

**RECOMMENDATIONS ON THE  
MANAGEMENT OF RESIDENTIAL DOCK  
STRUCTURES IN PECONIC BAY AND  
GARDINERS BAY IN THE TOWN OF  
SOUTHOLD**

Prepared by:  
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& Technical Coordinator  
2008

**WHAT, WHERE, WHY...**

- **WHAT DOES THE STUDY ADDRESS?** This study addresses the management of private, residential dock structures. Historic Maritime Areas and MI and MII zoned properties are excluded from this study.
- **WHERE DOES IT APPLY?** The study area includes Peconic Bay, Gardiners Bays, Long Island Sound, Fishers Island Sound and Block Island Sound. This presentation focuses on Peconic Bay and Gardiners Bay.
- **WHY WAS IT CONDUCTED?** To develop standards for the management of private, residential dock structures to determine when and under what circumstances docks should be permitted.

## **Town of Southold Moratorium**

**In May of 2008 the Southold Town Board adopted "a one-hundred eighty (180) day moratorium on the permitting of docks in Peconic Bay, Long Island Sound, Block Island Sound and Fishers Island Sound (excluding Silver Eel Cove, Hay Harbor, West Harbor, Chocomount Cove and East Harbor)."**

**In November of 2008 the moratorium was extended for an additional (90) days.**

## **Purpose**

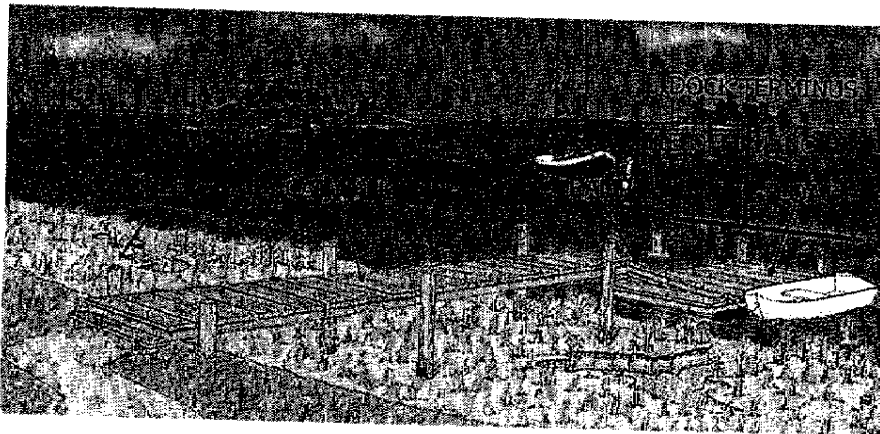
**The purpose of the moratorium is to evaluate the public waters of the Town of Southold to assess natural and public resource values and determine what potential impacts residential dock structures may have on such areas and values.**

**Overall the goal is to preserve public interests and rights for all residents of the Town.**

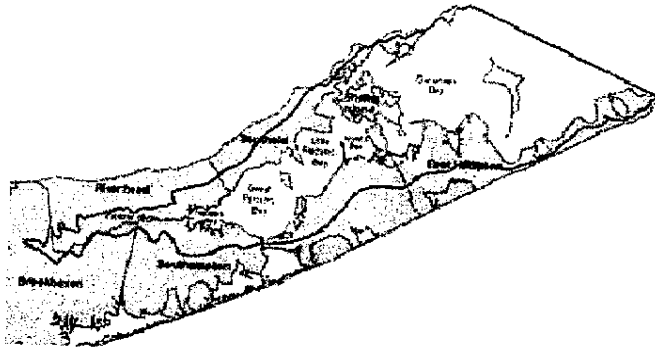
## Definitions

- **Residential Dock** - Any fixed dock and/or floating dock designed or constructed as a continuous unit to provide access to the surface waters from a lot that is zoned for residential use. The term "dock" shall include all associated structures such as ramps and mooring piles. [Amended 12-18-2007 by L.L. No. 23-2007] (Chapter 275 Southold Town Code)
- **Dock Terminus** - the most seaward projection of the dock structure including piles or dolphins.
- **Foreshore** - the strip of land between the ordinary high and low water marks that is alternately covered and uncovered by the flow of the tide. Often used synonymously with "wet sand beach" (NOAA)
- **Nearshore** - Those lands under water beginning at the near low-water line and extending waterward in a direction perpendicular to the shoreline to a point where mean low-water depth is 15 feet or to a horizontal distance of 1,000 feet from the mean low-water line, whichever is greater. (Chapter 111 Southold Town Code)

## Parts of a Dock Structure



In 1993, the Peconic Estuary became the 20th estuary in the nation to receive the designation as an "Estuary of National Significance" by the U.S. Environmental Protection Agency (EPA).



## **PECONIC ESTUARY VALUES!**

**In a 1999 report titled Recreational and Resource Economic Values for the Peconic Estuary System (Opalueh et. al.) the authors conducted a survey of 968 year round and seasonal residents on the East End of Long Island to elicit values of five important resources: farmland, undeveloped land, wetlands, safe shellfishing areas, and eelgrass.**

**Overall priorities for the five natural resources were identified as the protection of farmland, followed by wetlands, eelgrass, shellfish areas, and undeveloped land.**

## **PECONIC ESTUARY USERS...**

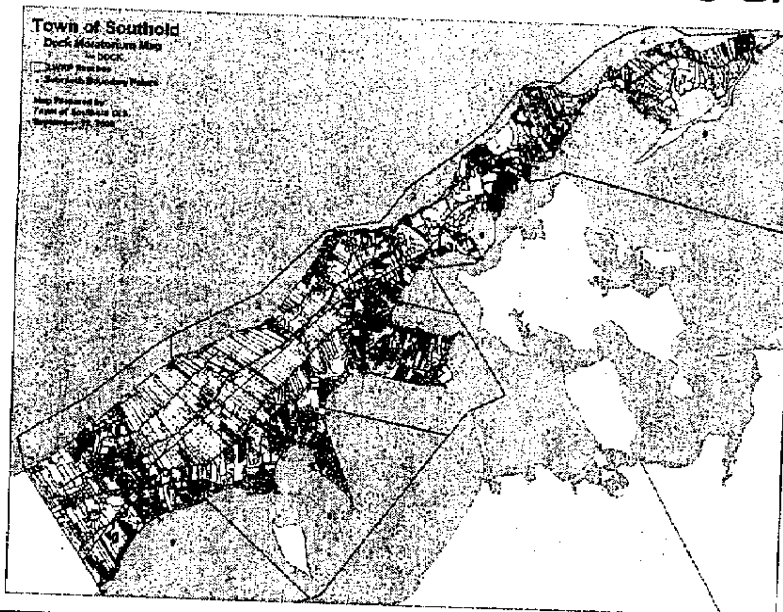
**In 2001 75% of 400 East End residents surveyed supported restricting the size and number of boat docks to protect habitat for scallops, clams and fish. (The Nature Conservancy)**

