

INTRODUCTION TO SAW-44 ASSESSMENT REPORT

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) is now a smaller panel with panelists provided by the University of Miami's Independent System for Peer Review (Center of Independent Experts, CIE). Second, the SARC no longer provides management advice. Instead, Council and Commission teams (e.g., Plan Development Teams, Monitoring and Technical Committees) formulate management advice, after an assessment has been accepted by the SARC.

Reports that are produced following SAW/SARC meetings include: an *Assessment Summary Report* – a brief summary of the assessment results in a format useful to managers; this *Assessment Report* – a detailed account of the assessments for each stock; and the SARC panelist report – a summary of the reviewer's opinions and recommendations as well as appendices consisting of a report from each panelist. SAW/SARC assessment reports are available online at <http://www.nefsc.noaa.gov/nefsc/publication/s/series/crdlist.htm>. The CIE review reports and assessment reports can be found at <http://www.nefsc.noaa.gov/nefsc/saw/>.

The 44th SARC was convened in Woods Hole at the Northeast Fisheries Science Center, November 28 – December 4, 2006 to review three assessments (ocean quahog *Arctica islandica*, the northeast skate species complex [barndoor skate, *Dipturus laevis*; clearnose skate, *Raja eglanteria*; little skate, *Leucoraja erinacea*; rosette skate, *Leucoraja garmani*; smooth skate, *Malacoraja senta*; thorny skate, *Amblyraja radiata*; winter skate, *Leucoraja ocellata*], and Atlantic surfclam *Spisula solidissima*. CIE reviews for SARC44 were based on detailed reports produced by the SAW Southern Demersal and Invertebrate Working Groups.

This Introduction contains a brief summary of the SARC comments, a list of SARC panelists, the meeting agenda, a list of working group meetings and a list of attendees (Tables 1 – 4). Maps of the Atlantic coast of the USA and Canada are also provided (Figures 1 - 5).

Outcome of Stock Assessment Review Meeting

The ocean quahog assessment was accepted by the SARC. Current biomass appears well above the B_{msy} proxy and current F appears well below the F_{msy} proxy. The SARC was concerned with the biomass estimates from the main assessment model (KLAMZ) because the model did not link long-term average recruitment to virgin biomass. The reviewers also expressed concern about the accuracy and precision of the dredge efficiency estimate, the approach used to fill missing survey data cells, the appropriateness of proxies for B_{msy} and F_{msy} , and the management of the entire offshore stock as a single unit.

Assessment results for the seven skate species were only partially accepted. The SARC rejected the estimates of the fishing mortality rate (F) as well as the proposed new Biological Reference Points (BRPs). The SARC felt that the absence of species-specific landings data made it extremely difficult to estimate F, and that estimates derived from the new model were too unreliable to accept at this time. The SARC felt that the existing BRPs were ad hoc and in need of improvement. The SARC felt that the proposed BRPs, derived from stock-recruit fits and length-based yield per recruit analysis, represented a positive step. However, the Committee did not feel that sufficient work had been done on the new BRPs to justify their use at this time. Accordingly, the assessment evaluated stock status with respect to the existing BRPs, and these results were accepted by the SARC.

No absolute estimates of total biomass or spawning stock biomass were made in the assessment. Finally, the SARC accepted work which examined the NEFSC Food Habits Database to estimate skate diets and skate consumptive demand in the ecosystem.

The Atlantic surfclam assessment was accepted by the SARC, although the Committee felt that the assessment could be improved by making better use of the available data on surfclam ages by developing a fully integrated age-structured model. Some of the concerns raised earlier about the ocean quahog assessment were also raised about the surfclam assessment. In addition, the Committee questioned whether the B_{msy} proxy (one half B_{1999}) was appropriate, and suggested that this issue be reconsidered in a future assessment.

Table 1. 44th Stock Assessment Review Committee Panel.

44th Northeast Regional Stock Assessment Workshop (SAW 44)
Stock Assessment Review Committee (SARC) Meeting

November 28 – December 4, 2006
Woods Hole MA

SARC Chairman (CIE):

Dr. Cynthia Jones, chair
Center for Quantitative Fisheries Ecology
Old Dominion University
Phone: 757-683-4497
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Email: cjones@odu.edu

SARC Panelists (CIE):

Dr. Vivian Haist, review panelist
1262 Marina Way
Nanoose Bay, BC
Canada V9P 9C1
Phone: 250-468-9141
Email: haistv@shaw.ca

Mr. Patrick Cordue, review panelist
11 Rangoon St
Khandallah
Wellington 6035
New Zealand
Phone: 644 479 0151
Email: plc@isl-solutions.co.nz

Table 2. Agenda, 44th Stock Assessment Review Committee Meeting.

