

N.C. Blue Crab Fishery Management Plan Draft Amendment 2

Feb. 23, 2012



Overview

- Review DMF and Blue Crab AC management recommendations
- Review MFC standing and regional advisory committee management recommendations and public comments
- MFC selects preferred management options and approves the FMP for DENR and Governmental Operations review



Issues

Review recommendations for issues:

- 11.1 Adaptive management framework for the North Carolina blue crab stock
- 13 other issues:
 - Seven issues with agreement between Blue Crab AC/DMF and other advisory committees
 - Two issues with Blue Crab AC/DMF agreement and various options from other advisory committees
 - Four issues with disagreement between Blue Crab AC, DMF, or multiple advisory committees

REFER TO HANDOUT TABLE SHOWING THE BLUE
CRAB AC, DMF AND OTHER ADVISORY
COMMITTEE RECOMMENDATIONS



Adaptive Management Framework

How will it work?

- The proposed process to manage the blue crab stock
- Traffic Light Stock Assessment provides relative condition of blue crab stock based on trends for the production, adult, and recruit stock characteristics updated annually by July
- Utilizes the director's proclamation authority to make proposed management changes for moderate and elevated management levels, with
 - Review by the Crustacean Advisory Committee; and
 - MFC approval

The proposed framework considers the dynamic nature of the blue crab stock.



Summary of DMF Adaptive Management Recommendations

1. Repeal current female stock conservation management trigger
2. Continue existing sampling programs to maintain baseline information for the Traffic Light Stock Assessment

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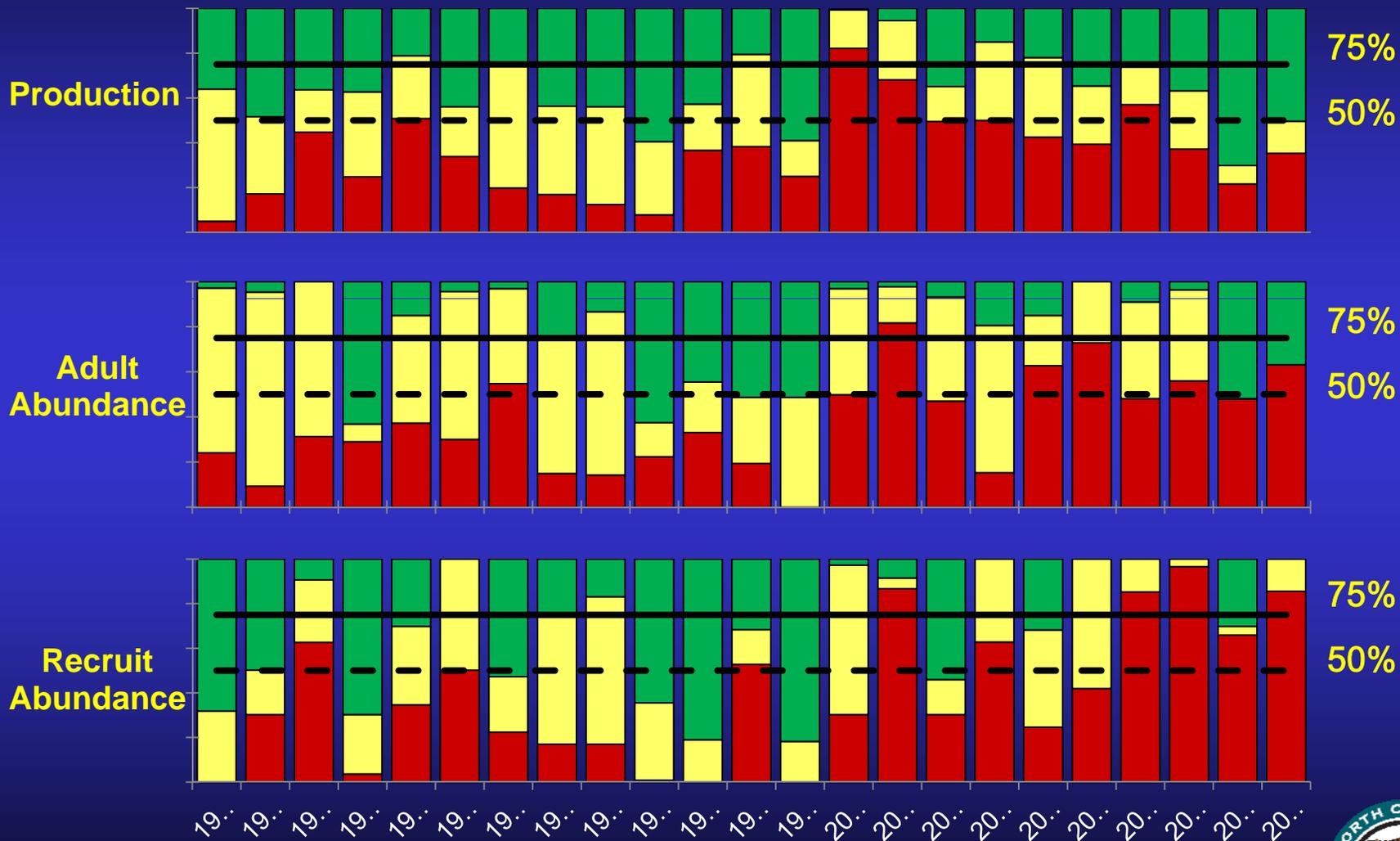