## **Town Planning**

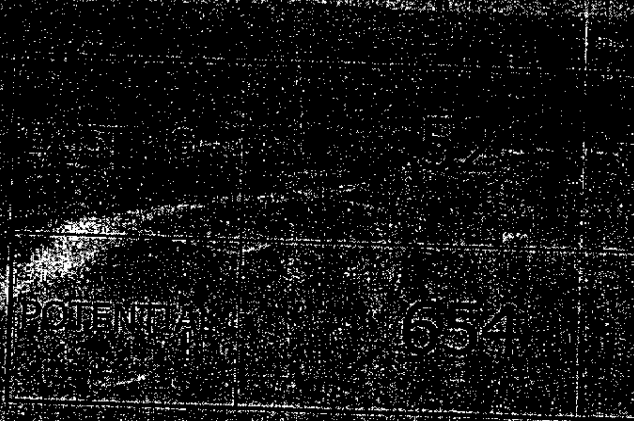
**The Town of Southold commits millions of dollars to preserve the quality of life for residents of the Town . These programs are mostly applied to acquire privately owned land areas of the Town.**

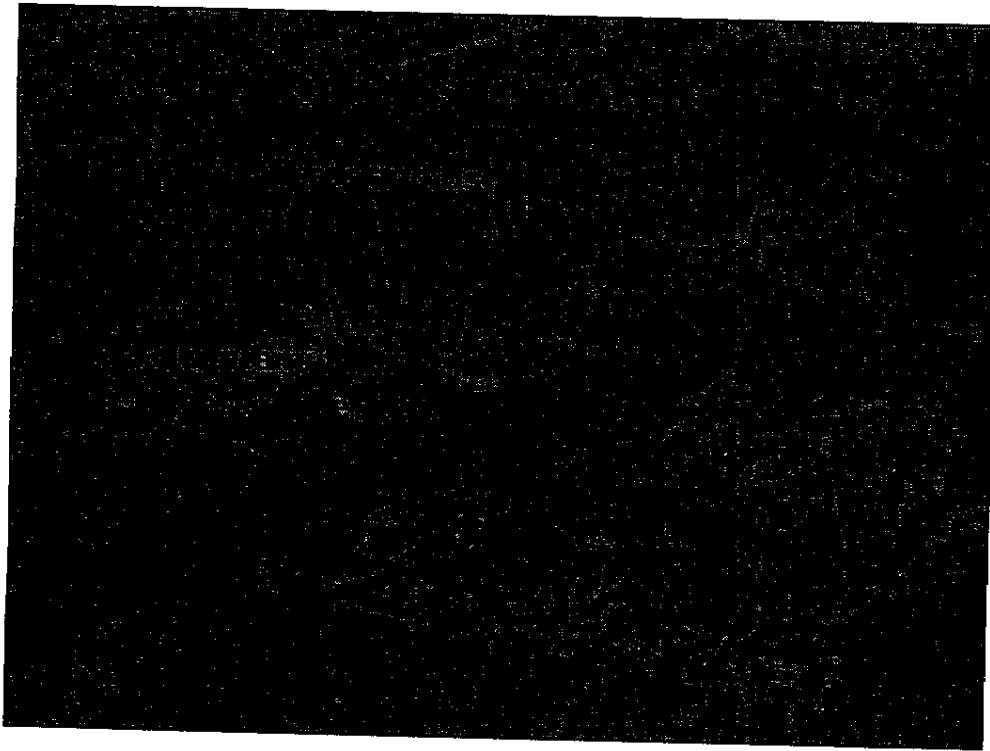
**The unparalleled benefits of the Town's public waters are available to residents at no cost. However, if these waters are not managed to preserve public rights and use, the burden to the residents will be loss of public use and potential long-term restoration of such waters.**

