

Management of Small Docks and Piers



**Best
Management
Practices**



National Oceanic and Atmospheric Administration

This presentation funded by the

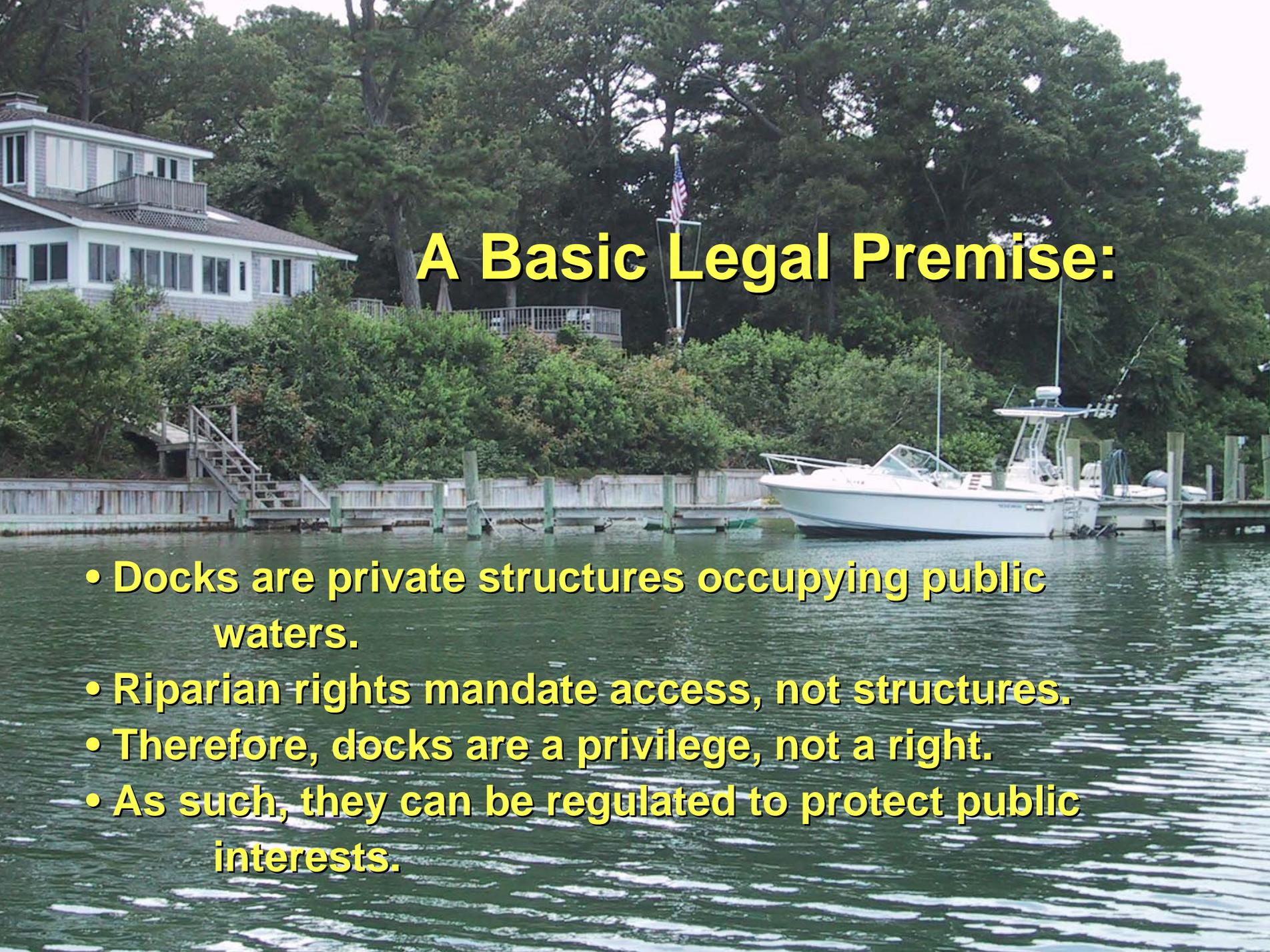
National Oceanic and Atmospheric Administration

National Centers for Coastal Ocean Science

and

The Office of Ocean and Coastal Resource Management

Materials prepared by Steve Bliven of Bliven & Sternack



A Basic Legal Premise:

