Connecticut Shellfish Initiative Vision Plan

Part 1. Overview and Recommendations

Executive Summary

October 2016

Introduction to the Connecticut Shellfish Initiative

The Purpose

The Connecticut Shellfish Initiative is a stakeholder-driven effort to map out a vision for the future of Connecticut shellfish.

The Vision

A future in which Connecticut shellfish and shellfisheries are valued and honored, shellfish habitats are protected and restored, prosperous businesses maintain a safe and sustainable seafood supply, and recreational harvesting opportunities abound.

The Goals

1. Grow and protect the long-term viability of shellfisheries, shellfish populations and habitats.
2. Increase public awareness and support of Connecticut's shellfish past, present, and future.

The Outcomes

Short-term. Success in the short-term is meeting the targets listed within approximately two years or 2018. The targets include no net loss of the following: (a) natural shellfish bed acreage; (b) leased shellfish harvest areas acreage; (c) conditionally-approved and approved shellfish harvest classification area acreage; (d) number of shellfish companies; (e) commercial shellfish landings from a 2016 baseline; and (f) revenue generated from sales of recreational harvest permits. Additionally, an increase in the numbers of public outreach and engagement programs, tools, and survey responses will be indicative of success.

Long-term. Most long-term success measures were established through the Connecticut Shellfish Initiative, are expected within 5 years or 2023, and with a baseline of 2016. The remaining have been identified in the newly released Long Island Sound Study Comprehensive Conservation and Management Plan[1], are expected by 2035, and with a baseline of 2014. These are denoted by an asterisk (*) below and in subsequent pages.

The targets include: (a) no net loss of natural shellfish bed acreage; (b) increase in leased shellfish harvest areas acreage; (c) upgrade 5 percent of acreage currently restricted or closed for shellfishing from 2014 baseline*; (d) increase the number of shellfish companies; (e) increase of commercial shellfishing landings; (f) increase in revenue generated from sales of recreational harvest permits; (g) increase the number of public access points to the Sound and its rivers by at least 10 percent*, and (h) increase the knowledge and engagement of the public in the protection and restoration of Long Island Sound*.

The Product

A Vision Plan is under development and will be published in three sections:
Part 1. Overview and Recommendations.
Part 2. Context.
Part 3. Implementation Plan.

Part 1 is summarized in this document. Part 2 is complete and highlights the cultural, environmental and economic importance of Connecticut shellfish and characterizes issues of importance.

All published materials are available online at http://shellfish.uconn.edu or can be requested by calling the Connecticut Sea Grant office at (860) 405-9128.