Summary DMF Adaptive Mgmt. Recommendations

3. Based on the Traffic Light Stock Assessment, adopt the proposed adaptive management framework with proclamation authority to implement restrictions:
- Adult abundance and production characteristics will trigger moderate & elevated management options when traffic light achieves a threshold of 50% red or greater for three consecutive years.
 - After further evaluation, it was determined that the recruit abundance characteristic would not be used to trigger management actions.
 - Recruit abundance characteristic will be evaluated and used as a supplement to further direct conservation management actions, if deemed necessary.



Traffic Light Tool for Adaptive Management



DMF Adaptive Management Recommendations

Table 11.1.2: Proposed production management levels and options to be implemented by proclamation

Characteristic	Moderate level	Elevated level
Production	P1. Restrict trip level harvest of sponge crabs (tolerance, quantity, sponge color)	P4. Prohibit harvest of sponge crabs and/or require sponge crab excluders in pots for specific areas
	P2. Minimum and/or maximum size limit for mature female crabs	P5. Reduce peeler harvest (no white line peelers and/or peeler size limit)
	P3. Close the crab spawning sanctuaries from Sept. 1 to Feb. 28 and may impose further restrictions	P6. Expand existing and/or designate new crab spawning sanctuaries
		P7. Closure of the fishery (season and/or gear)

DMF Adaptive Management Recommendations

Table 11.1.2: Proposed adult abundance management levels and options to be implemented by proclamation

Characteristic	Moderate level	Elevated level
Adult abundance	A1. Increase in minimum size limit for male and immature female crabs	A4. Closure of the fishery (season and/or gear)
	A2. Reduction in tolerance of sub-legal size blue crabs (to a minimum of 5%) and/or implement gear modifications to reduce sublegal catch	A5. Reduction in tolerance of sub-legal size blue crabs (to a minimum of 1%) and/or implement gear modifications to reduce sublegal catch
	A3. Eliminate harvest of v-apron immature hard crab females	A6. Time restrictions

Summary of Blue Crab AC Adaptive Management Recommendations

1. Repeal current female stock conservation management trigger
2. Improve data collection and consider fishery dependent and independent data to apply to the Traffic Light method
3. Support the DMF adaptive management framework with more specific moderate and elevated management measures ranked by priority for the adult abundance and production characteristics



Blue Crab AC Adaptive Management Recommendations

Proposed Blue Crab AC prioritized production management levels and options to be implemented by proclamation