44th Northeast Regional Stock Assessment Workshop (SAW 44)
Stock Assessment Review Committee (SARC) Meeting

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

November 28 – December 4, 2006

AGENDA (11-27-06)

TOPIC	PRESENTER	SARC LEADER	RAPPORTEUR
Tuesday, 28 November (1:00 – 5:00 PM).....			
Opening			
Welcome	James Weinberg, SAW Chairman		
Introduction	Cynthia Jones, SARC Chairman		
Agenda			
Conduct of Meeting			
Ocean quahog (A)	Larry Jacobson	Vivian Haist	Toni Chute
SARC Discussion	Cynthia Jones		
Wednesday, 29 November (8:30 – Noon).....			
Skates (B)	Kathy Sosebee	Patrick Cordue	Michelle Traver
SARC Discussion	Cynthia Jones		
Wednesday, 29 November (1:15 – 5:00 PM).....			
Atlantic surfclam (C)	Larry Jacobson	Vivian Haist	Laurel Col
SARC Discussion	Cynthia Jones		

Table 2 continued.

Thursday, 30 November (8:30 – 5:00 PM)

Revisit Assessments (A – C) with presenters, as needed.

Friday, 1 December (8:30 AM –)

Revisit Assessments (A – C) with presenters, if needed.

SARC Report writing. (closed)

Saturday, 2 December - Monday, 4 December

SARC Report writing. (closed)

Table 3. 43rd Stock Assessment Workshop, list of working groups and meetings.

Assessment Group	Chair	Species	Meeting Date/Place
SAW Southern Demersal Working Group	Paul Rago, NMFS	NEFSC	
		Skate complex	Oct. 24-26, 2006 Woods Hole
Sondre Aanes	Institute of Marine Research,	Bergen, Norway	
Larry Alade	NEFSC		
Laurel Col	NEFSC		
Mike Fogarty	NEFSC		
Mike Frisk	SUNY, Stony Brook		
Todd Gedamke	VIMS		
Dvora Hart	NEFSC		
Fiona Hogan	UMass/SMAST		
Chris Legault	NEFSC		
Jason Link	NEFSC		
Alyssa MacDonald	UMass/SMAST		
Ralph Mayo	NEFSC		
Hassan Moustahfid	NEFSC		
Paul Nitschke	NEFSC		
Mike Pennington	Institute of Marine Research,	Bergen, Norway	
Anne Richards	NEFSC		
Gary Shepherd	NEFSC		
Brian Smith	NEFSC		
Katherine Sosebee	NEFSC		
Michele Traver	NEFSC		
Megan Tyrrell	NEFSC		
Susan Wigley	NEFSC		

Table 3 continued.

Assessment Group	Chair	Species	Meeting Date/Place
Invertebrate Working Group	Ralph Mayo, NMFS NEFSC	Ocean quahog	March 20-21, 2006 April 25-26, 2006 Aug. 7-9, 2006 Woods Hole
<p>T. Alspach (Sea Watch International, Ltd.) T. Chute (Northeast Fisheries Science Center, NEFSC) S. Feindel (Darling Marine Center) C. Heaton (Mid-Atlantic Fishery Management Council, MAFMC) T. Hoff (MAFMC) L. Jacobson (NEFSC) – assessment lead C. Pickett (NEFSC) E. Powell (Haskin Shellfish Laboratory, Rutgers University) R. Russell (Maine Department of Marine Resources) D. Wallace (Wallace & Associates, Inc.) J. Womack (Wallace & Associates, Inc.) J. Weinberg (NEFSC) M. Bell (Invited external participant, Lowestoft, Suffolk, UK)</p>			
Invertebrate Working Group	M. Terceiro, NMFS NEFSC	Atl. Surfclam	Sept. 25-27, 2006 Oct. 16-18, 2006 Oct. 30- Nov. 1, 2006 Woods Hole
<p>T. Alspach (Sea Watch International, Ltd.) A. Chute (NEFSC) H. Dobby (Invited external participant, FRS Marine Laboratory, Aberdeen, Scotland) C. Heaton (Mid-Atlantic Fishery Management Council, MAFMC) J. Heifitz (Invited external participant, NMFS, AKFSC) T. Hoff (MAFMC) L. Jacobson (Northeast Fisheries Science Center, NEFSC) – assessment lead C. Pickett (NEFSC) E. Powell (Haskin Shellfish Laboratory, Rutgers University) D. Wallace (Wallace & Associates, Inc.) J. Womack (Wallace & Associates, Inc.) J. Weinberg (NEFSC)</p>			

