

Section 3: Coastal Area and Resources

Clinton encompasses 10,752 acres (16.8 square miles), and had a 2000 population of 13,094. Dramatic population increases during the 1950's and 1960's changed Clinton from a rural/seasonal community to a suburban community with an urban center. However, seasonal recreation along the coast is still important, and during the summer months population increases to around 14,000. Projections of future population indicate continued but slower growth to a 2010 year-round population of 13,224 or 1% over 2000.

Coastal Area

Clinton's coastal boundary is shown in *Figure 1: Coastal Boundary, Clinton, Connecticut*, located at the end of this document. The coastal boundary was delineated by determining the farthest inland of 1,000 feet from mean high water; 1,000 feet from tidal wetlands or the 100-year coastal flood zone and then adjusting the boundary to coincide with property lines.

The coastal area includes about 4,350 acres (6.8 square miles) or 40.5% of the total area of Clinton. Although there is no up-to-date map of existing land use in Clinton, about 1,936 acres of the coastal area are developed or in protected open space, distributed as follows:

<u>Acres</u>	<u>Use</u>
1,000	Residential
80	Industrial
29	Public and Institutional
146	Commercial
66	Active public open space (Parks and Beaches)
464	Protected passive open space
26	Marine Commercial
125	Agriculture
1,936	Total

About 2,414 acres are undeveloped, including large areas of inland and tidal wetlands.

Approximately 3,900 people (30% of the Town's year-round residents) live within the coastal boundary, and 1,575 year-round dwellings (31%) and 473 seasonal dwellings are within the coastal area. The number of seasonal dwellings has increased by 92 dwellings from 381 in 1980 as a result of stricter criteria being proposed and enacted by ordinance in September 2004, therefore making it more difficult for homeowners to convert seasonal dwellings for year-round use.

Background

Clinton Harbor has played a major role in the historical development of the Town. The harbor was once a seaport for lumber, shipbuilding and fishing. Three shipyards were

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active along the Indian River until the late 1800's. The Connecticut State Historic Commission has identified sixteen sites of historic or architectural importance in the harbor area.

Today, the harbor supports a large recreational boating industry. There are nine private marinas and the Town Dock facility in Clinton Harbor and along the Hammonasset and Indian Rivers provide slip moorings for about 1,450 boats. On-shore summer and winter boat storage and boat repair is also provided by many of the marinas. The Town operates a marina and public dock for launching boats.

The marinas provide access to Long Island Sound for both Town residents and non-residents. Visual access to the Sound and the marsh areas of the Hammonasset, Indian and Hammock Rivers is also provided at points along the harbor-front, as well as from the water. This view is a major attraction for many Clinton residents.

Access to Clinton Harbor from Long Island Sound is provided by a Federal Navigation Channel that begins approximately at Wheeler Rock and extends to Esposito Beach. This Federal Channel was completed in 1951 and was last dredged in 1981. The authorized size of the channel is 100 feet wide, 8 feet deep and about 1,500 feet long. From the end of the Federal Navigation Channel as determined by the Army Corps of Engineers through the remainder of the inner harbor and up the Hammonasset River, is a narrow and very shallow natural channel.



Clinton Harbor towards the Indian River

Water depth in this channel is approximately four feet deep at low tide. In addition, this channel is approximately 60 feet wide. Many boats berthed at the marinas on the Hammonasset River must wait until high tide to enter or leave the river.

To improve existing boating conditions and provide for future expansion, proposals have been made to widen and extend the existing Federal Navigation Channel. However, no action has been taken on previous proposals to expand or extend the Channel. Disposal of dredged material is one of the biggest obstacles to any dredging program because of the high cost involved. In the past, spoil material from maintenance dredging of the Federal Channel has been disposed of in open water disposal sites in Long Island Sound. If the channel were widened and deepened, it would provide for safer passage of the boats that presently use the harbor. It would also make it possible for larger boats to safely enter the harbor and create an opportunity for new or expanded marinas to handle additional boats.

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Within the past few years, it has become apparent that the bulkheads located at the launch ramp, the Town Marina, and at the intersection of Commerce and Grove Streets are in need of repair or rebuilding to prevent the continued collapse of the bulkheads into the harbor.



Bulkhead at the end of Commerce & Grove Streets

General Issues of Concern

One of the most significant issues with respect to the protection of coastal resources surrounds the elimination of any groundwater pollution caused by overly dense development that occurred, primarily, decades ago. Like neighboring towns located on Long Island Sound, Clinton has numerous shorefront areas - beach communities - where development density exists at significantly higher levels than what would be permitted under today's zoning and health code regulations. In the most of the

buildable land in areas adjacent to coastal resources is developed, the most significant risk comes from redevelopment - knock downs within residential areas. Where seasonal cottages are eliminated, it is common for the new homes to become year-round in nature - "winterized". Because of issues, including sewer minimization, such conversions cannot occur until an on-site waste disposal system is either maintained or replaced in order to bring it up to current health codes.