Characteristic	Moderate level	Elevated level
Production	P1. Restrict trip level harvest of sponge crabs <u>carrying brown or black eggs</u>	P3. Prohibit harvest of sponge crabs and/or require sponge crab excluders in pots for specific areas
	P2. Close the crab spawning sanctuaries <u>during September and October</u>	P4. Expand existing and/or designate new crab spawning sanctuaries



Blue Crab AC Adaptive Management Recommendations

Proposed Blue Crab AC prioritized production management levels and options to be implemented by proclamation

Characteristic	Moderate level	Elevated level
Adult abundance	A1. Eliminate harvest of v-apron immature hard crab females	A4. <u>Eliminate crab dredging</u>
	A2. Reduction in tolerance of sub-legal size blue crabs to <u>7.5%</u>	A5. Reduction in tolerance of sub-legal size blue crabs to <u>5%</u>
	A3. <u>Require an additional cull ring on all crab pots</u>	A6. <u>Allow no harvest of crabs on either Saturday or Sunday</u>



Differences between the DMF and Blue Crab AC Adaptive Management Recommendations

Adaptive Management Proposal Attributes	BCAC	DMF
Number of management options	Less	More
Specific and directed options	More	Less
Prioritized management options	Yes	No
Likelihood of stock response to match management intent	Less	More
Public understanding	More	Less



Adaptive Management Recommendations

Crustacean AC	<u>Recruit abundance to trigger management changes must be combined with either the adult or production characteristic that is also showing a similar level</u> (yes-5, no-1)
Northeast AC	<u>Supported principle behind Adaptive Management as opposed to current system, but did not support Adaptive Management for stock protection</u> (yes-2, abstain-2)
Central AC	See input on AC Adaptive Management Recommendations
Southeast AC	<u>Support Adaptive Management with addition of sufficient input from user groups</u> <u>Support AC recommendation # 5 to use fishery dependent and independent data to apply to the Traffic Light method</u> (unanimous)
Inland AC	Support DMF Adaptive Management recommendations (Options 1 and 2) (unanimous)
Habitat & WQ AC	Did not take a position on issue because they did not have the proper expertise (yes-5, abstain-1)

DECISION POINT



Seven Issues With No Disagreement

- 11.4 Incorporate the lower Broad Creek closed pot area into rule (Neuse River)
- 11.5 Clarify crab dredging restrictions
- 11.6 Incorporate the Pamlico Sound crab trawling proclamation into rule, and retain proclamation authority to restrict crab trawl mesh size
- 11.7 Explore options for escape ring exemptions in hard crab pots to harvest peeler crabs
- 11.9 Correction of peeler trawl exception rule
- 11.10 Blue crab size limit and culling tolerance
- 11.11 Allow floating crab pot lines in areas where obstructions exist



DECISION POINT



Two Issues with Blue Crab AC/DMF Agreement and Variation Among Other Advisory Committees

- 11.2 Crab pot limit for southern Bogue Sound
- 11.3 Consider allowing non-pot areas in Pungo River to be re-designated as open to pots



11.2 Crab Pot Limit for Southern Bogue Sound

Blue Crab AC/DMF - Status quo – no change

Inland	Northeast	Southeast	Crustacean	Central	Habitat and Water Quality
BCAC/DMF	BCAC/DMF	<u>Establish a 75 to 100 pot limit from March-June and ask the DMF/MFC to develop a strategy to deal with these situations</u>	BCAC/DMF	BCAC/DMF	No comment



11.3 Consider Allowing Non-Pot Areas in Pungo River to be Re-designated as Open to Pots

Blue Crab AC/DMF - Open the eight non-pot (long haul) areas all the time by rule in the Pungo River, and remain status quo (closed) for Long Point area Pamlico River

Inland	Northeast	Southeast	Crustacean	Central	Habitat and Water Quality
BCAC/DMF	Open all non-pot areas in the Pungo River and the <u>Long Point area in the Pamlico River</u>	BCAC/DMF	BCAC/DMF	<u>Status quo, leave the areas closed to pots in the Pungo and Pamlico rivers</u>	No comment



