Foreword

The Northeast Regional Stock Assessment Workshop (SAW) process has three parts: preparation of stock assessments by the SAW Working Groups and/or by ASMFC Technical Committees / Assessment Committees; peer review of the assessments by a panel of outside experts who judge the adequacy of the assessment as a basis for providing scientific advice to managers; and a presentation of the results and reports to the Region's fishery management bodies.
Starting with SAW-39 (June 2004), the process was revised in two fundamental ways. First, the Stock Assessment Review Committee (SARC) became smaller panel with panelists provided by the Independent System for Peer Review (Center of Independent Experts, CIE). Second, the SARC provides little management advice. Instead, Council and Commission teams (e.g., Plan Development Teams, Monitoring and Technical Committees, Science and Statistical Committee) formulate management advice, after an assessment has been accepted by the SARC. Starting with SAW-45 (June 2007) the SARC chairs were from external agencies, but not from the CIE. Starting with SAW-48 (June 2009), SARC chairs are from the Fishery Management Council's Science and Statistical Committee (SSC), and not from the CIE. Also at this time, some assessment Terms of Reference were revised to provide additional science support to the SSCs, as the SSC's are required to make annual ABC recommendations to the fishery management councils.

Reports that are produced following SAW/SARC meetings include: An *Assessment Summary Report* - a summary of the assessment results in a format useful to managers; an *Assessment Report* – a detailed account of the assessments for each stock; and the SARC panelist reports – a summary of the reviewer's opinions and recommendations as well as individual reports from each panelist. SAW/SARC assessment reports are available online at

http://www.nefsc.noaa.gov/nefsc/publications/series/crdlist.htm. The CIE review reports and assessment reports can be found at *http://www.nefsc.noaa.gov/nefsc/saw/*".
The 56th SARC was convened in Woods Hole at the Northeast Fisheries Science Center, February 19-22, 2013 to review benchmark stock assessments of: Atlantic surfclam and white hake. CIE reviews for SARC56 were based on detailed reports produced by NEFSC Assessment Working Groups. This Introduction contains a brief summary of the SARC comments, a list of SARC panelists, the meeting agenda, and a list of attendees (Tables 1 – 3). Maps of the Atlantic coast of the USA and Canada are also provided (Figures 1 - 5).

Outcome of Stock Assessment Review Meeting:

Text in this section is based on SARC-56 Review Panel reports (available at http://www.nefsc.noaa.gov/nefsc/saw/ under the heading "SARC-56 Panelist Reports").

The **Atlantic surfclam** stock is neither overfished nor experiencing overfishing in 2011. The GBK component is nearly in an unfished condition. The surfclam fishery has been concentrated in relatively small areas for economic reasons. Much of the stock area has not been heavily fished. This explains the low overall *F* estimates, and is consistent with previous assessment results. Commercial LPUE trends show striking similarity to the declining surfclam stock trends estimated in the analytical

assessment. Therefore, the SARC recommended that a more formal investigation of commercial LPUE for use in the assessment model be undertaken for future assessments. The assumed natural mortality rate (M = 0.15) is uncertain and may overstate stock productivity. Further work on M is recommended to better understand stock vulnerability. A statistical catch-at-age and length model (SS3) replaced the biomass dynamic model (KLAMZ) used previously. Stock assessment results from the northern and southern areas were combined to evaluate the status of the stock for the entire EEZ. The SARC could not decide whether to recommend changing from the current single stock definition. The SARC noted that this should not prevent conducting stock assessments by subareas, nor should it preclude area-based management, if appropriate. Although absolute biomass is uncertain, trends in biomass are relatively certain. The ratio B_{2011}/ B_{1999}, where B_{1999} is a B_{MSY} proxy, is relatively stable because estimates of B_{2011} and B_{1999} generally vary together. Fishing mortality estimates are less robust because they compare the catch estimate against the less certain scale of biomass. This uncertainty is not considered to be a serious problem in relation to stock status because overall F is estimated to be well below $F_{THRESHOLD} = M = 0.15$.

