

Land and Water Resources Division

Connecticut Beach Association's Guide to Coastal Activities and Permitting

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What is a Beach Association?	3
Beach Activity Poster	4
Beach Association Permit Quick Tips	5
CT DEEP Jurisdiction	
- Coastal Jurisdiction Line (CJL)	6
- CJL Town List	7
Public Trust and Public Access	8
- Where Does Private Property End?	9
Signage and Fencing	10
Tidal Wetlands	11
Beach Grading	12
Beach Raking	13
Beach Nourishment	14
Beach Debris	15
Groins/Jetties	16
Boating Access	17
Swim Floats	18
Swim Areas	19
Natural Diversity Database (NDDB)	20
Horseshoe Crabs	21
Beach Nesting Birds	22
Osprey Platforms	23
Continued on next page	

# **Table of Contents**



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# **Table of Contents Continued**

Marine Animal Strandings	2
Dogs on the Beach	2
Beach Dunes	2
Beach Erosion	2
FEMA Regulated Beach Structures	2
Storm Preparation and Response	2
Paddlecraft	3
Saltwater fishing	3
Shellfishing	3
Mosquito Management	3
Enforcement	3
Common Acronyms	3.
Glossary	3
Contacts	4



**Connecticut** Department of Energy & Environmental Protection

LAND & WATER RESOURCES



# What is a Beach Association?



Connecticut's shoreline began to see development in the 1800s when wealthy landowners started to build shorefront homes. Beach associations later started to develop as groups of residents came together to form associations or quasi-governmental special districts that could better secure benefits cooperatively rather than individually. Historically, many associations were summer-only residences and desired services such as, garbage collection, road maintenance, or police services that were not provided by the town. Many also wanted to retain privacy in the use of recreational facilities. Beach associations typically consist of a single neighborhood and are found in various forms. Some are established by special acts of the state legislature and have been given specific powers comparable or equal to those of the towns in which they are located. Some were formed

by special acts and are more restricted in their powers, while others were incorporated as non-stock corporations within the state and are subject to the powers and restrictions which the state defines in the <u>Non-Stock Corporation Act</u>. Many towns now offer the services that initiated associations, and in some instances, towns have taken over such functions. More historical information can be found in the 1976 report, <u>Residential Associations in the</u> <u>Coastal Area</u>.

While many coastal properties are a part of an association, not all shoreline homes belong to a beach association.





## PROTECTED RESOURCES AND COMMON BEACH ACTIVITIES THAT REQUIRE APPROVAL



#### **BEACH ASSOCIATION ACTIVITIES PERMIT FLOW CHART**



# **CT DEEP Jurisdiction**



6

### What is the Coastal Jurisdiction Line (CJL)?

Pursuant to the Structures, Dredging, and Fill (SDF) statutes, DEEP's jurisdiction is called the Coastal Jurisdiction Line (CJL), which is a series of elevations computed for each regulated Town using the highest predicted tides found in Long Island Sound and the Connecticut, Housatonic and Thames Rivers, up to their respective heads of tide.

Please visit the <u>Coastal Jurisdiction Line Fact</u> <u>Sheet</u> for more information and to learn <u>how the</u> <u>CJL is calculated</u>.

If you are planning any development or activity below the CJL or within/ adjacent to tidal wetlands, please review the regulatory information at <u>Coastal Permits Fact Sheet</u> and contact DEEP Land & Water Resources Division regulatory staff at (860) 424-3019. The DEEP's Land and Water Resources Division (LWRD) regulates all activities conducted in tidal wetlands and in tidal, coastal, or navigable waters in Connecticut under the Structures, Dredging and Fill (SDF) statutes, Connecticut General Statutes (CGS) Sections <u>22a-359 - 22a-363h</u>, inclusive, and the Tidal Wetlands (TW) statutes, CGS Sections <u>22a-28 - 22a-35</u>, inclusive. The major objectives of the permit program are to avoid or minimize navigational conflicts, encroachments into the state's public trust area, and adverse impacts on coastal resources and uses, consistent with Connecticut's Coastal Management Act (CCMA), CGS Sections <u>22a-90 - 22a-112</u>, inclusive.

Pursuant to the SDF statutes, DEEP's jurisdiction is called the Coastal Jurisdiction Line (CJL). Towns have been assigned a CJL elevation that reflects the long-term elevation of the highest predicted tide based on scientific data and is fairly distributed along the shoreline and tidal rivers. Since the CJL is a DEEP established elevation, corresponding to the North American Vertical Datum of 1988 (NAVD88), the beach association can retain the services of a Connecticut licensed land surveyor and delineate where the CJL is located on the beach and shoreline.



# CJL Town List



Find the CJL for your town and property using the chart below, or go to <u>CJLPrintableElevationspdf.pdf (ct.gov)</u>.

	Long I	sland Sound	
Greenwich	5.5'	East Haven	4.5'
Stamford	5.5'	Branford	4.3'
Darien	5.5'	Guilford	4.0'
Norwalk	5.4'	Madison	3.7'
Westport	5.3'	Clinton	3.4'
Fairfield	5.2'	Westbrook	3.2'
Bridgeport	5.0'	Old Saybrook	2.9'
Stratford*	4.8'	Old Lyme*	2.6'
Milford*	4.7'	East Lyme	2.3'
Orange*	4.7'	Waterford*	2.1'
West Haven	4.6'	New London	2.0'
New Haven	4.6'	Groton	2.0'
Hamden	4.6'	Stonington	2.0'
North Haven	4.6'		

	Housa	atonic River	
Stratford*	5.0'	Orange	5.4'
Milford*	5.1'	Ansonia	5.4'
Shelton	5.4'	Derby	5.4'

Connecticut River			
Old Lyme*	2.9'	Rocky Hill	3.4'
Old Saybrook	2.9'	Glastonbury	3.5'
Lyme	2.9'	Wethersfield	3.6'
Essex	2.8'	East Hartford	3.8'
Deep River	2.9'	Hartford	3.8'
Chester	2.9'	South Windsor	3.9'
East Haddam	3.0'	Windsor	3.9'
Haddam	3.0'	East Windsor	15.0'
East Hampton	3.0'	Windsor Locks	15.0'
Middletown	3.1'	Suffield	40.5'
Portland	3.3'	Enfield	40.5'
Cromwell	3.3'		

Thames River			
New London*	2.1'	Montville	2.3'
Groton*	2.1'	Preston	2.3'
Waterford*	2.2'	Norwich	2.4'
Ledyard	2.3'		

\* Municipalities with two CJL elevations.

# Public Trust/ Public Access



8

Under the common law public trust doctrine, the State of Connecticut holds the submerged lands and waters waterward of mean high water in trust for the public. *The general public may freely use these lands and waters, whether they are beach, rocky shore, or open water, for traditional public trust uses such as fishing, shellfishing, boating, sunbathing, or simply walking along the beach.* In Connecticut, a line of state Supreme Court cases dating back to the

Connecticut, a line of state Supreme Court cases dating back to the earliest days of the republic confirm that private property ownership ends at the mean high water line, and that the state holds title to the lands waterward of mean high water, subject to the private rights of littoral or riparian access.

### What is the public trust area?

The public trust area comprises submerged lands and waters waterward of the mean high water line in tidal, coastal, or navigable waters of the state of Connecticut. The public trust area extends from the water up to a prominent wrack line, debris line, or water mark.

### In general, if an area is regularly wet by the tides, you are probably safe to assume that it is in the public trust.

The public trust area is also sometimes referred to as tidelands, and is defined as "<u>public beach</u>" by the Connecticut Coastal Management Act, C.G.S. 22a-93(6).

### What rights does the public have within the public

#### trust area?

Below the mean high water line and in navigable waters, the Public shall have the right to fish, boat, sail, hunt, sunbathe, take shellfish, gather seaweed, cut sedge, and pass and repass.

# What rights does the adjacent private landowner have within the public trust area?

The adjacent landowner has the exclusive riparian or littoral right of access to navigable water. **This does not mean that the owner can exclude others from the adjacent waters**, but that only the owner may get to the water from his or her upland, as by constructing a dock or other structures where appropriate and appropriately authorized.

In terms of access, navigable waters are equivalent to a public road, and a dock serves the same purpose as a private driveway. A littoral landowner may not exclude the public from lawful uses of the public trust area, just as an upland owner cannot exclude the public from driving or walking on the street in front of their house. Of course, nuisance behavior in the public trust, such as littering, intoxication, etc. would constitute a breach of the peace, just as if done by neighbors on adjacent upland property.

**Littoral rights** are the rights of an owner whose land abuts tidewaters. The owner has the right to get to the water from his or her upland, such as by constructing an authorized dock where appropriate.

# Where Does Private Property End?

Coastal Jurisdiction Line

**Mean Low Water** 

**Mean High Water Line** 

In almost every case, private property ends, and public trust property begins, at the mean high water line (often referred to as "high water mark" in court decisions).