Conversion to year-round use is prohibited if the lot size and site conditions will not provide adequate on-site waste disposal. On September 11, 2004, the Board of Selectmen enacted an ordinance, "Winterization of Seasonal Use Structures", to assist in the Water Pollution Control Commission's effort to decrease groundwater contamination from septic systems. This ordinance requires a homeowner to upgrade their subsurface sewage disposal systems to current standards before converting a seasonal use structure for year-round use. In addition, the ordinance gives specific time frames for the completion of the work needed for winterization.

Several areas in Clinton have been identified as having groundwater contamination and wastewater disposal problems, identified as Needs Area 1 and Needs Area 2 in *Figure 10: Wastewater Facilities Plan*. As a result, the Town of Clinton is currently under order from the Connecticut DEP to abate the identified water pollution sources. The Water Pollution Control Commission is presently studying the problem areas, possible problem areas and alternative solutions to minimize the need for sewers. Several areas in the coastal area have been identified that may need related issues addressed at some time in the future if water quality problems should continue. The Commission is also enforcing the requirements set forth in the "Septage Disposal Ordinance".

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The significant issue of sewer minimization, or eliminating existing and potential groundwater pollution and the despoliation of coastal resources including tidal wetlands, is currently of high priority in the Town of Clinton. Policies in both the 2000 Plan of Conservation and Development and this Municipal Coastal Plan are directed at minimizing or eliminating the potential for this type of pollution.

Coastal Resources

The Town of Clinton is endowed with significant coastal resources along its entire shoreline. Although the waterfront has been colonized and utilized by humans for well over three hundred years, the Town enjoys resources of high quality. Indeed, all thirteen of the identified coastal resource categories are represented and extend from the Hammonasset River on the western border to Groveway Beach on the eastern border. Like most Connecticut shoreline communities, those resources are under increasing pressure as more and more people discover and enjoy the public amenities that exist on the waterfront.

The Connecticut Coastal Management Act (§22a-90 through 22a-113j CGS) defines and sets forth policies for coastal resources management in the State of Connecticut.

The following Section of the Municipal Coastal Plan is designed to identify and define Clinton's coastal resources and to present policies that guide local, state and federal land use decisions. Further, concerns, issues and parcels specific to Clinton are discussed so as to clearly delineate opportunities to further preserve, protect and enhance the coastal resources for all the competing users of the resources. This document provides the basis for the balancing of uses and needs of coastal resources that is prescribed by the Connecticut Coastal Management Act.

1. Beaches and Dunes

- a. Definition: Beaches and dunes are beach systems, including barrier beach spits and tombolos, barrier beaches, land contact beaches and related dunes and sand flats (CGS §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 narrower than in the summer.
- b. Policies: 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 unreasonable interfere with natural processes of erosion and sedimentation; and to **encourage** the restoration and enhancement of disturbed or modified beach systems (CGS §22a-92(b)(1)(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

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beach below mean high water must not be unreasonable impaired by such structures (CGS §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 §22a-93(15)(H)).

- c. Adverse Impacts: Degrading **tidal wetlands, beaches and dunes, rocky shorefronts, and bluffs and escarpments** through significant alteration of their natural characteristics or functions (CGS §22a-93(15)(H)).

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 §22a-93(15)(A)).

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

Increasing the hazard of **coastal flooding** through significant alteration of shoreline configurations of bathymetry, particularly within high velocity flood zones (CGS §22a-93(15)(E)).

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

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 (CGS §22a-93(15)(G)).

- d. Significant Issues and Parcels: Like all shoreline communities in Connecticut, Clinton's beaches are one of its primary coastal resource assets. Along with the numerous private association beaches, Clinton has two public beaches, the Clinton Beach and Esposito Beach.

Clinton Town Beach, the Town's primary public beach, is located on the eastern flank of the harbor at the terminus of Waterside Lane and Waterside Lane Extension. The developed area of the beach is 1.3 acres and has 550 feet of water frontage. The beach is maintained by the Public Works Department, which has recently added an additional children's play area, funded in part by the fundraising efforts of the Town Beach Playground Committee, and a DEP-funded viewing pavilion south of the beach

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overlooking the Harbor and tidal marsh. Parking is available for about 75 cars. During the summer months access to the beach is by permit. Residents may obtain a seasonal pass for a nominal cost, and non-residents may obtain a daily permit for only a small charge. At low tide swimming is not possible because mud flats extend almost to the Navigation Channel.

Esposito Beach, a very small area located between marinas at the foot of Maplewood Drive, provides only limited opportunities for swimming with the large number of boats using the area. However, it does provide a convenient open space within a heavily developed marine commercial area.

The Town also owns land on the western end of Cedar Island. Although not developed as a beach area, it is used by the residents of Cedar Island and by others who have access to the island by boat.

