Connecticut Coastal Management Manual

State of Connecticut
Department of Environmental Protection
Arthur J. Rocque, Jr., Commissioner

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Administered by the Office of Ocean and Coastal Resource Management
National Oceanic and Atmospheric Administration

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September 2000

INTRODUCTION

Connecticut's coastal area provides myriad opportunities for recreation, commercial fishing, marine trades and international shipping, as well as habitat for fish, shellfish, birds, wildlife and plants, and other valuable functions. We all need to work together to make sure all these uses co-exist in perpetuity. The coastal management decisions we make today determine the extent to which future generations will be able to enjoy this vital area where the land meets the sea. In the case of Connecticut, our emphasis is on balancing protection of the fragile coastal resources of Long Island Sound's ecosystem with sustainable economic uses of the shoreline.

This manual is intended to replace the Coastal Policies and Use Guidelines (a.k.a. Planning Report #30) which was published by the Department of Environmental Protection Coastal Area Management Program in December 1979. The manual was developed as a tool for coastal land use agents, boards and commissions, as well as developers, consultants and individuals, in understanding how to apply the standards and policies of the Connecticut Coastal Management Act.

The format of this manual is intended to allow for ease of use. It can be readily updated and new materials can be added as they become available.

For further information regarding coastal management in Connecticut, please contact the Coastal Programs Section of the Office of Long Island Sound Programs at 860-424-3034.

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Section 4 contains examples of site plans for the following types of coastal development activities:

Site Plan #1 - Single Family
Site Plan #2 - Multi-family
Site Plan #3 - Subdivision
Site Plan #4 - Commercial

Each plan is accompanied by descriptions and an analysis of coastal site plan deficiencies and coastal management issues specific to that plan, and a discussion of potential solutions to those problems.

SECTION 5 - CONNECTICUT COASTAL MANAGEMENT ACT

Connecticut General Statutes Sections 22a-90 through 22a-112
Public Act 00-152 – An Act Concerning Urban Harbors, Boating Safety and Water Systems in the State
Reference Guide to Coastal Policies and Definition

CONNECTICUT COASTAL MANAGEMENT MANUAL

SECTION 1

COASTAL MANAGEMENT PROCESS

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Office of Long Island Sound Programs

revised 8.30.00

Municipal Coastal Management Review Process Flowchart

START:
Application received.
Standard planning and zoning time lines begin.

Is the project site in the coastal boundary?

NO → No additional coastal management action required.

YES → Does project include a change of zoning map or regulations, a shoreline flood and erosion control structure or is a coastal site plan review required?

NO → No additional coastal management action required.

YES → Is the coastal site plan review application complete?

NO → Advise applicant of materials needed to complete application. Continue review process as application is completed.

YES → Does the project include a shoreline flood and erosion control structure (eg. seawall or revetment) and/or a zoning map or regulation change?

YES → **Shoreline Flood & Erosion Control Structure:** Referral of coastal site plan review to DEP-OLISP is required within 15 days of receipt of proposal. The commission or board must allow the commissioner of DEP 35 days for review and comment before it may render its decision.

Zoning Map or Regulation Change: The commission or board must allow the commissioner of DEP 35 days for review and comment before it may render its decision.

NO → Referral to DEP-OLISP not required. HOWEVER, we *recommend referral* to and consultation with OLISP regarding **major development** proposals, all **waterfront** proposals, and proposals where **wetlands**, **beaches & dunes**, **coastal bluffs & escarpments**, or **coastal waters** could be affected.

Are there potential adverse impacts on coastal resources and future water dependent uses?

YES → Are the adverse impacts deemed acceptable (*refer to checklist*) and/or have the adverse impacts been mitigated in an acceptable manner?

NO → Commission may approve, deny, modify or condition project. Any decision requires written findings.

YES → Commission or board APPROVES project with written findings.

NO →

- Commission or board may require MODIFICATION of project to mitigate adverse impacts. Requires written findings. Commission may require a bond, escrow account, or other surety or financial security to secure compliance with modifications.
- Commission or board may CONDITION a project with required changes to mitigate adverse impacts. Requires written findings. Commission may require a bond, escrow account, or other surety or financial security to secure compliance with conditions.
- Commission or board may DENY project without prejudice. Applicant may immediately resubmit proposal with modifications. Requires written findings.
- Commission or board may DENY project with prejudice. Applicant may not resubmit proposal for one year. Requires written findings.

NOTES:

1) The Commissioner of the Department of Environmental Protection is automatically a party to every municipal coastal site plan review and has the right to appeal a municipal decision.

2) If the board or commission does not render a decision within a statutorily allowed time frame (at least 65 days), the coastal site plan is deemed **rejected**.

3) A copy of any coastal site plan review decision must be sent to the applicant by certified mail, and must be published in the newspaper within 15 days of the decision. If the proposal includes a shoreline flood & erosion control structure the decision must also be sent to DEP-OLISP.

Office of Long Island Sound Programs

COASTAL SITE PLAN REVIEW

APPLICATION CHECKLIST

WHAT IS REQUIRED FOR A COMPLETE APPLICATION

This checklist has been developed to assist the commission or board or its staff in determining the completeness of a coastal site plan review application. To ensure that adequate information has been provided for a thorough project evaluation, coastal site plan review applications must contain specific information, as required by Connecticut General Statutes section 22a-105(c). If any of the items listed below is missing from such an application, the applicant should be advised of the information or materials necessary to complete the application.

A complete coastal site plan application should include the following information:

☐ Clear and accurate plan(s) of the entire project indicating:
- ☐ proposed location/locus map
- ☐ location of all existing buildings, structures, and uses
- ☐ location of all proposed buildings, structures, and uses
- ☐ all proposed site improvements and alterations, including location and extent of land disturbance and/or grading
- ☐ ownership (site ownership or applicant's interest in the site)
- ☐ uses on adjacent properties
- ☐ location and spatial relationship of all coastal resources on and contiguous to the site

☐ A description of the entire project, including types of existing and proposed buildings, structures, and uses

☐ Coastal Resources - identification of all resources on and adjacent to the site from following list:

- ☒ general resource*
- ☐ beaches and dunes
- ☐ bluffs and escarpments
- ☐ coastal flood hazard area
- ☐ coastal hazard area
- ☐ coastal waters/estuarine embayments
- ☐ developed shorefront
- ☐ freshwater wetlands/watercourse
- ☐ intertidal flats
- ☐ islands
- ☐ rocky shorefronts
- ☐ shellfish concentration area
- ☐ shorelands
- ☐ tidal wetlands

This identification of coastal resources leads directly to identification of the appropriate resource policies in the CCMA applicable to the project.

☐ An assessment of the condition of the resources and their capability to accommodate the proposed structure or use

☐ Coastal Use Policies - identification of all applicable policies from the following list:

- ☒ general development*
- ☐ boating
- ☐ coastal recreation and access
- ☐ coastal structures and filling
- ☐ cultural resources
- ☐ dams, dikes and reservoirs
- ☐ dredging and navigation
- ☐ energy facilities
- ☐ fisheries
- ☐ fuel, chemical and hazardous materials
- ☐ open space and agricultural lands
- ☐ ports and harbors
- ☐ sewer and water lines
- ☐ solid waste
- ☐ transportation
- ☐ water-dependent uses

☐ An assessment of how the proposal is consistent with all applicable resource and use policies

☐ An assessment of the suitability of the project for the proposed location, especially if the project site is waterfront or abuts tidal wetlands

☐ Methods and timing of construction

☐ Methods of stormwater management, including methods for retention and/or treatment

☐ Description of the type and extent of development adjacent to the site

☐ An evaluation of the potential beneficial and adverse impacts of the project and a description of proposed methods to mitigate, or lessen, any unavoidable adverse impacts

☐ Identification of whether the site is a waterfront location (includes sites fronting on tidal wetlands and open coastal waters) and, if so, an indication of whether the proposal is or is not water-dependent and why

☐ Description of impacts or effects the project will have on future water-dependent uses or water-dependent development on and adjacent to the site

☐ Description of proposed measures to mitigate, or lessen, any unavoidable adverse impacts on future water-dependent development opportunities

*General Resource and General Development policies apply to all sites and uses.

Office of Long Island Sound Programs

COASTAL SITE PLAN REVIEW COMMENTS CHECKLIST

This checklist is used by the Office of Long Island Sound Programs (OLISP) to assess the consistency of the proposed activities with the relevant policies and standards of the Connecticut Coastal Management Act [(CCMA), Connecticut General Statutes (CGS) sections 22a-90 through 22a-112, inclusive]. This review is for:

ORIGINAL TO:

by (indicate all that apply):
☐ hand-delivery ☐ fax ☐ e-mail ☐ U.S. mail
Date sent/delivered: 00/00/00

COASTAL SITE PLAN REVIEW TRIGGER:

- ☐ Zoning Compliance
- ☐ Subdivision
- ☐ Special Exception or Permit
- ☐ Variance
- ☐ Municipal Improvement

APPLICANT NAME:
MAILING ADDRESS:
PROJECT ADDRESS:

PROJECT DESCRIPTION:

OLISP reviewer:
Date OLISP review completed: 00/00/00
Plan title: _____

Date plans were received by OLISP: 00/00/00
Most recent revision date on plans:

COASTAL RESOURCES AND RESOURCE POLICIES:

	On-Site	Adjacent to Site	Potentially Inconsistent	Not Applicable
General Coastal Resources*	☒	☒	☐	☐
Beaches and Dunes	☐	☐	☐	☐
Bluffs and Escarpments	☐	☐	☐	☐
Coastal Hazard Area	☐	☐	☐	☐
Coastal Waters and/or Estuarine Embayments	☐	☐	☐	☐
Developed Shorefront	☐	☐	☐	☐
Freshwater Wetlands and Watercourses	☐	☐	☐	☐
Intertidal Flats	☐	☐	☐	☐
Islands	☐	☐	☐	☐
Rocky Shorefront	☐	☐	☐	☐
Shellfish Concentration Areas	☐	☐	☐	☐
Shorelands	☐	☐	☐	☐
Tidal Wetlands	☐	☐	☐	☐

ADVERSE IMPACTS ON COASTAL RESOURCES:

	Appears Acc…	Potentially Una…	…pplicable
Degrades tidal wetland, beaches and dunes, rocky shorefronts, or bluffs and escarpments	☒	☐	☐
Degrades existing circulation patterns of coastal waters	☐	☐	☐
Increases coastal flooding hazard by altering shoreline or bathymetry	☐	☐	☐
Degrades natural or existing drainage patterns	☐	☐	☐
Degrades natural shoreline erosion and accretion patterns	☐	☐	☐
Degrades or destroys wildlife, finfish, or shellfish habitat	☐	☐	☐
Degrades water quality	☐	☐	☐
Degrades visual quality	☐	☐	☐

…OLICIES:**

	Applies	Potentially Inconsistent
General Development*	☒	☐
Boating	☐	☐
Coastal Recreation and Access	☐	☐
Coastal Structures and Filling	☐	☐
Cultural Resources	☐	☐
Fisheries	☐	☐
Fuels, Chemicals, or Hazardous Materials	☐	☐
Ports and Harbors	☐	☐
Sewer and Water Lines	☐	☐
Solid Waste	☐	☐
Transportation	☐	☐
Water-dependent Uses	☐	☐

* General Coastal Resources and General Development policies are applicable to all proposed activities.

** Policies that are not applicable are not checked in this chart.

ADVERSE IMPACTS ON FUTURE WATER-DEPENDENT DEVELOPMENT ACTIVITIES AND OPPORTUNITIES:	Appears Acceptable	Potentially Unacceptable	Not Applicable
Replaces an existing water-dependent use with a non-water-dependent use	☐	☐	☐
Reduces existing public access	☐	☐	☐
Locates a non-water-dependent use at a site that is physically suited for a water-dependent use for which there is a reasonable demand	☐	☐	☐
Locates a non-water-dependent use at a site that has been identified for a water-dependent use in the plan of development or zoning regulations	☐	☐	☐

ISSUES OF CONCERN (SEE SUMMARY AND RECOMMENDATIONS BOX FOR ADDITIONAL DETAIL):

- ☐ Insufficient information
- ☐ Potential increased risk to life and property in coastal hazard area
- ☐ Adverse impacts on future water-dependent development opportunities
- ☐ Proximity of disturbance to sensitive resources/need for additional vegetated setback
- ☐ Potential to cause erosion/sedimentation; need for adequate sedimentation and erosion control measures
- ☐ Water quality and/or stormwater impact
- ☐ Other coastal resource impacts:
- ☐ Other:

SUMMARY AND RECOMMENDATIONS:

FINDING: (Please see summary and recommendations section on page 3 for discussion)

- ☐ CONSISTENT WITH ALL APPLICABLE COASTAL POLICIES, COMMENTS INCLUDED
- ☐ CONSISTENT WITH MODIFICATIONS OR CONDITIONS
- ☐ ADDITIONAL INFORMATION NEEDED PRIOR TO COMPLETE CSPR EVALUATION

SUPPORTING DOCUMENTATION ATTACHED TO THIS CHECKLIST:

- ☐ Copies of photographs of the site dated:
- ☐ Copies of aerial photographs dated:
- ☐ GIS maps depicting:
- ☐ Coastal resources maps dated:
- ☐ OLISP Fact Sheet(s):
- ☐ Other:

Please be advised that, separate from the municipal review [illegible] Department of Environmental Protection permits [illegible]

- ☐ Structures, Dredging and Filling [illegible] Navigable Waters
- ☐ Tidal Wetlands
- ☐ Stormwater General Permit (construction / industrial / commercial)
- ☐ Other:

For more information, contact:

Please direct questions or comments regarding this checklist to:

Department of Environmental Protection
Office of Long Island Sound Programs
79 Elm Street
Hartford, Connecticut 06106-5127

Phone 860-424-3034
Fax 860-424-4054

copy/ies provided to

OLISP Reviewer Initial: _____ Date: _____

This checklist is intended to replace a comment letter only in those instances where OLISP comments can be readily conveyed without the background discussion that would be provided in a letter.
This checklist is not used for projects that OLISP recommends should be denied.

Office of Long Island Sound Programs
Fact Sheet
for
COASTAL SITE PLAN REVIEW

What are Coastal Site Plans?

The Connecticut Coastal Management Act [CCMA, Connecticut General Statutes (CGS) sections 22a-90 through 22a-112, inclusive] requires "coastal site plan reviews" for certain site plans, plans and applications for activities or projects located fully or partially within the coastal boundary. Coastal site plan reviews must be conducted for the following applications if the proposed activity or use is located landward of the mean high water mark[1]:

- site plans submitted to a zoning commission in accordance with CGS section 22a-109;
- plans submitted to a planning commission for subdivision or resubdivision;
- applications for special exceptions or special permits submitted to a planning commission, zoning commission or zoning board of appeals;
- applications for variances submitted to a zoning board of appeals; and
- referrals of proposed municipal projects to a planning commission pursuant to CGS section 8-24 [CGS section 22a-105(b)].

In accordance with CGS section 22a-109(b), certain minor uses and activities may be exempted from coastal site plan review by municipal zoning regulations. Check your municipality's zoning regulations for exemptions.

What must be included in a coastal site plan?

The CCMA identifies the minimum level of information that must be included in a coastal site plan application. A complete application must contain the following:

- ✓ a plan showing the location and spatial relationship of coastal resources on and contiguous to the subject site;
- ✓ a description of the entire project with appropriate plans, indicating project location, design, timing, and methods of construction;
- ✓ an assessment of the capability of the resources to accommodate the proposed use;
- ✓ an assessment of the suitability of the project for the proposed location, especially if the project site is waterfront or abuts tidal wetlands;

- ✓ an evaluation of the potential beneficial and adverse impacts of the project on coastal resources and future water-dependent development activities;
- ✓ a description of proposed methods to mitigate (minimize, not compensate) adverse effects on coastal resources and future water-dependent development activities; and
- ✓ any other requirements specified by municipal regulation [CGS section 22a-105(c)].

For more information regarding what constitutes a complete application, please see the *Coastal Site Plan Review Application Checklist.*

What must the commission or board consider when acting upon a coastal site plan?

The appropriate commission or board must determine: 1) whether or not the proposed activity is consistent with all applicable coastal policies and standards in the CCMA; and 2) whether or not the potential adverse impacts of the proposed activity on both coastal resources and future water-dependent development activities are acceptable. In making this determination the municipal authority must look at the following aspects of the proposal:

- **?** consider the characteristics of the site including the location and condition of coastal resources on-site;
- **?** consider the potential effects, both beneficial and adverse, of the proposed activity on coastal resources and future water-dependent development opportunities;
- **?** follow all applicable goals and policies stated in CGS section 22a-92 and identify conflicts between the proposed activity and any goal or policy;
- **?** determine whether any remaining adverse impacts have been adequately minimized (see the *Adverse Impacts* fact sheet for more information); and
- **?** determine that the proposed activity satisfies other lawful criteria including, specifically, the municipal zoning or subdivision regulations or other applicable municipal regulations or ordinances [CGS sections 22a-106(a) and (b)].

Must a coastal site plan application be referred to the DEP for review?

Maybe. If a coastal site plan review application includes a shoreline flood and erosion control structure or includes a change in the zoning map or regulations, referral to OLISP is required by statute [Please see fact sheets on *Mandatory Municipal Referrals* and *Shoreline Flood and Erosion Control Structures*]. **However, even if the project does not require mandatory referral, we strongly recommend consultation with OLISP regarding coastal site plans for major development proposals, all waterfront proposals, and proposals where wetlands, beaches and dunes, coastal bluffs and escarpments, or coastal waters could be affected**. In these cases, referral to OLISP for technical review assistance may be appropriate.

Are there additional statutory considerations when acting upon a coastal site plan application?

Yes. These include:

DECISION

A municipal commission or board may approve, modify, condition, or deny a coastal site plan based upon the review criteria listed above. The commission or board must state in writing the findings and reasons for its action (i.e., the action to approve, modify, condition, or deny the coastal site plan review application) [CGS section 22a-106(d)].

WRITTEN FINDINGS

When a coastal site plan review decision is made, the commission or board must state in writing the findings and reasons for its actions. These are commonly termed "written findings" and should document and support the commission's decision. For example, when an application is approved, with or without conditions or modifications, the written findings should detail why the commission found that the project:

- is consistent with all applicable goals and conditions contained in CGS section 22a-92; and
- incorporates as conditions or modifications, if applicable, all reasonable measures to mitigate (or lessen) the adverse impacts of the proposed activity on both coastal resources and future water-dependent development activities[CGS section 22a-106(e)].

AUTHORITY TO REQUIRE A FINANCIAL ASSURANCE

The commission or board may also require a bond, escrow account, or other surety or financial security arrangement to secure compliance with any modifications, conditions and other terms stated in its approval of a coastal site plan [CGS section 22a-107].

LACK OF TIMELY DECISION

If the commission or board fails to render a decision within the time period provided for by the General Statutes (or by any special act for such decision), the coastal site plan is deemed rejected [CGS section 22a-105(f)].

VIOLATIONS

Any activity within the coastal boundary that is not exempt from coastal site plan review that occurs without receiving a lawful approval from a municipal board or commission or that violates the terms or conditions of such approval is a public nuisance [CGS section 22a-108].

Municipalities have the authority to exercise all enforcement remedies legally available to them for the abatement of such nuisances. The commissioner of environmental protection may also

order that such a public nuisance be halted, abated, removed, or modified and that the site of the violation be restored as nearly as reasonably possible to its condition prior to the violation [CGS section 22a-108].

Upon receipt of a petition signed by at least twenty-five residents of the municipality in which an activity is located, the commissioner of environmental protection shall investigate to determine whether or not an activity described in the petition constitutes a public nuisance [CGS section 22a-108].

Does the DEP have authority over coastal site plan reviews?

Not directly. The authority for coastal site plan review lies with the municipal board or commission responsible for the decision on the underlying application. However, the DEP exercises an oversight role in municipal coastal management activities and, in accordance with CGS section 22a-110, has "party status" in all coastal site plan reviews and can appeal a municipal decision.

[1] The mean high water mark is the average of all high tide elevations based on 19-year series of tide observations by the National Ocean Survey. The mean high water mark delineates the seaward extent of private ownership of upland property as well as the limits of municipal jurisdiction for regulating upland development projects; the State of Connecticut holds title as trustee to the lands waterward of mean high water.

Office of Long Island Sound Programs
Fact Sheet
for
MANDATORY MUNICIPAL REFERRALS

What types of reviews are required by law to be referred to the Department of Environmental Protection (DEP) in accordance with the Connecticut Coastal Management Act (CCMA)?

Any coastal site plan applications that include shoreline flood and erosion control structures as defined in Connecticut General Statutes (CGS) section 22a-109(c) [CGS section 22a-109(d)].

Any proposed municipal plan of conservation and development, municipal coastal program, or zoning regulations and any proposed changes to a municipal plan of conservation and development, municipal coastal program, or zoning regulations or zoning map [CGS section 22a-104(e)].

Are there any time frames for such referrals?

Yes. Any coastal site plan review application that includes either a shoreline flood and erosion control structure or a zoning regulation or map amendment, or both, must be referred to this Department in accordance with the general statutes as described below.

A copy of each coastal site plan submitted for any shoreline flood and erosion control structure must be referred to the DEP **within fifteen days of its receipt by the zoning commission**. The zoning commission must allow the commissioner of DEP thirty five days from the day of receipt by the Department for review and comment before it may render its decision [CGS section 22a-109(d)].

Proposed municipal plans of conservation and development or zoning regulations or changes thereto (including zoning map amendments) must be referred to the commissioner of the DEP at least **thirty-five days prior to the commencement of the public hearing** thereon [CGS section 22a-104(e)].

Please note that submission of these mandatory referrals directly to your OLISP liaison is considered by this department to be proper submission to the "commissioner" and is preferred in the interest of expediency.

What are the municipality's statutory responsibilities with regard to these applications?

Shoreline Flood and Erosion Control Structures: All projects must be reviewed to ensure that: the structure is necessary and unavoidable for the protection of infrastructure, water-

dependent uses, or existing inhabited structures that predate January 1, 1980; no feasible, less environmentally damaging alternatives exist; and all remaining unavoidable adverse impacts have been mitigated. (See also the fact sheet on *Shoreline Flood and Erosion Control Structures* for more detailed information.)

Municipal Plans of Conservation and Development or Zoning Regulations, or changes thereto (including zoning map amendments): To ensure that the proposal is consistent with the policies contained in CGS section 22a-92 and the criteria contained in CGS section 22a-102(b), the applicable land use board must consider:

- the character and distribution of the coastal resources within its coastal boundary;
- the capacity of and limitations on such resources to support development;
- the types and methods of development compatible with wise use, protection, and enhancement of such resources;
- the nature and pattern of existing development; and
- the need for public services.

If the DEP commissioner (or authorized DEP staff agent) comments on and makes recommendations on any such proposals or changes, such comment, in its entirety, must be read into the record of the public hearing and must be considered by the appropriate board or commission before final action on the proposals or changes. Failure to comment by the commissioner shall not be construed to be approval or disapproval [CGS section 22a-104(e)].

Are there any applications that the DEP would like to review, even though there is not a mandatory referral requirement?

Yes. The OLISP staff is available to and interested in providing technical assistance to coastal land use boards and commissions. Any coastal municipality can take advantage of this free service and benefit from our many years of experience in the evaluation of coastal site plan reviews. There are several types of applications that typically can either be difficult to evaluate for coastal consistency or raise specific coastal management concerns. In particular, OLISP coastal programs staff is interested in reviewing:

- major development proposals in the coastal boundary;
- all waterfront proposals; and
- development proposals where sensitive coastal resources such as beaches and dunes, coastal bluffs and escarpments, wetlands and coastal waters could be affected.

However, we are willing to evaluate any other coastal site plan review application, if time allows, although given limited staff resources and the large number of coastal site plan reviewd typically conducted in a year's time, we generally must pass on the more simple applications. We recommend that you contact OLISP staff to discuss individual applications and the advisability of their referral well in advance of the Board or Commission's review.

Office of Long Island Sound Programs
Fact Sheet
for
COASTAL SITE PLAN REVIEW EXEMPTIONS

What activities may be exempt from coastal site plan review?

Municipalities are required to conduct coastal site plan reviews for most activities within the coastal boundary in accordance with the Connecticut Coastal Management Act [CCMA, Connecticut General Statutes (CGS) sections 22a-90 through 22a-112, inclusive, see *Fact Sheet for Coastal Site Plan Reviews* for more information]. However, the CCMA also allows municipalities to authorize specific exemptions from the coastal site plan review requirements. Exemptions **may** be made for activities specifically listed in CGS section 22a-109(b) provided these exemptions have been adopted by the municipality and incorporated into its zoning regulations. The following activities are listed in CGS section 22a-109(b) as eligible for exemption from coastal site plan review:

- minor additions to or modification of existing buildings or detached accessory buildings, such as garages and utility sheds;
- construction of new or modification of existing structures incidental to the enjoyment and maintenance of residential property including but not limited to walks, terraces, driveways, swimming pools, tennis courts, docks and detached accessory buildings;
- construction of new or modification of existing on-premise structures including fences, walls, pedestrian walks and terraces, underground utility connections essential electric, gas, telephone, water and sewer service lines, signs and such other minor structures as will not substantially alter the natural character of coastal resources or restrict access along the public beach. It should be noted that in this context "walls" does not include any structures that meet the definition of shoreline flood and erosion control structure found in CGS section 22a-109(b). (See *Fact Sheet for Shoreline Flood and Erosion Control Structures* for more information);
- construction of an individual single-family residential structure except when such structure is located on an island not connected to the mainland by an existing road bridge or causeway (i.e., on an island without motor vehicle access) or except when such structure is in or within one hundred feet of the following coastal resource areas: tidal wetlands, coastal bluffs and escarpments, and beaches and dunes;
- activities conducted for the specific purpose of conserving or preserving soil, vegetation, water, fish, shellfish, wildlife and other coastal land and water resources;
- interior modifications to buildings; and
- minor changes in use of a building, structure or property except those changes occurring on property adjacent to or abutting coastal waters.

In addition to the statutory exemptions, there are two items addressed in CGS section 22a-109 that are important to note:

1. shoreline flood and erosion control structures, as defined in CGS section 22a-109(b), **cannot be exempt** from the coastal site plan review requirements contained in the CCMA (See *Fact Sheet for Shoreline Flood and Erosion Control Structures* for more information); and
2. gardening, grazing, and the harvesting of crops are not subject to provisions of the CCMA.

How can I tell if an activity is exempt?

The exemptions must be formally adopted by a municipality in order for them to be in effect. The statutorily listed exemptions have been incorporated into the zoning regulations of most coastal municipalities. Thus, to determine whether a proposed activity is currently exempt from coastal site plan review, please refer to your municipality's zoning regulations for its specific list of exemptions and consult with the municipal planning and zoning office.

Does the DEP have authority over determining whether an activity is exempt from coastal site plan review?

Not directly. Although OLISP can provide assistance in determining whether or not a proposed activity meets the standards for exemption, the authority for establishing coastal site plan review exemptions lies with a municipality's zoning commission. However, if a municipality exempts from coastal site plan review an activity that should have received such a review, the DEP can deem the activity a public nuisance and take enforcement action in accordance with CGS section 22a-108.

Must DEP be notified of a determination that an activity is exempt from coastal site plan review?

No.

What is the process for establishing exemptions?

In order to exempt any of the listed activities, the municipality must first formally adopt the exemptions, generally as amendments to their zoning regulations. A municipality is not required to adopt any of the exemptions listed in the statutes nor must they adopt all of the exemptions if they choose to adopt some of them. They may also adopt a more restrictive description of exempt activities. However, a municipality cannot exempt activities that are not specified by CGS section 22a-109(b).

What should be considered when specifying exemptions in the zoning regulations?

Many municipalities have adopted the statutorily listed exemptions verbatim. In fact, in many cases the current municipal regulations indicate that certain uses "shall be exempt" from coastal site plan review rather than "may be exempt." This precludes any flexibility to require coastal site plan review of those activities that may present a threat to sensitive coastal resources due to their location, as the regulations automatically exempt the specified activities regardless of their location. Many of the statutorily defined uses and activities may seem to be minor and in most cases they are. However, we have learned from experience that it is really the location of these uses and activities relative to sensitive coastal resources that

is critical in determining the potential adverse impacts that such uses might have. Because municipalities are required to ensure that adverse impacts are minimized and found acceptable, the proposed **location** of the activity should be the main factor in determining what constitutes a "minor addition" and/or a "minor change in use."

This, combined with several other minor issues and questions from municipalities and applicants regarding the exemption of specific activities has led us to develop model exemption regulation language. We strongly encourage municipal zoning commissions to review the exemptions that are currently allowed under their existing zoning regulations to determine whether amendments are warranted to clarify which activities are exempt or to provide reasonable flexibility to better protect sensitive coastal resources, or both.

MODEL EXEMPTION LANGUAGE.

To assist municipalities in the adoption of clearer and more flexible exemption language, the Office of Long Island Sound Programs has developed the following model for coastal site plan review exemption regulations. As you will note, the differences between the statutory language and the model regulation are very slight and differ only in that they do not exempt activities, no matter how minor, if they have the potential to impact sensitive coastal resources or affect access along public beaches. Such uses would not be prohibited by adoption of the model regulation; rather, the regulation preserves the authority of municipalities to require a coastal site plan review application and, importantly, to condition or modify such applications to mitigate impacts, where warranted, as part of the approval process.

Please note that in order to exempt any of the uses allowed pursuant to CGS section 22a-109(b) or modify the existing exemptions regulation, the municipal zoning regulations must be amended in accordance with the procedure specified in Section 8-3 of the Connecticut General Statutes. As with any proposed zoning regulation change that affects the coastal boundary, adoption of the listed exemptions or changes to the adopted exemptions requires referral to the Department of Environmental Protection for review and comment at least 35 days prior to the opening of the local public hearing. Please see the OLISP fact sheet regarding *Mandatory Referrals* for additional information regarding this process.

Notes on the model language below:

> The language in *italics* is not contained in the statutory language of CGS section 22a-109(b).
>
> Text in [brackets] is not necessarily intended as part of the final regulations, but rather is either narrative to clarify certain items or provided as alternate criteria for adoption. If the model language is adopted, this text should be either deleted if it is a clarification, or a selection should be made between the suggested alternatives.
>
> In several sections, the model language requires coastal site plan review for activities within 25 feet of specific coastal resources. We are recommending 25 feet as a minimum; however, municipalities are encouraged to adopt wider review areas (e.g., all activities within 50, 75, or 100 feet). In any event, the review area should be consistent throughout the exemption regulations.

Model Regulations:

SECTION XX: COASTAL SITE PLAN REVIEWS – EXEMPTIONS

1. Minor additions to or modification of existing buildings or detached accessory buildings *(e.g.,* garage or utility shed*) except when such building or proposed addition or modification is in or within twenty-five feet of the following coastal resources as defined by section 22a-93 of the Connecticut General Statutes: tidal wetlands, beaches and dunes, coastal bluffs and escarpments or coastal waters.*

2. Construction of new or modification to existing structures incidental to the enjoyment and maintenance of residential property including walks, terraces, driveways, *decks,* swimming pools, docks, tennis courts, and detached accessory buildings *except: (1) where the proposed construction or modification is in or within 25 feet of the following coastal resources as defined by section 22a-93 of the Connecticut General Statutes: tidal wetlands, beaches and dunes, coastal bluffs and escarpment, or coastal waters; or (2) where access along a public beach may be affected.*

3. Construction of new or modification of existing on-premise structures including fences, walls *(provided they do not meet the definition of shoreline flood and erosion control structure found in* [use either of the following: *section ___ of these regulations* or *section 22a-109(c) of the Connecticut General Statutes])*, pedestrian walks and terraces, *decks,* underground utilities, essential electric, gas, telephone, water and sewer service lines, *septic systems, and other services,* signs and other minor structures except: *(1) where any of the work or associated activities will occur within 25 feet the following coastal resources as defined by section 22a-93 of the Connecticut General Statutes: tidal wetlands, beaches and dunes, coastal bluffs and escarpments, or coastal waters; or (2) where access along a public beach may be affected.*

4. Construction of an individual single-family residential structure except when located on an island not connected to the mainland by an existing road bridge or causeway *(i.e., on an island without motor vehicle access)* or except when such structure is within one hundred feet of the following coastal resources as defined in section 22a-93 of the Connecticut General Statutes: tidal wetlands, beaches and dunes, coastal bluffs and escarpments, *or coastal waters.*

5. Activities conducted for the specific purpose of conserving or preserving soil, vegetation, water, fish, shellfish, wildlife, and other coastal land and water resources, except those activities that meet the definition of a shoreline flood and erosion control structure as defined in [use either of the following: *section ___ of these regulations* or *section 22a-109(c) of the Connecticut General Statutes]*.

6. Interior modifications to buildings.

7. Minor changes in use of a building, structure, or property except those changes occurring on property adjacent to or abutting coastal waters.

This model language is available to municipalities in electronic form. Please contact the Office of Long Island Sound Programs at 860-424-3034 to request a copy.

Office of Long Island Sound Programs

SHORELINE FLOOD AND EROSION CONTROL STRUCTURES CONSISTENCY CHECKLIST

Shoreline flood and erosion control structures represent a "hardening" of the shoreline and their installation frequently generates adverse impacts to coastal resources and may result in more harm than good. Accordingly, they are strongly discouraged by the Connecticut Coastal Management Act [CCMA, Connecticut General Statutes (CGS) sections 22a-90 through 22a-112]. This checklist is provided to assist land use agencies and private individuals in determining whether a shoreline flood and erosion control structure may be appropriate in a given situation. A shoreline flood and erosion control structure is potentially consistent with the Connecticut Coastal Management Act [CCMA, CGS sections 22a-90 through 22a-112] only if a clear demonstration can be provided that ALL of the following criterion (A through G) are met:

☐ A) The shoreline flood and erosion control structure would protect one or more of the following:

- ☐ a water-dependent use as defined by CGS Section 22a-96(16) (e.g., marina, commercial fishing facility, public access walkway)
- ☐ infrastructural facilities (e.g., roads, sewer lines, water lines)
- ☐ an inhabited structure built prior to effective date of the CCMA (January 1, 1980). The pre-existing structure itself must be in danger or located perilously close to the water.

☐ B) There is a clear demonstration of the need for erosion or flood protection. For example:

- ☐ There is clear evidence of *significant* erosion or flooding;
- ☐ A qualified structure or use is clearly in danger from flooding or erosion;
- ☐ The proposed flood and erosion control structure would protect a water-dependent structure or use which must be located on or close to the waterfront, within a coastal flood hazard area or an area prone to erosion;
- ☐ Affected infrastructure cannot be designed or relocated to remove it from a flood-prone or erosion-prone area; and
- ☐ A vulnerable pre-existing (prior to January 1, 1980) inhabited structure cannot be relocated away from a flood-prone or erosion-prone area and/or elevated to Federal Emergency Management Agency standards.

☐ C) There has been a *clear* and *compelling* demonstration that nonstructural alternatives such as vegetative stabilization (e.g., plantings and/or vegetated berms) or beach nourishment are not possible.

☐ D) There is no feasible, less environmentally damaging alternative to the proposed structure.

☐ E) The flood and erosion control structure proposed is the minimum dimension necessary to protect the structure or use.

☐ F) Adverse impacts to coastal resources have been minimized to the maximum extent practicable and have been deemed acceptable through the provision of all reasonable mitigation measures and techniques

☐ G) Based upon the above criteria, the structure is *unavoidable* and *necessary* to protect a water-dependent use, infrastructural facilities, or an inhabited structure(s) that predates January 1, 1980, the effective date of the CCMA.

Office of Long Island Sound Programs
Fact Sheet
for
STATE AND MUNICIPAL REGULATORY JURISDICTIONS

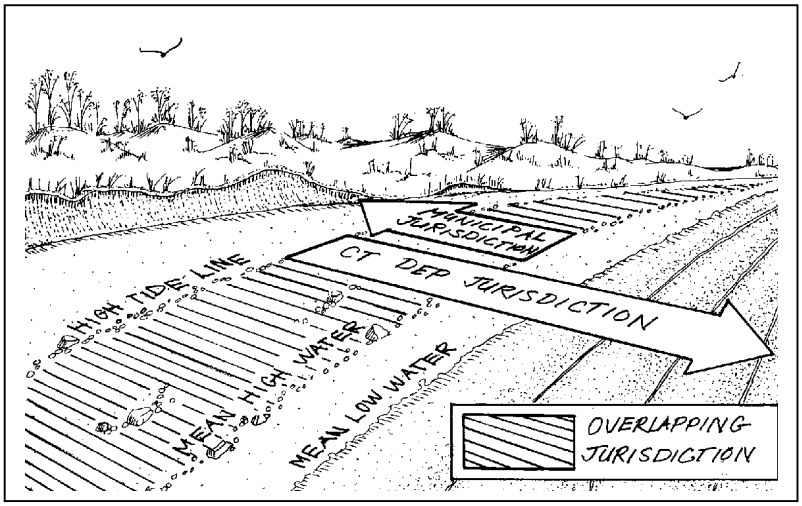
Where does the Department of Environmental Protection's Office of Long Island Sound Programs regulate and why?

The Office of Long Island Sound Programs (OLISP) of the Department of Environmental Protection (DEP) has direct regulatory jurisdiction over activities occurring in ***tidal wetlands***[1] and/or waterward of the ***high tide line***[2]**.**

If any construction activities or structure(s), in part or in whole, or any incidental work proposed in conjunction with the construction or structure(s) is proposed at or waterward of the high tide line or in tidal wetlands, prior authorization from DEP is required in accordance with the Tidal Wetlands Act (CGS sections 22a-28 through 22a-35) and/or the statutes governing the placement of structures, dredging, and fill in tidal, coastal or navigable waters (CGS sections 22a-359 through 22a-363f, inclusive).

Examples of regulated activities include dredging, the installation of structures such as docks, seawall construction, and filling. The goals of DEP's coastal regulatory programs are to protect coastal resources, promote safe navigation, balance private rights of access with the public's right to use and enjoy state public trust waters, and protect water-dependent uses (those uses functionally dependent upon a waterfront location, such as marinas).

Where does a municipality regulate in comparison to DEP's jurisdiction?



A municipality regulates upland activities under local planning and zoning authority down to the ***mean high water*** line[3]. Because the DEP-OLISP regulates activities waterward of the high tide line, in general, especially on gently sloping shorelines, there will be an area of overlapping jurisdictions because the high tide line will be further landward than mean high water. Along steep or vertical shorefronts, for instance along a seawall, the high tide line and mean high water mark will be more closely spaced, or even coincide as the same jurisdiction

line. Regardless of whether the shoreline has gentle or steep slopes, there will be many instances where ***both*** the municipality and the DEP-OLISP will regulate proposed activities along the shore (see illustration above).

Why are there separate jurisdictions?

Although there are many waterfront parks or natural areas owned by the state or coastal municipalities, much of the Connecticut shore landward of mean high water is privately owned. Areas seaward of mean high water are coastal tidelands actually belonging to the general public. Under the common law public trust doctrine, a body of law dating back to Roman times, coastal states hold submerged lands and coastal waters in trust for the public. In Connecticut, the limit of public trust lands and waters is the mean high water line which also indicates the waterward limit of a municipality's planning and zoning jurisdiction.

The OLISP's and a municipality's jurisdictions are distinctly different. Generally, DEP-OLISP regulates most public trust lands and waters with its in-water statutory powers geared toward stewardship of the public trust, resource preservation and the protection and promotion of water-dependent uses. A municipality's regulatory land use powers are drawn from the statutes governing municipal planning and zoning which generally govern use of private and municipal lands. The type and abundance of natural resources, allowable uses, applicable laws and management goals differ in both jurisdictions as well, and thus, they are regulated by different entities under different applicable laws and regulations. (For more information, see *Living on the Shore: Rights and Opportunities*, DEP- OLISP publication and DEP-OLISP's fact sheet on public trust).

Does the Connecticut Coastal Management Act apply to both DEP-OLISP and municipal jurisdictions?

Yes. Regardless of whether the DEP-OLISP, a municipality, or both, have jurisdiction over specific proposed activities along the shore, the Connecticut Coastal Management Act's (CCMA) policies and standards apply. During coastal site plan review and long range municipal planning, municipal planning and zoning commissions apply the CCMA's goals and standards for the protection of both coastal resources and water-dependent uses. (For more information, see coastal site plan review, water-dependent use and individual coastal resource fact sheets).

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[1] Tidal wetland are those areas which border on or are beneath tidal waters, such as but not limited to; banks, bogs, salt marsh, swamps, meadows, flats or other low lying lands subject to tidal action, including those areas now or formerly connected to tidal waters and whose surface is at or below an elevation of one foot above local extreme high water and upon which may grow or be capable of growing some, but not necessarily all, of the following plants: (see list in statutes)[CGS section 22a-35].

[2] The "high tide line" means a line or mark left upon tide flats, beaches, or along shore objects that indicates the intersection of the land with the water's surface at the maximum height reached by a rising tide [excerpt from CGS section 22a-359(c)].

[3] The "mean high water" line is a line on the shore established by the average of all high tides and the boundary of the public trust area based on the common law public trust doctrine. The mean high water line can often be determined by a prominent wrack line, debris line, or watermark.

Office of Long Island Sound Programs
Fact Sheet
for
WATERSHED MANAGEMENT PLANNING

What is a Watershed?

Every body of water (e.g., rivers, lakes, ponds, streams, and estuaries) has a watershed. The watershed is the area of land that drains or sheds water into a specific receiving waterbody, such as a lake or a river. As rainwater or melted snow runs downhill in the watershed, it collects and transports sediment and other materials and deposits them into the receiving waterbody.

What is Watershed Management?

Watershed management is a term used to describe the process of implementing land use practices and water management practices to protect and improve the quality of the water and other natural resources within a watershed by managing the use of those land and water resources according to a comprehensive plan.

What is Watershed Management Planning?

Watershed management planning is a process that results in a plan or a blueprint of how to best protect and improve the water quality and other natural resources in a watershed. Very often, watershed boundaries extend over political boundaries into adjacent municipalities and/or states. That is why a comprehensive planning process that involves all affected municipalities located in the watershed is essential to successful watershed management.

Why is watershed management important?

Rainwater or snowmelt can contribute significant amounts of pollution into the lake or river. Watershed management helps to control pollution of the water and other natural resources in the watershed by identifying the different kinds of pollution present in the watershed and how those pollutants are transported, and recommending ways to reduce or eliminate those pollution sources.

All activities that occur within a watershed will somehow affect that watershed's natural resources and water quality. New land development, runoff from already-developed areas, agricultural activities, and household activities such as gardening/lawn care, septic system use/maintenance, water diversion and car maintenance all can affect the quality of the resources within a watershed. Watershed management planning comprehensively identifies those activities that affect the health of the watershed and makes recommendations to properly implement them so that adverse impacts from pollution are reduced.

Watershed management is also important because the planning process results in a partnership among all affected parties in the watershed. That partnership is essential to the successful management of the

land and water resources in the watershed since all partners have a stake in the health of the watershed. It is also an efficient way to prioritize the implementation of watershed management plans in times when resources may be limited.

Because watershed boundaries do not coincide with political boundaries, the actions of adjacent municipalities upstream can have as much of an impact on the downstream municipality's land and water resources as those actions carried out locally. Impacts from upstream sources can sometimes undermine the efforts of downstream municipalities to control pollution. Comprehensive planning for the resources within the entire watershed, with participation and commitment from all municipalities in the watershed, is critical to protecting the health of the watershed's resources.

What are some key steps in watershed management?

FAMILIARIZE YOURSELF WITH YOUR WATERSHED

Comprehensive watershed plans should first identify the characteristics of the watershed and inventory the watershed's natural resources. It is important to establish a baseline of the overall nature and quality of the watershed in order to plan properly for the improvement of the resources in the watershed and to actually measure those improvements.

The first steps in watershed management planning are to:

- Delineate and map the watershed's boundaries and the smaller drainage basins within the watershed;
- Inventory and map the resources in the watershed;
- Inventory and map the natural and manmade drainage systems in the watershed;
- Inventory and map land use and land cover;
- Inventory and map soils;
- Identify areas of erosion, including stream banks and construction sites;
- Identify the quality of water resources in the watershed as a baseline; and
- Inventory and map pollution sources, both point sources (such as industrial discharge pipes) and nonpoint sources (such as municipal stormwater systems, failing septic systems, illicit discharges).

Much of this information may already be compiled and available through the DEP, the Natural Resources Conservation Service of the U.S. Department of Agriculture, and municipal offices such as planning and zoning, inland wetlands, and public works. Additional information specific to the watershed can be gathered during volunteer stream walks which allow for on the ground study of the general conditions of the receiving waters and the adjacent watershed areas.

BUILD LOCAL PARTNERSHIPS

Watershed planning should also identify and include the partners, or "stakeholders," in the watershed. Development of local partnerships can also lead to greater awareness and support from the general public. Once individuals become aware of and interested in their watershed, they often become more involved in decision-making as well as hands-on protection and restoration efforts. Through such involvement, watershed management builds a sense of community, helps reduce conflicts, increases commitment to the actions necessary to meet environmental goals, and ultimately, improves the likelihood of success for the watershed management plan.

Local partnerships can include:

Residents;
Landowners;
Federal, state, and municipal government officials;
Watershed associations and other environmental and civic groups;
Local business and industry leaders;
Agricultural users;
Developers;
Teachers; and
Recreational users.

DETERMINE PRIORITIES FOR ACTION

Watershed management planning should also determine what the opportunities are to reduce pollution or address other pressing environmental issues, prioritize those opportunities, and identify a time frame for accomplishing pollution reduction and resource and habitat improvements. Those issues that pose the greatest risk to human health or particular resources, or to desired uses of resources (i.e., swimming beaches), might be given highest priority for control and reduction. Watershed plans should establish clear goals, visions, and actions to be taken.

