Meeting Summary:
ASMFC American Lobster Technical Committee
Portsmouth, NH

Day 1: July 9, 2002

Participants: Heather Stirratt, Don Byrne, Joe Idoine, Tom Angell, Bob Glenn, Bruce Estrella, Carl LoBue, Bonnie Spinazzola, Bill Adler

The meeting was called to order by Carl Wilson.

Update on Technical Committee Composition
Don Byrne was introduced as the new Technical Committee representative from New Jersey. Carl Wilson informed the Committee that Bill Andrews has since retired from employment with New Jersey and Don will serve as his replacement. Carl also informed the Committee that Bob Glenn will serve as the official representative for Massachusetts. Bruce Estrella will continue to serve on the Database Subcommittee.

Review Agenda

No changes or additions were requested.

ASMFC Update

Staff provided an update on compliance issues with New York and Massachusetts. It was noted that both states had implemented the necessary regulations to bring them back into compliance before July 1, 2002. Staff also noted that the PRT would be conducting two compliance reviews this year due to the July 1, 2002 implementation date in Addendum III. A subsequent report to the Board is anticipated for presentation during the August 2002 Board meeting.

Staff also provided an update on the transferability workshop. Staff noted that the workshop is scheduled for Aug 26, 2002 from 9am until 1pm, which will occur right before the Board meeting. Staff noted the travel reimbursement would be made available to members of the Lobster Board and the Advisory Panel. Carl Wilson and Bob Glenn would also be covered for travel to attend both the workshop and the Board meeting. Several members of the Technical Committee mentioned the desire to hold this workshop somewhere in the Northeast, but it was also noted that this workshop could be repeated or taped for participation or review by those who cannot attend the ASMFC workshop.

Review of Area 1 Evaluation for Mandatory V-notching

Joe Idoine presented the v-notch model to members of the Technical Committee (See Attached Handouts). Following this presentation, the Technical Committee entered into a discussion about v-notching. The Committee discussed both v-nothching in general as well as model outputs. A discussion ensued about the participation level in the current Area 1 v-notching plan particularly relative to the notching (or re-notching) of all berried females encountered.

According to one TC member, Maine sea sampling has indicated fishermen were not notching lobsters with old notches. Some TC members agreed that achieving 100% compliance with v-notching was unlikely. Reasons were discussed why the model outputs of rate of v-notching compliance and observed v-notch rates off Maine (from sea sampling) differed. The group outlined a variety of possible reasons for further consideration including:

1. There may be no differences, since the model outputs discussed were for F's on the order of 0.75. High fishing mortality rates in coastal Maine regions (under-represented in last stock assessment) result in high encounter rates which, in turn, would generate high observed percentages of v-notched egg-bearing females.
2. Perhaps we are not asking the right questions of the data.
3. Perhaps we are missing something (i.e., basic assumptions) in the model.
4. The sea sampling program may be questionable (i.e., there may be inconsistent mixing of mortality, extrusion rates, and/or v-notching rates over many areas).
5. There may be catchability differences, based upon area fished or gear type employed, for sea sampling yet annual observed percentages of v-notched eggers are consistent across years.
6. Most legal sized female lobsters landed in Maine never make it to the point of egg production and this may be a reason for differences between observed and predicted v-notching rates.
7. Recruitment declines or high removal of unprotected (i.e., immature or non-berried females) due to increases in fishing mortality could be seen as an increase in the observed v-notching rate.

Following this line of reasoning, the Technical Committee noted that enrichment of v-notches over time is a logical outcome of any notching conducted throughout the year period. That this is not reflected in sea sampling data in the Gulf of Maine is an area for concern which could indicate v-notching is not occurring at a constant rate throughout the year and warrants further investigation. Many questions were posed by the Technical Committee during this discussion including:

1. Do we believe that landing data reflect actual removals from the population?
2. Are there other influences affecting/resulting in high observed v-notching rates? For example, capture rates can differ especially on a seasonal basis. However, capture rates are high during the warmer months of the year which includes the egg extrusion period and this should be reflected in observed data.
3. Can we address these areas of concern in either the model design or the sea sampling program? If so, how? For instance, perhaps we need to look at the data differently (i.e., capture rates - look at females kept versus those thrown back).

Members of the Technical Committee generally agreed that the model was a useful tool however, the fishing mortality currency employed is different than the fishing mortality currency used in other models. It was noted that this was not the first time the Committee had identified this problem. Length cohort analysis and Delury do not match. There was discussion as to whether the Delury and EPR match and it was determined that they did. Joe agreed to take a look at the two currencies and to try to match them up. A matching fishing mortality rate can be calculated in the EPR model by summing, over the lifetime of the cohort, appropriate notched and berried lobsters in the 3rd quarter of each year to approximate the ratios of notched vs. berried at equilibrium for a given F. Members of the Technical Committee commented that the model should be kept as simple as possible. Joe Idoine agreed to send out the revised model,

based upon meeting discussions, to members of the Technical Committee for further review and comment prior to August 1, 2002.

Day 2: July 10, 2002

Continuation of discussion of Evaluation Criteria/Tools for management measures within LCMT are management plans.