The most significant issue facing Clinton's beaches likely involves continued protection and enhancement of these recreational assets. Clinton Town Beach is located at the end of a northward-oriented spit of upland that separates Clinton Harbor from Hammock River tidal wetlands complex in an area devoid of significant development other than the beach facilities themselves. The beach has always been a popular summer spot for many townspeople. The Town has successfully enhanced this recreational resource and has included an educational component as well.

Due to its smaller size and location within Clinton's marina area, Esposito Beach has not been a significant point of interest for most people outside the immediate neighborhood in which it exists. As a result, the Town has not focused on it as a significant public resource. Future efforts to enhance this small public resource, including making efforts to improve water quality deficiencies, should be encouraged in the future.

Private beaches owned and maintained by beach associations exist in the areas of Harbor View, Grove Beach, Blake Avenue and Indian Drive. In the Clinton Beach area, 10-foot right-of-ways between lots (about every 100 feet) on the south side of Shore Road provide beach access for owners of lots across from them on the north side of Shore Road.

As the Town continues to grow, it is expected that use of the beach facilities, both public and private, will necessitate further effort to preserve, protect and enhance them.

2. Bluffs and Escarpments:

- a. Definitions: 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 (CGS §22a-93(7)(A)).

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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 opportunities and scenic vistas if such uses can be designed to protect the resource from disturbance.

- b. Policies: To **manage** 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 §22a-92(b)(2)(A)).
- c. Adverse Impacts: Degrading **tidal wetlands, beaches and dunes, rock shorefronts, and bluffs and escarpments** through significant alteration of their natural characteristics or functions (CGS §22a-93(15)(H)).

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

Increasing the hazard of **coastal flooding** through significant alteration of shoreline configurations or bathymetry, particularly within high velocity flood zones.

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

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 (CGS §22a-93(15)(G)).

- d. Significant Issues and Parcels: From the perspective of coastal systems, natural bluffs and escarpments serve several important purposes including acting as a sediment source for beach systems while at the same time serving as a buffer to the erosive effects of coastal storms. The slopes also act as critical wildlife habitat as well. When viewed in terms of development, however, those natural functions can run *counter* to the need to minimize or eliminate erosion of these bluffs in order to preserve the homes that are often built atop such bluffs and escarpments. It is the balance of these natural and human needs that we seek in our land use decisions. Further, when such bluff and escarpments are protected or armored or otherwise manipulated through development, they are defined as “modified” bluffs and escarpments.

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Kelsey Point

In Clinton, the Hammock and Kelsey Point area of the shoreline is identified as “modified” bluffs and escarpments, this is because of the fact that the majority of the shorefront has been stabilized over the years through the construction of seawalls. Elevations of the bluffs and escarpments range from approximately 15 to 25 feet above sea level and are a result of remnant glacial deposits, likely recessional moraines. As such, the slopes are composed of undifferentiated sand, gravel and larger material and are particularly prone to the erosive forces of Long Island Sound.

Although the structures have stabilized the slopes and homes on top of the slopes (development needs), the bluffs and escarpments no longer provide source material to adjacent beaches (coastal system needs). As a result of the diminishment of natural source materials to the coastal system here and elsewhere, Connecticut beaches, in general, are receding, or at least, not growing. This is especially true in the areas of headlands.

In that “bluff-front” (waterfront) properties located in the Hammock and Kelsey Point areas of Clinton have waterside property lines located at the Mean High Water line (usually at the base of the bluffs and escarpments), and setbacks from property lines, including the Mean High Water line, do not usually impact development at the top of the slope, or as close as safe construction practices allow. In an effort to further protect bluffs and escarpments, the Town should encourage preservation by establishing a setback from the break in slope. Adopting this type of preservation tool would accomplish several goals including protecting the fragile top of the slope as well as buffer the vegetated slope, a wildlife habitat, from more intensive human activities.

There are few properties located on Hammock and Kelsey Points which have not been armored using either seawalls or rip rap. Areas that have not been stabilized using such structural means are located along the eastern and western most flanks of the promontory where the increased elevations drop back down to lower topographic areas. In those elevation transition areas, the Town should make every effort to discourage further armoring of the bluffs and escarpments as they transition to the lower beach resource areas. At the very least, vertical “hard” structures such as seawalls should be discouraged in favor of “softer” irregular features including rip rap, where necessary to protect an existing structure that may be prone to damage – the structure instead should be set back a sufficient distance from the slope.

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3. Coastal Hazard Areas:

- a. Definition: Coastal hazard areas are defined as those 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 (CGS §22a-93(7)(H)). Generally, coastal flood hazard areas include all areas designated as within A-zones and V-zones by the Federal Emergency Management Agency (FEMA). A-zones are those areas subject to still-water flooding during the so called “100-year” flood events while V-zones are those areas subject, in addition, to direct action by waves three feet or more in height.