**Private Ownership** 

**Ends Here** 

Private Property ends at the mean high water line

Mean high water is the average of high tides over a defined period. Its elevation can be obtained from standard references, including the <u>U.S.</u> <u>Army Corps of Engineers Tidal</u> <u>Flood Profile charts</u>.

Wrack line is the line of debris left on the beach by high tide and is used to determine the high tide line.

ublic Trust

Wrack Line

Mean low water is the average of low tides over a defined period. Its elevation can be obtained from standard references, including the <u>U.S.</u> <u>Army Corps of Engineers Tidal</u> <u>Flood Profile charts</u>.

9

# Signage and Fencing



10

# My beach association wants to put up a "Private Beach" sign. Is this allowed?

Under the common law public trust doctrine, the State of Connecticut holds the submerged lands and waters waterward of the mean high water line in trust for the public. This means that private ownership ends at the mean high water line. Even at a private beach in Connecticut, the public has the right to fish, boat, sail, swim, sunbathe, walk along the beach, etc. so long as it is waterward of the mean high water line. For this reason, **LWRD does not encourage signage indicating beaches as private.** 

Exclusionary private beach association signs placed at or waterward of the mean high water line would be subject to DEEP authorization and are unlikely to be permitted. Other safety or informational signs may be permitted by DEEP.

### My beach association wants to put up a fence. Is this allowed?

If a beach association wants to install fencing, a full permit is required for any portion of fencing that crosses waterward of the Coastal Jurisdiction Line. Please note that LWRD does not permit fencing that limits access to the public trust or impedes beach access. Contact your local Planning and Zoning Commission to learn more about your municipality's fencing requirements.



Above: Fencing put in place to protect dunes and promote walkways is an acceptable use of fencing along beaches. Fencing should not be used as a method of deterring or blocking the public from fully enjoying the public trust.

# Private ownership ends at the mean high water line and the state holds title to the lands waterward of mean high water.

Any fencing or signage installed to deter the public from the public trust area is considered to be inconsistent with the public trust doctrine and the policies of the CT Coastal Management Act.

# **Tidal Wetlands**



The DEEP's Land and Water Resources Division regulates all activities conducted in tidal wetlands and in tidal, coastal, or navigable waters in Connecticut under the Structures, Dredging and Fill (SDF) statutes, Connecticut General Statutes (CGS) Sections 22a-359 - 22a-363h, inclusive, and the Tidal Wetlands (TW) statutes, CGS Sections 22a-28 - 22a-35, inclusive. The major objectives of these permit programs are to avoid or minimize navigational conflicts, encroachments into the state's public trust area, and adverse impacts on coastal resources and uses, consistent with Connecticut's Coastal Management Act (CCMA), CGS Sections 22a-90 - 22a-112, inclusive.

DEEP directly regulates activities proposed within tidal wetlands, which are defined in CGS Chapter 440 Wetlands and Watercourses <u>Section 22a-29</u>. Tidal wetlands are strongly protected in Connecticut, visit <u>DEEP's Tidal Wetlands</u> page to learn more.

To accurately delineate the limits of tidal wetlands at your property, the beach association can retain the services of an environmental consultant familiar with coastal resources, tidal flows and tidal wetland plant species.

### Examples of tidal wetlands plants in CT:



Saltmarsh grass Spartina alterniflora



High-tide bush Iva frutescens



Sea Lavender Limonium carolinianum



Tidal wetlands are areas which border on or lie beneath tidal waters. These areas may grow or be capable of growing some, but not necessarily all, of the species list in <u>Chapter 440 -</u> Wetlands and Watercourses (ct.gov)).



Photo credit: Paul Fusco

11

If you are planning any development or activity below the CJL or within tidal wetlands, please review the regulatory information at <u>Coastal Permits Fact Sheet</u> and contact DEEP Land & Water Resources Division regulatory staff at (860) 424-3019. Also, consult your town's zoning regulations for setbacks for work adjacent to tidal wetlands.

# **Beach Grading**

### **Definition:**

DEEP defines "Beach Grading" as the redistribution and regrading of on-site beach sand between Mean Low Water and the Coastal Jurisdiction Line <u>without</u> <u>the nourishment or addition of any off-site beach sand or other material</u>.

### **Permitting:**

Beach grading can be conducted as a non-reporting activity under DEEP's General Permit for Coastal Maintenance Activities (GP) <u>General Permit for Coastal</u> <u>Maintenance (ct.gov)</u>, provided the following conditions and restrictions are followed:

- 1. Beach nourishment or addition of any off-site beach sand or other material is prohibited.
- 2. Beach grading waterward of the Mean Low Water mark is prohibited.
- 3. Beach grading in areas of tidal wetlands or intertidal flats is prohibited.

a. A minimum of a 10-foot setback shall be established from any tidal wetlands or watercourses in and adjacent to the area where work is to be conducted or areas which are to be used for access to the work area. Such setback area(s) shall be flagged so as to be readily identifiable by contractor personnel until the work is completed.

- 4. The storing, staging and operation of beach grading equipment in-water at any time is prohibited.
- 5. Beach grading shall not impede access to any riparian or littoral property.
- 6. Beach grading shall not take place on any leased or managed shellfish bed.
- 7. All beach grading work is prohibited between <u>April 1st and September 15th, inclusive, of any year</u> to protect spawning horseshoe crabs and nesting and migrating shorebirds:

a. An exemption to this seasonal restriction may be requested from DEEP's Land & Water Resources Division and will require the submittal of supporting biological surveys that document "no impact" to horseshoe crabs and shorebird life cycles and movement. An affirmative DEEP exemption approval in writing is required to meet this GP requirement.

 Prior to conducting beach grading, the beach association/property owner shall provide copies of the GP to any employed contractor and shall make the GP available for inspection at the site whenever work is being performed at the site.



Please be aware that beach grading activities that do not meet the GP eligibility criteria will require the submission of an <u>individual</u> <u>Structures, Dredging & Fill permit</u>.

# **Beach Raking**

### **Definition:**

The use of motorized equipment and any associated implements on a beach waterward of the Coastal Jurisdiction Line for the purpose of removing macroalgae (seaweed), stones, shells, or other natural or unnatural debris.

### **Permitting:**

Beach raking can be conducted as a non-reporting activity under DEEP's <u>General Permit for Coastal Maintenance</u> (GP), provided the following conditions and restrictions are followed:

- 1. Beach raking waterward of the Mean Low Water mark is prohibited.
- 2. Beach grading in areas of tidal wetlands or intertidal flats is prohibited.

A minimum of a 10-foot setback shall be established from any tidal wetlands or watercourses in and adjacent to the area where work is to be conducted or areas which are to be used for access to the work area. Such setback area(s) shall be flagged so as to be readily identifiable by contractor personnel until the work is completed.

- 3. The storing, staging, and operation of beach raking equipment in-water at any time is prohibited.
- 4. Beach raking that uses motorized equipment or employs implements which penetrate more than two inches is **prohibited between May 10th and July 15th**, inclusive, of any year in order to protect spawning horseshoe crabs:

An exemption to this seasonal restriction may be requested from DEEP's Land & Water Resources Division and will require the submittal of supporting biological surveys that document "no impact" to horseshoe crabs and shorebird life cycles and movement. An affirmative DEEP exemption approval in writing is required to meet this GP requirement.

5. Prior to conducting beach raking, the beach association/property owner shall provide copies of the GP to any employed contractor and shall make the GP available for inspection at the site whenever work is being performed at the site.

Please note that surficial beach raking by hand may be conducted at any time.



Any material including seaweed, stones, shells, or other natural or unnatural debris removed during beach raking activities shall be disposed of above the coastal jurisdiction line and outside of any tidal wetlands.

Please be aware that beach raking activities that do not meet the GP eligibility criteria may require the submission of an <u>individual</u> <u>Structures, Dredging & Fill permit</u>.





# **Beach Nourishment**



14

#### **Definition:**

The artificial addition of sand, gravel, or other similar natural material to a beach or subtidal area adjacent to a beach to increase beach elevations and width at an eroded section.

### **Permitting:**

Any first-time beach nourishment projects will require the submission of an <u>individual</u> <u>Structures, Dredging & Fill (SDF) permit</u> and require the following information:

- Historic shoreline beach location/erosion information (aerial photos, GIS information, previous surveys, etc.);
- New beach surveys, including plan view and profiles;
- Coastal resources identification (tidal wetlands, intertidal flats, rocky shorefront, etc.);
- Wave energy and erosion potential analysis for shoreline;
- A DEEP NDDB review for CT State Listed Species;
- Existing sand analysis for color, texture, grain size, etc.;
- Proposed volume of sand addition and new proposed beach profile; and
- Identified approved source of sand for the project.

