

# Shellfish Restoration & Recycling Update

Alissa Dragan

Supervising Environmental Analyst, CT DoAg

Gathering of the Shellfish Commissions 2/8/25



# Shellfish Rehabilitation & Enhancement



- CT Shellfish Restoration Guide Published in 2022
- The first & most comprehensive plan laying out the foundation for shellfish restoration in the waters of Long Island Sound
- The Guide Identified shell as the preferred substrate for oyster recruitment
- Shellfish restoration and enhancement efforts should focus on restoring habitat where shellfish naturally recruit to maximize shellfish production and ecosystem services

# Establishment of Public Act 21-24





***Senate Bill No. 840***

***Public Act No. 21-24***

**AN ACT CONCERNING CONNECTICUT'S SHELLFISH RESTORATION PROGRAM, THE CONNECTICUT SEAFOOD COUNCIL AND THE TAXATION OF CERTAIN UNDERWATER FARMLANDS.**

# Public Act 21-24



- Established a program to purchase & acquire shell, or other cultch material, for deposit on state shellfish beds
- Allows DoAg to purchase supplies, materials and spawn oyster stock; contract the use of a shell recovery vessel to collect and deposit shell on shellfish beds; and to receive and deposit on shellfish beds cultch from oyster *shell recycling programs administered or authorized by the department*



# Connecticut Department of Agriculture

[CT.gov Home](#) / [Department of Agriculture](#) / [Aquaculture Home Page](#)

[Grants](#) >

[Aquaculture](#) >

[Regulatory Services](#) >

[Animals and Animal Health](#) >

## Welcome to the Bureau of Aquaculture

*David H. Carey, Bureau Director*

[Staff & Contact Us](#)

Follow us on Instagram: [@aquaculture\\_ct](#) | Read about [CT Aquaculture in the News](#)

## Shellfish Rehabilitation and Enhancement

[Policy for Shellfish Enhancement and Restoration Projects](#)

[Connecticut Shellfish Restoration Guide](#) 

[Shellfish Rehabilitation and Enhancement Projects](#)

[Shellfish Restoration Regulation Flowchart](#)

## Shell Recovery and "Recycling"

[Connecticut Public Act 21-24](#) 

[Shell Recovery Guidance](#)  - August 2024

[DEEP-DOAG Shell Recovery Memorandum of Understanding \(MOU\)](#)

 [Shell Recovery Application](#)

 [Oyster Habitat Restoration Application](#) 

# DoAg Restoration & Rehabilitation Policy

- Provides information on how to appropriately plan and site projects
- All shellfish restoration & enhancement projects must be reviewed and approved by DoAg prior to starting any work
- It is unlikely that the DoAg will permit restoration and enhancement in prohibited areas, unless it is for *restoration of designated State Natural Oyster Seed Beds or direct benefit to the shellfish industry.*

## Other Considerations:

- Impacts to navigation
- Oyster diseases
- Sanctuaries will require significant MOU(s) and a funding mechanism for depopulating the area
- No oyster gardening allowed
- Other permits may be required from DoAg or DEEP

# CT Natural Seed Oyster Beds

Greenwich-Old Saybrook  
there are no designated  
natural oyster seed beds east  
of Old Saybrook





# Shellfish Rehabilitation & Conflicts with the NSSP-MO

## NSSP-MO Section II Chapter VII @.01 B. Patrol of Growing Areas (2)

The Authority shall patrol growing areas or portions of growing areas classified as restricted, conditionally restricted, or prohibited, or conditionally approved and approved when in the closed status at sufficient intervals to deter illegal harvesting...