Examples of opportunities to reduce pollution and address other wide-ranging environmental issues include:

- Infrastructure improvements. More frequent maintenance of municipal stormwater systems or improving or replacing inadequate stormwater treatment systems, identifying and eliminating illicit (i.e., non-stormwater) connections to municipal stormwater systems;
- Reducing paved areas and other impervious cover, especially adjacent to waterbodies and wetlands. Zoning and subdivision regulations can be revised to address issues such as reducing lot coverage/impervious cover, reducing roadway widths, encouraging cluster development, limiting land disturbance such as grading and clearing, and increasing development setbacks from resources;
- Identifying appropriate areas for open space acquisition, greenways planning, and the establishment of vegetated buffers along waterbodies and wetland areas;
- Establishing sewer avoidance areas to limit development;
- Increasing inspections and maintenance of existing septic system and encouraging repairs to failing systems;
- Identifying other appropriate housekeeping practices for homeowners and landowners (encouraging the use of vegetated buffers adjacent to waterbodies and wetlands, reducing lawn areas and the amount of fertilizers and chemicals applied to them, recommending washing cars over lawns instead of driveways so rinse water can drain into the lawn and not run-off into storm drains, etc.);
- Identifying resource and wildlife habitat restoration priorities;
- Increasing and promoting public access and greenways and identifying areas where it is appropriate to do so; and
- Identifying and evaluating opportunities for nonstructural flood protection efforts;

- Improving waste management, pollution prevention, and recycling efforts at municipal facilities and businesses within the watershed.

CONDUCT EDUCATIONAL PROGRAMS

The degree of public education and participation in the planning process can greatly influence the success of watershed management. There are many ways to involve and educate the public in watershed management. The formation of citizen review groups and advisory committees can gain public support from the watershed and are an essential component to a successful, community-based, and locally led effort. These community-based groups and committees can also provide the means to keep the project going once the plan has been finalized to make sure that recommended actions are taken. It might also be helpful to identify a watershed coordinator to help in this effort.

Outreach and education efforts can include:

Periodic informational meetings;
Stream walk assessments;
Organized storm drain stenciling projects;
Watershed clean-up days and riparian planting/habitat restoration days;
Coordination with school systems within the watershed;
Information kiosks and websites;
Videos; and
Newsletters and other printed materials to provide status and progress reports.

ENSURE IMPLEMENTATION AND FOLLOW-UP

It is important to establish a schedule with milestones and some sort of committee to ensure that projects proceed in a timely manner. A monitoring program should also be established to measure success through data gathering. It is also important to identify ways in which landowners can be assisted with undertaking necessary improvements, such as low interest loans or technical outreach information. Finally, it is important to ensure that the recommendations contained in the watershed plan, especially design standards, are integrated into municipal land use regulations (zoning, subdivision, inland wetlands).

Where can a municipality get additional information?

If you are interested in watershed planning, please contact the Department of Environmental Protection's Watershed Management and Coordination Program at 860-424-3020 or Office of Long Island Sound Programs at 860-424-3034.

In addition, there are several websites that highlight watershed planning. These include:

US Environmental Protection Agency sites: http://www.epa.gov/owow/lessons/ and http://www.epa.gov/owow/watershed/tools/

The University of Connecticut's Cooperative Extension Service Nonpoint Education for Municipal Officials (NEMO) site: http://www.lib.uconn.edu/CANR/ces/nemo/index.html

The Rivers Alliance of Connecticut site: http://www.riversalliance.org/

CONNECTICUT COASTAL MANAGEMENT MANUAL

SECTION 2

COASTAL RESOURCES

Adverse Impacts Fact Sheet
Beach and Dune Fact Sheet
Bluffs and Escarpments Fact Sheet
Coastal Hazard Area Fact Sheet
Coastal Waters and Estuarine Embayments Fact Sheet
Developed Shorefronts Fact Sheet
Intertidal Flats Fact Sheet
Islands Fact Sheet
Rocky Shorefronts Fact Sheet
Shellfish Concentration Areas Fact Sheet
Shorelands Fact Sheet
Submerged Aquatic Vegetation Fact Sheet
Tidal Wetlands Fact Sheet
Landscape Protection and Visual Impacts Fact Sheet

Office of Long Island Sound Programs
Fact Sheet
for
ADVERSE IMPACTS

In order for projects proposed in the coastal boundary to be consistent with the Connecticut Coastal Management Act (CCMA), they must be designed to avoid, or if unavoidable, minimize adverse impacts to coastal resources and future water-dependent development opportunities and activities.

What are Adverse Impacts to Coastal Resources?

Eight adverse impacts to coastal resources are specifically defined in the Connecticut Coastal Management Act (CCMA). These include:

- Degrading **water quality** through the significant introduction into either coastal waters or groundwater supplies of suspended solids, nutrients, toxics, heavy metals or pathogens, or through the significant alteration of temperature, pH, dissolved oxygen or salinity [Connecticut General Statutes (CGS) section 22a-93(15)(A)]. {EXAMPLE: the discharge of significant amounts of freshwater in the form of stormwater can alter the salinity and temperature in the vicinity of the outfall and, depending upon the upland source of the stormwater, it can introduce suspended solids, nutrients, toxics, heavy metals or pathogens.}

- Degrading **existing circulation patterns of coastal waters** through the significant patterns of tidal exchange or flushing rates, freshwater input, or existing basin characteristics and channel contours [CGS section 22a-93(15)(B)]. {EXAMPLE: the installation or alteration of a tide gate on a culvert that connects a tidal wetland to open coastal waters can change the patterns of tidal exchange and flushing rates.}

- Degrading **natural erosion patterns** through the significant alteration of littoral transport of sediments in terms of deposition or source reduction [CGS section 22a-93(15)(C)]. {EXAMPLE: construction of a new groin on a beach will alter the pattern of deposition.}

- Degrading **natural or existing drainage patterns** through the significant alteration of groundwater flow and recharge and volume of runoff [CGS section 22a-93(15)(D)]. {EXAMPLE: establishment of a new large impervious surface (e.g., a new shopping center) without on-site retention of stormwater will alter the volume of runoff.}

- Increasing the hazard of **coastal flooding** through significant alteration of shoreline configurations or bathymetry, particularly within high velocity flood zones [CGS section 22a-93(15)(E)]. {NOTE: alterations of shorelines and bathymetry generally occur waterward of mean high water and thus consideration of this adverse impact is rarely required for municipal actions.}

- Degrading **visual quality** through significant alteration of the natural features of vistas and view points [CGS section 22a-93(15)(F)]. {EXAMPLE: new construction that significantly obstructs coastal views from a scenic overlook or public park.}

- Degrading or destroying **essential wildlife, finfish or shellfish habitat** through significant alteration of the composition, migration patterns, distribution, breeding or other population characteristics of the natural species or significant alteration of the natural components of the habitat [CGS section 22a-93(15)(G)]. {EXAMPLE: disturbance of piping plover nesting areas during the nesting season (mid-April to mid-August.}

- Degrading **tidal wetlands, beaches and dunes, rocky shorefronts, and bluffs and escarpments** through significant alteration of their natural characteristics or function [CGS section 22a-93(15)(H)]. {EXAMPLE: stabilizing a bluff or escarpment with riprap or other armor will eliminate its natural function as a source of sand for the adjacent beach.}

The CCMA also includes definitions of **adverse impacts on future water-dependent development opportunities and activities** which include:

- Locating a non-water-dependent use at a site that (i) is physically suited for a water-dependent use for which there is a reasonable demand, or (ii) has been identified for a water-dependent use in the plan of development of the municipality or the zoning regulations [CGS section 22a-93(17)(A)]. {EXAMPLE: a waterfront site suitable for marina development is instead used for condominium or restaurant use.}

- Replacement of a water-dependent use with a non-water-dependent use [CGS section 22a-93(17)(B)]. {EXAMPLE: an existing marina is replaced by a retail development.}

- Siting of a non-water-dependent use which would substantially reduce or inhibit existing public access to marine or tidal waters [CGS section 22a-93(17)(C)]. {EXAMPLE: new waterfront residential condominium development with fencing and signage designed to discourage access to the public trust area.}

Why is it important to consider adverse impacts?

Avoiding and reducing adverse impacts will aid in preserving and protecting sensitive coastal resources and ensure that suitable waterfront sites are reserved for uses that require direct access to, or location in, marine or tidal waters.

Is a municipality required to consider adverse impacts?

Yes. In accordance with CGS section 22a-106, a municipal board or commission reviewing a coastal site plan must determine whether or not the potential adverse impacts of the proposed activity on both coastal resources and future water-dependent uses are acceptable.

In determining the acceptability of potential adverse impacts of the proposed activity described in the coastal site plan on both coastal resources and future water-dependent development opportunities, a municipal board or commission is required to:

- consider the characteristics of the site, including the location and condition of any coastal resources;
- consider the potential effects, both beneficial and adverse, of the proposed activity on coastal resources and future water-dependent development opportunities; and
- follow all applicable coastal resource and use goals and policies stated in CGS section 22a-92 and identify conflicts between the proposed activity and any CCMA goal or policy.

What can the municipality do to ensure adverse impacts to coastal resources and future water-dependent development opportunities are avoided or minimized?

- Incorporate as conditions or modifications of coastal site plan approval all reasonable measures which would mitigate the adverse impacts of the proposed activity on both coastal resources and future water-dependent development activities. For example, require as a condition of coastal site plan approval the provision of a permanent, deed-restricted public access easement and site amenities including parking, seating, and signage to offset the non-water-dependent nature of an upland residential development.
- Update zoning and subdivision regulations to better address minimizing statutorily defined adverse impacts. Ensure that sensitive resources are protected from development through the use of buffer areas and decreased impervious coverage.
- Adopt a stormwater management ordinance to ensure that stormwater is retained on-site and/or properly treated prior to its discharge to receiving waters.
- Update the municipal plan of conservation and development and municipal coastal program, if applicable, to better address minimizing statutorily defined adverse impacts. Strongly encourage resource setbacks to protect against development impacts, and identify sites that are suitable for the development of water-dependent uses, including public access. Promote the installation and use of best management practices to minimize impacts from already-developed areas. Prohibit the placement of shoreline flood and erosion control structures except in limited circumstances to protect infrastructure, water-dependent uses, and inhabited structures that pre-date January 1, 1980.
- Review development projects to control or mitigate (lessen) on-site and off-site impacts resulting from soil erosion, sedimentation, and stormwater runoff through the use of appropriate construction, siting, and design practices such as timing and staging of earthmoving, grading, and vegetating to minimize soil exposure
  - ✔ use of vegetative control techniques such as sod, temporary vegetation, or vegetation
  - ✔ buffers,
  - ✔ use of non-vegetative control techniques such as mulches, nettings, and chemical binders,
  - ✔ use of structural control techniques such as filters, traps, basins, ponds and diversion

structures

- ✔ avoiding excavation on steep slopes (greater than 25%), and
- ✔ utilizing terracing for slope control rather than retaining walls.

- Incorporate site planning and design features which limit or avoid negative visual and aesthetic impacts or which create positive visual and aesthetic impacts on the site and on the surrounding area. For example:

  - ✔ alleviate blighted or deteriorated conditions on-site;
  - ✔ blend the architecture, size, materials, color, and texture of new structures with the existing qualities and characteristics of the man-made and natural environment;
  - ✔ provide visual setbacks from the water based on consideration of structure, height, and mass for all structures which do not functionally require a shorefront location;
  - ✔ make extensive use of landscaping, plantings, and natural ground coverings;
  - ✔ maintain, improve, or enhance visual access to the coast.

- Avoid any use or activity that would significantly increase floodwater elevations, or otherwise increase flood or erosion hazards.

- Revise zoning regulations to disallow the development of multi-family residential-type uses, including condominiums, hotels, motels, elderly housing, and assisted living facilities, in flood hazard areas (especially V-zones) unless it can be demonstrated that evacuation routes are not flood-prone and that other hazards to life and property have been minimized.

- Maintain or enhance public access to and along the shorefront when compatible with the proposed use, and design facilities so as to take advantage of their waterfront location in order to provide an area for public enjoyment.

- Maintain or improve access to and along publicly owned shorefront, including public trust lands below the mean high water mark.

- Ensure that all activities and uses are consistent with the capacity of the soil and subsoil to support such use or activity.

- Maintain or enhance cultural features through measures such as 1) protection of historic sites and districts from incompatible land uses and 2) prevention of harmful alteration of significant archaeological or geologic sites.

Office of Long Island Sound Programs
Fact Sheet
for
BEACHES AND DUNES[1]

What are Beaches and Dunes?

Beaches and dunes are beach systems including barrier beach spits and tombolos, barrier beaches, pocket beaches, land contact beaches and related dunes and sandflats [Connecticut General Statutes (CGS) section 22a-93(7)(C)]. In general, beaches are dynamic areas abutting coastal waters that are characterized by sand, gravel or cobbles. Often, in the winter the beach profile is steeper and more narrow than in the summer.

Why are they valuable?

Beaches and dunes provide critical nesting habitat for some shore birds and unique habitats for plant species and communities. They act as a buffer to coastal flooding and erosion and dissipate wave energy. Beaches and dunes provide recreational opportunities, including fishing, swimming, sunning, hiking and sight-seeing. They are areas of scientific and educational value. Dunes and dune ridges act as reservoirs for sand supply to beaches.

What are the statutory policies that apply?

> To preserve the dynamic form and integrity of natural beach systems in order to provide critical wildlife habitats, a reservoir for sand supply, a buffer for coastal flooding and erosion, and valuable recreational opportunities; to insure that coastal uses are compatible with the capabilities of the system and do not unreasonably interfere with natural processes of erosion and sedimentation; and to encourage the restoration and enhancement of disturbed or modified beach systems [CGS section 22a-92(b)(2)(C)]; and
>
> To require as a condition in permitting new coastal structures, including but not limited to groins, jetties or breakwaters, that access to, or along, the public beach below mean high water must not be unreasonably impaired by such structures [CGS section 22a-92(b)(1)(K)].
>
> To disapprove extension of sewer and water services into developed and undeveloped beaches, barrier beaches and tidal wetlands except that, when necessary to abate existing sources of pollution, sewers that will accommodate existing uses with limited excess capacity may be used [excerpt from CGS section 22a-92(b)(1)(B)].

In addition, the Connecticut Coastal Management Act defines as an adverse impact:

> Degrading tidal wetlands, beaches and dunes, rocky shorefronts, and bluffs and escarpments through significant alteration of their natural characteristics or functions [CGS section 22a-93(15)(H)]
>
> During the coastal site plan review process, a determination must be made that adverse impacts have been avoided and unavoidable adverse impacts have been minimized in

order to lawfully approve the application. See the coastal site plan review and adverse impacts fact sheets for additional information.

What can a municipality do to minimize adverse impacts to these sensitive coastal resources?

- Õ Preserve or enhance the natural form, volume and stability of beach systems during development reviews through: 1) the maintenance, restoration and enhancement of natural beach and dune vegetation; 2) the control of pedestrian access so as to prevent the trampling or destruction of beach system vegetation (through proper traffic design, control, construction methods); and 3) the utilization of non-structural erosion control techniques such as the planting of native dune grass and placement of sand fill for beach nourishment.
- Õ Protect the nesting and breeding habitats of terns, plovers, and other shorebirds which occupy beach areas through the control of pedestrian and pet access, proper trash control and temporary restrictions of access to nesting and feeding areas during breeding season.
- Õ Employ low impact pile and timber construction for the siting of necessary and unavoidable structures on beach systems. Require mitigation of impacts of such structures through the planting of native beach vegetation and minimizing encroachments into the beach and dune areas.
- Õ Prohibit the extension of sewer or water lines to undeveloped beach and dune areas.
- Õ Minimize seasonal conversions in beach areas allowing only those where: 1) the septic systems or existing sanitary sewers can accommodate year-round use; 2) the entire structure is located outside (landward) of any V-zone area; and the entire structure is located landward of the high tide line as defined in CGS section 22a-359(c).
- Õ Employ construction techniques which minimize the necessary alteration of a beach system and its form, volume and vegetation. Such techniques include, but are not limited to: 1) placement of construction materials on elevated ramps so as to prevent soil compaction and destruction of beach vegetation; 2) storage of construction materials and equipment at a non-beach location; 3) scheduling of construction so as to avoid shorebird and shellfish breeding seasons; 5) restricting equipment movement to non-vegetated areas; and 6) restoring and revegetating areas disturbed by construction to predevelopment conditions.
- Õ Update zoning regulations to better protect sensitive beach and dune areas by establishing or increasing setbacks or buffers between development (not only buildings, but also decks, parking lots, etc.) and for land disturbances which must occur on or in areas abutting beach and dune systems. Development setbacks should be wide enough to allow for predictable shoreline recession and/or dune migration which may occur during the useful life of the structure. Since January 1, 1980, it has been unlawful to approve structural flood and erosion control measures

to protect new development.

- Revise zoning and subdivision regulations to reduce development densities on and adjacent to beach resources. Prohibit high density residential-type development such as condominiums, assisted living facilities, hospitals, hotels/motels and similar uses in flood zones designated by the Federal Emergency Management Agency as V-zones where damage from direct wave action is likely during a so-called "100-year" storm event.
- Update the municipal Plan of Conservation and Development and Municipal Coastal Program, if applicable, to specifically include beach protection and preservation as a municipal goal in accordance with the guidelines found below. Include identification of appropriate beach areas for possible open space acquisition and encouragement of beach planting projects and the installation of appropriate educational signage.
- Adopt a stormwater management ordinance or make other regulatory changes to improve stormwater management (see *Water Quality* fact sheet for more information).
- Preserve the natural dynamic relationships between littoral sediment sources and depositional areas of beach systems by avoiding structures and uses which divert or otherwise alter littoral drift volumes, patterns and directions.
- Preserve public access to or along beaches below the mean high water mark by requiring that consistent development not obstruct passage along that public portion of the beach.
- Preserve the physical and spatial relationship between beach systems and related intertidal flats through the prohibition of excavation, grading and dredging of intertidal flats when they abut or are related to beach systems.

Does the DEP regulate activities on beaches and dunes?

Maybe, depending on the location and specifics of the proposed activity. The Department of Environmental Protection (DEP) has direct regulatory jurisdiction over activities occurring in tidal wetlands and/or waterward of the high tide line. If any construction activities or structure(s), in part or in whole, or any incidental work proposed in conjunction with the construction or structure(s) is proposed at or waterward of the high tide line or in tidal wetlands, authorization from the DEP's Office of Long Island Sound Programs would be required prior to construction in accordance with the Tidal Wetlands Act (CGS sections 22a-28 through 22a-35) and/or the statutes governing the placement of structures, dredging, and fill in tidal, coastal or navigable waters (CGS sections 22a-359 through 22a-363f, inclusive).

What's the difference between DEP and municipal regulatory areas?

As mentioned above, the DEP has direct regulatory jurisdiction over activities occurring in tidal

wetlands and/or waterward of the high tide line. The municipality regulates the upland waterward to the mean high water mark. In general, the mean high water mark is lower than the high tide line. Therefore, on gently sloping shorelines, there will be an area of overlapping jurisdictions (because the high tide line will be further landward than mean high water). Along steep shorefronts, for instance along a seawall, the high tide line and mean high water mark will be more closely aligned, or even coincide as the same line. The area of overlapping jurisdictions will be minimal in that case. Regardless of whether the DEP and/or the municipality have jurisdiction, the statutory policies and standards apply equally to both jurisdictions (see, also, the *Fact Sheet for State and Municipal Regulatory Jurisdictions*).

1. This fact sheet is one of 13, which detail coastal resources. Fact sheets are available for the following coastal resources: beaches and dunes, bluffs and escarpments, coastal hazard areas, coastal waters, developed shorefront, estuarine embayments, intertidal flats, islands, rocky shorefronts, shellfish beds, shorelands, submerged aquatic vegetation, and tidal wetlands.

Office of Long Island Sound Programs
Fact Sheet
for
BLUFFS AND ESCARPMENTS[1]

What are Bluffs and Escarpments?

Bluffs and escarpments are naturally eroding shorelands marked by dynamic escarpments or sea cliffs which have slope angles that constitute an intricate and dynamic balance between erosion, substrate, drainage and degree of plant cover [Connecticut General Statutes (CGS) section 22a-93(7)(A)]. In general, they are dynamic, erosion-prone areas.

Why are they valuable?

Bluffs and escarpments are a significant sediment source for other features such as beaches and dunes. They provide valuable wildlife habitat and support unique plant communities and species. They reduce the impact of coastal flooding by dissipating wave energy. In some instances they can provide recreational opportunities and scenic vistas if such uses can be designed to protect the resource from disturbance.

What are the statutory policies that apply to projects where bluffs and escarpments are on or adjacent to the site?

> To manage coastal bluffs and escarpments so as to preserve their slope and toe; to discourage uses which do not permit continued natural rates of erosion; and to disapprove uses that accelerate slope erosion and alter essential patterns and supply of sediments to the littoral transport system [CGS section 22a-92(b)(2)(A)].

In addition, the Connecticut Coastal Management Act defines as an adverse impact:

> Degrading tidal wetlands, beaches and dunes, rocky shorefronts, and bluffs and escarpments through significant alteration of their natural characteristics or functions [CGS section 22a-93(15)(H)]

During the coastal site plan review process, a determination must be made that adverse impacts have been avoided and unavoidable adverse impacts have been minimized in order to lawfully approve the application. See the coastal site plan review and adverse impacts fact sheets for additional information.

What can a municipality do to minimize impacts to bluffs and escarpments?

- Maintain coastal bluffs and escarpments in their natural state as vertical buffers to storms and flooding.

- Preserve bluff and escarpment slopes through the maintenance, enhancement and restoration of natural vegetative cover. Discourage disturbance of the face of the slope.

- Employ non-structural erosion control techniques such as erosion setbacks and buffers, locate vulnerable uses out of hazard areas, and stabilize with vegetation. See *Fact Sheet for Coastal Hazard Areas* for more information regarding erosion control techniques.

- Preserve the natural patterns and volumes of littoral transport between bluffs and escarpments and the related beaches and dunes by minimizing disturbance of the face of the bluff or escarpment. Provide an adequate buffer between the top of the slope and proposed development or use to allow for the continuing natural erosion of this resource.

- Update the municipal Plan of Conservation and Development and Municipal Coastal Program, if applicable, to specifically include as a goal the protection and preservation of bluffs and escarpments.

- Establish or increase development setbacks in zoning and subdivision regulations for the siting of structures and other work that occurs on lands adjacent to bluffs and escarpments. Setbacks should allow for predictable bluff and escarpment recession or erosion that may occur during the useful life of the structure or use of the property.

- Employ temporary, non-structural erosion control techniques such as mulch, hay bales, fabric nets and short term drainage controls during the development of any necessary and unavoidable structures on or adjacent to bluffs and escarpments.

- Maintain or enhance public access when compatible with the upland proposed use. Design proposed development to take advantage of waterfront location by providing an area for public enjoyment. Such area could include: 1) access to and along the top of the bluff or escarpment to afford coastal views; and/or 2) access to and along the toe of the bluff or escarpment, including the public trust lands below the mean high water mark.

Does the DEP regulate activities on bluffs and escarpments?

Maybe, depending on the location and specifics of the proposed activity. The Department of Environmental Protection (DEP) has direct regulatory jurisdiction over activities occurring in tidal wetlands and/or waterward of the high tide line. If any construction activities or structure(s), in part or in whole, or any incidental work proposed in conjunction with the construction or structure(s) is proposed at or waterward of the high tide line or in tidal wetlands, authorization from the DEP's Office of Long Island Sound Programs would be required prior to construction in accordance with the Tidal Wetlands Act (CGS sections 22a-28 through 22a-35) and/or the statutes governing the placement of structures, dredging, and fill in tidal, coastal or navigable waters (CGS sections 22a-359 through 22a-363f, inclusive).

What's the difference between DEP and municipal regulatory areas?

As mentioned above, the DEP has direct regulatory jurisdiction over activities occurring in tidal wetlands and/or waterward of the high tide line. The Town regulates the upland waterward to the mean high water mark. In general, the mean high water mark is lower than the high tide line. Therefore, on gently sloping shorelines, there will be an area of overlapping jurisdictions (because the high tide line will be further landward than mean high water). Along steep shorefronts, for instance along a seawall, the high tide line and mean high water mark will be more closely aligned, or even coincide as the same line. The area of overlapping jurisdictions will be minimal in that case. Regardless of whether the DEP and/or the municipality have jurisdiction, the statutory policies and standards apply equally to both jurisdictions (see, also, the *Fact Sheet for State and Municipal Regulatory Jurisdictions*).

1. This fact sheet is one of 13, which detail coastal resources. Fact sheets are available for the following coastal resources: beaches and dunes, bluffs and escarpments, coastal hazard areas, coastal waters, developed shorefront, estuarine embayments, intertidal flats, islands, rocky shorefronts, shellfish beds, shorelands, submerged aquatic vegetation, and tidal wetlands.

Office of Long Island Sound Programs
Fact Sheet
for
COASTAL HAZARD AREAS[1]

What are Coastal Hazard Areas?

Coastal hazard areas are statutorily defined as those land areas inundated during coastal storm events or subject to erosion induced by such events, including flood hazard areas as defined and determined by the National Flood Insurance Act and all erosion hazard areas as determined by the Commissioner [Connecticut General Statutes (CGS) section 22a-93(7)(H)]. In general, coastal flood hazard areas include all areas designated as within A-zone and V-zones by the Federal Emergency Management Agency (FEMA). A-zones are subject to still-water flooding during so called "100-year" flood events. During 100-year flood events, V-zones are subject to direct action by waves three feet or more in height.

Why are they valuable?

Coastal hazard areas encompass most other important coastal resources, can serve as flood storage areas, and provide numerous open space and recreational opportunities. They are, by their nature, hazardous areas for structural development, especially residential-type uses.

What are the statutory policies that apply?

To manage coastal hazard areas so as to insure that development proceeds in such a manner that hazards to life and property are minimized and to promote nonstructural solutions to flood and erosion problems except in those instances where structural alternatives prove unavoidable and necessary to protect existing inhabited structures, infrastructural facilities or water-dependent uses [CGS section 22a-92(b)(2)(F)]. An "existing inhabited structure" is a building which was constructed and inhabited prior to authorization of the CCMA on January 1, 1980 and is still in residential use.

To maintain the natural relationship between eroding and depositional coastal landforms; to minimize the adverse impacts of erosion and sedimentation on coastal land uses through the promotion of nonstructural mitigation measures. Structural solutions are permissible when necessary and unavoidable for the protection of infrastructural facilities, water-dependent uses, or existing inhabited structures, and where there is no feasible, less environmentally damaging alternative and where all reasonable mitigation measures and techniques have been provided to minimize adverse environmental impacts [CGS section 22a-92(b)(2)(J)].

> To maintain, enhance, or, where feasible, restore natural patterns of water circulation and fresh and saltwater exchange in the placement or replacement of culverts, tide gates or other drainage or flood control structures [CGS section 22a-92(c)(2)(B)].

In addition, the Connecticut Coastal Management Act defines as an adverse impact:

> Increasing the hazard of coastal flooding through significant alteration of shoreline configurations or bathymetry, particularly within high velocity flood zones [CGS section 22a-3(15)(B)].

During the coastal site plan review process, a determination must be made that adverse impacts have been avoided and unavoidable adverse impacts have been minimized in order to lawfully approve the application. See the coastal site plan review and adverse impacts fact sheets for further information.

What can a municipality do to minimize impacts to these sensitive coastal resources?

- Update municipal Plan of Conservation and Development, Municipal Coastal Program, if applicable, and zoning regulations and subdivision regulations to better manage development in coastal hazard areas by incorporating language that reflects the following guidance.

- Apply the National Flood Insurance Program flood plain management requirements [24 Code of Federal Regulations (CFR) 60.3] to: 1) all activities in designated A-zones and floodways; and 2) to all new construction or substantial improvements in designated coastal high hazard zones (V-zones).

- Prevent development of high-density residential-type uses (e.g., condominium complexes, elderly housing, hospitals, assisted living facilities, hotels/motels, etc.) in V-zones. Allow such uses in A-zones only if access to the site is not flood prone and the applicant can demonstrate the project has been designed so that risks to life and property are not increased.

- Site all facilities that have the potential to cause pollution or hazardous conditions as a result of flooding or erosion, such as energy or oil and chemical handling facilities, outside of coastal hazard areas (A and V zones). If a facility, because of its water-dependent nature, cannot be located outside of a coastal flood hazard area, incorporate flood-proofing measures in the design of the facility to protect against flooding including extreme conditions (generally a 500-year frequency flood event or greater).

- Site all new or substantially improved buildings, dwellings and non-water-dependent structures out of the designated coastal high hazard area (V-Zone).

- Elevate sufficiently above the base flood level the lowest floor of a new or substantially improved water-dependent building and habitable structure which cannot functionally be sited outside the V-Zone to minimize the impacts of wave action generated by 100 year frequency storm events.

- Where applicable, require that all new development in erosion-prone areas, particularly in any erosion hazard areas designated by the Commissioner of the Department of Environmental Protection, be set back from the water to create a safety buffer strip consisting of natural vegetative cover. The width of this buffer should be based on the predicted erosion rate in conjunction with the anticipated “useful life" of the proposed structure.

- Employ non-structural flood and erosion control techniques such as erosion setbacks and buffers, location of vulnerable uses out of hazard areas, vegetative stabilization, and construction of artificial dunes, as the primary means of controlling flood and erosion hazards except in instances where such non-structural techniques would be inadequate to protect infrastructural facilities (such as sewer and water lines), water dependent uses, or existing inhabited structures that were in place prior to January 1, 1980. Structural flood and erosion control methods cannot be approved for residential structures approved after January 1, 1980.

- Utilize structural flood and erosion control techniques such as groins, seawalls, and revetments only when: 1) the structures are being placed to provide protection to infrastructural facilities, water dependent uses, or existing inhabited structures that were in place prior to January 1, 1980; 2) non-structural techniques have been explored and are found to be infeasible; 3) there is no other less environmentally damaging alternative; and 4) all reasonable mitigation measures and techniques are employed to minimize adverse environmental impacts.

- Maintain or restore natural vegetation in coastal high hazard areas (V-Zones) to serve as buffers against storm, wind, and wave energy.

- Maintain or restore natural landforms within or adjacent to coastal hazards areas that serve as buffers to flood and erosion such as beaches, dunes and wetlands.

- Avoid any use or activity which would significantly increase floodwater elevations, or otherwise increase flood or erosion hazards.

- Maintain or restore natural patterns of littoral transport and avoid uses and activities which interrupt or alter natural sediment transport from eroding source areas to depositional receiving areas.

- Apply all coastal policies and use guidelines for other coastal resources where they occur within coastal hazard areas (see individual fact sheets for general coastal resources, beaches and dunes, bluffs and escarpments, coastal hazard areas, coastal waters,

developed shorefront, estuarine embayments, intertidal flats, islands, rocky shorefronts, shellfish beds, shorelands, submerged aquatic vegetation, and tidal wetlands).

Does the DEP regulate activities in coastal flood hazard areas?

Maybe, depending on the location and specifics of the proposed activity. The DEP has direct regulatory jurisdiction over activities occurring in tidal wetlands and/or waterward of the high tide line. If any construction activities or structure(s), in part or in hole, or any incidental work proposed in conjunction with the construction of structure(s) is proposed at or waterward of the high tide line, authorization from the DEP's Office of Long Island Sound Programs would be required prior to construction in accordance with the Tidal Wetlands Act (CGS sections 22a-28 through 22a-35 and/or the statutes governing the placement of structures, dredging, or filling in tidal, coastal or navigable waters (CGS sections 22a-359 through 22a-363f, inclusive).

While each municipality implements its own flood management regulations, the DEP Bureau of Water Management, Inland Water Resources Division, provides training, technical and planning assistance to municipalities using guidelines developed under the National Flood Insurance Program. However, each municipality maintains its regulatory jurisdiction over its flood management regulations.

What's the difference between DEP and municipal regulatory areas?

As mentioned above, the DEP has direct regulatory jurisdiction over activities occurring in tidal wetlands and/or waterward of the high tide line. The Town regulates the upland waterward to the mean high water mark. In general, the mean high water mark is lower than the high tide line. Therefore, on gently sloping shorelines, there will be an area of overlapping jurisdictions (because the high tide line will be further landward than mean high water). Along steep shorefronts, for instance along a seawall, the high tide line and mean high water mark will be more closely aligned, or even coincide as the same line. The area of overlapping jurisdictions will be minimal in that case. Regardless of whether the DEP and/or the municipality have jurisdiction, the statutory policies and standards apply equally to both jurisdictions (see, also, the *Fact Sheet for State and Municipal Regulatory Jurisdictions*).

1. This fact sheet is one of 13, which detail coastal resources. Fact sheets are available for the following coastal resources: beaches and dunes, bluffs and escarpments, coastal hazard areas, coastal waters, developed shorefront, estuarine embayments, intertidal flats, islands, rocky shorefronts, shellfish beds, shorelands, submerged aquatic vegetation, and tidal wetlands.

Office of Long Island Sound Programs
Fact Sheet
for
COASTAL WATERS AND ESTUARINE EMBAYMENTS[1]

What are Coastal Waters and Estuarine Embayments?

Coastal waters are those waters of Long Island Sound and its harbors, embayments, tidal rivers, streams and creeks, which contain a salinity concentration of at least five hundred parts per million under the low flow stream conditions as established by the commissioner [Connecticut General Statutes (CGS) section 22a-93(5)].

Coastal waters can be separated into "nearshore waters," "offshore waters" and "estuarine embayments."

> *Nearshore Waters* are those waters and their substrates lying between mean high water and a depth approximated by the ten meter contour [CGS section 22a-93(7)(K)].
>
> *Offshore Waters* means the area comprised of those waters and their substrates lying seaward of a depth approximated by the ten meter contour [CGS section 22a-93(7)(L)].
>
> *Estuarine Embayments* are a protected coastal body of water with an open connection to the sea in which saline sea water is measurably diluted by fresh water including tidal rivers, bays, lagoons and coves [CGS section 22a-93(7)(G)].

Why are they valuable?

Coastal waters are areas of high primary and secondary productivity. Coastal waters provide habitat for a variety of marine organisms (shellfish, finfish, crustaceans and benthic organisms); support many diverse floral and faunal species; provide spawning and breeding areas for many species; and are an important contributor to the productivity of contiguous ocean waters. Coastal waters are critical to the assimilation of industrial, commercial and residential wastes; support commercial and recreational fisheries; are important to marine transportation and navigation; and provide recreational opportunities for boating, swimming, fishing, diving and vistas.

Estuarine embayments are semi-enclosed bodies of coastal waters, such as tidal rivers or coves, which are measurably diluted by freshwater inputs. As such they have high biological productivity; provide significant habitat for shellfish, finfish and waterfowl; serve as spawning and feeding grounds for commercially important finfish; are essential biological corridors for spawning anadromous and catadramous fish; exhibit unique circulation patterns (estuarine circulation) which influence nutrient distribution, control salinity, mix the water column and work and redistribute sediments; supply sheltered areas for the development of eelgrass flats or beds of other submerged aquatic vegetation which are highly productive; provide nursery grounds, shelter and refuge for various aquatic species; are a vital food source for marine organisms, support an important biomass of epiphytic plants (plants that grow on other plants or objects upon which they depend for mechanical support but not as sources of nutrients); and transfer nutrients from sediments into

the water column. Estuarine embayments also provide protected locations for activities such as boating, swimming, fishing and other passive recreational activities and protected areas for deep water access and navigational corridors for commercial and industrial waterfront uses; are areas of unique scientific and educational value, and some embayments contain eelgrass flats which reduce current velocities, control erosion by trapping and binding sediments and provide essential aquatic habitat.

What are the statutory policies that apply?

> To manage estuarine embayments so as to insure that coastal uses proceed in a manner that assures sustained biological productivity, the maintenance of healthy marine populations and the maintenance of essential patterns of circulation, drainage and basin configuration; to protect, enhance and allow natural restoration of eelgrass flats except in special limited cases, notably shellfish management, where the benefits accrued through alteration of the flat may outweigh the long-term benefits to marine biota, waterfowl, and commercial and recreational finfisheries [CGS section 22a-92(c)(2)(A)].
>
> It is found and declared that the pollution of the waters of the state is inimical to the public health, safety and welfare of the inhabitants of the state, is a public nuisance and is harmful to wildlife, fish and aquatic life and impairs domestic, agricultural, industrial, and recreational and other legitimate beneficial uses of water, and that the use of public funds and the granting of tax exemptions for the purpose of controlling and eliminating such pollution is a public use and purpose for which moneys may be expended and tax exemptions granted, and the necessity and public interest for the enactment of this chapter and the elimination of pollution is hereby declared as a matter of legislative determination [CGS section 22a-422, as referenced by CGS section 22a-92(a)(2)].

In addition, the Connecticut Coastal Management Act defines as an adverse impact:

> Degrading water quality through the significant introduction into either coastal waters or groundwater supplies of suspended solids, nutrients, toxics, heavy metals or pathogens, or through the significant alteration of temperature, pH, dissolved oxygen or salinity [CGS section 22a-93(15)(A)].

During the coastal site plan review process, a determination must be made that adverse impacts have been avoided and unavoidable adverse impacts have been minimized in order to lawfully approve the application. (See the *Coastal Site Plan Review* and *Adverse Impacts* fact sheets for additional information.)

Finally, the state statutes regarding planning and zoning contain specific requirements for zoning regulations and Plans of Development that relate to the restoration and protection of coastal resources. These are:

> In any municipality that is contiguous to Long Island Sound the regulations adopted under this section shall be made with reasonable consideration for restoration and protection of the ecosystem and habitat of Long Island Sound and shall be designed to reduce hypoxia, pathogens, toxic contaminants and floatable debris in Long Island Sound. Such regulations shall provide that the commission consider the environmental impact on Long Island Sound of any proposal for development [CGS section 8-2(b)].
>
> The plan adopted under this section for any municipality that is contiguous to Long Island Sound shall be made with reasonable consideration for restoration and protection of the

ecosystem and habitat of Long Island Sound and shall be designed to reduce hypoxia, pathogens, toxic contaminants and floatable debris in Long Island Sound [excerpt from CGS section 8-23].

What can a municipality do to minimize impacts to these sensitive coastal resources?

* Maintain the continued biological productivity and viability of Long Island Sound as a resource capable of supporting: 1) healthy marine and finfish resources; 2) a broad spectrum of safe and healthy recreational opportunities; and 3) an efficient system of marine transportation and navigation through the protection of coastal water quality. The most direct approach is to adopt and implement a stormwater management ordinance, either as an amendment to the municipal zoning regulations or as a "stand-alone" ordinance. In either case, it should require that the volume of runoff generated by the first one-inch of rainfall is retained on-site and the post-development runoff rates and volumes should not exceed the pre-development runoff rates and volumes. (See *Stormwater Management* fact sheet for additional information.)

* Review the existing zoning regulations regarding the maximum impervious cover allowed. Reduce this wherever possible, especially adjacent to coastal waters and other sensitive coastal resources. This will aid in protecting coastal water quality by minimizing stormwater discharges.

* Require regularly scheduled street sweeping and catch basin clean-outs to minimize the amount of sediment, contaminants and floatable debris entering coastal waters through the municipal stormwater management system.

* Identify outfalls from the municipal stormwater systems and opportunities for retrofits to treat stormwater, especially from roads, prior to discharge.

* Prohibit the dumping of sand, snow and demolition debris into any waterbodies.

* Consider coordination with neighboring municipalities on watershed management planning.

* Update the municipal Plan of Conservation and Development, Municipal Coastal Program, if applicable, and zoning and subdivision regulations to better protect coastal waters and estuarine embayments by increasing buffers between development and these coastal resources, with the possible exception of developed shorefront where water-dependent development is suitable and to improve stormwater management. (See fact sheets regarding *Vegetated Buffers*, *Stormwater Management* and *Adverse Impacts* for more information).

* Maintain and improve water quality in accordance with the highest standards set by federal, state or local authorities by: 1) preserving and maintaining those waters with existing quality better than established standards; 2) restoring the surface waters of the municipality to a quality consistent with its use for the protection and propagation of fish, shellfish and wildlife including breeding, feeding and nursery grounds and with its use for recreation in and on the water; and 3) restoring all water to the maximum extent possible, at least to a

quality consistent with Class B or SB. Class B waters for the following recreational uses: fish and wildlife habitat; agricultural and industrial supply and other legitimate uses including navigation. Class SB waters allow for the following uses: fish, shellfish and wildlife habitat, shellfish harvesting for transfer to approved areas for purification prior to human consumption, recreation, industrial and other legitimate uses including navigation.

Does the DEP regulate activities in coastal waters and estuarine embayments?

Yes. The DEP has direct regulatory jurisdiction over activities occurring in tidal wetlands and/or waterward of the high tide line. If any construction activities or structure(s), in part or in whole, or any incidental work proposed in conjunction with the construction of structure(s) is proposed at or waterward of the high tide line, authorization from the DEP's Office of Long Island Sound Programs would be required prior to construction in accordance with the Tidal Wetlands Act (CGS sections 22a-28 through 22a-35) and/or the statutes governing the placement of structures, dredging, or filling in tidal, coastal or navigable waters (CGS sections 22a-359 through 22a-363f, inclusive).

Further, the DEP's Water Bureau administers programs regulating the discharges of nonpoint (e.g., urban stormwater runoff) and point sources (e.g., sewage outfalls) of pollution into coastal waters and estuarine embayments. Contact the DEP's Water Bureau (860-424-3705) for additional information on how to better control or report such discharges if you believe they are not being properly managed or are unauthorized.

What's the difference between DEP and municipal regulatory areas?

As mentioned above, the DEP has direct regulatory jurisdiction over activities occurring in tidal wetlands and/or waterward of the high tide line. The Town regulates the upland waterward to the mean high water mark. In general, the mean high water mark is lower than the high tide line. Therefore, on gently sloping shorelines, there will be an area of overlapping jurisdictions (because the high tide line will be further landward than mean high water). Along steep shorefronts, for instance along a seawall, the high tide line and mean high water mark will be more closely aligned, or even coincide as the same line. The area of overlapping jurisdictions will be minimal in that case. Regardless of whether the DEP and/or the municipality have jurisdiction, the statutory policies and standards apply equally to both jurisdictions (see, also, the fact sheet for *State and Municipal Regulatory Jurisdictions*).

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Office of Long Island Sound Programs
Fact Sheet
for
DEVELOPED SHOREFRONTS[1]

What are Developed Shorefronts?

Developed shorefronts are those harbor areas which have been highly engineered and developed resulting in the functional impairment or substantial alteration of their natural physiographic features or systems [Connecticut General Statutes (CGS) section 22a-93(7)(I)]. They are areas that are intensely developed, generally with bulkheads, seawalls, revetments, or other hard structures that were usually constructed many years ago.

Why are they valuable?

Developed Shorefronts have limited natural value; however, they provide other significant benefits. They are economically valuable; they serve as major transportation and commercial centers; they support significant recreational boating opportunities; and they provide substantial cultural and historic value.

What are the statutory policies that apply?

To promote, through existing state and local planning, development, promotional and regulatory programs, the use of existing developed shorefront areas for marine-related uses, including but not limited to commercial and recreational fishing, boating and other water-dependent commercial, industrial and recreational uses [CGS section 22a-92(b)(2)(G)].

What can a municipality do to best utilize these resources?

- Where feasible, reserve developed shorefront areas for intensive water-dependent uses, including but not limited to commercial and recreational fishing, boating, and other water-dependent commercial, industrial and recreational uses. If a particular site is not physically suited to intensive water-dependent use, the provision of uses providing public access should be required as a critical component of any development or redevelopment effort. Please see the *Water-Dependent Use* fact sheet for additional information. During redevelopment efforts, proper stormwater management measures should be implemented to control on-site and off-site impacts. During construction, of particular concern are impacts resulting from soil erosion, sedimentation and stormwater runoff. Control and mitigation can occur through the use of appropriate construction, siting, and design practices such as: 1) timing and staging of earthmoving, grading and the establishment of vegetation to minimize soil exposure; 2) use of vegetative control techniques such as sod, temporary vegetation, or vegetated buffers; 3) use of non-vegetative control techniques, such as mulches, netting, and chemical binders; 4) use of structural control techniques such as filters, traps, basins, ponds, and diversion structures; 5) avoiding development on steep slopes (greater than 25%); and 6) terracing. Also, redevelopment provides opportunities to retrofit stormwater management systems to minimize adverse impacts to water quality by adding retention systems, and oil, grease, and sediment traps on existing and proposed stormwater collection systems.

- Update the municipal plan of conservation and development and zoning regulations to identify and designate appropriate developed shorefront areas as commercial/industrial water-dependent zones.

- Avoid any use or activity, which would significantly increase flood or erosion hazards.
- Maintain or enhance public access to and along developed shorefront areas where compatible with the nature of the existing or proposed use. Design waterfront commercial, industrial, utility, residential and institutional facilities to provide an attractive area along the water for public enjoyment of the shorefront.
- Reuse and redevelop built-up or vacant shorefront in preference to development of previously undeveloped shorefront.
- Ensure that shorefront development is compatible with municipally and state approved municipal harbor management plans.
- All activities and uses should be consistent with the capacity of the soil and subsoil to support such uses or activities. This is especially important for stormwater retention/infiltration and treatment systems. Please see the stormwater fact sheet for more information.

Does the DEP regulate activities on developed shorefronts?

Maybe, depending to the specifics of the proposed activities. The DEP has direct regulatory jurisdiction over activities occurring in tidal wetlands and/or waterward of the high tide line. If any construction activities or structure(s), in part or in whole, or any incidental work proposed in conjunction with the construction of structure(s) is proposed at or waterward of the high tide line, authorization from the DEP's Office of Long Island Sound Programs would be required prior to construction in accordance with the Tidal Wetlands Act (CGS sections 22a-28 through 22a-35) and/or the statutes governing the placement of structures, dredging, or filling in tidal, coastal or navigable waters (CGS sections 22a-359 through 22a-363f, inclusive).

What's the difference between DEP and municipal regulatory areas?

As mentioned above, the DEP has direct regulatory jurisdiction over activities occurring in tidal wetlands and/or waterward of the high tide line. The municipality regulates the upland waterward to the mean high water mark. In general, the mean high water mark is lower than the high tide line. Therefore, on gently sloping shorelines, there will be an area of overlapping jurisdictions (because the high tide line will be further landward than mean high water). Along steep shorefronts, for instance along a seawall, the high tide line and mean high water mark will be more closely aligned, or even coincide as the same line. The area of overlapping jurisdictions will be minimal in that case. Regardless of whether the DEP and/or the municipality have jurisdiction, the statutory policies and standards apply equally to both jurisdictions (see, also, the fact sheet for *State and Municipal Regulatory Jurisdictions*).