The **white hake** stock is not overfished and overfishing is not occurring. This favorable determination of stock status is a change from the previous stock assessment in which white hake was judged to be overfished and subject to overfishing in 2007. Fishing mortality has varied over a wide range since the 1970s but presently is well below the $F_{MSY\ proxy}$. The improving condition of the stock is indicated by the more than three-fold increase in spawning stock biomass from a time series low in 1997. The estimated increase in spawning stock biomass from 2007 to 2011 was during a period when F was low and recruitment was near the long-term average. The 2013 SAW/SARC-56 white hake assessment model was a statistical catch-at-age model (ASAP) incorporating formulations that differed from the 2008 Statistical Catch-at-Age (SCAA) model. Results from the previous SCAA and new ASAP model formulations using revised data were similar in trend and magnitude. The improved stock status is not the result of changing assessment models. Recent recruitment was sampled when carrying out short term projections, while biological reference points (BRPs) were based on recruitment estimates from the entire time series. The SARC-56 Panel did not find a clear reason to derive BRPs based on the shorter, recent time series of recruitment. The SARC-56 Panel recommended that the $F_{MSY\ proxy}$ of F40% currently in place should remain. This decision was based on consideration of the risks of depleting the stock associated with F40% and F35% as well as on the sensitivity of these risks to the assumed stock-recruitment steepness parameter.

SARC-56 concluded the **Atlantic surfclam** and **white hake** assessments were effective in delineating stock status, determining BRPs and proxies, and in projecting probable short-term trends in stock biomass, fishing mortality, and catches.

Table 1. 56th Stock Assessment Review Committee Panel.

SARC Chairman (MAFMC SSC):

Dr. Edward Houde
Chesapeake Biological Laboratory
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SARC Panelists (CIE):

Dr. Martin Cryer
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Ministry for Primary Industries
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Mr. Michael Smith
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Dr. Kevin Stokes
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kevin@stokes.net.nz

Table 2. Agenda, 56th Stock Assessment Review Committee Meeting.

February 19-22, 2013

Stephen H. Clark Conference Room – Northeast Fisheries Science Center
Woods Hole, Massachusetts

AGENDA* (version: 15 Feb. 2013)

TOPIC	PRESENTER(S)	SARC LEADER	RAPPORTEUR

Tuesday, Feb. 19

10 – 10:30 AM
Welcome — **James Weinberg**, SAW Chair
Introduction — **Edward Houde**, SARC Chair
Agenda
Conduct of Meeting

10:30 – 12:30 PM Assessment Presentation (A. Atlantic Surfclam)
Daniel Hennen/Larry Jacobson TBD **Toni Chute**

12:30 – 1:30 PM Lunch

1:30 – 3:30 PM Assesssment Presentation (A. Atlantic Surfclam)
Larry Jacobson/ TBD (Others) TBD **Jon Deroba**

3:30 – 3:45 PM Break

3:45 – 4 PM Public Comments

4 - 6 PM SARC Discussion w/ Presenters (A. Atlantic Surfclam)
Edward Houde, SARC Chair **Jon Deroba**

Wednesday, Feb. 20

9 – 10:45 AM Assessment Presentation (B. White Hake)
Katherine Sosebee TBD **Kiersten Curti**

10:45 – 11 AM Break

11 – 12:30 PM (cont.) Assessment Presentation (B. White Hake)
Katherine Sosebee TBD **Kiersten Curti**

12:30 – 1:45 PM Lunch

1:45 – 2 PM Public Comments

2 – 3:30 PM	SARC Discussion w/presenters (B. White Hake) **Edward Houde,** SARC Chair		**Alicia Miller**
3:30 -3:45 PM	Break		
3:45 – 6 PM	Revisit with presenters (A. Atlantic Surfclam) **Edward Houde**, SARC Chair		**Alicia Miller**
7 PM	**(**Social Gathering – Coonamessett Inn **)**		