# PECONIC BAY & GARDINERS BAY



## Total Number of Dock Structures Peconic Bay and Gardiners Bay



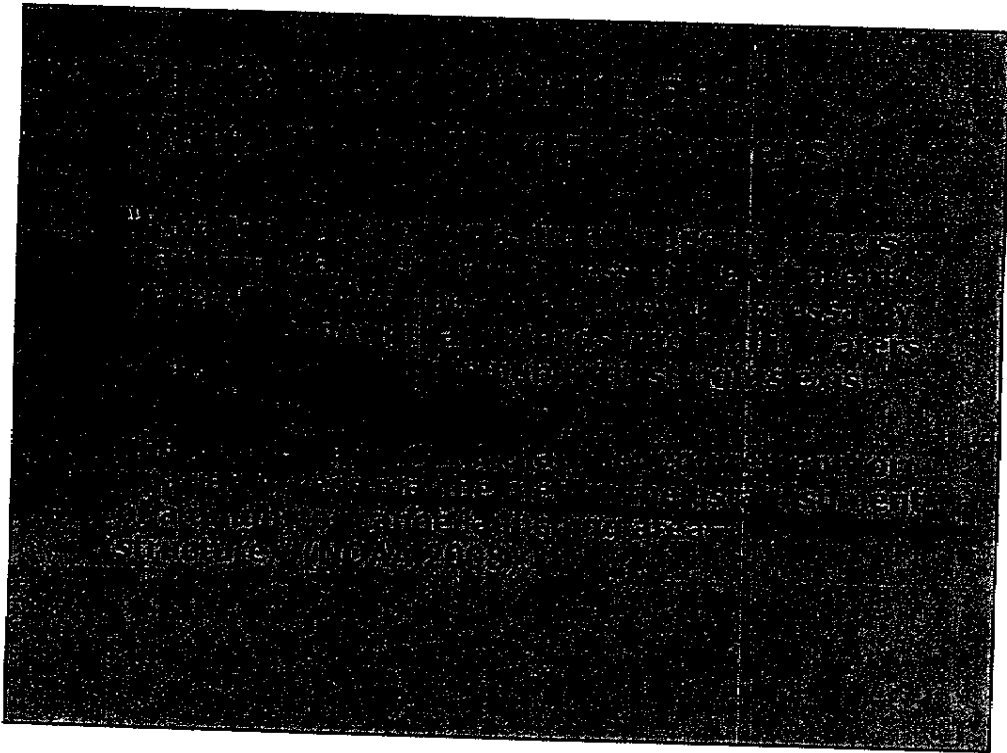


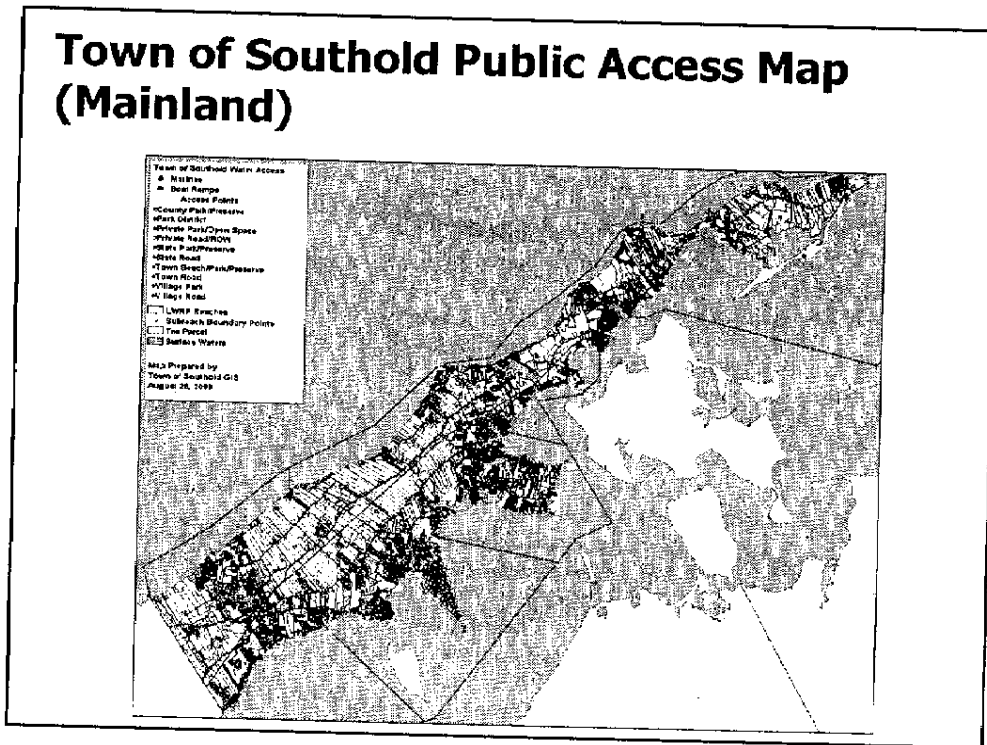
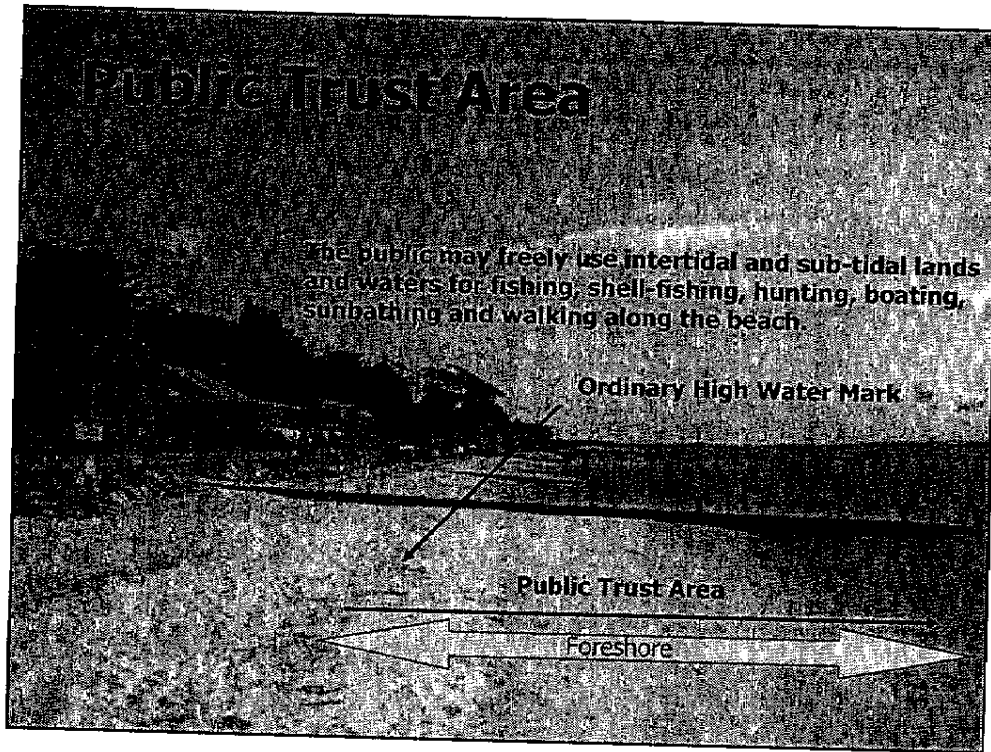
**PUBLIC ACCESS AND USE**

## **Public Access and Use**

**The legal use of The Town's beaches, tidelands, and lands underwater is defined by the Public Trust Doctrine which holds that the public has certain rights of access along the shore, typically for fishing, shellfishing, and navigation.**

