MASSACHUSETTS SHELLFISH INITIATIVE

SCOPING COMMITTEE REPORT

REPORT
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Table of Contents

Executive Summary

The Massachusetts Shellfish Initiative (MSI) is an iterative and collaborative process with the goal of enhancing the economic, environmental, and social benefits of shellfish resources to the Commonwealth of Massachusetts and its residents. To achieve this overarching goal the MSI's Task Force has decided to write a Strategic Plan. To inform the development of that Strategic Plan, the Task Force identified six objective categories to be used to develop draft recommendations to balance the growing and competing demands for the state's shellfish resources. The six objective categories are: (1) building public and stakeholder capacity to support shellfish resources and shellfish fisheries; (2) development of management, research, and industry resources; (3) supporting and promoting the cultural and historical uses of shellfish; (4) supporting and promoting balanced and sustainable economic opportunities around shellfish; (5) ensuring ecologically sound management and enhancement of shellfish resources and coastal ecosystems; and (6) fostering communication and coordination between local, state, and federal managers and developing improved guidance for such communication.

The MSI Scoping Committee (Scoping Committee) was assigned by the Task Force to solicit and consolidate public feedback regarding these six objective categories. Written public comment was received over a period between August 6 and November 1, 2019. Additionally, during September and October 2019 public listening sessions were held in Chatham, Tisbury, Bourne and Gloucester. This public process produced over 200 comments from more than 50 unique individuals or groups engaged in shellfish resource management, shellfish fisheries, and shellfish resource and coastal restoration. This represents strong stakeholder and public engagement. The comments are reflective of a diversity of opinions from across the state's coast. They also provide insight into areas where public consensus exists. *For instance, there was near universal support to: increase financial support to improve shellfish management; enhance marketing and industry development; improve information sharing among and between government and stakeholders; expand public educational efforts; and further scientific research.*

The Scoping Committee analyzed the stakeholder feedback received through this public process. Then using considerations outlined in the draft Assessment Report (produced by the MSI's Assessment Committee), as well as the stated goals and objectives of the Task Force, the public comment was synthesized into priority goals. These priority goals were then grouped within the six objective categories identified by the Task Force.

The culmination of this work is this document: The Scoping Committee Report (Report). The Report outlines specific action items to be considered in the Task Force's development of the MSI's strategic plan. These specific action items were identified through the Scoping Committee's review of the Task Force's six broad objective categories; development of descriptive priority goals within each objective category; and synthesis of public comment received. While the objective categories and priority goals are enumerated within the report, *this enumeration is strictly organizational and does not reflect any effort on behalf of the Scoping Committee to prioritize the importance of one goal or objective over another.* All public comments received, as well as other guiding considerations, may be found in this document's appurtenant appendices.

The MSI is modeled after the NOAA Fisheries National Shellfish Initiative (NSI) and the Task Force's objective categories are in line with the NSI's goals to: (1) improve marine planning and permitting; (2) conduct and support environmental research on shellfish populations; (3) support restoration and farming techniques; and (4) prioritize coordinated and innovative financing for conservation, commercial, and research activities.

Objective Category 1

MSI Objective Category 1:
Building Public and Stakeholder Capacity to Support Shellfish Resources and Shellfish Fisheries

MSI Priority Goal 1.1:
Improve how local and state shellfish managers communicate and engage with stakeholders.

Strategic Planning Action Item(s):
Increase shellfish management capacity at state and local levels as it pertains to the dissemination of information to shellfish stakeholders.

Goal Overview:
There are varied types of information communicated between elected officials, managers, and stakeholders, as well as varied methods of communication used by elected officials and managers to collect and share that information. In some cases, protocols for public notices and hearings are well established or strictly mandated by state law or regulation (e.g., public hearings, shellfish growing area classification changes). In other cases, public notice may require a less formal notification process and communication is done at the discretion of the organizing body (e.g., MSI). In the absence of a consistent means of communication, the dissemination of information may result in a failure to get the information to the stakeholders. In turn, communication issues may lead to confusion and give the impression of impropriety. Accordingly, there is a need for better and more consistent communication, as well as the enhanced coordination of information dissemination among and between state and local government, shellfish stakeholders, and the general public.

Summary of Comments:
Shellfish stakeholders and the general public were often unaware of or confused by state and local shellfish policies and shellfish management actives. Accordingly, there was a need to increase the capacity for stakeholder engagement and enhance transparency in the management process. This included recommendations for increased stakeholder communication on emergency shellfish closures, *Vp.* related illness, shellfish growing area classification and status changes, proposed regulatory changes, and state and local planning and management efforts. There were also concerns regarding how information was disseminated to the public, particularly with regards to the purpose and formation of the MSI. DMF's Shellfish Advisory Panel should be expanded to accommodate additional stakeholders.

