Atlantic States Marine Fisheries Commission

1050 N. Highland Street • Suite 200A-N • Arlington, VA 22201
703.842.0740 • 703.842.0741 (fax) • www.asmfc.org

MEMORANDUM

TO: American Lobster Management Board

FROM: American Lobster Technical Committee

DATE: July 12, 2017

SUBJECT: Review of LCMT Proposals for Addendum XXV

The American Lobster Technical Committee (TC) met via conference call on June 28th to review the Addendum XXV proposals submitted by LCMTs 2, 3, 4, 5, and 6 to achieve a 5% increase in egg production. Overall, the TC continues to assert that trap allocation reductions do not result in a meaningful increase in egg production given there is a large amount of latent effort in the Southern New England (SNE) fishery and fishermen can compensate by increasing their number of trap hauls (refer to the TC memo to the Board dated July 15, 2016 for a full description of caveats associated with trap reductions). This is supported by an analysis of the 25% trap allocation reduction in 2016 for Massachusetts LCMA 2 permit holders which shows that trap hauls and landings increased despite the trap allocation reduction. Additionally, the TC notes that it is difficult to determine the success or failure of Addendum XXV, given a 5% increase in egg production falls within the error bars of the previous analyses conducted by the TC.

Below is a summary of the TC's evaluation of each LCMT proposal, including a determination by the TC as to whether the proposal is sufficient to achieve a 5% increase in egg production.

Area 2 Proposal
LCMT 2 is proposing that the current trap reduction plan specified in Addendum XVIII (25% trap allocation reduction in year 1 followed by a series of 5% trap allocation reductions in years 2-6) be used to achieve the 5% increase in egg production.

The TC does not find the LCMT 2 proposal sufficient to achieve a 5% increase in egg production given uncertainty in the relationship between trap allocations, exploitation, and resulting egg production. As previously stated in their July 2016 memo to the Board, the relationship between traps fished and exploitation is highly uncertain, particularly given there is little data on what level of exploitation results from low trap allocations. As a result, the TC used a bootstrap analysis to estimate the relationship between actively fished traps in the SNE stock (MA, RI, CT, and NY) and exploitation. This analysis predicted, at most, a 13.1% increase in egg production from a 25% reduction in actively fished traps.

A key difference between the TC's analysis and the on-going trap reductions in LCMA 2 is that Addendum XVIII reduces total trap allocations rather than actively fished traps. Thus, these reductions are expected to primarily reduce latent effort. The efficacy of trap allocation

reductions is further reduced given there is a trap transferability program in Areas 2 and 3 which allows active fishermen to replace cut traps with purchased traps.

In order to understand the potential impacts of the 25% trap allocation reduction which took place in LCMA 2 during 2016, Massachusetts reviewed its trap allocation and landings data for 2015 and 2016. While the total number of traps allocated to Massachusetts fishermen (including active and inactive traps) declined, the number of trap hauls and the pounds landed increased. The TC noted some caveats to this analysis, primarily that some LCMA 2 permits can be transferred between fishermen from different states and that the expansion of the Jonah crab fishery could be contributing to an increase in the number of trap hauls. To address these potential caveats, the TC looked solely at information from Massachusetts-only permit holders who fish in state waters and generally do not participate in the Jonah crab fishery (which primarily occurs in Federal waters). This analysis showed that while there was a 13% reduction in traps fished, trap hauls increased by 45% and pounds landed increased by 63%. This analysis illustrates that there is not a straight-forward relationship between trap allocation and traps fished, nor between traps fished and exploitation. Rhode Island Area 2, state-only information was also reviewed to assess how representative Massachusetts trends are of Area 2. These data indicated similar changes, with landings, pot-hauls, participants, and maximum traps fished all increased modestly from 2015 to 2016. Based on these results, the TC reiterates that trap allocation reductions alone should not be used to achieve the goal of Addendum XXV, especially if there is significant latent effort.

One TC member did note that the Board approved trap reductions as a management tool in Addendum XXV and the LCMTs have met the criteria specified by the Board. This individual recommended the TC review in the LCMT proposals based on the parameters set by the Board.