TOPIC	PRESENTER(S)	SARC LEADER	RAPPORTEUR

Thursday, Feb. 21

8:30 – 10:15	Revisit with presenter (B. White hake) **Edward Houde**, SARC Chair		**Michelle Traver**
10:15 – 10:30	Break		
10:30 – 12:45	Review/edit Assessment Summary Report (B. White hake) **Edward Houde**, SARC Chair		**Michelle Traver**
12:45 – 2 PM	Lunch		
2 – 2:45 PM	(cont.) edit Assessment Summary Report (B. White hake) **Edward Houde**, SARC Chair		**Julie Nieland**
2:45 – 3:00 PM	Break		
3:00 – 6:00 PM	Review/edit Assessment Summary Report (A. Surfclam) **Edward Houde**, SARC Chair		**Julie Nieland**

Friday, Feb. 22

9:00 AM – 5:00 PM	SARC Report writing. (closed meeting)

*All times are approximate, and may be changed at the discretion of the SARC chair. The meeting is open to the public, except where noted.

Table 3. 56th SAW/SARC, List of Attendees

Participant Last Name	Participant First Name	Affiliation	Email Address
Adams	Charles	NEFSC	charles.adams@noaa.gov
Alspach	Tom	Sea Watch	talspach@goeaston.net
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Brooks	Liz	NEFSC	liz.brooks@noaa.gov
Chute	Toni	NEFSC	toni.chute@noaa.gov
Coakley	Jessica	MAFMC	jcoakley@mafmc.org
Cryer	Martin	MPI, New Zealand	martin.cryer@mpi.govt.nz
Curti	Kiersten	NEFSC	kiersten.curti@noaa.gov
Dameron	Tom	Surfclam/Quahog Advisory	capttomd@gmail.com
Deroba	Jon	NEFSC	jonathan.deroba@noaa.gov
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Gerencer	Bill	M.F. Foley Company, Inc.	gmorhua@aol.com
Hart	Dvora	NEFSC	deborah.hart@noaa.gov
Hendrickson	Lisa	NEFSC	lisa.hendrickson@noaa.gov
Hennen	Dan	NEFSC	daniel.hennen@noaa.gov
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Hogan	Fiona	NEFMC	FHogan@nefmc.org
Houde	Ed	UMCES-CBL	ehoude@cbl.umces.edu
Houde	Edward	University of Maryland	ehoude@umces.edu
Jacobson	Larry	NEFSC	larry.jacobson@noaa.gov
Kretsch	Alexa	SMAST	akretsch@umassd.edu
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McCay	Bonnie	Rutgers U	Mccay@rutgers.edu
Miller	Alicia	NEFSC	alicia.miller@noaa.gov
Munroe	Daphne	Haskin Shellfish Lab, Rutgers U.	dmunroe@hsrl.eutgers.edu
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Nitschke	Paul	NEFSC	paul.nitschke@noaa.gov
O'Brien	Loretta	NEFSC	Loretta.O'Brien@noaa.gov
Odell	Jackie	NSC	jackie_odell@yahoo.com
Palmer	Mike	NEFSC	Michael.Palmer@noaa.gov
Potts	Doug	NEFSC	douglas.potts@noaa.gov
Powell	Eric	GCRL-USM	eric.n.powell@usm.edu
Rago	Paul	NEFSC	paul.rago@noaa.gov
Robillard	Eric	NMFS/NERO	Eric.Robillard@noaa.gov
Serchuk	Fred	NEFSC	fred.serchuk@noaa.gov
Shepherd	Gary	NEFSC	gary.shepherd@noaa.gov
Smith	Michael	CEFAS	mike.smith@cefas.co.uk
Sosebee	Kathy	NEFSC	katherine.sosebee@noaa.gov

Stokes	Kevin	Stokes.net.nz, LTD	kevin@stokes.net.nz
Terceiro	Mark	NEFSC	mark.terceiro@noaa.gov
Traver	Michele	NEFSC	michele.traver@noaa.gov
Wallace	Dave	Wallace & Assoc., Inc.	DHWALLACE@AOL.COM
Weinberg	James	NEFSC	james.weinberg@noaa.gov
Wigley	Susan	NEFSC	susan.wigley@noaa.gov
Wood	Tony	NEFSC	anthony.wood@noaa.gov