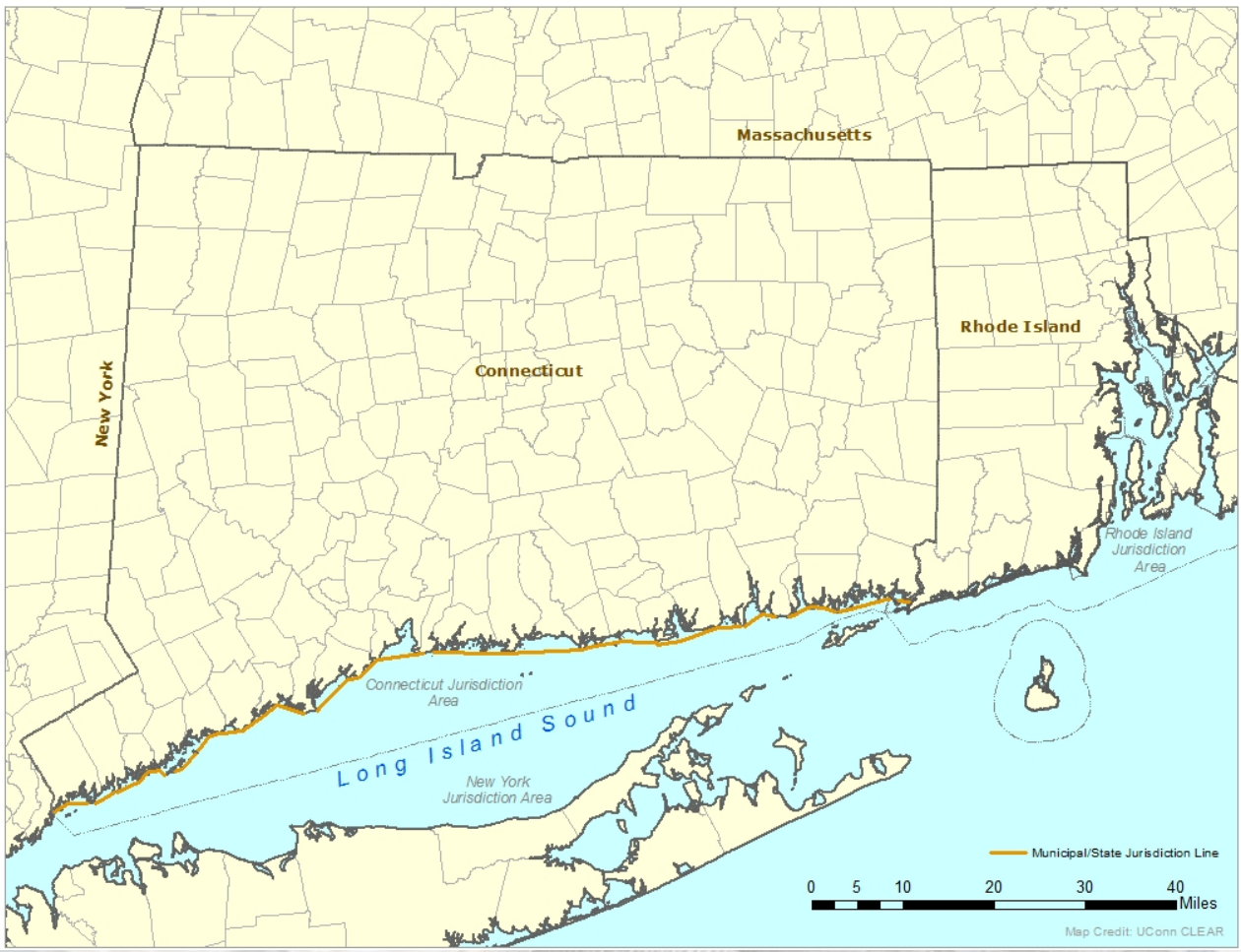

Figure 1. Geographic Area.

The Geographic Area

The Vision Plan covers the Connecticut portion of Long Island Sound (Figure 1) and its tributaries. The map depicts the State jurisdiction line, established in 1881, which creates the boundary separating shellfish grounds under town jurisdiction (north of the line and reaching to the coastal boundary) and those under State jurisdiction (to the south and reaching to the New York border). The total area within this boundary is 335,000 acres[2].

The Species

The plan is focused on commercially, recreationally and ecologically important bivalve mollusks. Table 1 identifies the species covered.

Table 1. Shellfish species covered in the CSI.

Common name	Scientific name
Eastern oyster	*Crassostrea virginica*
Northern quahog	*Mercenaria mercenaria*
Softshell clam	*Mya arenaria*
Atlantic jackknife	*Ensis directus*
Surf clam	*Spisula solidissima*
Bay scallop	*Argopecten irradians*
Blue mussel	*Mytilus edulis*
Ribbed mussel	*Geukensia demissa*

The Players

Connecticut citizens, shellfishermen, regulators, community groups and scientists representing a diverse array of interests and expertise.