Beach nourishment projects that have been previously authorized by DEEP or are included in a larger <u>Living Shoreline</u> approach can be approved under a Certificate of Permission, with pre-application coordination with Land & Water Resources Division staff.



Information from Nourish the Beach | Connecticut Beaches and Dunes: A Hazard Guide for Coastal Property Owners (uconn.edu) and Beach Nourishment (U.S. National Park Service) (nps.gov)

#### **Pros:**

- A wider and higher beach can provide storm protection for coastal structures, create new wildlife habitat, and enhance the beach for recreation.
- Beach nourishment can be an effective, temporary response to coastal erosion, though it tends to be costly, and its effectiveness is generally short-lived (5 years or less), especially in areas with high erosion rates.

### Cons:

- Dumping sand/sediment in large quantities in the intertidal area can suffocate benthic communities which are the food source for many species of seabirds and fishes.
- Often, beach nourishment projects demand a continuous resupply of sediment due to the erosional nature of the involved beach.

Generally, there are two sources of material in Connecticut that have been used for beach nourishment:

"beneficial reuse" of dredged material, usually

**1** in conjunction with a dredging project of navigable waterways; and

upland sourcing of material, typically from a gravel

2 pit, where trucks are used to transport material from an upland source to the beach.

© RACE Coastal Engineering

# **Beach Debris**



Removal of debris is a regulated activity that is covered under "Beach Raking" in DEEP's <u>General Permit for Coastal Maintenance</u>: (6) beach grading or beach raking conducted in the area between mean low water and the coastal jurisdiction line.

#### **Organic Materials:**

Eelgrass or other plant material that wash ashore can be composted. For large scale composting, check with your municipality to see if composting can be incorporated into the local transfer station.

Oyster shells can be recycled and used in crucial oyster restoration projects. CORR, <u>Collective Oyster Recycling</u> and <u>Restoration</u>, is a nonprofit organization dedicated to facilitating a collaborative statewide shell recycling network and supporting shellfish restoration projects in Long Island Sound. Visit <u>CORR</u> to learn more about how to recycle oyster and clam shells. You can also learn more about shell recycling initiatives being introduced in Connecticut at <u>Connecticut Sea Grant</u>. Beach debris that washes ashore can range in size from seaweed and small sticks to massive trees, tree trunks, and even derelict docks. What options do homeowners and beach associations have in cleaning up their beaches? Even though the shoreline is regulated by DEEP, natural debris that enters Connecticut's waterways such as trees, logs, and limbs are not marked or removed by DEEP. If such debris is lodged in and blocking a federal navigation channel, the United States Coast Guard ("USCG") should be contacted to address it. Similar to the responsibility of a homeowner for shoveling public sidewalks on their property, debris that washes up upon a private shoreline is the responsibility of the property owner.



Photo Credit: Town of Westbrook, Public Works Director, John Riggio. Photo of dock that washed ashore on Westbrook's Town Beach in the summer of 2023.

To learn more about Marine Debris in general, please visit <u>NOAA's</u> Marine Debris Program.

# **Groins and Jetties**



## The U.S. Army Corps of Engineers defines **Groins:**

Shore perpendicular structures, used to maintain updrift beaches or to restrict longshore sediment transport.



#### **Jetties:**

Shore perpendicular structures and are placed adjacent to tidal inlets and harbors to control inlet migration and minimize sediment deposition within the inlet.



By design, both structures are meant to capture sand transported by the longshore current, which depletes the sand supply to the beach area immediately down-drift of the structures. Groins and jetties can destabilize the coastal system and disrupt natural sediment regimes, which the CCMA defines as an adverse impact to

Connecticut's coastal resources.

This adverse down-drift impact causes erosion and loss of beach sand depth and width. In response, down-drift property owners often seek authorization to install groins to counteract the increased erosion. This leads to a cascading effect of installations.

That is why DEEP highly



Aerial view of CT shoreline showing erosion and loss of sand from down-drift impact from groin installation.

scrutinizes any applications to retain, repair and modify existing groins and jetties, and generally discourages the installation of new groins and jetties.

# It is important for a beach association to survey its property, identify any existing groins or jetties, and search the association files for corresponding DEEP licenses.

Many DEEP licenses for groin repairs include conditions to minimize impacts, such as lowering/shortening of existing groins, monitoring sand movement and beach profiles, and beach nourishment of down-drift properties. Since structures such as

Any DEEP license will require the property owner to modify the structure to allow for reasonable public access over or through the groin or jetty. These modifications include lowering the height of the structure, installing stairs/ladder or an opening in the structure, or even removing the structure itself. Since structures such as groins generally cause the trapping of material on one side and erosion of material on the other, applicants may be responsible for a long term beach nourishment plan.

16

# **Boating Access**



Under the Structures, Dredging, & Fill (SDF) and Tidal Wetlands statutes, DEEP directly regulates all boating access structures in Connecticut's tidal, coastal, or navigable waters and tidal wetlands, including:

- 🔆 ramps
- floating docks

\* moorings

walkways

🔆 stairs

- launch ramps
- ✤ fixed piers

It is important for a beach association to survey its property, identify any existing boating access structures and search the association files for corresponding DEEP licenses. If you have questions on DEEP authorizations or the regulatory status for identified structures, please follow the contact instructions on <u>Coastal Property</u> <u>Owner's Guide (ct.gov)</u>.



Depending on the location, moorings are also licensed by a State appointed Harbor Master.	To determine whether the waters off your beach are within your Town Harbormaster's jurisdiction, please use the contact information in the table at <u>Connecticut Harbor Masters</u> . If you are not regulated by the Town Harbormaster, then you would need to file a registration for a Non-Harbor Mooring general permit with DEEP (see <u>Non-Commercial Harbor Master Mooring Permit Application</u> and <u>Minor Coastal Structures General Permit</u> (DEEP-OLISP-GP-2015-01).
Permitting for New and Existing Structures	Existing unauthorized boating access structures can be retained under various DEEP license types, including a Certificate of Permission, an abbreviated process that can approve pre-1995 structures that have been maintained and serviceable to the present. Other DEEP license types include individual SDF permits, tidal wetlands individual permits, and general permits, both reporting and non-reporting.
Maintenance and Modifications	If the association plans to conduct any maintenance and/or modifications to existing boating access structures or plans to construct/install any new structures, please review the regulatory information at <u>Coastal Permits Fact Sheet</u> and contact DEEP Land & Water Resources Division regulatory staff at (860) 424-3019.

# Swim Floats



### Swim Float:

"Swim float" is defined in the <u>General Permit for Minor</u> <u>Coastal Structures</u> (DEEP-OLISP-GP-2015-01) as a single floating or inflatable structure unattached to land or to any other structure, secured by bottom anchor, seasonally installed and removed, and used solely for swimming.

### Swim Float General Permit Conditions:

- **1** Must not exceed 200 square feet.
- **2** There cannot be more than two swim floats installed at any site. They may not be rafted or connected to each other.
- **3** A swim float associated with a swim area designated under section 15-121 of the General Statutes must be located within the boundaries of that swim area.
- 4 Swim floats must have at least 6 inches of freeboard. If the float is inflatable, it can not have more than 3 feet of freeboard.
- Swim floats must have a silver or international orange reflective band of at least 2 inches in width placed above the waterline around the sides of the upper perimeter of the float unless located within the boundaries of a swim area.

### Swim float specific guidance:

Placement, removal, and replacement of a swim float is authorized under the <u>General Permit for Minor Coastal</u> <u>Structures</u>. Registration is not required for swim floats, but must meet the specific conditions listed in Section 5 (f) of the general permit and must be removed from the water from November 15th through April 15th each year.

- 6 Swim floats must be secured by appropriate bottom anchors and tackle to avoid dragging or shifting position.
  - Swim floats are <u>not</u> to be secured by steel cables.
- 8 Swim floats must be used solely for swimming and associated water-based recreation. They may not be used to moor or dock a vessel used for navigation.
- **9** Swim floats shall not to be located on or over tidal wetlands or submerged aquatic vegetation.
- **10** Swim floats shall not be placed within a federally designated navigation channel or anchorage area and shall not create a hazard to or interfere with existing navigation uses in any waterway including channels, fairways, turning basins, or transient anchorages.



#### More information about swim floats can be found in the General Permit for Minor Coastal Structures.

# Swim Areas



To establish a swim area in Connecticut's coastal waters, a beach association must obtain a DEEP Regulatory Marker Permit pursuant to the Regulations of Connecticut State Agencies (RCSA) Section 15 -121-A5. This application can be found on the DEEP website.