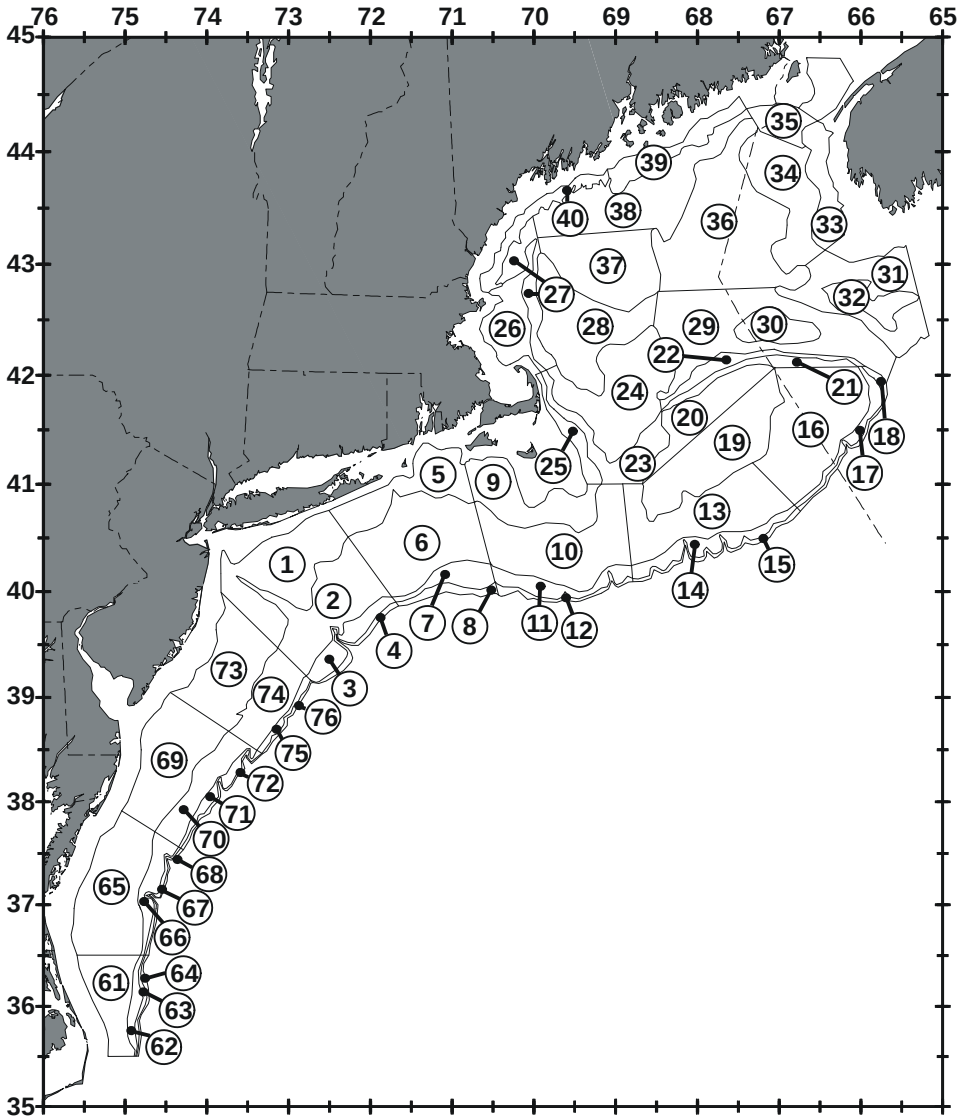

Figure 1. Offshore depth strata that have been sampled during Northeast Fisheries Science Center bottom trawl research surveys. Some of these may not be sampled presently.

