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.