

# Issues/Reports



# N.C. FISHERY MANAGEMENT PLANS

February 2016



## OYSTER FISHERY MANAGEMENT PLAN AMENDMENT 4

### 13.1 PREFERRED MANAGEMENT STRATEGIES

#### 13.1.1 INSUFFICIENT DATA

The data necessary for a robust estimate of oyster standing stock and sustainable harvest still does not exist and very limited data are collected for the recreational harvest of oysters. Socioeconomic surveys of recreational participants need to be performed to determine specific characteristics of the user group, to determine which issues are important to them, attitudes toward management of the fishery, as well as general demographics. The statutory obligation to maintain sustainable harvest in the oyster fishery cannot be calculated until the appropriate data are collected. While landings records reflect population abundance to some extent, the relationship is confounded by changes in harvest effort and efficiency. The trip ticket program, initiated in 1994, provides commercial landings as well as individual trip information. Fishery-dependent and independent monitoring programs continue, yet data in some areas still are not enough.

#### 13.2.1 OYSTER MANAGEMENT STRATEGIES

##### 13.2.1.1 RE-OPEN SHALLOW BAYS (< 6 ft) OF PAMLICO SOUND TO MECHANICAL HARVEST

#### Proposed Management Options

1. Status quo (Maintain shallow bays (< 6ft) as defined in 15A NCAC 03R .0108)
2. Re-open all shallow bays (< 6 ft.) previously closed to mechanical harvest as listed in 15ANCAC 03R .0108
3. Consider changing criteria used to designate hand harvest areas
4. Status quo (Maintain opening of deep bays ( $\geq$  6ft) during the November-December timeframe)
5. Increase the time frame for opening the deep bays ( $\geq$  6 ft.) from 6 weeks
6. Decrease the time frame for opening the deep bays ( $\geq$  6 ft.) from 6 weeks
7. Change the time frame for opening the deep bays ( $\geq$  6 ft.) from the November-December to allow flexibility within the season
8. Remove the six-week time frame for opening deep bays ( $\geq$  6 ft.) and manage by a trigger (Refer to Supplement A)
9. Close all bays to mechanical harvest

#### Management Recommendations

##### MFC Preferred Management Strategy

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##### NCDMF and Advisory Committee

- Status quo (Maintain shallow bays (< 6ft) as defined in 15A NCAC 03R .0108)

##### NCDMF

- Status quo (Maintain opening of deep bays ( $\geq$  6ft) during the November-December timeframe)

Advisory Committee

- Recommend a six-week opening timeframe for deep bays to begin on the Monday of the week prior to Thanksgiving week through the Friday after Thanksgiving. Reopen two weeks before Christmas for the remainder of the 6-week season.
- Recommend a controlled study of dredges impacts on areas currently closed to mechanical harvest

13.2.1.2 ASSESSING AND MITIGATING HARVEST EFFORT IMPACTS ON OYSTER RESOURCES IN THE SOUTHERN REGION

**Proposed Management Options**

1. Status quo
2. Reduce the culling tolerance for oysters statewide to 5% (**rule change required**)
3. Implement relay participation as a requirement to retain a commercial shellfish license (**requires statutory change**)
4. Increase efforts to plant available cultch materials in the southern region
5. Institute rotational area closures for both commercial and recreational oyster harvest from public bottom annually
6. Explore a preliminary fishery independent index of oyster abundance to inform future management actions
7. Reduce the number of fishing days south of Highway 58 Bridge for both commercial and recreational oyster harvest from public bottom
8. Reduce daily commercial harvest limit from public bottom for all oyster harvesters south of Highway 58 Bridge
9. Reduce the daily oyster harvest limit from public bottom south of Highway 58 Bridge for Shellfish License holders only

**Management Recommendations**

MFC Preferred Management Strategy

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NCDMF

- Increase efforts to plant and monitor available cultch materials in the southern region and to encourage the review and approval by regulatory agencies of the use of alternative cultch material
- Explore a preliminary fishery independent index of oyster abundance to inform future management actions

Advisory Committee

- Increase efforts to plant and monitor available cultch materials in the southern region using lessons learned to maximize success in the cultch planting program and to emphasize the review and approval by regulatory agencies of the use of alternative cultch material
- Explore and attempt to develop a preliminary fishery independent index of oyster abundance to inform future management actions.
- Decrease the culling tolerance to 5% statewide (**rule change required**)

