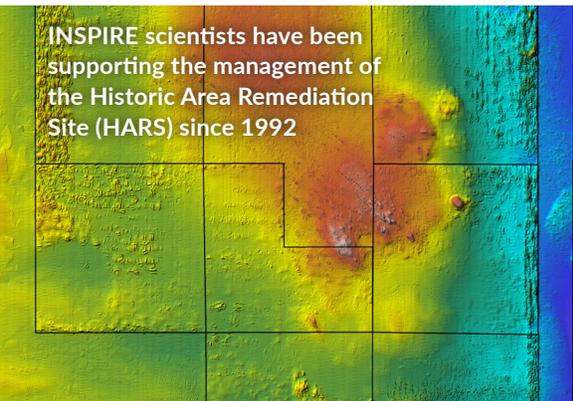
We at INSPIRE listen to our clients' unique needs to customize integrated and scientifically defensible approaches to support site management in relation to disposal history and regional guidelines. Using this approach, we have supported the New England and New York Districts of the U.S. Army Corps of Engineers in **dredged material management** since 1992.

INSPIRE also supports a wide range of clients with assessment of contaminated sediments in support of remedial investigations, feasibility studies (RI/FS), Natural Resource Damage Assessments (NRDA), and Environmental Assessments (EAs).

**INSPIRE scientists invented SPI technology** and offer the most experienced interpretation and integration of seafloor information available.



Sediment Profile and Plan View Camera



INSPIRE scientists have been supporting the management of the Historic Area Remediation Site (HARS) since 1992



### INSPIRE Environmental

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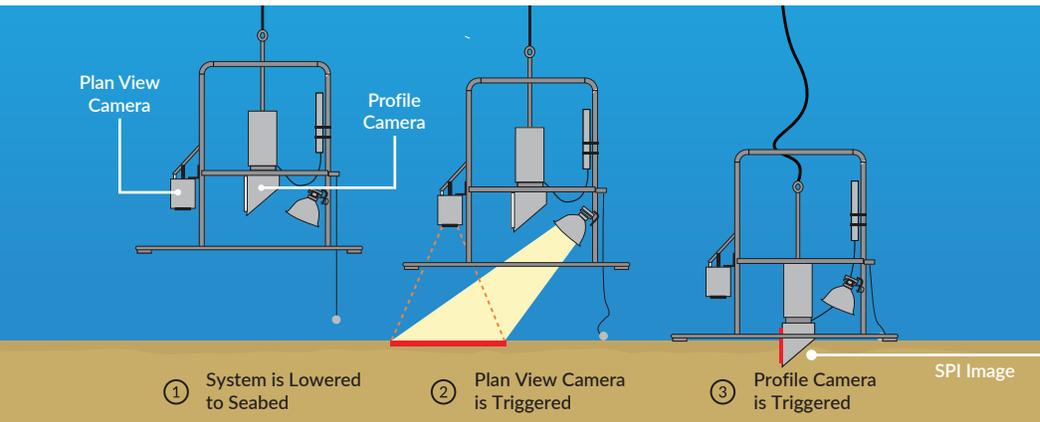
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## What Is Sediment Profile Imaging (SPI)?