[1] This fact sheet is one of 14, which detail coastal resources. Fact sheets are available for the following coastal resources: general coastal resources, beaches and dunes, bluffs and escarpments, coastal hazard areas, coastal waters, developed shorefront, estuarine embayments, intertidal flats, islands, rocky shorefronts, shellfish beds, shorelands, submerged aquatic vegetation, and tidal wetlands.

Office of Long Island Sound Programs
Fact Sheet
for
INTERTIDAL FLATS[1]

What are Intertidal Flats?

Intertidal flats are very gently sloping or flat areas located between high and low tides composed of muddy, silty and fine sandy sediments and generally devoid of vegetation [Connecticut General Statutes (CGS) section 22a-93(7)(D)].

Why are they valuable?

Intertidal flats serve as rich sources of and reservoirs for nutrients. Intertidal flats provide valuable feeding areas for invertebrates, fish, and shorebirds and significant shellfish habitat. Intertidal flats are sinks for toxic materials where they are generally sequestered in the finer sediments, thereby contributing to improved water quality. Intertidal flats also provide: recreational opportunities including shellfishing, fishing and wildlife observation; buffers for storm energy; and are areas of scientific and educational value.

What are the statutory policies that apply?

To manage intertidal flats so as to preserve their value as a nutrient source and reservoir, a healthy shellfish habitat and a valuable feeding area for invertebrates, fish and shorebirds; to encourage the restoration and enhancement of degraded intertidal flats; to allow coastal uses that minimize change in the natural current flows, depth, slope, sedimentation, and nutrient storage functions; and to disallow uses that substantially accelerate erosion or lead to significant despoliation of tidal flats [CGS Sec. 22a-92(b)(2)(C)].

What can a municipality do to minimize impacts to these sensitive coastal resources?

W Utilize all reasonable siting and construction practices that avoid or substantially reduce the potential negative impacts of development in or on intertidal flats. These practices may include, but are not limited to, minimizing and controlling both soil erosion and sedimentation, and stormwater impacts. See the fact sheets regarding *Coastal Waters, Stormwater Management,* and *Vegetated Buffers* for additional information.

- Update municipal Plan of Conservation and Development and zoning and subdivision regulations to better protect intertidal flats by increasing buffers between development and these coastal resources and improve stormwater management (see fact sheets regarding *Vegetated Buffers*, *Stormwater Management*, and *water quality* for more information).

- Maintain the natural patterns of sedimentation and littoral transport which determine the character and quality of intertidal flats.

- Avoid or minimize activities that interrupt or alter the nature, chemistry or tidal pattern of estuarine waters that inundate and permeate intertidal flats.

- Protect and, when practicable, restore shellfish species diversity and the capacity of intertidal flats to support shellfish, invertebrates, fish and shorebirds.

Does the DEP regulate activities on intertidal flats?

Yes. The DEP has direct regulatory jurisdiction over activities occurring in tidal wetlands and/or waterward of the high tide line. By definition, intertidal flats areas are waterward of the high tide line. Thus, any construction activities or structure(s), in part or in whole, or any incidental work proposed in conjunction with the construction of structure(s) that is proposed on intertidal flats requires prior authorization from the DEP's Office of Long Island Sound Programs in accordance with the statutes governing the placement of structures, dredging, and fill in tidal, coastal or navigable waters (CGS sections 22a-359 through 22a-363f, inclusive).

1. This fact sheet is one of 13, which detail coastal resources. Fact sheets are available for the following coastal resources: beaches and dunes, bluffs and escarpments, coastal hazard areas, coastal waters, developed shorefront, estuarine embayments, intertidal flats, islands, rocky shorefronts, shellfish beds, shorelands, submerged aquatic vegetation, and tidal wetlands.

Office of Long Island Sound Programs
Fact Sheet
for
ISLANDS[1]

What are Islands?

Islands are lands surrounded on all sides by water [Connecticut General Statutes (CGS) section 22a-93(7)(J)].

Why are they valuable?

Islands, undeveloped islands in particular, provide isolated nesting areas and critical habitat for shorebirds, support many floral and faunal species which have all but disappeared from the mainland, constitute a large percent of undeveloped shoreline, constitute unique geologic features, provide unique recreational opportunities for fishing, swimming, boating, and wildlife observation, contain large amounts of open space, are areas of scientific and educational value, and provide a storm buffer for adjacent mainland areas.

What are the statutory policies that apply?

To manage undeveloped islands in order to promote their use as critical habitats for those bird, plant and animal species which are indigenous to such islands or which are increasingly rare on the mainland; to maintain the value of undeveloped islands as a major source of recreational open space; and to disallow uses which will have significant adverse impacts on islands or their resource components [CGS section 22a-92(b)(2)(H)].

What can a municipality do to minimize impacts to these sensitive coastal resources?

- Limit development to low-density, low-impact residential or recreational uses.
- Where limited development is proposed on islands, control or mitigate on-site and off-site impacts resulting from soil erosion, sedimentation, and stormwater runoff through the use of appropriate construction, siting, and design practices such as: 1) timing and staging of earthmoving, grading, and establishing vegetation to minimize soil exposure; and 2) use of vegetative control techniques such as filters, traps, basins, ponds, and diversion structures.
- Prohibit extension of fixed access routes (such as roads or bridges) and infrastructural facilities (such as sewer and water lines) that would induce or support high intensity urban or suburban use of islands. Allow and encourage the use of shared docks for access to and from developed islands.
- Incorporate site planning and design features that limit or avoid negative visual impacts from the water. This can be accomplished by: 1) providing visual setbacks from the

water based on considerations of building height and mass for all structures which do not functionally require a shorefront location; and 2) making extensive use of landscaping, plantings, and natural ground coverings. See the fact sheet on *Adverse Impacts* for additional information regarding visual impacts.

- Maintain, restore, or enhance critical habitats for terns, herons, shorebirds, and other valuable, unique, rare or endangered flora and fauna.
- Avoid any use or activity that would significantly increase flood or erosion hazards.
- Maintain or enhance public access to and along the shorefront areas that are publicly owned, including public land below the mean high water mark.
- Apply all coastal policies and use guidelines for all other coastal resources where they occur on islands.
- Update the municipal Plan of Conservation and Development and Municipal Coastal Program, if applicable, to specifically include island protection and preservation as a municipal goal. The unique constraints to development of undeveloped islands must be recognized in the planning process, including difficulties with access for construction equipment and machinery.

Does the DEP regulate activities on islands?

Maybe, depending on the location and specifics of the proposed activity. The Department of Environmental Protection (DEP) has direct regulatory jurisdiction over activities occurring in tidal wetlands and/or waterward of the high tide line. If any construction activities or structure(s), in part or in whole, or any incidental work proposed in conjunction with the construction of structure(s) is proposed at or waterward of the high tide line or in tidal wetlands, authorization from the DEP's Office of Long Island Sound Programs would be required prior to construction in accordance with the Tidal Wetlands Act (CGS sections 22a-28 through 22a-35) and/or the statutes governing the placement of structures, dredging, and fill in tidal, coastal or navigable waters (CGS sections 22a-359 through 22a-363f, inclusive).

What's the difference between DEP and municipal regulatory areas?

The DEP has direct regulatory jurisdiction over activities occurring in tidal wetlands and/or waterward of the high tide line. The Town regulates the upland waterward to the mean high water mark. In general, the mean high water mark is lower than the high tide line. Therefore, on gently sloping shorelines, there will be an area of overlapping jurisdictions (because the high tide line will be further landward than mean high water). Along steep shorefronts, for instance along a seawall, the high tide line and mean high water mark will be more closely aligned, or even coincide as the same line. The area of overlapping jurisdictions will be minimal in that case. Regardless of whether the DEP and/or the municipality have jurisdiction, the statutory policies and standards apply equally to both jurisdictions (see, also, the fact sheet for *State and Municipal Regulatory Jurisdictions*).

1. This fact sheet is one of 13, which detail coastal resources. Fact sheets are available for the following coastal resources: beaches and dunes, bluffs and escarpments, coastal hazard areas, coastal waters, developed shorefront, estuarine embayments, intertidal flats, islands, rocky shorefronts, shellfish beds, shorelands, submerged aquatic vegetation, and tidal wetlands.

Office of Long Island Sound Programs
Fact Sheet
for
ROCKY SHOREFRONTS[1]

What are Rocky Shorefronts?

Rocky shorefronts are shorefront areas composed of bedrock, boulders, and cobbles that are highly erosion resistant and are an insignificant source of sediments for other coastal landforms [Connecticut General Statutes (CGS) section 22a-93(7)(B)]. In general, rocky shorefronts are naturally occurring rocky outcrops that are the interface between the land and water.

Why are they valuable?

Rocky shorefronts provide hard substrate and habitat for rocky intertidal organisms such as barnacles, blue mussels, rockweed, starfish, and oyster drills, serve as feeding grounds and refuge areas for shorebirds and finfish, dissipate and absorb storm and wave energy without significant changes in shoreline configuration, and provide scenic vistas and recreational opportunities for climbing and wildlife observation.

What are the statutory policies that apply?

> To manage rocky shorefronts so as to insure that development proceeds in a manner which does not irreparably reduce the capability of the system to support a healthy intertidal biological community; to provide feeding grounds and refuge for shorebirds and finfish, and to dissipate and absorb storm and wave energies [CGS section 22a-92(b)(2)(B)].

In addition, the Connecticut Coastal Management Act defines as adverse impacts:

> Degrading tidal wetlands, beaches and dunes, rocky shorefronts, and bluffs and escarpments through significant alteration of their natural characteristics or functions [CGS section 22a-93(15)(H)]

During the coastal site plan review process, a determination must be made that adverse impacts have been avoided and unavoidable adverse impacts have been minimized in order to lawfully approve the application. See the *Coastal Site Plan Review* and *Adverse Impacts* fact sheets for additional information.

What can a municipality do to minimize impacts to these sensitive coastal resources?

- Preserve rocky shorefront slope and composition in order to provide a natural buffer to wave attack, storms, and erosion.

- Maintain the natural features of rocky shorefronts which provide habitat for intertidal shellfish and molluscs and feeding grounds and refuge areas for shorebirds, finfish and shellfish.

- Update the municipal Plan of Conservation and Development and Municipal Coastal Program, if applicable, to specifically include the identification, protection and preservation of rocky shorefronts as a municipal goal. Include identification of rocky shorefront areas where public access is suitable and desirable.

- Update zoning regulations to better protect sensitive resources by establishing or increasing setbacks or buffers between development (not only buildings, but also decks, parking lots, etc.) and for land disturbances which must occur on or in areas abutting rocky shorefronts. Development setbacks should be wide enough to allow for reasonable upland use in order to discourage disturbance of the rocky shorefront.

Does the DEP regulate activities on rocky shorefronts?

Maybe, depending on the location and specifics of the proposed activity. The Department of Environmental Protection (DEP) has direct regulatory jurisdiction over activities occurring in tidal wetlands and/or waterward of the high tide line. If any construction activities or structure(s), in part or in whole, or any incidental work proposed in conjunction with the construction of structure(s) is proposed at or waterward of the high tide line or in tidal wetlands, authorization from the DEP's Office of Long Island Sound Programs would be required prior to construction in accordance with the Tidal Wetlands Act (CGS sections 22a-28 through 22a-35) and/or the statutes governing the placement of structures, dredging, and fill in tidal, coastal or navigable waters (CGS sections 22a-359 through 22a-363f, inclusive).

What's the difference between DEP and municipal regulatory areas?

The DEP has direct regulatory jurisdiction over activities occurring in tidal wetlands and/or waterward of the high tide line. The Town regulates the upland waterward to the mean high water mark. In general, the mean high water mark is lower than the high tide line. Therefore, on gently sloping shorelines, there will be an area of overlapping jurisdictions (because the high tide line will be further landward than mean high water). Along steep shorefronts, for instance along a seawall, the high tide line and mean high water mark will be more closely aligned, or even coincide as the same line. The area of overlapping jurisdictions will be minimal in that case. Regardless of whether the DEP and/or the municipality have jurisdiction, the statutory policies and standards apply equally to both jurisdictions (see, also, the fact sheet for *State and Municipal Regulatory Jurisdictions*).

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1. This fact sheet is one of 13, which detail coastal resources. Fact sheets are available for the following coastal resources: beaches and dunes, bluffs and escarpments, coastal hazard areas, coastal waters, developed shorefront, estuarine embayments, intertidal flats, islands, rocky shorefronts, shellfish beds, shorelands, submerged aquatic vegetation, and tidal wetlands.

Office of Long Island Sound Programs
Fact Sheet
for
SHELLFISH CONCENTRATION AREAS[1]

What are Shellfish Concentration Areas?

Shellfish concentration areas are actual, potential or historic areas in coastal waters, in which one or more species of shellfish aggregate [Connecticut General Statutes (CGS) section 22a-93(7)(N)]. Many shellfish concentration areas provide harvest opportunities for personal consumption or by Connecticut's aquaculture industry.

Why are they valuable?

Shellfish concentration areas provide habitat for several species of shellfish, contribute to the diversity of benthic life, and provide sources of food for shorebirds, lobsters and other marine life. Shellfish concentration areas support an important source of food, provide recreational shellfishing opportunities, provide economic opportunities for the shellfish industry, and provide employment through the shellfish industry.

What are the statutory policies that apply to shellfish concentration areas?

> To insure that the state and the coastal municipalities provide adequate planning for… [the restoration and enhancement of Connecticut's shellfish industry]…and to insure that any restrictions or exclusion of such…[use]…are reasonable [CGS section 22a-92(a)(10)].
>
> To manage intertidal flats so as to preserve their value as a nutrient source and reservoir, a healthy shellfish habitat and a valuable feeding area for invertebrate, fish and shorebirds [CGS section 22a-92(b)(2)(D)].
>
> Where feasible and environmentally acceptable, to encourage the creation of wetlands for the purposes of shellfish and finfish management, habitat creation and dredge spoil disposal [CGS section 22a-92(b)(2)(E)].
>
> To give high priority and preference to uses and facilities which are dependent upon proximity to the water or the shorelands immediately adjacent to marine and tidal waters [CGS section 22a-92(a)(3)].
>
> To protect and where feasible, upgrade facilities serving the commercial fishing and recreational boating industries [CGS section 22a-92(b)(1)(I)].

In addition, the Connecticut Coastal Management Act defines as an adverse impact:

> Degrading or destroying essential wildlife, finfish or shellfish habitat through significant alteration of the composition, migration patterns, distribution, breeding or other population characteristics of natural species or significant alteration of the natural components of the habitat [CGS section 22a-93(15)(G)].

During the coastal site plan review process, a determination must be made that adverse impacts have been avoided and unavoidable adverse impacts have been minimized in order to lawfully approve the application. See the coastal site plan review and adverse impacts fact sheets for additional information.

Finally, the statutes regarding planning and zoning contain specific requirements for zoning regulations and plans of development that relate to the restoration and protection of coastal resources. These are:

> In any municipality that is contiguous to Long Island Sound the regulations adopted under this section shall be made with reasonable consideration for restoration and protection of the ecosystem and habitat of Long Island Sound and shall be designed to reduce hypoxia, pathogens, toxic contaminants and floatable debris in Long Island Sound. Such regulations shall provide that the commission consider the environmental impact on Long Island Sound of any proposal for development [CGS section 8-2(b)].
>
> The plan adopted under this section for any municipality that is contiguous to Long Island Sound shall be made with reasonable consideration for restoration and protection of the ecosystem and habitat of Long Island Sound and shall be designed to reduce hypoxia, pathogens, toxic contaminants and floatable debris in Long Island Sound [excerpt from CGS section 8-23].

What can a municipality do to minimize impacts to these sensitive coastal resources?

- Update the Plan of Conservation and Development, the Municipal Coastal Program, if applicable, and zoning and subdivision regulations to better protect shellfish concentration areas by increasing buffers between development and these coastal resources, and to improve stormwater management (see fact sheets regarding *Vegetated Buffers*, *Stormwater Management* and *Water Quality* for more information).

- Maintain and ensure the continued viability and productivity of shellfish concentration areas by: 1) revitalizing and increasing the number and extent of productive shellfish beds; and 2) restoring and maintaining healthy and productive bottom conditions.

- Maintain and restore water quality to a condition that permits direct harvesting of shellfish for human consumption.

- Avoid activities that may have an adverse impact on water column characteristics, sedimentation, and substrates in shellfish concentration areas during critical spawning periods.

- Avoid uses and activities that might restrict the harvesting of shellfish of a quality suitable for human consumption.

- Avoid the placement of structures associated with upland development which would restrict access to or prevent the harvesting of shellfish.

- Apply guidelines for coastal waters and estuarine embayments for shellfish concentration areas (see *Coastal Waters and Estuarine Embayments* fact sheet).

Does the DEP regulate activities in shellfish concentration areas?

Yes. The Department of Environmental Protection (DEP) has direct regulatory jurisdiction over activities occurring in tidal wetlands and/or waterward of the high tide line. By their nature, shellfish concentration areas are waterward of the high tide line. Thus, any construction activities or structure(s), in part or in whole, or any incidental work proposed in conjunction with the construction of structure(s) that is proposed in shellfish concentration areas requires prior authorization from the DEP's Office of Long Island Sound Programs in accordance with the Tidal Wetlands Act (CGS sections 22a-28 through 22a-35) and/or the statutes governing the placement of structures, dredging, and fill in tidal, coastal or navigable waters (CGS sections 22a-359 through 22a-363f, inclusive).

Other agencies or local commissions may have regulatory jurisdiction over shellfish concentration areas. Local shellfish commissions or harbor management commissions may have policies and regulations regarding shellfish concentration areas that are within their municipality's jurisdiction. The State of Connecticut Department of Agriculture is the lead state agency with control over all shellfisheries within state jurisdiction. The Department of Agriculture Bureau of Aquaculture also has exclusive authority for regulating aquaculture structures and operations, except for water discharges, in the waters of the State pursuant to Public Act 99-93.

1. This fact sheet is one of 13, which detail coastal resources. Fact sheets are available for the following coastal resources: beaches and dunes, bluffs and escarpments, coastal hazard areas, coastal waters, developed shorefront, estuarine embayments, intertidal flats, islands, rocky shorefronts, shellfish beds, shorelands, submerged aquatic vegetation, and tidal wetlands.

Office of Long Island Sound Programs
Fact Sheet
for
SHORELANDS[1]

What are Shorelands?

Shorelands are those land areas within the coastal boundary exclusive of coastal hazard areas, which are not subject to dynamic coastal processes and which are comprised of typical upland features such as bedrock hills, till hills, and drumlins [Connecticut General Statutes (CGS) section 22a-93(7)(M)]. In general, shorelands are not located within coastal flood or erosion hazard areas (V-zones and A-zones as defined by the Federal Emergency Management Agency) and contain no tidal wetlands, beaches and dunes or other sensitive resources.

Why are they important?

Shorelands function as immediate sources of upland runoff contributing to coastal drainage, serve as immediate sources of upland sediments, provide scenic vistas, and have high development and redevelopment potential.

What are the statutory policies that apply?

> To regulate shoreland use and development in a manner which minimizes adverse impacts upon adjacent coastal systems and resources [CGS section 22a-92(b)(2)(I)].

The statutes regarding planning and zoning also contain specific requirements for zoning regulations and Plans of Conservation and Development that relate to the restoration and protection of coastal resources. These are:

> In any municipality that is contiguous to Long Island Sound the regulations adopted under this section shall be made with reasonable consideration for restoration and protection of the ecosystem and habitat of Long Island Sound and shall be designed to reduce hypoxia, pathogens, toxic contaminants and floatable debris in Long Island Sound. Such regulations shall provide that the commission consider the environmental impact on Long Island Sound of any proposal for development [CGS section 8-2(b)].
>
> The plan adopted under this section for any municipality that is contiguous to Long Island Sound shall be made with reasonable consideration for restoration and protection of the ecosystem and habitat of Long Island Sound and shall be designed to reduce hypoxia, pathogens, toxic contaminants and floatable debris in Long Island Sound [excerpt from CGS section 8-23].

What can a municipality do to minimize impacts to adjacent coastal resources and promote appropriate development and use of shorelands?

- Revise municipal Plan of Conservation and Development, where appropriate, to guide coastal development to shorelands and to require setbacks for new structures from bluffs and escarpments, tidal wetlands, and beaches or dunes in order to minimize potential impacts to sensitive coastal resources. Setbacks should be designed to protect resources from both direct development impacts and secondary impacts associated with stormwater runoff. See fact sheets for individual resources for additional protection and preservation measures.

- Update municipal zoning regulations to require maintenance of vegetative buffer areas on the perimeter of shorelands as necessary to: 1) protect adjacent coastal wetlands, beaches, and watercourses from the impacts of accelerated velocities or increased volumes of upland runoff and associated sedimentation and erosion; 2) preserve coastal water quality; 3) provide visual buffers; and 4) protect important habitat areas.

- Adopt a stormwater management ordinance, either as an amendment to the zoning regulations or a stand-alone ordinance. It should prohibit increases in volumes and rates of upland runoff to coastal waters by: 1) limiting the amount of impervious surface area created by construction, even on sites removed from the waterfront; 2) requiring installation of stormwater detention facilities such as ponds, holding basins, or infiltration galleries capable of preventing increases in pre-existing natural runoff rates for all intensities and durations of rainfall; 3) requiring the installation of temporary drainage controls during construction; 4) limiting site clearing to the minimum necessary for construction and location of facilities; and 5) requiring the maintenance of vegetative buffers adjacent to wetlands and watercourses. See fact sheet on *Stormwater Management* for more information.

- Include in the Plan of Conservation and Development provisions to maintain or enhance public access to and along the shorefront by: 1) maintaining or improving access to and along publicly owned shorefront including public trust lands below the mean high water mark; and 2) discouraging development which reduces or eliminates existing public access to the shoreline.

- In reviewing coastal site plan review applications, prevent erosion by requiring that plans be designed to: 1) minimize the area of disturbed soil and duration of its exposure by limiting site clearing and devegetation and phasing construction activities; 2) require that vegetative buffers be maintained in an undisturbed condition (see fact sheet on *Vegetated Buffers*); 3) require replanting and

  revegetation of areas disturbed during construction; 4) employ temporary erosion

control techniques such as hay bales, mulching, sod, netting, diversion structures and filters; 5) avoid development on steep slopes (25% or greater); 6) limit development on moderately steep slopes (15% to 25%) to low intensity uses; and 7) avoid alteration of natural drainage channels which would accelerate stream flow and/or bank erosion.

- Protect rare and endangered species and preserve their critical habitats.
- Preserve groundwater quality in recharge and aquifer areas by preventing the discharge, disposal, or storage of toxic or hazardous materials on or near such areas.
- Insure that all activities and uses, including stormwater retention and infiltration systems, are consistent with the capacity of the soil or subsoil to support such activities.
- Maintain cultural characteristics of shorelands by 1) protecting historic sites and districts against incompatible land uses, and 2) preventing the alteration of significant archaeological or geologic sites.

Does DEP regulate activities on shorelands?

Maybe, depending on the location and specifics of the proposed activity. The Office of Long Island Sound Programs at DEP does not have direct regulatory jurisdiction over activities within shorelands; however other regulatory programs is the Air, Waste or Water Bureaus may apply to shoreland uses. Additional information regarding departmental permitting programs is available on the DEP website which is located at http://dep.state.ct.us/.

Additional information regarding the areal extent of OLISP's permitting authority is available on the fact sheet on *State And Municipal Regulatory Jurisdictions*.

Regardless of whether a project is directly subject to departmental permitting, any development activities on or in shorelands must be consistent with the Connecticut Coastal Management Act (CGS sections 22a-90 through 22a-112), as these activities could have direct impacts on other coastal resources.

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Office of Long Island Sound Programs
Fact Sheet
for
SUBMERGED AQUATIC VEGETATION (SAV)[1]

What is Submerged Aquatic Vegetation (SAV)?

Submerged aquatic vegetation includes those rooted, vascular, flowering plants that live permanently submerged below the water in coastal, tidal and navigable waters. The primary species in Long Island and Fishers Island Sounds are eelgrass and widgeon grass. In the brackish and fresh tidal areas of Connecticut there are seventeen other species of SAV's, the dominant one being tapegrass.

Why is it valuable?

SAV beds are some of the most productive shallow water habitats on earth. They provide critical shelter for finfish and essential habitat for shellfish, especially scallops, and improve water quality by taking up nutrients, removing sediment from the water column, and reducing wave energy, thereby minimizing shoreline erosion rates. Thus, recreational and commercial fishing operations in Connecticut are critically dependent upon the preservation of SAV's. They also are an important food source for many waterfowl species.

What are the statutory policies that apply?

> To protect, enhance and allow natural restoration of eelgrass flats except in special limited cases, notably shellfish management, where the benefits accrued through alteration of the flat may outweigh the long-term benefits to marine biota, waterfowl, and commercial and recreational fisheries [Connecticut General Statutes (CGS) section 22a-92(c)(2)(A)].

In addition, the Connecticut Coastal Management Act defines as an adverse impact:

> Degrading or destroying essential wildlife, finfish or shellfish habitat through significant alteration of the composition, migration patterns, distribution, breeding or other population characteristics of natural species or significant alteration of the natural components of the habitat [CGS section 22a-93(15)(G)].

During the coastal site plan review process, a determination must be made that adverse impacts have been avoided and unavoidable adverse impacts have been minimized in order to lawfully approve the application. See the *Coastal Site Plan Review* and *Adverse Impacts* fact sheets for additional information.

Since SAV's are essential habitat for wildlife, finfish and shellfish, the destruction or degradation of SAV's constitutes an unacceptable adverse impact. This applies not only to eelgrass beds, but to all SAV's.

Finally, the statutes regarding planning and zoning contain specific requirements for zoning regulations and Plans of Development that relate to the restoration and protection of coastal resources. These are:

> In any municipality that is contiguous to Long Island Sound the regulations adopted under this section shall be made with reasonable consideration for restoration and protection of the ecosystem and habitat of Long Island Sound and shall be designed to reduce hypoxia, pathogens, toxic contaminants and floatable debris in Long Island Sound. Such regulations shall provide that the commission consider the environmental impact on Long Island Sound of any proposal for development [CGS section 8-2(b)].
>
> The plan adopted under this section for any municipality that is contiguous to Long Island Sound shall be made with reasonable consideration for restoration and protection of the ecosystem and habitat of Long Island Sound and shall be designed to reduce hypoxia, pathogens, toxic contaminants and floatable debris in Long Island Sound [excerpt from CGS section 8-23].

What can a municipality do to minimize impacts to these sensitive coastal resources?

R Update the municipal Plan of Conservation and Development, zoning regulations and subdivision regulations to: 1) better protect sensitive resources by establishing or increasing protective buffers between development and coastal waters; 2) reduce development densities; and 3) require proper stormwater management in new development and the retrofitting of existing stormwater systems during redevelopment to minimize potential adverse impacts to coastal water quality. See fact sheets regarding *Vegetated Buffers*, *Coastal Waters* and *Stormwater Management* for additional information.

R Update the Harbor Management Plan, if applicable, to include municipal goals and policies designed to protect SAV beds.

R Amend zoning regulations to require on-site, upland retention of the runoff associated with the first one-inch of rainfall and to direct additional runoff, after appropriate treatment, away from coastal waters, especially where SAV beds are present. Freshwater inputs such as those associated with stormwater runoff adversely impact the brackish and saline ecosystems that characterize most SAV beds in Connecticut. See fact sheets regarding *Water Quality* and *Stormwater Management* for additional information.

R Review the existing zoning regulations regarding the maximum impervious cover

allowed. Reduce this wherever possible, especially adjacent to coastal waters and other sensitive coastal resources.

R Avoid or minimize activities that interrupt or alter the essential character of SAV beds, including the chemistry or tidal pattern of estuarine waters that inundate and permeate submerged aquatic vegetation beds and the bathymetry of the substrate.

Does the DEP regulate activities in SAV beds?

Yes. The DEP has direct regulatory jurisdiction over activities occurring in tidal wetlands and/or waterward of the high tide line. If any construction activities or structure(s), in part or in whole, or any incidental work proposed in conjunction with the construction of structure(s) is proposed at or waterward of the high tide line, authorization from the DEP's Office of Long Island Sound Programs would be required prior to construction in accordance with the Tidal Wetlands Act (CGS sections 22a-28 through 22a-35) and/or the statutes governing the placement of structures, dredging, and fill in tidal, coastal or navigable waters (CGS sections 22a-359 through 22a-363f, inclusive). Since all SAV beds occur waterward of the high tide line, most activities proposed within SAV beds are regulated by DEP.

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Office of Long Island Sound Programs
Fact Sheet
for
TIDAL WETLANDS[1]

What are Tidal Wetlands?

Tidal wetlands are "those areas which border on or lie beneath tidal waters, such as, but not limited to banks, bogs, salt marshes, swamps, meadows, flats, or other low lands subject to tidal action, including those areas now or formerly connected to tidal waters, and whose surface is at or below an elevation of one foot above local extreme high water; and upon which may grow or be capable of growing some, but not necessarily all, of [a list of specific plant species - see Connecticut General Statutes (CGS) section 22a-29(2) for complete list of species]" [CGS section 22a-29, as referenced by CGS section 22a-93(7)(E)]. In general, tidal wetlands form in "low energy" environments protected from direct wave action. They are flooded by tidal waters twice a day and support a diverse ecosystem of vegetation and wildlife.

Why are they valuable?

Tidal wetlands are areas of high nutrient and biological productivity that provide detrital products forming the base of the food web in Long Island Sound. Tidal wetlands provide habitat, nesting, feeding, and refuge areas for shorebirds; serve as a nursery ground for larval and juvenile forms of many of the organisms of Long Island Sound and of many estuarine-dependent oceanic species; and provide significant habitat for shellfish. Tidal wetlands also improve water quality by trapping sediments, reducing turbidity, restricting the passage of toxics and heavy metals, decreasing biological oxygen demand (BOD), trapping nutrients, and buffering storm and wave energy. Tidal wetland vegetation stabilizes shorelines and buffers erosion. Tidal wetlands provide recreational opportunities for fishing, wildlife observation and hunting; are important to commercial and recreational shell- and finfisheries; and are areas of scientific and educational value. Tidal wetlands are a major source of coastal open space.

What are the statutory policies that apply?

> It is declared that much of the wetlands of this state have been lost or despoiled by unregulated dredging, dumping, filling and like activities and despoiled by these and other activities, that such loss or despoliation will adversely affect, if not entirely eliminate, the value of such wetlands as sources of nutrients to finfish, crustacea and shellfish of significant economic value; that such loss or despoliation will destroy such wetlands as habitats for plants and animals of significant economic value and will eliminate or substantially reduce marine commerce, recreation and aesthetic enjoyment and that such loss of despoliation will, in most cases, disturb the natural ability of tidal wetlands to reduce flood damage and adversely affect the public health and welfare; that

> such loss or despoliation will substantially reduce the capacity of such wetlands to absorb silt and will thus result in the increased silting of channels and harbor areas to the detriment of free navigation. Therefore, it is declared to be the public policy of this state to preserve the wetlands and to prevent the despoliation and destruction thereof [CGS section 22a-28 as referenced by CGS section 22a-92(a)(2)].
>
> To preserve tidal wetlands and to prevent the despoliation and destruction thereof in order to maintain their vital natural functions; to encourage the rehabilitation and restoration of degraded tidal wetlands; and where feasible and environmentally acceptable, to encourage the creation of wetlands for the purpose of shellfish and finfish management, habitat creation and dredge spoil disposal [CGS section 22a-92(b)(2)(E)].
>
> To disallow any filling of tidal wetlands and nearshore, offshore, and intertidal waters for the purpose of creating new land from existing wetlands and coastal waters which would otherwise be undevelopable, unless it is found that the adverse impacts on coastal resources are minimal [CGS section 22a-92(c)(1)(B)].
>
> To disapprove extension of sewer and water services into developed and undeveloped beaches, barrier beaches and tidal wetlands except that, when necessary to abate existing sources of pollution, sewers that will accommodate existing sues with limited excess capacity may be used [excerpt from CGS section 22a-92(b)(1)(B)].

In addition, the Connecticut Coastal Management Act defines as an adverse impact:

> Degrading tidal wetlands, beaches and dunes, rocky shorefronts, and bluffs and escarpments through significant alteration of their natural characteristics or functions [CGS section 22a-93(15)(H)]
>
> Degrading or destroying essential wildlife, finfish or shellfish habitat through significant alteration of the composition, migration patterns, distribution, breeding or other population characteristics of the natural species or significant alterations of the natural components of the habitat [CGS section 22a-93(15)(G)].

During the coastal site plan review process, a determination must be made that adverse impacts have been avoided and unavoidable adverse impacts have been minimized in order to lawfully approve the application. See the *Coastal Site Plan Review* and *Adverse Impacts* fact sheets for additional information.

What can a municipality do to minimize impacts to these sensitive coastal resources?

- Update the municipal Plan of Conservation and Development, Municipal Coastal Program, if applicable, and zoning and subdivision regulations to better protect tidal wetlands by providing development setbacks and vegetated buffers from the upland edge of tidal wetlands which are adequate to protect the wetlands from

runoff, erosion, construction, and other negative impacts that might result from development on adjacent upland resources. See fact sheets regarding *Vegetated Buffers*, *Stormwater Management* and *Water Quality* for more information.

- Amend zoning regulations to require on-site, upland retention of the runoff associated with the first one-inch of rainfall and to direct additional runoff, after appropriate treatment, away from tidal wetlands. Freshwater inputs such as those associated with stormwater runoff adversely impact the brackish and saline ecosystems that characterize most tidal wetlands in Connecticut. See fact sheets regarding *Water Quality* and *Stormwater Management* for additional information.

- Review the existing zoning regulations regarding the maximum impervious cover allowed. Reduce this wherever possible, especially adjacent to coastal waters and other sensitive coastal resources.

- Include in the municipal Plan of Conservation and Development or Municipal Coastal Program, if applicable, an inventory of tidal wetland areas and adjacent upland for possible open space acquisition.

- Preserve or restore the structure, function, and integrity of the physical and biological components of tidal wetlands by encouraging projects that would: 1) maintain or restore the natural tidal flushing, circulation, and chemical characteristics of tidal wetlands and adjacent estuarine waters; 2) maintain or restore the natural plant and animal species that inhabit tidal wetlands; and, 3) avoid adverse impacts to U.S. and state listed threatened and endangered species.

- Disallow extensions of water and sewer lines into tidal wetlands except sewers that will accommodate existing uses with limited excess capacity may be used when necessary to abate existing sources of pollution.

- Employ siting alternatives which will avoid or substantially limit negative impacts, such as the following: 1) siting inconsistent uses out of tidal wetlands on adjacent upland areas, or 2) siting consistent uses in such a manner as to avoid or minimize the tidal wetland area affected. When siting consistent uses, consider requiring construction techniques which will avoid or substantially limit impacts such as: 1) elevation of consistent uses on low impact pile foundations at a height sufficient to prevent or minimize the effects of shading on the wetland vegetation; 2) storage of construction materials and equipment in non-wetland areas; 3) provision of waterborne access to the construction site, or use of temporary elevated construction accessways; 4) schedule construction activities during late fall, winter or early spring months when impacts to wetland systems are generally the least harmful; 5) schedule construction activities so as to avoid shorebird, shellfish and finfish breeding seasons; and 6) restore all disturbed marsh surfaces as nearly as possible to their natural topographic condition following construction activities and re-establishing a natural vegetation cover.

- Where applicable, as a component of permitted activities, rehabilitate and restore

degraded tidal wetlands through such means as 1) restoration of natural tidal range or circulation patterns 2) restoration of tidal flushing and circulation to wetlands which were formerly connected to tidal waters, and 3) re-establishment of marsh vegetation.

What is tidal wetland restoration?

The Connecticut DEP is a national leader in efforts to restore degraded tidal wetlands to healthy, productive conditions. Historically, many tidal wetlands were diked and drained, filled, or otherwise cut off from tidal waters in an effort to control mosquitoes and create dry land for development. Restoration efforts generally involve the removal of obstacles that prevent tidal waters from reaching the degraded areas. Once tidal flushing is re-established, the natural fish predators of mosquitoes can enter the wetlands and feed on mosquito larvae which helps minimize the need for chemical controls. Connecticut is the first state in the nation to establish a unit dedicated to wetland restoration and mosquito management. Through the efforts of the Wildlife Division's Wetlands Habitat and Mosquito Management (WHAMM) Program of the DEP, many of the state's tidal wetlands will be restored and enhanced for the benefit of waterfowl, shorebirds, and other wetland dependent wildlife.

Does the DEP regulate activities on tidal wetlands?

Yes. The Department of Environmental Protection (DEP) has direct regulatory jurisdiction over activities occurring in tidal wetlands and/or waterward of the high tide line. If any construction activities or structure(s), in part or in whole, or any incidental work proposed in conjunction with the construction of structure(s) is proposed at or waterward of the high tide line, authorization from the DEP's Office of Long Island Sound Programs would be required prior to construction in accordance with the Tidal Wetlands Act (CGS sections 22a-28 through 22a-35) and/or the statutes governing the placement of structures, dredging, and fill in tidal, coastal or navigable waters (CGS sections 22a-359 through 22a-363f, inclusive).

1. This fact sheet is one of 13, which detail coastal resources. Fact sheets are available for the following coastal resources: beaches and dunes, bluffs and escarpments, coastal hazard areas, coastal waters, developed shorefront, estuarine embayments, intertidal flats, islands, rocky shorefronts, shellfish beds, shorelands, submerged aquatic vegetation, and tidal wetlands.

Office of Long Island Sound Programs
Fact Sheet
for
LANDSCAPE PROTECTION AND VISUAL IMPACTS

Why do we need to protect landscapes?

The face of coastal Connecticut is often pictured in terms of historic New England fishing villages, beach communities, and quaint villages. However, ongoing development pressures such as skyrocketing real estate values, tear-downs of summer cottages, and rebuilds of much larger permanent residences tend to result in a much different visual landscape. The visual quality of the landscape, in turn, plays a large role in maintaining community identity and quality of life in coastal areas. Though visual resources are statutorily protected, regulators at state and local levels have had difficulty in interpreting and implementing these existing standards in specific cases. This guidance is intended to equip coastal managers and municipalities with tools to discuss, prevent, and mitigate negative impacts to scenic resources.

What are the statutory policies and authorities that apply?

The **Connecticut Coastal Management Act (CCMA)**, the foundation upon which the coastal management program is based, contains a general statement in §22a-91(5) that the coast is rich in "aesthetic resources," and §22a-93(15)(F) defines as an "adverse impact on coastal resources" the "degrading [of] visual quality through significant alteration of the natural features of vistas and view points."

The **Connecticut River Gateway Commission** is a state-local compact charged with protecting the scenic and ecological integrity of the lower Connecticut River. The Commission is organized within the Connecticut General Statutes chapter 477a §25-102a through §25-1021. The statutes declare that the "…lower Connecticut River and the towns abutting the river possess "unique scenic, ecological, scientific and historic value contributing to public enjoyment, inspiration and scientific study,…" and charge the Commission with "…prevent[ing] deterioration of the natural and traditional river way scene for the enjoyment of present and future generations of Connecticut citizens**…**" The Commission accomplishes this through land protection and zoning standards to be enforced by the participating towns in the Gateway Zone.

What are Visual Impacts?

Visual impacts include changes in appearance of the landscape as a result of developments. They can be positive or negative, direct or indirect, temporary or permanent, single or cumulative, and can vary in magnitude and significance. Factors to consider include extent of potential visibility of the proposed development, views and viewers affected, quality of views, and magnitude of

visual impact as determined by duration, nature, scale and other criteria.* Significant negative impacts occur when character, quality, or public enjoyment of a visual resource is diminished or impaired.

Which views does Coastal Management Act policy protect?

At the state level, DEP coastal programs focus on protecting public views of statewide scenic significance. This may include natural views as well as built views that typify a cultural landscape. The policy is intended to protect views generally accessible to the public, even if they are on private lands, but not private individual views. The types of visual resources this policy protects are:

- National Wildlife Refuges, and state Wildlife Management Areas, Sanctuaries and Natural Area Preserves (e.g., Stewart B. McKinney National Wildlife Refuge Units, Barn Island Wildlife Management Area, Hammonasset Natural Area Preserve);
- Trails of National or State significance (e.g., East Coast Greenway, Branford Trolley Trail);
- Sites of cultural or historical significance including sites on or eligible for inclusion on the National Register of Historic Places (e.g., Avery Point Lighthouse, Mystic Seaport);
- National, State, or Municipal Parks or Forests (e.g., Harkness Memorial State Park, Cockaponset State Forest, Lighthouse Point Park);
- Coastal public access sites (most are included in the *Connecticut Coastal Access Guide* available online at http://www.lisrc.uconn.edu/coastalaccess/index.asp);
- All other resources identified as "outstanding scenic assets" in the Long Island Sound Study's *Shoreline Appearance and Design: A Planning Handbook,* produced by the New England River Basins Commission in April 1975.
- Public natural resources or public landscapes visited by the general public, in part for the use, observation, enjoyment and appreciation of natural or cultural visual qualities (e.g., Gateway Region of Lower Connecticut River, Long Island Sound).

What can a municipality do to minimize visual impacts?

Actions at the municipal level may hold the most potential power in determining the visual quality of coastal landscapes in Connecticut. There may be views that are important to local communities that do not necessarily constitute *views of statewide significance*. Local entities, including harbor management commissions and planning and zoning boards, should work together to identify local scenic resources and create protections for those resources.

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* Institute of Environmental Assessment and The Landscape Institute. *Guidelines for Landscape and Visual Impact Assessment*. 1995

- **Step One** is to identify through a public process the scenic views that a town wishes to protect. This task requires the identification of what *about* those views is worth protecting. Is it the natural landscape? The lack of visible built structures? No structures at all, whether visible or not? If there are dilapidated structures, are they adding scenic character? Consider also the potential threats to the view. For example, what stands out most often is development that is out of character with the surrounding environment.

  If community meetings have recently been conducted to create comprehensive planning documents, it may be possible to glean this information from that process. Towns may want to preserve views from or of local public access points or historic structures. They may want to protect views that are "pristine," or alternatively, areas that are more appropriate for development, e.g views that encompass structures similar to the proposed development. As a particular example, towns in the Lower Connecticut River Gateway Region will probably want to protect the views from ridgeline to ridgeline as best as possible along the river. From these evaluative processes, towns may create visual zones to preserve characteristic views.

- **Step Two** is to write into local management plans and municipal zoning regulations measures to protect views identified in Step One. Harbor Management Commissions have a particular responsibility to consider potential upland development that may impact shoreline views. For suggested language for Harbor Management Plans, please see the publication *Old Riverport Harbor Management Plan*, available from OLISP by calling 860-424-3034.

  It is essential for local boards and commissions that have overlapping authorities to work together to ensure implementation of a consistent visual resource policy in accordance with the community's overall planning process and goals. Cumulative impacts should be considered in areas suggested for development. Keep in mind that visual impacts are only one factor for consideration and must be balanced with navigational, ecological, and economic considerations in implementing CCMA policies.

How can municipalities evaluate visual impacts in Coastal Site Plan Reviews?

Based on CCMA visual impact policies, municipal agencies may require applicants to submit, through the Coastal Site Plan Review process, information detailing visual resources, visual public access points and suitable options for mitigation of any adverse impacts on those resources. Views of statewide significance as well as any scenic areas identified in local plans should be considered for inclusion in this analysis.

Factors for considerations during agency review of Coastal Site Plans include:

- the visual characteristics of the site and surrounding location;

- the potential effects, both beneficial and adverse, of the proposed activity on the scenic landscape;

- conflicts between the proposed activity and policies stated in CGS §22a-91(5), §22a-93(15)(F), municipal Plans of Conservation and Development, harbor management plans; or other scenic preservation goals.

- available alternatives for prevention, minimization, and mitigation of adverse visual impacts.

If the proposed activity impacts a view of statewide significance, a Coastal Site Plan should be forwarded to DEP, if such has not already occurred for other reasons. OLISP staff may request that the applicant demonstrate that the proposed activity does not diminish the quality and public appreciation of the scenic resource. Similarly, local agencies can request such demonstration for views of local significance. An applicant's assertion that the design is in harmony with or does not diminish the values of the listed resource may not be sufficient for the purposes of determining visual impacts. In some cases, an applicant may need to provide a professional assessment of the visual impact of the proposed activity, including viewshed analyses or simulations conducted by a licensed landscape architect or a professional in a related field. A viewshed is an area of land, water and/or other environmental elements that is visible from a fixed vantage point.

Are there tools that applicants and municipalities can use for visual simulation of project proposals?

CanVis software, available free of charge through the National Oceanic and Atmospheric Administration's Coastal Services Center (NOAA-CSC), can be used to depict both two-dimensional and three-dimensional coastal development scenarios. Advanced users may create scale-accurate depictions of docks and other coastal development. This software is not intended for the creation of legal evidence but rather as a tool for discussing alternative scenarios. Visual simulations may assist developers, applicants, and decision-makers in deliberations. Tutorials and downloadable files of docks, boats, vegetation, houses, and other structures designed to assist with coastal development simulation are available from NOAA-CSC at http://www.csc.noaa.gov/canvis. For more information, please contact the Coastal Services Center at (843) 740-1200.

OLISP has available a sample list of methods for minimizing or mitigating visual impacts. To obtain a copy, call 860-424-3034.

CONNECTICUT COASTAL MANAGEMENT MANUAL

SECTION 3

COASTAL USES

General Public Access to Coastal Waters Fact Sheet

Septic Systems Fact Sheet

Sewer and Water Lines Fact Sheet

Shoreline Flood and Erosion Control Structures Fact Sheet

Stormwater Management Fact Sheet

Vegetated Buffers Fact Sheet

Water-Dependent Uses Fact Sheet

Office of Long Island Sound Programs
Fact Sheet
for
GENERAL PUBLIC ACCESS TO COASTAL WATERS

What is General Public Access to Coastal Waters?

General public access to coastal waters, as used in the statutory definition of "water-dependent uses" [see fact sheet for *Water-Dependent Uses*], are uses or facilities which provide for recreational use or enjoyment of coastal waters and/or their adjacent shoreline by the general public. General public recreational use and enjoyment includes, but is not limited to: fishing, hiking, boat launching, birding or wildlife observation, and general passive enjoyment of scenic waterfront coastal views and vistas.

