

PUBLIC HEARING DOCUMENT

OMNIBUS AMENDMENT

**AMENDMENT 13 TO THE
ATLANTIC MACKEREL, SQUIDS, AND BUTTERFISH MANAGEMENT PLAN**

**AMENDMENT 3 TO THE
BLUEFISH MANAGEMENT PLAN**

**AMENDMENT 2 TO THE
DOGFISH MANAGEMENT PLAN**

**AMENDMENT 15 TO THE
SUMMER FLOUNDER, SCUP, AND BLACK SEA BASS
FISHERY MANAGEMENT PLAN**

**AMENDMENT 16 TO THE
SURFCLAM/OCEAN QUAHOG MANAGEMENT PLAN**

**AMENDMENT 3 TO THE
TILEFISH MANAGEMENT PLAN**

(PUBLIC HEARING DOCUMENT)

April 2010

**Mid-Atlantic Fishery Management Council
in cooperation with
the National Marine Fisheries Service**

Draft adopted by MAFMC: DD MONTH YYYY

Final adopted by MAFMC:

Final approved by NOAA:

**A Publication of the Mid-Atlantic Fishery Management Council pursuant to
National Oceanic and Atmospheric Administration Award No. NA57FC0002**



PUBLIC HEARING DOCUMENT

This document will be available at all of the public hearings and is currently available via the Internet at: <http://www.mafmc.org/comments/comments.htm>

This document can also be obtained on request from the Council office at the address and telephone number below.

Schedule of Public Hearings

<p><u>Atlantic States Marine Fisheries Commission</u> <u>Spring Meeting</u> <i>May 3, 2010, 7:00 PM</i> Crowne Plaza Old Town Alexandria 901 N. Fairfax Street Alexandria, Virginia 22314 Contact: Peter Himchak (609) 748-2020</p>	<p><u>New York Department of Environmental</u> <u>Conservation</u> <i>May 12, 2010, 7:00 PM</i> NYSDEC Marine Resources 205 N. Belle Mead Rd, Ste 1 East Setauket, NY 11733 Contact: Jim Gilmore (631) 444-0430</p>
<p><u>Virginia Marine Resources Commission</u> <i>May 10, 2010, 7:00 PM</i> Marine Resources Commission 2600 Washington Avenue Newport News, Virginia 23607 Contact: Jack Travelstead (757) 247-2200</p>	<p><u>Richard Stockton College of New Jersey</u> <i>May 18, 2010, 7:00 PM</i> Lakeside Center Lodge (Off Laurel Lane and Oak Pond Drive; follow campus signs to Lakeside Center) Pomona, NJ 08240 Contact: Peter Himchak (609) 748-2020</p>

In addition to providing information and comments at the above public hearings, you may submit written comments on or before 5:00 p.m., EST, on May 21, 2010 to:

Daniel T. Furlong
Mid-Atlantic Fishery Management Council
800 North State Street, Suite 201
Dover, DE 19901

Telephone: (302) 674-2331
Fax: (302) 674-5399

Comments may also be sent via fax at the above fax number or by e-mail to info1@mafmc.org. Please note on your correspondence and in the subject line of e-mail comments the following identifier: "Omnibus ACL/AM Amendment Comments."

TABLE OF CONTENTS

<u>LIST OF ACRONYMS</u>	<u>4</u>
<u>GLOSSARY</u>	<u>5</u>
<u>ES – EXECUTIVE SUMMARY</u>	<u>7</u>
ES-1.0 Introduction, Purpose, and Need for Action _____	7
ES-2.0 Acceptable Biological Catch (ABC) _____	8
ES-3.0 Annual Catch Limits (ACLs) and Accountability Measures (AMs) _____	9
ES-4.0 Review and Modification of ABC, ACLs, and AMs _____	11
ES-5.0 Impact Analysis _____	11
<u>DETAILED DESCRIPTIONS OF THE ALTERNATIVES</u>	<u>13</u>
Section 1.0: Acceptable Biological Catch (ABC) Alternatives _____	13
Section 2.0: Council Risk Policy Alternatives _____	16
Section 3.0: Annual Catch limit (ACL) and Accountability Measure (AM) Alternatives	20
Section 4.0: Periodic Review of ABC, ACL, and AM Alternatives _____	71
Section 5.0: Description of Process to Modify Actions _____	72