The Process

Public scoping sessions were held in 2013, 2014 and 2015 to solicit input and present progress on the Initiative. The initial workshops offered an open forum for individuals and organizations to identify challenges and opportunities related to Connecticut's commercial, recreational and natural shellfish resources. Subsequent workshop discussions and other stakeholder input resulted in the list of recommendations that are presented in this document. Meeting participants are listed in Vision Plan Part 2, Appendix 4. (see http://shellfish.uconn.edu)

The Principles

- All citizens and stakeholders have the opportunity to contribute to the Vision Plan.
- Contributors must follow a set of ground rules that include treating each other professionally and respectfully, and communicating in an open and inclusive manner.
- The process by which the plan is developed must be transparent and flexible.
- Science-based data, when available, are used to inform the process.

The Next Step

An Implementation Plan to be assembled by themed committees, will identify specific actions and details - the what, when, who and how much – for each recommendation in the Vision Plan.

The Role of the Steering Committee

The Steering Committee was charged with identifying key players in the public and private sector, identifying sector concerns and opportunities, assessing law and policy implications of recommendations included in the Vision Plan, and providing context. The Committee is comprised of shellfish industry leaders, local, state and federal regulators, community groups and scientists.

The Role of the Task Force

The primary role of the Task Force was to facilitate stakeholder participation in the Connecticut Shellfish Initiative and to coordinate the development, distribution, review and revision of the Vision Plan. The Task Force included individuals from Connecticut Sea Grant, the University of Connecticut, Department of Extension and the National Oceanic and Atmospheric Administration (NOAA) National Marine Fisheries Service Milford Laboratory.

Aquaculture Advisory Council

The Connecticut General Assembly in 2015 mandated the establishment of an Aquaculture Advisory Council. The Council is to be comprised of shellfishermen, a marine habitat conservation organization, a scholar in marine studies, chief executive officers of coastal municipalities, shellfish commission members, a recreational shellfishermen, the Commissioner of Agriculture or their designee, the Commissioner of Public Health or their designee, and the Commissioner of Energy and Environmental Protection or their designee. The Council is charged with several responsibilities that dovetail with the Connecticut Shellfish Initiative Vision Plan. These include but are not limited to: developing a recommended plan to expand the shellfish industry in Connecticut; reviewing the state shellfish leasing process; reviewing health and safety standards pertaining to the state's shellfish industry; reviewing existing laws and procedures pertaining to recreational shellfishing; reviewing other coastal states' laws and regulations pertaining to shellfish sizes and make recommendations for changes to Connecticut's shellfish size law; and coordinating with other states to inform recommendations on how to further develop the state's shellfish industry. A number of recommendations in this Vision Plan were intentionally made broad as the CSI

Steering Committee felt the Council would be the appropriate decision-making body.

The National Shellfish Initiative

The goal of the National Shellfish Initiative, facilitated by the NOAA Aquaculture Program, is to increase populations of bivalve shellfish in our nation's coastal waters—including oysters, clams, abalone, and mussels—through both sustainable commercial production and restoration activities[3]. The Task Force is collaborating with outreach personnel from other states and regions that are developing shellfish initiatives to share ideas towards achieving common state and national goals.

Recommendations

The following recommendations are the result of input by citizens, shellfishermen, regulators and scientists. The CSI Steering Committee has vetted the recommendations that are considered in draft form until the public comment period has ended. As previously mentioned, specific actions for each recommendation will be identified during the Implementation Planning stage, which begins in the fall of 2016. In some cases, related targets and implementation actions have been set in the Long Island Sound Study Comprehensive Conservation and Management Plan, and are denoted with an asterisk (*) below.

Theme 1. Increasing Public Awareness and Support

1. Determine the economic importance of shellfish harvest and cultivation*.
2. Improve public understanding of the ecological services and equivalent economic value provided by both natural and harvested shellfish populations.
3. Develop and implement strategies to promote Connecticut's shellfish heritage.
4. Improve public understanding of the implications of various land and resource management practices on water quality in Long Island Sound and its shellfish resources.
5. Improve public understanding of how shellfish harvest and cultivation practices can benefit and impact marine and coastal environments.
6. Improve public understanding of the benefits and risks of seafood consumption.