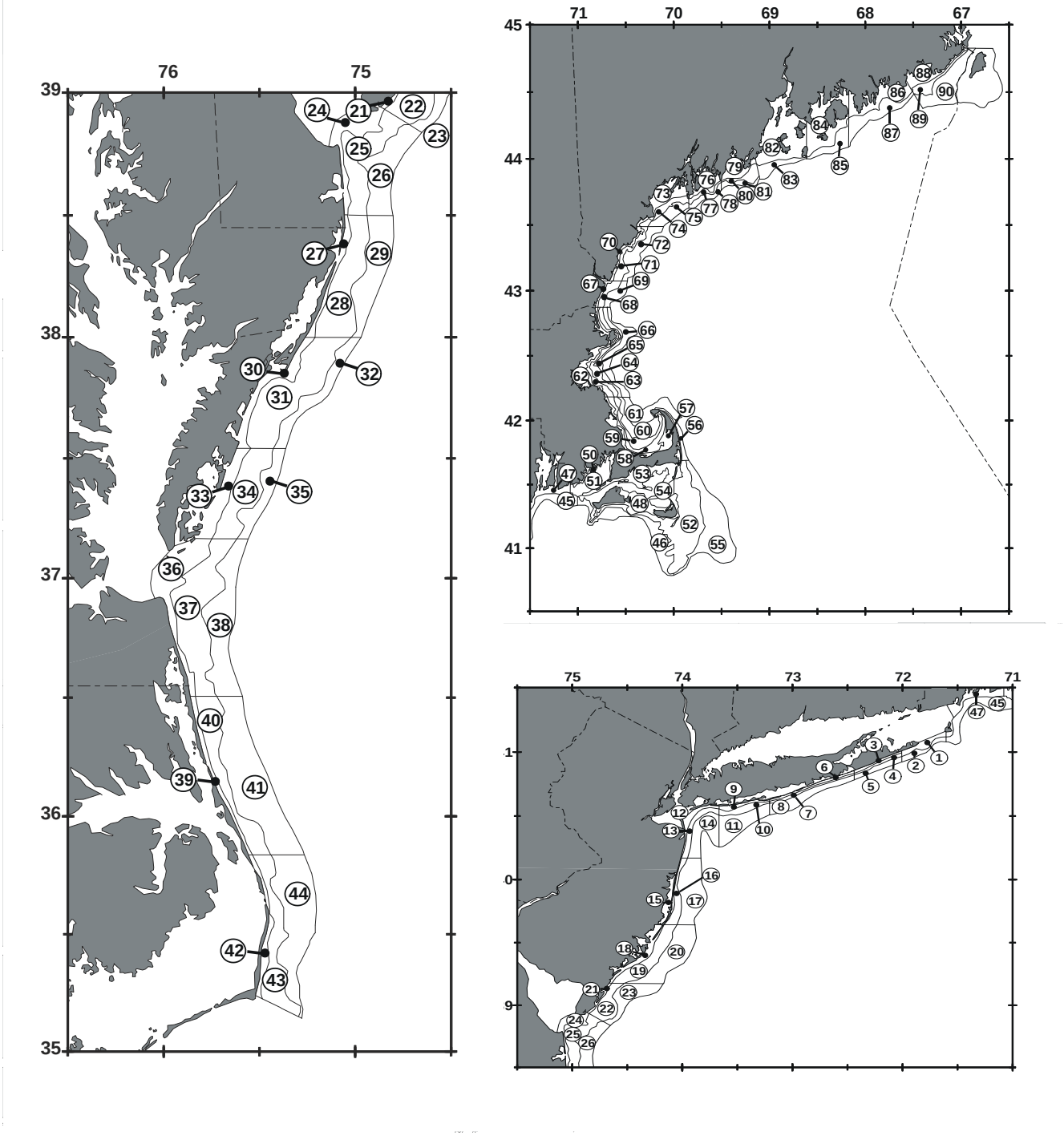

Figure 2. Inshore depth strata that have been sampled during Northeast Fisheries Science Center bottom trawl research surveys. Some of these may not be sampled presently.