### 13.2.1.3 DIFFERENCES IN HAND HARVEST LIMITS STATEWIDE

#### Proposed Management Options

1. Status quo (continue to maintain the 15 bushel hand/mechanical harvest limit in Pamlico Sound mechanical harvest areas outside the bays, 10 bushel hand/mechanical harvest limit in the bays and in the Mechanical Methods Prohibited area along the Outer Banks of Pamlico Sound)
2. Raise all harvest to 15-bushel trip limit for hand harvest methods for areas north of Core Sound and maintain 5/person – 10/operation from Core Sound south
3. Allow all harvest to 10-bushel trip limit for hand harvest methods for all areas from Core Sound south
4. Expand 10-bushel hand harvest trip limit for hand harvest methods from Core Sound south to US Hwy. 58 Bridge at Emerald Isle
5. Return to five bushels per person/10 bushel per commercial fishing operation for all hand harvest, statewide

#### Management Recommendations

MFC Preferred Management Strategy

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NCDMF and Advisory Committee

- Status quo (Maintain the 15 bushel hand/mechanical harvest limit in Pamlico Sound mechanical harvest areas outside the bays, 10 bushel and/mechanical harvest limit in the bays and in the Mechanical Methods Prohibited area along the Outer Banks of Pamlico Sound)

### 13.2.1.4 ADOPTING SUPPLEMENT A TO AMENDMENT 2 INTO THE N.C. OYSTER FISHERY MANAGEMENT PLAN

#### Proposed Management Options

1. Status quo – Reinstate the 15-bushel per operation mechanical harvest limit for oysters and close the season based on public perception and increases in law enforcement actions
2. Adopt the provisions of Supplement A – a flexible harvest limit up to 20 bushels, a trigger of 26 percent legal-sized oysters for closing an area to mechanical harvest and set the upper harvest limit of 20 bushels in rule (**rule change required**)
3. Change the Supplement A harvest trigger calculation to exclude oysters less than 25 mm
4. Phase out mechanical harvest of oysters

#### Management Recommendations

MFC Selected Management Strategy

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NCDMF and Advisory Committee

- Adopt the provisions of Supplement A – a flexible harvest limit up to 20 bushels, a trigger of 26 percent legal-sized oysters for closing an area to mechanical harvest and set the upper harvest limit of 20 bushels in rule

#### NCDMF

- Attempt to develop and ground truth a fishery dependent metric of effort to better inform management decisions in the future

#### Advisory Committee

- Develop a fishery dependent metric of effort to help assist with management decisions

#### 13.2.1.5 CONSIDER THE ELIMINATION OF THE SHELLFISH LICENSE AND REQUIRE ALL SHELLFISH HARVESTERS TO HAVE A STANDARD COMMERCIAL FISHING LICENSE OR A RETIRED COMMERCIAL FISHING LICENSE

#### Proposed Management Options

1. Status quo
2. Increase the cost of the shellfish license to one-half the cost of a SCFL/RSCFL **(requires statutory change)**
3. Maintain the cost of the shellfish license allowing for harvest of all shellfish except oysters; require SCFL/RSCFL with a shellfish endorsement to harvest oysters **(requires statutory change)**
4. Cap the number of available shellfish licenses **(requires statutory change)**
5. Phase out the shellfish license; allowing time for license holders to show participation to be eligible for a SCFL/RSCFL **(requires statutory change)**
6. Eliminate the shellfish license and develop an apprenticeship program in place of a shellfish license **(requires statutory change)**
7. Eliminate the shellfish license and require a SCFL or RSCFL with a shellfish endorsement **(requires statutory change)**

#### Management Recommendations

##### MFC Preferred Management Strategy

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#### NCDMF

- Maintain the cost of the shellfish license allowing for harvest of all shellfish except oysters; require Standard/Retired Commercial Fishing License with a shellfish endorsement to harvest oysters from public bottom **(requires statutory change)**.
- From Highway 58 Bridge south to NC/SC state line, maintain a daily trip limit of 2 bushels of oysters per person maximum 4 bushels of oysters per vessel off public bottom for holders of the Shellfish License. Maintain the daily trip limit at 5 bushels of oysters per person for Standard/Retired Commercial Fishing License holders in the southern region.