Theme 2. Promoting Aquaculture and Shellfisheries Development

7. Identify and minimize barriers to entry and expansion of commercial shellfisheries.
8. Improve understanding of the strengths and weaknesses of the state shellfish grounds leasing process.
9. Improve understanding of the risks and benefits of changing the minimum commercial harvest size for oysters.
10. Encourage establishment of an aquaculture or shellfish industry association in Connecticut.
11. Develop a marketing strategy for Connecticut shellfish products that is recognized and trusted by consumers.
12. Expand Connecticut shellfish sales and distribution methods.
13. Improve productivity of oyster beds used as a local source of seed for aquaculture.
14. Explore oyster shell management, recovery and recycling.

15. Facilitate the establishment of in-state hatcheries to provide local shellfish seed for recreational, restoration and commercial purposes.

16. Identify and implement strategies to expand recreational shellfishing opportunities where desirable and appropriate.*

17. Establish a reliable and efficient means of transporting water and meat samples from recreational shellfish harvest areas to state laboratory, establishing this as standard protocol within the memorandum of understanding between the Bureau of Aquaculture and shellfish commissions.

18. Identify tools and partnerships to expand water quality and shellfish resource monitoring capacity in town and state waters.*

Theme 3. Shellfish in a Changing Environment and Climate

19. Develop strategies to reduce non-point/runoff and point sources of pollution that affect human and shellfish population health.*

20. Improve understanding of the effects of ocean acidification on shellfish survival and growth in Long Island Sound.*

21. Improve understanding of the effects of hypoxia (low dissolved oxygen) on shellfish survival and growth in Long Island Sound.*

22. Ensure that coastal resiliency plans address the impacts of climate on infrastructure, water quality and shellfish resources.*

23. Identify strategies to reduce development impacts and conflicts between recreational and commercial uses of shellfish harvest areas.

Theme 4. Streamlining Regulations and Management

24. Ensure the Connecticut Department of Agriculture/Bureau of Aquaculture has the laboratory staff, capacity and equipment to meet existing needs and allow for future growth of shellfish sectors.

25. Review all shellfish-related statutes, identifying gaps and redundancy and revising accordingly to improve clarity and readability.

26. Improve public understanding of management decisions and processes, and compliance related to shellfish harvest, cultivation and restoration.

27. Improve internal coordination among regulatory agencies.

28. Update permitting guidance and application forms for shellfisheries and aquaculture, and improve access to these materials.

29. Develop permitting guidance and application forms for projects involving shellfish habitat restoration, shoreline protection, and bioextraction projects that utilize shellfish.

30. Improve mapping capacity, geographic coverage and public access to and use of spatial, biological, chemical and physical data sets used for shellfish resource management.*

31. Continue to provide continuing education opportunities for shellfish commissions on shellfisheries management topics.

32. Improve and expand methods to communicate closures of recreational shellfishing areas to the public.

33. Continue efforts to engage industry in research related to *Vibrio parahaemolyticus* control plans and sampling efforts.

Theme 5. Vision Plan Process Related

34. Produce a condensed and simplified version of the Vision and Implementation Plans, containing the goals and recommended actions on a single page to be circulated in regular updates sent to an email distribution list of Aquaculture Advisory Council members, legislators, and members of the press.

35. Establish a committee to meet on a regular basis to track progress of Connecticut Shellfish Initiative Vision Plan and to discuss new and emerging issues.

References.

[1] Long Island Sound Study. 2015. Comprehensive Conservation and Management Plan.

[2] Connecticut Shell-fish Commission. 1882. Report of the Commissioners of Shell-Fisheries, State of Connecticut. First report, 1881. *In*: The Sixteenth annual report of the Fish Commissioners (p. 35-132).

[3] NOAA Fisheries. 2011. National Shellfish Initiative Fact Sheet. NOAA Aquaculture Program. 2pp.

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