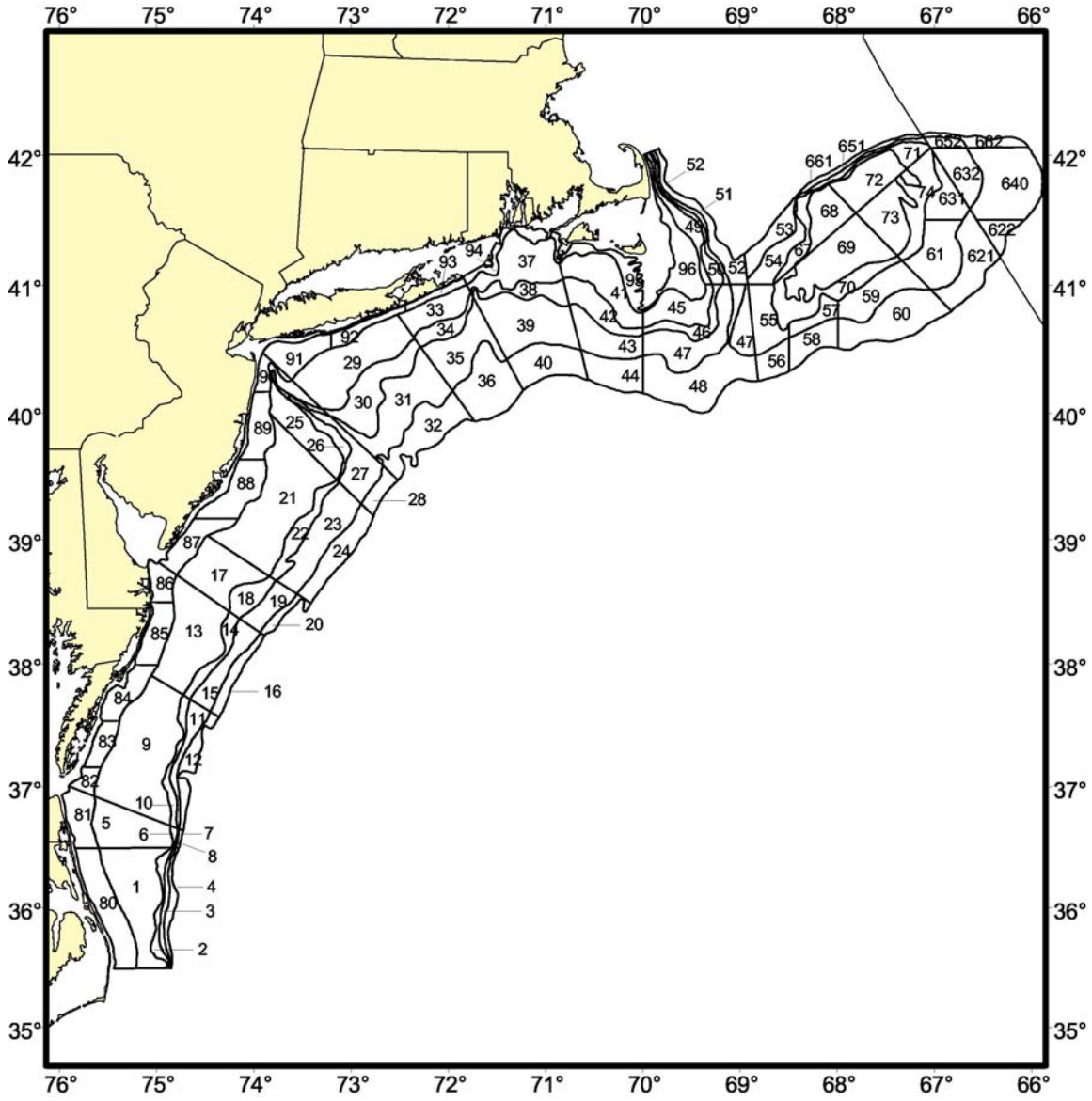

Figure 3. Depth strata sampled during Northeast Fisheries Science Center clam dredge research surveys.