- b. Policies: 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 §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 §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 §22a-92(c)(2)(B)).

- c. Adverse Impacts: Increasing the hazard of **coastal flooding** through significant alteration of shoreline configurations or bathymetry, particularly within high velocity flood zones (CGS §22a-3(15)(b) & §22a-93(15)(E)).

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 §22a-93(15)(B)).

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

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

- d. Significant Issues and Parcels: Clinton and all of its Long Island Sound and Connecticut River neighbors are subject to the adverse impacts of coastal flooding. Of all the natural hazards that may potentially impact the area, flooding resulting from coastal storms is the most prevalent. In an effort to take advantage of Federally-subsidized flood insurance rate opportunities, Clinton and other coastal municipalities adopted minimum flood standard ordinances and, later, zoning standards (flood ordinances were originally developed for states with county-level zoning authorities – Connecticut zoning authority rests at the municipal level which has required the standards be placed with zoning regulations instead.) Those standards are considered *minimum* standards that must be met by property owners – any additional elevation above those minimum elevation standards can further reduce an individual's flood insurance rates. The standards are primarily designed to lift flood prone structures up and out of most typical flood events so as to minimize destruction to life and property. Not only does this minimize potential damage to individual structures, but it lessens the possibility of structures being swept into *other* structures where they can act as battering rams.

Minimum flood standards have been part of the Clinton Zoning Regulations for over twenty years. As a result, new construction (including substantial renovation) has been built to those standards. Construction that pre-dated the standards, however, remain vulnerable to damage and destruction caused by coastal storms. In addition, the last significant “inland” flood event in the area occurred in 1982. Structures damaged or destroyed by this event have been reconstructed to the new minimum standards. The last significant coastal storm, however, occurred in 1938 (the Great New England Hurricane of 1938). As a result, a tremendous amount of rebuilding has occurred between the '38 hurricane and the implementation of the minimum standards in the early 1980's. Thus, almost 45 years worth of construction remains vulnerable to the next significant coastal storm event. As a result, low-lying beach communities are seen as the sector of development that is most vulnerable to impacts from future coastal flooding. Those communities include Grove Beach, Harbor View, Blake Avenue, Indian Drive and the low-lying portions of both Hammock and Kelsey Points.

Another significant impact of coastal flooding occurs as a result of the low-lying elevation of access roads to many of the town's beach communities. Coastal flooding of low-lying roads occurs at the western end of Hammock Road on Kelsey Point, Shore Road along Clinton Beach leading to Kelsey Point, and the Beach Park Road and Causeway entrances to the Clinton Beach and Kelsey Point areas. Beach Park Road and Causeway exist at an

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elevation near 8 feet above sea level and are prone to flooding even during lesser rain events. Flooding of these access roads alone can completely cut off the Kelsey Point area from emergency access, making the area particularly vulnerable. Other areas prone to coastal flooding include the southern ends of Commerce and Grove Streets near the Town Dock, and the western end of Pratt Road near the Hammonasset River. Outside the beach communities but within the designated Coastal Boundary, Clinton also experiences roadway flooding in numerous locations along Route 1 as a result of both culver and bridge restrictions and low-lying elevations. In particular, high tidal levels cause flooding difficulties where the Indian River flows south underneath Route 1 and where a small drainage pond flows underneath Nod Road near Sunnybrook Lane.

The Town should continue to strive to raise the elevation of town roads that are prone to flooding in an effort to enhance emergency access during coastal flooding events. Efforts should continue to stringently monitor new construction and renovations in order to insure compliance with minimum flood standards and to insure overall compliance with the National Insurance Flood Program. Consideration of strengthening standards beyond “minimal” should also be considered as well. The Town has already adopted an improvement measure to further minimize abuses of the “substantial improvement” clause in flood regulations by review such proposals over a five-year period as opposed to the less stringent one-year time period. Previously, up to 50% improvement to a structure could be accomplished during a twelve-month period, leading to the possibility of abuse of requirements to “flood proof” such structure – a short-term gain at the expense of potential long-term loss.

In an effort to plan beyond the current minimum flood standards, the Town should consider the use of SLOSH data and maps (hurricane inundation data) available through the Connecticut Department of Environmental Protection in planning for revisions to both the Zoning Regulations and the Plan of Conservation and Development. Such data highlights low-lying areas that are prone to flooding during Category 1 through 5 hurricanes – areas that don’t show as being prone on current FEMA maps.

4. Coastal Waters/Estuarine Embayments

- a. Definition: Coastal waters and estuarine embayments 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 (CGS §22a-93(5)). Coastal waters are areas of high primary and secondary productivity, providing habitat for a variety of marine organisms, supporting many diverse floral and faunal species, providing spawning and breeding areas for many ocean waters. In addition, those waters are frequently used by the many Connecticut residents that enjoy the

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coastal environment for their recreational activities, including boating, fishing, and swimming.