PUBLIC HEARING DOCUMENT

LIST OF ACRONYMS

ABC	Acceptable Biological Catch
ACL	Annual Catch Limit
ACT	Annual Catch Target
AM	Accountability Measure
APA	Administrative Procedures Act
ASMFC	Atlantic States Marine Fisheries Commission or Commission
B	Biomass
CEQ	Council on Environmental Quality
CZMA	Coastal Zone Management Act
DAH	Domestic Annual Harvest
DAP	Domestic Annual Processing
EA	Environmental Assessment
EEZ	Exclusive Economic Zone
EIS	Environmental Impact Statement
ESA	Endangered Species Act of 1973
F	Fishing Mortality Rate
FR	Federal Register
FMP	Fishery Management Plan
FONSI	Finding of No Significant Impact
IOY	Initial Optimum Yield
IQA	Information Quality Act
JVP	Joint Venture Processor/Processing
M	Natural Mortality Rate
MAFMC	Mid-Atlantic Fishery Management Council
MFMT	Maximum Fishing Mortality Threshold
MRFSS	Marine Recreational Fisheries Statistical Survey
MSA	Magnuson-Stevens Fishery Conservation and Management Act
MSY	Maximum Sustainable Yield
mt	metric tons
NEFSC	Northeast Fisheries Science Center
NEPA	National Environmental Policy Act
NERO	Northeast Regional Office
NMFS	National Marine Fisheries Service
NOAA	National Oceanic and Atmospheric Administration
NSI	National Standard 1
MMPA	Marine Mammal Protection Act
MSA	Magnuson-Stevens Act (portions retained plus revisions)
MSRA	Magnuson-Stevens Fishery Conservation and Management Reauthorization Act
OFL	Overfishing limit
OY	Optimal Yield
PRA	Paperwork Reduction Act
RFA	Regulatory Flexibility Act
RHL	Recreational Harvest Limit
RQ	Research Quota
RSA	Research Set-Aside
SSB	Spawning Stock Biomass
SSC	Science and Statistical Committee
TAC	Total Allowable Catch
TAL	Total Allowable Landings
TALFF	Total Allowable Level of Foreign Fishing
VECs	Valued Ecosystem Components

GLOSSARY

Acceptable biological catch (ABC) - a level of stock or stock complex's annual catch that accounts for scientific uncertainty in the estimate of the overfishing limit (OFL; see definition below)

Accountability measures (AMs) - management controls that prevent annual catch limits (ACLs; see definition below) or sector-specific ACLs from being exceeded (i.e., proactive measures), or where possible, correct or mitigate overages if they occur (i.e., reactive measures).

Annual catch limit (ACL) - the level of annual catch of a stock or stock complex that serves as a basis for invoking accountability measures.

Annual catch target (ACT) - the level of annual catch of a stock that is the management target of the fishery. Considered to be a type of accountability measure (AM).

Amendment - a formal change to a fishery management plan (FMP). The Council prepares amendments and submits them to the Secretary of Commerce for review and approval.

B - Biomass, measured in terms of total weight, spawning capacity, or other appropriate units of production.

B_{MSY} - Long-term average stock biomass that would be achieved if fishing at a constant rate equal to F_{MSY} (see definition below). For most fish stocks, B_{MSY} is about $\frac{1}{2}$ of the carrying capacity. Overfishing definition control rules usually call for action when biomass is below $\frac{1}{4}$ or $\frac{1}{2}$ B_{MSY} , depending on the species.

Control rule - describes a plan for a pre-agreed management action. For example, a control rule could specify how fishing mortality or yield should vary at different levels of stock biomass.

F_{MSY} - a fishing mortality rate that would produce maximum sustainable yield (MSY; see definition below) when the stock biomass is sufficient for producing MSY on a continuing basis.

Management uncertainty - management measure often have some level of uncertainty associated with them. Management uncertainty can occur because of a lack of sufficient information about the catch (e.g. due to late reporting, underreporting, and misreporting of landings or bycatch), or because of a lack of management precision in many fisheries (e.g. due to limited or unavailable data, untimely data, or lack of inseason closure authority).

Maximum sustainable yield (MSY) - the largest long-term average yield (catch) that can be taken from a stock under prevailing ecological and environmental conditions.

Mortality rates - the rate at which the numbers in a population decline over time. Mortality rates are critical parameters for determining the effects of harvesting strategies on fish stocks and yields. Together, the natural mortality rate (M) and fishing mortality rate (F) make up the total mortality rate (Z). Natural mortality is the death of fish from all causes other than fishing (e.g. aging, predation, cannibalism, disease, etc.).

Overfishing - according to the National Standard Guidelines, "overfishing occurs whenever a stock or stock complex is subjected to a rate or level of fishing mortality that jeopardizes the capacity of a stock or stock complex to produce maximum sustainable yield (MSY) on a continuing basis."

Overfished - a stock is considered “overfished” when exploited beyond an explicit limit beyond which its abundance is considered “too low” to ensure safe reproduction.

Overfishing limit (OFL) - the point above which fishing seriously compromises the continued, sustained productivity of a fish stock. The annual amount of catch that corresponds to the fishing mortality rate at maximum sustainable yield applied to stock abundance (in no. or weight).