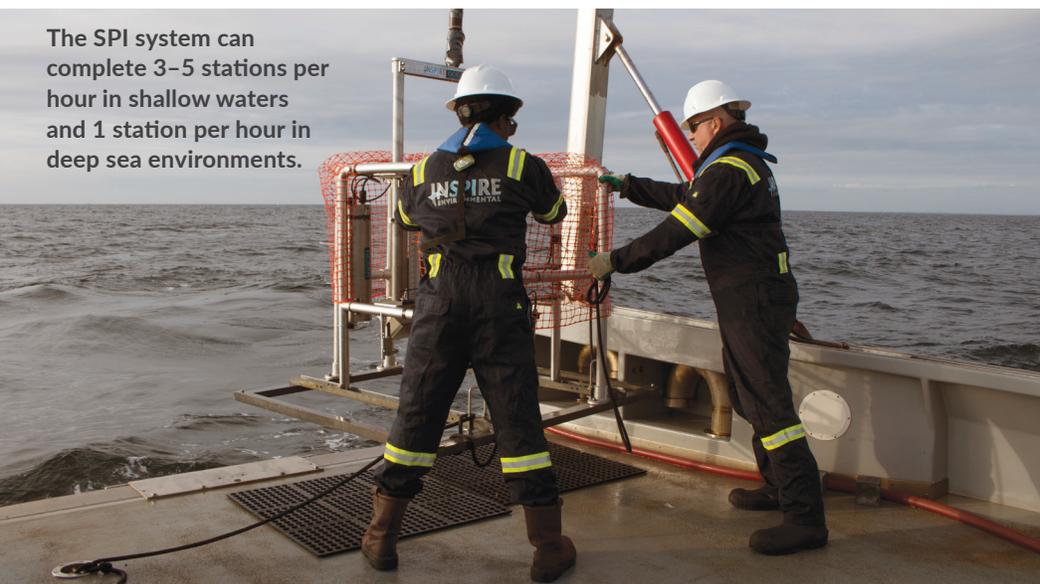
Developed by INSPIRE scientists four decades ago, SPI is an optical coring device that works like an upside-down periscope, taking cross-sectional images of the upper 20 cm of the seafloor. Our system combines a plan view and a profile camera to produce data that our scientists use to analyze and interpret physical, chemical, and biological parameters in oceans, lakes, and rivers. SPI is a proven alternative to traditional benthic sampling methods.



## Sediment Profile Imaging/Analysis Allows You To:

- › Delineate dredged material mounds, deposits, and capping layers.
- › Verify presence or absence of dredged material, rapidly and efficiently.
- › Map visible sediment contaminants: coal tar, DNAPL, wood waste.
- › Accurately detect physical, biological, and geochemical gradients.
- › Reduce project costs by optimizing in-field sediment sampling.
- › Characterize ecological conditions and recovery of affected seafloor habitats.
- › Efficiently monitor impacts from dredged material disposal.
- › Cost-effectively quantify surface features, biota, sediment type, and dynamics.
- › Produce results that are easily understandable by a non-scientific audience.

The SPI system can complete 3-5 stations per hour in shallow waters and 1 station per hour in deep sea environments.



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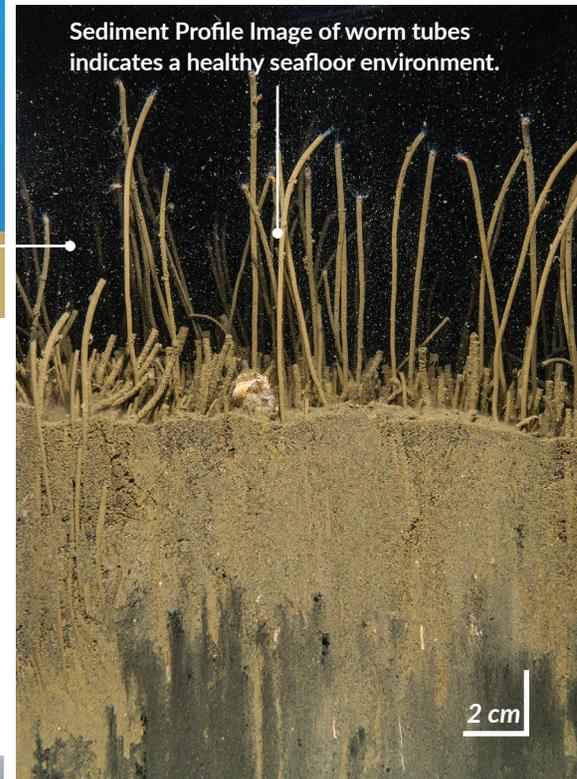
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## Suite of Services for Sediment Management

- › Sediment Profile and Plan View Imaging
- › Sediment Collection for Biological and Chemical Analysis
- › Tissue Collection
- › Data Visualization and Reporting
- › Integrated Interpretive Reporting
- › Creation of Interactive Reports and Computer Animations



## Our Clients Include:

- › US Army Corps of Engineers
- › US Environmental Protection Agency
- › State of WA: DNR, DOE
- › Port of Seattle, WA
- › US Navy
- › Hong Kong Civil Engineering Dept.
- › City of Sitka, AK
- › ExxonMobil
- › Chevron Texaco
- › Petrobras
- › Eni Syndial
- › Pacific Gas & Electric
- › Golder Associates
- › EHS Support