

Wetlands Interagency Planning Group

Worcester County

Wednesday, 21 June 2006



Kent County Department of Planning and Zoning

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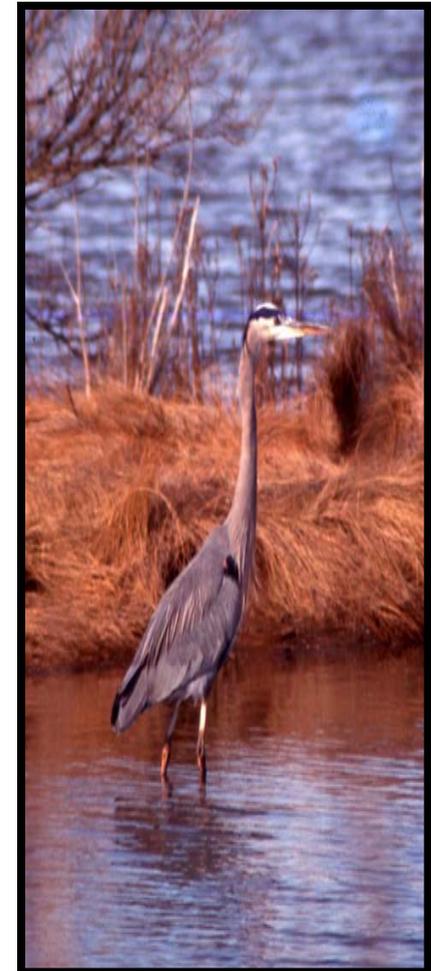
Kent County Land Use Ordinance: Article VI, Section 3



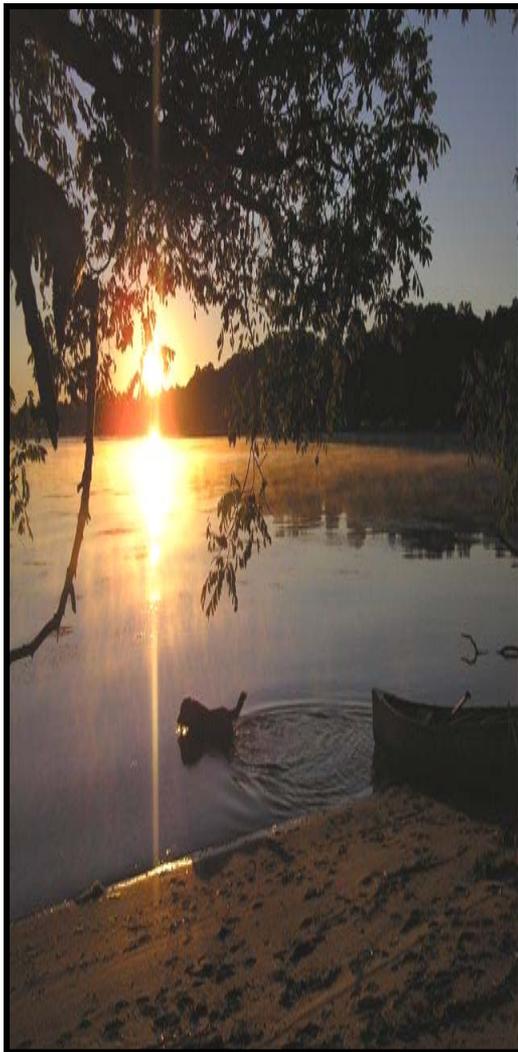
3.10 SHORE EROSION PROTECTION WORKS

The purpose of this section is to encourage the protection of rapidly eroding portions of the shoreline in the County by public and private landowners. When such measures can effectively and practically reduce or prevent shoreline erosion, the use of nonstructural shore protection measures shall be encouraged to conserve and protect plant, fish and wildlife habitat. The following criteria shall be followed when selecting shore erosion protection practices:

1. Nonstructural practices shall be used whenever possible.
2. Structural measures shall be used only in areas where nonstructural practices are impractical or ineffective.
3. Where structural measures are required, the measure that best provides for the conservation of fish and plant habitat and which is practical and effective shall be used.
4. If significant alteration of the characteristics of a shoreline occurs, the measure that best fits the change may be used for sites in that area.