DECISION POINT



Four Issues with Disagreement Between Blue Crab AC, DMF, or Multiple Advisory Committees

- 11.8 Convert crab pot escape ring proclamation exemptions for mature females into rule
- 11.12 Diamondback terrapin interactions with the blue crab fishery in North Carolina
- 11.13 Multiple pots attached to a single buoy
- 11.14 Pot loss and ghost pot mortality



11.8 Convert Crab Pot Escape Ring Proclamation Exemptions for Mature Females Into Rule

Blue Crab AC

Recommendation

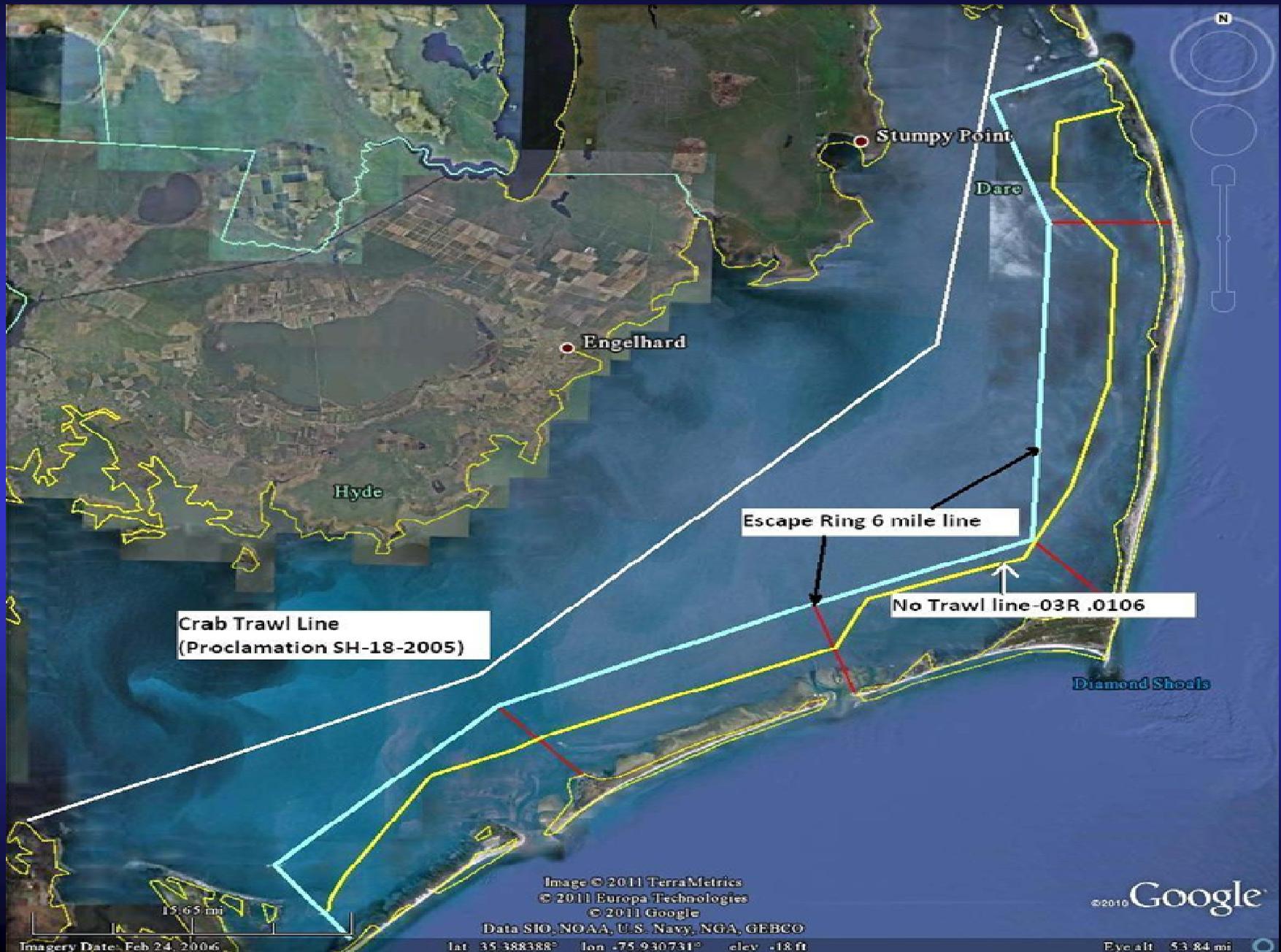
- 1) Adopt the four inch mesh size crab trawl line as the new boundary in Pamlico Sound; and
- 2) the Newport River boundaries from April 1 through June 15 as defined in the proposed rule to allow closure of the cull rings to take small mature females.