#### Advisory Committee

- From Swan Point Marina south to the NC/SC state line, maintain a daily trip limit of 2 bushels per person maximum 4 bushels of oysters per vessel off public bottom for holders of the Shellfish License. Maintain a daily trip limit at 5 bushels of oysters per person for SCFL and RSCFL holders in the southern region.
- Allow Shellfish License holders to be eligible to acquire a SCFL after they show a history of sale of shellfish.

### 13.2.1.6 REQUIREMENTS FOR SHADING MOLLUSCAN SHELLSTOCK

#### Proposed Management Options

1. Status quo (Continue with no shading requirements)
2. Require shading for clams only during June through September on vessel and transport vehicle to dealer
3. Require shading for clams and oysters during June through September on vessel and transport vehicle to dealer
4. Require shading for clams and oysters during transport to dealer only (in vehicle) during June through September
5. Implement shading requirements for clams during transport to a dealer or storage on a dock during June through September. These requirements would be implemented as a public health protection measure under 15A NCAC 03K .0110 by proclamation annually

#### Management Recommendation

MFC Preferred Management Strategy

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NCDMF and Advisory Committee

- Implement shading requirements for clams on a vessel, during transport to a dealer or storage on a dock during June through September. These requirements would be implemented as a public health protection measure under 15A NCAC 03K .0110 by proclamation annually.

### 13.3.1 PRIVATE CULTURE

The current shellfish lease program in North Carolina needs to be evaluated and changes implemented in order to be productive for culturists. Improvements in the allocation of leases and requirements for the continuance of leases are needed. Other issues of concern include the protection of shellfish lease and franchise rights, re-visiting the issues on lease prohibitions in certain water bodies, and consider modification to specific lease provisions.

#### 13.3.1.1 PROTECTION OF SHELLFISH LEASE AND FRANCHISE RIGHTS

##### Proposed Management Options

1. Status Quo (Continue classifying larceny of shellfish from private bottom and damage to property from an aquaculture facility or operation as a Class A1 misdemeanor, which may include a fine of not more than \$5,000)
2. Support modification of G.S 113-208 and G.S 113-269 to add minimum fines for violations on shellfish leases and franchises (**requires statutory change**)
3. Support modification of G.S 113-269 to include protection to all shellfish leases and franchises, not just those with water column amendments (**requires statutory change**)
4. Modify Rule 15A NCAC 03O .0114 so that convictions under G.S. 113-208 or G.S. 113-269 would count as more than one conviction for license suspension or revocation purposes (**rule change required**)

## Management Recommendations

MFC Preferred Management Strategy

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NCDMF and Advisory Committee

- Support modification of G.S 113-208 and G.S 113-269 to add minimum fines for violations on shellfish leases and franchises. With minimum fines set at \$500 for the first violation and \$1,000 for the second violation **(requires statutory change)**.
- Support modification of G.S 113-269 to include protection to all shellfish leases and franchises, not just those with water column amendments **(requires statutory change)**.
- Modify Rule 15A NCAC 03O .0114, so that a first conviction under G.S. 113-208 or G.S. 113-269 the Fisheries Director shall revoke all licenses issued to the licensee for a period of one year **(rule change required)**.

### 13.3.1.2 DEFINING ADVERSE IMPACTS TO SUBMERGED AQUATIC VEGETATION FROM SHELLFISH LEASES AND FRANCHISES

#### Proposed Management Options

1. Status quo (Adhere to Regional Conditions of USACE NWP48 with no adverse effect to SAV from shellfish leases and following the 15% sparse SAV measure identified in the interim
2. NCDMF/NMFS/USACE reevaluate benthic sampling protocol for shellfish lease investigations to ensure that the current sampling density of 50 one meter samples per acre is not excessive
3. NCDEQ/NCDMF issue shellfish leases in areas containing SAV

#### Management Recommendations

MFC Preferred Management Strategy

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NCDMF and Advisory Committee

- Status quo (Adhere to Regional Conditions of USACE NWP48 with no adverse effect to SAV from shellfish leases and following measures identified in the interim)

### 13.3.1.3 BRUNSWICK COUNTY SHELLFISH LEASE MORATORIUM

#### Proposed Management Options

1. Status quo (Continue the moratorium of shellfish leases in Brunswick County)
2. Allow shellfish leases in Brunswick County **(requires statutory change)**
3. Allow shellfish leases in Brunswick County, limiting acreage and availability **(requires statutory change)**

#### Management Recommendations

MFC Preferred Management Strategy

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NCDMF and Advisory Committee