When is it most appropriate to incorporate public access into a waterfront development proposal?

As required by the Connecticut Coastal Management Act (CCMA) waterfront sites should, in most instances, be developed with water-dependent uses, unless site specific characteristics prevent such use. In an instance where a site is inappropriate for more active water-dependent uses, such as marinas, the creation or enhancement of public access should be a priority. (See *Fact Sheet for Water-dependent Uses* for more information.)

Generally, coastal public access should be provided where appropriate as a stand-alone water-dependent use and at any waterfront site proposed for non-water-dependent use to make the project consistent with the water-dependent use policies of the CCMA and to mitigate unacceptable adverse impacts of the proposed development on future water-dependent development opportunities. The acceptability of potential adverse impacts should be evaluated based upon a consideration of the:

- site's unique characteristics including its potential to accommodate a water-dependent development or use;
- effects of the proposed non-water-dependent use on possible future water-dependent development opportunities; and
- consistency of the proposed use with applicable CCMA policies and goals.

The degree to which potential adverse impacts to future water-dependent development opportunities are created by a proposed non-water-dependent use should be determined based upon a consideration of the amount and characteristics of the shoreline proposed to be developed for non-water-dependent uses and the intensity of such use. The following list of potential public

access opportunities and constraints should be considered in determining the type and extent of coastal public access appropriate for the site:

- general site topography including site elevation and contours;
- on-site or adjacent safety hazards;
- water depths;
- presence of sensitive coastal resources and the need to protect them;
- community coastal recreational facility needs;
- neighborhood privacy concerns; and
- views from the site.

Can a commission legally require coastal public access as a condition of coastal site plan review approval?

Yes, when necessary and appropriate to satisfy the water-dependent use requirements of the CCMA. The statutory language found within the CCMA authorizes a municipal planning and zoning commission to require the provision of coastal public access as a condition of coastal site plan approval for the otherwise non-water-dependent use of a waterfront site. This has been confirmed by the Connecticut Supreme Court in the decision DeBeradinis vs. Zoning Commission of the City of Norwalk 228 Conn. 187**.** The Court also found that the imposition of a requirement to provide public access at a site proposed for a non-water-dependent use was <u>not</u> an unconstitutional taking of private property without just compensation.

What is the process for evaluating and siting coastal public access facilities?

<u>General Site Evaluation</u>

- Get a sense of the site - is there potential for providing meaningful public access?
- Confirm information shown on the site plan (e.g., drainage, solar orientation, slopes, soils, hazards).
- Identify existing or potential site attractions (e.g., scenic view, water depths for fishing/boat launching, surficial geology-sandy beach or rocky shorefront).
- Is there evidence of existing public use at the site (e.g., foot paths)? If none, contact local potential user groups (e.g., birding or kayak clubs) to evaluate site's potential.
- Is there enough space to separate public from private use of the site? If not, redesign the project to accommodate public access.
- Are there significant public safety concerns?
- Can site safety constraints and coastal resource protection concerns be overcome through appropriate design (e.g., pedestrian overpasses, fencing, security lighting, etc.)?

- Can the proposed development be redesigned, if necessary, to better accommodate public use?

Locate and Map Potential Site Activity Nodes

- Identify areas appropriate to public and private uses, including areas for parking and access to the site.
- Develop linkages between public use areas and site access points; locate attractions to draw the visitor to the site from a public street or parking area.
- Identify and locate appropriate barriers to separate public from private areas (e.g., fencing, landscape screening).
- Identify links to off-site public areas (e.g., public parks) and barriers to adjacent incompatible uses (e.g., railroads).

Site Signage

- Provide signage design and wording details (e.g., open dawn to dusk) and indicate sign locations. Generally, signs should, at a minimum, be located at the street entrance to the site and, if somewhat distant from the entrance, at the parking area(s). Additional directional signage should be considered if the access area is remote and not obvious from the street entrance.
- Develop a town-wide signage program to promote uniform signage and special sign components (e.g., directional arrows) and to provide prefabricated signs. Prefabricated universal coastal public access signs are also available through the DEP's bookstore.

Administrative and Legal Items

- To ensure implementation and maintenance of public access component(s), condition coastal site plan approval to specifically require:
    - general public access component(s) as a separate, enforceable condition of approval, even if shown on developer's plans. The formal decision should include description of the public access components.;
    - recorded public access easements on land records to ensure permanency of access;
    - maintenance of the public access area and associated amenities and establishment of a mechanism to provide such maintenance (e.g., create a homeowners association public access area maintenance account);
    - public access areas and linkages be built before issuing building permit(s) or certificate(s) of occupancy for the non-water-dependent components of the site development; and
    - applicants to post performance bonds or escrow accounts, as authorized by CGS section 22a-107, to ensure that coastal public access facilities are constructed.

- Perform follow-up inspections to ensure the access facilities are properly constructed and associated easements are filed prior to issuing certificate(s) of occupancy for the non-water-dependent components of the site development and periodic inspections to ensure facilities are properly maintained.

Note: CGS section 52-557f relieves private property owners of liability for injury in most instances when they provide public access on private lands at no charge.

What are the principles of coastal public access site design?

- Make the visiting public feel comfortable and welcome (methods: signage, amenities such as benches, trash receptacles, lighting and parking, if appropriate).
- Separate the public and private portions of the development (methods: plantings, fences, adequate space between public and private activity nodes).
- Design to attract and retain public use of access area (methods: provide sufficient space and amenities such as seating, trash receptacles and parking, if warranted).
- Promote a sense of visitor safety from on- and off-site hazards such as dogs, privacy conscious neighbors, industrial activities (methods: provide lighting, limit access from dawn to dusk except for fishing access, orient site away from visual distractions, provide vegetated buffers).
- Make access to area easy (methods: on or near site parking; connect site walkways to public sidewalks, provide gentle slopes).

What can a municipality do to promote coastal public access?

- Amend the Plan of Conservation and Development and Municipal Coastal Program, if applicable, to specifically identify both areas where coastal public access is particularly needed and the types of access facilities in greatest demand.
- Amend the zoning regulations to specify municipal authority and criteria to specifically require water-dependent uses including coastal public access through the coastal site plan review process, as already provided in the CCMA.
- Direct applicants for waterfront projects to meet with town planning and zoning staff prior to formal application for coastal site plan review approval to review the CCMA's water-dependent use requirements. The purpose of such meetings should be to explore whether a site is suitable for active water-dependent uses, and if not, how proposed non-water dependent uses of waterfront sites could be modified to incorporate meaningful water-dependent use components. Such meetings could also address concerns about the perceived effects of providing coastal public access (i.e., public access can be designed at "neighborhood scale"; time of access limited to dawn to dusk except where fishing access is appropriate, landowner liability is limited by statute, etc.).
- Make this fact sheet available to the public and the planning and zoning office.

Office of Long Island Sound Programs
Fact Sheet
for
SEPTIC SYSTEMS

What are Septic Systems?

The purpose of an on-site subsurface sewage treatment and disposal system, commonly known as a septic system, is to treat domestic sewage from a residential, commercial, or in some cases, industrial use in order to prevent contamination of nearby ground and surface waters. Septic systems generally provide adequate treatment of domestic sewage as long as they are properly located, designed, installed, operated and adequately maintained.

How do septic systems work?

A septic system has two basic working parts

1) SEPTIC TANK

Domestic sewage flows from the house or other building into the septic tank. Solids settle and are partially decomposed by bacteria to form sludge. Grease floats to the top forming a scum layer. Generally, this material (septage) is what is pumped out when a septic system is cleaned.

2) SOIL ABSORPTION FIELD

Partially treated domestic sewage is discharged from the septic tank into an absorption field. Here, the water is further purified by filtration and decomposition by microorganisms in the soil.

What harm can a septic system do?

The potential for contamination of coastal waters, ground water and surface waters exists when any of these factors are neglected. Septic systems must be located in suitable soils and adequately set back from wells, watercourses, and wetlands among other requirements. Otherwise, they can pose a public health risk and result in water contamination. Failing or improperly sited or designed septic systems may contribute to water quality problems as a result of both pathogens (disease-causing microorganisms such as bacteria and viruses) and nutrients (excessive levels of nitrogen and phosphorus which can cause algal blooms and low oxygen conditions). Toxic contaminants can also be a problem when systems are used improperly. In the past along Connecticut's coast, it has been common to site septic systems in coastal areas on small lots with inadequate separation distances to groundwater or bedrock, or on very sandy soils with poor renovation capacity which has lead to pollution of coastal surface and ground waters.

What can I, as a municipal official, board, commission or resident do to promote wise septic system use?

- Remember that each new residential or small commercial septic system constructed in the state must be located, designed, installed and operated in accordance with the *Connecticut Public Health Code*. Municipal directors of health are responsible for ensuring that new systems meet the health code and its standards.
- Familiarize yourself with the basic septic system setback requirements (from ledge, water table, wells, open watercourses) and minimum criteria of the *Connecticut Public Health Code*. Ask your health official for information-- if something doesn't look right to you, ask questions.
- When reviewing a coastal site plan or zoning proposal, with proposed or modified septic systems, direct your concerns and questions to your local health official or Connecticut Department of Public Health Services. In addition to the state water quality standards, remember the Connecticut Coastal Management Act has specific criteria that must be considered during review of coastal site plan review applications to protect water quality, tidal wetlands, coastal resources and prevent non-point source pollution from septic systems.
- Ask that all pertinent septic system information be placed on site plans (septic system location, basis of design, test hole data, percolation rates, etc.).
- Keep in mind that failing septic systems are also considered a non-point source of pollution which needs to be addressed under Connecticut's Coastal Non-Point Source Pollution Control Program.
- Encourage septic system owners to know the location of their septic systems. Often the local health department or septic tank service companies have information regarding specific systems, or a septic system owner can trace the direction the sewer pipe goes from the basement or look for areas where the grass does not grow well, remains green throughout the summer when other portions of the lawn browns due to lack of water, or where a leach field area may be slightly depressed or raised.
- Don't plant trees or shrubs over your septic area.
- Encourage septic system owners to pump out their septic tanks regularly. Consider passing a municipal ordinance to require periodic pumping.
- Develop and distribute fliers around town describing the importance of proper siting, soil testing and maintenance of septic systems.
- Protect the absorption field by keeping automobiles and heavy equipment off of them.
- A septic system does not need to have anything added to it to function properly. Water

softener and conditioner backwash should not be discharged to a septic system.

- Eliminate the use of garbage disposals and phosphate-based detergents.
- Don't put substances such as motor oil, gasoline, paints, thinners and pesticides in drains. While moderate use of household cleaners will do little harm, other substances such as fats, grease, coffee grounds, paper towels, disposable diapers, etc. may clog your system.
- Keep a maintenance record of your septic system to aid in anticipating when the next cleaning may be needed.
- Plant a greenbelt between your absorption field and the shoreline.
- If you are building a new septic system, construct the system as far away from tidal and inland wetlands and the shoreline as possible.
- Call your local health official if your system fails. Exercise caution near an opened septic tank (it may contain toxic and explosive gases) and fence off the area.
- Repair and upgrade improperly functioning systems. Retrofit plumbing fixtures with water conservation units. Fix leaking fixtures. Don't direct sump pumps or floor drains to septic systems.

Additional resources and publications

The Connecticut Department of Public Health Services,
Capitol Avenue, Hartford
860-509-7296
Connecticut Public Health Code
Design of Subsurface Sewage Disposal Systems for Households and Small Commercial Buildings

The Connecticut Department of Environmental Protection

Maps and Publications Office, 79 Elm St. Hartford
860-424-3555
Septic Systems Manual: A Guide to On-Site Subsurface Sewage Disposal for Local Land-Use Officials
Seepage and Pollutant Renovation Analysis for Land Treatment, Sewage Disposal Systems

Office of Long Island Sound Programs- 860-424-3034
Coastal Water Quality Protection: A Guide for Local Officials

Office of Long Island Sound Programs
Fact Sheet
for
SEWER AND WATER LINES

What are the concerns regarding sewer and water lines in the coastal boundary?

People love to live and play on and near Connecticut's shore. Many areas along the shore have historically been developed within flood prone areas on or near beaches and tidal wetlands. The pressure continues today to develop any remaining lands. The provision of sewer or water lines to areas previously deemed undevelopable due to the inability to accommodate septic systems or wells, can lead to more people being subject to flood hazards and increase potential adverse impacts to coastal resources from development. The establishment of new sewer and water lines sometimes leads to whole-sale increases in allowable densities or impervious coverage previously limited by septic capacity. This overall development pressure can sometimes result in increased conversions of seasonal cottages to year-round dwellings and impacts to on-site or nearby beaches, dunes, tidal wetlands, and water quality.

What are the statutory policies that apply?

> To disapprove extension of sewer and water services into developed and undeveloped beaches, barrier beaches and tidal wetlands except that, when necessary to abate existing sources of pollution, sewers that will accommodate existing uses with limited excess capacity may be used [Connecticut General Statutes (CGS) section 22a-92(b)(1)(B)]
>
> To locate and phase sewer and water lines, so as to encourage concentrated development in areas which are suitable for development [CGS section 22a-92(b(1)(B)]

Additionally, the Connecticut Coastal Management Act's (CCMA) planning goal regarding sewer and water line extensions is to encourage development in areas which are suitable and prevent flood-prone and resource intensive areas from becoming developable or developed at a higher density. It is important to keep in mind that CCMA policies allow extensions only under limited conditions.[1]

Under what circumstances can sewer and water lines be extended?

When they are required to abate existing sources of pollution. However, even in such cases, the extension should accommodate only existing uses with limited excess capacity so as to minimize the potential for additional development in the sensitive resource area and prevent "tie-ins" to the system.

What can the municipality do to minimize impacts associated with sewer and water line extensions?

- Update municipal plan of conservation and development, municipal coastal program, if applicable, and zoning and subdivision regulations to establish criteria to identify sewer avoidance areas and promote development in appropriate areas outside beaches, barrier beaches, tidal wetlands, and other flood hazard areas.

- Develop and implement a sewer avoidance program.

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[1] State funds used for sewer and water line extensions generally carry the same limitations on where and under what circumstances they can be extended.

Office of Long Island Sound Programs
Fact Sheet
for
SHORELINE FLOOD & EROSION CONTROL STRUCTURES

What are Shoreline Flood and Erosion Control Structures?

The Connecticut General Statutes (CGS) defines shoreline flood and erosion control structures as:

> any structure the purpose or effect of which is to control flooding or erosion from tidal, coastal or navigable waters and includes breakwaters, bulkheads, groins, jetties, revetments, riprap, seawalls and the placement of concrete, rocks or other significant barriers to the flow of flood waters or the movement of sediments along the shoreline [CGS section 22a-109(c)].

What are the statutory policies that apply?

To manage coastal bluffs and escarpments so as to preserve their slope and toe [CGS section 22a-92(b)(2)(A)]

To discourage uses which do not permit continued natural rates of erosion [CGS section 22a-92(b)(2)(A)]

To disapprove uses that accelerate slope erosion and alter essential patterns and supply of sediments to the littoral transport system [CGS section 22a-92(b)(2)(A)]

To preserve the dynamic form and integrity of natural beach systems in order to provide critical wildlife habitats, a reservoir for sand supply, a buffer for coastal flooding and erosion, and valuable recreational opportunities [CGS section 22a-92(b)(2)(C)]

To insure that coastal uses are compatible with the capabilities of the beach/dune system and do not unreasonably interfere with natural processes of erosion and sedimentation [CGS section 22a-92(b)(2)(C)]

To promote nonstructural solutions to flood and erosion problems except in those instances where structural alternatives prove unavoidable and necessary to protect existing inhabited structures, infrastructural facilities or water-dependent uses [CGS section 22a-92(b)(2)(F)]

To maintain the natural relationship between eroding and depositional coastal landforms [CGS section 22a-92(b)(2)(J)]

To minimize the adverse impacts of erosion and sedimentation on coastal land uses through the promotion of nonstructural mitigation measures [CGS section 22a-92(b)(2)(J)]

Structural solutions are permissible when necessary and unavoidable for the protection of infrastructural facilities, water-dependent uses, or existing inhabited structures, and where there is no feasible, less environmentally damaging alternative and where all reasonable mitigation

measures and techniques have been provided to minimize adverse environmental impacts [CGS section 22a-92(b)(2)(J)]

What are the concerns regarding shoreline flood and erosion control structures?

Shoreline flood and erosion control structures are generally proposed for areas such as beaches and bluffs, which can experience erosion in the presence of significant wave action. However, the placement of these structures in such sensitive and dynamic areas usually causes adverse impacts to adjacent properties, exacerbates the erosion problem rather that eliminating it, and can cause significant adverse impacts on the resources themselves.

When waves break on a gently sloping sandy beach, their energy is gradually absorbed by the beach. In contrast, when waves encounter a solid structure, such as a seawall, placed parallel to the shoreline, their energy is not absorbed, but rather it is redirected in all directions along the face of the structure. Energy directed downward can cause erosion or scouring of sediments or wetland vegetation at a structure's base, allowing even greater wave energy to reach the structure because of increased depth of water, eventually undermining the structure and causing its collapse. In addition, waves directed upward over the wall often severely damage or destroy the very structure the wall was placed to protect. Further, wave energy focused by a hardened shoreline can result in faster-than-normal erosion of nearby sediments and vegetation, potentially resulting in the rapid loss of neighboring waterfront property.

Shoreline flood and erosion control structures, such as groins or jetties, placed perpendicular to a beach are intended to interfere with the natural transport of sand along the shoreline. Sand continues to move away from the groin in the downdrift direction but is blocked from passing the groin on the opposite side, resulting in the accretion of sand on one side but also the loss of sand from the opposite side.

In addition, the placement of a flood and erosion control structure in a beach environment eliminates the upland as a source of sediments for beaches in the system and often accelerates erosion due to a lack of replacement sediment. This results in a narrowing of the beach since currents continue to transport sediment offshore and along the shore. Further, the structure prevents the beach from migrating landward as it would naturally tend to do. The combination of structure-induced scour and the cutting off of the sediment supply can cause dramatic changes in beach contour in a relatively short time.

What are the adverse impacts associated with shoreline flood and erosion control structures?

The CCMA defines adverse impacts which must be avoided or, if avoidance is not possible, must be minimized in order for a project to be lawfully approvable. From a resource perspective, shoreline flood and erosion control structures can have the following adverse impacts on valuable features and functions of shoreline areas and coastal resources:

- eliminate natural buffer for coastal flooding and erosion
- alter natural rates of erosion and sedimentation
- interrupt sand supply
- reduce valuable recreational opportunities
- destroy critical wildlife habitats
- detract from the visual quality of a natural shoreline

Any proposals for such structures must be carefully evaluated, and non-structural erosion control alternatives such as vegetative stabilization to stop or slow down any erosion and/or flooding problems

should be promoted. (For more information, please see the *Fact Sheet for Adverse Impacts*.)

When are shoreline flood and erosion control structures generally consistent with the Connecticut Coastal Management Act?

The Connecticut Coastal Management Act (CCMA) contains strong policies that discourage the placement of shoreline flood and erosion control structures except in those limited instances where they are deemed necessary and unavoidable to protect the following:

- water-dependent uses as defined in CGS section 22a-93(16);
- infrastructural facilities (e.g., roads and sewer and water lines); and
- inhabited structures built prior to implementation of the CCMA (January 1, 1980).

However, there must be a clear and compelling demonstration that there is a threat from erosion and that nonstructural erosion controls are not viable alternatives. Nonstructural approaches include relocation and elevation of at-risk buildings, vegetative stabilization with native plantings, dune creation or enhancement, and temporary placement of sandbags.

Protective structures are not allowed for newer residential structures because any residential structure built after the effective date of the CCMA and in compliance with its goals and policies should have been placed sufficient distances from coastal waters, thereby obviating the need for shoreline flood and erosion control structures.

What are the requirements for action on a shoreline flood and erosion control coastal site plan application?

- A copy of each coastal site plan submitted for any shoreline flood and erosion control structure (including those proposed as a component of a larger development project) must be **referred to the DEP within 15 days of its receipt** by the zoning commission. [CGS section 22a-109(d)]
- The DEP may comment on such plans; any comments must be submitted to the zoning commission within 35 days of its receipt at the DEP. [CGS section 22a-109(d)]
- The zoning commission must consider any DEP comments prior to final action on the application. [CGS section 22a-109(d)]
- If the DEP does not comment within the 35-day time frame or any extension granted by the zoning commission, the commission may take final action. [CGS section 22a-109(d)]
- The commission may hold a hearing on a shoreline flood and erosion control structure, and must hold a hearing upon the request of the commissioner of environmental protection. [CGS section 22a-109(e)]

A copy of any decision on a coastal site plan for a shoreline flood and erosion control structure shall be sent to the commissioner of environmental protection within 15 days after such decision is rendered. [CGS section 22a-109(f)]

Does the DEP regulate shoreline flood and erosion control structures?

Maybe, depending on the specifics of proposed activities. The Department of Environmental Protection (DEP) has direct regulatory jurisdiction over activities occurring in tidal wetlands and/or waterward of the high tide line. If any construction activities or structure(s), in part or in whole, or any incidental work proposed in conjunction with the construction of structure(s) is proposed at or waterward of the high tide line or in tidal wetlands, authorization from the DEP's Office of Long Island Sound Programs would be required prior to construction in accordance with the Tidal Wetlands Act (CGS sections 22a-28 through 22a-35) and/or the statutes governing the placement of structures, dredging, and fill in tidal, coastal or navigable waters (CGS sections 22a-359 through 22a-363f, inclusive).

What's the difference between DEP and municipal regulatory areas?

The DEP has direct regulatory jurisdiction over activities occurring in tidal wetlands and/or waterward of the high tide line. The municipality regulates the upland waterward to the mean high water mark. In general, the mean high water mark is lower than the high tide line. Therefore, on gently sloping shorelines, there will be an area of overlapping jurisdictions (because the high tide line will be further landward than mean high water). Along steep shorefronts, for instance along a seawall, the high tide line and mean high water mark may be closely aligned, or may even coincide in the same vertical plane. The area of overlapping jurisdictions will be minimal in that case. Regardless of whether the DEP and/or the municipality have jurisdiction, the statutory policies and standards apply equally to both jurisdictions (see, also, the fact sheet for *State and Municipal Regulatory Jurisdictions*).

Office of Long Island Sound Programs
Fact Sheet
for
STORMWATER MANAGEMENT

What is Stormwater Management?

Stormwater management is a comprehensive process to minimize potential adverse impacts to natural resources and water quality from stormwater runoff. The traditional approach to handling stormwater runoff has been to collect it from the developed area and shunt it as quickly as possible to the nearest water body to prevent flooding in upland areas. In the past, little attention had been paid to the impacts of the associated increases in both the volumes and rates discharged and the pollutants carried in the runoff. The result has been severe erosion of streams, the loss and degradation of habitat, increased flooding and associated damage, increased siltation resulting in more frequent dredging to maintain navigation, and tremendous capital expenditures to address these problems.

Proper state-of-the-art stormwater management involves many techniques including pollution prevention, minimization of impervious surfaces, on-site retention of a portion of the runoff, where appropriate, and treatment of non-retained runoff to remove contaminants such as oils, greases, suspended solids and floatable debris. One general goal is to design development in such a manner that the changes in runoff rates and volumes are minimized. This is initially accomplished through the proper siting and design of proposed structures and infrastructure.

Why is stormwater management important?

Pollution of our surface and ground waters has been a recognized problem for many years. While great strides have been made in controlling point sources of pollution, primarily through the National Pollution Discharge Elimination System (NPDES) permitting program and corresponding state regulatory programs, there is a new awareness of the importance of controlling nonpoint sources of pollution (pollution generated by many diffuse sources). Stormwater runoff is a major contributor of nonpoint source pollution.

The amount of stormwater runoff from a given site is dictated by site-specific conditions, such as the soil's infiltration capacity, the type and extent of site cover (e.g., vegetation or pavement), the slope, and the duration and intensity of each rainfall event. Stormwater that penetrates the soil is slowed, filtered, cooled, and renovated. Renovation is a process by which bacteria and minerals in the soil treat and bind contaminants, removing them from the stormwater.

Impervious surfaces, such as pavement and buildings, reduce the area of soil into which rainfall can infiltrate, thus increasing the volume of runoff that flows over the land. As this runoff flows over impervious and pervious surfaces, it can pick up and transport floating, suspended, and

dissolved constituents such as pathogens, toxic materials (heavy metals, oils, antifreeze, pesticides, etc.), high levels of nutrients (fertilizers and organic matter), eroded sediments (topsoil and road sand), and trash. This runoff flows down gradient over the land to the nearest water body or depression where it not only deposits the contaminants it carries, but it alters the temperature, pH, and/or salinity of receiving waters. It should be noted that even clean, potable freshwater can be a pollutant when introduced to a brackish or saline environment in the coastal area. Freshwater dilutes the salt concentrations in the receiving area, adversely impacting the flora and fauna that are uniquely suited to such salty environs. Over the long-term, sediment settles out of the water column and can degrade habitat in stream bottoms, tidal wetlands, and shellfish beds.

Poorly planned new development and redevelopment can result in increased stormwater discharges, and ultimately more polluted runoff reaching watercourses and wetlands. Unlike conditions in the soil, there are few natural processes available in the receiving waters to treat, reduce, or control many of the harmful constituents in the runoff; they can only be diluted by the volume of water that they reach. With constant inputs after each rainfall, concentrations of many harmful constituents have been increasing in the sediments and the water column. Additionally, increasing stormwater discharges can lead to increased risks of flooding and flood damage and to increased siltation in coastal waters which often results in habitat degradation and an increased need to dredge to maintain navigation.

Design issues relate to the topography, soil conditions, existing drainage, and natural resources on and adjacent to the site. The implementation of structural and/or non-structural best management practices (BMPs) can also be used to provide both effective erosion and sedimentation control and minimization of other pollutants including oils, greases, toxics, pathogens and floatable debris. Please refer to the manual titled *Coastal Water Protection: A Guide for Local Officials*, (DEP, 1996) for additional detailed information. A copy of the guide has been provided to the planning and zoning department in each coastal municipality.

What are the statutory policies that apply?

The Connecticut Coastal Management Act (CCMA) contains several policies that highlight the need to incorporate stormwater management into individual project reviews and long-range planning. These include the following:

> To manage estuarine embayments so as to insure that coastal uses proceed in a manner that assures sustained biological productivity, the maintenance of healthy marine populations and the maintenance of essential patterns of circulation, drainage and basin configuration; to protect, enhance and allow natural restoration of eelgrass flats except in special limited cases, notably shellfish management, where the benefits accrued through alteration of the flat may outweigh the long-term benefits to marine biota, waterfowl, and commercial and recreational finfisheries [Connecticut General Statutes (CGS) section 22a-92(c)(2)(A)].
>
> It is found and declared that the pollution of the waters of the state is inimical to the public health, safety and welfare of the inhabitants of the state, is a public nuisance and is

> harmful to wildlife, fish and aquatic life and impairs domestic, agricultural, industrial, recreational and other legitimate beneficial uses of water and that the use of public funds and the granting of tax exemptions for the purpose of controlling and eliminating such pollution is a public use and purpose for which moneys may be expended and tax exemptions granted, and the necessity and public interest for the enactment of this chapter and the elimination of pollution is hereby declared as a matter of legislative determination [CGS section 22a-422, as referenced by CGS section 22a-92(a)(2)].

The CCMA defines adverse impacts which must be avoided or, if avoidance is not possible, must be minimized in order for a project to be lawfully approvable. The following potential adverse impacts must be considered during the coastal site plan review process and when evaluating proposed zoning regulation and map amendments.

> Degrading water quality through the significant introduction into either coastal waters or ground water supplies of suspended solids, nutrients, toxics, heavy metals, or pathogens, or through the significant alteration of temperature, pH, dissolved oxygen, or salinity [CGS section 22a-93(15)(A)];
>
> Degrading existing circulation patterns of coastal waters through the significant patterns of tidal exchange or flushing rates, freshwater input, or existing basin characteristics and channel contours [CGS section 22a-93(15)(B)];
>
> Degrading natural or existing drainage patterns through the significant alteration of groundwater flow and recharge and volume of runoff [CGS section 22a-93(15)(D)];
>
> Degrading or destroying essential wildlife, finfish or shellfish habitat through significant alteration of the composition, migration patterns, distribution, breeding or other population characteristics of the natural species or significant alteration of the natural components of the habitat [CGS section 22a-93(15)(G)]; and
>
> Degrading tidal wetlands, beaches and dunes, rocky shorefronts, and bluffs and escarpments through significant alteration of their natural characteristics and functions [CGS section 22a-93(15)(H)].

In addition, the state statutes pertaining to planning and zoning contain specific requirements for zoning regulations and plans of development that relate to the restoration and protection of coastal resources. These are:

> In any municipality that is contiguous to Long Island Sound the regulations adopted under this section shall be made with reasonable consideration for restoration and protection of the ecosystem and habitat of Long Island Sound and shall be designed to reduce hypoxia, pathogens, toxic contaminants and floatable debris in Long Island Sound. Such regulations shall provide that the commission consider the environmental impact on Long Island Sound of any proposal for development [CGS section 8-2(b)].
>
> The plan adopted under this section for any municipality that is contiguous to Long Island Sound shall be made with reasonable consideration for restoration and protection of the

ecosystem and habitat of Long Island Sound and shall be designed to reduce hypoxia, pathogens, toxic contaminants and floatable debris in Long Island Sound [excerpt from CGS section 8-23].

Proper management of stormwater will address these statutory requirements.

Are stormwater discharges regulated by the Department of Environmental Protection?

Yes. Technically, most discharges to the waters of the State Of Connecticut are regulated by the Department of Environmental Protection through either a general permit or individual permit requirement. There are several types of stormwater discharges that are covered by the issuance of a general permit. If the stormwater discharge does not qualify for coverage by the general permit because adverse impacts to the waters of the state would result, an individual permit may be required prior to discharge.

Registration is required to be submitted in order for stormwater discharges to be authorized by the following general permits issued by the Connecticut Department of Environmental Protection:

Stormwater and Dewatering Wastewaters from Construction Activities: This general permit applies to all discharges of stormwater and dewatering wastewaters from construction activities which include, but are not limited to, clearing, grading, and excavation and which result in the disturbance of *five or more acres* of total land area on a site.

Stormwater Associated with Commercial Activities: This general permit applies to all discharges from any conveyance which is used for collecting and conveying stormwater and which is directly related to retail, commercial, and/or office services whose facilities occupy *five acres or more* of contiguous impervious surface.

Stormwater Associated with Industrial Activities: This general permit applies to all discharges from any conveyance which is used for collecting and conveying stormwater and which is directly related to manufacturing, processing or material storage areas at an industrial activity site.

What can a municipality do to minimize impacts from stormwater runoff?

- Maintain, enhance or restore the quality of coastal waters and submerged lands through the adoption and implementation of a stormwater management ordinance, either as an amendment to the municipal zoning regulations or as a “stand-alone” ordinance. In either case, it should require 1) that new development projects be designed to minimize clearing, cutting and filling in undisturbed areas to ensure that new development is consistent with the capabilities of the land to support such development; 2) soil erosion and sediment control plans for all development projects near sensitive coastal resources, even those projects with less than one-half acre land disturbance proposed, and strictly enforce appropriate

sedimentation and erosion control measures during construction; and 3) that site plan and special permit/exception applications include appropriate best management practices to retain and treat on-site the runoff generated by the first inch of rainfall, remove 80% of the total suspended solids on an annual basis, and, where site conditions allow, prohibit post-development increases in the pre-development rates and volumes of stormwater discharge.

- Review zoning regulations to determine the maximum impervious cover allowed in each district and carefully consider reducing these maximums wherever possible, particularly in areas abutting coastal waters and other sensitive coastal resources, but also for areas serviced by municipal stormwater systems that discharge to coastal waters. Include buildings, paved areas, sidewalks, terraces, patios and other non-porous surfaces when calculating impervious cover.

- Update subdivision regulations to encourage cluster developments that incorporate features such as curbless roads, narrow roads, grass swales, retention ponds, and other features that reduce impervious cover, disperse and treat stormwater, and minimize the collection and transport of stormwater to surface waters.

- Update the municipality's Plan of Conservation and Development and Municipal Coastal Program, if applicable, to encourage best management practices for stormwater for all new or substantially improved development, including improvements to municipal roads, bridges and other facilities, and for currently developed areas. Consider including the following:

  An inventory of existing storm drain outfalls to identify opportunities to retrofit roads and other municipal facilities for stormwater retention and pollutant reduction;

  Identification of illicit connections to municipal storm sewer system (anything that is not stormwater that is being discharged to the stormwater system without a permit) and recommendations to correct or mitigate adverse impacts associated with these connections;

  Adoption of a municipal ordinance that prohibits illicit connections to municipal stormwater systems;

  Consideration of (and preparation for) the use of alternatives to winter sanding and salting on roadways and parking areas;

  Planning for and implementation of appropriate snow disposal practices;

  Initiation of a storm drain stenciling program to help identify direct links to coastal waters and other waterbodies;

  Adoption of an ordinance that limits the application of fertilizers and broad-based pesticides, particularly in months with historically high or low average precipitation such as April and August; and

Recommendations for regularly scheduled street sweeping and catch basin clean-outs to minimize the amount of sediment, contaminants, and floatable debris entering coastal waters and other waterbodies through the municipal stormwater management system, and recommendations to amend the zoning regulations to require similar maintenance of private parking lots and streets.

- Develop a watershed management plan with neighboring municipalities that share your watershed boundaries, and implement a coordinated stormwater management plan.

- Develop an educational handout that: addresses the importance of stormwater management; identifies actions that individuals can take to minimize potential stormwater impacts (including, for example, the proper use of fertilizer, disposal of used motor oil and composting of lawn clippings, etc.); and includes the municipality's standards for development. Include it in every application package for land use and/or building permits and authorization.

- Develop an open space/greenways plan to create recreational opportunities and buffer sensitive and important resources, particularly streams, tributaries, and coastal resources from stormwater impacts.

- During the review process for new or redeveloping marinas, require coastal site plan conditions that incorporate the practices identified in *Best Management Practices for Coastal Marinas* (DEP-OLISP, August 1992).

- Coordinate with the Department of Environmental Protection's Stormwater Management Unit to make sure that all eligible stormwater discharges from industrial, commercial, or construction activities are covered by the appropriate general permit and to ensure compliance with Stormwater Pollution Prevention Plans.

- Refer coastal site plan review applications for waterfront sites or significant development proposals within the coastal boundary to the DEP's Office of Long Island Sound Programs for comment and technical assistance.

Office of Long Island Sound Programs
Fact Sheet
for
VEGETATED BUFFERS

What is a Vegetated Buffer?

A vegetated buffer is a small area or strip of land in permanent undisturbed vegetation adjacent to a waterbody or other resource (e.g., wetland). It can be either in a natural state or artificially planted. Depending upon their purpose and site-specific conditions, vegetated buffers can range in size from several feet to hundreds of yards wide.

Why are they valuable?

Buffers protect resources from adjacent development by reducing the adverse effects of human activities on natural resources including wetlands and surface waters. They protect water quality and temperature, control erosion and trap sediment, protect and provide wildlife habitat, reduce the effects of flooding, reduce the potential for direct human disturbance of sensitive resources, and maintain aesthetic diversity and recreational value. A buffer provides a mosaic of interdependent functions. Installation of a buffer area can also lessen lawn maintenance requirements by reducing the area of manicured landscape.

How do they work?

Buffer areas work through several means. Land within buffer areas is not developed and, therefore, generally does not generate pollution. Vegetated buffer strips act as filters to intercept and absorb nutrients, sediment and other pollutants carried in stormwater run-off. Buffers slow down runoff which both reduces erosion and allows silt and other suspended solids to settle out before they reach a receiving waterbody or wetlands. Additionally, any contaminants attached to the sediment do not reach the waterbody or wetlands. Vegetated buffers provide an area for infiltration, thereby reducing the volume of runoff. Bacteria, pathogens and pesticides that are trapped within the buffer area decompose or are broken down, thus, preserving water quality.

Creating vegetated buffers

Where do we use vegetated buffers?

Vegetated buffers should be located between upland development and adjacent waterbodies or resources. Some water-dependent uses or water-dependent components of projects will likely require development within a buffer area, but water-dependent uses and vegetated buffers are not necessarily mutually exclusive.

How big is big enough?

The size of an effective buffer can be anywhere from a small unmown area of a lot to a large forested strip. The ideal buffer width will depend on the desired emphasis (water quality protection, wildlife habitat, temperature moderation, erosion control, etc.), the amount of available land, and the proposed use of the property. Generally, the effectiveness of a buffer increases with its size. Large buffers (e.g., 100 feet or greater in width) provide the best protection for water quality by buffering temperature changes and improving control of erosion, sedimentation and pollution. However, even a narrow buffer (15 to 30 feet in width) can be effective under certain conditions.

What determines the effectiveness of a buffer area as a stormwater management measure?

- The type of stormwater flow. Sheet flow (unrestricted flow across the ground) along the length of the buffer allows the buffer area to more effectively trap sediments, attenuate pathogens and pollutants, and encourage infiltration. Concentrated flow (e.g., flows directed through swales, pipes or other conveyances) reduce or essentially eliminate the effectiveness of the buffer for stormwater management.
- The general topography of the buffer area. Flat or gently sloping buffers are more effective because they slow the rate that stormwater flows across them which enhances their infiltration and filtering capability.
- The permeability of the soils and the depth to the water table. Generally, higher permeability and greater depth to the water table will increase the rate of infiltration and attenuation within the buffer area.
- Whether the current vegetation is native or non-native, its density and its character (e.g., forested, shrubby, grassland, etc.). Dense native vegetation is generally more effective and requires less maintenance as it is inherently suited to the local climate.
- Whether the land use above the buffer poses a high, medium or low risk for pollution. The higher the risk posed by the upland use, the greater the need for an effective buffer. Increasing the width of a required buffer and/or increasing the density of native plantings can aid in offsetting the potential impacts from a high-risk upland use.
- Whether there is an existing buffer, and if so, whether its width is sufficient to provide habitat and corridors for wildlife, erosion and sedimentation control, water quality protection or other benefits of vegetated buffers. If an existing buffer of adequate width is present on a lot, all efforts should be made to preserve it in its natural state.
- What types of activities are permitted within the buffer. The fewer activities that include land clearing, grading or other disturbances, the better. However, in many instances, passive recreational amenities, such as hiking trails, may be appropriate.

In general terms, what does the ultimate vegetated buffer look like?

The answer will depend on what you want the buffer to do (and it can't do it all). However, in general terms, the ultimate vegetated buffer has gentle slopes, with undisturbed, moderately permeable soils and dense native vegetation, and is as wide as possible given the lot size, site conditions and proposed use(s).

How can a municipality implement vegetated buffers?

- Update zoning regulations to better protect sensitive resources by establishing or increasing protective buffers between development and coastal waters and associated sensitive resources. These buffers should be required landward of the upland limit of tidal wetlands, beaches and dunes, and coastal and inland waters and from the tops of bluffs and escarpments.

- Once buffers are established by regulation, they should be strictly honored. Variances of the minimum buffer width should only be allowed in those extremely limited cases where there is a statutory hardship as defined in the Connecticut General Statutes Section 8-6(3) or to provide water-dependent use opportunities where appropriate.

- Revise subdivision regulations to require vegetated buffers abutting all water resources in new subdivisions.

- Revise zoning and subdivision regulations to limit clearing of vegetation to enhance views and to prohibit clearing or cutting on or above bluffs and escarpments.

- Update inland wetlands regulations to require larger buffers for all regulated activities adjacent to wetlands, including vernal pools and watercourses.

Office of Long Island Sound Programs
Fact Sheet
for
WATER-DEPENDENT USES

What are Water-Dependent Uses?

Water-Dependent Uses are specifically defined in the Connecticut Coastal Management Act (CCMA). In general, they are land uses that require direct access to coastal waters in order to function and which therefore must be located at the waterfront rather than on inland sites. Such uses include, but are not limited to marinas, commercial fishing or boating facilities and uses that provide general public access to coastal waters [Connecticut General Statutes (CGS) section 22a-93(16)].

Why is it important to make special provisions for them?

Locating water-dependent uses at waterfront sites is important because:

- waterfront properties are an extremely limited resource with the unique capacity to accommodate water-dependent uses, which, by statutory definition require waterfront sites. However, waterfront properties are also in great demand for many non-water-dependent uses which can be located inland;
- they are a significant part of our cultural heritage;
- they are an important sector of our state's economy; and
- they often depend upon or are enhanced by high quality waters thereby creating a constituency for water quality and coastal resource protection.

What are the statutory policies that apply?

To manage uses in the coastal boundary through existing municipal planning, zoning and other local regulatory authorities, giving highest priority and preference to water-dependent uses and facilities in shorefront areas [CGS section 22a-92(b)(1)(A)].

Municipal boards and commissions reviewing coastal site plans shall determine if the potential adverse impacts to future water-dependent development activities are acceptable and that such impacts have been mitigated using all reasonable mitigation methods [CGS sections 22a-106(a) and (e)].

Evaluating adverse impacts to future water-dependent development opportunities:

When a non-water-dependent use is proposed on a waterfront site, the reviewing board or commission must determine the acceptability of potential adverse impacts to possible future water-dependent development activities associated with the proposed development. While doing this evaluation, the following factors, which define adverse impacts to future water-dependent development activities, must be considered [see CGS section 22a-93(17)]:

(1) Is site physically suited for a water-dependent use for which there is reasonable demand, or has the site been identified in the plan of development or zoning regulations for water-dependent uses?
(2) Will a non-water-dependent use replace an existing water-dependent use as part of the proposed development or redevelopment?
(3) Will a non-water-dependent use inhibit or restrict existing public access*?

If any of the above three conditions apply, the proposed non-water-dependent use may preclude existing or future water-dependent uses and create unacceptable adverse impacts. Upon such a determination, the proposed use should be modified or conditioned if such impacts can be mitigated to a level which is consistent with applicable goals and policies of the Act or, if modification cannot achieve consistency, the project should be denied. Adverse impacts may be mitigated by providing coastal public access (see fact sheet for *General Public Access to Coastal Waters* for additional details).

What can a municipality do to promote water-dependent uses and minimize potential adverse impacts to such uses?

- Amend the Plan of Conservation and Development to: (1) identify areas where active (e.g., port facilities) and passive (e.g., coastal public access) water-dependent uses are appropriate or most needed and (2) require adequate and appropriate relocation of existing water-dependent uses if proposed redevelopment of waterfront sites cannot be configured to retain such uses. Please note that in a situation such as this, the redevelopment plan must provide a comparable level of water-dependent use in order to minimize adverse impacts to future water-dependent development opportunities as required by the CCMA (see above).

- Amend the zoning regulations to provide specific municipal authority to require water-dependent uses including coastal public access through the coastal site plan review process, as already provided in the Coastal Management Act.

- Amend the zoning regulations to establish separate zoning districts for shorefront areas currently used for water-dependent uses, as allowed in CGS section 8-3(k), to

* Existing public access can be either formal access secured by public land ownership or an access easement or informal access resulting from long-term open customary use of the property to access coastal waters.

promote the continuance of such uses without being subject to challenges of "spot zoning."

- Amend zoning regulations in appropriate waterfront zoning districts to ensure that "active" water-dependent uses (e.g., marinas) are allowed as-of-right. If non-water-dependent uses are allowed in such zoning districts, they should only be permitted: (1) on sites where on-site coastal resource constraints preclude the establishment of active water-dependent uses and, in these cases, proposed development should include meaningful general public access as the water-dependent project component; or (2) the non-water-dependent use is clearly ancillary to or supports a water-dependent use and does not diminish it in any way. Alternatively, the municipal zoning regulations could be amended to allow only active water-dependent uses.

- Direct waterfront project applicants and town staff to meet prior to formal submission of coastal site plan review applications in order to review the CCMA's water-dependent use requirements. The purpose of such meeting(s) should be to: 1) evaluate the site's suitability to support water-dependent uses; 2) assess the level of water-dependency proposed in the development/redevelopment plans; and, 3) explore how any proposed non-water-dependent use of a waterfront site could be modified to incorporate appropriate water-dependent use components. Where other water-dependent uses are not feasible due to site constraints, often a water-dependent use can be incorporated into the site design through the provision of a general public coastal access facility which could render the proposal consistent with the CCMA policies and standards (see fact sheet for *General Public Access to Coastal Waters*).

- Require applicants to post performance bonds or escrow accounts to ensure that water-dependent use project components are constructed, as authorized by CGS section 22a-107.

CONNECTICUT COASTAL MANAGEMENT MANUAL

SECTION 4

SITE PLAN EXAMPLES

Section 4 contains examples of site plans for the following types of coastal development activities:

Site Plan #1 - Single Family
Site Plan #2 - Multi-family
Site Plan #3 - Subdivision
Site Plan #4 - Commercial

Each plan is accompanied by descriptions and an analysis of coastal site plan deficiencies and coastal management issues specific to that plan, and a discussion of potential solutions to those problems.

Site Plan # 1
Residential Development

Coastal Site Plan Deficiencies

1) Tidal datums (i.e., mean high water and high tide line) and vertical datum (NGVD 1929) not shown.
2) Extent of beach resource not fully depicted.
3) No S&E controls.
4) Drainage not shown.

Coastal Management Issues

1) Proposal of shoreline flood and erosion control structure requires mandatory referral to OLISP in accordance with section 109d of the CCMA.
2) Seawall may be located on the beach.
3) Proposed dwelling in the V-Zone
4) Potential adverse impacts to coastal water quality - no stormwater best management practices (BMPs) proposed.
5) State coastal permits required for fill/stormwater discharge structures in tidal wetlands or areas below the high tide line.

Analysis

The site contains significant topographic relief. With only 10' contours shown, it is difficult to determine specifically where the steep slopes on the property are. The proposal meets the town's building setback regulation and, since the portion of the dwelling located in the V-Zone is pile supported, it meets FEMA construction standards. However, the proposal is inconsistent with CCMA policies. First, proposed residential development in the V-Zone, even if it can be constructed to meet FEMA standards, should be located outside the V-Zone where possible to minimize hazards to life and property. In this case, the entire structure could not only be located outside the V-Zone, but landward of the A-Zone as well. Keep in mind that the flood zone boundary lines are not exact and given the scale (1" = 500') of the Flood Insurance Rate Maps (FIRMs), it is prudent to err on the side of caution (i.e. locate structures as far landward as possible). Additionally, the boundary lines on the FIRM maps are not drawn for specific properties, but for longer stretches along the coast. Thus, there are inherent inaccuracies built into the maps when they are applied to a particular parcel.