DMF

Recommendation

- 1) Adopt the no trawl line along the Outer Banks in Pamlico Sound as the new boundary in Pamlico Sound; and
- 2) the Newport River boundaries from April 1 through June 15 as defined in the proposed rule to allow closure of the cull rings to take small mature females.

Pamlico Sound Pot Escape Ring Line Options



11.8 Convert Crab Pot Escape Ring Proclamation Exemptions for Mature Females Into Rule 15A NCAC 03J .0301 (g) POTS for Eastern Pamlico Sound and Newport River

Other Advisory Committee Recommendations

Inland	Northeast	Southeast	Crustacean	Central	Habitat and Water Quality
DMF	Support BCAC for Pamlico Sound and <u>no comment for the Newport River boundary</u>	DMF	BCAC	BCAC	No comment



DECISION POINT



11.12 Diamondback Terrapin Interactions with the Blue Crab Pot Fishery

Diamondback terrapins are currently classified by the state as a “Species of Concern” due to low population levels in some areas. Their capture and mortality in crab pots is a concern.



11.12 Blue Crab AC & DMF Terrapin Recommendations

Establish:

- (A) proclamation authority for requiring terrapin excluder devices in crab pots; and
- (B) a framework for developing proclamation use criteria and excluder specifications which may extend until after adoption of the amendment.

The recommendation is contingent on:

- (1) consultation with the Crustacean AC on developing criteria; and
- (2) no use of the proclamation authority until criteria are approved by the MFC.

Additional Blue Crab AC recommendation:

- (3) a terrapin excluder device of 2 inches by 6 inches located in all lower entrance tunnels to allow blue crab catch.



11.12 Diamondback Terrapin Interactions with Blue Crab Pot Fishery

Other Advisory Committee Recommendations

Inland	Northeast	Southeast	Crustacean	Central	Habitat and Water Quality
BCAC	BCAC	<u>Status quo with additional research needed on terrapin excluder devices in crab pots</u>	Accept this as a work in progress and ensure <u>proclamation authority is in keeping with appropriate terrapin habitat.</u>	<u>Status quo</u>	DMF



11.12 Diamondback Terrapin Interactions with Blue Crab Pot Fishery

Public Comments During Meetings

- A. Allow proclamation authority to specify other devices in addition to excluders which may enhance terrapin survival in areas having known concentrated populations of terrapins. (1 comment)

Public Comments Outside Meetings

- A. Against putting terrapin excluder devices in crab pots. (1 comment)
- B. Terrapin excluder devices should only be used in areas where terrapins are known to exist. (1 comment)
- C. Letters of support from WRC and N.C. Partners in Amphibian and Reptile Conservation are included in the MFC's briefing book.



DECISION POINT



11.13 Multiple Pots Attached to a Single Buoy

Blue Crab AC Recommendation

Allow proclamation authority for multiple pots on a line not to exceed two pots per buoy

DMF Recommendation

Status quo, do not allow multiple pots to a single buoy

Other Advisory Committee Recommendations

Inland	Northeast	Southeast	Crustacean	Central	Habitat and Water Quality
DMF	DMF	DMF	DMF	DMF	No comment



DECISION POINT



11.14 Pot Loss and Ghost Pot Bycatch Mortality



Reduction of pot loss and the continued bycatch and mortality of blue crabs and finfish in abandoned, unattended, and ghost pots is needed.