- Continue the moratorium of shellfish leases in Brunswick County

13.3.1.4 MODIFY SHELLFISH LEASE PROVISIONS

**Proposed Management Options**

1. Status Quo (Maintain current lease terms of 5 years with 5 year production average)
2. Establish a 7 year period for the initial lease with the last five years of the lease averaged for production. Upon renewal, lease period returns to 5 years **(requires statutory change)**
3. Established rule to support extensions for where “Acts of God” prevent lease holder from making production, with a two year extension and only one extension allowed per term. **(requires statutory change)**
4. Status Quo (Maintain five acres within a mechanical methods prohibited area and ten acres within a mechanical methods area, not to exceed 50 acres)
5. Allowing 10 acres per lease in Mechanical Method Prohibited Area (MMP) **(rule change required)**
6. Increasing maximum of 50 acres of shellfish leased bottom per lease holder **(requires statutory change)**
7. Waive natural shellfish bed designation after 10 years of a shellfish lease termination date and allow re-application for those leases **(requires statutory change)**
8. Establish grace periods for planting/production requirements when a lease is transferred to meet standards **(requires statutory change)**
9. Waive survey requirements on terminated leases when applying within same footprint **(requires statutory change)**

**Management Recommendations**

MFC Preferred Management Strategy

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NCDMF and Advisory Committee

- Establish a rule to support extensions for where “Acts of God” prevent lease holder from making production, with a two year extension and only one extension allowed per term **(rule change required)**.
- Allow leases returned to the state to remain delineated for one year to allow the pre-existing leased bottom to be re-issued to other shellfish growers **(requires statutory change)**.
- Improve public notice of proposed lease applications on the physical lease, at fish houses, and/or through electronic notices.

NCDMF

- Status Quo (Maintain five acres within a mechanical methods prohibited area and ten acres within a mechanical methods area, not to exceed 50 acres)

Advisory Committee

- Allow a maximum of 10 acres in both mechanical methods prohibited areas and mechanical methods allowed areas **(rule change required)**.

## HARD CLAM FISHERY MANAGEMENT PLAN AMENDMENT 2

### 13.1 PREFERRED MANAGEMENT STRATEGIES

The selected management strategies and research needs listed below are organized according to the General Problem Statements in Section 5.2. Each strategy is followed by a reference to the Principal Issue(s) and Management Options from Section 12.0 and indicated in parentheses that supports it, followed by which Objective(s) it addresses from Subsection 4.1.

#### 13.1.1 INSUFFICIENT DATA

NCDMF will only be able to approximate management that prevents overfishing and achieves sustainable harvest until necessary data are collected. Data are lacking from the recreational fishery and some life history aspects of the population to provide a stock assessment. While landings records reflect population abundance to some extent, the relationship is confounded by changes in harvest effort and efficiency. Fishery-dependent and independent monitoring programs to collect biological data to complement trip ticket landings information occurs in Core Sound and needs to be expanded to more areas in the state. Very limited data is collected for the recreational harvest of hard clams. A socioeconomic survey for the recreational hard clam fishery is necessary to determine the economic impacts and demographics of this user group. The socioeconomic survey of the hard clam commercial fishery should be continued and updated periodically to determine the specific business characteristics, the economics of working in the fishery, fishery demographics, issues of importance for commercial participants, and attitudes towards management of the fishery.

[(Section 6.0 and Section 9.0), (Objectives 1, 3, 6, and 7)]

#### 13.1.2 MANAGEMENT OF PUBLIC BOTTOM

The hard clam fishery has been managed through harvest and size limits, and gear and area restriction. The management program needs to be evaluated and modified as new information becomes available. Rules specific to hard clam management on public bottom should be periodically reviewed to clarify the intent and reflect changes concurrent with new information.

[(Section 12.0), (Objectives 1, 4, 6, and 7)]

##### 13.1.2.1 ISSUE: CONSIDER INCREASING THE RECREATIONAL MAXIMUM DAILY HARVEST LIMIT

#### PROPOSED MANAGEMENT OPTIONS

1. Status quo (Continue the daily harvest limit for recreational purposes at 100 clams per person per day not to exceed 200 per clams per vessel per day)
2. Increase the daily vessel maximum recreational clam harvest limit and maintain the daily personal harvest limit of 100 clams per person per day for all recreational participants (**rule change required**)
3. Increase the daily vessel maximum recreational harvest limit for clams for just recreational participants under a for-hire license with six or fewer participants and maintain the 200 clams maximum daily vessel limit for all other recreational participants (**rule change required**)