Coastal water 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 §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 §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 §22a-93(7)(G)).
- b. Policies: 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 alternation of the flat may outweigh the long-term benefits to marine biota, waterfowl and commercial and recreational fin fisheries.

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 §22a-422, as referenced by CGS §22a-92(a)(2)).

- c. Adverse Impacts: 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 §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 §22a-93(15)(B)).

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

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 (CGS §22a-93(15)(G)).

- d. Significant Issues and Parcels: Coastal waters and estuarine embayments or, for the most, Long Island Sound itself, serves many important natural functions that degraded water quality could potentially impair. As a result, many of the identified adverse impacts and policies have been designed to maintain the health of such water bodies for the purposes of habitat and wildlife are more attractive to the many recreational users that flock to the Connecticut shore each year.

An important component of these preservation/protection and enhancement efforts have most recently been directed at non-point source pollution – pollution sources that are not associated with discharge pipes or other localized sources of pollution. Such sources include runoff from uplands including fertilizers from lawns and runoff from impervious surfaces that include contaminants such as oil and grease from vehicles as well as particulate matter in the form of sand and finer sediments. Heavy metals from impervious surfaces also contribute to the overall level of non-point pollution as well.



Hammonasset River showing Hayden's Creek and tidal marsh.

For communities on the shoreline, another factor includes the non-point pollution contribution by deficient and failing septic systems in densely developed beach areas. Along with Clinton, the nearby communities of Westbrook, Old Saybrook and Old Lyme have been under scrutiny by State officials to remedy conditions that could potentially lead to ground water contamination from septic sources. A number of communities have responded by bolstering “sewer avoidance” policies including strengthening septic pump-out ordinances. Clinton has adopted such policies in their land

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use program, but still faces close scrutiny by DEP officials who seek to remedy and prevent what they describe as ground water contamination.

From the stand point of contamination of coastal waters and estuarine embayments, private marinas in Clinton have participated at the regional level in a DEP/CRERPA-sponsored "Clean Marina" program. This program has endeavored to educate boaters on the merits of recycling marina hazardous waste including oils and by-products of boat sanding such as hazardous, anti-fouling paints. The Clinton town government has indirectly participated through their association with CRERPA.

The Town should continue actively pursuing its sewer minimization efforts by maintaining and enhancing its septic inspection program. In addition, efforts should be made to consider lessening the potential density of development, especially in beach areas. Although most of those areas are currently developed, the current economic environment has led to the knockdown of existing older, sometimes seasonal structures and replacing them with larger year-round structures. This practice invariably puts more pressure on resources and should be planned for accordingly. Allowing a decreased density would help reduce ground water contamination potential to a great degree.

As a note, as recent as January of 2005, the Town adopted a clearer and more stringent zoning regulation regarding what is and is not permitted to occur within the 50 foot area immediately adjacent to tidal wetlands. Where many towns only require structures to adhere to such a setback, Clinton has gone so far as to preclude any number of uses including the establishment of new lawn areas within that 50 foot buffer area. Although prohibiting new septic system construction in the buffer, the regulation does not prohibit the "*continuation use, reconstruction or renovation of any septic disposal system*" existing on the effective date of the regulations (1/1/2005).

5. Developed Shorefront

- a. Definition: 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 (CGS §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.

- b. Policies: 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 (CGS §22a-92(b)(2)(G)).

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- c. Adverse Impacts: 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 §22a-93(15)(A)).

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

- d. Significant Issues and Parcels: Like nearby communities, Clinton's developed harbor is limited mainly to areas occupied by local marinas and limited municipal property. In addition, Clinton's harborfront area is zoned as Marine Commercial, with the exception of the developed portion of Cedar Island and the Clinton Town Beach property. Both of these areas are currently zones as R-10 residential. As such, the issued of redevelopment for uses other than marine-related uses is unlikely. Whether or not marinas could be expanded significantly, however, is another question. In that a significant portion of the harbor waterfront is colonized by tidal wetlands, expansion of private marine uses that could only be accomplished by removal of existing tidal wetlands would be unlikely and inconsistent with the Tidal Wetlands Act. Through this updated Municipal Coastal Plan, however, the Town goes on record indicating that all efforts to expand marinas should be avoided as is reasonably possible. Rather, redevelopment and/or reuse of existing harbor development areas should be considered for enhancement instead.



Inner Harbor with Cedar Island in the foreground.

6. Intertidal Flats

- a. Definition: 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 (CGS §22a-93(15)(G)). 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.

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- b. Policies: 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 the 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 subsequently accelerate erosion or lead to significant despoliation of tidal flats (CGS §22a-92(b)(2)(C)).
- c. Adverse Impacts: 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 §2293(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 §22a-93(15)(B)).