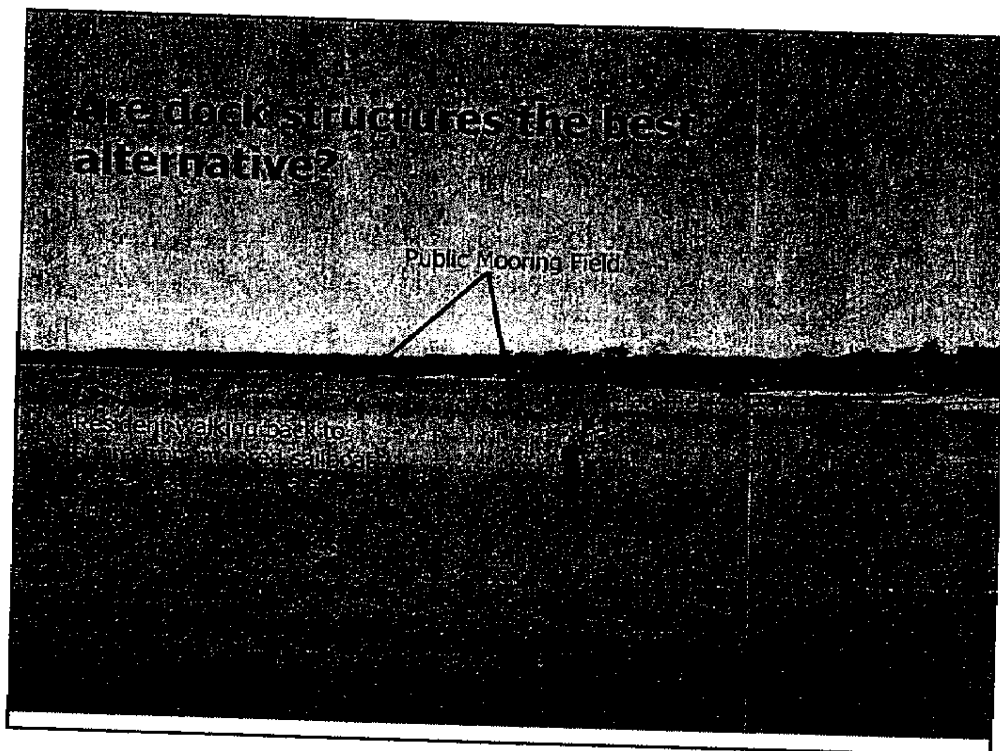
**Under the Public Trust Doctrine, the foreshore and underwater lands are held in trust by the state or local government for the benefit of the public.**





## Public Access by LWRP Reach

	LWRP REACH									
	4	0	0	0	8	9	11	8	4	
	4	2	1	1	3	1	6	8	1	
	12	8	4	4	16	14	23	32	10	
	6	0	5	7	6	12	34	28	11	
	26	10	10	12	33	36	74	76	26	



## **Potential Impacts on Public Access and Use**

- **Impedes and/or prohibits lateral public access along the foreshore and nearshore.**
- **Impedes and/or prohibits public use of foreshore and nearshore areas under and adjacent to dock structures.**

## **Supporting Town Goals and Policy**

### **Public Access**

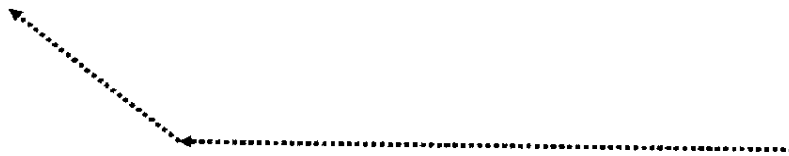
- **Prohibit structures that would hinder, restrain or impede public**

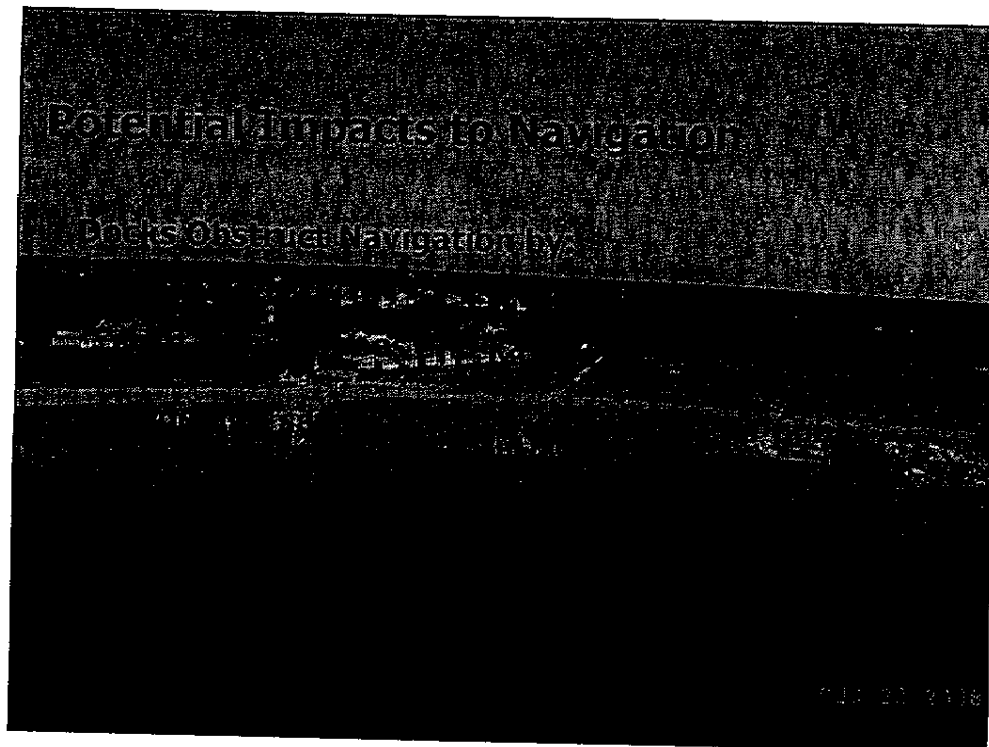
## **Recommended Standards**

### **Public Access and Use**

- **Prohibit dock structures in areas where public access and use of the nearshore and foreshore would be impeded, hindered or otherwise reduced.**
- **Provide additional public access facilities at public sites throughout the Town.**