Table 4. 44th SAW/SARC, List of Attendees

J. Womack	Wallace and Assoc.
T. Hoff	MAFMC
P. Nitschke	NEFSC
C. Pickett	NEFSC
D. Wallace	Wallace and Assoc.
L. Col	NEFSC
M. Terceiro	NEFSC
L. Jacobson	NEFSC
A. Applegate	NEFMC
F. Hogan	UMass/SMAST
A. MacDonald	UMass/SMAST
J. Moser	NEFSC
A. Richards	NEFSC
M. Traver	NEFSC
D. Hart	NEFSC
R. Brown	NEFSC
G. Shepherd	NEFSC
T. Alspach	Sea Watch International
L. O'Brien	NEFSC

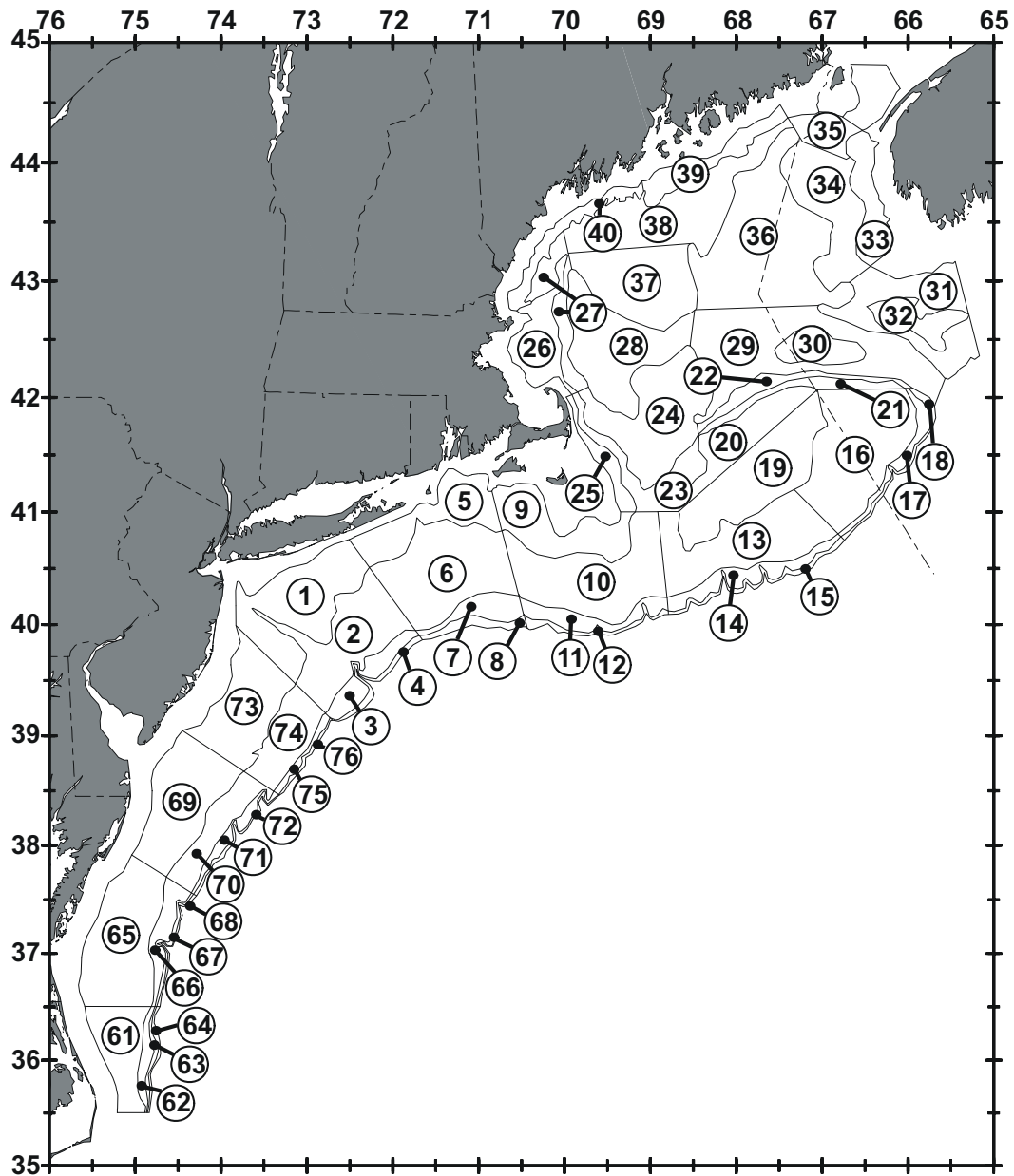


Figure 1. Offshore depth strata sampled during Northeast Fisheries Science Center bottom trawl research surveys.