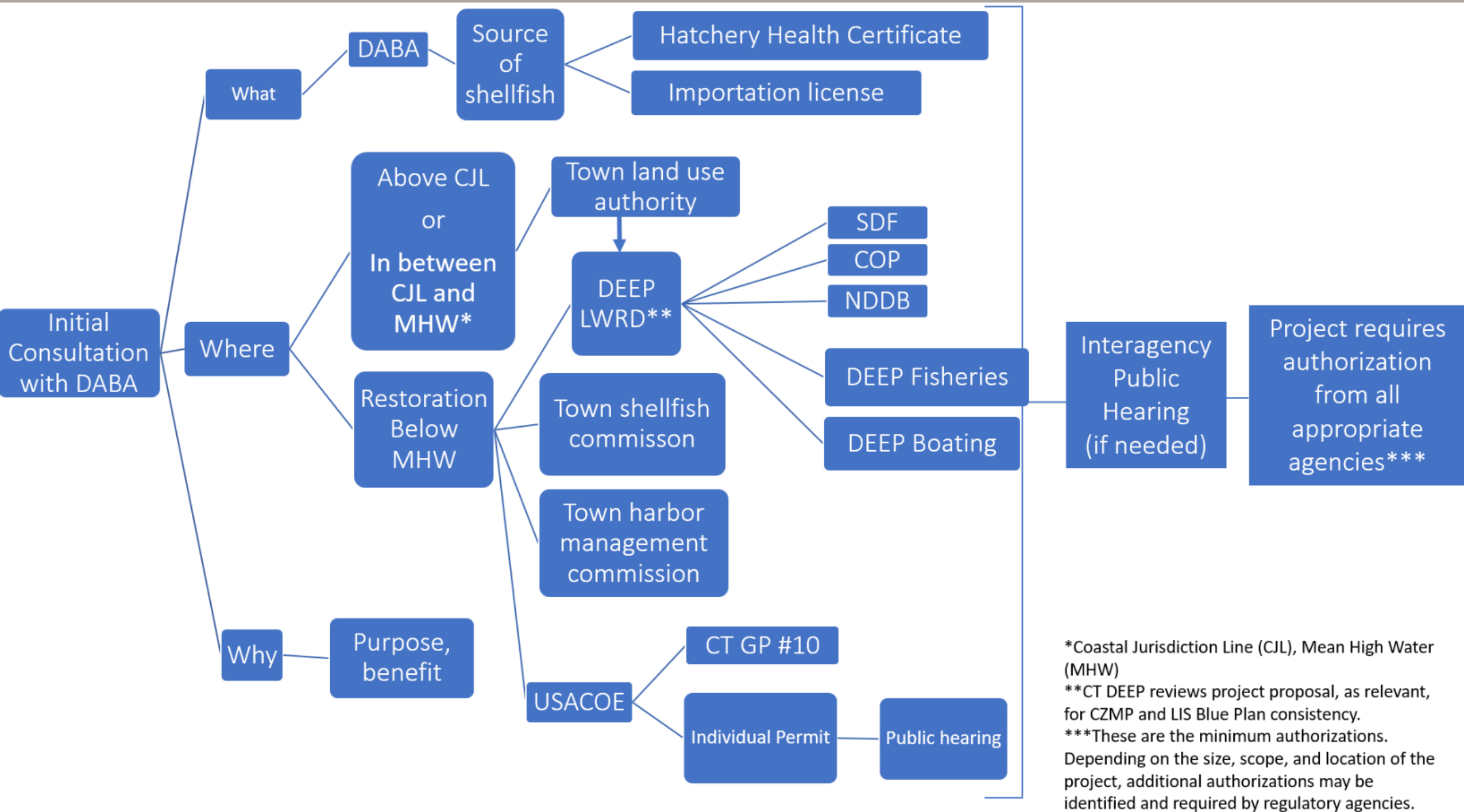
## NSSP-MO Section IV Chapter VIII Control of Shellfish Harvesting

shellstock densities in prohibited areas can be increased through aquaculture or shellfish gardening intended for ecosystem/habitat enhancement. These activities must be permitted or registered with the Authority noting the location and quantity of shellstock involved in the aquaculture operation. Such activities in prohibited areas are typically not intended to produce marketable shellfish. However, the Authority should assure that this information is available when *determining the NSSP patrol risk and patrol frequencies for the growing area, since the activity can increase the likelihood of illegal harvest.*

# Restoration in the Northeast



- New Hampshire - Allows restoration in Prohibited areas with controls ensuring product does not meet market. Harvester managed only
- Maine – Restoration is not allowed in Prohibited areas
- Massachusetts -Restoration is not currently allowed in Prohibited areas
- NY – Restoration/gardening occurring in Prohibited waters. Programs not overseen by state authority & conflict with NSSP-MO
- NJ – Allowed at 1 secured site – Naval base



\*Coastal Jurisdiction Line (CJL), Mean High Water (MHW)  
 \*\*CT DEEP reviews project proposal, as relevant, for CZMP and LIS Blue Plan consistency.  
 \*\*\*These are the minimum authorizations. Depending on the size, scope, and location of the project, additional authorizations may be identified and required by regulatory agencies.