## **NAVIGATION**





## **Supporting Town Goals and Policy**

### **Navigation**

- 1. Provide access to, and reasonable recreational use of, navigable waters and public trust lands under water.**
- 2. Provide for free and unobstructed public use of all navigable waters below the line of mean high water for navigation, recreation, and other public trust purposes, including the incidental rights of public anchoring.**

## **Recommended Standards**

### **Navigation**

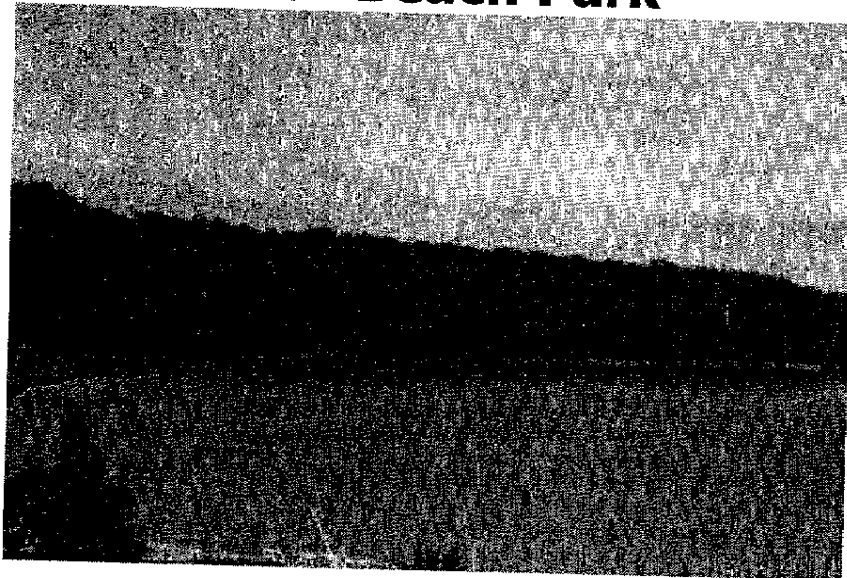
- **Prohibit construction of dock structures that would adversely affect free and unobstructed public use of all navigable waters below the line of mean high water, either through physical or visual barriers.**



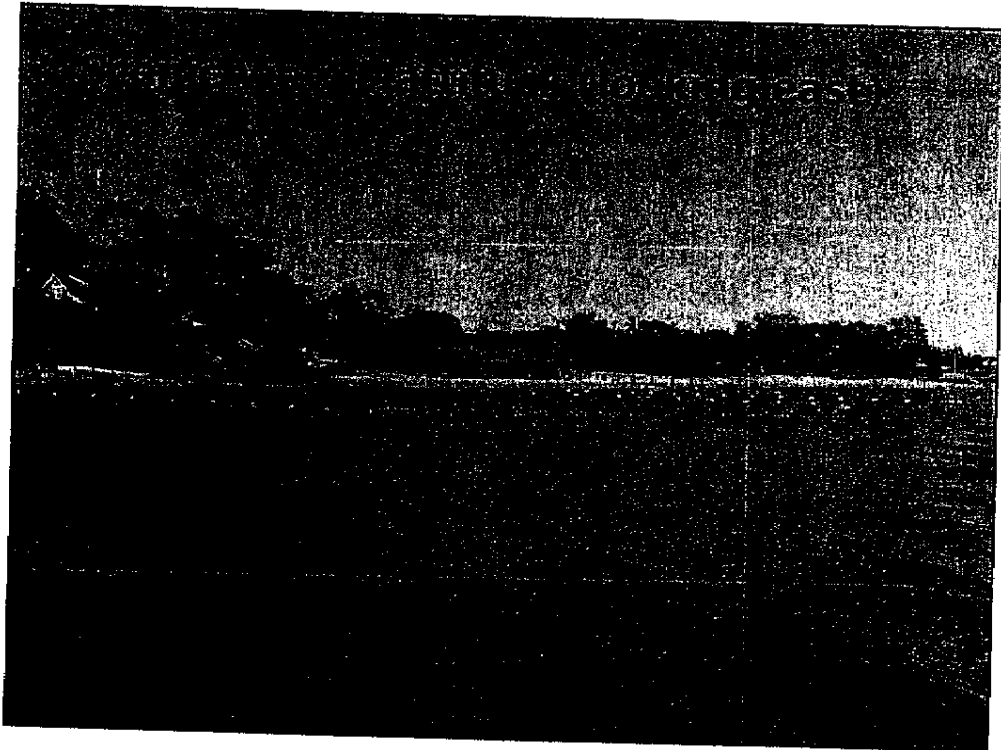
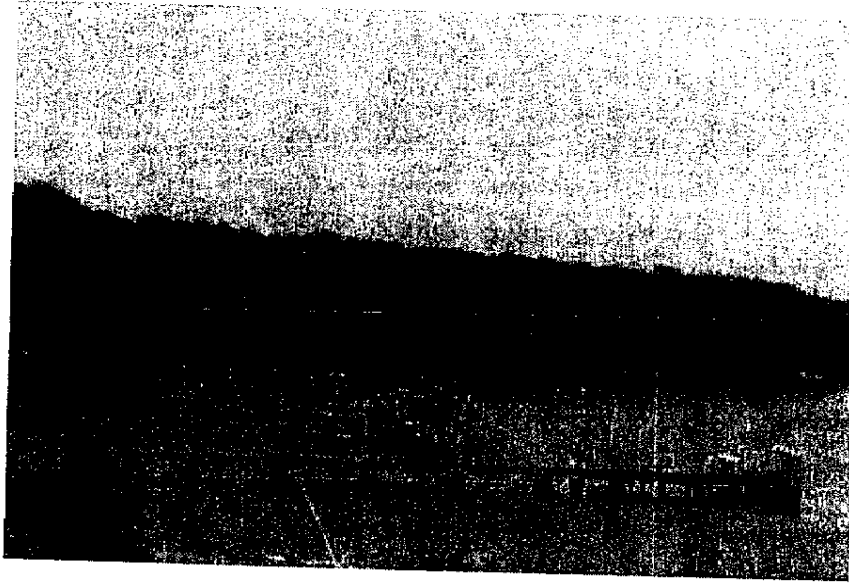
**The Peconic Bay and Gardiners Bay together with all of the Towns waters comprise the most significant open space areas under Town control.**