11.14 Pot Loss and Ghost Fishing Management Options

Blue Crab AC Recommendation

Status quo for both minimizing pot loss and reducing ghost pot fishing mortality

DMF Recommendation

Encourage crab potters in areas of high pot loss to incorporate methods to reduce pot loss. Develop and provide information on potential methods to reduce pot loss.

Encourage crab potters in areas of high pot loss to incorporate escape panel designs in pots to reduce potential ghost fishing impacts. Develop and provide information on potential methods and materials to reduce ghost fishing impacts.



11.14 Pot Loss and Ghost Pot Bycatch Mortality

Other Advisory Committee Recommendations

Inland	Northeast	Southeast	Crustacean	Central	Habitat and Water Quality
DMF	BCAC	BCAC	DMF	DMF	BCAC



DECISION POINT



10.4 Habitat Recommendations

Blue Crab AC did not support the following recommendations:

10. Consider if prohibition of crab dredging is advisable.
11. Protect “recruitment bottlenecks”, like inlets for the blue crab, from trawling or other impacts including natural channel modification using hardened structures like groins and jetties.
12. Shallow areas where trawling is currently allowed should be re-examined to determine if additional restrictions are necessary.



10.4 Habitat Recommendations

Crustacean AC	No recommendation
Northeast AC	No recommendation
Central AC	Support Blue Crab AC habitat management recommendations # 1-9 (yes-3, no-2)
Southeast AC	Deferred to DMF habitat recommendations (unanimous)
Inland AC	Support DMF habitat recommendations (unanimous)
Habitat & WQ AC	Support Blue Crab AC habitat management recommendations # 1-9 (unanimous) Combined and modified the habitat management recommendations #10 and #12 to the following: <u>Periodically evaluate the effects of crab dredging and trawling on immediate and adjacent habitat .</u> Modified #11 to: <u>Protect blue crab recruitment at inlets from adverse impacts, such as channel modification using hardened structures like groins and jetties.</u> (yes-6, no-1)

10.4 Water Quality Recommendations

Crustacean AC	No recommendation
Northeast AC	No recommendation
Central AC	Support Blue Crab AC/DMF water quality management recommendations (yes-4, no-1)
Southeast AC	Deferred to DMF water quality recommendations (unanimous)
Inland AC	Support DMF water quality recommendations (unanimous)
Habitat & WQ AC	Support water quality recommendations # 1-4 Modify #5 to: Provide proper disposal of unwanted <u>pharmaceuticals and prevent discharge of Endocrine Disrupting Chemicals into surface waters.</u> (unanimous)



10.5 Environmental Factors Research Needs

Blue Crab AC did not support the following
research need:

6. Conduct research on the water quality impacts of pot zincs, bait discard, and alternative baits in the pot fishery.



10.5 Environmental Factors Research Needs

Crustacean AC	No recommendation
Northeast AC	No recommendation
Central AC	Support research needs
Southeast AC	Deferred to DMF recommendations (unanimous)
Inland AC	Support DMF environmental factors research needs (unanimous)
Habitat & WQ AC	Support Blue Crab AC recommendations (# 1-5) for the environmental factors research needs (unanimous)



12.2 Research Recommendations

Crustacean AC	No recommendation
Northeast AC	No recommendation
Central AC	Support all 31 research recommendations Modified # 4 to: <u>Continue socioeconomic surveys of blue crab harvesters and include wholesale and retail benefits, the entire support industry for this fishery including suppliers, picking houses, and restaurants.</u>
Southeast AC	Deferred to DMF recommendations (unanimous)
Inland AC	Support Blue Crab AC/ DMF recommendations (unanimous)
Habitat & WQ AC	Support research recommendation #22 (unanimous) No position on any other research recommendations



NEXT STEP IN THE FMP PROCESS

Decision Point

MFC approval to send the FMP as amended to
DENR secretary and
Joint Legislative Committee on Governmental Operations