# Oyster Habitat Restoration Application



Connecticut Department of Agriculture, Bureau of Aquaculture  
P.O. Box 97, 190 Rogers Avenue, Milford, CT 06460  
203-874-0696 | [Agri.Aquaculture@ct.gov](mailto:Agri.Aquaculture@ct.gov)



## Oyster Habitat Restoration Application

No shell can be planted in Long Island Sound or its tributaries without the explicit approval of the Department of Agriculture, Bureau of Aquaculture (DoAG) through the receipt of an Oyster Habitat Restoration certificate. Shellfish Harvesters licensed by the DoAG are authorized to plant up to 1,500 bushels/acre of cured shell on their leased grounds. All other entities are required to complete this application process.

### DoAG Requirements:

- All entities desiring to plant shell must be, or receive shell from, an authorized Shell Recovery Program. Authorized Shell Recovery Programs have been approved by the DoAG to collect, recover, and cure shell at designated locations (Authorized Programs have successfully completed DoAG's [proposal process](#)).
- No shell from the European Union (EU) may be planted in Long Island Sound or its tributaries. Authorized Shell Recovery Programs are prohibited from collecting shell from the EU.
- Shell must be cured at authorized locations for a minimum of 6 months before it can be planted.
- Shell is not a monetized commodity; therefore, the DoAG does not condone the sale of cured shell for any purposes from authorized Shell Recovery Programs.
- The DoAG, or local shellfish commissions, can facilitate planting donated shell on the State's natural beds.

### DEEP Requirements:

The placement of cultch, defined as a substrate appropriate for larval oyster attachment consisting of gravel or shell material, is also covered under the DEEP General Permit for Coastal Maintenance.

Placement of shell must comply with the following regulations:

- Such placement of cultch shall only be conducted by a licensed shellfish operator in beds or areas designated for shellfishing under section 26-194 or section 26-242 of the General Statutes.
- Such placement of cultch shall be conducted only in appropriate locations for colonization by oysters, based upon factors of salinity, water quality, water circulation patterns and substrate composition.
- Such placement of cultch shall not be conducted in areas of tidal wetlands or submerged aquatic vegetation beds.
- Prior to the commencement of such placement of cultch, such licensed shellfish operator obtains all required authorizations from the Department of Agriculture Bureau of Aquaculture and Laboratory and the local shellfish commission, as applicable.
- Prior to the commencement of such placement of cultch, such licensed shellfish operator obtains permission in writing from the owner or lessee of such shellfish bed or area.
- Such placement of cultch shall be conducted in such a manner that it does not exceed a layer of cultch on the seafloor greater than 12" in depth.
- Such placement of cultch shall be conducted such that the placement does not exceed 1,500 bushels per acre of seafloor
- All applicants approved by the DoAG must annually report the amount of shell placed in Long Island Sound to the DEEP.



Connecticut Department of Agriculture, Bureau of Aquaculture  
P.O. Box 97, 190 Rogers Avenue, Milford, CT 06460  
203-874-0696 | [Agri.Aquaculture@ct.gov](mailto:Agri.Aquaculture@ct.gov)



## Oyster Habitat Restoration Application

Applicant: \_\_\_\_\_  
(Full name) (Phone number) (Email)

Entity: \_\_\_\_\_  
(Town, scientific, educational, non-profit, etc.)

Source(s) of shell: \_\_\_\_\_

Vehicles that will be used to transport shell: \_\_\_\_\_

Vessels that will be used to transport shell: \_\_\_\_\_

Proposed Location(s) to Plant Shell (including coordinates): \_\_\_\_\_

Attach agreement with local Shellfish Commission, Town, or other appropriate administrative authority, if applicable.

I hereby attest that the above information is true, and agree to abide by all DoAG and DEEP regulations as they pertain to planting shell in Long Island Sound. I understand that failing to meet any one of the regulations could result in the revocation of my Oyster Habitat Restoration Certificate and a financial penalty in accordance with State Statute.