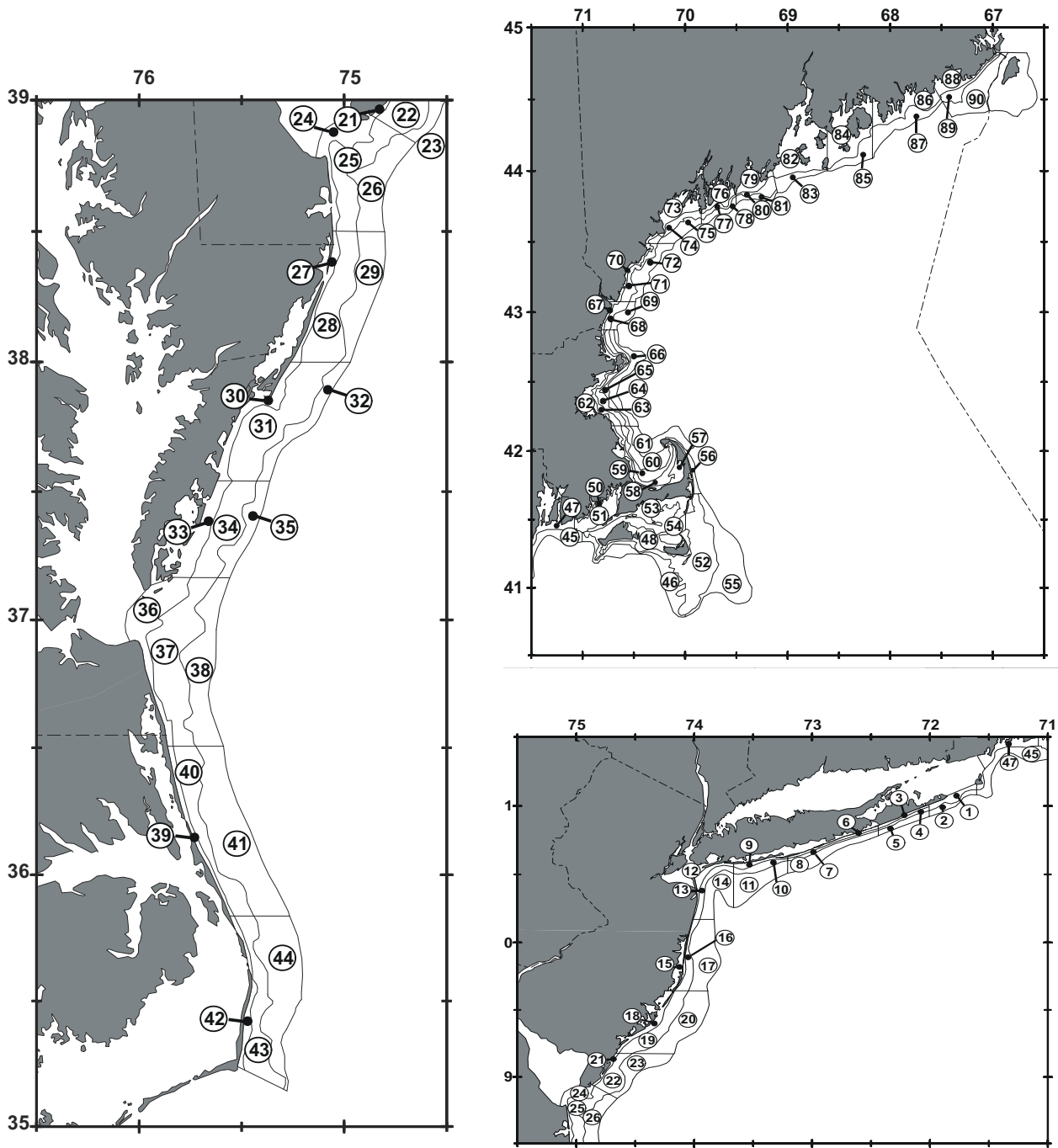


Figure 2. Inshore depth strata sampled during Northeast Fisheries Science Center bottom