## Swim area specific guidance:

SWIM

- Written approval from the chief executive authority of the town/city where the regulatory marker will be placed must be obtained prior to submitting an application to DEEP for a regulatory marker.
- 2 Applications must include an "Improvement Location Survey" completed by a Connecticut licensed land surveyor. This specific survey depicts the horizontal location of the buoys in relation to the applicant's property boundaries and littoral or riparian areas.
- Only regulatory markers that meet DEEP authorized design, size, and layout standards can be used, and will be clearly specified in the permit.
- Depth is generally limited to no greater than five feet at low water, unless a swim float is in place (DEEP permit also required), in which case a water depth of ten feet is allowed. In the case of extensive shallow bottoms or steep drop offs near shore, the size of the swim area must be reasonable and not extend out any further than needed for swimming.



- All vessels, including kayaks, canoes, and rowboats, are prohibited inside authorized swim areas per RCSA Sec 15-121-B12(a). Standup paddleboards are exempt from this prohibition and may be used in swim areas.
- 6 Swim area must be at least five feet away from each property line and the float line must not cross littoral property boundaries.

These boundaries are generally the extension of the shoreline property boundary or a line perpendicular from shore.

A letter of permission from the affected adjacent property owner may waive this requirement.

 Regulatory marker permits in tidal waters may require additional permits from the <u>US Army Corps</u> <u>of Engineers</u> and/or <u>US Coast Guard</u>, depending on the water body.

5

SWIM

AREA

# Natural Diversity Data Base





Photo credit: Paul J. Fusco / CT DEEP Wildlife

NDDB conditions for horseshoe crabs and nesting shorebirds are common in many coastal permits.



Photo credit: Paul J. Fusco / CT DEEP Wildlife

DEEP's Natural Diversity Data Base (NDDB) program tracks and protects rare species and critical habitats in Connecticut. Through the project review process, they help minimize the impacts of regulated activities on state listed species.

Certain state and local permits require an NDDB consultation as part of the permit process. Regulated activities, such as work waterward of the Coastal Jurisdiction Line, require that an NDDB application is filed and that a determination is received prior to filing the associated permit application.



Photo credit: Paul J. Fusco / CT DEEP Wildlife

NDDB maps indicate known locations of state listed species and critical habitats and serve as a screening tool for filing. If a project location falls within an NDDB State Listed Species Area on the map, then the applicant must submit a Request for Natural Diversity Data Base (NDDB) State Listed Species Review Form and all required attachments for further review.

NDDB staff may provide recommendations for avoiding impacts to state listed species. In some cases, biological surveys must be performed by qualified individuals, in order to determine species presence and appropriate conservation measures.

For more information about the NDDB program and process, please visit Endangered Species Review/Data Requests (portal.ct.gov)

# Horseshoe Crabs



Horseshoe crabs are living fossils, surviving for hundreds of millions of years in the depths of the ocean through five mass extinction events. Not true crabs, horseshoe crabs are closely related to arachnids (e,g., spiders) sporting a hard carapace over their bodies and a tail-like feature called a telson, which is used as a rudder and to help flip themselves over if they end up on their backs.

Though they are a resilient species, their population numbers are either dwindling or being maintained at impoverished levels, which is concerning for the fish, reptiles, and birds that rely on horseshoe crab eggs and adult crabs alike for food.

How do horseshoe crabs effect my beach association? Beach grading, nourishment, and mechanized raking all are prohibited during horseshoe crab spawning season, May 10 to July 15, to protect the crabs and their nests.

All photos on page are courtesy of Paul J. Fusco / CT DEEP Wildlife



### Horseshoe crab facts:

- ✤ Spawning Season: mid May June
- Peak spawning: evening high tides during full and new moons on beaches that are primarily protected from surf within bays and coves.



- Females will dig nests approximately 8" deep.
- Young crabs molt their outer shell as they grow.
- The long tail like feature is called a telson and is used as a rudder.
- A common myth is that the telson is used as a spear. It is not dangerous and should not be viewed as a threat to humans.
- Their blueblood contains Limulus Amebocyte Lysate and is harvested for biomedical purposes. The horseshoe crabs used are returned to the sea, however up to 30% do not survive.

You can help protect the future of the horseshoe crabs by not disturbing them and their nests during spawning season, May through June. You may see groups of the crabs spawning in the waves, leaving thousands of fertilized eggs in the sand of the beach intertidal zone. It is critical to allow the eggs time to hatch and horseshoe crab larvae to travel out to offshore intertidal flats, where they can continue on their journey to adulthood.

For more information, please visit: <u>Horseshoe Crabs: the Real</u> <u>Bluebloods</u>, <u>Maritime Aquarium: Meet the Animals</u>, <u>Sacred Heart</u> <u>University's Project Limulus</u>, and <u>Natural History: The Amazing</u> <u>Horseshoe</u>.

# **Beach Nesting Birds**



Human disturbance at beach nesting areas may result in nest abandonment by state threatened piping plovers and least terns, or the loss of eggs and chicks. In response, each year DEEP delineates nesting sites with rope and fencing to dissuade people from disturbing the birds and nests.

These shorebirds need special protection throughout their April to August nesting season and especially during the increased beach activity over the long Memorial Day and Fourth-of-July weekends. By obeying the warning signs and staying away from fenced areas, beach visitors can avoid disturbing the nesting birds.

Both piping plovers and least terns use a shallow depression in sand for a nest. Their sand-colored eggs and young are so well camouflaged that they are easily stepped on. When intruders approach, young piping plovers are likely to stand motionless while the adult tries to attract attention by pretending to have a broken wing or flying around the intruder. If you witness this behavior, DEEP advises you to move away from the area at once.



All photos on page are courtesy of Paul J. Fusco / CT DEEP Wildlife

For more information: Piping Plover (ct.gov) Least Tern (ct.gov) Share the Shore with Nesting Birds (ct.gov) Common Shorebirds of Connecticut Protect Shore-Nesting Birds | Audubon Connecticut

#### **Protect the nest:**

- Walk close to the water on the lower beach, this way birds can rest and nest on the upper beach. Follow any signs and guidance they provide, and respect all areas fenced or posted for protection of wildlife.
- Refrain from walking dogs, especially off leash, or allowing house cats to roam freely on beaches during the nesting season.
- Keep your distance while photographing or birdwatching so the birds feel safe to attend to their eggs and chicks.
- Remove trash and food scraps which attract animals that might eat piping plover eggs and chicks.
- \* Do not feed animals or wildlife on or near the beach.
- Do not attempt to "rescue" young birds that appear to be lost or too young. They should not be removed from the beach to be cared for at home. In most cases, when immature birds are found alone, the adults have been frightened away but remain nearby and will return to their young once the intruder leaves.



It is illegal to hold wildlife for rehabilitation without proper state or federal permits. Any violations affecting wildlife should be reported to the DEEP Emergency Dispatch Line at 860-424-3333.

# **Osprey Platforms**

#### Installation of an Osprey Platform and Perch Pole:

Installation of an osprey platform and/or perch pole is authorized under Section 3(a)(3) of the <u>General Permit for Minor Coastal Structures</u> (DEEP-OLISP-GP-2015-01) and has very specific eligibility criteria and approval notification requirements.

**Osprey Platform:** a single pole or group of poles each less than 20' long and less than 15" diameter, with a platform greater than 10' off the ground and having a surface area less than 25 square feet.

**Perch Pole:** a pole associated with an osprey platform that is less than 10' long and less than 15" diameter which is utilized for the purposes of providing a perch for osprey.

#### **General Permit Requirements:**

Osprey platforms and perch poles that are consistent with designs shown in the <u>General Permit</u> and are more than 300' from overhead power lines and any other osprey platforms, more than 600' from human disturbance sources, have a platform at least 10' from an area of open water, and a perch pole within 20' of the osprey platform, are eligible for the general permit without any additional approvals from DEEP. Please view the <u>guidance document</u> for more details and for information regarding non-conforming platforms and perch poles.



Photo credit: Paul J. Fusco / CT DEEP Wildlife

For more information:

#### Osprey (ct.gov)

OspreyPlatformPerchPole Guidancepdf.pdf (ct.gov)

About Ospreys | Audubon Connecticut

Osprey Nation Map & Data - Connecticut Audubon Society (ctaudubon.org)



#### **Osprey Facts:**

- Osprey are large hawks whose wings form a distinctive crook that can be distinguished in flight.
- They nest in coastal areas and large inland lakes and fly south for the winter, returning to Connecticut in late March. Nest sites are usually near or over water.
- Pairs typically return to the same nest sites each year and add new materials to the old nest.
- An average of 3 eggs are laid in April and the incubation period is one month.
- Adults are protective of the nest site and may exhibit aggressive behavior at the approach of a potential stranger.
- The osprey population was severely impacted by developmental pressures and eggshell thinning caused by DDT contamination.
- The number of active nests in the coastal zone between New York City and Boston dropped from an estimated 1,000 in the 1940s to 150 in 1969.
- Restrictions on the use of organochlorine pesticides and the banning of DDT in the 1970s have stimulated a steady recovery of osprey populations.
- DEEP Wildlife surveys active osprey nests during the summer and welcomes the help of volunteers.
- Modern day threats to osprey include: availability of food, secure nesting sites, and entanglement from items such as fishing line, 6pack rings, balloons, kite string, and other trash.
- Platforms and poles installed in tidal wetlands require a permit; many options fall within the General Permit for Minor Coastal Structures.