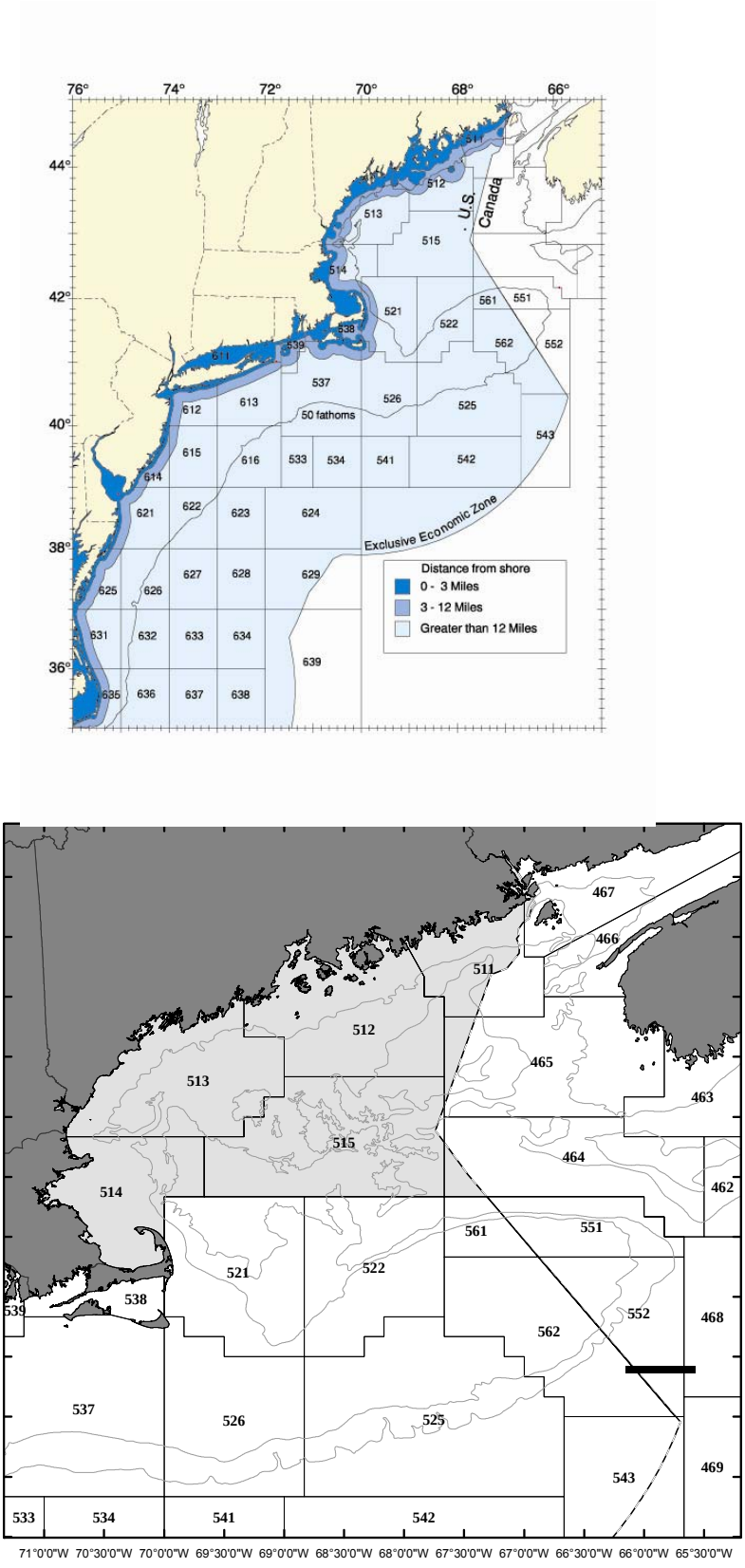

Figure 4. Statistical areas used for reporting commercial catches.