trawl research surveys.

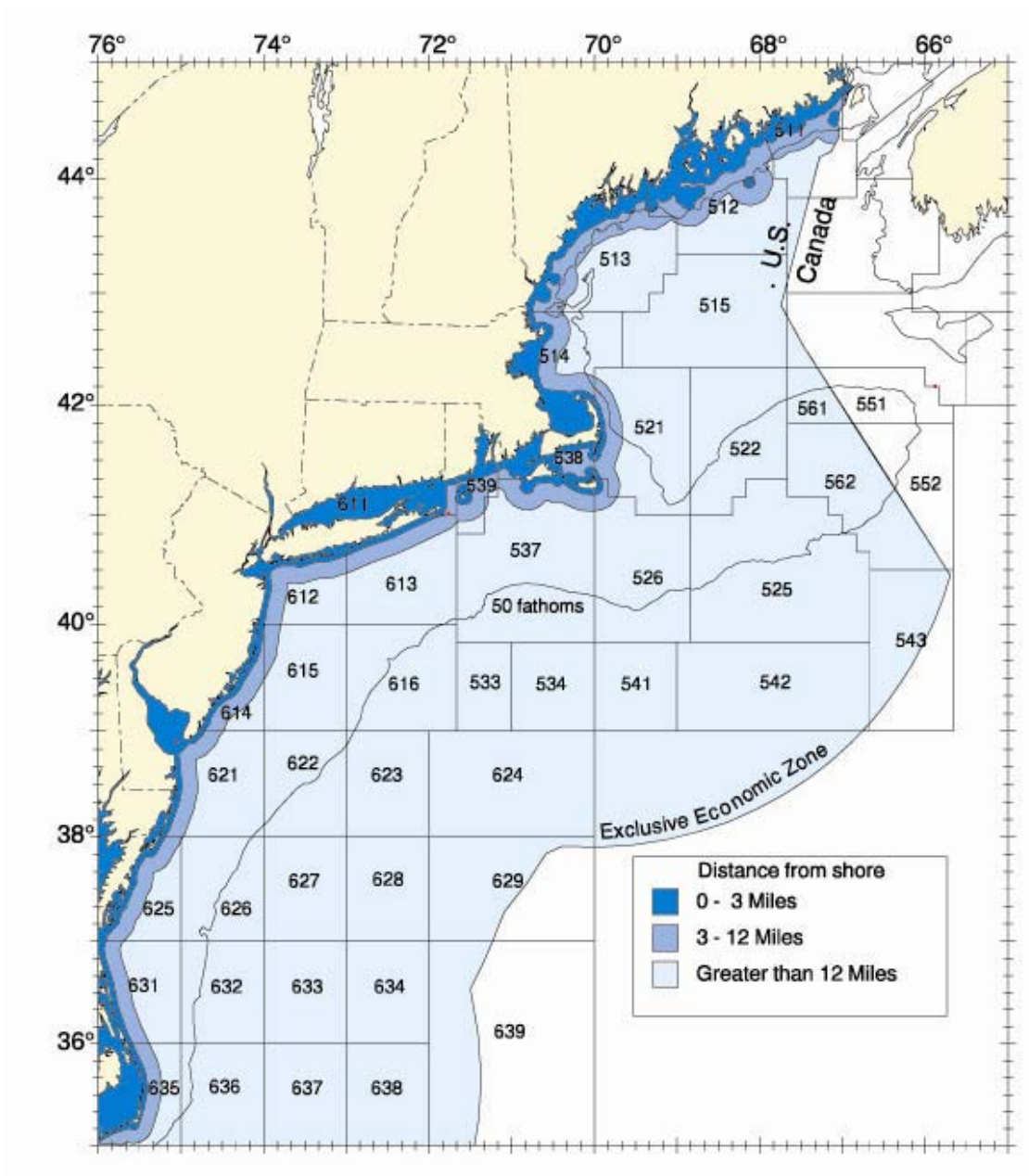


Figure 3. Statistical areas used for reporting commercial catches.