Area 3 Proposal

LCMT 3 is proposing that the current trap reduction plan specified in Addendum XVIII (5% trap allocation reduction for 5 years) be used to achieve the 5% increase in egg production.

The TC does not find the LCMT 3 proposal sufficient to achieve a 5% increase in egg production given uncertainty in the relationship between trap allocations, exploitation, and resulting egg production. Similar to the comments given in the review of the LCMT 2 proposal, the TC does not support the use of trap allocation reductions alone to achieve an increase in egg production. The TC does note that Area 3 may have lower levels of latent effort; however, it is still unclear if the on-going trap reductions will reduce active effort, or just latent effort. The expansion of the Jonah crab fishery offshore may complicate analyses of effort directed towards lobsters vs crabs; however, it is important to remember that effort currently directed towards the Jonah crab fishery can re-enter the lobster fishery given participation in both fisheries requires a single lobster permit.

Area 4 Proposal
LCMT 4 is proposing a 10% trap allocation reduction to achieve the 5% increase in egg production.

The TC does not find the LCMT 4 proposal sufficient to achieve a 5% increase in egg production given uncertainty in the relationship between trap allocations, exploitation, and resulting egg production. Similar to the comments given in the review of the LCMT 2 and 3 proposals, the TC does not support the use of trap allocation reductions alone to achieve an increase in egg production. While there is no trap transferability program in Area 4, trap allocation reductions still rely on the underlying assumption that the number of traps in the water correlates to the exploitation rate. Furthermore, LCMA 4 permit information for New York and New Jersey fishermen indicate a large percentage of latent effort in the fishery (roughly two-thirds of trap allocations are not fished). Therefore, this proposal assumes that latent effort does not re-enter the fishery at some future date.

Area 5 Proposal
LCMT 5 is proposing a minimum gauge size increase from 86mm to 88mm to achieve the 5% increase in egg production.

The TC finds the LCMT 5 proposal is sufficient to achieve a 5% increase in egg production. Table 2 in Appendix 5 of Draft Addendum XXV indicates that a 2mm increase in the minimum gauge size will result in a 6% increase in egg production. The TC does note that the gauge size analysis presented in Addendum XXV was conducted on a stock-wide scale and it would be ideal to have length information for lobsters harvested in LCMA 5 in order to validate this result. That said, the TC does support the use of a minimum gauge size change as this measure is enforceable, keeps lobsters in the water longer, and provides direct benefits in terms of fitness and egg production.

Area 6 Proposal
LCMT 6's preferred option is status quo. Their non-preferred option is a maximum gauge size decrease from 133mm to 115mm in combination with nine Sunday closures in July and August.

The TC does not find the LCMT 6 proposal sufficient to achieve a 5% increase in egg production given traps are still able to catch lobsters during a Sunday closure. The TC does support the use of a maximum gauge size decrease to achieve a 1% increase in egg production.

Table 2 in Appendix 5 of Draft Addendum XXV indicates that a maximum gauge size change from 133mm to 115mm results in a 1% increase in egg production. The TC supports the use of a gauge size change as this management tool is enforceable and provides permanent protection to larger lobsters. As noted above in the review of the Area 5 proposal, the gauge size analysis for Draft Addendum XXV was conducted on a stock-wide scale and it would be ideal to have length information for lobsters harvested in LCMA 6 in order to validate this result. Nonetheless, the TC supports the use of a maximum gauge size change.

The TC does not support the use of nine Sunday closures in July and August to achieve a 4% increase in egg production. The TC highlights that while the landing of lobsters may be prohibited on Sunday, traps still remain in the water and continue to fish for lobsters. As a result, unless the traps are disabled so they cannot catch lobster, a Sunday closure is more akin to a one day delay in harvest. The TC also notes that with such a short closure, it is easy for fishermen to recoup losses by harvesting on different days of the week. The TC does support the analytical methods used in the proposal to estimate LCMA-specific egg production increases from a season closure but notes that consecutive season closure days are more effective and traps must be disabled in order to prevent them from fishing.

The TC applauds LCMT 6 for noting the high level of latent effort in Long Island Sound and encourages the reduction of this latent effort through subsequent management action.