# Marine Animal Strandings





Marine mammals, both dead and alive, are protected under the <u>Marine</u> <u>Mammal Protection Act</u> of 1972. The <u>Endangered Species Act</u> of 1973 conserves endangered and threatened species and their ecosystems. Under these acts, the public is prohibited from harassing, harming, pursuing, wounding, killing, capturing, or collecting marine species. National Oceanic and Atmospheric Administration (NOAA) Fisheries is one of the federal entities responsible for implementing these acts. <u>Mystic Aquarium's Animal Rescue Program</u> (ARP) works closely with NOAA to respond to sick, injured, entangled, stranded, or dead animals along Connecticut's coastline.

### What to do if you see a dead or alive marine mammal or sea turtle:

- Leave a message on the Mystic Aquarium's 24-hour hotline, 860.572.5955 x 107 and expect a return call.
- Keep people and pets <u>at least 150 feet away</u> from the animal and make sure to give it plenty of space!
- Even if the animal appears to be dead, keep your distance, some zoonotic diseases are harmful to humans and can be transferred to pets.
- Do not touch, feed, or attempt to help the animal in any way- for the animal's safety, as well as your own.

To learn more about reporting strandings and injured marine animals throughout the United States, visit <u>NOAA's</u> Reporting page.



Report marine mammal or sea turtle sightings (dead or alive) to Mystic Aquarium's 24 hour hotline: 860.572.5955 x 107

# Dogs on the Beach





Rules and regulations regarding dogs on the beach vary and depend upon the municipality and/or association.

#### What are the rules at Connecticut State Parks regarding dogs on the beach?

The majority of Connecticut State Parks allow dogs, but according to state regulations, dogs must be on a leash no longer than 7-feet and under the control of the owner or keeper at all times. <u>Pets on a leash</u> are permitted in most state parks and forests, except in buildings, swimming areas, and camping areas.

Before bringing your dog to one of the state parks, check "Related Information" on the individual park's page within the <u>DEEP Park's website</u>.

#### **Shoreline Specific Parks:**

- Harkness, Rocky Neck, and Silver Sands: dogs are prohibited on the beach yearround.
- Hammonasset Beach State Park: leashed dogs are allowed on the beach ONLY from September 30 through April 1.
- **Sherwood Island State Park:** leashed dogs are not allowed anywhere in the park from April 15 through September 30.

The "no dogs on the beach" rule provides protection for beach-nesting shorebirds, like piping plovers and least terns.

#### What are the rules for Municipalities and Beach Associations?

Every municipality, tax district, and beach association has their own set of ordinances. Make sure to check with your municipality and association for their rules and regulations before bringing your furry friend.

#### What about dogs in swim areas?

The Department of Public Health regulates public swimming areas. <u>Section 19a-36-</u> <u>B61</u> (10) prohibits domestic animals in the water and immediate shoreline associated with the water of a public swimming area when the public swimming area is open for use.

# **Beach Dunes**

### What is a beach dune?

Beach dunes are formed by the accumulation of sand, at the upper (landward) end of the beach that is driven by water, wind currents, and erosion. Not all beaches in Connecticut have dunes because of coastal development and geologic processes. Since Long Island forms a protective barrier to the Connecticut coast, Connecticut's dune systems are smaller and not as developed as the coastlines directly fronting the Atlantic Ocean.

### Why are beach dunes important?

Dunes are important to both natural coastal features and manmade structures by reducing flooding and structural damage, and also by providing important ecological habitat. Dunes store sand and supply it to eroded beaches, as well as dissipate wave energy. They provide nesting and feeding areas for birds, including state protected piping plovers and least terns. By preserving or enhancing Connecticut's dunes systems, we protect birds, native plants, reptiles, and invertebrates that depend on these areas, as well as protect coastal property from flooding and damage.

### Beach dune protection:

There are many ways to help protect and enhance beach dunes. The easiest protection method is to control pedestrian access by using specific paths in order to keep people and pets off fragile dunes and beach grass. Fencing can help prohibit travel in fragile areas and also can help



sand accumulate in the dunes. While fencing may seem like a simple, cost effective solution, it is important to note that it may restrict bird or turtle habitat and can easily be destroyed in a storm. Fences should be installed landward of the CJL and may need to follow local ordinances. Replanting grass, especially after storm damage, is another way to maintain dunes. Please note: **FEMA regulations prohibit the man made alterations of sand dunes**.



26

#### Four Ways to Protect Dunes:

- 1. Stay off of and out of the dunes.
- 2. Plant beach grass. American beach grass has an extensive root system that helps stabilize the dune's sand, preventing erosion.
- 3. Create minimal paths and walk overs to prevent crushing multiple areas of dunes.
- 4. Strategically install fencing.

### More Information:

- Connecticut Beaches and Dunes: A Hazard Guide for Coastal Property Owners - Protecting Dunes
- 🔆 <u>Coastal Management Manual</u>
- Beaches and Dunes, UConn



Photo credit: Paul J. Fusco / CT

# **Beach Erosion**



### What is beach erosion?

Erosion is defined in the Connecticut General Statutes Section 22a-327(3) as the detachment and movement of soil or rock fragments by water, wind, ice and gravity. Beach erosion typically refers to the loss of beach sand to another coastal spot or transferred to deeper water. Sea-level rise, seasonal changes in wave action, barrier beach migration, storm events, and human impacts to sand supplies can all cause coastal erosion.

### What problems are often associated with erosion?

Coastal erosion can result in beach loss, property damage, and in severe cases, loss of property. Seawalls, bulkheads, revetments, and groins trap sand, which prevents the sand from being accessible to the beach. While these structures prevent land from being lost to erosion, the beach in front of seawalls is often lost over time, and erosion on opposing sides of jetties and groins is accelerated. For this reason, DEEP rarely authorizes new construction of hardened shoreline flood and erosion control structures and will only authorize structures that pre-date 1995. Please see the "Groins and Jetties" page for more information on these types of coastal structures.

### Can beach erosion be avoided?

Coastal erosion is a natural process. Honoring the natural shoreline and keeping man made structures away from the beach is one of the best ways to protect shoreline property. Beach dunes are nature's best defense against flooding and erosion. Planting grasses and native plantings are ways to help stabilize sand.

### How can I protect my coastal property?

Contacting town officials, state agency staff, and coastal experts is the first step for any anticipated work along the shoreline and when mitigating coastal erosion. It is best to start exploring and understanding options early on. DEEP's "Living on the Shore" webpages contain information on coastal property owners' Rights and Opportunities, <u>Coastal Permitting</u>, <u>Residential Dock Guidelines</u> and a fact sheet on the <u>Public Trust</u>. <u>Connecticut Sea Grant</u> provides lots of great information regarding coastal hazards and erosion and contains a helpful table of available options for beach hazard responses.

### **Useful Resources:**

- Connecticut Sea Grant—Connecticut Beaches and Dunes: A Hazard Guide for Coastal Property Owners
  - Webpage article
  - \* <u>2016 PDF Guide</u>
- FEMA Region 1 Coastal Erosion Viewer
- Coastal Landscaping Guide for Long Island Sound



Top Row: Fenwick living shoreline; initial work in

Bottom Row: Photos taken one year later in August of 2022.

### **Living Shorelines:**

Living shorelines are a relatively recent approach for combatting shoreline erosion. Rather than reflecting, living shorelines absorb wave energy, and in doing so, decreases uneven and unnatural rates of erosion. Living shorelines are a type of management practice that restores, enhances, maintains or creates natural coastal or riparian habitat, functions, and processes. They also function to mitigate flooding or shoreline erosion through a continuous land-water interface. Visit DEEP's Living Shoreline web pages to learn more.

# **FEMA Regulated Beach Structures**



If the beach association is considering constructing or rehabilitating accessory buildings such as a bathroom, concession stand, outdoor showers, ticket booth, harbormaster stations, fences, walls, boardwalks, etc., you will likely be working within a Federal Emergency Management Agency (FEMA) designated flood zone. FEMA flood zones in shoreline areas include the Coastal High Hazard Area (VE zone), Coastal AE/ Limit of Moderate Wave Action (LiMWA) zone and AE zone (1% annual-chance flood). For more information and definitions please visit Features of Flood Insurance Rate Maps in Coastal Areas | FEMA.gov.