Appendix A: Public Comment # 7, 30, 42, 96, 98, 118, 130, 139, 159, 166, 170, and 192.

Appendix B: Summary of Stakeholder Recommendations - Table 1.1

MSI Priority Goal 1.2:
Increase public support and awareness for shellfish resources, shellfish fishing, aquaculture, and the ecosystem services and economic opportunities shellfish provide to the Commonwealth.

Strategic Planning Action Item(s):
Pursue legislative and executive branch support and funding for public outreach and education. These efforts should focus on the economic and ecological value of shellfish resources and shellfish fisheries. This outreach and educational material should be designed for the general public to enhance public support for and stewardship of shellfish resources and shellfish fisheries.

Goal Overview:
There is a need for stable and consistent funding for education and outreach to the general public regarding the economic and ecological value of shellfish resources, and how their everyday actions may impact shellfish resources and the stakeholders that rely on them. This is necessary to bolster public support for the enhanced management capacity and industry resources necessary to address current and emerging issues impacting shellfish. In the past, limited funding for such endeavors has been made available in the past has been driven by NGOs (e.g., WHOI, MIT SeaGrant, TNC, and MOP) and local organizations (e.g., BCC and BARS).

Summary of Comments:
There needs to be enhanced public awareness regarding the economic and ecological value of shellfish resources and shellfish fisheries. This may include state-wide campaigns to increase public awareness of how pollution from fertilizers, pesticides and other residential and agriculture non-point sources impact coastal ecological health and shellfish populations. Educational materials should be straightforward and geared towards the general public. These materials should be displayed at local festivals, schools, and other prominent locations and educational facilities (e.g., New England Aquarium). There should also be opportunities to educate state and local level decision makers on shellfish related challenges to bolster support for sustainable shellfish resources and shellfish fisheries.

Appendix A: Public Comment # 7, 30, 42, 96, 98, 118, 130, 139, 159, 166, 170, and 192.

Appendix B: Summary of Stakeholder Recommendations - Table 1.2

Objective Category 2

MSI Objective Category 2:
Development of Management, Research, and Industry Resources

MSI Priority Goal 2.1:
Strengthen state and local governmental capacity to effectively manage shellfish resources and shellfish fisheries in the face of increasing and evolving management challenges.

Strategic Planning Action Item(s):
Pursue legislative and executive branch support for increased support and funding to strengthen municipal and state shellfish management capacities. This should include, but not be limited to, continued and enhanced support for: propagation activities; local shellfish management resources and training; state shellfish management resources; state personnel and laboratory equipment for shellfish growing area monitoring and classification, as well as pathogen monitoring and research; the encouragement of ISAs between state agencies and universities to leverage existing expertise and resources; and the development of protocols for independent testing facilities to support state testing.

Goal Overview:
Existing state and local governmental resources provide insufficient support to adequately manage the state's shellfish resources and shellfish fisheries. This is of particular concern given the increasing complexity of management challenges related to climate change, increasing population density, shellfish harvest closures, and higher rates of veterinary disease and shellfish related human illnesses. These factors may contribute to more stringent federal management mandates that may increase the frequency and duration of shellfish harvest closures. These issues have the potential to erode the reputation and sustainability of the state's shellfish resources and shellfish fisheries. By enhancing the resources available to managers, researchers and industry the state may be able to meet these challengers and decision makers can help communities develop sustainable shellfish management programs.

Summary of Comments:
State and local capacity to effectively manage shellfish resources and shellfish fisheries in the face of increasing management challenges needs to be enhanced. This includes increases to technical support, personnel, and other resources available to local and state shellfish manager.

Appendix A: Public Comment # 1, 6, 46, 52, 53, 54, 57, 58, 63, 64, 65, 94, 95, 99, 102, 103, 113, 117, 128, 138, 158, 162, 165, 174, 175, 182, 183, 193, 198, 199, 200, 201, and 205.

Appendix B: Summary of Stakeholder Recommendations - Table 2.1

MSI Priority Goal 2.2:
Support for research focused on issues impacting shellfish resource health, public health, and shellfish production at the federal, state, and local level.

Strategic Planning Action Item(s):
Encourage the development of a working group of state agencies, academic and research institutions, NGOs, and shellfish fishermen to develop grant and research related activities to enhance shellfish resource health, public health, and shellfish production. These grant and research initiatives should include, but not be limited to, promoting sustainable shellfish fisheries; addressing emerging and existing shellfish related public health and veterinary health issues; enhancing shellfish fisheries and commercial shellfish marketing; and improve coastal restoration and resiliency. Advocate for financial support from federal, state, and local government to achieve these goals.