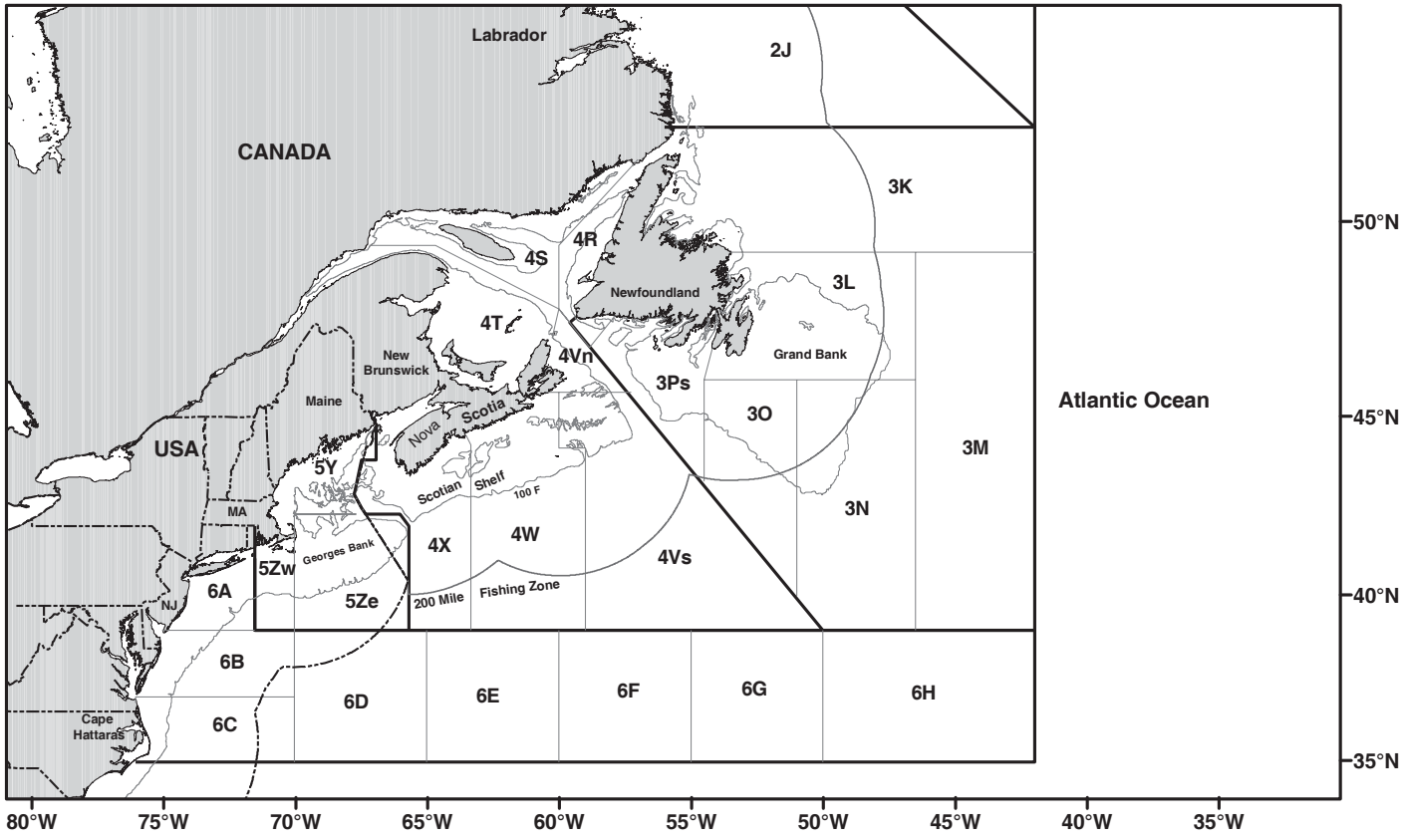

Figure 5. Catch reporting areas of the Northwest Atlantic Fisheries Organization (NAFO) for Subareas 3-6.