Illustration from FEMA: Features of Flood Insurance Rate Maps in Coastal Areas

It is strongly recommended that you contact the local zoning officer and building official and have all necessary reviews and permits before initiating construction. Even though these structures must be located on or near beach areas in these coastal flood zones, FEMA does not consider them <u>functionally dependent</u>. Although certain structures could be deemed "water dependent" under the Connecticut Coastal Management Act, they are not necessarily considered functionally dependent by FEMA. Only docking and port facilities needed for the unloading of passengers or cargo and ship building are considered functionally dependent uses. This means that these structures must meet the National Flood Insurance Program (NFIP) construction requirements outlined in your municipal floodplain zoning regulations and the Connecticut State Building Code.

Planning for these accessory coastal structures is critical before construction. Bathrooms and concession stands may need to be re-located outside the VE zone or include ramps and switchbacks to meet elevation requirements. Ticket booths may need to be placed seasonally and removed at the end of the summer or before a large storm event. Structures on wheels may also be a consideration. Utilities such as outdoor showers or dock utilities need to be floodproofed. FEMA Technical Bulletin 5, *Free-of-Obstruction Requirements*, and the *Homebuilder's Guide to Coastal Construction* (FEMA P-499) contain more information on the requirements for accessory structures in the coastal zone.

For more information on Connecticut's NFIP program and FEMA floodplain management see: <u>National Flood</u> <u>Insurance Program (ct.gov).</u>

# **Storm Preparation and Response**



## **Storm Preparation:**

Major storms can cause serious damage to beaches and associated structures. To protect coastal property prior to a severe storm, Storm Preparation Activities authorized under Section 3(a)(1) of the <u>General Permit for Coastal Storm Response (DEEP-OLISP-GP-2015-03)</u> (GP) can be undertaken without any DEEP pre-approval or declaration. These storm preparation activities must comply with the list of <u>special</u> <u>conditions</u> outlined on page 7 of the GP.

Connecticut's most damaging storms typically occur in September and October— hurricane season. These months fall outside of the seasonal restrictions that come with many non-reporting activities covered under the <u>General Permit for Coastal Maintenance</u>, such as beach raking and beach grading.

## **Eligible Storm Preparation Activities:**

- (A) temporary placement of bracing, scaffolding, hay bales, silt fencing, or sheeting;
- (B) temporary placement of sandbags; and
- (C) relocating and stockpiling beach sand for temporary dunes within areas above mean high water through the use of heavy equipment or hand-held tools.

### Storm Response:

After a coastal storm or other major weather event, the commissioner of DEEP may declare that the Storm Response Activities authorized under Section 3(a)(2) of the <u>General Permit</u> for Coastal Storm Response (DEEP-OLISP-GP-2015-03) be undertaken. The declaration will include the effective date, the expiration date, and the specific geographic areas covered. Only specific activities are eligible for coverage under this general permit which mainly involves shoreline stabilization. The included activities start on page 4 of the GP.

Tip: Often times, obtaining a Certificate of Permission for substantial work to previously authorized structures can be a streamlined option for emergency repair work.



For more information on the General Permit for Coastal Storm Response and Storm Response Activities, visit <u>Coastal Storm</u> <u>Response</u> and the <u>Storm Response Fact Sheet</u>.

# Paddlecraft

## What is paddlecraft?

A manually propelled vessel such as a canoe, kayak, raft, or standup paddleboard.

## Permitting:

Paddlecrafts do not require a specific boating registration or license in Connecticut, however, any paddlecraft storage structures, such as racks, decks, hoists and/or floats that are installed waterward of DEEP's coastal jurisdiction line (CJL) require an individual Structures, Dredging & Fill license from the Land & Water Resources Division.

It is strongly recommended that paddlecraft storage areas are located above the CJL and avoid critical coastal resources, such as dunes and tidal wetlands.

#### Paddlecrafts are not to be used within designated swim areas.

## "If Found" Stickers:

Each year dozens of empty kayaks and canoes are found adrift on Connecticut's waters – leaving emergency personnel in the dark as to who the owner is and whether a search and rescue operation is needed.

Name:	
Phone:	
Phone:	
Use wat	erproof marker-Place in a visible, weather protected area.
To r us	eport a boating emergency in Connecticut, e VHF Channel 16 or call (860) 424-3333.

Vessel Identification Sticker

**IF FOUND - CONTACT** 

These stickers, provided at no

cost by DEEP, offer important contact information to first responders to enable a quick response if needed. The use of the If-Found stickers can also be a useful tool to reunite owners with lost paddlecraft which are found adrift.

If Found stickers can be requested at: <u>https://forms.office.com/g/sVgwAB2eMw</u>.



### DEEP's Top Five Safety Tips:

- 1. Wear your Life Jacket!
- 2. Paddle with a friend or group.
- 3. Beginning paddlers should paddle close to shore.
- 4. Dress properly for paddling.
- 5. Paddle in quiet/non-congested areas. Familiarize yourself with the waterbody you plan on enjoying to ensure you know about potential hazards (i.e., low head dam, rapids).

### Safety Courses:

- The Free Paddle Sports Safety Course: sanctioned by the National Association of State Boating Law Administrators and recognized by the U.S. Coast Guard
- \* American Canoe Association (ACA)
- Boat US Foundation (BoatUS)



# Saltwater Fishing

With over 100 species of fish found in Long Island Sound, anglers can enjoy some of the very best striped bass, bluefish, summer flounder, scup, hickory shad, black sea bass, and tautog fishing along the entire coast. Connecticut offers anglers many fishing opportunities with excellent boat launches along the coast and great shore fishing locations at coastal state and city parks, and convenient party and charter boat fishing. The <u>CT Coastal Access Guide</u> can be used to locate public access fishing points.

DEEP Marine Fisheries Division: deep.marine.fisheries@ct.gov 860-434-6043

### **Fishing License Information:**

- required <u>for anyone 16 years of age or older</u>
- \* issued on a calendar year basis and expire on December 31<sup>st</sup>
- specific information is available at <u>Saltwater Fishing Guide</u> (ct.gov), <u>Saltwater Fishing Resource Map (arcgis.com)</u> and <u>How</u> to Catch Saltwater Fish (ct.gov).



**Note:** Avoid casting within Beach Association swim areas and avoid locating any fish cleaning stations near coastal waters and wetlands.

### **Blue Crab Fishing:**

Open Season: May 1<sup>st</sup>— November 30<sup>th</sup>

License: none required

Minimum shell widths: (Spike Tip to Spike Tip)

- 🔅 5" hard shell crabs
- ☀ 3½" soft shell crabs

Legal methods for capture:



Scoop Net, Hand Line, Dip Net, Trot Line, Star Crab Traps (or similar device), Circular Topless Traps (not exceeding 26" in diameter) and Semi-Circular Cylindrical Traps (12" or less in diameter), but such devices must be attended at all times.

More information can be found on the <u>Blue Crab Fishing PowerPoint</u> or contact Marine Fisheries Division.



31



# Shellfishing

Shellfishing regulations are set by each municipality in the state. Individual town Shellfish Commissions control recreational harvest and the rules vary from town to town. These regulations include species, size restrictions, harvest limits, closures, and fees. In Connecticut, shellfishing is allowed between sunrise and sunset, and recreational seasons are year-round, with a few exceptions. Most towns require an individual permit that must be carried at all times while shellfishing.

Check out <u>Connecticut Sea Grant's 2020 Guidance for</u> <u>Recreational Shellfish Harvesting in Connecticut</u> and <u>visitconnecticut.com</u> for more information on shellfishing.

### Examples of shellfish in CT



mussels



oysters



clams



scallops



Note: Not all beaches are classified as open for shellfishing. Consuming shellfish from these areas could cause serious illness.



# Mosquito Management



Mosquitoes can always be found around water, as that is where breeding, as well as the first two life stages, take place for them. Mosquitoes are known to "bite" humans and animals, however, technically speaking they are "feeding." Not only do mosquitoes leave behind an itchy red bump post feed, but they can also carry various diseases such as malaria, yellow fever, dog heartworm, Eastern Equine Encephalitis, and West Nile Virus. If a mosquito feeds on a host that is infected with a virus, it is possible for that mosquito to spread the virus when it feeds on another host.

It is important to prevent stagnant water from standing around homes, as well as places of recreation, in order to help control the amount of mosquitoes. Ways to reduce the amount of standing water include:

- Dispose of any water-holding containers that have accumulated on the property,
- Dispose of empty standing water and cover used or discarded tires that may be on the property,
- Drill holes in the bottom of recycling containers that are left outside.

In places where temporary stagnant water cannot be avoided or removed, a larvicide can be applied. Please note that permanent bodies of water usually contain fish and other predators that consume mosquito larvae.