Goal Overview:
There is a limited amount of state and local funding dedicated to applied research related to shellfish resources and shellfish fisheries and state agencies do not have mandates to fund or conduct such applied research. Accordingly, most of this research is conducted by academic institutions and NGOs, often through federal grants. With increasing rates of pathogen occurrence, shellfish-related human illness, and veterinary disease, additional research is needed to address these challenges.

Summary of Comments:
Increased support for research and grants to improve decision making related to shellfish resource management, shellfish resource health, public health, and shellfish production. Provide state and local shellfish managers and shellfish fishermen with better tools to address these areas of concerns. Research areas of particular interest are new and emerging pathogens (MSC, HABS, Vp.); monitoring impacts of climate change and ocean acidification on shellfish resources and shellfish fisheries; shellfish genetics, breeding and veterinary health; predator management; and diversifying the portfolio of aquaculture reared species. Funding should be focused towards researchers, municipalities, shellfish fishermen and NGOs.

Appendix A: Public Comment 77, 80, 88, and 188.

Appendix B: Summary of Stakeholder Recommendations - Table 2.2

MSI Priority Goal 2.3:
Support for resources that promote shellfish industry development, communication, market opportunities, and economic and environmental resiliency.

Strategic Planning Action Item(s):
Encourage efforts that ensure cooperation between state and local shellfish managers, local and county shellfish resource staff, and NGOs. These cooperative efforts should facilitate training to ensure best practices for commercial shellfish propagation and shellfish harvest and handling are being used.

Support the expansion of Seaport Economic Council grants and other grant opportunities that improve shore-side infrastructure, particularly as it relates to commercial shellfish fisheries.

Goal Overview:
Given existing and emerging public health and shellfish veterinary health issues, there is a growing need for strict adherence to best practices for commercial shellfish propagation, harvest, and handling. This requires coordination between industry, state, county local government and NGOs; enhanced training opportunities; and the expansion of supportive shore-side infrastructure.

Summary of Comments:
There is a need for increased cooperation among stakeholders to encourage the use of best practices for aquaculture and shellfish harvest and handling. This includes bolstering training efforts, shore-side infrastructure, and streamlining regulations. There was also interest in supporting efforts to increase in-state hatchery and seed supply for shellfish propagation and aquaculture to enhance seed supply and genetic resiliency. Increased resources and capacity to the commercial shellfish industry, particularly enhanced industry collaboration, branding and marketing opportunities, and financial support for recovering lost income were recommended.

Appendix A: Public Comments # 4, 35, 36, 37, 38, 39, 40, 43, 78, 79, 81, 106, 107, 111, 116, 121, 126, 185 and 186.

Appendix B: Summary of Stakeholder Recommendations - Table 2.3

Objective Category 3

MSI Objective Category 3:
Supporting and Promoting the Cultural and Historical Uses of Shellfish

MSI Priority Goal 3.1: Encourage economic opportunities around shellfish in a manner that is consistent with the character and interest of individual communities.

Strategic Planning Action Item(s):
Foster opportunities for individual municipalities to develop innovative management strategies that are best suited for their community. Such opportunities should ensure the necessary public health and resource management objectives critical to safeguarding a safe and sustainable supply of shellfish for consumption are met, and access to public shellfish resources and state tidelands is maintained.

Initiate a working group to address emerging conflicts related to home rule. This will allow for the MSI to transparently address and work to help balance competing interests and stakeholder groups. Of immediate interest is House Bill 746 (H746), which addresses the transferability of municipally issued aquaculture licenses.

Goal Overview:
State law establishes a legal and regulatory framework that delegates shellfish management and public health related responsibilities to both state and local authorities. This joint management system is intended to provide municipalities with the ability to develop innovative shellfish management strategies that are tailored to the interests of individual communities and their local shellfish resource abundance and use, while also ensuring that overarching public health and resource management objectives are met and access to the state's shellfish resources and tidelands are maintained. However, inconsistency across municipal regulations results in the uneven management of shellfish resources and shellfish fisheries across jurisdictions and tension between state and local government and shellfish stakeholders.

Summary of Comments:
There was a robust interest in maintaining home rule.

Several comments focused on H746. There are concerns that the bill weakens home rule and the municipal authority over the transferability of municipally issued aquaculture licenses and that this may lead to the development large scale aquaculture operations run by outside entities and change the character of aquaculture in communities.