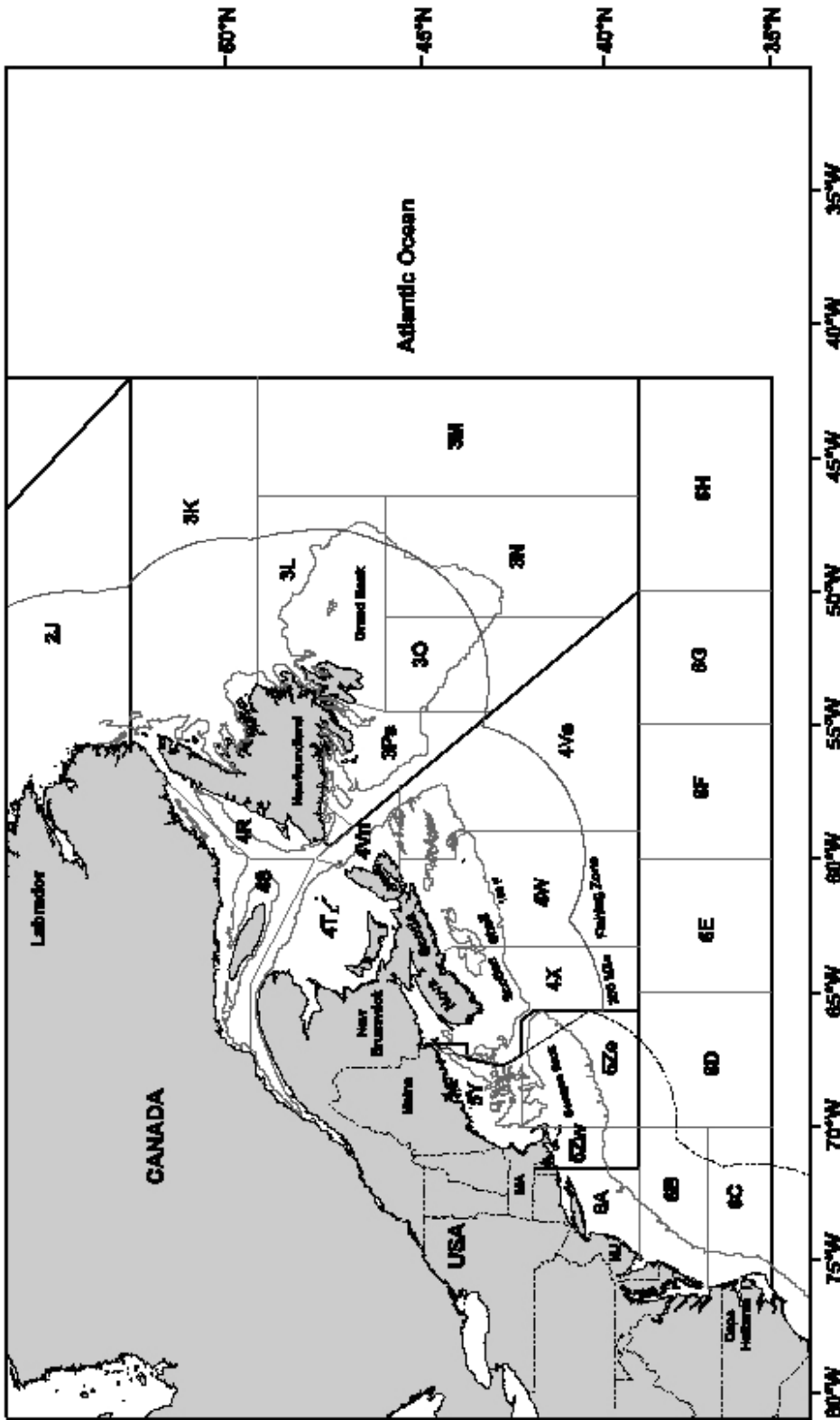


Figure 4. Catch reporting areas of the Northwest Atlantic Fisheries Organization (NAFO) for Subareas 3-6.