#### **Personal Precautions:**

Mosquitoes prefer to rest in shady, calm areas and will avoid more open sunny, breezy areas. They are most active around dawn and dusk although some, such as the common saltmarsh mosquito, may be active throughout the day or during cloudy, humid weather. Simply avoiding outdoor activity during these peak mosquito times can minimize contact with mosquitoes. Repellants containing DEET, picaridin, IR3535 or oil of lemon-eucalytus can provide temporary relief from mosquitoes; always read and follow the label.

#### Use of Pesticides for Mosquito Control:

Larvicides are pesticides applied to stagnant water areas to control mosquito larvae. Most pesticides registered for adult mosquito control (adulticides) are designed to kill adult mosquitoes within 5 to 30 minutes of contact. Contact is more reliably achieved after sunset and overnight when mosquitoes are most active. Soon after, these products break down and do not linger in the environment. If heavy rains or flooding tides produce another brood, another application of a larvicide or adulticide may be required. Some products on the market are designed for homeowner use. Spraying of larger areas may require the application be made by a DEEP-licensed professional.

Only female mosquitoes feed on birds, reptiles, humans, animals, and livestock. Females require protein to produce their eggs and obtain the protein from the blood of hosts.



To help control mosquitoes on state lands, the Wetland Habitat and Mosquito Management (WHAMM) Program of the DEEP Wildlife Division uses <u>Integrated Marsh Management</u> (<u>IMM</u>) – a holistic approach to coastal wetlands management. DEEP performs mosquito inspections and larvaciding on state-owned coastal properties such as Harkness, Rocky Neck, and Hammonasset.

For more information on DEEP's Mosquito Management Program, please visit portal.ct.gov/Mosquito or call 860-424-3011.

# Enforcement



Do you have a wetland or watercourse related complaint? Use our complaint intake form to let us know!

## **<u>Report a wetland or</u>** <u>watercourse violation</u>

#### Contact LWRD Enforcement: (860) 424-3019 DEEP.LWRDEnforcement@ct.gov

**File a wetland or watercourse complaint:** Please use our <u>online complaint intake form</u>.

#### **EnCon Police Emergencies:**

24 Hour Emergency Dispatch Center-(860) 424-3333 Toll Free Wildlife/Fisheries Violation Hotline-(800) 842-4357

#### For Routine EnCon Administrative Questions/Inquiries Only: Marine District Headquarters, Captain Keith Williams-(860) 447-4360

Citizens and visitors of Connecticut have the right to enjoy the waters and coastline of our State. DEEP's Land and Water Resources Division (LWRD) <u>Enforcement Section</u> helps ensure this is possible by monitoring compliance with state issued LWRD permits and investigating any complaints of wrongdoing. LWRD specifically focuses on the management and well-being of inland and tidal wetlands, watercourses, floodplains and coastal waters, and resources of Connecticut.

LWRD's <u>Regulatory Section</u> reviews applications and issues licenses for projects that occur within these water resource areas, while the Enforcement Section assures that such projects are properly authorized and that the licensee conducts all regulated activities in compliance with license conditions and approved plans. Most of Connecticut's inland wetland and watercourses, and floodplains are directly regulated by municipal commissions and the U.S. Army Corps of Engineers (USACOE), with oversight and coordination from LWRD. So, activities conducted within and adjacent to these water resource areas would require authorizations from the affected municipality, and possibly the USACOE.

Zoning Enforcement Officers, and other town/city staff enforce municipal regulations. Municipalities regulate and enforce landward of the Coastal Jurisdiction Line (CJL) and can regulate under zoning to Mean High Water (MHW).

The more commonly thought of form of enforcement within DEEP is the <u>Connecticut</u> <u>Environmental Conservation (EnCon) Police</u>, which is comprised of Conservation Officers stationed throughout Connecticut. All EnCon Police are certified as police officers by the Connecticut Police Officer Standards and Training Council. In addition to their state authority, Conservation Officers are also appointed as special deputy agents for the U.S. Fish and Wildlife Service and the National Marine Fisheries Service so they may enforce federal fisheries and wildlife laws.

EnCon officers will respond to boating incidents and other safety concerns, but will not patrol private beaches.

# Common Acronyms



DEEP: Department of Energy and Environmental Protection

LWRD: Land and Water Resource Division

FEMA: Federal Emergency Management Agency

NFIP: National Flood Insurance Program

CJL: Coastal Jurisdiction Line

MHW: Mean High Water

MLW: Mean Low Water

HTL: High Tide Line

TW: Tidal Wetlands

**BFE: Base Flood Elevation** 

SFHA: Special Flood Hazard Area

VE Zone: "Velocity" Zone

LiMWA: Limit of Moderate Wave Action

NAVD88: North American Vertical Datum of 1988

**GIS: Geographic Information Systems** 

NDDB: Natural Diversity Database

#### **GP: General Permit**

COP: Certificate of Permission

SDF: Structures, Dredging, and Fill

FECS: Flood and Erosion Control Structure

CCMA: Connecticut Coastal Management Act

CGS: Connecticut General Statutes

DDT: Dichlorodiphenyltrichloroethane (an insecticide used in agriculture).

ACA: American Canoe Association

BoatUS: Boat Owners Association of the United States

ConnYAK: Not-for-profit club devoted to sea kayaking.

RCSA: Risk and Control Self Assessment



**Beach Grading:** The redistribution and regrading of on-site beach sand between Mean Low Water and the Coastal Jurisdiction Line without the nourishment or addition of any off-site beach sand or other material.

**Beach Nourishment:** The artificial addition of sand, gravel, or other similar natural material to a beach or subtidal area adjacent to a beach to increase beach elevations and width at an eroded section.

**Beach Raking:** The use of motorized equipment and any associated implements on a beach waterward of the Coastal Jurisdiction Line for the purpose of removing macroalgae (seaweed), stones, shells, or other natural or unnatural debris.

**Benthic habitat:** Natural environment of organisms occurring on the floor of a body of water.

**Biological surveys:** Gathering of consistent, reliable, and reproducible data of the aquatic biological community in a systematic method.

**Bluffs/Escarpments:** 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))

**Bulkhead:** Vertical shoreline protection structures that are man-made and designed to protect upland materials and withstand the forces of waves or currents.

**Coastal High Hazard Area (DEEP):** Connecticut Coastal hazard areas are statutorily defined as 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 [(CGS) Section 22a-93(7)(H)]. In general, coastal flood hazard areas include all areas designated as within A-zones and V-zones by the Federal Emergency Management Agency (FEMA). (DEEP's Coastal Hazard Area Fact Sheet)

**Coastal Jurisdiction Line (CJL):** Pursuant to the Structures, Dredging, and Fill (SDF) statutes, DEEP's jurisdiction is called the Coastal Jurisdiction Line (CJL),

which is a series of elevations computed for each regulated Town using the highest predicted tides found in Long Island Sound and the Connecticut, Housatonic and Thames Rivers, up to their respective heads of tide.

**Developed Shorefront:** 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)

**Dredging:** Cleaning out and removing debris and sediments from the bed of an area of water, such as a river, lake, or harbor.

**Erosion/eroded:** The detachment and movement of soil or rock fragments by water, wind, ice and gravity. CGS (Section 22a-327(3)).

**Finfish:** Term used to describe true fishes and separate them from other aquatic life with names that include the word "fish," such as jellyfish, crayfish, and starfish.

**Fixed Pier:** A stationary structure secured by pilings (vertical poles driven into the ground) that are placed in or near bodies of water to help with the transition from land to water.

**Floating Dock:** A buoyant platform that is secured to the shoreline, ground, or fixed pier and provides easy access to boats or swimming areas. They are typically attached to a line or cable and can move with changing tides.

**Flood and erosion control structure:** Any structure in which the purpose or effect is to control flooding or erosion from tidal, coastal or navigable waters, including 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)].

**Freeboard:** A safety factor, expressed in feet above a calculated flood level, that compensates for unknown factors contributing to flood heights greater than the calculated height, including, but not limited to, ice jams, debris accumulations, wave actions, obstructions of bridge openings and floodways, the effects of urbanization on the hydrology of a watershed, loss of flood storage due to development and sedimentation of a watercourse bed. (CGS) Section 25-68b(7).



**Groins:** Structures installed perpendicular to the shoreline that are used to maintain updrift beaches or to restrict longshore sediment transport.

Harbormaster: An appointed person in command of and responsible for the general care and supervision of the harbors and navigable waterways over which they have jurisdiction, and they are subject to the direction and control of the Commissioner of the Department of Energy and Environmental Protection.

**Intertidal flats**: 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))

**Jetties:** Structures installed perpendicular to the shoreline that are placed adjacent to tidal inlets and harbors to control inlet migration and minimize sediment deposition within the inlet.

**Launch ramp:** A sloping stabilized entry point or roadway constructed on the shoreline for launching watercraft.

**Littoral rights:** The rights of an owner whose land abuts tidewaters. The owner has the right to get to the water from his or her upland, such as by constructing an authorized dock where appropriate.