There was also a diversity of opinion regarding the extent to which the municipality should have control over the transfer of shellfish aquaculture licenses, while some comments expressed a preference for varying allowances for transfer and sale of the municipal shellfish aquaculture

license to allow for business succession, there were some who opposed this approach and favored having the license revert back to the town for reissuance.
Appendix A: Public Comment # 14, 22, 24, 26, 51, 73, 74, 100, 110, 124, 151, 160, 172, and 173 Appendix B: Summary of Stakeholder Recommendations – Table 3.1

MSI Priority Goal 3.2: Improve and refine existing state management strategies that increase sustainable economic opportunities around shellfish resources and shellfish fisheries while balancing shellfish sanitation concerns.
Strategic Planning Action Item(s): Enhance state agency participation at the ISSC and NSSP to ensure that Massachusetts can adequately address emerging shellfish sanitation concerns, improve harvester access to shellfish resources, and promote sustainable economic opportunities in the state's shellfish industry. Support enhancing shellfish industry training and infrastructure. Increase state and local management capacity to conduct sanitary classifications of shellfish growing areas and enforce these classifications. Take advantage of opportunities to make state regulations less restrictive, if so allowed under the NSSP's MO.
Goal Overview: The NSSP's MO sets forth national agreed upon standards that are minimally necessary for the sanitary control of shellfish to ensure that it is safe for human consumption. A primary aspect of state compliance with the MO is the sanitary classification of shellfish growing areas and the monitoring of environmental conditions affecting water quality that may render shellfish unfit for consumption or hazardous to public health. In recent years, the MO has been amended and FDA has revised their long-standing interpretation of sanitary classification criteria. This has resulted in DMF needing to enhance its water quality monitoring, particularly following rainfall closures and in areas that may be at a higher risk of degraded water and contamination (e.g., mooring fields). Additionally, FDA has identified deficiencies in DMF's sanitary classification program and DMF has had to downgrade certain shellfish growing areas. State and local officials, including DMF, have been challenged to meet these new sanitary classification mandates. The impacts of this are two-fold. First, shellfish resource managers have been limited in their ability to dedicate resources to address other emerging and critical shellfish related issues (e.g., aquaculture development, *Vp* management, biotoxin monitoring), as well as other administrative responsibilities. Second, access to certain shellfish growing areas have been lost or limited due to changes in sanitary classifications. There are pervasive concerns that access

to shellfish growing areas will continue to be lost without increasing those resources dedicated to water quality monitoring or minimizing the negative impacts of evolving federal mandates.

Summary of Comments:
Stakeholders are concerned that enhanced federal oversight of shellfish sanitation will negatively impact commercial shellfish economics due to the loss of access to shellfish growing areas and capital investment costs related to compliance. Costly compliance measures tend to favor larger-scale operations and make small-scale operations unprofitable. It was recommended that DMF, and other state agencies, more forcefully push back on increasing federal oversight.

If it is allowed under the NSSP's MO, state and local shellfish management authorities should develop and revise management strategies and regulations to make compliance less burdensome. This includes recommendations to increase the maximum seed size nursery culture in contaminated growing areas and allow enhanced opportunities for the bulk tagging and direct-to-consumer sale of shellfish by harvesters.

There is a need to amend state law and regulation to provide consistency that may help support economic opportunities. This includes providing incentives for municipalities to expand shellfish aquaculture opportunities and to increase municipal shellfish aquaculture licensing fees to cover those costs associated with increased local oversight and management.

Appendix A: Public Comment # 23, 67, 68, 86, 114, 115, 163, 194, 195 and 196.

Appendix B: Summary of Stakeholder Recommendations – Table 3.2

Objective Category 4

MSI Objective Category 4:
Supporting and Promoting Balanced and Sustainable Economic Opportunities Around Shellfish

MSI Priority Goal 4.1: Protect public access to coastal waters and habitat quality in support of cultural uses of shellfish resources.

Strategic Planning Action Item(s):
Strengthen support for the protection of nearshore coastal habitat and shellfish resources through updating review frameworks to ensure projects with coastal impacts are designed to limit negative effects on the marine environment and public access to shellfish resources and tidal flats.

Goal Overview:
Massachusetts has a history of protecting public access to its marine resources since the Colony Ordinances (1640 – 1647). The state has historically viewed the recreational harvest of its shellfish resources as a public right. Accordingly, state law at G.L. c .130 §52 requires every municipality exercise its authority over its shellfish resources in those waters classified as approved for direct harvest. As a result, coastal municipalities issue thousands of recreational shellfish permits annually and the revenues from these permits support the maintenance of local shellfish management programs that provide residents and non-residents with opportunities to access the state's shellfish resource and conduct shellfish fishing. Likewise, commercial shellfish fishing has occurred since the colonial era and continues to support thousands of jobs across the Commonwealth. However, coastal development has strained sanitation infrastructure and in turn negatively impacted water quality and degraded coastal habitat. Additionally, other non-traditional uses of coastal areas and emerging economic activities within the nearshore coastal habitat threaten public access to shellfish resources and shellfish fisheries. These factors negatively impact the historic, cultural, and economic uses of the state's shellfish resources.