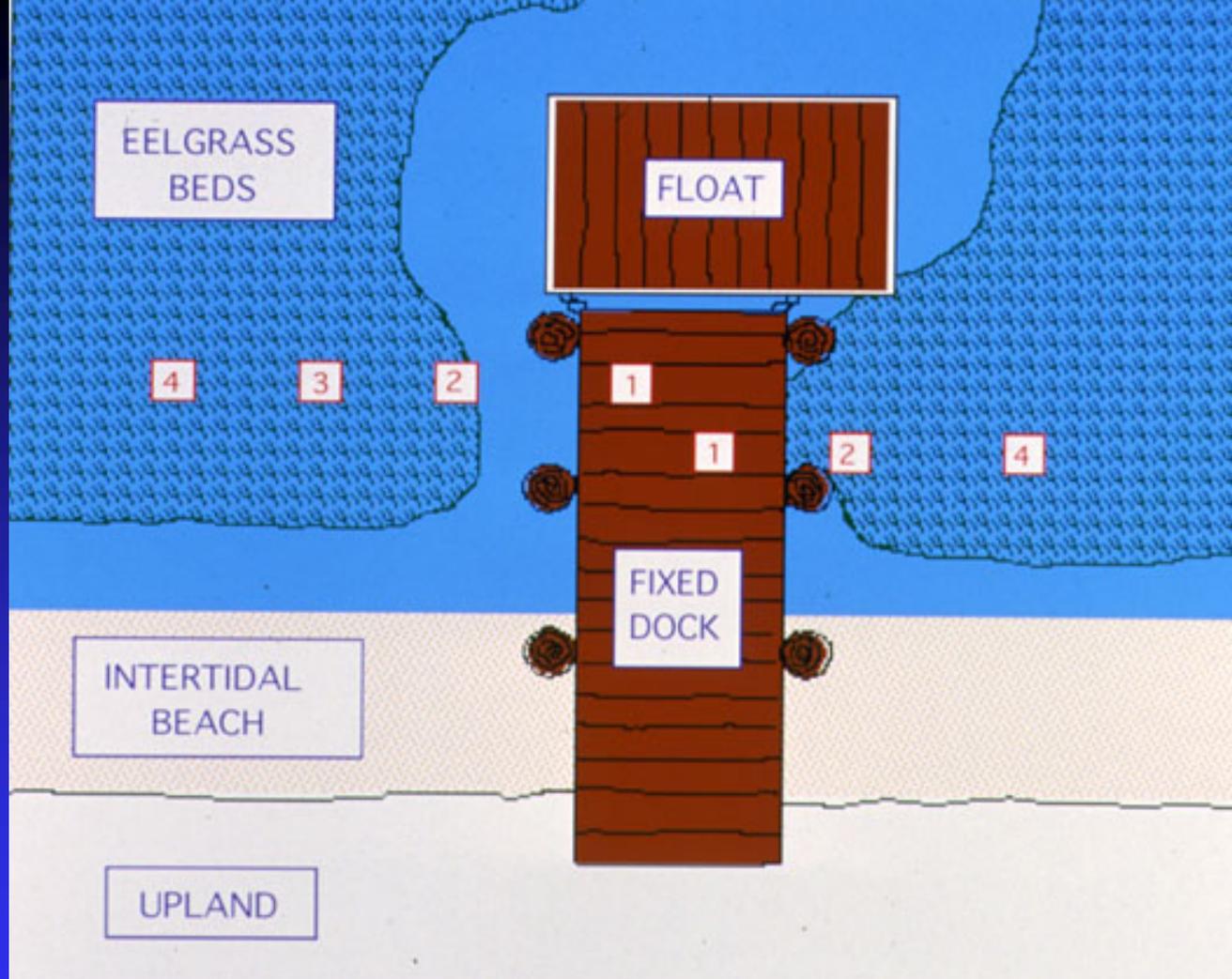
- **Docks are private structures occupying public waters.**
- **Riparian rights mandate access, not structures.**
- **Therefore, docks are a privilege, not a right.**
- **As such, they can be regulated to protect public interests.**



- **Avoid**
- **Minimize**
- **Mitigate**

Managing Shading Impacts:





Graphic courtesy Dave Burdick, Univ. New Hampshire

Avoid Resource Areas or Minimize Area Affected

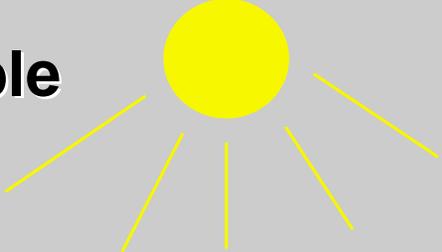


Maximize height and minimize width ...