<u>Living Shoreline</u>: A shoreline management practice that restores, enhances, maintains, or creates natural coastal or riparian habitat, functions, and processes and, also functions to mitigate flooding or shoreline erosion through a continuous land-water interface.

**Mean High Water (MHW):** The average of all the high water heights observed over the National Tidal Datum Epoch. <u>NOAA Tides & Currents</u>

**Mean Low Water (MLW):** The average of all the low water heights observed over the National Tidal Datum Epoch. <u>NOAA Tides & Currents</u>

**Moorings:** Structures employed to moor, dock, or otherwise secure a vessel used for waterborne travel. They may be installed for private recreational use but must not be located in federal navigation channels or anchorages.

**Natural Diversity Database (NDDB):** A DEEP program that racks and protects rare species and critical habitats in Connecticut.

**Nearshore waters:** Statutorily defined as the area comprised of 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**: 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))

**Paddlecraft:** A manually propelled vessel such as a canoe, kayak, raft, or standup paddleboard.

**Plan view/profiles:** A plan view shows the proposed activity as if you were looking straight down on it from above. **Profiles** (or cross section view) is a scale drawing that shows the side, front, or rear of the proposed activity. In a section view, the proposed structure is shown as it would look if sliced internally for display. <u>Guide for Permit Applicants (army.mil)</u>

**Public Access:** Unrestricted access for all citizens of the state along the shore waterward of the mean high water line. The general public may freely use these lands and waters for fishing, shell-fishing, hunting, boating, sunbathing and walking along the beach.

**Public Beach** The 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. (CGS) Section 22a-93(6).

**Public Trust Doctrine:** Under the common law public trust doctrine, a body of law dating back to Roman times, coastal states (as sovereigns) hold the submerged lands and waters waterward of the mean high water line in trust for the public.





**Public Trust Waters:** The public trust area includes submerged lands and waters waterward of mean high water in tidal, coastal, or navigable waters of the state of Connecticut.

<u>Regulatory Marker</u>: Informational markers such as swim area, speed zone, or danger area, i.e. buoys or beacons (signs). A permit is required to place any of these markers.

**Riprap:** Lose, large stones used to protect soil from erosion in areas of high or concentrated flows.

**Riparian rights:** The rights of an owner of property that abuts nontidal navigable waters and lakes to have reasonable access to the water and to wharf out.

**Rocky shorefront:** 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))

**Seawall:** Any dry stone or concrete structure, including bulkheads, retaining walls and riprap revetments, with the intended purpose or effect of preventing upland materials from slumping or otherwise entering the area waterward of the coastal jurisdiction line. The term does not include steel, timber, or plastic sheet pile, railroad ties or concrete blocks. <u>General Permit for Coastal Maintenance (ct.gov)</u>

**Shellfish Concentration Areas:** Statutorily defined as actual, potential or historic areas in coastal waters, in which one or more species of shellfish aggregate. (CGS, Section 22a-93(7)(N))

**Shorelands:** 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))

<u>Submerged Aquatic Vegetation (SAV)</u>: Rooted, vascular plants that grow completely underwater in coastal waters and inland lakes. Barnacles,

scallops, mussels, and eggs of aquatic organisms attach to the surface of the plants' leaves and stems, making them some of the most productive shallow water habitats on the earth.

**Subtidal:** A marine or estuarine environment that lies below mean low water; always (or almost always) submerged in a tidally-influenced area. National Marine Protected Areas Center: Glossary (noaa.gov)

**Swim float:** A single floating or inflatable structure unattached to land or to any other structure, secured by bottom anchor, seasonally installed and removed, and used solely for swimming.

**Tidal wetlands:** Tidal wetlands are areas which border on or lie beneath tidal waters. These areas may grow or be capable of growing some, but not necessarily all, of the species list in <u>Chapter 440 - Wetlands and</u> <u>Watercourses (ct.gov)</u>).

**Tide control structure:** A structure that restricts tidal flow to intertidal, shallow subtidal, and brackish waters in order to protect property from flooding due to extreme tides and storm surges.

**Water Dependent:** 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)].

**Wrack Line:** The line of debris left on the beach by high tide and is used to determine the high tide line.

**Zoning commission:** Responsible for developing and adopting the zoning regulations, which must be done in accordance with statutory requirements.



39

FEMA Related Vocabulary - All definitions are from www.fema.gov.

<u>Coastal Flooding</u>: When water inundates or covers normally dry coastal land as a result of high or rising tides or storm surges.

<u>Coastal Flood Zones</u>: Coastal areas that are at high risk of flooding within the coastal Special Flood Hazard Area (SFHA). The coastal SFHA has three flood hazard zones: Zones VE (which are unique to coastal areas), AE and AO.

**Flood Zone VE**: Also known as a **Coastal High Hazard Area**. Zones VE are unique to coastal flooding and are areas where wave action and fastmoving water can cause extensive damage during a base flood event. VE Zones have more stringent building practices due to the added wave hazard. Some building practices include, elevating a home on pilings so that waves can pass beneath it, or a prohibition to building on fill. These practices are intended to improve the chance of a home safely weathering a flood event.

<u>Coastal Zone AE</u>: Areas that have at least a 1%-annual-chance of being flooded, but where wave heights are less than 3 feet.

**Zone AO**: Areas at risk of shallow flooding during a base (1%-annualchance) flood, where water with average depths of 1 to 3 feet flows over sloping ground. On flood maps in coastal communities, Zone AO usually marks areas at risk of flooding from wave overtopping, where waves are expected to wash over the crest of a dune or bluff and flow down into the area beyond.

Limit of Moderate Wave Action Zone: An informational line found on flood maps for some coastal areas. The line marks the inland limit of the Coastal A Zone and is shown as a black line with arrows that point to areas where wave heights are between 1.5 and 3 feet.

**National Flood Insurance Program (NFIP):** Managed by the FEMA, the NFIP provides insurance to help reduce the socio-economic impact of floods. The program is delivered to the public by a network of more than 50 insurance companies and the <u>NFIP Direct</u>. (FEMA- <u>https://</u><u>www.fema.gov/flood-insurance</u>)

**Functionally Dependent:** A use which cannot perform its intended purpose unless it is located or carried out in close proximity to water. This term includes only docking facilities, port facilities that are necessary for the loading and unloading of cargo or passengers, and shipbuilding and ship repair facilities, but does not include long-term storage or related manufacturing facilities. (Functionally Dependent Use | FEMA.gov)



# Contacts



#### Land and Water Resources Division (LWRD)

Bureau of Water Protection and Land Reuse Department of Energy and Environmental Protection 79 Elm Street Hartford, CT 06106-5127 Phone:(860) 424-3019

For permitting related inquiries: <u>DEEP.LWRDRegulatory@ct.gov</u>

For LWRD Enforcement matters: DEEP.LWRDEnforcement@ct.gov

For compliance inquiries: DEEPLWRDPermitInfo@ct.gov

To file a wetland or watercourse complaint: Please use our <u>online complaint intake form</u>.

DEEP Boating Division Boating Courses/Certificate Information Phone: (860) 434-8638 Deep.Boating@ct.gov

DEEP Marine Fisheries Division Phone: (860) 434-6043 deep.marine.fisheries@ct.gov

DEEP Wildlife Division Phone: (860) 424-3011 deep.wildlife@ct.gov **Connecticut Environmental Conservation Police (EnCon)** For Routine EnCon Administrative Questions/Inquiries Only: Marine District Headquarters, Captain Keith Williams: Phone: (860) 447-4360

CT EnCon Police Emergencies: 24 Hour Emergency Dispatch Center: Phone: (860) 424-3333

Toll Free Wildlife/Fisheries Violation Hotline-Phone: (800) 842-4357

DEEP Stormwater DEEP.StormwaterStaff@ct.gov

### US Army Corps of Engineers, New England District

Regulatory Division (CT, MA, NH, RI) 696 Virginia Road Concord, MA 01742-2751 Phone: (978) 318-8338 E-mail for Connecticut related Inquiries: <u>cenae-r-ct@usace.army.mil</u>

NOAA's Greater Atlantic Regional Fisheries Office: Phone: (978) 281-9300 nmfs.gar.garfo@noaa.gov

**Mystic Aquarium's 24-hour hotline:** Phone: (860) 572-5955 x 107

#### **DEEP Contact Information List**

# Beach Association's Guide to Coastal Activities and Permitting



## Created by the Land and Water Resources Division

Contact: DEEPLWRDPermitInfo@ct.gov

Special Thanks to:

DEEP Boating Division DEEP EnCon Police DEEP Marine Fisheries Division DEEP State Parks DEEP Wildlife Division Dept. of Agriculture—

Bureau of Aquaculture

**Collective Oyster Recycling &** 

**Restoration - CORR** 

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