Increasing the hazard of **coastal flooding** through significant alteration of shoreline configurations or bathymetry, particularly within high velocity flood zones (CGS §22a-93(15)(E)).

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 (CGS §22a-93(15)(G)).

- d. Significant Issues and Parcels: Clinton is endowed with substantial intertidal flats in and around the mouths of the Indian and Hammock Rivers, the Hammonasset River and in the area of the Clinton Town Beach. Destruction of intertidal can occur as a result of several factors including direct removal (intentional dredging) and erosion through stream flow increases that can impact the flats through high velocity erosion. In the former case, harbor channel maintenance and expansion can potentially impact intertidal flats in the vicinity of the Town Beach. In the area of the marinas, basin maintenance and expansion should result in removal of intertidal flats to allow for expansion of the marinas or within existing marinas that are desirous of accommodating deeper-draft boats. Efforts to expand basins at the expense of important intertidal flat environments should be discouraged as much as practical. In that there are several smaller marinas upstream on the Hammonasset River and one upstream in the Indian River, pressures may be brought to bear to keep the channels open so that the boats can pass from the harbor upstream to the marinas. Maintenance dredging of existing channels should be encouraged but not expanded in a way that will adversely impact or destroy intertidal flats.

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At the mouth of the Hammock River, limited navigability of this waterway makes intentional dredging less likely. There is the possibility, however, of the alteration of stream flow dynamics in a way that would increase velocities of river flow and promotion erosion of intertidal flats. Such alterations could potentially occur through increasing stormwater runoff from upland drainage areas adjacent to the river or modification of road crossings (bridges) in a way that would produce constrictions and higher velocity water flow. Both types of stream modifications should be minimized and avoided to the greatest extent possible. In the case of the Hammock River crossing to the Town Beach, the bridge was designed to specifically reduce flow velocities so as to avoid exacerbating erosion of the riverbed and adjacent banks. Such design practices should be further encouraged any time a similar crossing is designed and built.

7. Islands

a. Definition: Islands are surrounded on all sides by water. Islands, undeveloped 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 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.

b. Policies: 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 island or 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 §22a-92(b)(2)(H)).



Cedar Island

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

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

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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 (CGS §22a-93(15)(G)).

- d. Significant Issues and Parcels: Cedar Island, Clinton's only island of significant size, separates Clinton Harbor from Long Island Sound. Although the developed, higher elevation eastern portion of the island can sometimes be surrounded by the harbor, Cedar Island is actually a peninsula interconnected with Hammonasset Beach in Madison to the west. As a result, many of the policies that govern islands apply less to Cedar Island than to undeveloped islands.

Expansion of development further west on the peninsula in areas that will encroach into and near tidal wetlands is discouraged as a result of that areas being defined on FEMA flood maps as "coastal barriers" – areas where flood insurance is not and has not been available for new construction or substantial improvements after November 16, 1990. Clinton's new regulations concerning substantial improvements and the increased five-year time period minimize the potential for significant improvements that circumvent the intent of flood standards.

The Town should continue to make efforts to disallow significant improvements for structures on Cedar Island, this because of the area's proneness to damage during coastal storms. Any lateral improvement should also be avoided and discouraged so as not to encroach on the tidal wetlands and significant wildlife habitat located to the west of the developed portion of Cedar Island. Avoiding expansion of development of the current "envelope" will also serve to minimize further visual impacts associated with bringing a developed environment into the undeveloped fringes of the area.

8. Rocky Shorefronts:

- a. Definition: Rocky shorefront areas are those composed of bedrock, boulders, and cobbles that are highly erosion-resistant and are an insignificant source of sediments for other coastal landforms (CGS §22a-93(7)(B)). In general, rocky shorefronts are naturally occurring rocky outcrops that are the interface between the land and water. 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.
- b. Policies: To **manage** rocky shorefronts so as to insure that development proceeds in a manner which does not irreparable reduce the capability of the

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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 §22a-92(b)(2)(B)).

- c. Adverse Impacts: Degrading **tidal wetlands, beaches and dunes, rock shorefronts, and bluffs and escarpments** through significant alteration of their natural characteristics or functions (CGS §22a-93(15)(H)).

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

Increasing the hazard of **coastal flooding** through significant alteration of shoreline configurations or bathymetry, particularly within high velocity flood zones (CGS §22a-93(15)(E)).

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

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 (CGS §22a-93(15)(G)).

- d. Significant Issues and Parcels: The Hammock Point area of the Clinton shoreline is the only section identified on Coastal Resource Maps (See *Figure 1: Coastal Boundary, Clinton, Connecticut*) as “rocky shorefront”, this along with interspersed areas of “modified bluffs and escarpments”. In this case, the rocky headland portion of the shoreline is a result of the presence of larger glacial boulders and rocks that have been left behind as the finer gravels, sands and finer materials have been winnowed away by thousands of years of wave action. The portions identified as “modified bluffs and escarpments” are those areas where the winnowing process wasn’t as pronounced, leaving more of the smaller-sized sediments. As a result of the natural armoring of those sections of the shoreline, rocky shorefront areas are somewhat more resistant to erosion than the glacial bluffs that are still composed of the entire range of undifferentiated glacial sediment.

