SILT CURTAINS - TURBIDITY BARRIERS Most construction or dredging projects require only simple protection. Though these typically do not require much engineering, loading calculations or detailed design, Mackworth's understanding of these concepts will facilitate that the system you bid or use will be the best to meet your needs and save you from failure to meet performance requirements.

BOTTOM-SEALED BARRIERS may be appropriate where contaminants, fish habitat, or stringent performance criteria are a concern. Standard barriers that do not seal with the bottom increase current velocity next to bottom sediments and exacerbate, not minimize, suspension. Mackworth is the only company with experience in design, fabrication and installation of bottom-sealed systems.

SPECIALTY BARRIERS can save money and help meet difficult environmental performance requirements. Where fish must be excluded from a construction area, Mackworth has the capability to design full fish exclusion systems. For contaminated sites, our expertise in chemistry and remediation of chemically contaminated sites, especially those with hydrocarbons, is drawn into our approach to design, installation and maintenance.

Mackworth provides solutions that utilize screening & filtering technologies in aquatic environments.

Consulting Services
- Concept development
- Cost estimating
- Feasibility studies
- Design and Engineering
- Bid Specifications

Systems
- Acquisition
- Fabrication
- Off-the-shelf system customization

Field Services
- Pre-Design or Pre-installation Studies
- Installation Field Guidance & Support
- Installation Full-Service
- Post-Installation Inspections
- Installation Certification
- Monitoring
- Operation and Maintenance

To learn more, visit us at
Mackworth-Enviro.com
or call 207-883-1777

Andrew J. McCusker, C.E.P.
General Manager, Technical Consultant
& Project Manager | 30 years experience

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Mackworth

Aquatic Filtering & Screening Barrier Systems

Sediment Control and Dredging Applications

Solutions That Work

MACKWORTH-ENVIRO

The Right Technology

Project suspended sediment and turbidity mitigation requirements and specifications frequently are not based in a full understanding of control technologies. On one end of the spectrum, a project may only allow the use of sheet-pile cofferdams. These are expensive and create their own disturbances.

On the other end of the spectrum, many projects call for a "turbidity barrier" or "silt curtain" with little specificity. While this may be functional for some projects, the result can allow, or even increase, the sediment suspension beneath the curtain.

Mackworth personnel have over 15 years of experience identifying and designing site-specific control technologies. Mackworth can determine the right solution for a project's suspended sediment and turbidity mitigtion requirements.

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The Right Experience

Portland, Maine

Contaminated Sediment Removal (Cofferdam Alternative)

A composite-layer, full-depth filter barrier was installed to limit release of contaminated sediments during remedial shorefront work at a site of a former manufactured gas plant.

Challenges successfully met with design and operational maintenance include control of various contaminants, tidal range, shoreline interface and shipping traffic.

Coastal California

Bridge Demolition - Enclosed Turbidity Control Curtain (Cofferdam Alternative)

Full-depth curtains enclosed bridge piers during demolition activities. Difference in water quality inside and outside the barriers was notably very different.

Mackworth employed CFD modeling to evaluate water current modifications and to optimize design. Mackworth also worked with state agencies in developing understanding of the technology, and developed of a Water Quality Control Plan.

Recent Applications

Vancouver Sound, Canada

Temporary Resuspension Barrier (Cofferdam Complement)

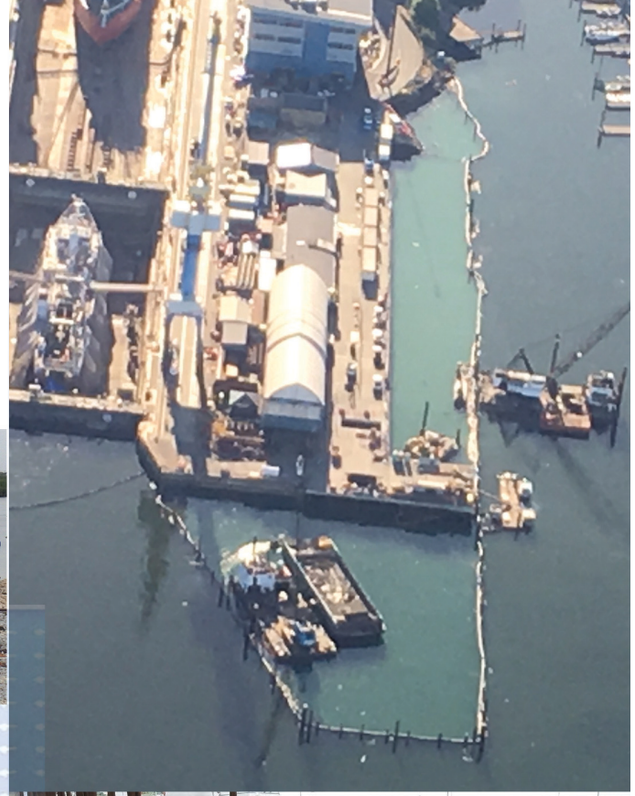
Mackworth designed a barrier to attach to the top of a submerged sheetpile wall and control hazardous sediments during a remedial dredging project.

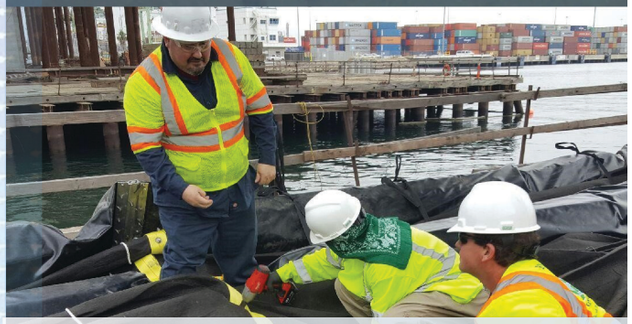
Coastal Florida

Turbidity Control System: High-Performance, Multi-Barrier

A tidal habitat creation project in the Florida Everglades required stringent turbidity control. The spec was for a 0 NTU increase in the adjacent waters of Biscayne Bay. Mackworth designed and fabricated a 3-barrier system for the protection of the local ecosystem, overseeing installation and movement to subsequent locations.

Mackworth employed CFD modeling to evaluate water current modifications and to optimize design.





Mackworth experts consult, design, fabricate, install & provide operational system support.

Solutions That Work.

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