Summary of Comments:
Public access to shellfish resources, including recreational and commercial shellfish fishing, must be balanced against emerging nearshore coastal economic activities (e.g., aquaculture and energy development) and coastal development to prevent the loss of access to shellfish resources and shellfish fishing opportunities that are of cultural, economic and historic importance. There is some concern that not enough is being done to ensure that the negative impacts the proliferation of coastal development; ocean energy development; impervious surfaces and private piers; marinas and mooring fields; boat traffic; and marine industry contaminants (e.g., toxic bottom paint, petroleum fuel) may be having on nearshore coastal water quality, shellfish resources, and shellfish stakeholders. Greater consideration needs to be given to these negative impacts to ensure they are avoided or adequately mitigated.

Recreational and commercial wild shellfish harvest opportunities should be expanded. This should be done in part through the growth of municipal shellfish propagation and shellfish relay activities, provided such activities do not negatively impact market conditions. State regulations do not adequately differentiate between aquaculture and wild harvest fisheries.
Appendix A: Public Comment # 8, 9, 10, 11, 12, 28, 70, 92, 101, 122, 123, 168, 181, 203, and 204 Appendix B: Summary of Stakeholder Recommendations – Table 4.1

Objective Category 5

MSI Objective Category 5:
Ensuring Ecologically Sound Management and Enhancement of Shellfish Resources and Coastal Ecosystems

MSI Priority Goal 5.1: Ensure shellfish planting for nutrient remediation projects are designed to consider animal health and management implications, and do not result in adverse economic impacts to existing commercial shellfish fishing activities.

Strategic Planning Action Item(s):
Develop best management practices for the shellfish planting efforts directed at nutrient remediation. These best management practices should minimally address requirements related to MEPA Certification for shellfish planted for nutrient remediation and set forth an economic impact analysis regarding the harvest and sale of shellfish planted for nutrient remediation.

Initiate a working group to oversee and guide the development of water quality restoration projects that utilize shellfish planting as a means to remediate nutrient pollution.

Goal Overview:
State law principally provides municipalities with the authority to license shellfish planting. Several coastal municipalities have begun to expand these opportunities as a means to meet state and federal water quality standards through the use of shellfish in nutrient remediation in their coastal waters. Notably, several Cape and Island communities have implemented Clean Water Act Section 208 Area-Wide Water Quality Management Plans (208 Plans) that allow for publicly supported shellfish planting to mitigate nutrient pollution to meet federal and state water quality requirements. This strategy is of interest to other towns, as it enhances local shellfish resources, mitigates nutrient pollution, and provides additional shellfish fishing opportunity.

However, shellfish planting as part of 208 Plans has raised concerns from a variety of stakeholders. Foremost among these concerns is that the harvest and sale of planted shellfish will increase the overall supply of shellfish, cause market volatility, and negatively impact incomes derived from commercial shellfish fishing. Additionally, there are concerns that shellfish planting for nutrient remediation projects may have unintended human health, animal health and management consequences. For instance, there is interest in developing projects to propagate shellfish in contaminated growing areas where water quality is degraded and there are concerns that this would artificially increase the biomass of contaminated shellfish and raises public health concerns among state agencies.

Summary of Comments:
Projects that plant shellfish for nutrient remediation may impact commercial shellfish fisheries and markets. There is some speculation that existing efforts have inflated market supply resulting

in volatile fluctuations in ex-vessel value. Shellfish planted as part of these projects should go to enhance recreational fisheries. Additionally, they should involve the planting of shellfish species other than oysters (e.g., quahogs), as they may be more suitable for certain target estuarine environments and have more diverse commercial markets to mitigate market volatility. If oysters are to be used, then the product should be sold as processed product so as not to directly compete on the raw oyster market.

Greater efforts need to be made to prevent nutrients from entering the state's nearshore marine waters.

Appendix A: Public Comment # 27, 47, 48, 60, 61, 66, 75, 84, 109, 119, 120, 217, 141, 143, 144, 147, and 164.
Appendix B: Summary of Stakeholder Recommendations – Table 5.1

MSI Priority Goal 5.2: Provide greater support for shellfish habitat restoration projects by developing further guidance on best practices, revise restrictions on restoration in contaminated growing areas, and ensure restoration is considered equally with shellfish fishery interests and public health.

Strategic Planning Action Item(s):
Expand shellfish planting and restoration activity intended to improve estuarine health and increase opportunities for recreational and commercial shellfish fishing. Considerations should be given to the planting and propagation of shellfish in contaminated growing areas and the development of shellfish sanctuaries.