4. Eliminate the daily vessel maximum recreational harvest limit for clams but maintain the daily individual harvest limit at 100 clams per person per day for all recreational participants **(rule change required)**
5. Use a volumetric measurement for the individual and vessel recreational clam daily harvest limit **(rule change required)**

#### MANAGEMENT RECOMMENDATIONS

##### MFC Preferred Management Strategy

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##### NCDMF and Advisory Committee

- Increase the daily vessel maximum recreational clam harvest limit to 400 clams and maintain the daily personal harvest limit of 100 clams per person per day for all recreational participants **(rule change required)**

#### 13.1.2.2 ISSUE: MANAGEMENT OF PUBLIC MECHANICAL CLAM HARVEST

#### PROPOSED MANAGEMENT OPTIONS

1. Status quo (Maintain management of the mechanical clam harvest in existing areas from Core Sound south to Topsail Sound, including modifications to the mechanical clam harvest lines to exclude areas where oyster habitat and SAV habitat exist based on all available information)
2. Modify mechanical clam harvest lines to exclude areas no longer fished but are currently open to mechanical clam harvest
3. Modify mechanical clam harvest lines currently open to mechanical clam harvest with a wider buffer between the lines and where oyster habitat and SAV habitat exist, based on all available information
4. Increase rotation of mechanical harvest in existing sites
5. Rotation of current mechanical harvest areas with previously unopened areas **(rule change required)**
6. Shorten the mechanical clam harvest season
7. Eliminate all mechanical clam harvest areas
8. Remove the Pamlico Sound mechanical clam harvest area in rule no longer in use **(rule change required)**
9. Take latitude/longitude coordinates of the poles marking the open mechanical clam harvest area boundary in the New River, still with the flexibility to move a line to avoid critical habitats
10. Shorten or eliminate the minimum 25-foot distance requirement mechanical clam harvesters must maintain from privately marked and maintained navigation channels, docks, and piers
11. Expand the mechanical clam harvest areas **(rule change required)**

#### MANAGEMENT RECOMMENDATIONS

##### MFC Preferred Management Strategy

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##### NCDMF and Advisory Committee

- Status quo (Maintain management of the mechanical clam harvest in existing areas from Core Sound south to Topsail Sound, including modifications to the mechanical clam

harvest lines to exclude areas where oyster habitat and SAV habitat exist based on all available information)

- Remove the Pamlico Sound mechanical clam harvest areas in rule no longer in use **(rule change required)**
- Take latitude/longitude coordinates of the poles marking the open mechanical clam harvest area boundary in the New River, still with the flexibility to move a line to avoid critical habitats

#### Advisory Committee

- Allow mechanical clam harvesters to have access to the bottom before maintenance dredging occurs

### 13.1.2.3 ISSUE: THE USE OF POWER HAULING EQUIPMENT IN THE HAND HARVEST OF HARD CLAMS

#### PROPOSED MANAGEMENT OPTIONS

1. Status quo (Maintain current definitions and enforcement of hand harvest methods)
2. Amend rules to set conditions allowing for the general use of power hauling equipment in the hand harvest of hard clams **(rule change required)**
3. Modify mechanical clam harvest lines to include additional waterbody areas where the use of power hauling equipment is the only mechanical harvest gear allowed through proclamation

#### MANAGEMENT RECOMMENDATIONS

##### MFC Preferred Management Strategy

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##### NCDMF and Advisory Committee

- Status quo (Maintain current definitions and enforcement of hand harvest methods)

### 13.1.2.4 ISSUE: CONSIDER THE ELIMINATION OF THE SHELLFISH LICENSE AND REQUIRE ALL SHELLFISH HARVESTERS TO HAVE A STANDARD COMMERCIAL FISHING LICENSE OR RETIRED STANDARD COMMERCIAL FISHING LICENSE

#### PROPOSED MANAGEMENT OPTIONS

1. Status quo
2. Increase the cost of the shellfish license to one-half the cost of a SCFL/RSCFL **(requires statutory change)**
3. Maintain the cost of the shellfish license allowing for harvest of all shellfish except oysters; require SCFL/RSCFL with a shellfish endorsement to harvest oysters **(requires statutory change)**
4. Cap the number of available shellfish licenses **(requires statutory change)**
5. Phase out the shellfish license; allowing time for license holders to show participation to be eligible for a SCFL/RSCFL **(requires statutory change)**
6. Eliminate the shellfish license and develop an apprenticeship program in place of a shellfish license **(requires statutory change)**
7. Eliminate the shellfish license and require a SCFL or RSCFL with a shellfish endorsement **(requires statutory change)**