\_\_\_\_\_  
Signature

# Shell Recovery Update

- MOU Between DoAg and DEEP
- Documents understanding between parties regarding the management of shell recovery and processing sites to ensure program provides the greatest environmental benefit
- Identifies DoAg as the authority authorizing entities to manage sites for collecting, sorting, storing, and curing shell
- Identifies DEEP as the authority regulating all other solid waste facilities, transfer stations, etc.
- Shell Recovery Guidance walks the applicant through the process and explains all necessary elements of a recovery program

# MOU Shell Recovery Activities and Authority

Activity	Authority	Allowed?	Application
Shell Collection	DoAg	Yes	Shell Recovery Application
Shell Curing/Storage at site not regulated by DEEP	DoAg (DEEP)	Yes	Shell Recovery Application (General Stormwater Permit may be required)
Shell Curing/Storage at Transfer Station	DEEP	No	NA*
Shell Curing/Storage at Landfill	DEEP	Requires Full DEEP Permit	Applicant must submit permit pre-application to DEEP
Shell Curing/Storage at Leaf Composting facility	DEEP	Yes*	Sites co-located where leaf composting is occurring must have adequate space, at minimum 50-feet, to ensure operations are segregated from the leaf composting operation and are subject to the criteria found at sections 22a-208i(a)-1(d)(1)(A) through 22a-208i(a)-1(d)(1)(F)

# Shell Recovery Application



Connecticut Department of Agriculture, Bureau of Aquaculture

P.O. Box 97, 190 Rogers Avenue, Milford, CT 06460

203-874-0696 | [Agri.Aquaculture@ct.gov](mailto:Agri.Aquaculture@ct.gov)



## Shell Recovery Application

All entities are required to comply with the Department of Agriculture, Bureau of Aquaculture (DoAG) [Guidance for Shell Recovery Operations in Connecticut](#) (hereafter referred to as the "Shell Recovery Guidance"). No shell can be collected, stored, cured, or planted without the explicit approval of the DoAG. This Shell Recovery Application is used to establish Shell Recovery Programs. The [Oyster Habitat Restoration Application](#) is used to authorize planting of cured shell in Long Island Sound or its tributaries. All entities are required to complete this application process prior to commencing any activities.

### DoAG Requirements:

- The DoAG reviews and provides comments on shell recovery applications to facilitate the applicant in locating an appropriate site for their operation and successful project implementation. Local land use boards and/or regional/local health departments have a role in approving shell recovery as it pertains to local regulations.
- The applicant must complete this Shell Recovery Application in its entirety, including finalized standard operating procedures as required below. Each proposal will be evaluated on a case-by-case basis.
- Authorized Shell Recovery Programs are prohibited from collecting shell from the European Union.
- Shell must be cured at authorized locations for a minimum of 6 months before it can be planted.
- The completion of this Shell Recovery Application and authorization by DoAG does not permit planting cured shell in Long Island Sound.

### DEEP Requirements:

- Applicants who are proposing shell collection at municipal transfer stations, leaf composting sites or a landfill must meet the regulatory requirements outlined in the facilities applicable permits administered by DEEP and the Shell Recovery Guidance.
- If any of the proposed shell recovery activities will be co-located at a regulated solid waste facility, the applicant will be required to contact DEEP and fill out a pre-application questionnaire. Further, activities may require permitting under DEEP's Industrial Stormwater Program, therefore it is best practice for all proposals within DEEP permitted sites to fill out a pre-application questionnaire. See link to [Pre-Application Assistance Fact Sheet](#).
- Additional requirements are outlined in the Shell Recovery Guidance.



Connecticut Department of Agriculture, Bureau of Aquaculture

P.O. Box 97, 190 Rogers Avenue, Milford, CT 06460

203-874-0696 | [Agri.Aquaculture@ct.gov](mailto:Agri.Aquaculture@ct.gov)



## Shell Recovery Application

Applicant: \_\_\_\_\_  
(Full name) (Phone number) (Email)

Entity: \_\_\_\_\_  
(Town, scientific, educational, non-profit, etc.)

Source(s) of shell: \_\_\_\_\_

*Shell must be sourced from shellfish harvested within the United States due to concerns about Oyster herpesvirus being introduced from shellfish imported from the European Union.*

**Shell collection:** Please attach a standard operating procedure (SOP) for all aspects of shell collection and include a preliminary schedule and detailed procedures for the sanitary operation of the program. Applicants must address all requirements, and may address the additional considerations as necessary, outlined in the Shell Recovery Guidance.

*\*Once authorized, Shell Recovery Programs must notify DoAG if they will be adding pickup locations at new restaurant, markets, or institutions, or seasonally collecting at large events like shellfish festivals. It is critical that programs develop slowly to ensure they have adequate staff and equipment to meet routine pickup, sanitation, and curing requirements, while prevent nuisances.*

**Shell transportation:** Please attach a SOP for all aspects of shell transportation. Applicants must address all requirements, and may address the additional considerations as necessary, outlined in the Shell Recovery Guidance.