Scientific uncertainty - measurements in scientific work are also usually accompanied by estimates of their uncertainty. There may be uncertainty in underlying fisheries data that relates to the samples themselves, the sampling methods, or the methods applied to analyze the information. Scientific uncertainty includes uncertainty around the estimate of a stock’s biomass and its maximum fishing mortality threshold (MFMT); therefore, an estimate of OFL has uncertainty. Stock assessment models have various sources of scientific uncertainty associated with them.

Sector - a grouping of similar fish harvesting entities participating under a specified ACL. Examples include recreational fishery participants (i.e., recreational sector), commercial fishery participants (i.e., commercial sector) or smaller sub-components of each such as party/charter vessels (i.e., party/charter sector--sub sector of the recreational sector).

Stock - a grouping of a species usually based on genetic relationship, geographic distribution and movement patterns. A region may have more than one stock of a species (e.g. Gulf of Maine cod and Georges Bank cod).

ES – EXECUTIVE SUMMARY

ES-1.0 Introduction, Purpose, and Need for Action

The Omnibus Amendment document and draft environmental assessment (EA) will present and evaluate management alternatives that specify mechanisms to set acceptable biological catch (ABC), annual catch limits (ACLs), and accountability measures (AMs) for Atlantic mackerel, butterfish, Atlantic bluefish, spiny dogfish, summer flounder, scup, black sea bass, tilefish, Atlantic surfclam, and ocean quahog, contained within six Mid-Atlantic Fishery Management Council (Council) Fishery Management Plans (FMP) (section 4.0). Specifically, this Omnibus document would amend the Atlantic Mackerel, Squid, and Butterfish FMP, Bluefish FMP, Dogfish FMP, Summer Flounder, Scup, and Black Sea Bass FMP, Tilefish FMP, and Surfclam and Ocean Quahog FMP.

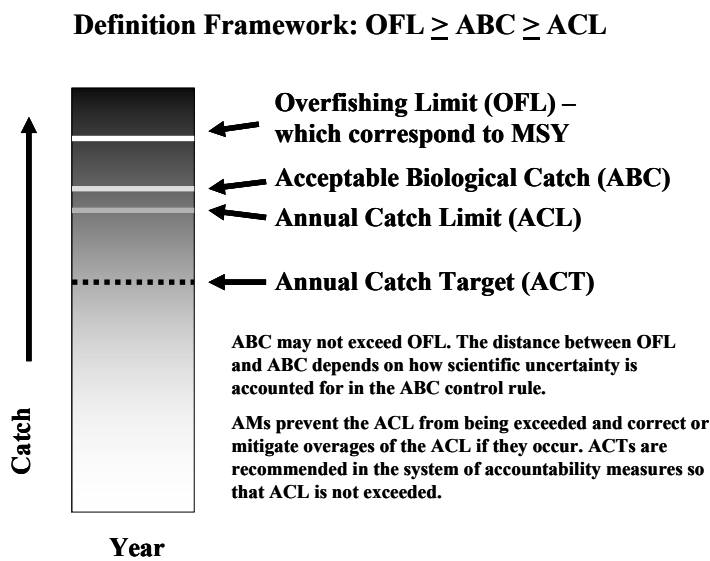
The Magnuson-Stevens Fishery Conservation and Management Reauthorization Act of 2006 (MSRA) was signed into law by President George W. Bush on January 12, 2007, following its 2006 passage by the U.S. Congress. This reauthorization of the Magnuson-Stevens Fishery Conservation and Management Act (MSFCMA, M-S Act) includes new requirements for ACLs and AMs and other provisions regarding preventing and ending overfishing (16 U.S.C. §1853(a)(15)). As a result, NOAA's National Marine Fisheries Service (NMFS) revised guidance for implementing National Standard 1 (74 FR 3178; January 16, 2009; NS1) which became effective February 17, 2009. To address the MSA¹ requirements and the revised National Standard 1 guidance, the Council has prepared this document in consultation with NMFS. This Omnibus Amendment is being developed in accordance with the MSA, and the National Environmental Policy Act (NEPA), the former being the primary domestic legislation governing fisheries management in the U.S. Exclusive Economic Zone (EEZ).

Although this Omnibus Amendment is being prepared primarily in response to the new requirements under MSA and requirements of NEPA, it will also address the requirements of the Marine Mammal Protection Act (MMPA) and the Endangered Species Act (ESA). When preparing an FMP or FMP amendment, the Council also must comply with the applicable requirements of the Regulatory Flexibility Act (RFA), the Administrative Procedure Act (APA), the Paperwork Reduction Act (PRA), the Coastal Zone Management Act (CZMA), the Information Quality Act (IQA), and Executive Orders. These other applicable laws and executive orders help ensure that in developing an amendment, the Council considers the full range of alternatives and their expected impacts on the marine environment, living marine resources, and the affected human communities. This integrated document will contain all required elements of the FMP amendment as required by NEPA and information to ensure consistency with other applicable laws and executive orders.