The proposal is also inconsistent with the CCMA's policy regarding shoreline flood and erosion control structures. Structural solutions are not allowed in this case since the house could be relocated such that no shoreline protection would be required during the expected useful life of the house. For more detailed information, please see the fact sheet for *Shoreline Flood and Erosion Control Structures*.

From a coastal permitting perspective, an application to construct the seawall as proposed including fill waterward of the high tide line could not be approved.

Potential Solutions

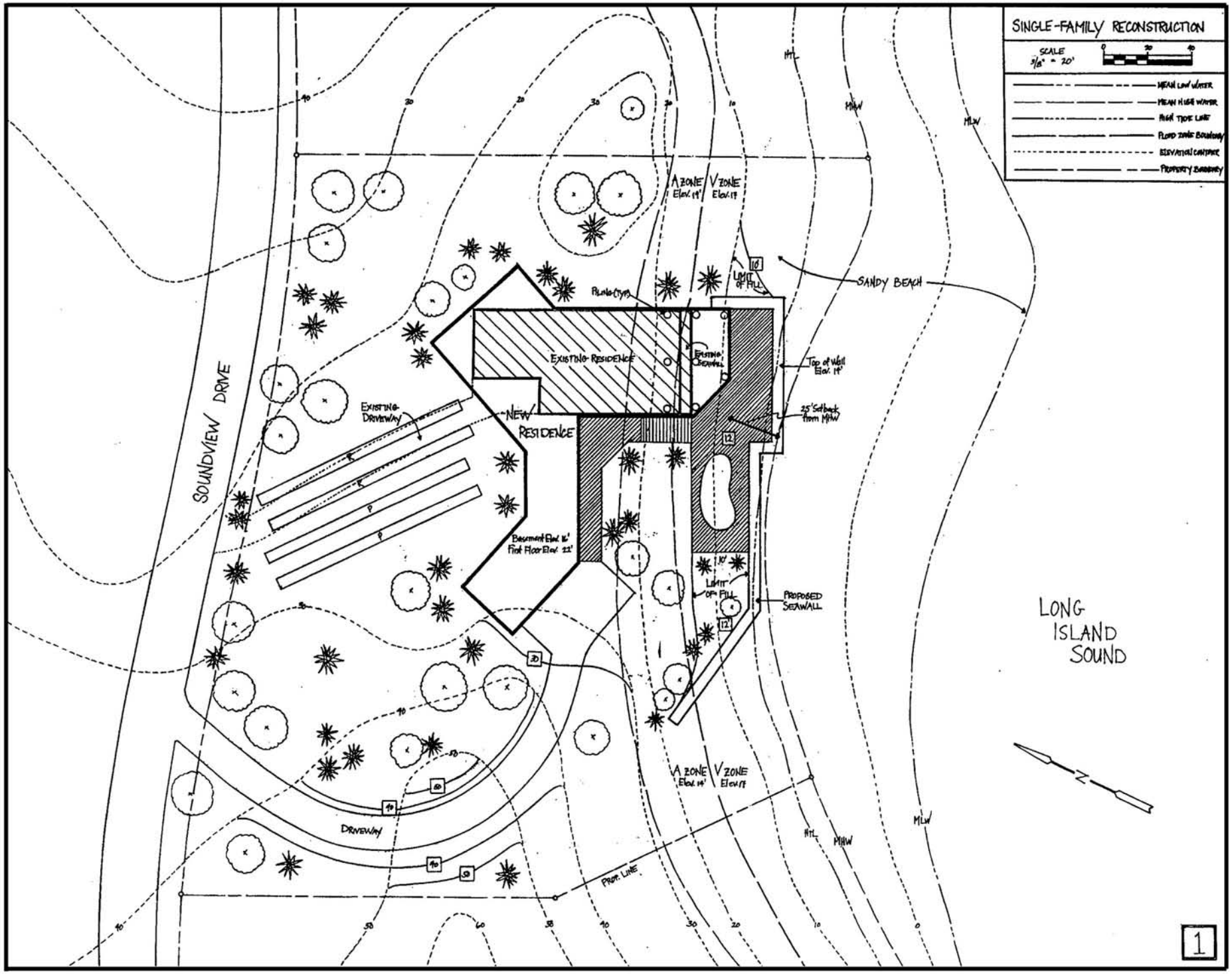
- In this example, the modifications required to render the site plan consistent with CCMA policies would drastically change the site plan. So much so that there would be no alternative but to deny the application without prejudice.

- The board/commission should clearly document the inconsistencies in its written finding.

- In making a subsequent proposal, the applicant should be informed that the residence should be located outside of the flood hazard area. In this case, that could be landward of elevation 14', even though the transposed A-Zone boundary crosses the 20' contour. Additionally, the applicant should be made aware that no shoreline flood and erosion control structures could be permitted now or in the future to protect the dwelling. Thus, the need to relocate the house as stated becomes evident.

- Due to the significant topographic relief on the property, appropriate and specific S&E controls should be shown on the plans.

- Stormwater BMPs should be shown on the plans. Potential solutions could include the use of depression storage, infiltration swales, vegetated buffers, and overland flow (runon). Structural measures such as catch basins and drywells should be avoided if possible.


SINGLE-FAMILY RECONSTRUCTION
SCALE 3/16" = 20'
0
20
40
MEAN LOW WATER
MEAN HIGH WATER
HIGH TIDE LINE
FLOOD ZONE BOUNDARY
ELEVATION CONTOUR
PROPERTY BOUNDARY
SOUNDVIEW DRIVE
A ZONE Elev. 14'
V ZONE Elev. 17
HTL
MHW
MLW
SANDY BEACH
LIMIT OF FILL
PILING-TYP.
EXISTING RESIDENCE
EXISTING SEAWALL
TOP OF WALL Elev. 14'
25' Setback from MHW
EXISTING DRIVEWAY
NEW RESIDENCE
Basement Elev. 16'
First Floor Elev. 22'
PROPOSED SEAWALL
LONG ISLAND SOUND
DRIVEWAY
PROP. LINE
N
1

Site Plan #2
Multi-Family Development

Coastal Site Plan Deficiencies

1) No vertical datum shown (plans should reference NGVD of 1929). This is particularly important in evaluating the accuracy of tidal datums (e.g., mean high water).
2) Accuracy of high tide line (HTL) is questionable. HTL is shown on plan at the same elevation as the tidal wetland boundary. Typically, the HTL is upland of the tidal wetland boundary.
3) Flood hazard area elevations are not shown.
4) The upland extent of the A zone not indicated on the plan.
5) Incomplete labeling of coastal resources at or adjacent to the site (e.g., intertidal flats?).

Coastal Management Issues

1) No water-dependent use of a waterfront site proposed (boat slips are accessory to a non-water-dependent use/boardwalk not available for public use).
2) Intense residential development in flood hazard V-zone
3) Flood and erosion control structure (i.e., seawall) extends onto dune/beach (such structures require mandatory referral to OLISP) would replace existing dune which provides a non-structural flood and erosion control and potential plant and wildlife habitat.
4) Protection of tidal wetlands and beach/dune system
5) Structural stormwater management system proposed which does not include any stormwater quality renovation measures. Includes direct discharge of stormwater to tidal wetlands without prior treatment.
6) Structures (walkway/gazebo) proposed in tidal wetlands require permit from OLISP.

Analysis

There are no water-dependent uses proposed for this waterfront site. Developable waterfront property, particularly property that can support an active water-dependent use, such as a boat basin, is extremely rare and valuable in Connecticut. Many former water-dependent uses such as marinas, boat yards, and boat building operations have been replaced with office, residential, and other uses that need not be located along the water's edge. Because the proposed private boat slips and private boardwalk demonstrate that the site is capable of supporting water-dependent uses, the coastal site plan must be modified to incorporate some type of water-dependent use in order to ensure that future water-dependent use opportunities at the site are not lost. In this case, the zoning district may allow for residential use. If there is no requirement under the existing zoning to require an active water-dependent use (e.g., marina), the commission should require that general public access, commensurate with the size of the site, be incorporated into the site design.

While offering waterfront residential dwellings as close to the water as possible is an attractive prospect to developers, such a design often creates a myriad of coastal resource management concerns including: (1) proposals for future filling of coastal waters to construct flood and erosion control structures (e.g., seawalls) to protect new construction; (2) increased likelihood of future unpermitted or illegal filling of coastal waters/tidal wetlands; (3) loss of coastal public access; (4) estuarine habitat encroachment/disturbance; (5) increased flood hazards; and (6) loss of riparian buffers.

Potential Solutions

- The proposed development must be significantly modified to address the above-reference coastal management concerns, as described below:

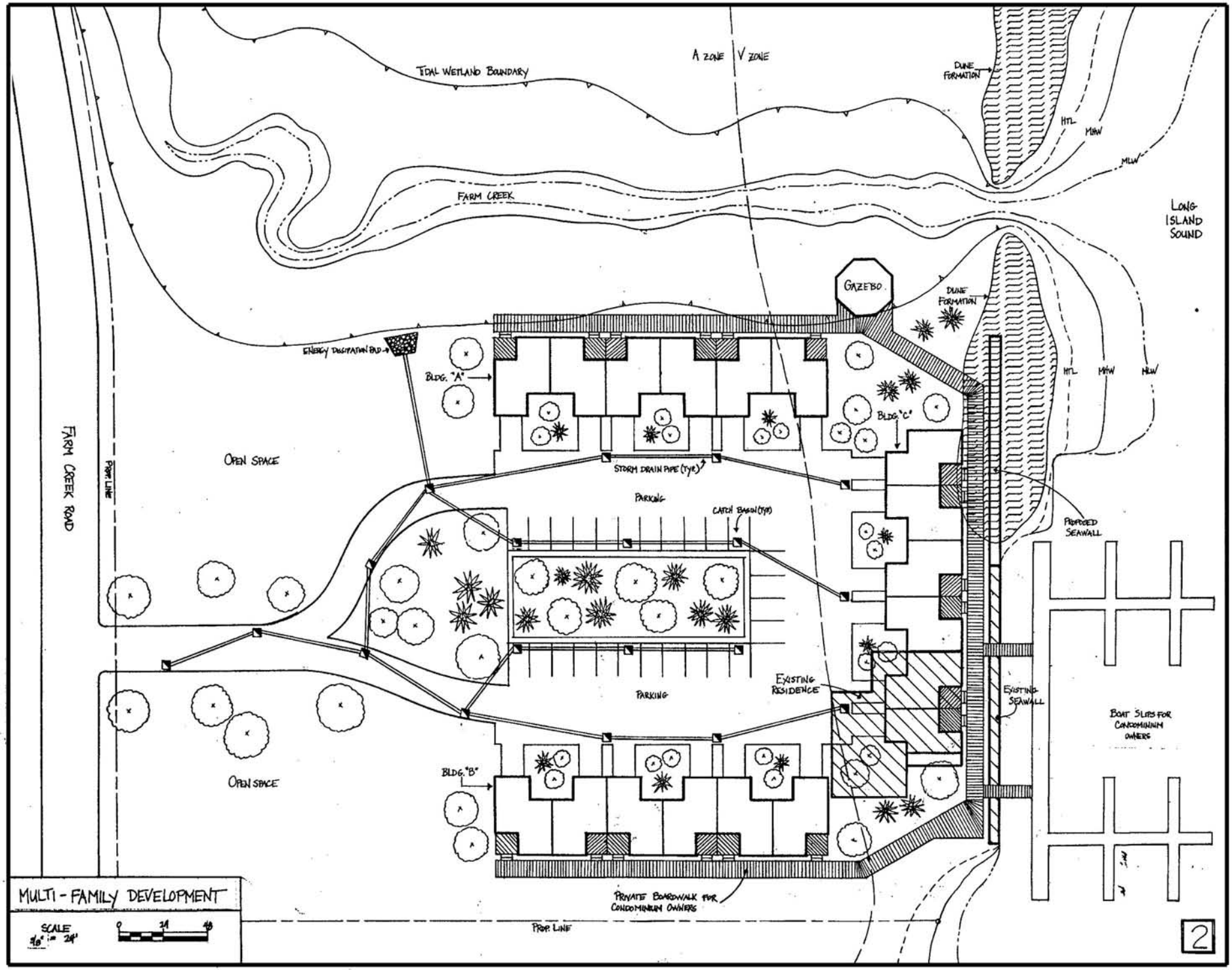
- The proposed extension of the seawall into the dune should be eliminated. If the applicant is concerned about future flood and erosion in this area of the site, the dune could be modified/expanded with snow fencing and native beach grass plantings to enhance the dune's flood and erosion control properties.

- The residential units and boardwalk should be relocated towards the road out of the V-zone and dune. Such a redesign would decrease future potential hazards to life and property from flooding and erosion, relocate the open space adjacent to the water for use by the general public to access coastal waters and preserve riparian habitat. Coastal public access areas should always be carefully designed and include appropriate amenities to provide attractive and usable public facilities. It's also important to ensure that coastal public access is ensured though a duly executed and legally binding access easement.

- Stormwater should be retained and treated on-site to the maximum extent practicable using appropriate best management practices. The open space areas and parking lot islands could potentially used as areas for retention basins or swales. Retention of the first inch of runoff onsite, if feasible, would reduce discharges of fresh water to tidal wetlands and minimize pollutant loadings to tidal wetlands and coastal waters.

- Proposed structures should be set back from both the tidal wetlands and the dune formations. Buffers between these resources will allow them to grow/migrate, protect them from potential adverse impacts of human activities, and reduce impacts to the wildlife that depend upon these resources for one or more parts of their life cycle.

Because of the extent of modifications necessary to render this proposed residential development consistent with the goals and polices of the Connecticut Coastal Management Act, the proposal should be denied.


TIDAL WETLAND BOUNDARY
A ZONE
V ZONE
DUNE FORMATION
HTL
MHW
MLW
FARM CREEK
LONG ISLAND SOUND
GAZEBO
DUNE FORMATION
ENERGY DISSIPATION PAD
BLDG. "A"
BLDG. "C"
FARM CREEK ROAD
PROP LINE
OPEN SPACE
STORM DRAIN PIPE (TYP.)
PARKING
CATCH BASIN (TYP.)
PROPOSED SEAWALL
EXISTING RESIDENCE
EXISTING SEAWALL
BOAT SLIPS FOR CONDOMINIUM OWNERS
OPEN SPACE
BLDG. "B"
PRIVATE BOARDWALK FOR CONDOMINIUM OWNERS
PROP LINE
MULTI - FAMILY DEVELOPMENT
SCALE
1/8" = 24'
0
24
48
2

Site Plan # 3
Residential Subdivision

Coastal Site Plan Deficiencies

1) No vertical datum shown (plans should reference NGVD 1929)
2) Incomplete listing of coastal resources (coastal bluff/escarpment not indicated on plan).

Coastal Management Issues

1) Potential accelerated erosion of coastal bluff and escarpment and future erosion threats to inhabited structures
2) Potential adverse impacts to coastal water quality from accelerated bluff erosion and untreated stormwater runoff.
3) No water-dependent use at a waterfront site.
4) Degraded views and vista of bluff from the river opposite river bank.

Analysis

The Connecticut Coastal Management Act (CCMA) policy for managing coastal bluffs and escarpments is to preserve their toe and slope, discourage uses which modify natural rates of erosion, and disapprove uses that accelerate slope erosion and alter supply of sediments to the littoral transport system. A related CCMA coastal hazard area policy also applies. It requires that proposed development in these areas be allowed only upon a demonstration that coastal flood and erosion hazards are minimized and that only non-structural methods to control these hazards be allowed for construction permitted after January 1, 1980, the effective date of the CCMA. In order to better understand how these policies apply to a specific location, the board or commission should direct staff to determine if an erosion study of the local shoreline exists. The Connecticut Coastal Management Program funded studies of erosion along Connecticut's coast during the 1980's. These studies including maps and periodic aerial surveys can be used to determine how an area of the coast responds to coastal erosion and depositional processes. This information, along with any additional information the commission or board can require from the applicant, should be used to apply these policies to the coastal site plan under review.

All three proposed dwelling units would likely increase erosion of the site's bluff/escarpment and increase hazards to life and property. Stormwater is proposed to directly discharge over the face of the bluff on all three proposed lots, subjecting the bluff to accelerated erosion forces. Further, the deck proposed on lot #2 would encroach waterward of the top of bank of the bluff modifying the face of the bluff that could destabilize the bluff in this area. These site modifications, along with siting the proposed structures proximate to the top of the face of the bluff, would likely also imperil the proposed structures over time. Once the structures become threatened by erosion of the bluff, the homeowners would likely proposed flood and erosion control structures, which is inconsistent with CCMA policy, as described above.

Potential Solutions

Relocate the proposed structures landward toward Meadow Road and modify the stormwater drainage plan to eliminate direct discharge to the bluff. Such a site redesign, which would require realignment of the proposed Riverview Lane, driveways and lot dimensions, would minimize impervious cover, thereby reducing stormwater runoff, allowing stormwater to drain across a vegetated buffer between the relocated houses and the top of the bluff's bank and reducing the erosive force of stormwater runoff. A modified site design which maximizes building setback form the top of bank would also minimize potential future erosion hazards to these structures thereby reducing the potential for future structural flood and erosion

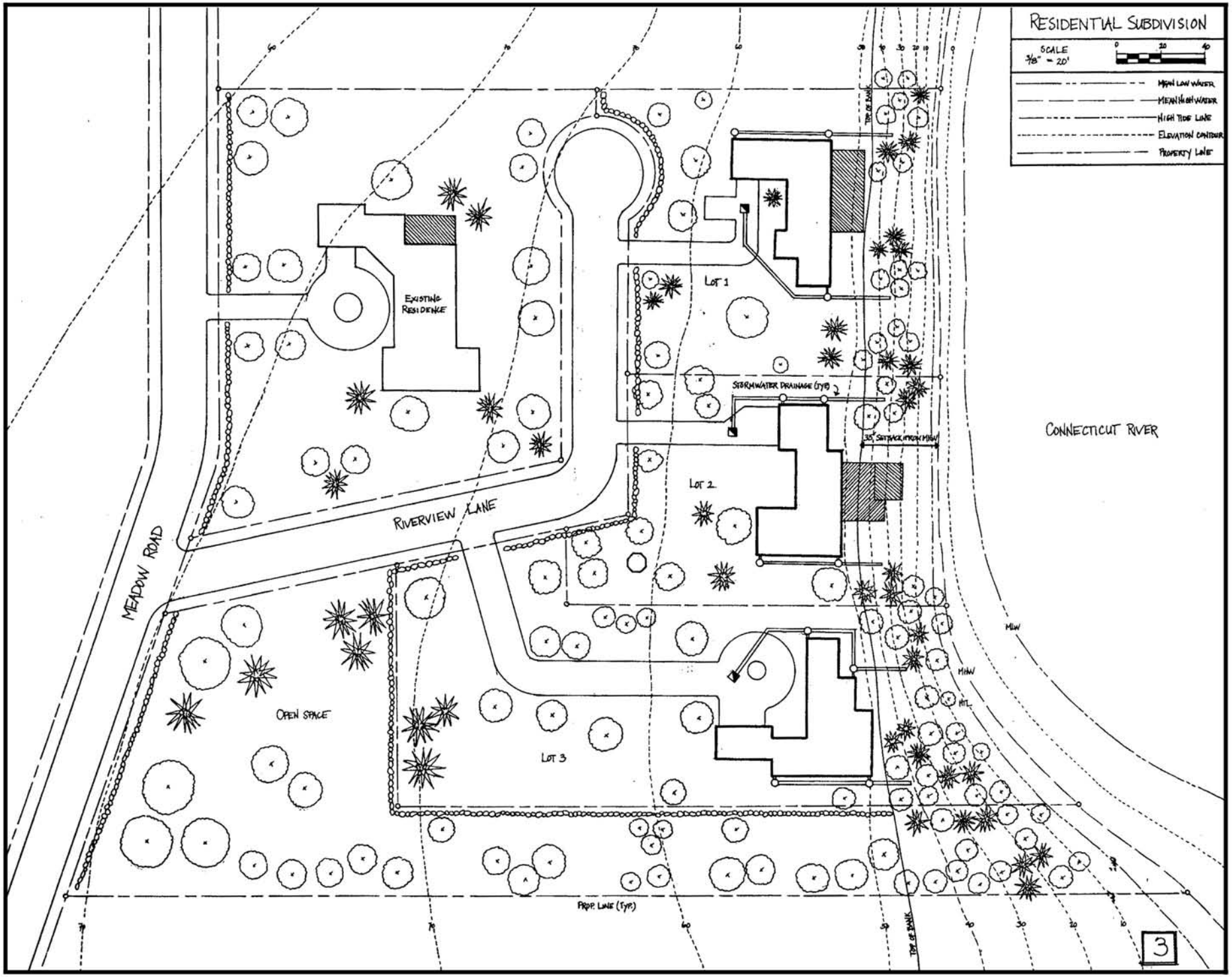
control structures. The board or commission may wish to modify its setback requirements for areas with coastal bluffs and escarpments if setbacks in these areas are determined using distances measured from mean high water rather than the top of the bluff's bank. As evident in this development scenario, the appropriate reference point from which to measure a shoreline setback is from top of bank, not mean high water, to protect coastal bluffs/escarpments (and water quality).

The additional undeveloped area created by setting the structures further back from the top of bank could be used to treat stormwater runoff as well as reduce erosive velocities. This area could be used to support drywells or swales from which stormwater could "leak-off" as sheet flow toward the bluff. Riverview Lane could be constructed without curbs to allow stormwater runoff from this road as sheet flow into roadside swales for on-site infiltration.

A site redesign, as described above, would also better accommodate a water-dependent use at the site-specifically, coastal public access (the only appropriate water-dependent use for this site). A coastal public access area would likely be best accommodated in the open space area adjacent to lot #3. The coastal public access open space area should include two or three parking spaces off Meadow Road, if on-street parking is not allowed. A clearly defined path from the road/parking, with public access signs at street/path connection, to the shoreline should be provided. Some type amenities should be provided at the top of the bank at the end of the coastal public access path (bench with bollards) which clearly defines the extent and terminus of the access area.

Views of the undisturbed bluff from the river and opposite bank of the river may be altered by clearing vegetation from the bluff and construction of the proposed houses. The relevant CCMA policy is contained within the minimization of "adverse impacts on coastal resources" policy, which includes but are not limited to… (F) degrading visual quality through the significant alteration of the natural features of vistas and view points (CGS Sec. 22a-93(15)). Within this context, this policy recognizes the importance of the visual quality of the **natural resources** of the coastline and the visual access to them. We understand that these policies are general in nature and, therefore, difficult to implement without subjective interpretation. Vistas and view points have traditionally been interpreted by DEP-OLISP to mean "public" views of the coastline and coastal resources. They have not been interpreted to mean "personal or private" views. As such, they have not been applied as a means of protecting "personal or private" views but public views. For example, the policies were not intended to prevent obstruction of private views or view corridors of coastal resources. As such, a private waterfront development should not be considered to be an obstruction of any other private view.

However, because the CCMA policies on visual quality are so general and non-specific, we strongly advise any municipality that is seriously interested in pursuing visual quality considerations in their coastal site plan review decisions not to rely solely on these standards. In order to more consistently and accurately apply these policies and provide much needed refinement and specificity, we recommend that the board consider amending their zoning regulations to customize policies regarding views and vistas. As such, the board may consider defining vistas and view points and developing standards regarding their implementation to further clarify adverse impacts to visual quality.


RESIDENTIAL SUBDIVISION
SCALE
3/8" = 20'
0
20
40
MEAN LOW WATER
MEAN HIGH WATER
HIGH TIDE LINE
ELEVATION CONTOUR
PROPERTY LINE
EXISTING RESIDENCE
LOT 1
LOT 2
LOT 3
STORMWATER DRAINAGE (TYP)
35' SETBACK FROM MHW
RIVERVIEW LANE
MEADOW ROAD
CONNECTICUT RIVER
OPEN SPACE
PROP. LINE (TYP.)
TOP OF BANK
MLW
MHW
HTL
3

Site Plan #4
Commercial Development

Coastal Site Plan Deficiencies

1) Tidal datums (i.e., mean high water and the high tide line) and vertical datum (NGVD 1929) not shown.
2) "Wetlands" label does not indicate whether wetlands are tidal wetlands or inland wetlands.
3) No elevation contours shown upland of elevation 11.
4) Flood hazard areas (if present) not delineated.
5) Direction of stormwater flow not shown (optional, but helpful).
6) Coastal resources are not identified on site plan (shorelands, flood hazard areas, tidal wetlands, inland wetlands, coastal waters)

Coastal Management Issues

1) Stormwater management system does not minimize development's potential adverse impacts to coastal water quality - no stormwater best management practices (BMPs) proposed.
2) Restored tidal wetland/inland wetlands adversely affected by stormwater discharges and discharge structures
3) If building is in a flood hazard area, building must be elevated or flood-proofed.
4) State coastal permits required for fill/stormwater discharge structures in tidal wetlands or areas below the high tide line.

Analysis

The stormwater drainage plan is unacceptable. To correct the problem, stormwater BMPs should be incorporated into the proposal. The first step in this process is to identify the potential pollutants in stormwater runoff at the site (see *Stormwater Management* fact sheet for description of parking lot runoff pollutants) and estimate the quantity of runoff generated by the "first-flush" of runoff generated by a 1 inch rainfall event. Next, the appropriate stormwater BMPs should be selected based upon the targeted pollutants, quantity of flow, and site conditions (e.g., soils, slope, available land area, etc.). To the extent possible, non-structural and low maintenance methods (e.g., vegetated swales) for treating stormwater that infiltrates runoff into on-site soils should be used. If necessary, structural methods (e.g., oil and gross particle separators) may be used, ideally in tandem with non-structural methods, if site conditions limit use of non-structural methods. It is particularly important that applicants be made aware that they may need to redesign a proposed development to accommodate non-structural stormwater management methods if insufficient space is provided on the coastal site plan submitted for review.

Potential Solutions

- ***No*** direct discharges to tidal wetlands should be allowed. Since runoff from the roof of the proposed building is cleaner than that from the parking lot, these sources of runoff should be separated and treated differently. Roof runoff can be discharged to a vegetated swale designed to enhance infiltration into the soil. Parking lot runoff can be treated using a variety of BMPs. Often BMPs used in series are the most effective. For example, surface drains containing adsorbent material to capture hydrocarbons could be used, as can modified catch basins with deep sumps and hooded outlets, to capture pollutants early in the stormwater conveyance system. Then, the stormwater could drain through a level spreader and over a vegetated buffer prior to discharge to the restored wetland. Alternatively, dry creeks could be installed adjacent to the parking lot. Again, water passing through the creeks could flow over the vegetated buffer on its way to inland wetlands. For parking lots with islands, dry creeks can be incorporated into the islands. It may be necessary to require the applicant

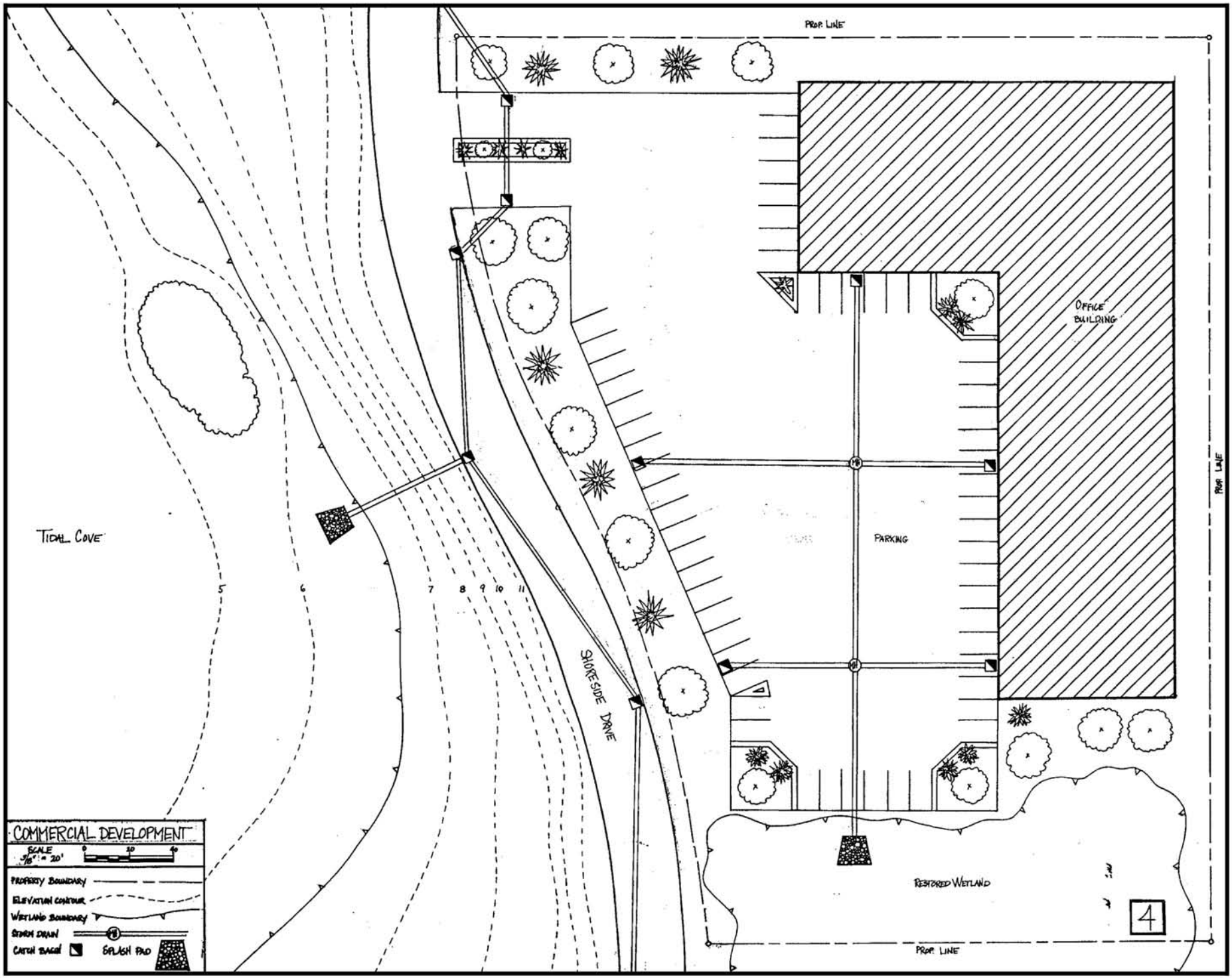
to eliminate proposed parking spaces to make an area available to accommodate the swales and dry creeks.

- Prior to the selection of stormwater BMPs, site design should first consider designing the building around significant trees and existing topography. Trees that overhang parking areas intercept rainfall, provide shade for the pavement (and vehicles), and transpire large quantities of water back to the atmosphere between rainfall events.

- Another potential solution could be to use infiltration galleries located below the parking surface. However, suitable soil condition ***must*** exist and pretreatment of stormwater prior to it entering the galleries to remove litter, suspended solids, and hydrocarbons is required.

- Other potential solutions might include the use of catch basin insert technology, depression storage, curbless parking areas with infiltration trenches, and drywells.

- Please note that maintenance of the stormwater management system is critical to its effectiveness. Stormwater management plans should include a scheduled maintenance plan with a dedicated funding source to ensure that periodic maintenance is performed.


PROP. LINE
OFFICE BUILDING
PARKING
TIDAL COVE
5
6
7
8
9
10
11
SHORESIDE DRIVE
RESTORED WETLAND
PROP. LINE
PROP. LINE
COMMERCIAL DEVELOPMENT
SCALE 3/16" = 20'
0
20
40
PROPERTY BOUNDARY
ELEVATION CONTOUR
WETLAND BOUNDARY
STORM DRAIN
CATCH BASIN
SPLASH PAD
4

CONNECTICUT COASTAL MANAGEMENT ACT

SECTION 5 - CONNECTICUT COASTAL MANAGEMENT ACT

Connecticut General Statutes Sections 22a-90 through 22a-112

Public Act 00-152 – An Act Concerning Urban Harbors, Boating Safety and Water Systems in the State

Reference Guide to Coastal Policies and Definition

CONNECTICUT COASTAL MANAGEMENT ACT

Connecticut General Statutes

CHAPTER 444*

*Cited. 192 C. 353, 354, 358−365. Coastal management act cited. 203 C. 364, 374; 222 C. 269, 275. Coastal area management act, Sec. 22a-90 et seq. cited. 227 C. 71, 77, 78, 93. Coastal management act cited. 228 C. 187, 195, 199.
Coastal Management Act Sec. 22a-90 et seq. cited. 35 CA 317−325.
Coastal Management Act cited. 43 CS 386, 387, 400.

Sec. 22a-90. Short title: Coastal Management Act. Sections 22a-90 to 22a-112, inclusive, shall be known and may be cited as the "Coastal Management Act".
(P.A. 78-152, S. 1, 11; P.A. 83-487, S. 28, 33.)
History: P.A. 78-152 effective July 1, 1979; P.A. 83-487 amended section to include Secs. 22a-97 to 22a-112, inclusive, under short title.

Sec. 22a-91. Legislative findings. The General Assembly finds that:
(1) The waters of Long Island Sound and its coastal resources, including tidal rivers, streams and creeks, wetlands and marshes, intertidal mudflats, beaches and dunes, bluffs and headlands, islands, rocky shorefronts, and adjacent shorelands form an integrated natural estuarine ecosystem which is both unique and fragile;
(2) Development of Connecticut's coastal area has been extensive and has had a significant impact on Long Island Sound and its coastal resources;
(3) The coastal area represents an asset of great present and potential value to the economic well-being of the state, and there is a state interest in the effective management, beneficial use, protection and development of the coastal area;
(4) The waterfront of Connecticut's major urban ports is underutilized and many existing urban waterfront uses are not directly dependent on proximity to coastal waters;
(5) The coastal area is rich in a variety of natural, economic, recreational, cultural and aesthetic resources, but the full realization of their value can be achieved only by encouraging further development in suitable areas and by protecting those areas unsuited to development;
(6) The key to improved public management of Connecticut's coastal area is coordination at all levels of government and consideration by municipalities of the impact of development on both coastal resources and future water-dependent development opportunities when preparing plans and regulations and reviewing municipal and private development proposals; and
(7) Unplanned population growth and economic development in the coastal area have caused the loss of living marine resources, wildlife and nutrient-rich areas, and have endangered other vital ecological systems and scarce resources.

(P.A. 78-152, S. 2, 11; P.A. 79-535, S. 1, 25.)
History: P.A. 78-152 effective July 1, 1979; P.A. 79-535 entirely replaced Subdivs. (3) and (5) which had addressed the demand for recreational opportunity in coastal areas and the lack of full protection for "natural features and processes" and the lack of beneficial development and added Subdivs. (6) and (7).

Sec. 22a-92. Legislative goals and policies. (a) The following general goals and policies are established by this chapter:
(1) To insure that the development, preservation or use of the land and water resources of the coastal area proceeds in a manner consistent with the capability of the land and water resources to support development, preservation or use without significantly disrupting either the natural environment or sound economic growth;
(2) To preserve and enhance coastal resources in accordance with the policies established by chapters 439, 440, 446i, 446k, 447, 474 and 477;
(3) To give high priority and preference to uses and facilities which are dependent upon proximity to the water or the shorelands immediately adjacent to marine and tidal waters;
(4) To resolve conflicts between competing uses on the shorelands adjacent to marine and tidal waters by giving preference to uses that minimize adverse impacts on natural coastal resources while providing long term and stable economic benefits;
(5) To consider in the planning process the potential impact of coastal flooding and erosion patterns on coastal development so as to minimize damage to and destruction of life and property and reduce the necessity of public expenditure to protect future development from such hazards;
(6) To encourage public access to the waters of Long Island Sound by expansion, development and effective utilization of state-owned recreational facilities within the coastal area that are consistent with sound resource conservation procedures and constitutionally protected rights of private property owners;
(7) To conduct, sponsor and assist research in coastal matters to improve the data base upon which coastal land and water use decisions are made;
(8) To coordinate the activities of public agencies to insure that state expenditures enhance development while affording maximum protection to natural coastal resources and processes in a manner consistent with the state plan for conservation and development adopted pursuant to part I of chapter 297;
(9) To coordinate planning and regulatory activities of public agencies at all levels of government to insure maximum protection of coastal resources while minimizing conflicts and disruption of economic development; and
(10) To insure that the state and the coastal municipalities provide adequate planning for facilities and resources which are in the national interest as defined in section 22a-93 and to insure that any restrictions or exclusions of such facilities or uses are reasonable. Reasonable grounds for the restriction or exclusion of a facility or use in the national interest shall include a finding that such a facility or use: (A) May reasonably be sited outside the coastal boundary; (B) fails to meet any applicable federal and state environmental, health or safety standard or (C) unreasonably restricts physical or visual access to coastal waters. This policy does not exempt any nonfederal facility in use from any applicable state or local regulatory or permit program nor does it exempt any federal facility or use from the federal consistency requirements of Section 307 of the federal Coastal Zone Management Act.
(b) In addition to the policies stated in subsection (a), the following policies are established for

federal, state and municipal agencies in carrying out their responsibilities under this chapter:
(1) Policies concerning development, facilities and uses within the coastal boundary are: (A) To manage uses in the coastal boundary through existing municipal planning, zoning and other local regulatory authorities and through existing state structures, dredging, wetlands, and other state siting and regulatory authorities, giving highest priority and preference to water-dependent uses and facilities in shorefront areas; (B) to locate and phase sewer and water lines so as to encourage concentrated development in areas which are suitable for development; and to disapprove extension of sewer and water services into developed and undeveloped beaches, barrier beaches and tidal wetlands except that, when necessary to abate existing sources of pollution, sewers that will accommodate existing uses with limited excess capacity may be used; (C) to promote, through existing state and local planning, development, promotional and regulatory authorities, the development, reuse or redevelopment of existing urban and commercial fishing ports giving highest priority and preference to water dependent uses, including but not limited to commercial and recreational fishing and boating uses; to disallow uses which unreasonably congest navigation channels, or unreasonably preclude boating support facilities elsewhere in a port or harbor; and to minimize the risk of oil and chemical spills at port facilities; (D) to require that structures in tidal wetlands and coastal waters be designed, constructed and maintained to minimize adverse impacts on coastal resources, circulation and sedimentation patterns, water quality, and flooding and erosion, to reduce to the maximum extent practicable the use of fill, and to reduce conflicts with the riparian rights of adjacent landowners; (E) to disallow the siting within the coastal boundary of new tank farms and other new fuel and chemical storage facilities which can reasonably be located inland and to require any new storage tanks which must be located within the coastal boundary to abut existing storage tanks or to be located in urban industrial areas and to be adequately protected against floods and spills; (F) to make use of rehabilitation, upgrading and improvement of existing transportation facilities as the primary means of meeting transportation needs in the coastal area; (G) to encourage increased recreational boating use of coastal waters, where feasible, by (i) providing additional berthing space in existing harbors, (ii) limiting non-water-dependent land uses that preclude boating support facilities, (iii) increasing state-owned launching facilities, and (iv) providing for new boating facilities in natural harbors, new protected water areas and in areas dredged from dry land; (H) to protect coastal resources by requiring, where feasible, that such boating uses and facilities (i) minimize disruption or degradation of natural coastal resources, (ii) utilize existing altered, developed or redevelopment areas, (iii) are located to assure optimal distribution of state-owned facilities to the state-wide boating public and (iv) utilize ramps and dry storage rather than slips in environmentally sensitive areas; (I) to protect and where feasible, upgrade facilities serving the commercial fishing and recreational boating industries; to maintain existing authorized commercial fishing and recreational boating harbor space unless the demand for these facilities no longer exists or adequate space has been provided; to design and locate, where feasible, proposed recreational boating facilities in a manner which does not interfere with the needs of the commercial fishing industry and (J) to require reasonable mitigation measures where development would adversely impact historical, archaeological, or paleontological resources that have been designated by the state historic preservation officer.
(2) Policies concerning coastal land and water resources within the coastal boundary are: (A) To manage coastal bluffs and escarpments so as to preserve their slope and toe; to discourage uses which do not permit continued natural rates of erosion and to disapprove uses that accelerate slope erosion and alter essential patterns and supply of sediments to the littoral transport system;

(B) to manage rocky shorefronts so as to insure that development proceeds in a manner which does not irreparably reduce the capability of the system to support a healthy intertidal biological community; to provide feeding grounds and refuge for shorebirds and finfish, and to dissipate and absorb storm and wave energies; (C) to preserve the dynamic form and integrity of natural beach systems in order to provide critical wildlife habitats, a reservoir for sand supply, a buffer for coastal flooding and erosion, and valuable recreational opportunities; to insure that coastal uses are compatible with the capabilities of the system and do not unreasonably interfere with natural processes of erosion and sedimentation, and to encourage the restoration and enhancement of disturbed or modified beach systems; (D) to manage intertidal flats so as to preserve their value as a nutrient source and reservoir, a healthy shellfish habitat and a valuable feeding area for invertebrates, fish and shorebirds; to encourage the restoration and enhancement of degraded intertidal flats; to allow coastal uses that minimize change in the natural current flows, depth, slope, sedimentation, and nutrient storage functions and to disallow uses that substantially accelerate erosion or lead to significant despoliation of tidal flats; (E) to preserve tidal wetlands and to prevent the despoliation and destruction thereof in order to maintain their vital natural functions; to encourage the rehabilitation and restoration of degraded tidal wetlands and where feasible and environmentally acceptable, to encourage the creation of wetlands for the purposes of shellfish and finfish management, habitat creation and dredge spoil disposal; (F) to manage coastal hazard areas so as to insure that development proceeds in such a manner that hazards to life and property are minimized and to promote nonstructural solutions to flood and erosion problems except in those instances where structural alternatives prove unavoidable and necessary to protect existing inhabited structures, infrastructural facilities or water dependent uses; (G) to promote, through existing state and local planning, development, promotional and regulatory programs, the use of existing developed shorefront areas for marine-related uses, including but not limited to, commercial and recreational fishing, boating and other water-dependent commercial, industrial and recreational uses; (H) to manage undeveloped islands in order to promote their use as critical habitats for those bird, plant and animal species which are indigenous to such islands or which are increasingly rare on the mainland; to maintain the value of undeveloped islands as a major source of recreational open space; and to disallow uses which will have significant adverse impacts on islands or their resource components; (I) to regulate shoreland use and development in a manner which minimizes adverse impacts upon adjacent coastal systems and resources and (J) to maintain the natural relationship between eroding and depositional coastal landforms and to minimize the adverse impacts of erosion and sedimentation on coastal land uses through the promotion of nonstructural mitigation measures. Structural solutions are permissible when necessary and unavoidable for the protection of infrastructural facilities, water-dependent uses, or existing inhabited structures, and where there is no feasible, less environmentally damaging alternative and where all reasonable mitigation measures and techniques have been provided to minimize adverse environmental impacts.

(c) In addition to the policies stated in subsections (a) and (b), the following policies are established for federal and state agencies in carrying out their responsibilities under this chapter: (1) Policies concerning development, facilities and uses within the coastal boundary are: (A) To minimize the risk of spillage of petroleum products and hazardous substances, to provide effective containment and cleanup facilities for accidental spills and to disallow offshore oil receiving systems that have the potential to cause catastrophic oil spills in the Long Island Sound estuary; (B) to disallow any filling of tidal wetlands and nearshore, offshore and intertidal waters for the purpose of creating new land from existing wetlands and coastal waters which would

otherwise be undevelopable, unless it is found that the adverse impacts on coastal resources are minimal; (C) to initiate in cooperation with the federal government and the continuing legislative committee on state planning and development a long-range planning program for the continued maintenance and enhancement of federally-maintained navigation facilities in order to effectively and efficiently plan and provide for environmentally sound dredging and disposal of dredged materials; to encourage, through the state permitting program for dredging activities, the maintenance and enhancement of existing federally-maintained navigation channels, basins and anchorages and to discourage the dredging of new federally- maintained navigation channels, basins and anchorages; (D) to reduce the need for future dredging by requiring that new or expanded navigation channels, basins and anchorages take advantage of existing or authorized water depths, circulation and siltation patterns and the best available technologies for reducing controllable sedimentation; (E) to disallow new dredging in tidal wetlands except where no feasible alternative exists and where adverse impacts to coastal resources are minimal; (F) to require that new or improved shoreline rail corridors be designed and constructed so as (i) to prevent tidal and circulation restrictions and, when practicable, to eliminate any such existing restrictions, (ii) to improve or have a negligible adverse effect on coastal access and recreation and (iii) to enhance or not unreasonably impair the visual quality of the shoreline; (G) to require that coastal highways and highway improvements, including bridges, be designed and constructed so as to minimize adverse impacts on coastal resources; to require that coastal highway and highway improvements give full consideration to mass transportation alternatives and to require that coastal highways and highway improvements where possible enhance, but in no case decrease coastal access and recreational opportunities; (H) to disallow the construction of major new airports and to discourage the substantial expansion of existing airports within the coastal boundary; to require that any expansion or improvement of existing airports minimize adverse impacts on coastal resources, recreation or access; (I) to manage the state's fisheries in order to promote the economic benefits of commercial and recreational fishing, enhance recreational fishing opportunities, optimize the yield of all species, prevent the depletion or extinction of indigenous species, maintain and enhance the productivity of natural estuarine resources and preserve healthy fisheries resources for future generations; (J) to make effective use of state- owned coastal recreational facilities in order to expand coastal recreational opportunities including the development or redevelopment of existing state-owned facilities where feasible; (K) to require as a condition in permitting new coastal structures, including but not limited to, groins, jetties or breakwaters, that access to, or along, the public beach below mean high water must not be unreasonably impaired by such structures and to encourage the removal of illegal structures below mean high water which unreasonably obstruct passage along the public beach; and (L) to promote the revitalization of inner city urban harbors and waterfronts by encouraging appropriate reuse of historically developed shorefronts, which may include minimized alteration of an existing shorefront in order to achieve a significant net public benefit, provided (i) such shorefront site is permanently devoted to a water dependent use or a water dependent public use such as public access or recreation for the general public and the ownership of any filled lands remain with the state or an instrumentality thereof in order to secure public use and benefit in perpetuity, (ii) landward development of the site is constrained by highways, railroads or other significant infrastructure facilities, (iii) no other feasible, less environmentally damaging alternatives exist, (iv) the adverse impacts to coastal resources of any shorefront alteration are minimized and compensation in the form of resource restoration is provided to mitigate any remaining adverse impacts, and (v) such reuse is consistent with the

appropriate municipal coastal program or municipal plan of development.
(2) Policies concerning coastal land and other resources within the coastal boundary are: (A) To manage estuarine embayments so as to insure that coastal uses proceed in a manner that assures sustained biological productivity, the maintenance of healthy marine populations and the maintenance of essential patterns of circulation, drainage and basin configuration; to protect, enhance and allow natural restoration of eelgrass flats except in special limited cases, notably shellfish management, where the benefits accrued through alteration of the flat may outweigh the long-term benefits to marine biota, waterfowl, and commercial and recreational finfisheries and (B) to maintain, enhance, or, where feasible, restore natural patterns of water circulation and fresh and saltwater exchange in the placement or replacement of culverts, tide gates or other drainage or flood control structures.
(d) In addition to the policies in this section, the policies of the state plan of conservation and development adopted pursuant to part I of chapter 297 shall be applied to the area within the coastal boundary in accordance with the requirements of section 16a-31.
(P.A. 78-152, S. 3, 11; P.A 79-535, S. 2, 25; P.A. 90-230, S. 33, 101; P.A. 00-152, S. 1.)
History: P.A. 78-152 effective July 1, 1979; P.A. 79-535 added reference to chapter 474a in Subsec. (a)(3), rephrased Subsec. (a)(6), referred to "state" rather than "public expenditures" in Subsec. (a)(8) and added reference to actions consistent with state plan for conservation and development, added Subdiv. (10) re insuring that use is in national interest and that restrictions or exclusions of uses and facilities are reasonable, and added Subsecs. (b) to (d) establishing policies for federal, state and municipal agencies in carrying out their responsibilities; P.A. 90-230 corrected internal references in Subsec. (a)(2); P.A. 00-152 amended Subsec. (c)(1) by adding new Subpara. (L) re revitalization of urban harbors and waterfronts.
Cited. 43 CS 386, 387, 395.
Subsec. (a):
Subdiv. (6) cited. 182 C. 611, 617.
Subdiv. (2) cited. 43 CS 386, 388. Subdiv. (1) cited. Id., 386, 389.
Subsec. (b):
Subdiv. (1)(D) cited. 43 CS 386, 388. Subdiv. (2)(E) cited. Id., 386, 388, 393. Subdiv. (1)(H) cited. Id., 386, 389. Subdiv. (2) cited. Id., 386, 395.
Subsec. (c):
Subdiv. (1)(B) cited. 43 CS 386, 388.