Proposed Location(s) of shell processing (including coordinates): \_\_\_\_\_

*Locations that do not meet the requirements outlined in the Shell Recovery Guidance for runoff control or distance to surface and drinking water sources will be rejected.*

**Shell cure pile maintenance:** Please attach a SOP describing how cure piles will be maintenance to avoid nuisances. Applicants must address all requirements, and may address the additional considerations as necessary, outlined in the Shell Recovery Guidance.



Connecticut Department of Agriculture, Bureau of Aquaculture

P.O. Box 97, 190 Rogers Avenue, Milford, CT 06460

203-874-0696 | [Agri.Aquaculture@ct.gov](mailto:Agri.Aquaculture@ct.gov)



## Shell Recovery Application (page 2)

**Sanitation station:** Please attach a SOP describing the location with potable water for equipment sanitation (containers and vehicles); a sanitation schedule; and prevention of discharge to surface waters, wetlands or to the ground. Applicants must address all requirements, and may address the additional considerations as necessary, outlined in the Shell Recovery Guidance.

Identify the **end users** of the shell: \_\_\_\_\_

*If the applicant is also the end user, they must complete an Oyster Habitat Restoration Application prior to planting any shell in Long Island Sound or its tributaries. If an end user is not identified, the applicant must consult with DoAG to transfer the shell to an end user.*

Please attached all **written agreements** between the applicant and EACH partner or subcontractor involved with shell collection, shell transportation, shell curing, and sanitation.

Identify **emergency contacts** who have knowledge of all aspects of the program, and unlimited access to all equipment and supplies, including transportation, necessary to maintain program operations in a timely manner: \_\_\_\_\_

*Please attach your contingency plan, which outlines how the program will continue normal operations to accommodate for members having emergencies preventing them from completing their outlined responsibilities on schedule.*

**Incomplete applications will be rejected by DoAG. Applicants that propose to collect shell at any DEEP permitted facilities, including municipal transfer stations, leaf composting sites, or landfills, are required to complete the separate application, review, and approval process with DEEP, as outlined in the Shell Recovery Guidance.**

I hereby attest that the above information is true, and agree to abide by all DoAG and DEEP regulations as they pertain to shell collection, transportation, and curing. I attest that I will follow all SOPs and schedules, as provided in my application, to support the successful implementation of the proposed shell recovery program and to minimize negative impacts to the environment. I understand that failing to meet any one of the regulations could result in the revocation of my Shell Recovery Certificate and a financial penalty in accordance with State Statute.



General Assembly

January Session, 2025

**Proposed Bill No. 5014**

LCO No. 514



\* 00514 \*

Referred to Committee on ENVIRONMENT

Introduced by:

REP. GRESKO, 121st Dist.

***AN ACT ADDING OYSTER SHELLS TO THE STATE'S LIST OF RECYCLABLE MATERIALS.***

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

- 1 That the general statutes be amended to add oyster shells to the state's
- 2 list of required recyclable materials.

***Statement of Purpose:***

To provide for the recycling and reuse of oyster shells as a means to seed more Connecticut oyster beds.

# Proposed Bill 5014

Seems like a great idea...



# Proposed Bill 5014 - the Unintended Consequences

- Designating oyster shell as a mandatory recyclable would have a negative impact on the Legislature's mandate to utilize shell for restoration projects on shellfish beds in Long Island Sound to support and benefit the State's commercial shellfishing industry
- The proposed legislation contradicts Public Act No. 21-24 by taking authority from DoAG and placing it with DEEP (recyclables are under the authority of DEEP)
- All recyclable commodities are monetized due to the significant cost in handling recycled commodities separately, requiring additional handling, transportation, and storage costs

# Proposed Bill 5014 - the Unintended Consequences

- Monetizing shell at the recycler level would lead transfer stations, recycling centers, and landfills to redirect shell from restoration projects to other uses, such as purchase by private shellfish companies, or for landscaping
- Current, and in-process, shell recovery programs do not have the capacity to collect from every establishment in CT. This bill would require the hiring of private composting collectors at a *cost to the establishment*
- These services are provided free of charge by existing programs

# Proposed Bill 5014 - the Unintended Consequences

- DoAg hopes to administer & authorize shell collection projects that are free of charge to establishments. Charging for collection will likely result in fewer participants.
- Establishments that serve small quantities of shellfish would be forced to choose between paying for recycling or removing shellfish from their menus.