## MANAGEMENT RECOMMENDATIONS

### MFC Preferred Management Strategy

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### NCDMF

- Maintain the cost of the shellfish license allowing for harvest of all shellfish except oysters; require Standard/Retired Commercial Fishing License with a shellfish endorsement to harvest oysters from public bottom **(requires statutory change)**
- From Highway 58 Bridge south to NC/SC state line, maintain a daily trip limit of 2 bushels of oysters per person maximum 4 bushels of oysters per vessel off public bottom for holders of the Shellfish License. Maintain the daily trip limit at 5 bushels of oysters per person for Standard/Retired Commercial Fishing License holders in the southern region

### Advisory Committee

- From Swan Point Marina south to the NC/SC state line, maintain a daily trip limit of two bushels of oysters per person maximum four bushels of oysters per vessel off public bottom from Highway 58 Bridge south only for holders of the Shellfish License. Maintain the daily trip limit at five bushels of oysters per person for SCFL and RSCFL holders in the southern region
- Allow Shellfish License holders to be eligible to acquire a SCFL after they show a history of sale of shellfish

### 13.1.3 PRIVATE CULTURE

The current shellfish lease program in North Carolina needs to be evaluated and changes implemented in order to be productive for culturists. Improvements in the allocation of leases and requirements for the continuance of leases are needed. Other issues of concern include the protection of shellfish lease and franchise rights, re-visiting the issues on lease prohibitions in certain water bodies, and consider modification to specific lease provisions.

[(Section 12.0), (Objectives 1, 2, and 4)]

#### 13.1.3.1 ISSUE: PROTECTION OF SHELLFISH LEASE AND FRANCHISE RIGHTS

### PROPOSED MANAGEMENT OPTIONS

1. Status quo (Continue classifying larceny of shellfish from private bottom and damage to property from an aquaculture facility or operation as a Class A1 misdemeanor, which may include a fine of not more than \$5,000)
2. Support modification of G.S 113-208 and G.S 113-269 to add minimum fines for violations on shellfish leases and franchises **(requires statutory change)**
3. Support modification of G.S 113-269 to include protection to all shellfish leases and franchises, not just those with water column amendments **(requires statutory change)**
4. Modify Rule 15A NCAC 03O .0114 so that convictions under G.S. 113-208 or G.S. 113-269 would count as more than one conviction for license suspension or revocation purposes **(rule change required)**

## MANAGEMENT RECOMMENDATIONS

### MFC Preferred Management Strategy

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### NCDMF and Advisory Committee

- Support modification of G.S. 113-208 and G.S. 113-269 to add minimum fines for violations on shellfish leases and franchises. With minimum fines set at \$500 for the first violation and \$1,000 for the second violation **(requires statutory change)**
- Support modification of G.S. 113-269 to include protection to all shellfish leases and franchises, not just those with water column amendments **(requires statutory change)**
- Modify Rule 15A NCAC 03O .0114, regardless whether statute changes occur, so that a first conviction under G.S. 113-208 or G.S. 113-269 the Fisheries Director shall revoke all licenses issued to the licensee **(rule change required)**

### 13.1.3.2 ISSUE: DEFINING ADVERSE IMPACTS TO SUBMERGED AQUATIC VEGETATION FROM SHELLFISH LEASES AND FRANCHISES

#### PROPOSED MANAGEMENT OPTIONS

1. Status quo (Adhere to Regional Conditions of USACE NWP48 with no adverse effect to SAV from shellfish leases and following the 15% sparse SAV measure identified in the interim)
2. NCDMF/NMFS/USACE reevaluate benthic sampling protocol for shellfish lease investigations to ensure that the current sampling density of 50 one meter samples per acre is not excessive
3. NCDEQ/NCDMF issue shellfish leases in areas containing SAV

#### MANAGEMENT RECOMMENDATION

##### MFC Preferred Management Strategy

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##### NCDMF and Advisory Committee

- Status quo (Adhere to Regional Conditions of USACE NWP48 with no adverse effect to SAV from shellfish leases and following measure identified in the interim)