Goal Overview:
Restoration is one tool to meet the need to improve estuarine function and shellfish habitat. To date, there have been a small number of projects that have deployed cultch and planted live shellfish to enhance habitat and improve water quality, and municipal propagation efforts have focused on making shellfish available for harvest. Expanded shellfish habitat restoration activities could result in improved ecosystem function while simultaneously increasing shellfish populations available to shellfish fishermen. However, shellfish habitat restoration projects are limited by funding, permitting requirements, and legal requirements.

State law provides municipalities with the legal authority to conduct shellfish planting. While municipalities often partner with NGOs, the NGOs themselves cannot pursue the activity unilaterally. State law also places limitations on the ability for a municipality to close areas for shellfish harvest. In most instances, the closure of an area to shellfish harvest is limited to no more than three years; if it can be demonstrated a closure beyond three years is in the best interest of resource management, the municipality can petition DMF to extend the closure for up to 10 years.

DMF does not permit the planting or propagation of shellfish in growing areas classified as contaminated, and these areas are often ecologically impaired or highly degraded and in the most need for restoration. This is driven by concerns related to the public health risks associated with having viable and productive shellfish resources in contaminated waters. A product of these concerns is that the NSSP's MO requires enhanced patrol and oversight over contaminated growing areas, and enforcement resources are currently limited.

DMF does allow for aquaculturists to conduct nursery shellfish culture in contaminated growing areas, provided that the increased patrol requirements are delegated to local enforcement authorities. In these situations, seed must be moved to an approved growing area once it reaches a maximum seed size. This maximum seed size is less than the commercial minimum size standard to safeguard public health. The reason for this is two-fold. First, it ensures the shellfish being cultured in the contaminated growing area are below the commercial minimum size standard to create a barrier to restrict it from entering commerce. Second, once the seed is moved back to an approved growing area it has to be grown out to harvest size, providing a sufficient period of time to allow for the purging of contaminants before being harvested and sold into commerce. As shellfish are efficient at removing nutrients from waterbodies, the expansion of nursery culture in contaminated growing areas could provide a means to improve local water quality. By focusing on nursery culture, this activity may mitigate potential concerns regarding the proliferation of legal sized shellfish resources in contaminated growing areas and how that may impact public health and commercial markets.

Summary of Comments:
There exists a general interest in the development of a management framework to enhance shellfish habitat restoration projects. This includes clarifying the permitting process for shellfish planting; increasing shellfish planting opportunities, including greater utilization of contaminated growing areas; and incentivizing well managed and well sited shellfish planting efforts.

The current permitting and review process focuses too much on the impacts of certain shellfish planting techniques (e.g., clutching) and the potential for increased illegal harvest of contaminated shellfish resulting from shellfish planting in contaminated growing areas. To this point, there was a call for the development of synergistic review metrics that weigh these traditional concerns against the potential ecological benefits of shellfish habitat restoration. This effort could result in DMF updating its Shellfish Planting Guidelines to more broadly consider impacts to coastal ecology, public health, public access, resource health, and shellfish fisheries.

DMF should incentivize ecosystem-based restoration efforts designed to improve shellfish habitat (e.g., spat on shell, cultch, reef development). This includes the development of shellfish habitat restoration leases and sanctuaries to protect brood stock to support shellfish fishing opportunities in adjacent areas, as well as lifting restrictions on shellfish planting in contaminated growing areas.

Appendix A: Public Comment # 29, 41, 49, 59, 62, 69, 104, 146, 149, 150, 152, 153, 176, 180 and 202

Appendix B: Summary of Stakeholder Recommendations – Table 5.2

Objective Category 6

MSI Objective Category 6:
Fostering Communication and Coordination Between Local, State, and Federal Managers, and Developing Improved Guidance for Such Communication.

MSI Priority Goal 6.1: Develop and strengthen the means of communication between managers, regulators, and community groups both within and across all levels of government.

Strategic Plan Action Item:
Establish a post-MSI working group that provides a venue for state and local governmental bodies to follow through on MSI objectives and cooperatively address future shellfish related challenges in a transparent manner. This could be achieved by increasing the scope and mandate of DMF's Shellfish Advisory Panel. Any such body should include participation from the variety of state agencies involved in shellfish management, specifically those agencies within EEA (e.g., DMF, MEP), as well as DPH (who occupy a different Secretariat but have a substantial role in shellfish management).