Kent County Comprehensive Plan: Section D, Environment



GOAL: ENCOURAGE STEWARDSHIP OF THE CHESAPEAKE BAY, ITS TRIBUTARIES AND THEIR WATERSHEDS THROUGH BEST MANAGEMENT PRACTICES

Strategy: Encourage shore erosion control and promote living shorelines as the preferred method of shoreline stabilization

The County will encourage stabilization of eroding shoreline. Kent County will encourage waterfront property owners to consider living shorelines as the preferred treatment to restore eroding shorelines. In many areas, living shorelines have proven effective at stabilizing shorelines while maintaining more of the vital fish and wildlife habitat at the water's edge. Where living shorelines are not appropriate, rip rap and stone revetments protect shorelines by the dispersal of wave energy. Technical assistance is available from the State and Federal government.

Upper Chester River Draft Watershed Restoration Action Strategy



Goal One: Improve Water Quality

Strategy: Improve sediment conservation

Kent and Queen Anne's Counties will **promote living shorelines for shoreline stabilization projects**. The Counties will encourage waterfront property owners to consider living shorelines as the preferred treatment to restore eroding shorelines. In many areas, living shorelines have proven effective at stabilizing shorelines while maintaining more of the vital fish and wildlife habitat at the water's edge. Counties will make homeowners aware of technical assistance available from the State and Federal government.





Kent County Permitting Process

1. Joint MDE/USACE permit
2. Letter of notification from contractor
3. Staff site visit
4. Contact RC&D, second staff site visit
5. Requirements for local building permit:
 1. Nonstructural project design (if applicable)
 2. Site plan
 3. Formal sediment control plan
 4. Critical Area Plan (if applicable)



Project Selection Criteria

Energy Environment	<i>Low Energy</i>	<i>Medium Energy</i>		<i>High Energy</i>
Shoreline Location	creek or cove	minor river	major tributary	main stem Bay
water depth (ft)	-1.0	-1.0 to -2.0	-2.0 to -4.0	-4.0 to -15.0
fetch (miles)	0.5	1.0 to 1.5	2.0 or more	2.0 or more
Erosion rate (ft/yr)	2 or less	2 to 4	4 to 8	8 to 20
Erosion Control Treatment Options	<i>Non-structural Projects</i>	<i>Hybrid Projects</i>		<i>Structural Projects</i>
	beach replenishment	marsh fringe w/groins		bulkheads
	fringe marsh creation	marsh fringe w/sills		revetments
	marshy islands	marsh fringe w/breakwaters		stone reinforcing
	coir logs edging, groins	beach replenishment w/breakwaters		groins & jetties
Cost per foot	\$50-100	\$150-300	\$350-500	\$500-1,200



Shore Erosion Control Methods

Nonstructural

- Habitat Restoration/Creation Achieved w/o Structures
- Limited Erosion Control

Marsh Plantings on:

- Existing Substrate or
- Fill

Beach Nourishment
Coir Log Edging

Hybrid

- Habitat Restoration/Creation Assisted w/ Structures
- Erosion Control & Habitat Benefits Variable

Continuous Sills
Low Profile & Segmented Sills
Marshy Islands (Irregular Sill)*
Stone Containment Groins*

* Often categorized as
“nonstructural” due to small size

Structural

- Structural Controls Primarily Address Erosion concerns
- Habitat Benefits Limited – Can Be Achieved Through Careful Design

Bulkheads & Seawalls
Groins & Jetties
Breakwaters (best opportunity)
Revetments



Outreach and Education

- Realtor education
- Chester River Association: *Currents*
- Sassafra River Association: Newsletter, monthly meeting