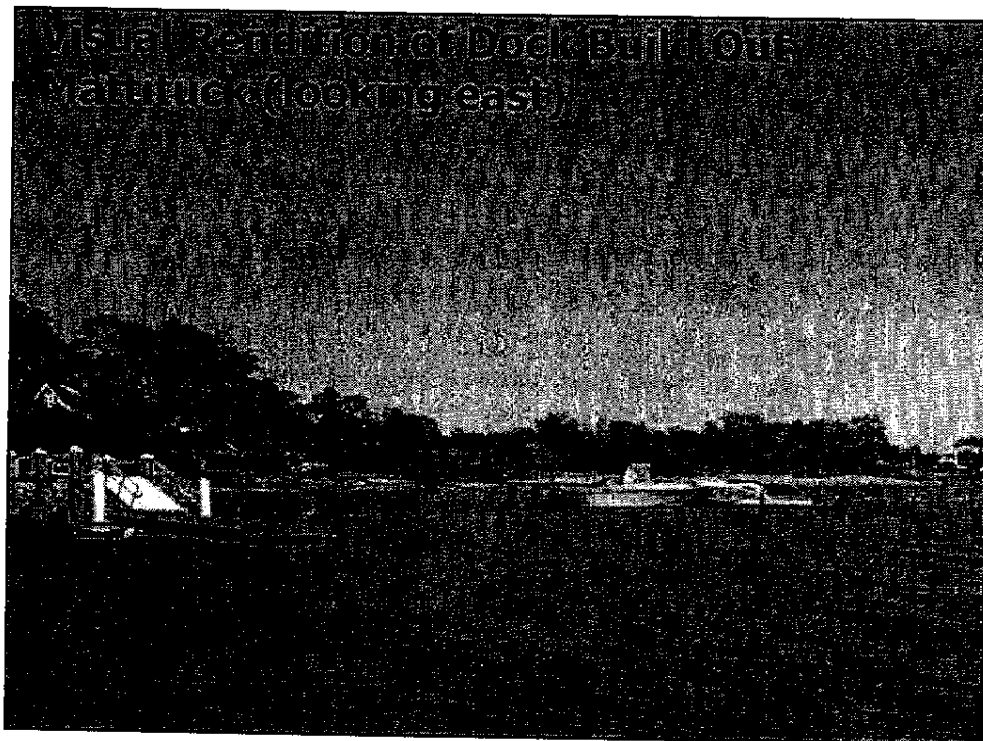
**The aesthetic impact of dock structures upon these areas is relative to one's viewpoint and perspective.**

**Unobstructed view from  
Cedar Beach Park**



**Present view  
from Cedar Beach Park**





### **Potential Impacts to Aesthetics**

- **Permanent disruption of scenic views important to the public.**
- **Permanent disruption of scenic views important to private interests (e.g. adjacent property owners)**

## **Supporting Goals and Policy**

### **Aesthetics**

- **Enhance visual quality and protect scenic resources throughout the Town of Southold.**
- **Minimize introduction of structural design components (including utility lines, lighting, signage and fencing) which would be discordant with existing natural scenic components and character.**
- **Protect visual quality associated with public lands, including public transportation routes, public parks and public trust lands and waters.**
- **Protect visual quality associated with agricultural land, open space and natural resources.**

## **Recommended Standards**

### **Aesthetics**

- **Preserve and protect natural scenic components and character by prohibiting dock structures to minimize scenic interruptions of view-sheds on public trust lands.**



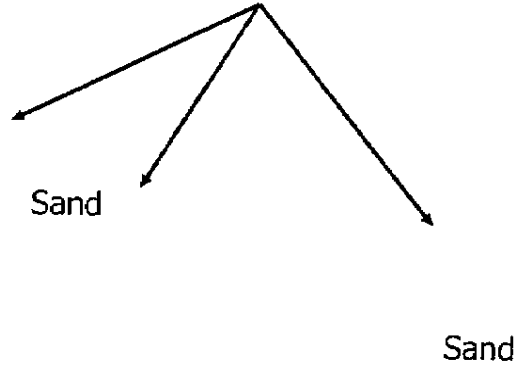
## **Impacts to Vegetation**

- **Intertidal vegetation and submerged aquatic vegetation (SAV) provide critical habitat, filter nutrients and sediments, provide nursery habitat for fish and shellfish, stabilize bottom sediments and form the basis of the food web.**
- **Impacts from the construction of docks on vegetation occurs in two ways:**
  - **Impacts from construction (jetting).**
  - **Impacts from chronic shading.**

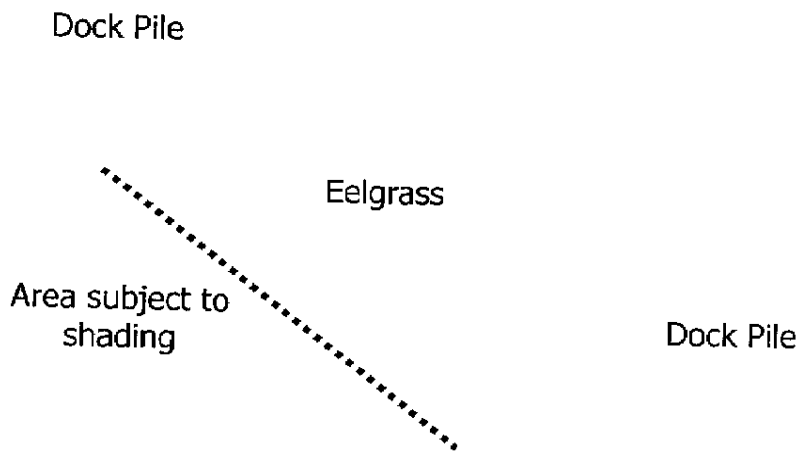
## **Physical loss of vegetation/habitat from construction impacts**