Goal Overview:
The MSI was developed to provide an iterative and collaborative process to address ongoing and emerging issues related to shellfish resource, shellfish fisheries, and shellfish management with the goal of enhancing the economic, environmental, and social benefits of shellfish resources to the Commonwealth. When the MSI completes its stated task, a legacy goal should be to provide a venue that perpetuates MSI's goal and allows for continued transparent governmental cooperation to address shellfish related challenges.

Summary of Comments:
There needs to be transparent communication and coordination among shellfish managers and regulators across all levels of government.

A venue needs to be created to ensure follow through on MSI objectives and ensure transparent government communication and coordination on future shellfish related challenges.

There needs to be increased communication and data sharing between state and local shellfish managers and regulators.

All efforts to enhance governmental communication need to include DPH due to the substantial role the agency plays in shellfish management.

Appendix A: Public Comment # 5, 45, 55, 56, 87, 90, 112, 125, 137, 148, 167, 178, 189, and 206.

Appendix B: Summary of Stakeholder Recommendations – Table 6.1

Glossary of Acronyms and Terms

For the purpose of this Scoping Committee Report, the following acronyms and terms hold the following meanings:

Approved area means any shellfish growing area classified by DMF as Approved or Conditional Approved and not in a closed status under the provisions of a Conditional Area Management Plan.

Aquaculture means the planting and raising of shellfish at an aquaculture grant site , which results in the commercial production of shellfish.

Aquaculturist means any person permitted by DMF to plant and raise shellfish at an aquaculture grant site, which results in the commercial production of shellfish.

Aquaculture Grant Site or Aquaculture License Site means that specific portion of the waters under the jurisdiction of the Commonwealth granted by the municipality where a shellfish aquaculturist is licensed to propagate shellfish in accordance with G.L. c. 130 §57.

Assessment Committee means the MSI's Assessment Committee.

BARS means the Barnstable Association for Recreational Shellfishing.

BCC means Barnstable County Commission.

Closed Status means any growing are classified by DMF as Approved, Conditionally Approved, Restricted, or Conditionally Restricted that has been closed to shellfish harvesting, or in the case of a Conditionally Approved Area, when a municipality closes an area under the provisions of a Conditional Area Management Plan.

Commercial Shellfish Fisherman means any person who may catch, possess and land shellfish for sale barter or exchange. This shall include aquaculturists and wild harvesters.

Commercial Shellfish Fishing means any shellfish fishing activity conducted by a commercial shellfish fisherman for the purpose of sale, barter or exchange.

Contaminated Area means any shellfish growing area classified as Prohibited, Restricted, Conditionally Restricted, Conditionally Approved or Approved and in a closed status.

Contaminated shellfish means any shellfish shellstock within or taken from any contaminated area.

CPR means coastal pollution remediation.

Culture Activity means those activities conducted by aquaculturists (or employees thereof) that are authorized in writing by DMF and may occur at locations other than the aquaculture grant site. Culture activities include, but are not limited to, sorting, cleaning, culling, grading, pitting, or over-wintering of cultured shellfish.

DAR means the Massachusetts Department of Agriculture.

DFG means the Massachusetts Department of Fish and Game.

DMF means the Massachusetts Division of Marine Fisheries.

DPH means the Massachusetts Department of Public Health.

EEA means the Massachusetts Secretariat of Energy and Environmental Affairs.

FDA means the United States Food and Drug Administration.

Fishing or Fish For means to harvest, catch, or take, or attempt to harvest, catch, or take shellfish. This includes the taking of aquaculture reared shellfish for purposes other than culture activity.

FTE means full-time employee

GIS means geographic information system.

Growing Area means any site which supports or could support the propagation of shellstock by natural artificial means. DMF has listed and mapped all growing areas in the waters under the jurisdiction of the Commonwealth and these geographic maps are made available on DMF's website.

HABS means harmful algal blooms.

Home Rule means the authority vested in municipal government to manage the shellfish resources and shellfish fisheries within its waters pursuant to state law at G.L. c. 130.

ISA means Interdepartmental Service Agreement.

ISSC means the Interstate Shellfish Sanitation Conference

Long Term Transplants means the transfer of seed shellfish only by municipalities from growing areas classified as Prohibited to growing areas classified as Approved or Conditionally Approved to reduce pathogens. Transplants require one or more spawning seasons and a minimum of 6 months of natural depuration before harvest. Areas used as a source of shellfish for transplants must have acceptably low levels of poisonous or deleterious substances as defined by the NSSP and any other contaminants of concern to MA DPH. Testing must demonstrate that the shellfish are free of shellfish diseases prior to transplanting. The NSSP defines seed as shellstock (shellfish) which is less than market size.

MEP means the Massachusetts Environmental Police.

MEPA means the Massachusetts Environmental Protection Act.

MIT means the Massachusetts Institute of Technology.