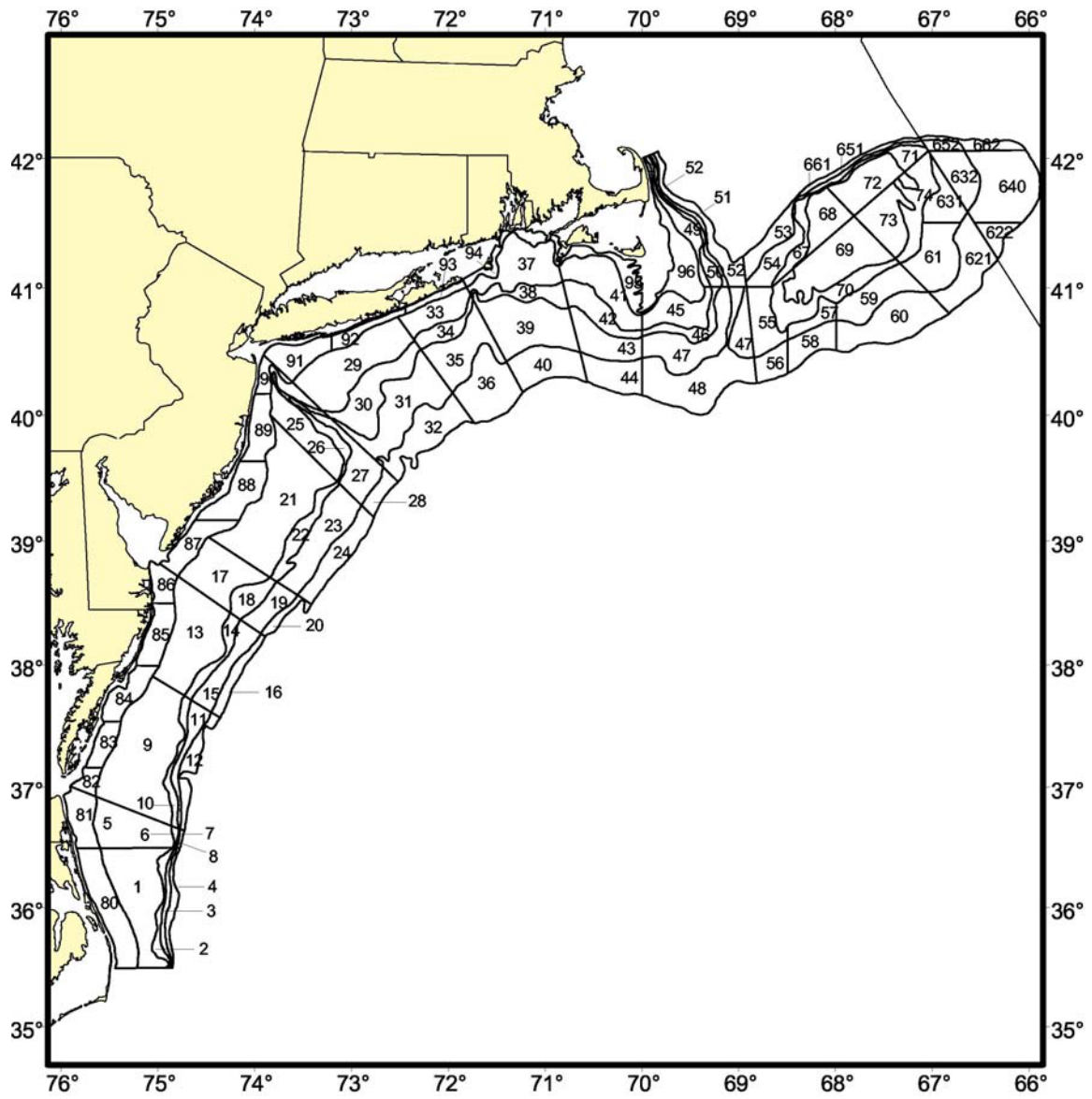


Figure 5. Clam strata for NEFSC resource surveys.