**Sand deposited due to dock construction**

### Physical Loss of vegetation through "jetting" piles into the substrate



### Affects of chronic shading on eelgrass



## **Supporting Goals and Policy**

### **Ecological Significance**

- **Protect and restore ecological quality throughout the Town of Southold.**
- **Avoid adverse changes to the Long Island Sound and the Peconic Bay ecosystems that would result from impairment of ecological quality...**
- **Protect and restore Significant Coastal Fish and Wildlife Habitats.**
- **Protect and restore tidal and freshwater wetlands.**
- **Protect vulnerable fish, wildlife, plant species, rare ecological communities and their habitats.**
- **Promote sustainable use of living marine resources in Long Island Sound and the Peconic Estuary.**

## **Recommended Standards**

### **Ecological Significance**

- 1. Prohibit dock structures that could result in impairment and/or physical loss of ecological quality in areas located within or over a NECAS –USFWS Northeast Coastal Areas Study Significant Coastal Habitat and a NYSDOS Significant Coastal Fish and Wildlife Habitat Area where:**
  - a. Two or more of the following designations occur:**
    - i. NYSDEC Critical Environmental Area.**
    - ii. NYSDEC Water Quality Designation – SA Areas.**
    - iii. Peconic Estuary Program Critical Natural Resource Areas.**
    - iv. Fairly Productive and Most Productive Shellfishing Seeding and Harvest Areas.**

## Potential Impacts from Contaminants

- The most common contaminants associated with dock structures are the trace metals arsenic, chromium, and copper.
- The toxicity of chromium depends upon species, age, developmental stage, temperature, pH, salinity, duration of exposure, and interactions with other contaminants. Chromium is toxic to segmented worms and crabs at concentrations as low as 200 ppb (Eisler 1986).
- Copper is toxic to marine organisms, particularly early developmental stages of marine invertebrates (e.g., Brooks 1996). Mollusks (e.g., oysters) and some crustaceans concentrate copper in their tissue.
- Arsenic is a common environmental metal that is toxic to a range of marine organisms including algae, mollusks, crustaceans, and fish. Arsenic tends to bioaccumulate in higher-level predators (e.g., predatory fish) but not in primary and secondary consumers.

## Regional Policy and Regulation on the use of CCA in Dock Structures.

### Peconic Estuary

Avoid introduction of the (Chromated Copper Arsenate (CCA)) in marine waters. (Peconic Bays Natural Shoreline Committee 1999)

### Town of East Hampton

No natural resources special permit which is required for projects or activities in tidal waters shall allow the use of wood which has been treated with copper chromated arsenate (CCA), unless it can be shown that no reasonable alternative material will serve the purpose. *Chapter 255-5-50 Town of East Hampton Town Code*

### Town of Southampton

The use of CCA treated lumber is prohibited in all Trustee regulated structures (Docks, bulkheads etc...).

## **Regional Policy and Regulation on the use of CCA in Dock Structures Cont...**

### **Town of Riverhead**

**No use of CCA for pilings and framings of docks, mooring, basins and ramps (Telephone Conversation, 2008)**

### **Town of Southold**

**In order to prevent the release of metals and other contaminants into the wetlands and waters of Southold, the use of lumber pre-treated with any preservative, including but not limited to chromated copper arsenate (also known as "CCA"), penta products, Alkaline Copper Quat (ACQ), or homemade wood preservatives is prohibited for use in sheathing and decking on structures in the wetlands as well as on any part of a structure in low tidal flow wetland areas as determined by the Trustees. Any use of creosote is prohibited. Preservatives of any type, including but not limited to those listed above, cannot be applied to any bulkheads, retaining walls or revetments after installation. Encapsulated pilings or native nonchemically treated (untreated) lumber only should be used in sensitive areas (Chapter 275 of the Town of Southold Town Code)**

## **Recommended Standards for**

### **Contaminants**

- **Prohibit the use of Chromated Copper Arsenate (CCA) treated materials in Peconic Bay and Gardiners Bay, require the use of alternative piling materials (recycled plastic, encapsulated or untreated wood).**

## **Supporting Goals and Policy**

### **Contamination and Pollution**

- **Protect the environment from degradation due to toxic pollutants and substances hazardous to the environment and public health.**
- **Prevent environmental degradation due to persistent toxic pollutants by:**
  1. **limiting discharge of bio-accumulative substances,**
  2. **avoiding re-suspension of toxic pollutants and hazardous substances and wastes, and avoiding reentry of bio-accumulative substances into the food chain from existing sources.**

### **Potential Impacts from Vessel Use Associated with Dock Structures**

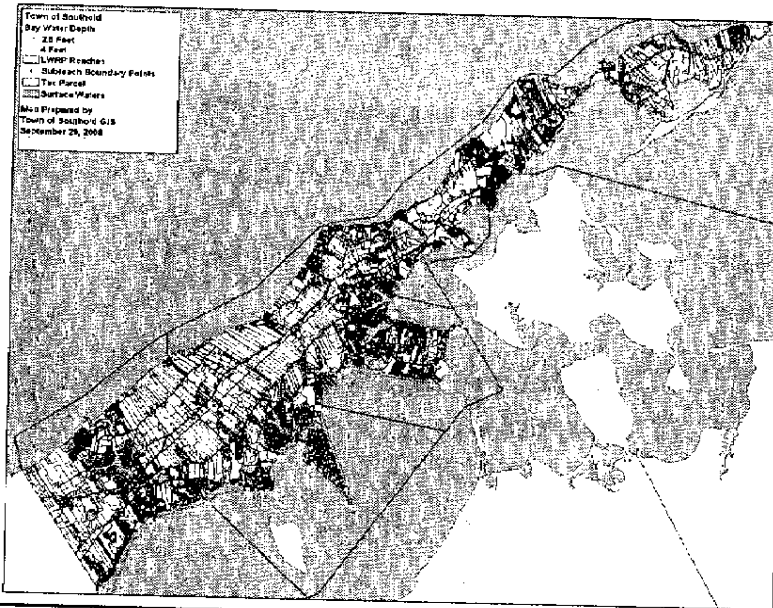
- **Impacts to submerged aquatic vegetation (SAV) (Bottom scouring, prop damage, chronic shading).**
- **Re-suspension of bottom sediments and turbidity due to inadequate water depth.**
- **Contamination from fuel discharges (spills).**
- **Pollution from illegal septic dumping.**
- **Erosion of shorelines from vessel wakes.**

## Water Depths

Recognizing the impacts from dock structures on areas of low water depths, in 1999 the New York Department of Environmental Conservation (DEC) began to impose the "4 foot rule" whereby docks must extend to a minimum of 4 feet of water (mean low water) for approval.