# Proposed Bill 5014 - the Unanswered Questions

- Who is providing the clean sanitized containers statewide? Are restaurants expected to continually purchase new pails and sanitize them after a recycler has dumped the shell? It is unlikely pails can be sanitized in the restaurant for many reasons, especially the odor.
- How is the establishment supposed to dispose of shell when there is no available collector? What would be the cost to each restaurant? Would this in turn decrease oyster sales in Connecticut?
- Who will ensure that shell collection and disposition meets the objectives of Public Act No. 21-24 once removed from the establishment?
- All recyclable commodities must have a monetary value. Making shell a mandatory recyclable, would create a market-driven price. How does this benefit the shellfish industry and restoration programs, which depend on low to no-cost sources of shell?
- All recyclable commodities must be removed from transfer stations within 48 hours. This will further increase cost of shell. How does this benefit the shellfish industry and restoration programs?

# Proposed Bill 6222 (2)



General Assembly

**Proposed Bill No. 6222**

January Session, 2025

LCO No. 3490



Referred to Committee on ENVIRONMENT

Introduced by:  
REP. BUMGARDNER, 41st Dist.

## ***AN ACT CONCERNING AQUACULTURE IN THE STATE.***

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

1 That the general statutes be amended to: (1) Reduce the minimum  
2 size, from three inches to two and one-half inches long for the taking of  
3 farm-raised eastern oysters; (2) expand oyster shell recycling efforts in  
4 the state by reforming the permitting system to establish shell recycling  
5 operations; (3) create a program through the Bureau of Aquaculture in  
6 the Department of Agriculture to increase black, indigenous and people  
7 of color farmers in shellfishing; (4) support the growth of seaweed  
8 cultivation in the state; (5) study the Noank Aquaculture Cooperative as  
9 a model for shellfishing; (6) change a commercial landing vessel  
10 operator's license to a commercial vessel landing license; (7) introduce  
11 special licensing for unregulated species and direct sales at docks; and  
12 (8) establish a tax credit of two hundred fifty dollars for each restaurant  
13 that participates in a shell recycling program.

### ***Statement of Purpose:***

To support and expand aquaculture in the state.

# Proposed Bill 6222

“(2) Expand oyster shell recycling efforts in the state by reforming the permitting system to establish shell recycling operations”

Currently, there is a simple permitting process to establish shell recycling operations

DoAg will issue a permit authorization letter upon approval

However, applicants who wish to conduct these activities at DEEP regulated facilities must submit pre permit applications to the DEEP

# Proposed Bill 6222

Currently the DoAg requires applicants to submit a Shell Recovery Application to DoAg that includes:

- Detailed SOPs for all aspects of collection-schedules and sanitary operation of program as outlined in the Shell Recovery Guidance document
- Proposed location(s) of shell processing
- SOP describing how cure piles will be maintained to avoid nuisances
- Location of sanitation activities and a detailed SOP
- Identification of the end use/user of shell
- Submission of all written agreements between the applicant and EACH partner or subcontractor involved with shell collection, shell transportation, shell curing, and sanitation
- Identification of emergency contacts with knowledge of all aspects of the program, and unlimited access to all equipment and supplies, including transportation, necessary to maintain program operations in a timely manner
- A contingency plan, outlining how the program will continue normal operations to accommodate for emergencies that prevent dedicated staff them from completing responsibilities on schedule

# Proposed Bill 6222

## Potential Consequences if Adopted:

- DoAg could be required to develop a complex permit process and regulatory framework which would halt any new operations until such processes are approved by the Regulations Review Committee
- DEEP could also be required to modify their already complex recycling, transfer station, composting, and solid waste permits to conform with the bill, resulting in further delays for any new applicants



Since public act 22-24 was adopted, DoAg has administered and authorized one shell recycling operation, collecting from 45 restaurants, 2 wholesalers, and several festivals and events

Since their inception in July of 2023, more than 650,000 pounds of shell has been recovered to be returned to the State's shellfish beds

Another project remains in the pre-application phase. In May of 2023 DoAg requested modifications to the proposal and has not yet heard back from the applicant

Based on the small number of applicants at this time there is no need for revising the current processes

# Proposed Bill 6222

# Thank you

[Agri.Aquaculture@tct.gov](mailto:Agri.Aquaculture@tct.gov)

<https://portal.ct.gov/doag/aquaculture1/aquaculture/aquaculture-home-page>