One of the values of rocky shorefronts is said to be the habitat value associated with a hard substrate that intertidal organisms such as barnacles, blue mussels, rockweed, starfish and oyster drills prefer. This is less of a value for Clinton’s shorefront in that the intertidal area fronting the rocky shorefront is primarily beach environment. The winnowed glacial deposit *does*, however, provide feeding grounds and refuge for shorebirds and dissipates and absorbs storm and wave energy without significant changes in

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shoreline configuration. There is no question that Clinton's rocky shorefront provides scenic vistas.

As in the case with modified bluffs and escarpments, the Town should consider developing a setback from the break in slope at the top of the area defined as "rocky shorefront". Currently, there are no provisions that disallow or discourage development as close to the edge of a rocky shorefront slope as a property owner cares to get. Like tidal wetland setbacks, such "rocky shorefront" and "bluff and escarpment" setbacks can be identified based upon the break in slope or some related topographic identification.

9. Shellfish Concentration Areas

- a. Definition: Shellfish concentration areas are actual, potential or historic areas in coastal waters, in which one or more species of shellfish aggregate (CGS §22a-93(7)(N)). Many shellfish concentration areas provide harvest opportunities for personal consumption or by aquaculture industry. 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, provide economic opportunities for the shellfish industry, and provide employment through the shellfish industry.
- b. Policies: 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 §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 §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 §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 §22a-92(a)(3)). To **protect**, and where feasible, **upgrade** facilities serving the commercial fishing and recreational boating industries (CGS §22a-92(b)(1)(I)).
- c. Adverse Impacts: 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 natural components of the habitat (CGS §22a-93(15)(G)).

Degrading **water quality** through the significant introduction into either coastal waters or groundwater supplies of suspended solids, nutrients, toxics,

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heavy metals or pathogens, or through the significant alteration of temperature, pH, dissolved oxygen or salinity (CGS §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 §22a-93(15)(B)).

Increasing the hazard of **coastal flooding** through significant alteration of shoreline configurations or bathymetry, particularly within high velocity flood zones (CGS §22a-93(15)(E)).

- d. Significant Issues and Parcels: Many of the issues connected to preserving, protecting and enhancing shellfish habitat are similar to the issues that face protection of coastal waters and estuarine embayments – water quality and related issues. Up until recently, the Clinton Shellfish Commission has been relatively inactive for a number of years. As a result, policies regarding shellfish have been overseen primarily at the state level through the Department of Agriculture, Aquaculture Division. That oversight, however diligent, cannot replace the local protections and guidance that area is afforded at the municipal level.

The most significant shellfish concentration areas in Clinton are located near the mouth of the Hammonasset River, near the mouth of the Indian River and around the eastern end of Cedar Island. Water quality issues impact all three of these areas. In addition, it is possible that proposed dredging activities could impact shellfish areas as well. Although the likelihood of this is small, channel dredging at the entrance to Clinton Harbor and the potential for channel deepening and enlargement in the Hammonasset and Indian Rivers could possibly impact those shellfish beds. These impacts could include both directed impacts of sedimentation from nearby dredging activities or the direct physical removal of beds by adjacent dredging. Again, based upon DEP scrutiny of dredging activities, precautions are taken in permit conditions to lessen the likelihood of such occurrences. The Town goes on record in this Municipal Coastal Plan by indicating its support for efforts to preserve, protect and enhance shellfish beds in Clinton waters by avoiding impacts through dredging and other development activities.

10. Shorelands

- a. Definition: Those 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 drumlin (CGS §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. Shorelands function as

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immediate sources of upland sediments, provided scenic vistas, and have high development and redevelopment potential.

- b. Policies: To **regulate** shoreland use and development in a manner which minimizes adverse impacts upon adjacent coastal systems and resources (CGS §22a-92(b)(2)(I)).
- c. Adverse Impacts: 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 §22a-93(15)(A)).

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

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

- d. Significant Issues and Parcels: As defined in the Coastal Management Act, shorelands resources are those areas within the Coastal Boundary other than the specific resources identified in this Plan (i.e. tidal wetlands, rocky shorefront, intertidal flats, etc.). Shoreland resources encompass much of the land within the Coastal Boundary that is not located immediately on the waterfront. This means that most of the land parcels between the rail line and the immediate coast are subject to the preservation policies associated with shoreland resources.