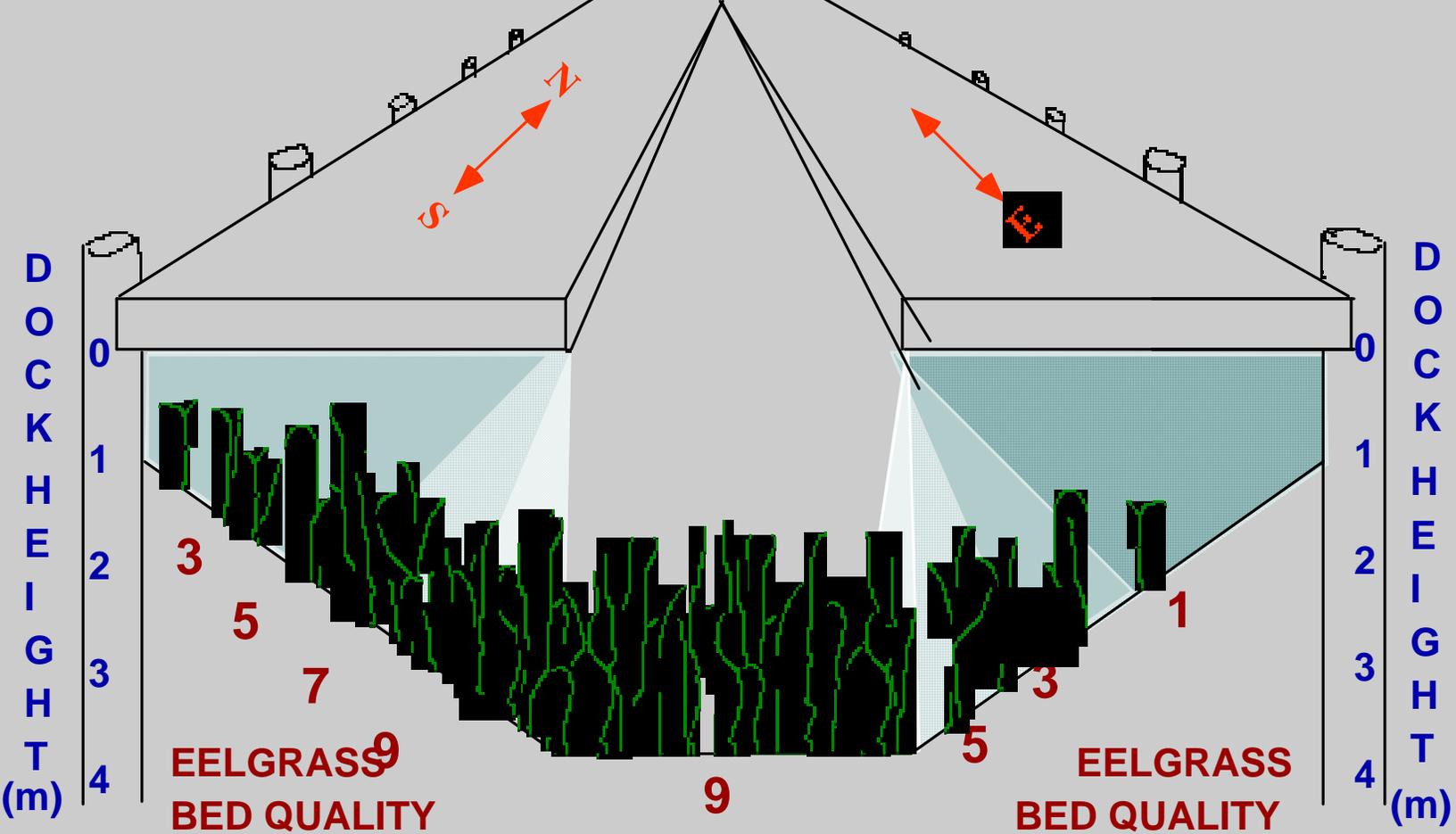
... 1 foot high or more for each foot wide



**Orient North-South,
or as close as possible**



**DOCK
ORIENTATION**



Avoid Roofs or Walled Structures



Explore Techniques to Increase Light Transmission

Fiberglass Grating



Installing grating panels



Metal Grating



Plastic Grating

Light Prism



Space Between Decking

Managing Construction Impacts



**Keep off the
Marsh.**

**Where possible work from a barge or
work out along the pier.**



Sharpen ends of piles



When possible use low pressure jetting to start and drop hammer to drive the piles.