Sec. 22a-93. Definitions. For the purposes of this chapter:
(1) "Commissioner" means the Commissioner of Environmental Protection;
(2) "Municipality" means any town listed in subsection (a) of section 22a-94, the city of Groton, the borough of Stonington, the borough of Groton Long Point, the borough of Fenwick and the borough of Woodmont, but shall not include any special district;
(3) "Coastal area" means those lands described in subsection (a) of section 22a-94;
(4) "Coastal boundary" means the boundary described in subsection (b) of section 22a-94;
(5) "Coastal waters" means those waters of Long Island Sound and its harbors, embayments, tidal rivers, streams and creeks, which contain a salinity concentration of at least five hundred parts per million under the low flow stream conditions as established by the commissioner;
(6) "Public beach" means that portion of the shoreline held in public fee ownership by the state or that portion of the shoreline below the mean high tide elevation that is held in public trust by the state;

(7) "Coastal resources" means the coastal waters of the state, their natural resources, related marine and wildlife habitat and adjacent shorelands, both developed and undeveloped, that together form an integrated terrestrial and estuarine ecosystem; coastal resources include the following: (A) "Coastal bluffs and escarpments" means naturally eroding shorelands marked by dynamic escarpments or sea cliffs which have slope angles that constitute an intricate adjustment between erosion, substrate, drainage and degree of plant cover; (B) "rocky shorefronts" means shorefront composed of bedrock, boulders and cobbles that are highly erosion-resistant and are an insignificant source of sediments for other coastal landforms; (C) "beaches and dunes" means beach systems including barrier beach spits and tombolos, barrier beaches, pocket beaches, land contact beaches and related dunes and sandflats; (D) "intertidal flats" means very gently sloping or flat areas located between high and low tides composed of muddy, silty and fine sandy sediments and generally devoid of vegetation; (E) "tidal wetlands" means "wetland" as defined by section 22a-29; (F) "freshwater wetlands and watercourses" means "wetlands" and "watercourses" as defined by section 22a-38; (G) "estuarine embayments" means a protected coastal body of water with an open connection to the sea in which saline sea water is measurably diluted by fresh water including tidal rivers, bays, lagoons and coves; (H) "coastal hazard areas" means those land areas inundated during coastal storm events or subject to erosion induced by such events, including flood hazard areas as defined and determined by the National Flood Insurance Act, as amended (USC 42 Section 4101, P.L. 93-234) and all erosion hazard areas as determined by the commissioner; (I) "developed shorefront" means those harbor areas which have been highly engineered and developed resulting in the functional impairment or substantial alteration of their natural physiographic features or systems; (J) "island" means land surrounded on all sides by water; (K) "nearshore waters" means the area comprised of those waters and their substrates lying between mean high water and a depth approximated by the ten meter contour; (L) "offshore waters" means the area comprised of those waters and their substrates lying seaward of a depth approximated by the ten meter contour; (M) "shorelands" means those land areas within the coastal boundary exclusive of coastal hazard areas, which are not subject to dynamic coastal processes and which are comprised of typical upland features such as bedrock hills, till hills and drumlins; (N) "shellfish concentration areas" means actual, potential or historic areas in coastal waters, in which one or more species of shellfish aggregate;

(8) "Zoning commission" means the municipal zoning commission established under section 8-1 or by any special act or the combined planning and zoning commission established under section 8-4a;

(9) "Planning commission" means the municipal planning commission established under section 8-19 or by any special act or the combined planning and zoning commission established under section 8-4a;

(10) "Municipal coastal plans" means the plans listed in subsections (b) and (d) of section 22a-101;

(11) "Municipal coastal regulations" means the regulations and ordinances listed in subsection (b) of section 22a-101;

(12) "Federal Coastal Zone Management Act" and "federal act" means the U.S. Coastal Zone Management Act of 1972, as amended;

(13) "Coastal site plans" means the site plans, applications and project referrals listed in section 22a-105;

(14) "Facilities and resources which are in the national interest" means: (A) Adequate protection of tidal wetlands and related estuarine resources; (B) restoration and enhancement of

Connecticut's shellfish industry; (C) restoration, preservation and enhancement of the state's recreational and commercial fisheries, including anadromous species; (D) water pollution control measures and facilities consistent with the requirements of the federal Clean Water Act, as amended; (E) air pollution control measures and facilities consistent with the requirements of the federal Clean Air Act, as amended; (F) continued operations of existing federally-funded dredged and maintained navigation channels and basins; (G) energy facilities serving state-wide and interstate markets, including electric generating facilities and facilities for storage, receiving or processing petroleum products and other fuels; (H) improvements to the existing interstate rail, highway and water-borne transportation system; (I) provision of adequate state or federally-owned marine-related recreational facilities, including natural areas and wildlife sanctuaries and (J) essential maintenance and improvement of existing water-dependent military, navigational, resource management and research facilities;

(15) "Adverse impacts on coastal resources" include but are not limited to: (A) Degrading water quality through the significant introduction into either coastal waters or groundwater supplies of suspended solids, nutrients, toxics, heavy metals or pathogens, or through the significant alteration of temperature, pH, dissolved oxygen or salinity; (B) degrading existing circulation patterns of coastal waters through the significant alteration of patterns of tidal exchange or flushing rates, freshwater input, or existing basin characteristics and channel contours; (C) degrading natural erosion patterns through the significant alteration of littoral transport of sediments in terms of deposition or source reduction; (D) degrading natural or existing drainage patterns through the significant alteration of groundwater flow and recharge and volume of runoff; (E) increasing the hazard of coastal flooding through significant alteration of shoreline configurations or bathymetry, particularly within high velocity flood zones; (F) degrading visual quality through significant alteration of the natural features of vistas and view points; (G) degrading or destroying essential wildlife, finfish or shellfish habitat through significant alteration of the composition, migration patterns, distribution, breeding or other population characteristics of the natural species or significant alteration of the natural components of the habitat and (H) degrading tidal wetlands, beaches and dunes, rocky shorefronts, and bluffs and escarpments through significant alteration of their natural characteristics or function;

(16) "Water-dependent uses" means those uses and facilities which require direct access to, or location in, marine or tidal waters and which therefore cannot be located inland, including but not limited to: Marinas, recreational and commercial fishing and boating facilities, finfish and shellfish processing plants, waterfront dock and port facilities, shipyards and boat building facilities, water-based recreational uses, navigation aides, basins and channels, industrial uses dependent upon water-borne transportation or requiring large volumes of cooling or process water which cannot reasonably be located or operated at an inland site and uses which provide general public access to marine or tidal waters;

(17) "Adverse impacts on future water-dependent development opportunities" and "adverse impacts on future water-dependent development activities" include but are not limited to (A) locating a non-water-dependent use at a site that (i) is physically suited for a water-dependent use for which there is a reasonable demand or (ii) has been identified for a water-dependent use in the plan of development of the municipality or the zoning regulations; (B) replacement of a water-dependent use with a non-water-dependent use, and (C) siting of a non-water-dependent use which would substantially reduce or inhibit existing public access to marine or tidal waters; and

(18) "Zoning board of appeals" means the municipal zoning board of appeals established

pursuant to section 8-5 or any special act.
(P.A. 78-152, S. 4, 11; P.A. 79-535, S. 3, 25; P.A. 82-250, S. 1, 6; P.A. 83-587, S. 83, 96; P.A. 95-218, S. 7.)
History: P.A. 78-152 effective July 1, 1979; P.A. 79-535 redefined "municipality" and "coastal waters" in specific rather than general terms, redefined "public beach" to specify those owned by state, expanded definition of "coastal resources" and added Subdivs. (8) to (16) defining various planning and zoning commissions, coastal plans and regulations, the applicable federal act, "facilities and resources which are in the national interest", "adverse impacts on coastal resources" and "water dependent uses"; P.A. 82-250 added definitions for "adverse impacts on future water dependent development opportunities", "adverse impacts on future water dependent development activities" and "zoning board of appeals"; P.A. 83-587 substituted reference to federal clean air act for reference to clean water act in Subdiv. (14); P.A. 95-218 amended the definition of "adverse impacts on coastal resources" to make a minor clarification re patterns of tidal exchange.
Subdiv. (7):
Subpara. (E) cited. 43 CS 386, 395, 396.
Subdiv. (16):
Cited. 228 C. 187, 200.
Subdiv. (17):
Cited. 228 C. 187, 200.

Sec. 22a-94. Coastal area; coastal boundary. Commissioner to prepare maps. (a) The Connecticut coastal area shall include the land and water within the area delineated by the following: The westerly, southerly and easterly limits of the state's jurisdiction in Long Island Sound; the towns of Greenwich, Stamford, Darien, Norwalk, Westport, Fairfield, Bridgeport, Stratford, Shelton, Milford, Orange, West Haven, New Haven, Hamden, North Haven, East Haven, Branford, Guilford, Madison, Clinton, Westbrook, Deep River, Chester, Essex, Old Saybrook, Lyme, Old Lyme, East Lyme, Waterford, New London, Montville, Norwich, Preston, Ledyard, Groton and Stonington.
(b) Within the coastal area, there shall be a coastal boundary which shall be a continuous line delineated on the landward side by the interior contour elevation of the one hundred year frequency coastal flood zone, as defined and determined by the National Flood Insurance Act, as amended (USC 42 Section 4101, P.L. 93-234), or a one thousand foot linear setback measured from the mean high water mark in coastal waters, or a one thousand foot linear setback measured from the inland boundary of tidal wetlands mapped under section 22a-20, whichever is farthest inland; and shall be delineated on the seaward side by the seaward extent of the jurisdiction of the state.
(c) The coastal boundary as defined in subsection (b) of this section shall be shown on maps or photographs prepared by the commissioner which supplement flood hazard rate maps prepared by the United States Department of Housing and Urban Development under the National Flood Insurance Act. Such maps shall be sufficiently precise to demonstrate whether the holdings of a property owner, or portions thereof, lie within the coastal boundary. Copies of such maps or photographs shall be filed with the commissioner and with the clerk of each coastal municipality.
(d) The maps described in subsection (c) of this section shall be promulgated not later than July 1, 1980. Prior to final adoption of any map, the commissioner shall hold a public hearing in accordance with the provisions of chapter 54 within the applicable coastal town. The

commissioner may use interim maps prepared on United States Geological Survey Topographic base at a scale of one to twenty-four thousand or their metric equivalent. In preparing such interim maps, the commissioner may use any man-made structure, natural feature, property line, preliminary flood hazard boundary maps as prepared by the United States Department of Housing and Urban Development, or a combination thereof which most closely approximates the landward side of the boundary. Further, the commissioner may use city or town property tax maps or aerial photographs, state tidal wetlands photographs, or similar maps of property delineation as they are available.
(e) The commissioner may, from time to time, amend such maps described in subsection (c) of this section. Prior to the adoption of an amendment to any map, the commissioner shall hold a public hearing in the affected municipality in accordance with the provisions of chapter 54. The commissioner shall consider for amendment changes in the boundary petitioned by the coastal municipality, by any person owning real property within the boundary, or by twenty-five residents of such municipality. The commissioner shall approve, deny or modify such petition within sixty days of receipt and shall state, in writing, the reasons for his action. All amendments to the boundary shall be consistent with subsection (b).
(f) A municipal coastal boundary may be adopted by the municipal planning commission of each coastal municipality in accordance with the notice, hearing and other procedural requirements of section 8-24. Such boundary may be delineated by roads, property lines or other identifiable natural or man-made features, provided such boundary shall approximate and in no event diminish the area within the coastal boundary as defined in subsection (b) and as mapped under subsection (d). Such boundary shall be sufficiently precise to demonstrate whether the holdings of a property owner, or portions thereof, lie within the boundary. Upon adoption such boundary shall be submitted to the commissioner for mapping in accordance with subsection (c). The municipal planning commission may, at its own discretion or upon request of a property owner, amend the coastal boundary in accordance with the procedures and criteria of this subsection.
(g) All property lying within the coastal boundary shall be subject to the regulatory, development and planning requirements of this chapter.
(P.A. 78-152, S. 5, 11; P.A. 79-535, S. 4, 25.)
History: P.A. 78-152 effective July 1, 1979; P.A. 79-535 substituted "towns" for "municipalities", clarified coastal boundary by including reference to 1,000 foot linear setback, substituting "high water mark" for "high tide" and deleting description of specific types of environment to be included, i.e. coastal waters, submerged lands, intertidal zones, etc. in Subsec. (b), changed deadline for maps in Subsec. (d) from "within twenty-four months of July 1, 1979", to "July 1, 1980", added provisions in Subsec. (e) re petitions to change boundaries, and added Subsecs. (f) and (g) re adoption of boundaries and re applicability of chapter to property within the established coastal boundary.
Cited. 228 C. 187, 189.

Sec. 22a-95. Duties of commissioner. Model municipal coastal program. (a) The commissioner shall, on a continuing basis, assist coastal municipalities in carrying out their responsibilities under this chapter.
(b) The commissioner shall provide each coastal municipality with resource factor maps and other information concerning the location and condition of its coastal resources and shall also provide general technical background information on the beneficial and adverse impacts of various types of development on coastal resources.

(c) The commissioner shall respond to questions regarding the requirements of this chapter, shall respond to requests by coastal municipalities for background technical information and shall meet reasonable requests by such municipalities for technical staff assistance in developing and implementing municipal coastal programs and coastal site plan reviews.
(d) The commissioner shall consult regularly with officials of coastal municipalities regarding implementation of this chapter and shall periodically hold workshops with municipal officials responsible for making decisions under this chapter.
(e) The commissioner shall prepare a model municipal coastal program which shall include, but not be limited to: (1) Model municipal coastal plans and regulations; (2) suggested planning methodologies useful in revising municipal coastal plans; (3) suggested regulatory methods useful in revising municipal coastal regulations to conform to and effectuate the purposes of municipal coastal plans and (4) suggested criteria and procedures for undertaking municipal coastal site plan reviews.
(f) Written technical information provided by the commissioner to coastal municipalities shall be in clear and readily understandable language.
(P.A. 78-152, S. 6, 8, 11; P.A. 79-535, S. 5, 25.)
History: P.A. 79-535 replaced previous provisions which had established interim study committee to recommend plan for coastal area management and had set forth commissioner's duties concerning plans establishment with new provisions re commissioner's duties to assist coastal municipalities in fulfilling their responsibilities.

Sec. 22a-96. Commissioner authorized to enter into agreements; designated as representative of state. (a) The commissioner is authorized to enter into written agreements with federal agencies concerning the matters set forth in subsection (b) of this section having an interest in or regulatory authority in the coastal area. Such agreements shall be consistent with the provisions of sections 22a-90 to 22a-96, inclusive, and chapters 439, 440, 446i, 447, 474 and 477, shall indicate the respective powers and duties of the commissioner and the federal agency or agencies thereunder and shall provide for cooperation and coordination in the implementation of state and federal programs with jurisdiction in the coastal area in a manner consistent with the provisions of sections 22a-90 to 22a-96, inclusive.
(b) Agreements concerning regulatory programs of the U.S. Army Corps of Engineers and the U.S. Coast Guard, Bridges Section, may include the following: (1) Procedures for conducting joint hearings on permit applications; (2) procedures for issuing common and joint application materials and instructions for permit applications; (3) procedures for timely exchange of technical materials related to permit applications and other matters and (4) procedures for coordinating the timing and sequence of the issuance of decisions on permit applications.
(c) The commissioner is authorized to (1) represent the state in formal proceedings regarding "federal consistency" as defined in the federal act; (2) request, receive and administer funds under said act and (3) develop and coordinate, in cooperation with other state agencies, plans to achieve the purposes of sections 22a-90 to 22a-96, inclusive.
(d) The commissioner is designated as the representative of the state in all matters concerning the consistency of federal activities, projects or proposals with the policies and provisions of sections 22a-90 to 22a-96, inclusive.
(P.A. 78-152, S. 7, 9−11; P.A. 90-230, S. 34, 101.)
History: Subsec. (c) effective May 23, 1978, and Subsecs. (a), (b) and (d) effective July 1, 1979; P.A. 90-230 corrected an internal reference in Subsec. (a).

Sec. 22a-97. Duties of the commissioner. Technical, coordinating and research services. Supervision. Annual report. (a) The commissioner shall provide, within available appropriations, technical, coordinating and research services to promote the effective administration of this chapter at the federal, state and local levels.
(b) The commissioner shall have the overall responsibility for general supervision of the implementation of this chapter and shall monitor and evaluate the activities of federal and state agencies and the activities of municipalities to assure continuing, effective, coordinated and consistent administration of the requirements and purposes of this chapter.
(c) The commissioner shall prepare and submit to the General Assembly and the Governor, on or before December first of each year, a written report summarizing the activities of the department concerning the development and implementation of this chapter during the previous year. Such report shall include, but not be limited to: (1) The department's accomplishments and actions in achieving the goals and policies of this chapter including, but not limited to, coordination with other state, regional, federal and municipal programs established to achieve the purposes of this chapter and research programs established pursuant to subsection (a) of section 22a-112; (2) recommendations for any statutory or regulatory amendments necessary to achieve such purposes; (3) a summary of municipal and federal programs and actions which affect the coast; (4) recommendations for any programs or plans to achieve such purposes; (5) any aspects of the program or the chapter which are proving difficult to accomplish, suggested reasons for such difficulties and proposed solutions to such difficulties; (6) a summary of the expenditure of federal and state funds under this chapter and (7) a request for an appropriation of funds necessary to match federal funds and provide continuing financial support for the program. Such report shall comply with the provisions of section 46a- 78. On and after October 1, 1996, the report shall be submitted to the joint standing committee of the General Assembly having cognizance of matters relating to the environment and, upon request, to any member of the General Assembly. A summary of the report shall be submitted to each member of the General Assembly if the summary is two pages or less and a notification of the report shall be submitted to each member if the summary is more than two pages. Submission shall be by mailing the report, summary or notification to the legislative address of each member of the committee or the General Assembly, as applicable.
(P.A. 79-535, S. 17, 25; P.A. 96-251, S. 10.)
History: P.A. 96-251 amended Subsec. (c) by requiring that on and after October 1, 1996, reports be submitted to environment committee and upon request to any legislator and by adding provisions on submission of report summaries to legislators.

Sec. 22a-98. Commissioner to coordinate regulatory programs. The commissioner shall coordinate the activities of all regulatory programs under his jurisdiction with permitting authority in the coastal area to assure that the administration of such programs is consistent with the goals and policies of this chapter. Such programs include, but are not limited to: (1) Regulation of wetlands and watercourses pursuant to chapter 440; (2) regulation of stream encroachment pursuant to sections 22a-342 to 22a-349, inclusive; (3) regulation of dredging and the erection of structures or the placement of fill in tidal, coastal or navigable waters pursuant to sections 22a-359 to 22a-363f, inclusive; and (4) certification of water quality pursuant to the federal Clean Water Act of 1972 (33 USC 1411, Section 401). The commissioner shall assure consistency with such goals and policies in granting, denying or modifying permits under such

programs. Any person seeking a license, permit or other approval of an activity under the requirements of such regulatory programs shall demonstrate that such activity is consistent with all applicable goals and policies in section 22a-92 and that such activity incorporates all reasonable measures mitigating any adverse impacts of such actions on coastal resources and future water-dependent development activities. The coordination of such programs shall include, where feasible, the use of common or combined application forms, the holding of joint hearings on permit applications and the coordination of the timing or sequencing of permit decisions.
(P.A. 79-535, S. 21, 25; P.A. 83-525, S. 1; P.A. 96-145, S. 16; P.A. 99-225, S. 12, 33.)
History: P.A. 83-525 required that any person seeking a permit or approval of any activity under the requirements of a regulatory program demonstrate that such activity incorporates all reasonable measures mitigating damage to coastal resources; P.A. 96-145 deleted former Subdiv. (4) re removal of sand and gravel, renumbering former Subdiv. (5) accordingly; P.A. 99-225 added a provision regarding coordination of dredging regulation with coastal management, effective July 1, 1999.
Cited. 43 CS 386, 387, 395.

Sec. 22a-99. Testimony by coastal municipality on permits and licenses. Appeal from decision of the commissioner. A coastal municipality may submit written testimony to the commissioner and may appear by right as a party to any hearing before said commissioner concerning any permit or license to be issued by said commissioner for an activity occurring within the coastal boundary of the municipality or occurring within the coastal boundary of any adjacent municipality and within five hundred feet of the boundary of such municipality and may appeal any decision of the commissioner concerning such permit or license.
(P.A. 79-535, S. 18, 25.)

Sec. 22a-100. State plans and actions to be consistent with this chapter. (a) All major state plans, other than the state plan for conservation and development adopted pursuant to part I of chapter 297, which affect the coastal area shall be consistent with the goals and policies stated in section 22a-92 and existing state plans, other than the state plan for conservation and development adopted pursuant to part I of chapter 297, which affect the coastal area shall, on or before July 1, 1981, be revised, if necessary, to insure consistency with this chapter. Agencies responsible for revising state plans, other than the state plan for conservation and development adopted pursuant to part I of chapter 297, shall consult with the commissioner in making such revisions.
(b) Each state department, institution or agency responsible for the primary recommendation or initiation of actions within the coastal boundary which may significantly affect the environment, as defined in section 22a-1c, shall insure that such actions are consistent with the goals and policies of this chapter and incorporate all reasonable measures mitigating any adverse impacts of such actions on coastal resources and future water-dependent development activities. The Secretary of the Office of Policy and Management shall consider the consistency of such proposed actions with such goals and policies in determining whether or not an environmental impact evaluation prepared pursuant to section 22a-1b satisfies the requirements of sections 22a-1a to 22a-1h, inclusive, and regulations adopted pursuant thereto. The commissioner shall amend such regulations, if necessary, to insure consistency with the goals and policies of this chapter.
(P.A. 79-535, S. 20, 25; P.A. 83-525, S. 2.)
History: P.A. 83-525 amended Subsec. (b), requiring agencies to insure that actions which might

affect the environment incorporate all reasonable safeguards against any adverse affect.

Sec. 22a-101. Municipal coastal programs. (a) In order to carry out the policies and provisions of this chapter and to provide more specific guidance to coastal area property owners and developers, coastal municipalities may adopt a municipal coastal program for the area within the coastal boundary and landward of the mean high water mark.
(b) A municipal coastal program shall include, but is not limited to: (1) Revisions to the municipal plan of conservation and development under section 8-23 or special act, insofar as it affects the area within the coastal boundary, such revisions to include an identification and written description of the municipality's major coastal-related issues and problems, both immediate and long-term, such as erosion, flooding, recreational facilities, and utilization of port facilities and to include a description of the municipal boards, commissions and officials responsible for implementing and enforcing the coastal program, a description of enforcement procedures and a description of continuing methods of involving the public in the implementation of the municipal coastal program; (2) revisions to the municipal zoning regulations under section 8-2 or under special act and revisions to the following regulations and ordinances if the municipality has adopted such regulations or ordinances, and insofar as such regulations or ordinances affect the area within the coastal boundary: (A) Historic district ordinances under section 7-147b; (B) waterway encroachment line ordinances under section 7-147; (C) subdivision ordinances under section 8-25; (D) inland wetland regulations under subsection (e) of section 22a-42 and section 22a-42a; (E) sewerage ordinances under section 7-148; (F) ordinances or regulations governing filling of land and removal of soil, loam, sand or gravel under section 7-148; (G) ordinances concerning protection and improvement of the environment under section 7-148; and (H) regulations for the supervision, management, control, operation or use of a sewerage system under section 7-247.
(c) If a municipality has not yet adopted a municipal plan of conservation and development under section 8-23, a municipal planning commission may prepare a municipal coastal plan of development solely for that portion of municipality within the coastal boundary in accordance with subsection (b) of this section and section 22a-102.
(d) A municipal coastal program may include revisions to the following municipal plans or programs which revisions shall be consistent with the municipal plan of conservation and development revised in accordance with subsection (b) of this section and section 22a-102: (1) The community development plan under sections 8-169c and 8- 169d; (2) the harbor improvement plan under section 13b-56; (3) the redevelopment plan under sections 8-125 and 8-127; (4) the port development plan under section 7- 329c; (5) the capital improvement plan under section 8-160; (6) the open space plan under section 12-107e; (7) any development project plan or plans under section 8-189; and (8) the municipal water pollution control plan under section 7-245.
(e) Revisions to the municipal plan of development in accordance with subsection (b) of this section and section 22a-102 may include a description of any development projects, acquisition plans, open space tax abatement programs, flood and erosion control projects and other nonregulatory measures which the municipality intends to undertake in order to promote wise management of coastal resources.
(P.A. 79-535, S. 7, 25; P.A. 82-327, S. 10; P.A. 85-409, S. 1, 8; P.A. 95-335, S. 18, 26.)
History: P.A. 82-327 changed a reference to sewer ordinance adopted under Sec. 7-153 to Sec. 7-148 to acknowledge a transfer; P.A. 85-409 removed reference to planned unit development

regulations under Secs. 8-13c and 8-13d, which were repealed by that act; P.A. 95-335 amended Subsecs. (b) to (d) to change "plan of development" to "plan of conservation and development", effective July 1, 1995.

Sec. 22a-102. Municipal plan of development. Proposed municipal land use regulations. (a) In revising the municipal plan of conservation and development in accordance with subsection (b) of section 22a-101, the municipal planning commission shall follow: (1) The policies and goals in section 22a-92; (2) criteria listed in section 8-23.
(b) In adopting any proposed municipal plan of conservation and development, zoning regulations or changes thereto or other municipal coastal regulations listed in subdivision (2) of subsection (b) of section 22a-101 or changes thereto, the following criteria shall also be considered: (1) The character and distribution of the coastal resources defined in section 22a-93 within its coastal boundary, the capacity of and limitations on such resources to support development, and the types and methods of development compatible with the wise use, protection and enhancement of such resources; (2) the nature and pattern of existing development and (3) the need for public services.
(c) The municipal planning commission may revise its municipal plan of conservation and development by making such changes as: Modifications of land use categories, changes in the density and intensity of land use, alteration in plan policies; modifications in growth strategies, changes in acquisition priorities, and alterations in public infrastructure, highway and other capital improvement projects.
(d) The municipal planning commission shall submit its proposed revisions to the municipal plan of conservation and development prepared in accordance with subsections (a) and (b) of this section and section 22a-101 to the commissioner and the regional planning agency for review and comment prior to the final adoption of such revisions in accordance with section 8-23. Upon receipt of such proposed revisions the commissioner and the regional planning agency shall review them for consistency with requirements and criteria listed in subsections (a) and (b) of this section and said section 22a-101 and shall within ninety days notify the municipality in writing of any suggested modifications to the proposed revisions. Upon receipt of such comments or ninety days after receipt by the commissioner of proposed revisions, the municipal planning commission may modify and adopt the proposed revisions in accordance with said section 8-23.
(P.A. 79-535, S. 8, 25; P.A. 83-287, S. 1; P.A. 95-335, S. 19, 26.)
History: P.A. 83-287 amended Subsec. (b) to require that any proposed municipal land use or coastal regulation, not only a revision to a municipal plan of development, reflect coastal management criteria; P.A. 95-335 amended section to change "plan of development" to "plan of conservation and development", effective July 1, 1995.

Sec. 22a-103. Municipal zoning regulations. Criteria and process for revision. (a) In revising zoning regulations and other municipal coastal regulations and ordinances listed in subdivision (2) of subsection (b) of section 22a-101, the municipal agency with jurisdiction over such regulations or ordinances shall consider the criteria in section 8- 2 and the other sections of the general statutes or special act authorizing such regulations. Such regulations shall conform to and effectuate the policies and land and water use strategies of the municipal coastal plans revised under sections 22a-101 and 22a-102 and the criteria listed in subsections (a) and (b) of section 22a-102.

(b) The municipal agency with jurisdiction over the zoning regulations and other municipal coastal regulations and ordinances listed in subdivision (2) of subsection (b) of section 22a-101 shall submit its proposed revisions of such regulations and ordinances to the commissioner for his review and comment prior to final adoption of such revisions in accordance with the appropriate statutory requirements regarding amendment of such regulations or ordinances. Upon receipt of the proposed revisions to the municipal coastal regulations, the commissioner shall review them for their consistency with the municipality's previously adopted municipal plan of conservation and development and the criteria listed in subsections (a) and (b) of section 22a-102, and shall within ninety days notify the municipality in writing of any suggested modifications. Upon receipt of the commissioner's comments or ninety days after his receipt of proposed revisions the municipal agency with jurisdiction over such regulations may modify and adopt the proposed revisions in accordance with the appropriate statutory requirements regarding amendment of such regulations and ordinances.
(c) In revising zoning regulations under chapter 124 for the area within the coastal boundary the municipal zoning commission may utilize any lawful zoning techniques, including but not limited to, modifications of use categories, alteration of density and intensity of use, special use zones, overlay zones, special permit regulations, sign controls, design controls, landscaping and gardening regulations, hazard or geological review requirements, conservation, cluster, open space and lot coverage requirements, minimum lot sizes, setback requirements, and bonus and incentive zoning regulations.
(d) In revising subdivision regulations under chapter 126 the municipal planning commission may utilize any lawful technique including, but not limited to, conservation, cluster, open space, park and recreation regulations.
(P.A. 79-535, S. 9, 25; P.A. 85-409, S. 2, 8; P.A. 95-335, S. 20, 26.)
History: P.A. 85-409 substituted reference to chapter 124 for reference to chapter 124a in Subsec. (c); P.A. 95-335 amended Subsec. (b) to change "plan of development" to "plan of conservation and development", effective July 1, 1995.

Sec. 22a-104. Implementation of municipal coastal program. Amendments. (a) If a municipality has adopted a municipal coastal program in accordance with sections 22a-101, 22a-102 and 22a-103, such program shall be implemented by those municipal bodies exercising legal authority for the regulatory decisions listed in subsection (b) of section 22a-105. The provisions of subsections (b) to (e), inclusive, of this section shall apply to such municipality.
(b) Amendments to the municipal plan of conservation and development affecting the area within the coastal boundary or municipal coastal regulations shall be made in accordance with subsection (e) of this section and sections 22a-101, 22a-102 and 22a-103.
(c) When amendments are made to the municipal plan of conservation and development affecting the area within the coastal boundary, the municipality shall also make such amendments to the zoning regulations and other municipal coastal regulations listed in subdivision (2) of subsection (b) of section 22a-101 in accordance with applicable statutory requirements regarding amendment of such regulations and ordinances as are necessary to insure that such regulations conform to and effectuate the policies and land and water use strategies of the amended plans.
(d) When amendments are made to zoning regulations and other municipal coastal regulations listed in subdivision (2) of subsection (b) of section 22a-101 without prior amendments to corresponding provisions of municipal coastal plans, such regulations, as amended, shall

conform to and effectuate the policies and land and water use strategies of the municipal coastal plans and the criteria listed in subsections (a) and (b) of section 22a-102.
(e) Any proposed municipal plan of conservation and development or zoning regulations or changes thereto affecting the area within the coastal boundary, regardless of whether the municipality affected has adopted a municipal coastal program in accordance with sections 22a-101, 22a-102 and 22a-103, shall be consistent with the policies of section 22a-92 and the criteria of subsection (b) of said section 22a-102. The commissioner shall be notified of any such proposed municipal plan of conservation and development or zoning regulations or changes thereto at least thirty-five days prior to the commencement of the hearing thereon. The commissioner may comment on and make recommendations on such proposals or changes. Such comment shall be read into the record of the public hearing and shall be considered by the appropriate board or commission before final action on the proposals or changes. Failure to comment by the commissioner shall not be construed to be approval or disapproval.
(P.A. 79-535, S. 10, 25; P.A. 83-287, S. 2, 3; P.A. 95-335, S. 21, 26.)
History: P.A. 83-287 amended Subsec. (a) to clarify the application of Subsecs. (b) to (e), inclusive, to municipalities with coastal programs and replaced previous Subsec. (e) re procedure for adoption of proposed amendments with new provisions; P.A. 95-335 amended Subsecs. (b), (c) and (e) to change "plan of development" to "plan of conservation and development", effective July 1, 1995.

Sec. 22a-105. Coastal site plan reviews. (a) Coastal municipalities shall undertake coastal site plan reviews in accordance with the requirements of this chapter.
(b) The following site plans, plans and applications for activities or projects to be located fully or partially within the coastal boundary and landward of the mean high water mark shall be defined as "coastal site plans" and shall be subject to the requirements of this chapter: (1) Site plans submitted to a zoning commission in accordance with section 22a-109; (2) plans submitted to a planning commission for subdivision or resubdivision in accordance with section 8-25 or with any special act; (3) applications for a special exception or special permit submitted to a planning commission, zoning commission or zoning board of appeals in accordance with section 8-2 or with any special act; (4) applications for a variance submitted to a zoning board of appeals in accordance with subdivision (3) of section 8-6 or with any special act, and (5) a referral of a proposed municipal project to a planning commission in accordance with section 8-24 or with any special act.
(c) In addition to the requirements specified by municipal regulation, a coastal site plan shall include a plan showing the location and spatial relationship of coastal resources on and contiguous to the site; a description of the entire project with appropriate plans, indicating project location, design, timing, and methods of construction; an assessment of the capability of the resources to accommodate the proposed use; an assessment of the suitability of the project for the proposed site; an evaluation of the potential beneficial and adverse impacts of the project and a description of proposed methods to mitigate adverse effects on coastal resources.
(d) Municipalities, acting through the agencies responsible for the review of the coastal site plans defined in subsection (b) of this section, may require a filing fee to defray the reasonable cost of reviewing and acting upon an application.
(e) The board or commission reviewing the coastal site plan shall, in addition to the discretion granted in any other sections of the general statutes or in any special act, approve, modify, condition or deny the activity proposed in a coastal site plan on the basis of the criteria listed in

section 22a-106 to ensure that the potential adverse impacts of the proposed activity on both coastal resources and future water-dependent development activities are acceptable. The provisions of this chapter shall not be construed to prevent the reconstruction of a building after a casualty loss.
(f) Notwithstanding the provisions of any other section of the general statutes to the contrary, the review of any coastal site plan pursuant to this chapter shall not be deemed complete and valid unless the board or commission having jurisdiction over such plan has rendered a final decision thereon. If such board or commission fails to render a decision within the time period provided by the general statutes or any special act for such a decision, the coastal site plan shall be deemed rejected.
(P.A. 79-535, S. 11, 25; P.A. 82-250, S. 2, 6; P.A. 83-525, S. 3; P.A. 84-53, S. 1, 2; P.A. 85-409, S. 3, 8.)
History: P.A. 82-250 amended Subsec. (b) to require that municipalities with planning and zoning functions authorized by special act comply with coastal site plan review; P.A. 83-525 added a new Subsec. (f) which requires a board or commission to decide on a coastal site plan before it is to be considered complete and valid; P.A. 84-53 amended Subsec. (e) by adding provision clarifying the lack of authority of a board or commission to prevent reconstruction after a casualty loss; P.A. 85-409 removed reference to plans submitted to planning commission for approval of planned unit development under Sec. 8-13f which was repealed by the same act.
Cited. 192 C. 353, 358−360, 362, 363. Cited. 228 C. 187, 196, 203.
Subsec. (c):
Cited. 228 C. 187, 196.
Subsec. (e):
Cited. 228 C. 187, 196.
Subsec. (f):
Cited. 192 C. 353, 364.

Sec. 22a-106. Criteria and process for action on coastal site plans. (a) In addition to determining that the activity proposed in a coastal site plan satisfies other lawful criteria and conditions, a municipal board or commission reviewing a coastal site plan shall determine whether or not the potential adverse impacts of the proposed activity on both coastal resources and future water-dependent development activities are acceptable.
(b) In determining the acceptability of potential adverse impacts of the proposed activity described in the coastal site plan on both coastal resources and future water- dependent development opportunities a municipal board or commission shall: (1) Consider the characteristics of the site, including the location and condition of any of the coastal resources defined in section 22a-93; (2) consider the potential effects, both beneficial and adverse, of the proposed activity on coastal resources and future water-dependent development opportunities and (3) follow all applicable goals and policies stated in section 22a-92 and identify conflicts between the proposed activity and any goal or policy.
(c) Any persons submitting a coastal site plan as defined in subsection (b) of section 22a-105 shall demonstrate that the adverse impacts of the proposed activity are acceptable and shall demonstrate that such activity is consistent with the goals and policies in section 22a-92.
(d) A municipal board or commission approving, modifying, conditioning or denying a coastal site plan on the basis of the criteria listed in subsection (b) of this section shall state in writing the findings and reasons for its action.

(e) In approving any activity proposed in a coastal site plan, the municipal board or commission shall make a written finding that the proposed activity with any conditions or modifications imposed by the board: (1) Is consistent with all applicable goals and policies in section 22a-92; (2) incorporates as conditions or modifications all reasonable measures which would mitigate the adverse impacts of the proposed activity on both coastal resources and future water-dependent development activities.
(P.A. 79-535, S. 12, 25.)
Cited. 192 C. 353, 358−360, 362, 363. Cited. 228 C. 187, 190, 196, 203.
Subsec. (c):
Cited. 228 C. 187, 196.
Subsec. (d):
Cited. 228 C. 187, 190, 198.
Subsec. (e):
Cited. 228 C. 187, 196, 198.

Sec. 22a-106a. Civil penalty. Any person who conducts an activity within the coastal boundary without having received a lawful approval from a municipal board or commission under all of the applicable procedures and criteria listed in sections 22a- 105 and 22a-106 or who violates the terms and conditions of an approval under said sections shall be liable for a civil penalty of not more than one thousand dollars for each offense. Each violation shall be a separate and distinct offense and in the case of a continuing violation, each day's continuance thereof shall be deemed to be a separate and distinct offense. The Commissioner of Environmental Protection may request the Attorney General to bring a civil action in the superior court for the judicial district of Hartford to seek imposition and recovery of such civil penalty.
(P.A. 87-438, S. 1; P.A. 88-230, S. 1, 12; 88-364, S. 41, 123; P.A. 90-98, S. 1, 2; P.A. 93-142, S. 4, 7, 8; P.A. 95-220, S. 4−6.)
History: P.A. 88-230 replaced "judicial district of Hartford-New Britain at Hartford" with "judicial district of Hartford", effective September 1, 1991; P.A. 88-364 made a technical change; P.A. 90-98 changed the effective date of P.A. 88-230 from September 1, 1991, to September 1, 1993; P. A. 93-142 changed the effective date of P.A. 88-230 from September 1, 1993, to September 1, 1996, effective June 14, 1993; P.A. 95-220 changed the effective date of P.A. 88-230 from September 1, 1996, to September 1, 1998, effective July 1, 1995.

22a-107. Bond as a condition to coastal site plan approval. As a condition to a coastal site plan approval a board or commission may require a bond, escrow account or other surety or financial security arrangement to secure compliance with any modifications, conditions and other terms stated in its approval of a coastal site plan.
(P.A. 79-535, S. 13, 25.)

Sec. 22a-108. Violations. Any activity within the coastal boundary not exempt from coastal site plan review pursuant to subsection (b) of section 22a-109, which occurs without having received a lawful approval from a municipal board or commission under all of the applicable procedures and criteria listed in sections 22a-105 and 22a-106, or which violates the terms or conditions of such approval, shall be deemed a public nuisance. Municipalities shall have the authority to exercise all enforcement remedies legally available to them for the abatement of such nuisances including, but not limited to, those under section 8-12. After notifying the municipality in which

the activity is located, the commissioner may order that such a public nuisance be halted, abated, removed or modified and that the site of the violation be restored as nearly as reasonably possible to its condition prior to the violation, under the authority of sections 22a-6 and 22a-7. The commissioner may request the Attorney General to institute proceedings to enjoin or abate any such nuisance. Upon receipt of a petition signed by at least twenty- five residents of the municipality in which an activity is located the commissioner shall investigate to determine whether or not an activity described in the petition constitutes a public nuisance. Within ninety days of receipt of such petition, the commissioner shall make a written determination and provide the petitioning municipality with a copy of such determination.
(P.A. 79-535, S. 14, 25; P.A. 82-250, S. 3, 6.)
History: P.A. 82-250 amended the section to authorize the commissioner to request the attorney general to enjoin or abate the public nuisance caused by an activity in violation of the coastal site plan review process, and applied section to activities "not exempt" from review rather than to activities "subject to" review requirements.

Sec. 22a-109. Coastal site plans. Review. (a) A coastal site plan shall be filed with the municipal zoning commission to aid in determining the conformity of a proposed building, use, structure, or shoreline flood and erosion control structure as defined in subsection (c), fully or partially within the coastal boundary, with the specific provisions of the zoning regulations of the municipality and the provisions of sections 22a-105 and 22a-106, and in the case of shoreline flood and erosion control structures, the provisions of sections 22a-359 to 22a-363, inclusive, and any regulations adopted thereunder. A coastal site plan required under this section may be modified or denied if it fails to comply with the requirements already set forth in the zoning regulations of the municipality and, in addition, the coastal site plan may be modified, conditioned or denied in accordance with the procedures and criteria listed in sections 22a-105 and 22a-106. A coastal site plan for a shoreline flood and erosion control structure may be modified, conditioned or denied if it fails to comply with the requirements, standards and criteria of sections 22a-359 to 22a-363, inclusive, and any regulations adopted thereunder. Review of a coastal site plan under the requirements of this section shall supersede any review required by the municipality under subsection (g) of section 8-3 and shall be in addition to any applicable zoning regulations of any special district exercising zoning authority under special act. The provisions of this section shall not be construed to limit the authority of the Commissioner of Environmental Protection under sections 22a-359 to 22a- 363, inclusive.
(b) The zoning commission may by regulation exempt any or all of the following uses from the coastal site plan review requirements of this chapter: (1) Minor additions to or modifications of existing buildings or detached accessory buildings, such as garages and utility sheds; (2) construction of new or modification of existing structures incidental to the enjoyment and maintenance of residential property including but not limited to walks, terraces, driveways, swimming pools, tennis courts, docks and detached accessory buildings; (3) construction of new or modification of existing on-premise structures including fences, walls, pedestrian walks and terraces, underground utility connections, essential electric, gas, telephone, water and sewer service lines, signs and such other minor structures as will not substantially alter the natural character of coastal resources or restrict access along the public beach; (4) construction of an individual single-family residential structure except when such structure is located on an island not connected to the mainland by an existing road bridge or causeway or except when such structure is in or within one hundred feet of the following coastal resource areas: Tidal wetlands,

coastal bluffs and escarpments and beaches and dunes; (5) activities conducted for the specific purpose of conserving or preserving soil, vegetation, water, fish, shellfish, wildlife and other coastal land and water resources; (6) interior modifications to buildings, and (7) minor changes in use of a building, structure or property except those changes occurring on property adjacent to or abutting coastal waters. Gardening, grazing and the harvesting of crops shall be exempt from the requirements of this chapter. Notwithstanding the provisions of this subsection, shoreline flood and erosion control structures as defined in subsection (c) of this section shall not be exempt from the requirements of this chapter.

(c) For the purposes of this section, "shoreline flood and erosion control structure" means any structure the purpose or effect of which is to control flooding or erosion from tidal, coastal or navigable waters and includes breakwaters, bulkheads, groins, jetties, revetments, riprap, seawalls and the placement of concrete, rocks or other significant barriers to the flow of flood waters or the movement of sediments along the shoreline. The term shall not include any addition, reconstruction, change or adjustment to any walled and roofed building which is necessary for such building to comply with the requirements of the Code of Federal Regulations, Title 44, Part 50, and any municipal regulation adopted thereunder.