Mitigation means any shellfish planting done as compensation for alterations resulting in losses or damage to existing shellfish resources or habitat.

MOA means Memorandum of Agreement.

Model Ordinance or MO means that part of the most recent version of the National Shellfish Sanitation Program's Guide for the Control of Molluscan Shellfish that sets for the requirements that the states have agreed to enforce through their participation in the Interstate Shellfish Sanitation Conference, which are minimally necessary for the sanitary control of shellfish produced from that state to ensure that it is safe for human consumption.

MOP means the Massachusetts Oyster Project.

MOU means Memorandum of Understanding.

MSC means that group of viruses known as male specific coliphage.

MSOA means the Massachusetts Shellfish Officers Association.

MSI means the Massachusetts Shellfish Initiative.

National Shellfish Sanitation Program or NSSP means the cooperative state, FDA, industry program for the sanitary control of shellfish that is adequate to ensure that the shellfish produced in accordance with these guidelines will be safe and sanitary.

NGO means non-governmental organization.

NOAA means the United States National Oceanic and Atmospheric Association

Nursery Culture means the culturing and grow-out of hatcher seed.

Open Status means a growing area classified as Approved, Conditional Approved, Restricted or Conditionally Restricted that is not in a closed status and allows for the direct harvest of shellfish.

Planting means any type of human induced or human assisted method of increasing or creating shellfish resources regardless of the purpose.

Propagation means any shellfish planting activity conducted by municipalities or DMF to increase the supply of shellfish.

Recreational Shellfish Fishermen means those individuals who harvest shellfish for personal, familial, or cultural use where the shellfish harvested are not for sale, barter or exchange.

Relay means the transfer of any sized contaminated shellfish by a municipality from a growing area classified as Restricted, Conditionally Restricted, Conditionally Approved in the closed status to a growing area classified as Approved or Conditionally Approved for the purpose of purging contamination in such shellfish. Relay activity is regulated by DMF pursuant to 322 CMR 16.08. This includes Long Term and Short Term Relays.

Research Project means any planting activity designed for hypothesis testing, experimentation, scientific research or education, permitted annually by DMF. These permits include a monitoring and reporting component.

Restoration means any activity that enhances or expands shellfish habitat and increases shellfish populations with the intended goal of improving the surrounding ecological condition and function. This activity may also enhance shellfish populations to increase recreational and commercial shellfish fishing opportunities. of the surrounding

SAP means DMF's Shellfish Advisory Panel.

Scoping Committee means the MSI's Scoping Committee.

Seed means shellstock that is less than the minimum size established by DMF in regulation at 322 CMR 6.00.

Shellfish means species of molluscan shellfish available within the waters under the jurisdiction of the Commonwealth. This includes oysters, soft shell clams, surf clams, bay quahogs, ocean quahogs, razor clams, bay scallops, sea scallops, blood arcs and mussels.

Shellfish Fishery means the take and harvest of shellfish resources by recreational or commercial shellfish fishermen.

Shellfish Industry means broadly commercial shellfish fishermen, seafood dealers and other dependent shore-side businesses.

Shellfish Planting Guidelines means that document produced by DMF that describes the allowable practices, statutory and regulatory authorities, and permit requirements governing the planting of shellfish in the waters under the jurisdiction of the Commonwealth.

Shellfish Resources mean those shellfish as they exist in the waters or tidal flats.

Shellfish sanctuary means any area with naturally occurring or planted shellfish resources that is closed to harvest to provide ecological services and brood stock to enhance shellfish populations within and outside of the sanctuary's boundaries.

Shellstock means any live shellfish in the shell.

Short Term Relay means the transfer of any sized shellfish by municipalities from growing areas classified as Restricted or Conditionally Restricted to growing areas classified as Approved or Conditionally Approved to reduce pathogens. Shellfish may be harvested after 90 days and usually one spawning season. Shellfish are typically relocated (relayed) in late spring and opened to harvest in the fall. Areas used as a source of shellfish for relays must have a current sanitary survey and shellfish must meet NSSP and MA DPH guidelines for suitability. Testing must demonstrate that the shellfish are free of shellfish diseases prior to relaying.

Status change means a change from open status to closed status or closed status to open status of any growing area classified as Approved, Conditional Approved, Restricted or Conditionally Restricted.

Task Force means the MSI's Task Force.

TNC means The Nature Conservancy.

Transplant means the transfer of relayed contaminated shellfish and its placement in a growing area classified as Approved or Conditionally Approved in the open status for the purpose of purging the contamination in such shellfish.

Vp means that bacterium known as Vibrio parahaemolyticus.

WHOI means the Woods Hole Oceanographic Institute.

WQ means water quality.