Carl Wilson read the memo from Commissioner Lapointe outlining the Lobster Board's motion to charge the TC to develop suggestions for real-time biological monitoring programs that judge the effectiveness of all management strategies in the Lobster Plan. This was followed by a discussion about current gaps in data which make it difficult to evaluate area management plans. Members of the TC mentioned the lack of accurate landings data (e.g., in Maine) and stressed the need for mandatory standardized logbooks coast wide. Commission staff stated that the TC needs to be specific in a request for what data is necessary to evaluate management measures. Carl Wilson agreed and suggested that the TC differentiate between data needs for current analytical tools and data needs for potential new analytical tools.

The TC spent considerable time generating an outline of tool specific data needs and reasons why these data are needed. The information compiled from this discussion follows in Tables 1, 2, and 3.

Table 1: Modified Delury

Tool Improvements Necessary	Data Requirements***	Why Data is Required?	Time Required (Expected Results)
▪ Improve regional (i.e. smaller scale) fishing mortality estimates	▪ Need fishing mortality estimate – Inshore GOM	▪ Improve geographical scale of fishing mortality estimates	▪ Model requires 12 years (minimum) of data ▪ Continued monitoring required
▪ Increase sample size	▪ Fishery independent surveys (i.e. sampling in Area 4 = 0)	▪ Seven different abundance indices are needed to determine status by stock area	▪ Three plus years of data are required for an index of abundance ▪ Continued monitoring required
▪ Allocate landings spatially	▪ Catchability coefficients (Q ratios) ▪ Comparative tows (catch experiments)	▪ In order to properly allocate landings spatially	▪ Two to three years of research is required
▪ Improve spatial landing reports	▪ Logbooks	▪ Improve spatial landing reports	▪ From inception forward ▪ Continued monitoring required
▪ Improve temporal and spatial size structure data	▪ Commercial size structure data	▪ This information is utilized to convert pounds into numbers	▪ From inception forward ▪ Continued monitoring required

***Red text denotes absolute data requirement**

Table 2: EPR model

Tool Improvements Necessary	Data Requirements	Why Data is Required?	Time Required (Expected Results)

▪ Examine yield	▪ Maximum molt intervals ▪ Molt frequency within intervals (by size and sex)	▪ Model is sensitive to growth rates and this information is necessary to examine yield	▪ Ten to twenty years of research is required
▪ Improve estimate of egg production	▪ Fecundity data on large lobster (i.e. greater than 200mm)	▪ Currently this information is limited ▪ This information affects F_{10}	▪ From inception forward or as large lobster are found
▪ Improve estimate of discard mortality/egg loss	▪ Discard mortality and/or egg loss data	▪ Currently there are zero data available ▪ This information will improve mortality estimates	▪ Two to three years of research is required
▪ Simulation of population	▪	▪ This information will be used to generate answers to management questions (i.e. How long will it take to get back to equilibrium state?)	▪ From inception forward ▪ Continued monitoring required

*****Red text denotes absolute data requirement**

Table 3: Length Cohort Analysis (LCA)

Tool Improvements Necessary	Data Requirements	Why Data is Required?	Time Required (Expected Results)
▪ Tune LCA to recruitment index	▪	▪ A basic assumption is that recruitment stays constant, TC recognizes that this isn't realistic	▪ Six months to a year of research is required
▪ Improve catch matrix	▪ Increase spatial and temporal commercial catch length frequency	▪ This information will be used to generate the catch matrix (i.e. by area and over time)	▪ From inception forward ▪ Continued monitoring required
▪ Identify link between LCA and mortality estimates	▪	▪ This information will improve mortality estimates	▪ Six months to a year of research is required
▪ Identify link between LCA and reference point model(s)	▪	▪ This information will provide scientists with a validation technique for comparison purposes	▪ Six months to a year of research is required
▪ Increase knowledge of growth (i.e., changes over time) for both sexes	▪ Define schedule of molting and egg extrusion for all sizes of females (and males)	▪ The LCA is sensitive to changes in growth and this information will reduce uncertainty associated with current data	▪ Ten to twenty years research is required

*****Red text denotes absolute data requirement**

Following generation of these tables the Committee discussed the assumptions in current techniques. The assumptions discussed were as follows: 1.) The will be a 10 to 15 year lag time in the response of the resource to any management measure; 2.) The terminal year of fishing mortality estimates is the least certain (this is a mathematical limitation of Delury). This necessitates a 2 year information lag on fishing mortality estimates; 3.) For the sake of evaluation, lobster management areas are considered autonomous units. Current models can be used to monitor status in a given area, but not to explain interaction.

Discussion on Standardization of Trawl Survey Trends

ASMFC staff provided a draft document of guidelines for reviewing trawls survey trends. Members of the Technical Committee reiterated the need for specific reporting guidelines to make survey trend comparisons meaningful. The TC provided suggested changes and additions to the document. ASMFC staff agreed to make edits to the document and redistribute it to the TC at a later date.

Election of New Technical Committee Chair

ASMFC staff stated that Wilson's appointment was at a close and that ASMFC guidelines dictated it was time to elect a new chair. Carl Wilson indicated that the past protocol was for the vice-chair to take the chair's seat at the end of his appointment. ASMFC staff stated that Clare McBane was in line to become chair under this protocol but could not commit to being chair because of time constraints. Carl Wilson made a solicitation for nominations. Josef Idoine nominated Bob Glenn (MADMF) as TC chair. Carl Lobue seconded the nomination. The nomination passed unanimously. Bob Glenn accepted the nomination and agreed to attend the August 2002 Board meeting in order to effectively transition into the chair's seat.

Carl Wilson called the meeting adjourned.