Impacts from Boats and Floats

**Don't Store Boats
on the Marsh**



**Keep Floats off
The Bottom at
Low Tide**

Managing Impacts from Contaminants

**Prohibit the use of
Oil-based Preservatives
(Creosote or
Pentachlorophenols)
For Small Docks**





**Minimize use of CCA-treated
Materials in Low Flushing Waters**

Don't Use CCA-treated Materials in Fresh Water



Alternatives include:

- **Untreated Wood**
- **Polyethylene Pile Encasement Systems**
- **Metal**
- **Concrete**
- **PVC**
- **Recycled plastics and composite materials for decking**

Decking and other elements not immersed do not need to be treated or could be made of “alternative” materials.



Managing Impacts from Dock Flotation Materials

- **Require encapsulated materials**
- **Avoid exposed open cell polystyrene**
- **Avoid reuse of industrial drums**

Industrial Barrels





Encapsulated Floatation

In this case, expanded polystyrene foam enclosed in plastic





- **Avoid painting or staining docks, piers and walkways while in the water.**
- **Avoid soaps when cleaning. Wash and rinse with sea water or lake water.**



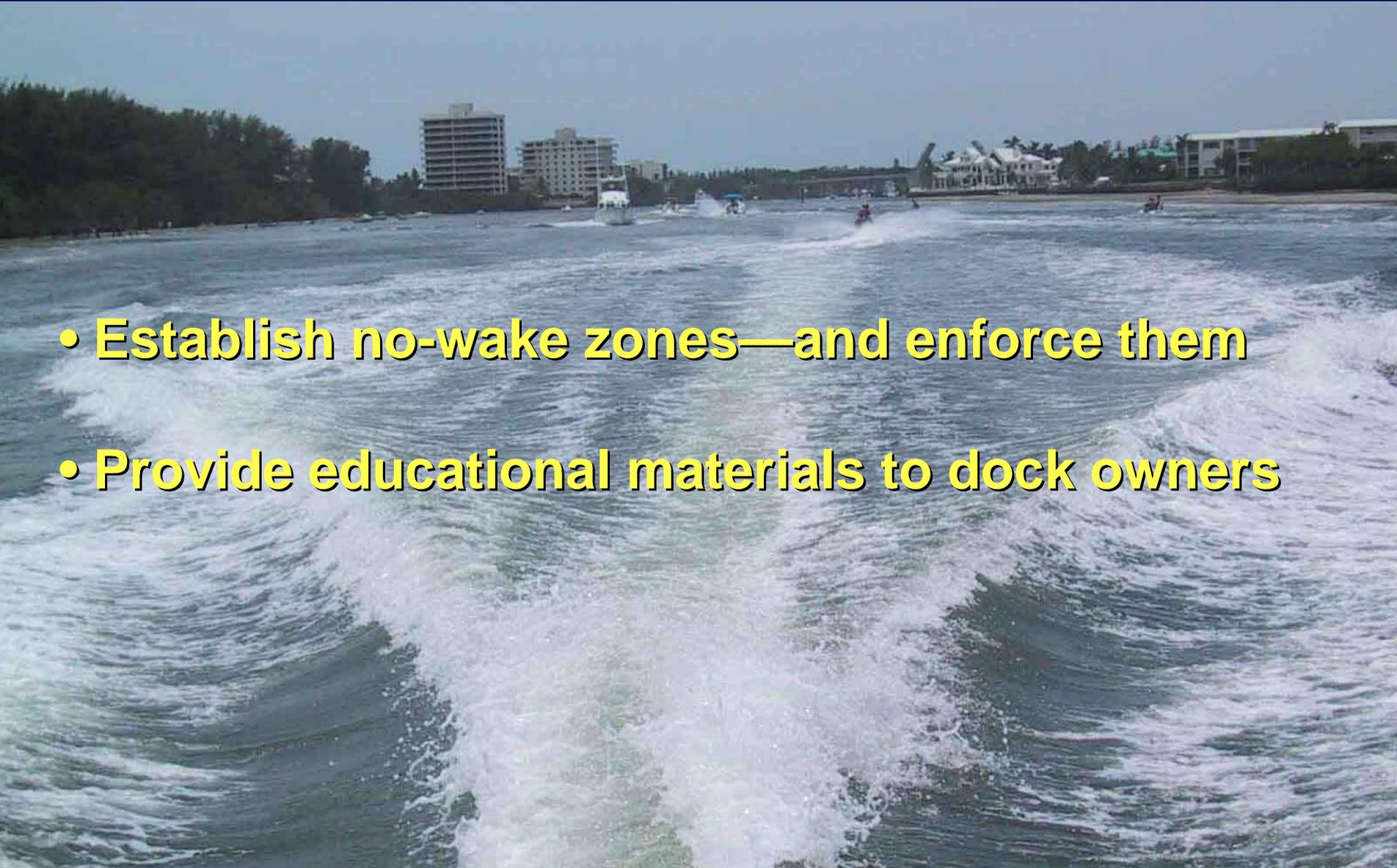
**Require regular
maintenance and
upkeep of docks**