For practical purposes, this usually translates to discussions of stormwater runoff from a site and how that non-source point pollution source could potentially impact nearby (or not so nearby) coastal resources. Soil Erosion & Sediment Control Plans are important tools for evaluating just how effective the construction plans of a particular development will be in minimizing adverse impacts to coastal resources to the greatest extent possible. In certain high water use proposals, it is conceivable that issues of degradation of natural or existing drainage patterns of groundwater flow and recharge can be raised as well. This may be particularly true as the Town moves forward to deal with groundwater contamination issues related to the existence of septic systems and not sewer lines. In shoreland areas in closer proximity to the immediate coast, issues of degradation of visual quality may be raised as well.

Through the Coastal Site Plan Review process, the Town should continue to closely review applications for development within the Coastal Boundary even though such parcels may not be immediate waterfront with immediately

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evident adverse impacts. The land use boards should continue to be vigilant to insure that stormwater and associated contaminants be designed to be discharged off-site and into or close to identified coastal resources.

11. Submerged Aquatic Vegetation

- a. Definition: Submerged aquatic vegetation (SAV) 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 Sound and Fisher's Island Sound 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.

SAV beds are some of the most protective 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 are also an important food source for many waterfowl species.

- b. Policies: 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 (CGS §22a-92(c)(2)(A)).
- c. Adverse Impacts: 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 §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 §22a-93(15)(B)).

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 (CGS §22a-93(15)(A)).

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 (CGS §22a-93(15)(G)).

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- d. Significant Issues and Parcels: As indicated above, one of the most prevalent SAV's in Connecticut waters is eelgrass. Actually, eelgrass populations are more prevalent in the eastern Sound toward the Rhode Island border, but populations do exist as one moves westerly along the Connecticut coast. In Clinton waters, a population of eelgrass exists along the eastern border of Clinton Harbor in the area extending from just inside Hammock Point to the area of the Clinton Town Beach. This area tends to be somewhat protected, likely a contributor to the existence of the eelgrass bed.

Eelgrass is generally known to be somewhat ephemeral – the beds will exist for a time and then disappear. In the area of Clinton Harbor, activities that could impact the health of the eelgrass include the impacts of dredging that periodically occurs at the entrance of the harbor. Short-term sedimentation from the dredging could create adverse impacts on the eelgrass beds and should be minimized to the greatest extent possible. Although there are no current plans, the installation of groins along the eastern flank of the harbor could modify existing circulation patterns in a way that would likely be detrimental to any SAV beds. Again, the ephemeral nature of the eelgrass would suggest that a thorough investigation of such structures, if ever considered, should occur.

12. Tidal Wetlands

- a. Definition: 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 the 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 listed at the Department of Environmental Protection. In general, tidal wetlands in “low energy” environments are protected from direct wave action. They are flooded by tidal waters twice a day and support a diverse ecosystem of vegetation and wildlife.
- b. Policies: 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, crustacean 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; and such loss or despoliation will substantially reduce the capacity of such wetlands to absorb silt and will thus result in the

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increase 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 §22a-28 as reference by §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 disposals (CGS §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 §22a-92(c)(1)(B)).

To **disapprove** extension of sewer and water services into developed and undeveloped beaches and tidal wetlands except that, when necessary to abate existing sources of pollution, sewers that will accommodate existing issues with limited excess capacity may be used (excerpt from CGS §22a-92(b)(1)(B)).

- c. Adverse Impacts: Degrading **tidal wetlands, beaches and dunes, rocky shorefronts, and bluffs and escarpments** through significant alteration of their natural characteristics or functions (CGS §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 §22a-93(15)(G)).

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 §22a-93(15)(F)).

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

- d. Significant Issues and Parcels: Clinton Harbor is surrounded by a significant quantity of tidal wetlands, including the Hammonasset area on the western flank of the Harbor and the shoreline area east of the Hammonasset River. East of the Clinton Town Beach, the Hammock River wetlands system is

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extensive. In addition, upstream areas of both the Indian and Hammock Rivers are experiencing stress and degradation due to ongoing sedimentation. The encroaching invasive Phragmites will, at some point, likely be targeted for removal through tidal wetlands restoration efforts.

With the past several decades, proposals have come forth to expand existing marinas. Such efforts included components that require the removal and destruction of adjacent tidal wetlands. Such efforts were eliminated in the face of opposition and concern from numerous sources. This document establishes that destruction or modification of tidal wetlands for the purposes of marina expansion or other water-related development should be avoided and minimized at all costs, and should only occur if no other option exists and the development is clearly a benefit to the public at large.

Restoration and enhancement of tidal wetlands, including upstream areas of the Indian River and the Hammock River wetlands system should be actively promoted. The Hammock River wetland system should be actively promoted. The Hammock River wetlands system is of particular interest for education purposed as a result of its close proximity to the Clinton Town Beach. Further educational opportunities connected with the existing DEP-funded viewing pavilion should be pursued, including the design and installation of educational signage that is easily accessed and overlooks the extensive wetlands resources.



Hammock River west of Beach Park Road