### 13.1.3.3 ISSUE: BRUNSWICK COUNTY SHELLFISH LEASE MORATORIUM

#### PROPOSED MANAGEMENT OPTIONS

1. Status quo (Continue the moratorium of shellfish leases in Brunswick County)
2. Allow shellfish leases in Brunswick County **(requires statutory change)**
3. Allow shellfish leases in Brunswick County, limiting acreage and availability **(requires statutory change)**

#### MANAGEMENT RECOMMENDATIONS

##### MFC Preferred Management Strategy

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NCDMF and Advisory Committee

- Continue the moratorium of shellfish leases in Brunswick County

13.1.3.4 ISSUE: MODIFY SHELLFISH LEASE PROVISIONS

PROPOSED MANAGEMENT OPTIONS

1. Status quo (Maintain current lease terms of 5 years with 5 year production average)
2. Establish a 7 year period for the initial lease with the last five years of the lease averaged for production. Upon renewal, lease period returns to 5 years **(requires statutory change)**
3. Establish a rule to support extensions for where “Acts of God” prevent lease holder from making production, with a two year extension and only one extension allowed per term. **(rule change required)**
4. Status quo (Maintain five acres within a MMPA and ten acres within a mechanical methods area, not to exceed 50 acres)
5. Allow ten acres per lease in MMPA **(rule change required)**
6. Increasing maximum of 50 acres of shellfish leased bottom per lease holder **(requires statutory change)**
7. Status quo (Once a lease is terminated it returns to public bottom and is assessed for future leases based on “natural shellfish bed” definition.
8. Waive natural shellfish bed designation after ten years of a shellfish lease termination date and allow re-application for those leases **(requires statutory change)**
9. Establish grace periods for planting/production requirements when a lease is transferred to meet standards **(requires statutory change)**
10. Waive survey requirements on terminated leases when applying within same footprint **(requires statutory change)**

MANAGEMENT RECOMMENDATIONS

MFC Preferred Management Strategy

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NCDMF and Advisory Committee

- Establish a rule to support extensions for where “Acts of God” prevent lease holder from making production, with a two year extension and only one extension allowed per term **(rule change required)**
- Allow leases returned to the state to remain delineated for a period of one year to allow the pre-existing leased bottom to be re-issued to other shellfish growers **(requires statutory change)**.
- Improve public notice of proposed lease applications on the physical lease, at fish houses, and/or through electronic notices

NCDMF

- Status quo (Maintain five acres within a mechanical methods prohibited area and ten acres within a mechanical methods area, not to exceed 50 acres)

Advisory Committee

- Allow a maximum of ten acres in both mechanical methods prohibited areas and mechanical methods allowed areas **(rule change required)**

#### 13.1.4 ENVIRONMENT AND PUBLIC HEALTH

Adequate habitat and suitable water quality are imperative to the hard clam population. Support of the CHPP is essential in collaborating with other agencies such as, the CRC and the EMC to improve habitat and water quality coastwide. Sanitary controls are also established over all phases of the growing, harvesting, shucking, packing, and distribution of fresh and frozen shellfish, based on public health principles designed to prevent human illness associated with the consumption of hard clams. These recommendations should include ways to prevent or minimize potential negative impacts to shellfish growing waters and the prevention of human illnesses associated with the consumption of molluscan shellfish.

[(Sections 11.0 and 12.0), (Objectives 2, 4, and 5)]

##### 13.1.4.1 ISSUE: REQUIREMENTS FOR SHADING MOLLUSCAN SHELLSTOCK

###### PROPOSED MANAGEMENT OPTIONS

1. Status quo (Continue with no shading requirements)
2. Require shading for clams only during June through September on vessel and transport vehicle to dealer
3. Require shading for clams and oysters during June through September on vessel and transport vehicle to dealer
4. Require shading for clams and oysters during transport to dealer only (in vehicle) during June through September
5. Implement shading requirements for clams during transport to a dealer or storage on a dock during June through September. These requirements would be implemented as a public health protection measure under 15A NCAC 03K .0110 by proclamation annually

###### MANAGEMENT RECOMMENDATIONS

###### MFC Preferred Management Strategy

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###### NCDMF and Advisory Committee

- Implement shading requirements for clams on a vessel, during transport to a dealer, or storage on a dock during June through September. These requirements would be implemented as a public health protection measure under 15A NCAC 03K .0110 by proclamation annually.