Managing Impacts from Fuel Leakage

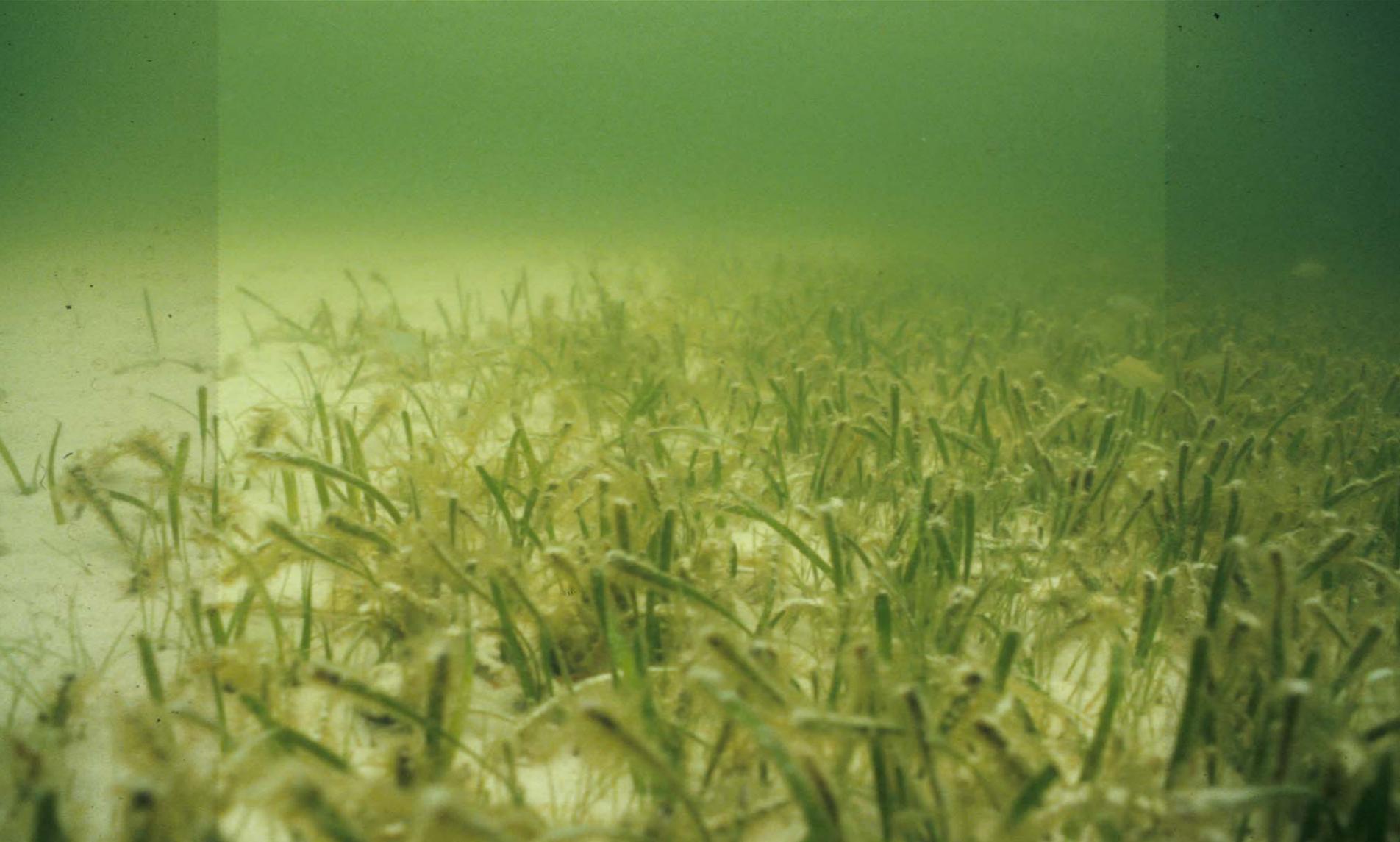
- **Avoid fuel pumps or storage on docks**
- **Fuel outboard motors onshore when feasible**
- **Provide educational materials to dock owners**

