



New England Fishery Management Council

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MEMORANDUM

DATE: September 8, 2009
TO: Scientific and Statistical Committee (SSC) Members
FROM: Lori Steele, NEFMC Staff, Herring PDT Chair
SUBJECT: **Herring Plan Development Team (PDT) Recommendations for Specifying Atlantic Herring ABC for the 2010-2012 Fishing Years**

- Causes for the retrospective pattern are unknown in the case of Atlantic herring, but general causes can include misspecification of catch, ageing problems, changes in natural mortality (M), changes in survey catchability, differences in fishery selectivity difference among stock components or across time, etc. The range of uncertainty in the retrospective analysis in the final model encompasses the range of uncertainty found in the various model formulations. The Herring PDT concludes that the retrospective adjustment in the projections should provide adequate precaution for these scientific uncertainties.
- The Herring PDT recommends changing the control rule specified in the Herring FMP so that it is more useful and consistent with control rules for other stocks. The proposed modification to the control rule provides a more appropriate approach that recognizes natural variability associated with maintaining a stock at B_{MSY} (see Herring PDT memo: *Atlantic Herring Overfishing Definition – Proposed Modification to Control Rule*).
- Because stock biomass is estimated from the TRAC assessment to be at 97% of B_{MSY} and given the recommended change to the control rule, the Herring PDT recommends basing overfishing level (OFL) for herring on F_{MSY} for 2010-2012 and applying a retrospective adjustment to the terminal year stock size in order to derive acceptable biological catch (ABC) and account for scientific uncertainty (see Herring PDT Discussion Paper *Projected Landings and Stock Biomass Under Different Fishing Mortality Scenarios for Atlantic Herring*).

Herring PDT Recommendations for OFL and ABC 2010-2012

YEAR	OFL ('000 mt)	ABC ('000 mt)
2010	144.996	92.135
2011	134.493	97.690
2012	126.966	102.943

OFL is based on F_{MSY} applied to stock biomass projected from the assessment.

Projections of ABC incorporate a retrospective adjustment from the AGEPRO projection model.

- The Atlantic herring stock is a complex composed of several spawning components, which mix at different rates during the year. Annual catch limits (ACLs) will be set for four management areas (1A, 1B, 2, and 3). The risk of these ACLs to the inshore component of the stock will be analyzed by the PDT during the ACL setting process.