(d) A copy of each coastal site plan submitted for any shoreline flood and erosion control structure shall be referred to the Commissioner of Environmental Protection within fifteen days of its receipt by the zoning commission. The day of receipt shall be determined in accordance with subsection (c) of section 8-7d. The commissioner may comment on and make recommendations on such plans. Such comments and recommendations shall be submitted to the zoning commission within thirty-five days of the date of receipt of the coastal site plan by the commissioner and shall be considered by the zoning commission before final action on the plan. If the commissioner fails to comment on a plan within the thirty-five-day period or any extension granted by the zoning commission, the zoning commission may take final action on such plan. Failure to comment by the commissioner shall not be construed to be approval or disapproval.

(e) The zoning commission may, at its discretion, hold a hearing on a coastal site plan required by this section. The commission shall hold a hearing on a coastal site plan for a shoreline flood and erosion control structure upon the request of the Commissioner of Environmental Protection.

(f) The zoning commission shall set forth the reasons for any decision to deny, modify or condition a coastal site plan submitted under this section. A copy of any decision shall be sent by certified mail to the person who submitted such plan within fifteen days after such decision is rendered. A copy of any decision on a coastal site plan for a shoreline flood and erosion control structure shall be sent to the Commissioner of Environmental Protection within fifteen days after such decision is rendered. The commission shall publish notice of the approval or denial of a coastal site plan, in a newspaper having a general circulation in the municipality, not more than fifteen days after such decision is rendered.

(g) The coastal site plan review required under this section shall be subject to the same statutory requirements as subsections (a) and (b) of section 8-7d for the purposes of determining the time limitations on the zoning commission in reaching a final decision.

(h) In addition to the requirements of subsection (f) of section 8-3, no building permit or certificate of occupancy shall be issued for a building, use or structure subject to the zoning regulations of a municipality and located fully or partially within the coastal boundary, or for any shoreline flood and erosion control structure as defined in subsection (c) of this section, and located fully or partially within the coastal boundary, without certification in writing by the official charged with enforcement of such regulations that such building, use, structure or

shoreline flood and erosion control structure has been reviewed and approved in accordance with the requirements of this chapter or is a use exempt from such review under regulations adopted by the zoning commission in accordance with this section.
(i) A municipality by vote of its legislative body may delegate its responsibility for coastal site plan review under this section to a special district exercising zoning authority under special act for the area within both the coastal boundary and limits of the special district, subject to acceptance by the special district of such responsibility following the procedures listed in section 7-327. The municipality may revoke the delegation of such responsibilities and the special district may also revoke acceptance of such responsibility under this subsection at any time. Notwithstanding the provisions of this subsection, the town of Groton shall delegate authority for coastal site plan review to the Noank fire district.
(j) A municipal zoning commission reviewing, in accordance with this section, a coastal site plan for a building use, structure, or shoreline flood and erosion control structure occurring within the limits of a special district exercising zoning authority under special act shall provide a copy of the coastal site plan to the chief elected official of such district and shall provide an adequate opportunity for comment by such official prior to making a final decision on the coastal site plan. A special district delegated the responsibility for coastal site plan reviews in accordance with subsection (i) of this section shall provide a copy of any coastal site plan submitted for its review to the municipal zoning commission of the town in which the project is to occur and shall provide an adequate opportunity for comment by the zoning commission prior to making a final decision on the coastal site plan.
(P.A. 79-535, S. 15, 25; P.A. 82-250, S. 4, 6; P.A. 83-525, S. 4, 5; P.A. 87-495, S. 1.)
History: P.A. 82-250 amended Subsec. (b) to authorize zoning commissions to exempt from coastal site plan review interior modifications to buildings and minor use changes in a building structure or property and to make technical corrections; P.A. 83-525 amended Subsec. (b) by limiting a zoning commission's power to exempt construction of a single- family residential structure to those structures not located on an island connected to the mainland by an existing road, bridge or causeway and amended Subsec. (d) by requiring the commission to publish notice of the approval of a coastal site plan; P.A. 87-495 amended Subsec. (a) by applying provisions to shoreline flood and erosion control structures, added new Subsec. (c) defining shoreline flood and erosion control structures and new Subsec. (d) regarding review of shoreline flood and erosion control structures and relettered the section accordingly and amended new Subsecs. (f), (h) and (j) to apply to shoreline flood and erosion control structures.
Cited. 192 C. 353, 355, 358, 363; Id., 367, 369. Cited. 225 C 432, 438. Cited. 228 C. 187, 189. Cited. 7 CA 684, 694. Cited. 35 CA 317, 321, 323.
Subsec. (a):
Cited. 192 C. 353, 359, 362, 363.
Cited. 35 CA 317, 318, 321−323, 325.
Subsec. (d):
Cited. 225 C. 1, 4. Cited. 228 C. 187, 192.
Subsec. (e):
Express incorporation of Sec. 8-7d(b) reflects intent to incorporate as well the presumption of Sec. 8-3(g) making the sixty-five day period mandatory. 192 C. 353, 356, 358, 359, 364. Any application under statute not expressly denied or modified within the statutory period is deemed approved by operation of law. Id., 367, 369, 370. Cited. 222 C. 269, 275. Cited. 228 C. 187, 192. Cited. 6 CA 284, 289.

Subsec. (f):
Cited. 192 C. 353, 356.
Subsec. (g):
Cited. 222 C. 269, 276. Cited. 225 C. 432, 438.
Cited. 35 CA 317, 322.
Subsec. (h):
Cited. 222 C. 269, 275.

Sec. 22a-110. Testimony by commissioner on municipal actions. Appeals. The commissioner or his designee may submit written testimony to any municipal board or commission and may appear by right as a party to any hearing before such municipal board or commission concerning any proposed municipal plan of conservation and development or zoning regulations or changes thereto affecting the area within the coastal boundary or the review of a coastal site plan or a municipal approval, permit or license for a building, use or structure affecting the area within the coastal boundary and said commissioner may appeal, or appear as a party to any appeal of, a municipal decision concerning such matters whether or not he has appeared as a party before the municipal board or commission. If the decision of such board or commission is upheld by a court of competent jurisdiction, the state shall reimburse the municipality within three months for all costs incurred in defending the decision.
(P.A. 79-535, S. 19, 25; P.A. 83-287, S. 4; P.A. 95-335, S. 22, 26.)
History: P.A. 83-287 expanded the commissioner's authorization to submit testimony or appear before a municipal agency to any proposal concerning municipal land use regulations affecting the coastal boundary; P.A. 95-335 changed "plan of development" to "plan of conservation and development", effective July 1, 1995.
Cited. 35 CA 317, 320.

Sec. 22a-111. Connecticut River Gateway Committee. Consistency. (a) The minimum standards established by the Connecticut River Gateway Committee under section 25-102d and revisions to such standards adopted by the Connecticut River Gateway Commission under subsection (c) of section 25-102g before January 1, 1980, shall be deemed to be consistent with the goals, policies and purposes of this chapter.
(b) On or after January 1, 1980, the commission shall make no revisions to such standards which are inconsistent with the goals and policies stated in subsections (a) and (b) of section 22a-92.
(c) No provision of this chapter shall be deemed to derogate from the authority of the commission to approve or disapprove the adoption, amendment or repeal of local zoning, subdivision or planning regulations under subsection (b) of section 25-102g, provided any such approval or disapproval shall be consistent with the goals and policies stated in subsections (a) and (b) of section 22a-92.
(P.A. 79-535, S. 16, 25.)

Sec. 22a-112. Financial assistance. Grants to municipalities. Contracts or grant agreements concerning coastal management. (a) In order to carry out the purposes of this chapter, the commissioner shall equitably allocate any funds received for the implementation of this chapter between coastal-related state programs, which may include coastal research projects, and municipal coastal programs.
(b) Upon receipt by the commissioner of a written application from a coastal municipality, said

commissioner shall make a grant to such municipality of not less than twenty- five hundred dollars to be used to carry out the responsibilities of such municipality under this chapter, provided, on or after July 1, 1980, funds shall be allocated to coastal municipalities in accordance with subsections (c) and (d).

(c) The commissioner shall provide, within available appropriations, continuing financial assistance to coastal municipalities to carry out their responsibilities under this chapter. Municipalities may apply annually for financial assistance in carrying out their responsibilities for municipal coastal site plan reviews under sections 22a-105 to 22a- 109, inclusive, and for the purpose of preparing and implementing municipal coastal programs under sections 22a-101 to 22a-104, inclusive. The commissioner shall, by regulations adopted in accordance with chapter 54, establish reasonable application requirements consistent with federal application requirements. In reviewing municipal applications for financial assistance the commissioner shall consider: (1) The area, length of shorefront, population and development pressures within the municipality's coastal boundary, (2) the nature of the municipality's coastal resources and coastal- related problems, (3) the demonstrated capacity and commitment of the municipality to carrying out the purposes of this chapter, (4) the number of coastal site plan reviews conducted by the municipality, (5) the availability of funds, and (6) the state plan for conservation and development adopted pursuant to part I of chapter 297.

(d) Not less than thirty per cent of any funds received annually by the state under Section 306 of the federal Coastal Zone Management Act shall be provided annually to coastal municipalities for municipal coastal site plan reviews under sections 22a-105 to 22a-109, inclusive. Up to an additional twenty per cent of any funds received annually by the state under Section 306 of the federal Coastal Zone Management Act shall as a first priority be provided annually to assist coastal municipalities which have chosen to prepare and implement a municipal coastal program under sections 22a-101 to 22a-104, inclusive, provided that if in any one year the total amount of all grants to municipalities which have agreed to adopt municipal coastal programs is less than twenty per cent of such federal funds received in that year, the difference shall be allocated for the purposes of this chapter in accordance with subsection (a).

(e) Any funds appropriated to the Department of Environmental Protection for the purposes of subsection (b) of this section and for the purpose of providing matching funds to implement a coastal management program pursuant to this chapter which are not used for such purposes shall be allocated to coastal municipalities in accordance with subsection (c) of this section.

(f) The legislative body of a municipality or, in the case of a municipality for which the legislative body is a town meeting or a representative town meeting, the board of selectmen may, by majority vote, authorize the chief executive officer to enter into contracts or grant agreements concerning coastal management with the commissioner. Such contracts or agreements include but are not limited to those for funding of coastal site plan review, municipal coastal program and any other demonstration or coastal research project funded in accordance with this section. (P.A. 79-535, S. 6, 24, 25; P.A. 82-250, S. 5, 6; P.A. 86-336, S. 2, 19.)

History: P.A. 82-250 added Subsec. (f) authorizing the legislative body or board of selectmen of a coastal community to empower the chief executive officer of a coastal community to enter into contract or grant agreements with the commissioner for funding coastal site plan review, municipal coastal programs and coastal research projects; P.A. 86-336 amended Subsec. (c) to limit provision of continuing financial assistance to coastal municipalities to "within available appropriations".

Sec. 22a-113. Estuarine embayment program established. The Commissioner of Environmental Protection shall establish and implement a program to address problems of water quality, siltation and erosion in estuarine embayments, as defined in subdivision (7) of section 22a-93.
(P.A. 86-382, S. 1, 6.)

Sec. 22a-113a. Grants. Eligibility. (a) The Commissioner of Environmental Protection may make a grant to any municipality, as defined in section 22a-93, for a project to improve the quality of estuarine embayments, as defined in subdivision (7) of said section. The amount of the grant shall not exceed fifty per cent of the cost of implementation and related costs of any such project. Related costs may include costs of design and data collection and monitoring before and after the project is completed, but shall not include costs for operation, maintenance or upkeep of any such project.
(b) The commissioner shall evaluate the eligibility of a project for a grant and award such a grant based on the degree of public benefit from such project. He shall determine such benefit by assessing (1) the conditions and problems of the estuarine embayment and their causes; (2) the cost of the project; (3) the short and long term impact of the project; (4) the accessibility of the embayment to the public; and (5) the level of public concern for the condition of the embayment. In making such an assessment, the commissioner shall consider (A) the effect of the project on the embayment, including the effect on water quality, sedimentation, wetlands, shell and fin fisheries, biota, tidal flushing, tidal flow, bathymetry, substrate quality, hydraulics, navigability and flooding, (B) public health and public recreational opportunities and (C) any other factors the commissioner deems relevant. No grant shall be made unless the project for which such grant is made is consistent with policies and standards established in this chapter and the municipality's coastal management program approved in accordance with the provisions of sections 22a-101 to 22a-104, inclusive.
(c) The legislative body of a municipality or, in the case of a municipality for which the legislative body is a town meeting or a representative town meeting, the board of selectmen, by majority vote, may authorize the chief executive officer to enter into contracts or grant agreements concerning estuarine embayment improvement projects with the Commissioner of Environmental Protection. Two or more municipalities may, with the approval of their legislative bodies, or, as provided in this section, with the approval of their boards of selectmen, jointly undertake estuarine embayment improvement projects. The state share of a joint project shall not exceed fifty per cent of the cost of the project.
(P.A. 86-382, S. 2, 6.)

Sec. 22a-113b. Regulations. The Commissioner of Environmental Protection shall adopt regulations in accordance with chapter 54 to carry out the purposes of section 22a-113a.
(P.A. 86-382, S. 3, 6.)

Sec. 22a-113c. State bond issue authorized for estuarine embayment projects. For the purposes described in section 22a-113a, the State Bond Commission shall have the power, from time to time to authorize the issuance of bonds of the state in one or more series and in principal amounts not exceeding in the aggregate two hundred forty- six thousand five hundred dollars. All provisions of section 3-20, or the exercise of any right or power granted thereby which are not inconsistent with the provisions of sections 22a-113 to 22a-113b, inclusive, are hereby

adopted and shall apply to all bonds authorized by the State Bond Commission pursuant to said sections, and temporary notes in anticipation of the money to be derived from the sale of any such bonds so authorized may be issued in accordance with said section 3-20 and from time to time renewed. Such bonds shall mature at such time or times not exceeding twenty years from their respective dates as may be provided in or pursuant to the resolution or resolutions of the State Bond Commission authorizing such bonds. None of said bonds shall be authorized except upon a finding by the State Bond Commission that there has been filed with it a request for such authorization, which is signed by or on behalf of the Secretary of the Office of Policy and Management and states such terms and conditions as said commission, in its discretion, may require. Said bonds issued pursuant to sections 22a- 113 to 22a-113b, inclusive, shall be general obligations of the state and the full faith and credit of the state of Connecticut are pledged for the payment of the principal of and interest on said bonds as the same become due, and accordingly and as part of the contract of the state with the holders of said bonds, appropriation of all amounts necessary for punctual payment of such principal and interest is hereby made, and the Treasurer shall pay such principal and interest as the same become due.
(P.A. 86-382, S. 4, 6; P.A. 88-343, S. 13, 32; May Sp. Sess. P.A. 92-7, S. 16, 36.)
History: P.A. 88-343 increased the bond authorization from two hundred thousand dollars to five hundred thousand dollars and provided for the request for authorization to come from the secretary of the office of policy and management rather than the commissioner of environmental protection; May Sp. Sess. P.A. 92-7 decreased the bond authorization from five hundred thousand dollars to two hundred forty-six thousand five hundred dollars.

Secs. 22a-113d to 22a-113j. Reserved for future use.

Substitute Senate Bill No. 32

Public Act No. 00-152

An Act Concerning Urban Harbors, Boating Safety And Water Systems In The State.

Be it enacted by the Senate and House of Representatives in General Assembly convened:

Section 1. Subdivision (1) of subsection (c) of section 22a-92 of the general statutes is repealed and the following is substituted in lieu thereof:

(1) Policies concerning development, facilities and uses within the coastal boundary are: (A) To minimize the risk of spillage of petroleum products and hazardous substances, to provide effective containment and cleanup facilities for accidental spills and to disallow offshore oil receiving systems that have the potential to cause catastrophic oil spills in the Long Island Sound estuary; (B) to disallow any filling of tidal wetlands and nearshore, offshore and intertidal waters for the purpose of creating new land from existing wetlands and coastal waters which would otherwise be undevelopable, unless it is found that the adverse impacts on coastal resources are minimal; (C) to initiate in cooperation with the federal government and the continuing legislative committee on state planning and development a long-range planning program for the continued maintenance and enhancement of federally-maintained navigation facilities in order to effectively and efficiently plan and provide for environmentally sound dredging and disposal of dredged materials; to encourage, through the state permitting program for dredging activities, the maintenance and enhancement of existing federally-maintained navigation channels, basins and anchorages and to discourage the dredging of new federally-maintained navigation channels, basins and anchorages; (D) to reduce the need for future dredging by requiring that new or expanded navigation channels, basins and anchorages take advantage of existing or authorized water depths, circulation and siltation patterns and the best available technologies for reducing controllable sedimentation; (E) to disallow new dredging in tidal wetlands except where no feasible alternative exists and where adverse impacts to coastal resources are minimal; (F) to require that new or improved shoreline rail corridors be designed and

constructed so as (i) to prevent tidal and circulation restrictions and, when practicable, to eliminate any such existing restrictions, (ii) to improve or have a negligible adverse effect on coastal access and recreation and (iii) to enhance or not unreasonably impair the visual quality of the shoreline; (G) to require that coastal highways and highway improvements, including bridges, be designed and constructed so as to minimize adverse impacts on coastal resources; to require that coastal highway and highway improvements give full consideration to mass transportation alternatives and to require that coastal highways and highway improvements where possible enhance, but in no case decrease coastal access and recreational opportunities; (H) to disallow the construction of major new airports and to discourage the substantial expansion of existing airports within the coastal boundary; to require that any expansion or improvement of existing airports minimize adverse impacts on coastal resources, recreation or access; (I) to manage the state's fisheries in order to promote the economic benefits of commercial and recreational fishing, enhance recreational fishing opportunities, optimize the yield of all species, prevent the depletion or extinction of indigenous species, maintain and enhance the productivity of natural estuarine resources and preserve healthy fisheries resources for future generations; (J) to make effective use of state-owned coastal recreational facilities in order to expand coastal recreational opportunities including the development or redevelopment of existing state-owned facilities where feasible; **[**and**]** (K) to require as a condition in permitting new coastal structures, including but not limited to, groins, jetties or breakwaters, that access to, or along, the public beach below mean high water must not be unreasonably impaired by such structures and to encourage the removal of illegal structures below mean high water which unreasonably obstruct passage along the public beach; and (L) to promote the revitalization of inner city urban harbors and waterfronts by encouraging appropriate reuse of historically developed shorefronts, which may include minimized alteration of an existing shorefront in order to achieve a significant net public benefit, provided (i) such shorefront site is permanently devoted to a water dependant use or a water dependent public use such as public access or recreation for the general public and the ownership of any filled lands remain with the state or an instrumentality thereof in order to secure public use and benefit in perpetuity, (ii) landward development of the site is constrained by highways, railroads or other significant infrastructure facilities, (iii) no other feasible, less environmentally damaging alternatives exist, (iv) the adverse impacts to coastal resources of any shorefront alteration are minimized and compensation in the form of resource restoration is provided to mitigate any remaining adverse impacts, and (v) such reuse is consistent with the appropriate municipal coastal program or municipal plan of development.

Sec. 2. The Commissioner of Environmental Protection shall grant a permit to the United States Army Corp of Engineers for emergency dredging of Clinton Harbor not later than fifteen days after receipt of certification, and corresponding evidence substantiating certification, that the dredging activity will not negatively impact Clinton Harbor or any area designated as a disposal area for dredged material.

Sec. 3. South Central Regional Water Authority shall, in consultation with the Commissioner of Environmental Protection, develop a management plan setting forth performance based monitoring and mitigation procedures to be met during the operation of the proposed Lake Whitney Water Treatment Plant to protect the environmental quality of Lake Whitney and the Mill River corridor in New Haven County and to avoid unacceptable adverse impacts on the ecology and the aesthetics of the area.

Sec. 4. Section 15-140f of the general statutes is repealed and the following is substituted in lieu thereof:

(a) The Commissioner of Environmental Protection shall formulate courses in safe boating operation.

(b) The commissioner shall adopt regulations in accordance with the provisions of chapter 54 setting forth the content of safe boating operation courses. Such regulations may include provisions for examinations, issuance of safe boating certificates and establishment of reasonable fees for the course and examination and for issuing certificates, temporary certificates, and duplicate certificates. Any fees collected pursuant to such regulations shall be deposited in the boating account established pursuant to section 15-155.

[(c) The commissioner may enter into reciprocal agreements with other states having similar safe boating or certificate programs acceptable to the commissioner.**]**

(c) Any person who **[**successfully completes a safe boating course of instruction or**]** holds a certificate from another state **[**which**]** that has a reciprocal agreement with the commissioner may operate a vessel on the waters of this state.

Sec. 5. Sections 20 to 24, inclusive, of public act 98-209 are repealed.

Approved May 16, 2000

REFERENCE GUIDE TO COASTAL POLICIES AND DEFINITIONS

May, 1992

This guide is designed to supplement, but not replace,

Planning Report 30 Coastal Policies and Use Guidelines.

For Use Guidelines refer to Planning Report 30

Connecticut Coastal Management Act
Statutorily Defined
Definitions, Policies & Adverse Impacts

INTRODUCTION

DEFINITIONS

ADVERSE IMPACTS

COASTAL RESOURCES & OTHER DEFINITIONS

POLICIES

RESOURCE POLICIES

INTRODUCTION

The attached policies, taken from and developed specifically for the Connecticut Coastal Management Act, together with those preexisting the Act, provide the foundation for the coastal management program. Their purpose is to guide all federal and state planning, development, acquisition and regulatory activities that are subject to the management program within the coastal area. Further, they are to guide all municipal planning, development, acquisition and regulatory activities that are subject to the management program within the coastal boundary. In short, the coastal policies provide uniform standards and criteria for all public agencies that conduct or regulate activities subject to the management program. The policies have been adopted as an integral part of the Act and are directly enforceable through implementation of the management program.

To assist in the evaluation of adverse impacts on coastal resources and water-dependent uses associated with activities in the coastal area, the Act specifically defines the adverse impacts which must be considered for all coastal development proposals and in conjunction with all applicable coastal policies.

The Connecticut Coastal Management Act also defines all coastal resources within the land and water areas of the coastal boundary. Such resource definitions range from natural resources (e.g. tidal wetlands, beaches and dunes) to man-made resources (e.g. developed shorefront). Each defined resource category has a set of specific statutory policies pertaining to it. The defined coastal resources have been mapped (resource factor maps) and copies of such maps are available through DEP's Office of Long Island Sound Programs and each coastal municipality.

Connecticut's coastal management program incorporates a resource management/impact zoning concept to be used by both state and municipal agencies. Uses and activities subject to the management program are evaluated, through all applicable state and municipal permit programs, for their consistency with the coastal policies and for their adverse impacts on coastal resources and water-dependent uses. To provide the necessary guidance to implement this resource-based approach to coastal management, the policies are divided into three broad categories - 1) coastal resource policies, 2) coastal use policies, and 3) governmental process policies.

The Coastal Management Act's "coastal resource" policies apply to all uses occurring in or affecting any resource category defined in the Act. Guidance on the location of coastal resources is provided by the resource factor maps.

The Act also contains specific "coastal use" policies for major uses and activities subject to the management program. These policies pertain to certain major uses and activities independent of their location within the coastal area. They must be considered in addition to and in conjunction with all applicable coastal resource policies and potential adverse impacts.

The third broad category of policies, "governmental process" policies, pertain to intergovernmental coordination, permit simplification, planning programs, national interest and related topics. Their purpose is to provide direction and standards for program implementation, coordination and long-range planning, by governmental entities in Connecticut.

USING THE COASTAL POLICIES

The initial step in assuring consistency with the coastal policies for any use or activity subject to the management program is to determine the coastal resources on or near the site which may be affected. The coastal resource definitions and coastal resource factor maps will aid the applicant in determining these resources.

Once an accurate identification of the resources has been made, the coastal resource policies corresponding to each of the resources identified should ve reviewed to determine which are applicable to the project.

The next step is to review the coastal use policies to determine if there are specific policies regarding the use or activity under consideration. The applicable coastal resource policies together with any applicable coastal use policies will indicate the criteria an standards with which the proposed activity or use must be consistent.

Review of applicable coastal policies constitutes the resource management component of the resource management/impact zoning system established by the Connecticut Coastal Management Act. The applicant bears the burden of demonstrating consistency with applicable coastal policies. For guidance in determining consistency with state policies, refer to the Connecticut General Statutes section 22a-92 and Planning Report 30. Assuming that the applicant has adequately demonstrated consistency with the coastal policies, the remaining step in the evaluation process is to assess the adverse impacts on the affected coastal resources and water-dependent use opportunities. The adverse impacts to be considered are defined by the Act. The magnitude of the impact is dependent upon the nature of the project (e.g. its size, available infrastructure such as sewers, water service, method and time of construction) and the project's location (e.g. the fragility of the affected resources). While the coastal resources and coastal use policies are designed to provide specific locational and siting criteria for major uses or facilities, the minimization or elimination of defined adverse impacts is designed to prevent significant long-term degradation of the coastal resources.

Once the applicant feels that consistency has been adequately demonstrated and that adverse impacts associated with the use or activity have been sufficiently evaluated, required permits are sought through municipal zoning and state regulatory programs. The review of the application by the permitting agency or agencies includes determination of consistency with the coastal policies and assessment of the adverse impacts, upon which permit certification is based. Further, any federal permits required must be issued consistent with the coastal policies under the state's federal consistency review responsibilities through coastal management. If a permit for a use or activity subject to the management program is issued without such certification, it does not constitute a legal permit.

DEFINITIONS OF ADVERSE IMPACTS

Characteristics & Functions of Resources

Degrading tidal wetlands, beaches and dunes, rocky shorefronts, and bluffs and escarpments through significant alteration of their natural characteristics or function [CGS section 22a-93(15)(H)].

Coastal Flooding

Increasing the hazard of coastal flooding through significant alteration of shoreline configurations or bathymetry, particularly within high velocity flood zones. CGS section 22a-3(15)(E)

Coastal Waters Circulation Patterns

Degrading existing circulation patterns of coastal waters through the significant alteration of patterns of tidal exchange or flushing rates, freshwater input, or existing basin characteristics and channel contours. CGS section 22a-93(15)(B)

Drainage Patterns

Degrading natural or existing drainage patterns through the significant alteration of groundwater flow and recharge and volume of runoff. CGS section 22a-93(15)(D)

Patterns of Shoreline Erosion and Accretion

Degrading natural erosion patterns through the significant alteration of littoral transport of sediments in terms of deposition or source reduction. CGS section 22a-93(15)(C)

Visual Quality

Degrading visual quality through significant alteration of the natural features of vistas and view points. CGS section 22a-93(15)(F)

Water-Dependency

"Adverse impacts on future water-dependent development opportunities" and "adverse impacts on future water-dependent development activities" include but are not limited to (A) locating a non-water-dependent use at a site that (i) is physically suited for a water-dependent use for which there is a reasonable demand or (ii) has been identified for a water-dependent use in the plan of development of the municipality or the zoning regulations; (B) replacement of a water dependent use with a non-water-dependent use; and (C) siting of a non-water-dependent use which would substantially reduce or inhibit existing public access to marine or tidal waters. CGS section 22a-93(17)

Water Quality

Degrading water quality through the significant introduction into either coastal waters or groundwater supplies of suspended solids, nutrients, toxics, heavy metals or pathogens, or through the significant alteration of temperature, pH, dissolved oxygen or salinity. CGS section 22a-93(15)(A)

Wildlife, Finfish, Shellfish Habitat

Degrading or destroying essential wildlife, finfish or shellfish habitat through significant alteration of the composition, migration patterns, distribution, breeding or other population characteristics of the natural species or significant alteration of the natural components of the habitat. CGS section 22a-93 (15)(G)

COASTAL RESOURCES & OTHER DEFINITIONS

BEACHES AND DUNES

"Beaches and Dunes" means beach systems including barrier beach spits and tombolos, barrier beaches, pocket beaches, land contact beaches and related dunes and sandflats. CGS section 22a-93(7)(C)

BLUFFS AND ESCARPMENTS

"Coastal Bluffs and Escarpments" means naturally eroding shorelands marked by dynamic escarpments or sea cliffs which have slope angles that constitute an intricate adjustment between erosion, substrate, drainage and degree of plant cover. CGS section 22a-93(7)(A)

COASTAL HAZARD AREAS

"Coastal Hazard Areas" means those land areas inundated during coastal storm events or subject to erosion induced by such events, including flood hazard areas as defined and determined by the

National Flood Insurance Act, as amended (U.S.C. 42 Section 4101, P.L. 93-234) and all erosion hazard areas as determined by the commissioner. CGS section 22a-93(7)(H)

COASTAL WATERS AND ESTUARINE EMBAYMENTS

"Coastal Waters" means those waters of Long Island Sound and its harbors, embayments, tidal rivers, streams and creeks, which contain a salinity concentration of at least five hundred parts per million under the low flow stream conditions as established by the commissioner. CGS section 22a-93(5)

"Nearshore Waters" means the area comprised those waters and their substrates lying between mean high water and a depth approximated by the ten meter contour. CGS section 22a-93(7)(K)

"Offshore Waters" means the area comprised of those waters and their substrates lying seaward of a depth approximated by the ten meter contour. CGS section 22a-93(7)(L)

"Estuarine Embayments" means a protected coastal body of water with an open connection to the sea in which saline sea water is measurably diluted by fresh water including tidal rivers, bays, lagoons and coves. CGS section 22a-93(7)(G)

DEVELOPED SHOREFRONT

"Developed Shorefront" means those harbor areas which have been highly engineered and developed resulting in the functional impairment or substantial alteration of their natural physiographic features or systems. CGS section 22a-93(7)(I)

FRESHWATER WETLANDS AND WATERCOURSES

"Freshwater Wetlands and Watercourses" means "wetlands" and "watercourses" as defined by CGS section 22a-38 and CGS section 22a-93(7)(F).

"Wetlands" means land, including submerged land, not regulated pursuant to sections 22a-28 to 22a-35, inclusive, which consists of any of the soil types designated as poorly drained, very poorly drained, alluvial, and flood plain by the National Cooperative Soil Survey, as may be amended from time to time, of the Soil Conservation Service of the United States Department of Agriculture. CGS section 22a-38(15)

"Watercourses" means rivers, streams, brooks, waterways, lakes, ponds, marshes, swamps, bogs and all other bodies of water, natural or artificial, public or private, which are contained within, flow through or border upon this state or any portion thereof, not regulated pursuant to sections 22a-28 to 22a-35, inclusive. CGS section 22a-38(16)

GENERAL RESOURCE

"Coastal Resources" means the coastal waters of the state, their natural resources, related marine and wildlife habitat and adjacent shorelands, both developed and undeveloped, that together form an integrated terrestrial and estuarine ecosystem. CGS section 22a-93(7)

INTERTIDAL FLATS

"Intertidal Flats" means very gently sloping or flat areas located between high and low tides composed of muddy, silty and fine sandy sediments and generally devoid of vegetation. CGS section 22a-93(7)(D)

ISLANDS

"Island" means land surrounded on all sides by water. CGS section 22a-93(7)(J)

ROCKY SHOREFRONT

"Rocky Shorefront" means shorefront composed of bedrock, boulders and cobbles that are highly erosion-resistant and are an insignificant source of sediments for other coastal landforms. CGS section 22a-93(7)(B)

SHELLFISH CONCENTRATION AREAS

"Shellfish Concentration Areas" means actual, potential or historic areas in coastal waters, in which one or more species of shellfish aggregate. CGS section 22a-93(7)(N)

SHORELANDS

"Shorelands" means those land areas within the coastal boundary exclusive of coastal hazard areas, which are not subject to dynamic coastal processes and which are comprised of typical upland features such as bedrock hills, till hills and drumlins. CGS section 22a-93(7)(M)

TIDAL WETLANDS

"Tidal Wetlands" means "wetland" as defined by CGS Section 22a-29. CGS section 22a-93(7)(E)

"Wetland" means those areas which border on or lie beneath tidal waters, such as, but not limited to banks, bogs, salt marsh, swamps, meadows, flats, or other low lands subject to tidal action, including those areas now or formerly connected to tidal waters, and whose surface is at or below an elevation of one foot above local extreme high water; and upon which may grow or be capable of growing some but not necessarily all, of the following: (wetland vegetation - see CGS section 22a-29(2) for complete list of species).

WATER-DEPENDENT USES

"Water-dependent uses" means those uses and facilities which require direct access to, or location in, marine or tidal waters and which therefore cannot be located inland, including but not limited to: Marinas, recreational and commercial fishing and boating facilities, finfish and shellfish processing plants, waterfront dock and port facilities, shipyards and boat building facilities, water-based recreational uses, navigation aides, basins and channels, industrial uses dependent upon water-borne transportation or requiring large volumes of cooling or process water which cannot reasonably be located or operated at an inland site and uses which provide general public access to marine or tidal waters. CGS section 22a-93(16)

POLICIES

RESOURCE POLICIES

General Resources

1 To preserve and enhance coastal resources in accordance with the policies established by chapters 439 (Environmental Protection Department and State Policy), 440 (Wetlands and Watercourses), 446i (Water Resources), 446k (Water Pollution Control), 447 (State Parks and Forests), 474 (Pollution), and 477 (Flood Control and Beach Erosion) [CGS section 22a-92(a)(2)].

2 The general assembly hereby declares that the policy of the state of Connecticut is to conserve, improve and protect its natural resources and environment- and to control air, land and water pollution in order to enhance the health, safety and welfare of the people of the state. CGS section 22a-1 as referenced by CGS section 22a-92(a)(2)

3 It is hereby found and declared that there is a public trust in the air, water and other natural resources of the state of Connecticut and that each person is entitled to the protection, preservation and enhancement of the same. CGS section 22a-15 as referenced by CGS section 22a-92(a)(2)

4 **THE COMMISSIONER SHALL CARRY OUT THE ENVIRONMENTAL POLICIES OF THE STATE AND SHALL HAVE ALL POWERS NECESSARY AND CONVENIENT TO FAITHFULLY DISCHARGE THIS DUTY. IN ADDITION TO, AND CONSISTENT WITH THE ENVIRONMENT POLICY OF THE STATE, THE COMMISSIONER SHALL** (a) promote and coordinate management of water, land and air resources to assure their protection, enhancement and proper allocation and utilization; **(B) PROVIDE FOR THE PROTECTION AND MANAGEMENT OF** plants, trees**, FISH, SHELLFISH,** wildlife and other animal life of all types, including the preservation of endangered species; (c) provide for the protection, enhancement and management of the

public forests, parks, open spaces and natural area preserves; (d) provide for the protection, enhancement and management of inland, marine and coastal water resources, including, but not limited to, wetlands, rivers, estuaries and shorelines; (e) provide for the prevention and abatement of all water, land and air pollution including, but not limited to, that related to particulate, gases, dust, vapors, noise, radiation, odors, nutrients and cooled or heated liquids, gases and solids; (f) provide for control of pests and regulate the use, storage and disposal of pesticides and other chemicals which may be harmful to man, sea life, animals, plant life or natural resources; (g) regulate the disposal of solid waste and liquid waste, including but not limited to, domestic and industrial refuse, junk motor vehicles, litter and debris, which methods shall be consistent with sound health, scenic environmental quality and land use practices; (h) regulate the storage, handling and transportation of solids, liquids and gases which may cause or contribute to pollution; and (I) provide for minimum state-wide standards for the mining, extraction or removal of earth materials of all types. CGS Section 22a-5, referenced by CGS section 22a-92(a)(2)

Beaches & Dunes

5 To preserve the dynamic form and integrity of natural beach systems in order to provide critical wildlife habitats, a reservoir for sand supply, a buffer for coastal flooding and erosion, and valuable recreational opportunities. [CGS section 22a-92(b)(2)(C)].

6 To insure that coastal uses are compatible with the capabilities of the system and do not unreasonably interfere with natural processes of erosion and sedimentation. [CGS section 22a-92(b)(2)(C)].

7 To encourage the restoration and enhancement of disturbed or modified beach systems [CGS section 22a-92(b)(2)(C)].

8 To require as a condition in permitting new coastal structures, including but not limited to, groins, jetties or breakwaters, that access to, or along, the public beach below mean high water must not be unreasonably impaired by such structures and to encourage the removal of illegal structures below mean high water which unreasonably obstruct passage along the public beach [CGS section 22a-92(c)(1)(K)].

Bluffs & Escarpments

9 To manage coastal bluffs and escarpments so as to preserve their slope and toe [CGS section 22a-92(b)(2)(A)].

10 To discourage uses which do not permit continued natural rates of erosion [CGS section 22a-92(b)(2)(A)].

11 To disapprove uses that accelerate slope erosion and alter essential patterns and supply of

sediments to the littoral transport system [CGS section 22a-92(b)(2)(A)].

Coastal Hazard Area

12 To manage coastal hazard areas so as to insure that development proceeds in such a manner that hazards to life and property are minimized [CGS section 22a-92(b)(2)(F)].

13 To promote nonstructural solutions to flood and erosion problems except in those instances where structural alternatives prove unavoidable and necessary to protect existing inhabited structures, infrastructural facilities or water-dependent uses [CGS section 22a-92(b)(2)(F)].

14 To maintain the natural relationship between eroding and depositional coastal landforms [CGS Section 22a-92(b)(2)(J)].

15 To minimize the adverse impacts of erosion and sedimentation on coastal land uses through the promotion of nonstructural mitigation measures. [CGS Section 22a-92(b)(2)(J)]

16 Structural solutions are permissible when necessary and unavoidable for the protection of infrastructural facilities, water-dependent uses, or existing inhabited structures, and where there is no feasible, less environmentally damaging alternative and where all reasonable mitigation measures and techniques have been provided to minimize adverse environmental impacts [CGS Section 22a-92(b)(2)(J)].

17 To maintain, enhance, or, where feasible, restore natural patterns of water circulation and fresh and saltwater exchange in the placement or replacement of culverts, tide gates or other drainage or flood control structures [CGS section 22a-92(c)(2)(B)].

18 It is hereby found and declared that, because of the occurrence of severe storms accompanied by winds up to hurricane force, abnormal high tides and tide flooding, the lives and property of residents and other persons within areas exposed to such hazards are endangered, and that, in the interest of public health, safety and general welfare, it is necessary to minimize, and as far as possible to prevent, loss of life, property and revenue to municipalities and the state from taxation by the construction of protective works on or near shores and beaches within such areas. As title to the land between high and low watermark is vested in the state, it is further found and declared to be in the public interest to secure such exposed areas by the most economical and effective means for safeguarding life and protecting property and, because it is uneconomical and ineffective for the general purpose for an individual landowner to attempt to maintain protective installations separated from and lacking co-extension with those of abutting properties, that it is in the public interest to provide ways and means for collective and cooperative action to alleviate the dangers and destruction common to such exposed areas. It is further found and declared that because of the recurrence of severe flooding of many of the waterways of the state and their tributaries, taking a huge toll in life and property, extensive flood protection measures must be

inaugurated. It is, therefore, found and declared to be in the public interest that encroachment limits along waterways be established and any flood control features at dams and reservoirs be utilized as a part of the construction and installation of any flood control project. CGS Section 25-69, referenced by CGS section 22a-92(a)(2)

19 Land areas fronting on the ocean, or on bays, inlets and coves, or bordering on rivers in which tides occur, that are subject to the full force of storms; or land areas in direct contact with storm waves, including banks, bluffs, cliffs, promontories and headlands or similar topographical or geological formations, that are subject to erosion through wave action; or open beach areas, including spits, dunes and barrier beaches, that are subject to loss of sand through high waves, strong currents or scouring wave action; or land areas subject to inundation during storms or vulnerable to storm damage because of geographic situation, may be classed as exposed areas within the meaning of sections 25-69 to 25-75, inclusive. The limits of such areas shall be the extent of the natural configuration of the land surface not necessarily co-extensive with political boundaries, and shall include privately-owned and municipally-owned properties upon which public money may be spent and public debt incurred for the protection and conservation thereof, and taxes levied to support expenditures for such purposes. CGS section 25-70, referenced by CGS section 22a-92(a)(2)

20 The commissioner shall establish, along any tidal or inland waterway or flood-prone area considered for stream clearance, channel improvement or any form-of flood control or flood alleviation measure, lines beyond which, in the direction of the waterway or flood-prone area, no obstruction or encroachment shall be placed by any person, firm or corporation, public or private, unless authorized by said commissioner. The commissioner shall issue or deny permits upon applications for establishing such encroachments based upon his findings of the effect of such proposed encroachments upon the flood carrying and water storage capacity of the waterways and floodplain, flood heights, hazards to life and property, and the protection and preservation of the natural resources and ecosystems of the state, including but not limited to ground and surface water, animal, plant and aquatic life, nutrient exchange, and energy flow, with due consideration given to the results of similar encroachments constructed along the reach of waterway. CGS section 22a-342, referenced by CGS section 22a-92(a)(2)

Coastal Waters & Estuarine Embayments

22 It is found and declared that the pollution of the waters of the state is inimical to the public health, safety and welfare of the inhabitants of the state, is a public nuisance and is harmful to wildlife, fish and aquatic life and impairs domestic, agricultural, industrial, and that the use of public funds recreational and other legitimate beneficial uses of water, and the granting of tax exemptions for the purpose of controlling and eliminating such pollution is a public use and purpose for which moneys may be expended and tax exemptions granted, and the necessity and public interest for the enactment of this chapter and the elimination of pollution is hereby declared as a matter of legislative determination. CGS section 22a-422, as referenced by CGS section 22a-92(a)(2)

23 TO MANAGE ESTUARINE EMBAYMENTS SO AS TO INSURE THAT COASTAL USES PROCEED IN A MANNER THAT ASSURES SUSTAINED BIOLOGICAL PRODUCTIVITY, THE MAINTENANCE OF HEALTHY MARINE POPULATIONS and the maintenance of essential patterns of circulation, drainage and basin configuration [CGS section 22a-92(c)(2)(A)].

24 TO PROTECT, ENHANCE AND ALLOW NATURAL RESTORATION OF EELGRASS FLATS EXCEPT IN SPECIAL LIMITED CASES, NOTABLY SHELLFISH MANAGEMENT, WHERE THE BENEFITS ACCRUED THROUGH ALTERATION OF THE FLAT MAY OUTWEIGH THE LONG-TERM BENEFITS TO MARINE BIOTA, WATERFOWL, AND COMMERCIAL AND RECREATIONAL FINFISHERIES [CGS SECTION 22A-92(C)(2)(A)].

25 The commissioner of environmental protection shall adopt, and may thereafter amend, standards of water quality applicable to the various waters of the state or portions thereof as provided in subdivision (a) of section 22a-6. Such standards shall be consistent with the federal Water Pollution Control Act and shall be for the purpose of qualifying the state and its municipalities for available federal grants and for the purpose of providing clear and objective public policy statements of a general program to improve the water resources of the state; provided no standard of water quality adopted shall plan for, encourage or permit any wastes to be discharged into any of the waters of the state without having first received the treatment available and necessary for the elimination of pollution. Such standards of quality shall: (1) apply to interstate waters or portions thereof within the state; (2) apply to such other waters within the state as the commissioner may determine is necessary; (3) protect the public health and welfare and promote the economic development of the state; (4) preserve and enhance the quality of state waters for present and prospective future use for public water supplies, propagation of fish and aquatic life and wildlife, recreational purposes and agricultural, industrial and other legitimate uses; (5) be consistent with health standards as established by the state department of health. CGS section 22a-426(a), as referenced by CGS section 22a-92(a)(2)

Developed Shorefront

26 TO PROMOTE, THROUGH EXISTING STATE AND LOCAL PLANNING, DEVELOPMENT, PROMOTIONAL AND REGULATORY PROGRAMS, THE USE OF EXISTING DEVELOPED SHOREFRONT AREAS FOR MARINE-RELATED USES, INCLUDING BUT NOT LIMITED TO COMMERCIAL AND RECREATIONAL FISHING, BOATING AND OTHER WATER-DEPENDENT COMMERCIAL, INDUSTRIAL AND RECREATIONAL USES [CGS SECTION 22A-92(B)(2)(G)].

Freshwater Wetlands & Watercourses

27 **IT IS, THEREFORE, THE PURPOSE OF SECTIONS 22A-36 TO 22A-45, INCLUSIVE, TO PROTECT THE CITIZENS OF THE STATE BY MAKING PROVISIONS FOR THE PROTECTION, PRESERVATION, MAINTENANCE AND USE OF THE INLAND WETLANDS AND WATERCOURSES BY** minimizing their disturbance and pollution; maintaining and improving water quality in accordance with the highest standards set by federal, state or local authority; preventing damage from erosion, turbidity or siltation; **PREVENTING LOSS OF FISH AND OTHER BENEFICIAL AQUATIC ORGANISMS, WILDLIFE AND VEGETATION AND THE DESTRUCTION OF THE NATURAL HABITATS THEREOF**; deterring and inhibiting the danger of flood and pollution; protecting the quality of wetlands and watercourses for their conservation, economic, aesthetic, recreational and other public and private uses and values; and protecting the state's potable fresh water supplies from the dangers of drought, overdraft, pollution, misuse and mismanagement by providing an orderly process to balance the need for the economic growth of the state and the use of its land with the need to protect its environment and ecology in order to forever guarantee to the people of the state, the safety of such natural resources for their benefit and enjoyment and for the benefit and enjoyment of generations yet unborn. CGS Section 22a-36 as referenced by CGS section 22a-92(a)(2).

28 In carrying out the purposes and policies of sections 22a-36 to 22a-45, inclusive, including matters relating to regulating, licensing and enforcing of the provisions thereof, the commissioner shall take into consideration all relevant facts and circumstances, including but not limited to:

(1)The environmental impact of the proposed action;
(2)The alternatives to the proposed action;
(3)The relationship between short-term uses of environment and the maintenance and enhancement of long-term productivity;
(4)irreversible and irretrievable commitments of resources which would be involved in the proposed activity;
(5)The character and degree of injury to, or interference with, safety, health or the reasonable use of property which is caused or threatened; and
(6)The suitability or unsuitability of such activity to the area for which it is proposed. CGS section 22a-41(a), referenced by CGS section 22a-92(a)(2)

Intertidal Flats

29 TO MANAGE INTERTIDAL FLATS SO AS TO PRESERVE THEIR VALUE AS A NUTRIENT SOURCE AND RESERVOIR, A HEALTHY SHELLFISH HABITAT AND A VALUABLE FEEDING AREA FOR INVERTEBRATES, FISH AND SHOREBIRDS [CGS SECTION 22A-92(B)(2)(D)].