Managing Impacts from Boat Usage:

- **Establish no-wake zones—and enforce them**
- **Provide educational materials to dock owners**



Managing Impacts to Sediments





Suggested BMPs regarding sediments

- **Adequate space between pilings**
- **Avoid solid fill structures**
- **Install pilings with minimum disruption of sediments**
- **Avoid floats or boats resting on the bottom**

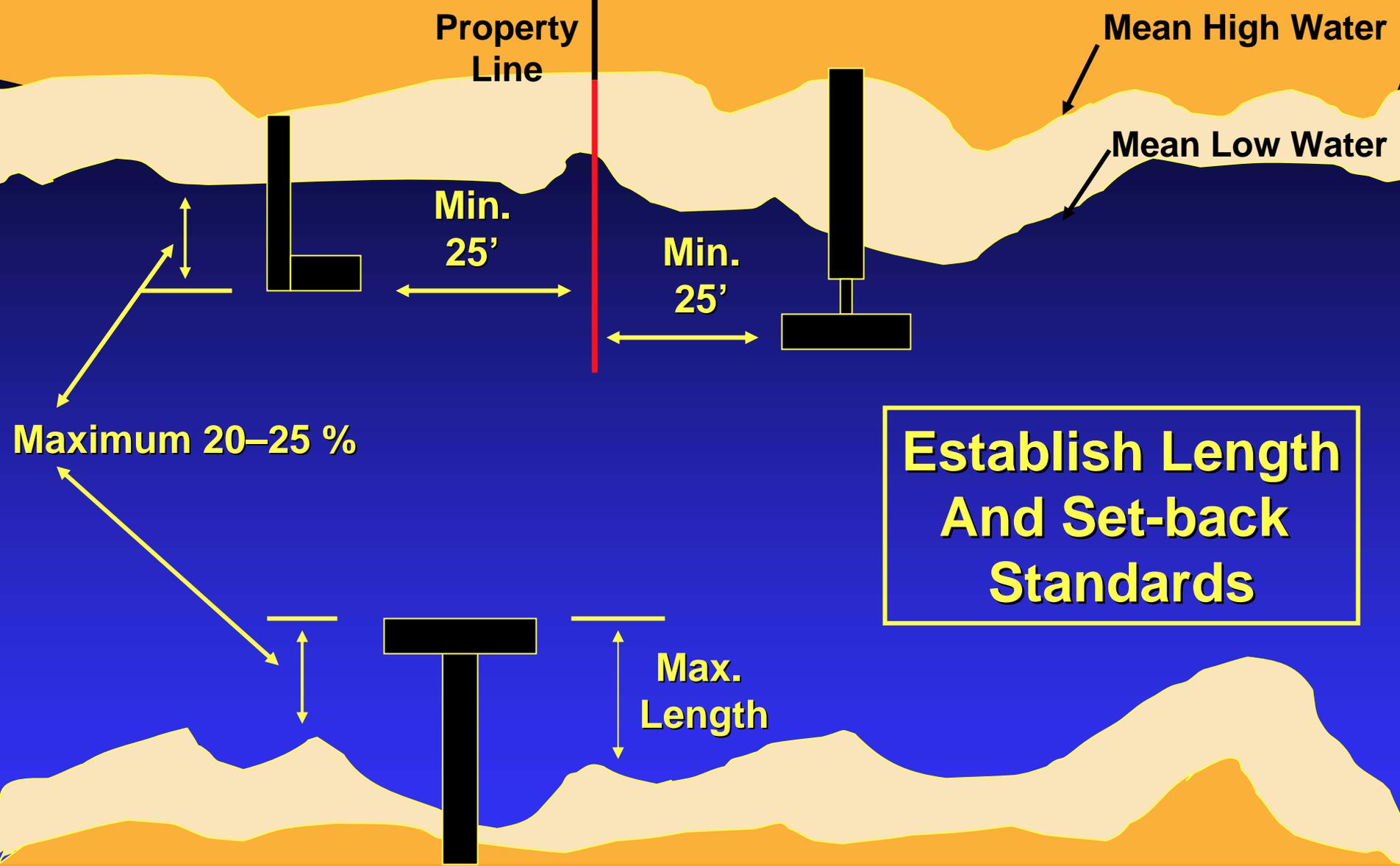
Managing Impacts to Navigation

- Structures should be water-dependent
- Reasonable leasing fees for mitigation



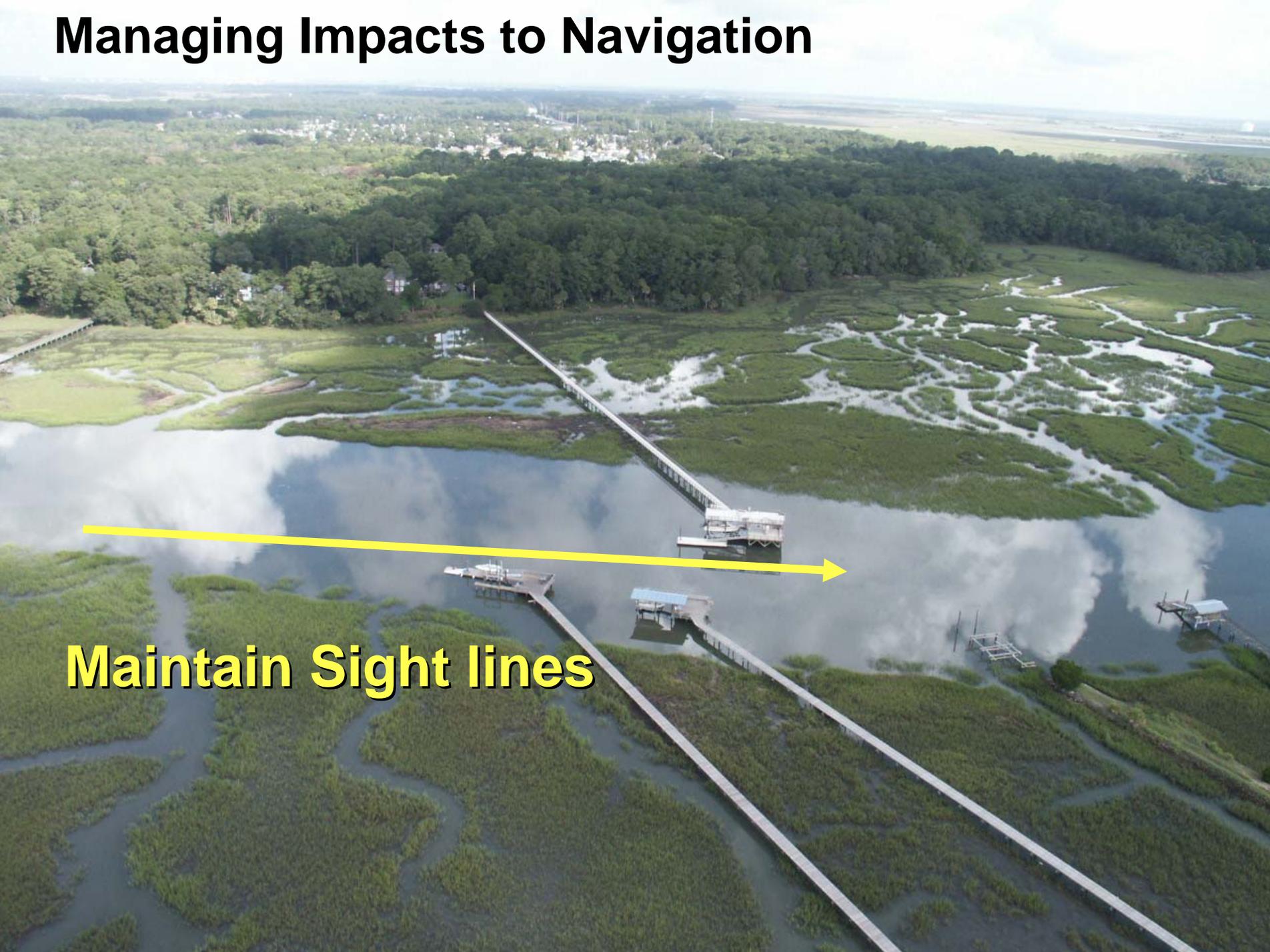
Managing Impacts to Navigation

- **Establish setbacks from navigation areas and between docks**
- **Limit dock length in congested areas**
- **Avoid public use areas**