# Mean Low Water Depth Map



## Recommended Standards

### Vessel Impacts

- Site dock structures in areas where water depths are greater than 4' mean low water at terminus.
- Establish vessel mooring fields in areas with adequate infrastructure, access, water depths and facilities (fuel and pump-out stations)

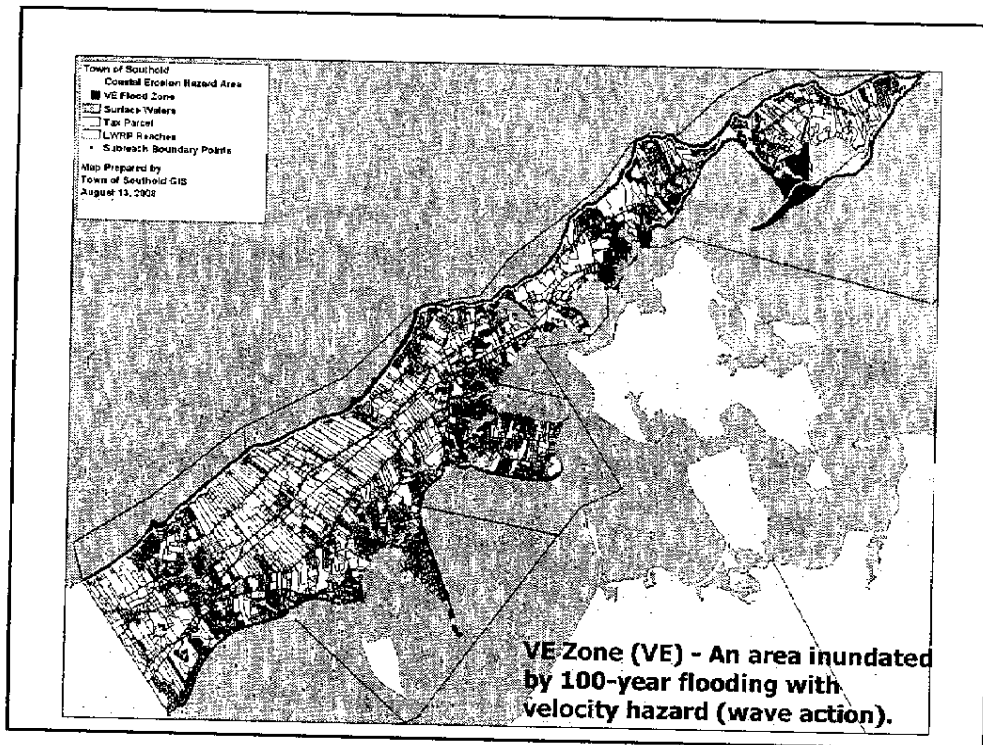
**PHYSICAL CONSTRAINTS  
OF SITING DOCK STRUCTURES**

- **FEMA Coastal High Hazard Areas (V-Zones)**

**STORM SURGE**

**FEMA Coastal High Hazard Areas (V-Zones)  
Chapter 148 Southold Town Code**

- **Coastal High-Hazard Areas (V-zones) are defined as areas with special flood hazards associated with high-velocity waters generated by tidal surges and hurricane wave wash.**



## Recommended Design Standards Physical Limitations

- Avoid the construction of dock structures in FEMA Coastal High Hazard Areas (V-Zones) where dock structures have the ability of becoming projectiles and floating debris during storm/flooding events, and can contribute to property damage and/or personal injury.

## **Findings**

**Based on our observations and a review of literature, the construction, use, and maintenance of dock structures are likely to have a significant and cumulative adverse effect on natural and public resource values.**

## **Summary of Recommendations**

**Excludes: MI and MII Zoning Districts and Historic Maritime Areas (Orient Harbor) and commercial dock structures.**

- 1. Prohibit dock structures to preserve public access and use of the nearshore and foreshore areas that would be impeded, hindered or otherwise reduced.**
- 2. Prohibit dock structures that would adversely affect free and unobstructed public use of all navigable waters below the line of mean high water, either through physical or visual barriers.**
- 3. Preserve scenic quality by prohibiting dock structures to minimize scenic interruptions of view-sheds on public trust lands.**

## **Summary of Recommendations cont...**

- 4. Prohibit dock structures that could result in impairment and/or physical loss of ecological quality in areas located within or over a NECAS –USFWS Northeast Coastal Areas Study Significant Coastal Habitat and a NYSDOS Significant Coastal Fish and Wildlife Habitat Area where:**
  - a. Two or more of the following designations occur:**
    - i. NYSDEC Critical Environmental Area.**
    - ii. NYSDEC Water Quality Designation – SA Areas.**
    - iii. Peconic Estuary Program Critical Natural Resource Areas.**
    - iv. Fairly Productive and Most Productive Shellfishing Seeding and Harvest Areas.**
- 5. Establish vessel mooring fields in areas with adequate infrastructure, access, water depths and facilities (fuel and pump-out stations)**
- 6. Avoid the construction of dock structures in FEMA Coastal High Hazard Areas (V-Zones).**

### **IN AREAS WHERE DOCK STRUCTURES ARE PERMITTED THE FOLLOWING DESIGN STANDARDS ARE RECOMMENDED...**

**All dock structures shall:**

- 1. Be a maximum length (including dolphins and pilings) of eighty (80) feet in total length; or achieve a minimum water depth of four (4) feet MLW (catwalk or float) whichever is lesser; and**
  - 2. achieve a minimum catwalk height of five (5) feet over MHW line or construct dock seaward of the MHW line; and**
  - 3. be oriented north/south to the greatest extent practicable; and**
  - 4. allow a minimum of fifty percent (50%) irradiance to the substrate; and**
  - 5. not be constructed of treated lumber e.g., CCA.**