30 TO ENCOURAGE THE RESTORATION AND ENHANCEMENT OF DEGRADED INTERTIDAL FLATS [CGS SECTION 22A-92(B)(2)(D)].

31 To allow coastal uses that minimize change in the natural current flows, depth, slope, sedimentation and nutrient storage functions [CGS section 22a-92(b)(2)(D)].

32 To disallow uses that substantially accelerate erosion or lead to significant despoliation of tidal flats [CGS section 22a-92(b)(2)(D)].

33 To require as a condition in permitting new coastal structures, including but not limited to groins, jetties or breakwaters, that access to, or along, the public beach below mean high water must not be unreasonably impaired by such structures [CGS section 22a-92(c)(1)(K)].

Islands

34 To manage undeveloped islands in order to promote their use as critical habitats for those bird, plant and animal species which are indigenous to such islands or which are increasingly rare on the mainland [CGS section 22a-92(b)(2)(H)].

35 To maintain the value of undeveloped islands as a major source of recreational open [CGS section 22a-92(b)(2)(H)].

36 To disallow uses which will have significant adverse impacts on islands or their resource components [CGS section 22a-92(b)(2)(H)].

Rocky Shorefront

37 To manage rocky shorefronts so as to insure that development proceeds in a manner which does not irreparably reduce the capability of the system to support a healthy intertidal biological community; to provide feeding grounds and refuge for shorebirds and finfish, and to dissipate and absorb storm and wave energies [CGS section 22a-92(b)(2)(B)].

Shellfish Concentration Area

38 TO MANAGE THE STATE'S FISHERIES IN ORDER TO PROMOTE THE ECONOMIC BENEFITS OF COMMERCIAL AND RECREATIONAL FISHING,

ENHANCE RECREATIONAL FISHING OPPORTUNITIES, OPTIMIZE THE YIELD OF ALL SPECIES, PREVENT THE DEPLETION OR EXTINCTION OF INDIGENOUS SPECIES, MAINTAIN AND ENHANCE THE PRODUCTIVITY OF NATURAL ESTUARINE RESOURCES AND PRESERVE HEALTHY FISHERIES RESOURCES FOR FUTURE GENERATIONS [CGS SECTION 22A-92(C)(1)(I)].

39 THE DEPARTMENT OF HEALTH SERVICES IS EMPOWERED TO PROHIBIT THE TAKING OR HARVESTING OF SHELLFISH IN CERTAIN TIDAL FLATS, SHORES AND COASTAL WATERS WHENEVER IT FINDS BY EXAMINATIONS AND SURVEYS THAT SUCH FLATS, SHORES OR COASTAL WATERS ARE CONTAMINATED OR POLLUTED TO THE EXTENT THAT THE WATERS DO NOT MEET STANDARDS OF PURITY ESTABLISHED BY SAID DEPARTMENT, AND THAT SHELLFISH OBTAINED THEREFROM MAY BE UNFIT FOR FOOD AND DANGEROUS TO THE PUBLIC HEALTH. SUCH CLOSURE MAY BE PERMANENT, TEMPORARY OR CONTINGENT UPON THE OCCURRENCE OF SPECIFIED EVENTS. CGS SECTION 19A-98(A)

40 THE DEPARTMENT OF HEALTH SERVICES MAY INSPECT SHELLFISH BEDS AND AREAS IN THIS STATE WHERE SHELLFISH ARE GROWN OR HARVESTED FOR MARKET, ALL BOATS, TOOLS AND APPLIANCES USED IN THE PRODUCTION AND PREPARATION OF SHELLFISH FOR MARKET AND ALL WHARVES OR BUILDINGS WHERE SHELLFISH ARE OPENED, PACKED AND PREPARED FOR SALE OR SHIPMENT. IT MAY PRESCRIBE REGULATIONS FOR THE SANITARY GROWTH, PRODUCTION AND PREPARATION OF SHELLFISH FOR MARKET. CGS SECTION 19A-96

41 NOTHING IN SECTIONS 19A-95 TO 19A-101, INCLUSIVE, SHALL PROHIBIT THE TAKING OF SHELLFISH BY COMMERCIAL HARVESTERS FROM PERMANENTLY CLOSED AREAS WHEN THEY ARE REMOVED FOR TRANSPLANTING TO APPROVED AREAS UNDER PERMITS ISSUED BY THE DEPARTMENT OF HEALTH SERVICES AND UNDER SUPERVISION OF STATE AND LOCAL HEALTH AGENCIES HAVING JURISDICTION. CGS SECTION 19A-101

Shorelands

42 To regulate shoreland use and development in a manner which minimizes adverse impacts upon adjacent coastal systems and resources [CGS section 22a-92(b)(2)(I)].

Tidal Wetlands

43 To preserve tidal wetlands and to prevent the despoliation and destruction thereof in order to maintain their vital natural functions [CGS section 22a-92(b)(2)(E)].

44 To encourage the rehabilitation and restoration of degraded tidal wetlands [CGS section 22a-92(b)(2)(E)].

45 WHERE FEASIBLE AND ENVIRONMENTALLY ACCEPTABLE, TO ENCOURAGE THE CREATION OF WETLANDS FOR THE PURPOSE OF SHELLFISH AND FINFISH MANAGEMENT, habitat creation and dredge spoil disposal [CGS section 22a-92(b)(2)(E)].

46 IT IS DECLARED THAT MUCH OF THE WETLANDS OF THIS STATE HAVE BEEN LOST OR DESPOILED BY UNREGULATED DREDGING, DUMPING, FILLING AND LIKE ACTIVITIES AND DESPOILED BY THESE AND OTHER ACTIVITIES, THAT SUCH LOSS OR DESPOLIATION WILL ADVERSELY AFFECT, IF NOT ENTIRELY ELIMINATE, THE VALUE OF SUCH WETLANDS AS SOURCES OF NUTRIENTS TO FINFISH, CRUSTACEA AND SHELLFISH OF SIGNIFICANT ECONOMIC VALUE; that such loss or despoliation will destroy such wetlands as habitats for plants and animals of significant economic value and will eliminate or substantially reduce marine commerce, recreation and aesthetic enjoyment and that such loss of despoliation will, in most cases, disturb the natural ability of tidal wetlands to reduce flood damage and adversely affect the public health and welfare; that such loss or despoliation will substantially reduce the capacity of such wetlands to absorb silt and will thus result in the increased silting of channels and harbor areas to the detriment of free navigation. Therefore, it is declared to be the public policy of this state to preserve the wetlands and to prevent the despoliation and destruction thereof. CGS section 22a-28 as referenced by CGS section 22a-92(a)(2)

47 To disallow any filling of tidal wetlands and nearshore, offshore and intertidal waters for the purpose of creating new land from existing wetlands and coastal waters which would otherwise be undevelopable, unless it is found that the adverse impacts on coastal resources are minimal [CGS Section 22a-92(c)(1)(B)].

48 IN GRANTING, DENYING OR LIMITING ANY PERMIT THE COMMISSIONER OR HIS DULY DESIGNATED HEARING OFFICER SHALL CONSIDER THE EFFECT OF THE PROPOSED WORK WITH REFERENCE TO THE PUBLIC HEALTH AND WELFARE, MARINE FISHERIES, SHELLFISHERIES, wildlife, the protection of life and property from flood, hurricane and other natural disasters, and the public policy set forth in Sections 22a-28 to 22a-35 inclusive. The fact that the department of environmental protection is in the process of acquisition of any tidal wetlands by negotiation or condemnation under the provisions of section 26-17a, shall be sufficient basis for denial of any permit. CGS section 22a-33 as referenced by CGS section 22a-92(a)(2)

ACTIVITIES POLICIES

General Development

49 To insure that the development, preservation or use of the land and water resources of the coastal area proceeds in a manner consistent with the capability of the land and water resources to support development, preservation or use without significantly disrupting either the natural environment or sound economic growth [CGS section 22a-92(a)(1)].

50 To resolve conflicts between competing uses on the shorelands adjacent to marine and tidal waters by giving preference to uses that minimize adverse impacts on natural coastal resources while providing long-term and stable economic benefits [CGS section 22a-92(a)(4)].

51 IT IS HEREBY FOUND AND DECLARED THAT THERE IS A CONTINUING NEED IN THE STATE FOR: (1) Economic development and activity to provide and maintain employment and tax revenues, promote the export of products and services beyond state boundaries, encourage innovation in products and services, and support or broaden the economic base of the state, the control, abatement and prevention of pollution to protect the public health and safety, and the development and use of indigenous and renewable energy resources to assist industrial and commercial businesses in meeting their energy requirements; (2) the development of recreation facilities to promote tourism, to provide and maintain employment and tax revenues and to promote the public welfare; (3) the development of commercial and retail sales and services facilities in urban areas to provide and maintain construction, permanent employment and tax revenues, to improve conditions of deteriorated physical development, slow economic growth and eroded financial health of the public and private sectors in urban areas and to revitalize the economy of urban areas; (4) assistance to public service businesses providing transportation and utility services in the state; **(5) DEVELOPMENT OF THE COMMERCIAL FISHING INDUSTRY TO PROVIDE AND MAINTAIN EMPLOYMENT AND TAX REVENUES;** and (6) assistance to nonprofit and governmental entities in financing facilities providing health, educational, charitable, community, cultural, agricultural, consumer or other services benefiting the citizens of the state; that the availability of financial assistance and suitable facilities are important inducements to industrial, commercial and nonprofit enterprises to remain or locate in this state and to provide economic development projects, recreation projects, urban projects, public service projects, commercial fishing projects, health care projects and nonprofit projects; that there are significant barriers inhibiting access by the authority and eligible financial institutions to the public capital markets and expansion of the secondary loan market to assist in financing economic development and other projects in the state; that the exercise by the authority of the powers in this chapter will promote economic development by increasing access to the public capital markets for the authority and eligible financial institutions; and that therefore the necessity in the public interest and for the public benefit and good for the provisions of this chapter is hereby declared as a matter of legislative determination. It is further found and declared that there is a necessity in the state of creating a department of economic development to coordinate and be responsible for matters affecting

the growth of business and industry in the sate and the maintenance and development of industry in the state as well as the promotion of tourism in the state and for the establishment and creation of an authority to assist the department and the state to carry out the needs and policies of the state as set forth in this section. It is further found and declared that existing, pending and proposed federal legislation has limited and restricted and may further limit and restrict the power of the authority to issue obligations the interest on which is exempt from federal income -taxation; that the ability of the authority to issue obligations to provide financing for projects is essential to the maintenance and expansion of employment and the tax base in the state and to the economic development and health, education and general welfare of the state; and that the issuance of obligations the interest on which may be includable in the holder's gross income for the purposes of federal income taxation serves a needed public purpose; and therefore the necessity in the public interest and for the public benefit and good for the provisions of this chapter is hereby declared as a matter of legislative determination. CGS section 32-23c

Boating

52 To encourage increased recreational boating use of coastal waters, where feasible, by (i) providing additional berthing space in existing harbors, (ii) limiting non-water-dependent land uses that preclude boating support facilities, (iii) increasing state-owned launching facilities, and (iv) providing for new boating facilities in natural harbors, new protected water areas and in areas dredged from dry land [CGS section 22a-92(b)(1)(G)].

53 To protect coastal resources by requiring, where feasible, that such boating uses and facilities (i) minimize disruption or degradation of natural coastal resources, (ii) utilize existing altered, developed or redevelopment areas, (iii) are located to assure optimal distribution of state-owned facilities to the statewide boating public and (iv) utilize ramps and dry storage rather than slips in environmentally sensitive areas [CGS section 22a-92(b)(1)(H)].

54 TO PROTECT AND WHERE FEASIBLE, UPGRADE FACILITIES SERVING THE COMMERCIAL FISHING AND RECREATIONAL BOATING INDUSTRIES [CGS SECTION 22A-92(B)(1)(I)].

55 TO MAINTAIN EXISTING AUTHORIZED COMMERCIAL FISHING AND RECREATIONAL BOATING HARBOR SPACE UNLESS THE DEMAND FOR THESE FACILITIES NO LONGER EXISTS OR ADEQUATE SPACE HAS BEEN PROVIDED [CGS SECTION 22A-92(B)(1)(I)].

56 TO DESIGN AND LOCATE, WHERE FEASIBLE, PROPOSED RECREATIONAL BOATING FACILITIES IN A MANNER WHICH DOES NOT INTERFERE WITH THE NEEDS OF THE COMMERCIAL FISHING INDUSTRY [CGS SECTION 22A-92(B)(1)(I)].

57 In performance of his duties under pan B the commissioner shall (1) Classify all waters and all vessels for the purpose of establishing uniformity in the regulation of such waters and such vessels; (2) prescribe uniform navigation aids for state waters and regulate the use of such aids; (3) establish restricted zones or sea lanes within navigable waters and adopt regulations pertaining thereto for the purpose of protecting the natural ecology of such waters and the abutting shoreline from environmental damage resulting from marine accidents which cause the release of petroleum products or other hazardous substances and materials into the waters of the state, provided before establishing such lanes, zones and regulations the commissioner shall consider at least the following factors: (i) The danger in transporting the type of material; (ii) the evidence of deleterious incidents arising from the transportation of such hazardous materials; (iii) available alternatives; (iv) the public need; and (v) the effect on interstate commerce; and further provided any such regulations promulgated by the commissioner shall list and define the substance and materials which are classified as hazardous; (4) prescribe uniform standards for safety devices and equipment required by part 11 and certify the types of devices and equipment which meet such standards; (5) designate and assist the several towns in designating prohibited and restricted boating areas and waters limited to special boating purposes and prescribe uniform standards for the marking and regulation of such areas; (6) adopt such regulations respecting water skiing and underwater sw g and diving as he finds necessary for public safety; (7) study, plan and recommend the development of boating facilities, safety education and means of improving boating safety; (8) in cooperation with the department of health, investigate matters relating to and recommended means of improving boating sanitation; (9) cooperate with the department of transportation and the bureau of aeronautics concerning regulations governing the operation of seaplanes on state waters; (10) cooperate with the United States and the several states in promoting uniformity of boating laws and regulations and their administration and enforcement, and (11) subject to the applicable provisions of chapter 54 and section 4-117 and the limitations of part H, adopt such regulations to provide for public safety and environmental quality as he finds necessary to administer and enforce the provisions of said part and to promote the safe use and protection of waters and the safe operation of vessels, provided the commissioner shall make no regulations respecting the operation of vessels on Long Island Sound except as are necessary to secure inshore waters and establish and secure restricted areas. CGS section 15-121(b)

Coastal Recreation & Access

58 To encourage public access to the waters of Long Island Sound by expansion, development and effective utilization of state-owned recreational facilities within the coastal area that are consistent with sound resource conservation procedures and constitutionally protected rights of private property owners [CGS section 22a-92(a)(6)].

59 To make effective use of state-owned coastal recreational facilities in order to expand coastal recreational opportunities including the development or redevelopment of existing state-owned facilities where feasible [CGS section 22a-92(c)(1)(J)].

60 To require as a condition in permitting new coastal structures, including but not limited to groins, jetties or breakwaters, that access to, or along, the public beach below mean high water must not be unreasonably impaired by such structures [CGS section 22a-92(c)(1)(K)].

61 In making grants-in-aid for open space land acquisition or development to the commissioner of environmental protection shall: (a) Seek to achieve a reasonable balance among all parts of the state in the relative adequacy of present areas devoted to recreational and conservation purposes and the relative anticipated future needs for additional areas devoted to recreational and conservation purposes; (b) give due consideration to special park requirement needs of urban areas; (c) wherever possible, give priority to land which will be utilized for multiple recreational and conservation purposes; (d) give due consideration to coordination with the plans of departments of the state and regional planning agencies with respect to land use or acquisition and (e) give primary consideration to the needs of municipalities that have formed local housing partnerships pursuant to the provisions of CGS section 8-336f. CGS section 7-131f.

62 To such extent as may be necessary to assure the proper operation and maintenance of areas and facilities acquired by municipalities or regional authorities pursuant to any program participated in by this state under authority of sections 22a-21 to 22a-26, inclusive, such areas and facilities shall be publicly maintained for outdoor recreation or natural resources purposes, and such city or other local governmental unit shall give such assurances to the state as may be required by the commissioner of environmental protection, that it has available sufficient funds to meet its share of the cost of the project and that the acquired or developed areas will be operated and maintained at municipal or regional expense for public outdoor recreation or natural resources use. CGS section 22a-27 as referenced by CGS section 22a-92(a)(2)

Coastal Structures & Filling

63 To require that structures in tidal wetlands and coastal waters be designed, constructed and maintained to minimize adverse impacts on coastal resources, circulation and sedimentation pattens, water quality, and flooding and erosion, to reduce to the maximum extent practicable the use of fill, and to reduce conflicts with the riparian rights of adjacent landowners [CGS section 22a-92(b)(1)(D)].

64 To disallow any filling of tidal wetlands and nearshore, offshore and intertidal waters for the purpose of creating new land from existing wetlands and coastal waters which would otherwise be undevelopable, unless it is found that the adverse impacts on coastal resources are minimal [CGS section 22a-92(c)(1)(B)].

65 To require as a condition in permitting new coastal structures, including but not limited to, groins, jetties or breakwaters, that access to, or along, the public beach below mean high

water must not be unreasonably impaired by such structures [CGS section 22a-92(c)(1)(K)].

66 To encourage the removal of illegal structures below mean high water which unreasonably obstruct passage along the public beach [CGS section 22a-92(c)(1)(K)].

67 To maintain, enhance, or where feasible, restore natural patterns of water circulation and fresh and saltwater exchange in the placement or replacement of culverts, tide gates or other drainage or flood control structures [CGS section 22a-92(c)(2)(B)].

68 The commissioner of environmental protection shall regulate dredging and the erection of structures and the placement of fill, and work incidental thereto, in the tidal, coastal, or navigable waters of the state waterward of the high tide line. Any decisions made by the commissioner pursuant to this section shall be made with due regard for indigenous aquatic life, fish and wildlife, the prevention or alleviation of shore erosion and coastal flooding, the use and development of adjoining uplands, the improvement of coastal and inland navigation for all vessels, including small craft for recreational purposes, the use and development of adjacent lands and properties and the interests of the state, including pollution control, water quality, recreational use of public water and management of coastal resources, with proper regard for the rights and interests of all persons concerned. CGS section 22a-359(a), as referenced by CGS section 22a-92(a)(2)

Cultural Resources

69 To require reasonable mitigation measures where development would adversely impact historical, archaeological or paleontological resources that have been designated by the state historic preservation officer [CGS section 22a-92(b)(1)(J)].

70 Any municipality may, by vote of its legislative body and in conformance with the standards and criteria formulated by the Connecticut historical commission, establish within its confines an historic district or districts to promote the educational, cultural, economic and general welfare of the public through the preservation and protection of the distinctive characteristics of buildings and places associated with the history of or indicative of a period or style of architecture of the municipality, of the state or of the nation. CGS section 7-147a(b)

71 The legislative body of any municipality may make appropriations for the purpose of carrying out the provisions of sections 7-147a to 7-147k, inclusive. CGS section 7-147a(c)

72 Any municipality or private organization may acquire, relocate, restore, preserve and maintain historic structures and landmarks and may receive funds from the state and federal government for such purposes. Grants-in-aid may be made to owners of historic structures or landmarks in an amount not to exceed fifty percent of the non-federal share of the total cost of such acquisition, relocation, historic preservation and restoration. Grants-in-aid shall be

made through an assistance agreement signed by the owners. Subsequent to the execution of any such assistance agreement, advances of funds may be made by the commissioner to the owner of such an historic structure or landmark. CGS section 10-321a

73 It is found that the lower Connecticut River and the towns abutting the river possess unique scenic, ecological, scientific and historic value contributing to public enjoyment, inspiration and scientific study, that it is in the public interest that the provisions of this chapter be adopted to preserve such values and to prevent deterioration of the natural and traditional riverway scene for enjoyment of present and future generations of Connecticut citizens and that the powers of the commissioner of environmental protection, conferred by the provisions of section 22a-25, should be exercised in the furtherance of the purposes hereof in conformity with his general responsibility to preserve the natural resources of the state. CGS section 25-102a

74 The commission may, using such funds as may be appropriated to it or available from any other source, acquire by gift, grant, bequest, devise, lease, purchase or otherwise historic structures or landmarks, including such adjacent land as may be necessary for the comfort and safety of the visiting public, which the commission determines to be of national or state historical importance and to be of such concern to the public at large that they should be held forever in good condition for visitation by the public and for the protection of the heritages of the people of this state and nation. The commission may restore, maintain and operate such properties in such a condition as to render them suitable for public visitation and to inform the public of the historic event or circumstance connected therewith. The commission may charge reasonable visitation fees in order to help defray the cost of maintenance and operation. CGS section 10-321d.

Dams, Dikes & Reservoirs

75 All dams, dikes, reservoirs and other similar structures, with their appurtenances, without exception and without further definition or enumeration herein, which, by breaking away or otherwise, might endanger life or property, shall be subject to the jurisdiction conferred by this chapter. CGS section 22a-401 [formerly CGS section 25-110, as referenced by CGS section 22a-92(a)(2)]

76 The commissioner or his representative, engineer or consultant shall determine the environmental impact of the construction work on the inland wetlands of the state, in accordance with the provisions of sections 22a-36 to 22a-45, inclusive, and the need for a fishway in accordance with the provisions of section 26-136, and examine the documents and inspect the site, and, upon approval thereof, the commissioner shall issue a permit authorizing the proposed construction work under -such conditions as the commissioner may direct. CGS Section 22a-403 [formerly CGS section 25-112 as referenced in CGS section 22a-92(a)(2)]

Dredging & Navigation

77 To encourage, through the state permitting program for dredging activities, the maintenance and enhancement of existing federally maintained navigation channels, basins and anchorages [CGS section 22a-92(c)(1)(C)].

78 Discourage the dredging of new federally maintained navigation channels, basins and anchorages [CGS section 22a-92(c)(1)(C)].

79 To reduce the need for future dredging by requiring that new or expanded navigation channels, basins and anchorages take advantage of existing or authorized water depths, circulation and siltation patterns and the best available technologies for reducing controllable sedimentation [CGS section 22a-92(c)(1)(D)].

80 To disallow new dredging in tidal wetlands except where no feasible alternative exists and where adverse impacts to coastal resources are minimal [CGS section 22a-92(c)(1)(E)].

81 THE COMMISSIONER OF ENVIRONMENTAL PROTECTION SHALL REGULATE THE TAKING AND REMOVAL OF SAND, GRAVEL AND OTHER MATERIALS FROM LANDS UNDER TIDAL AND COASTAL WATERS WITH DUE REGARD FOR THE PREVENTION OR ALLEVIATION OF SHORE EROSION, THE PROTECTION OF NECESSARY SHELLFISH GROUNDS AND FINFISH HABITATS, the preservation of necessary wildlife habitats, the development of adjoining uplands, the rights of riparian property owners, the creation and improvement of channels and boat basins, the improvement of coastal and inland navigation for all vessels including small craft for recreational purposes and the Improvement, protection or development of uplands bordering upon tidal and coastal waters, with due regard for the rights and interests of all persons concerned. CGS section 22a-383 as referenced by CGS 22a-92(a)(2)

82 Harbor masters shall have the general care and supervision of the harbors and navigable waterways over which they have jurisdiction, subject to the discretion and control of the commissioner of transportation, and shall be responsible to the commissioner for the safe and efficient operation of such harbor and navigable waterways in accordance with the provisions of this chapter. The commissioner may delegate, any of his powers and duties under this chapter to such harbor masters or to any existing board of harbor commissioners, but shall at all times be vested with responsibility for the overall supervision of the harbors and navigable waterways of the state. CGS section 15-1

Energy Facilities

83 The legislature finds that power generating plants and transmission lines for electricity and fuels, community antenna television towers and telecommunication towers have had a

significant impact on the environment and ecology of the state of Connecticut; and that continued operation and development of such power plants, lines and towers, if not properly planned and controlled, could adversely affect the quality of the environment, the ecological, scenic, historic and recreational values of the state. The purposes of this chapter are: to provide services at the lowest reasonable cost to consumers with the need to protect the environment and ecology of the state and to minimize damage to scenic, historic, and recreational values; to provide environmental quality standards and criteria for the location, design, construction and operation of facilities for the furnishing of public utility services at least as stringent as the federal environmental quality standards and criteria, and technically sufficient to assure the welfare and protection of the people of the state; to encourage research to develop new and improved methods of generating, storing and transmitting electricity and fuel and of transmitting and receiving television and telecommunications with minimal damage to the environment and other values described above; to require annual forecasts of the demand for electric power, together with identification and advance planning of the facilities needed to supply that demand and to facilitate local, regional, state-wide and interstate planning to implement the foregoing purposes. CGS section 16-50g

84 In a certification proceeding, the council shall render a decision upon the record either granting or denying the application &s filed, or granting it upon such ten-ns, conditions, limitations or modifications of the construction or operation of the facility as the council may deem appropriate. The council's decision shall be rendered within twelve months of the filing of an application concerning a facility described in subdivisions (1) to (3), inclusive, of subsection (a) of section 16-50i or subdivision (4) of said subsection if the application was incorporated in an application concerning a facility described in subdivision (1) of said subsection, and within one hundred eighty days of the filing of any other application concerning a facility described in subdivision (4) of said subsection and an application concerning a facility described in subdivisions (5) and (6) of said subsection, provided such time periods may be extended by the council by not more than one hundred eighty days with the consent of the applicant. The council shall file, with its order, an opinion stating in full its reasons for the decision. The council shall not grant a certificate, either as proposed or as modified by the council, unless it shall find and determine: (1) A public need for the facility and the basis of the need; (2) the nature of the probable environmental impact, including a specification of every significant adverse effect, whether alone or cumulatively with other effects, on, and conflict with the policies of the state concerning the natural environment, ecological balance, public health and safety, scenic, historic and recreational values, forests and parks, air and water purity and fish and wildlife; (3) why the adverse effects or conflicts referred to in subdivision (2) of this subsection are not sufficient reason to deny the application; (4) in the case of an electric transmission line, (A) what part, if any, of the facility shall be located overhead, (B) that the facility conforms to a long-range plan for expansion of the electric power grid of the electric systems serving the state and interconnected utility systems and will serve the interests of electric system economy and reliability, and © that the overhead portions of the facility, if any, are consistent with the purposes of this chapter, with such regulations as the council may adopt pursuant to

subsection (a) of section 16-50t, and with the Federal Power Commission "Guidelines for the Protection of Natural Historic Scenic and Recreational Values I-n the Design and Location of Rights-of-Way and Transmission Facilities" or any successor guidelines and any other applicable federal guidelines; (5) in the case of an electric or fuel transmission line, that the location of the line will not pose an undue hazard to persons or property along the area traversed by the line. CGS section 16-50p(a)

Fisheries

85 TO MANAGE THE STATE'S FISHERIES IN ORDER TO PROMOTE THE ECONOMIC BENEFITS OF COMMERCIAL AND RECREATIONAL FISHING, ENHANCE RECREATIONAL FISHING OPPORTUNITIES, OPTIMIZE THE YIELD OF ALL SPECIES, PREVENT THE DEPLETION OR EXTINCTION OF INDIGENOUS SPECIES, MAINTAIN AND ENHANCE THE PRODUCTIVITY OF NATURAL ESTUARINE RESOURCES AND PRESERVE HEALTHY FISHERIES RESOURCES FOR FUTURE GENERATIONS [CGS SECTION 22A-92(C)(1)(I)].

86 THE PARTY STATES, FOR THE PURPOSE OF PROMOTING THE RESTORATION OF ANADROMOUS ATLANTIC SALMON, HEREINAFTER REFERRED TO AS ATLANTIC SALMON, TO THE CONNECTICUT RIVER BASIN BY THE DEVELOPMENT OF A REGIONAL PROGRAM FOR STOCKING, PROTECTION, MANAGEMENT, RESEARCH AND REGULATION, DO HEREBY ESTABLISH THE CONNECTICUT RIVER ATLANTIC SALMON COMMISSION. CGS SECTION 26-302, ARTICLE I

Fuel, Chemical & Hazardous Materials

87 To minimize the risk of oil and chemical spills at port facilities [CGS section 22a-92(b)(1)(C)].

88 To disallow the siting within the coastal boundary of new tank farms and other new fuel and chemical facilities which can reasonably be located inland [CGS section 22a-92(b)(1)(E)].

89 To require any new storage tanks which must be located within the coastal boundary to abut existing storage tanks or to be located in urban industrial areas and to be adequately protected against floods and spills [CGS section 22a-92(b)(1)(E)].

90 To minimize the risk of spillage of petroleum products and hazardous substances [CGS section 22a-92(c)(1)(A)].

91 To provide effective containment and clean up facilities for accidental spills [CGS section 22a-92(c)(1)(A)].

92 To disallow offshore oil receiving systems that have the potential to cause catastrophic oil spills in the Long Island Sound estuary [CGS section 22a-92(c)(1)(A)].

93 The commissioner of environmental protection shall, to the extent possible, immediately, whenever there is discharge, spillage, uncontrolled loss, seepage or filtration of oil or petroleum or chemical liquids or solid, liquid or gaseous products or hazardous wastes upon any land or into any of the waters of the state or into any offshore or coastal waters, which may result in pollution of the waters of the state, damage to beaches, wetlands, stream banks or coastal areas, or damage to sewers or utility conduits or other public or private property or which may create an emergency, cause such discharge, spillage, uncontrolled loss, seepage or filtration to be contained and removed or otherwise mitigated by whatever method said commissioner considers best and most expedient under the circumstances. The commissioner shall also determine the person, firm or corporation responsible for causing such discharge, spillage', uncontrolled loss, seepage or filtration. CGS section 22a-449(a), as referenced by CGS section 22a-92(a)(2)

94 The commissioner may: 1) License terminals in the state for the loading or unloading of oil or petroleum or chemical liquids or solid, liquid or gaseous products or hazardous wastes and shall adopt, in accordance with Chapter 54, reasonable regulations in connection therewith for the purposes of identifying terminals subject to licensure and protecting the public health and safety and for preventing the discharge, spillage, uncontrolled loss, seepage or filtration of oil or petroleum or chemical liquids or solid, liquid or gaseous product or hazardous wastes. Each license issued under this section shall be valid for a period of not more than one year commencing July first, unless sooner revoked by the commissioner and there shall be charged for each such license or renewal thereof a fee established by regulation and sufficient to cover the reasonable cost of the state of inspecting and licensing such terminals; 2) provide by regulations for the establishment and maintenance in operating condition and position of suitable equipment to contain as far as possible the discharge, spillage, uncontrolled loss, seepage or filtration of any oil or petroleum or chemical liquids or solid, liquid-or gaseous products or hazardous wastes; 3) inspect periodically all hoses, gaskets, tanks, pipelines and other equipment used in connection with the transfer, transportation or storage of oil or petroleum or chemical liquids or solid, liquid or gaseous products or hazardous wastes to make certain that they are in good operating condition, and order the renewal of any such equipment found unfit for further use. Any person, firm or corporation which operates any such terminal in this state on or after the first day of July following the effective date of regulations adopted pursuant to this subsection, without a license issued by the commissioner, shall be fined one hundred dollars per day during any period of unlicensed operation. CGS section 22a-449(b), as referenced by CGS section 22a-92(a)(2)

95 The safe and sanitary disposal of toxic or hazardous wastes shall be the responsibility of the generator and shall be accomplished in a manner approved by the commissioner. CGS 22a-220(a) [formerly CGS section 19-524n, as referenced by CGS section 22a-92(a)(2)]

96 The commissioner of environmental protection shall (1) provide and maintain necessary equipment and train adequate emergency response personnel for the purpose of oil spill containment and removal within the lower Connecticut river and adjacent shoreline area; and (2) assist in and coordinate the development of oil spill containment and removal contingency plans for the towns located within the lower Connecticut river and adjacent shoreline area. CGS section 25-102t(b)

Open Space & Agricultural Lands

97 It is hereby declared (a) that it is in the public interest to encourage the preservation of farm land, forest land and open space land in order to maintain a readily available source of food and fan-n products close to the metropolitan areas of the state (b) that it is in the public interest to prevent the forced conversion of farm land, forest land and open space land to more intensive uses as the result of economic pressures caused by the assessment thereof for the purposes of property taxation at values incompatible with their preservation as such farm land, forest land and open space land, and (c) that the necessity in the public interest of the enactment of the provisions of sections 7-131c and 12-107b to 12-107e, inclusive, is a matter of legislative determination. CGS section 12-107a

98 The general assembly finds that the growing population and expanding economy of the state have had a profound impact on the ability of public and private sectors of the state to maintain and preserve agricultural land for farming and food production purposes, that unless there is a sound, state-wide program for its preservation, remaining agricultural land will be lost to succeeding generations and that the conservation of certain arable agricultural land and adjacent pastures, woods, natural drainage areas and open space is vital for the well-being of the people of Connecticut. CGS section 22-26aa

99 Connecticut is a state of relatively small area, undergoing rapid industrialization and rapid diminution of areas remaining in their natural condition. It is, therefore, declared to be the public policy that carefully selected areas of land and water of outstanding scientific and educational interest be preserved. In implementation of this policy, there is established a Connecticut system of natural area preserve. CGS section 23-5a as referenced by CGS section 22a-92(a)(2)

Ports & Harbors

100 TO PROMOTE, THROUGH EXISTING STATE AND LOCAL PLANNING, DEVELOPMENT, PROMOTIONAL AND REGULATORY AUTHORITIES, THE DEVELOPMENT, REUSE OR REDEVELOPMENT OF EXISTING URBAN AND COMMERCIAL FISHING PORTS GIVING HIGHEST PRIORITY AND PREFERENCE TO WATER-DEPENDENT USES, INCLUDING BUT NOT LIMITED TO COMMERCIAL AND RECREATIONAL FISHING AND BOATING USES

101 To disallow uses which unreasonably congest navigation channels, or unreasonably preclude boating support facilities elsewhere in a port or harbor [CGS section 22a-92(b)(1)(C)].

Sewer & Water Lines

102 To locate and phase sewer and water lines, so as to encourage concentrated development in areas which are suitable for development [CGS section 22a-92(b)(1)(B)].

103 to disapprove extension of sewer and water services into developed and undeveloped beaches, barrier beaches and tidal wetlands except that, when necessary to abate existing sources of pollution, sewers that will accommodate existing uses with limited excess capacity may be used [CGS section 22a-92(b)(1)(B)].

Solid Waste

104 Each municipal authority shall make provisions for the safe and sanitary disposal of all solid wastes which are generated within its boundaries, including septic tank pumping, sludge from water pollution abatement facilities and water supply treatment plants, solid residues and sludge from air pollution control facilities and solid wastes from commercial, industrial, agricultural and mining operations, but excluding wastes which are toxic or hazardous. CGS section 22a-220 [formerly CGS section 19-524n, as referenced by CGS section 22a-92(a)(2)]

105 The commissioner shall administer and enforce the pluming and implementation requirements of this chapter. He shall examine all existing or proposed solid waste facilities, provide for their planning, design, construction and operation in a manner which conserves, improves and protects the natural resources and environment of the state and shall order their alteration, extension and replacement when necessary to conserve, improve and protect the state's natural resources and environment and to control air, water and land pollution so that the health, safety and welfare of the people of the state may be safeguarded and enhanced. CGS section 19-524b

Transportation

106 To make use of rehabilitation, upgrading and improvement of existing transportation facilities as the primary means of meeting transportation needs in the coastal area [CGS section 22a-92(b)(1)(F)].

107 To require that new or improved shoreline rail corridors be designed and constructed so as (i) to prevent tidal and circulation restrictions and, when practicable, to eliminate any such existing restrictions, (ii) to improve or have a negligible adverse effect on coastal access and recreation and (iii) to enhance or not unreasonably impair the visual quality of the shoreline

[CGS section 22a-92(c)(1)(F)].

108 To require that coastal highways and highway improvements, including bridges, be designed and constructed so as to minimize adverse impacts on coastal resource [CGS section 22a-92(c)(1)(G)].

109 To require that coastal highway and highway improvements give full consideration to mass transportation alternatives [CGS section 22a-92(c)(1)(G)].

110 To require that coastal highways and highway improvements where possible enhance, but in no case decrease coastal access and recreational opportunities [CGS section 22a-92(c)(1)(G)].

111 To disallow the construction of major new airports [CGS section 22a-92(c)(1)(H)].

112 To discourage the substantial expansion of existing airports within the coastal boundary [CGS section 22a-92(c)(1)(H)].

113 To require that any expansion or improvement of existing airports minimize adverse impacts on coastal resources, recreation or access [CGS section 22a-92(c)(1)(H)].

Water Dependent Uses

114 TO GIVE HIGH PRIORITY AND PREFERENCE TO USES AND FACILITIES WHICH ARE DEPENDENT UPON PROXIMITY TO THE WATER OR THE SHORELANDS IMMEDIATELY ADJACENT TO MARINE AND TIDAL WATERS [CGS SECTION 22A-92(A)(3)].

115 TO MANAGE USES IN THE COASTAL BOUNDARY THROUGH EXISTING MUNICIPAL PLANNING, ZONING AND OTHER LOCAL REGULATORY AUTHORITIES AND THROUGH EXISTING STATE STRUCTURES, DREDGING, WETLANDS, AND OTHER STATE SITING AND REGULATORY AUTHORITIES, GIVING HIGHEST PRIORITY AND PREFERENCE TO WATER-DEPENDENT USES AND FACILITIES IN SHOREFRONT AREAS [CGS SECTION 22A-92(B)(1)(A)].

OTHER POLICIES

Intergovernmental Coordination of Planning and Regulatory Activities

116 To coordinate planning and regulatory activities of public agencies at all levels of government to insure maximum protection of coastal resources while minimizing conflicts and disruption of economic development. CGS Sec. 22a-92(a)(9)

Coordination and Consistency of State Programs, Projects, Expenditures, And Acquisitions

117 To coordinate the activities of public agencies to insure that state expenditures enhance development while affording maximum protection to natural coastal resources and processes in a manner consistent with the state plan for conservation and development adopted pursuant to Part I of chapter 297. CGS Sec. 22a-92(a)(8)

118 In addition to the policies in this section, the policies of the state plan of conservation and development adopted pursuant to Part I of chapter 297 shall be applied to the area within the coastal boundary in accordance with the requirements of section 16a-31. CGS Sec. 22a-92(d)

119 In furtherance of and pursuant to sections 22a-1 and 22a-15, the general assembly, recognizing the profound impact of man's activity on the inter-relations of all components of the natural environment, particularly the profound influence of population growth, high-density urbanization, industrial expansion, resource exploitation, and new and expanding technological advances, and recognizing further the critical importance of restoring and maintaining environmental quality to the overall welfare and development of man, declares that it is the continuing policy of the state government, in cooperation with federal and local governments, and other concerned public and private organizations, to use all practicable means and measures, including financial and technical assistance, in a manner calculated to foster and promote the general welfare, to create and maintain conditions under which man and nature can exist in productive harmony, and fulfill the social, economic, and other requirements to present and future generations of Connecticut's residents.

In order to carry out the policy set forth in sections 22a-1a to 22a-1f, inclusive, it is the continuing responsibility of the state government to use all practicable means, consistent with other essential considerations of the state policy, to improve and coordinate state plans, functions, programs, and resources to the end that the state may: (1) Fulfill the responsibility of each generation as trustee of the environment for succeeding generations; (2) assure for all residents of the state safe, healthful, productive, and esthetically and culturally pleasing surroundings; (3) attain the widest range of beneficial uses of the environment without degradation, risk to health or safety, or other undesirable and unintended consequences; (4) preserve important historic; cultural, and natural aspects of our Connecticut heritage, and maintain, wherever possible, an environment which supports diversity and variety of individual choice; (5) achieve an ecological balance between population and resource use which will permit high standards of living and a wide sharing of life's amenities; (6) enhance the quality of renewable resources and approach the maximum attainable recycling of depletable resources; and (7) practice conservation in the use of energy, maximize the use of energy efficient systems and minimize the environmental impact of energy production and use. CGS Sec. 22a-1a(a) and (b) as referenced by CGS Sec. 22a-92(a)(2)

120 The general assembly finds that the growing population and expanding economy of the state have had a profound impact on the life-sustaining natural environment. The air, water, land and other natural resources, taken for granted since the settlement of the state, are now recognized as finite and precious. It is now understood that human activity must be guided by and in harmony with the system of relationships among the elements of nature. Therefore the general assembly hereby declares that the policy of the state of Connecticut is to conserve, improve and protects its natural resources and environment and to control air, land and water pollution in order to enhance the health, safety and welfare of the people in the state. It shall further be the policy of the state to improve and coordinate the environmental plans, functions, powers and programs of the state, in cooperation with the federal government, regions, local governments other public and private organizations and concerned individuals, and to manage the basic resources of air, land and water to the end that the state may fulfill its responsibility as trustee of the environment for the present and future generations. CGS Sec. 22a-1 as referenced by CGS Sec. 22a-92(a)(2)

121 The secretary of the office of policy and management shall develop a form for capital development impact statements on which state agencies shall indicate the manner in which a planned or requested capital project or program addresses the following goals: (1) Revitalization of the economic base of urban areas by rebuilding older commercial and industrial areas, and encouraging new industries to locate in the central cities in order to protect existing jobs and create new job opportunities needed to provide meaningful economic opportunity for inner city residents; (2) revitalization of urban neighborhoods to reduce the isolation of various income, age and minority groups through the promotion of fair and balanced housing opportunities for low and moderate income residents; (3) revitalization of the quality of life for the residents of urban areas by insuring quality education, comprehensive health care, access to balanced transportation, adequate recreation facilities, responsive public safety, coordinated effective human service programs, decent housing and employment and clean water and by insuring full and equal rights and opportunities for all people to reap the economic and social benefits of society; (4) coordination of the conservation and growth of all areas of the state to insure that each area preserves its unique character and sense of community and further insure a balanced growth and prudent use of the state's resources. The secretary shall establish criteria for determining the capital projects and programs for which such statements shall be required to be filed with said secretary and with the state bond commission. CGS Sec. 4-66b as referenced by CGS Sec. 22a-92(a)(8)

Flooding and Erosion Planning

122 To consider in the planning process the potential impact of coastal flooding and erosion patterns on coastal development so as to minimize damage to and destruction of life and property and reduce the necessity of public expenditure to protect future development from such hazards. CGS Sec. 22a-92(a)(5)

Dredging and Dredged Material Disposal Planning

123 To initiate in cooperation with the federal government and the continuing legislative committee on state planning and development a long range planning program for the continued maintenance and enhancement of federally maintained navigation facilities in order to effectively and efficiently plan and provide for environmentally sound dredging and disposal of dredged materials. CGS Sec. 22a-92(c)(1)(C)

Coastal Related Research

124 To conduct, sponsor and assist research in coastal matters to improve the data base upon which coastal land and water use decisions are made. CGS Sec. 22a-92(a)(7)

NATIONAL INTEREST FACILITIES AND RESOURCES

DEFINITION - "FACILITIES AND RESOURCES WHICH ARE IN THE NATIONAL INTEREST" MEANS: (A) ADEQUATE PROTECTION OF TIDAL WETLANDS AND RELATED ESTUARINE RESOURCES; (B) RESTORATION AND ENHANCEMENT OF CONNECTICUT'S SHELLFISH INDUSTRY; (C) RESTORATION, PRESERVATION AND ENHANCEMENT OF THE STATE'S RECREATIONAL AND COMMERCIAL FISHERIES, INCLUDING ANADROMOUS SPECIES; (D) water pollution control measures and facilities consistent with the requirements of the Federal Clean Water Act, as amended; (E) air pollution control measures and facilities consistent with the requirements of the Federal Clean Air Act, as amended; (F) continued operations of existing federally funded dredged and maintained navigation channels and basins; (G) energy facilities serving statewide and interstate markets, including electric generating facilities and facilities for storage, receiving or processing petroleum products and other fuels; (H) improvements to the existing interstate rail, highway and waterborne transportation system; (I) provisions of adequate state or federally owned marine related recreational facilities, including natural areas and wildlife sanctuaries and (J) essential maintenance and improvement of existing water dependent military, navigational, resource management and research facilities. (Source: CGS Sec. 22a-93(14))

125 To insure that the state and the coastal municipalities provide adequate planning for facilities and resources which are in the national interest as defined in section 3 of this act and to insure that any restrictions or exclusions of such facilities or uses are reasonable. Reasonable grounds for the restriction or exclusion of a facility or use in the national interest shall include a finding that such a facility or use: (A) may reasonably be sited outside the coastal boundary; (B) fails to meet any applicable federal and state environmental, health or safety standard or (C) unreasonably restricts physical or visual

access to coastal waters. This policy does not exempt any nonfederal facility in use from any applicable state or local regulatory or permit program nor does it exempt any federal facility or use from the federal consistency requirements of section 307 of the federal Coastal Zone Management Act. CGS Sec. 22a-92(a)(10)

Air Resources & Air Quality (Pollution)

126 The commissioner, in the manner provided in subdivision (1) of section 22a-6, shall have the power to formulate, adopt, amend and repeal regulations to control and prohibit air pollution throughout the state or in such areas of the state as are affected thereby, which regulations shall be consistent with the Federal Air Pollution Control Act and which qualify the state and its municipalities for available federal grants. Any person heard at the public hearing on any such regulations shall be given written notice of the determination of the commissioner. (Source: CGS Sec. 22a-174(a))

127 The commissioner, in making regulations and issuing orders and in enforcing the provisions of this chapter, shall take into consideration all of the facts and circumstances bearing on the reasonableness of the activity involved and the regulations proposed to control it, including: (a) The character and degree of injury to, or interference with, safety, health or the reasonable use of property which is caused or threatened to be caused; (b) the social and economic value of the activity involved; (c) the suitability or unsuitability of such activity to the area in which it is located; and (d) the practicability, both scientific and economic, of reducing or eliminating the discharge resulting from such activity. In all cases the commissioner shall exercise a wide discretion in weighing the equities involved and the advantages and disadvantages to the residents of the area involved and to any lawful business, occupation or activity involved resulting from requiring compliance with the specific requirements of any order or regulation. (Source: CGS Sec. 22a-176)