**Establish Length
And Set-back
Standards**

Managing Impacts to Navigation



Maintain Sight lines

Managing Impacts to Public Access Along the Shoreline



Managing Impacts to Public Access Along the Shoreline

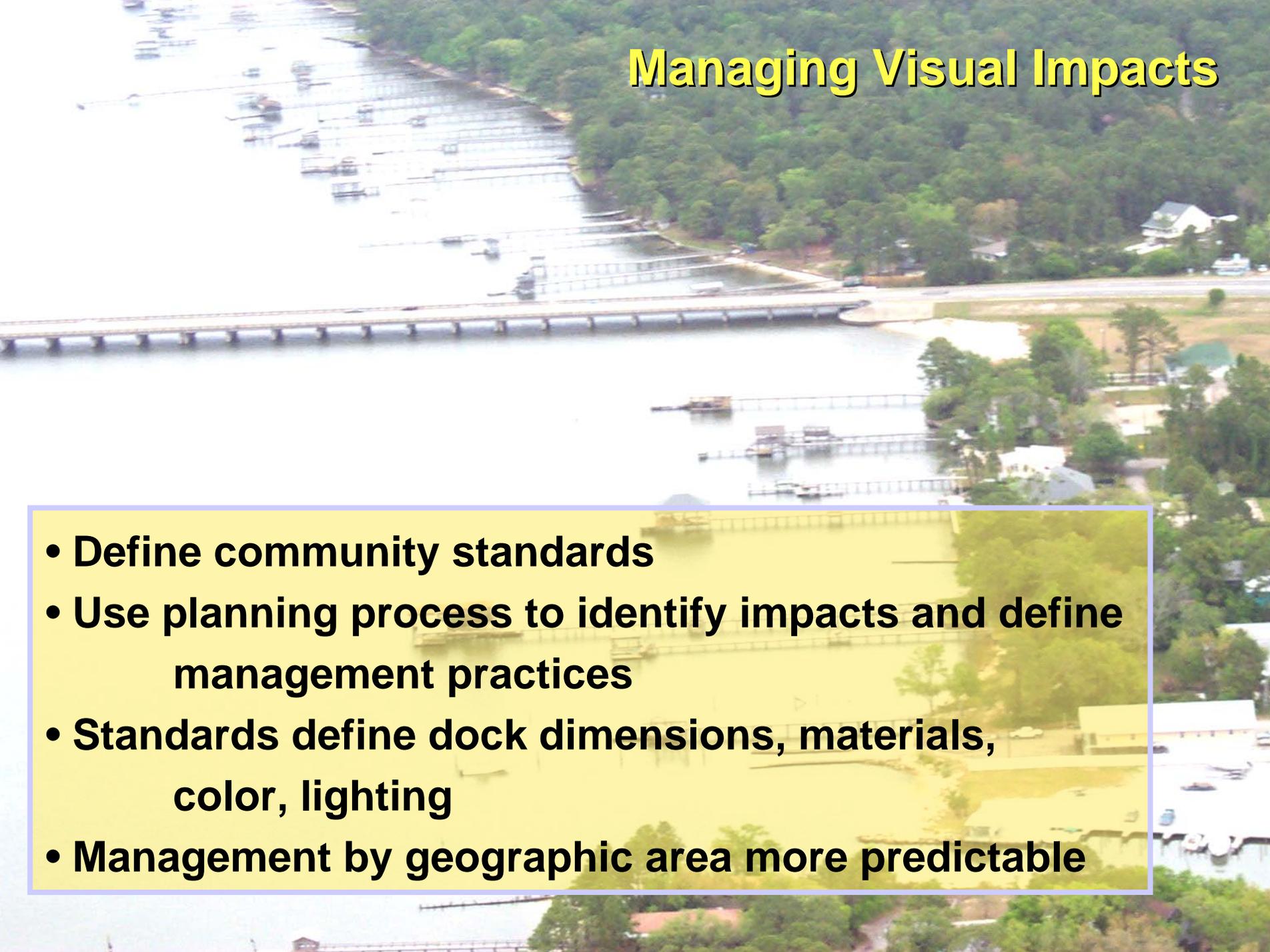
TASHMOO ASSOCIATES
PRIVATE
DOCK
KEEP OFF

- Ensure passage through, over or around docks

Managing Visual Impacts



Managing Visual Impacts

An aerial photograph of a marina. The water is light blue and filled with numerous wooden docks of varying lengths. Many boats are moored at the docks. The marina is bordered by a dense line of green trees. In the background, a road and some residential buildings are visible. The overall scene is a typical waterfront development.

- **Define community standards**
- **Use planning process to identify impacts and define management practices**
- **Standards define dock dimensions, materials, color, lighting**
- **Management by geographic area more predictable**