¹ Magnuson-Stevens Fishery Conservation and Management Act (MSFCMA, M-S Act), portions retained plus revisions made by the Magnuson-Stevens Fishery Conservation and Management Reauthorization Act of 2006 (MSRA).

The proposed actions in this amendment would: 1) describe the process by which ABC will be specified to account for scientific uncertainty, incorporating both assessment levels and a Council adopted risk policy, 2) establish a framework of ACLs (and/or Annual Catch Targets (ACTs)) to address for management uncertainty, 3) establish AMs for each of the catch frameworks, 4) establish a review process for the performance of ACLs and AMs, and 5) identify how modification of processes established by the amendment would occur (i.e. future amendments, frameworks, or specifications).

NMFS produced guidelines (National Standard 1 Guidelines; NS1) which provide detail on how to comply with the new requirements for annual catch limits (ACLs) and accountability measures (AMs) under the MSA. The terms introduced through that guidance (OFL, ABC, ACL, ACT) relate as given in the following figure.



NS1 Guidelines state, “The Council should generally set the ACL lower than the ABC to take into account other factors related to preventing overfishing or achieving optimum yield (OY), or it may set the ACL equal to the ABC and take these additional factors into account when setting an ACT below the ACL.”

ES-2.0 Acceptable Biological Catch (ABC)

In an effort to be compliant with the NS1 Guidelines, the Council has worked with their Scientific and Statistical Committee (SSC) to prescribe ABC through a set of four levels. The underlying principle is that a fixed classification system (levels) is developed based on specific criteria. In this case the levels are based on the information available to assess the stock. In general, higher levels will contain assessments with greater detail and lower scientific uncertainty while lower levels have less robust assessments with higher uncertainties. When a new stock assessment completes peer-review for any of the target stocks, the SSC would be responsible for determining the level for the assessment. Then a pre-defined set of control rules are used to calculate ABC. Box 1 provides a brief

summary of all of the alternatives discussed in this document that address the issue of ABC.

In the NS1 Guidelines response to comment 42, it states “The SSC must recommend an ABC to the Council after the Council advises the SSC what would be the acceptable probability that a catch equal to the ABC would result in overfishing. This risk policy is part of the required ABC control rule.” As such, the Council is considering risk policy options which define the Council’s tolerance for overfishing for each of the managed stocks. The Council may consider the consequences of exceeding the OFL and overfishing a stock (biological factors), as well as other factors including social, economic, and ecological, consistent with National Standard 1, when developing a Council risk policy. The Council is considering this risk policy residing in either 1) the FMP, or 2) the Council Standard Operating Procedures (SOPPs).

Box 1. Brief description of the alternatives included in this amendment that address the issue of ABC. “Status” refers to whether an alternative is proposed or has been considered but rejected from further analysis in this EA. Detailed descriptions of each alternative are provided in section 1.0.

Issue	Sub-Issue	Alternative	Status of Alternative	Description of Action (more detail starts on page 13)
Acceptable Biological Catch (ABC)	<i>ABC Control Rule Framework</i>	1A	Proposed (No action)	No established ABC control rule framework in FMP
		1B	Proposed	Council establishes ABC control rule framework in FMP
	<i>Council Risk Policy</i>	2A	Proposed (No action)	No established Council risk policy; SSC will determine acceptable probability of overfishing when ABC is specified
		2B	Proposed	Constant probability of overfishing = 25 Percent, under all circumstances
		2C	Proposed	Stock Status, Replenishment Threshold, with Inflection at $B/B_{MSY} = 1.0$
		2D	Proposed	Stock Status/Assessment Level Offset, Replenishment Threshold, with Inflection at $B/B_{MSY} = 1.5$
		2E	Proposed	Stock Status/Assessment Level Offset, Replenishment Threshold, with 2 Inflection Points at $B/B_{MSY} = 1.0$ and $B/B_{MSY} = 2.0$
		2F	Proposed	Categorical (4 x 4) with stock history, life history, and assessment level, with range from 10 - 50 percent

ES-3.0 Annual Catch Limits (ACLs) and Accountability Measures (AMs)

Annual catch limit frameworks have been developed which allow for management uncertainty (i.e. implementation uncertainty), if present, to be addressed. Management

uncertainty can occur because of a lack of sufficient information about the catch (e.g. due to late reporting, underreporting, and/or misreporting of landings or bycatch), or because of a lack of management precision (i.e., the ability to constrain catch to desired levels) in many fisheries (e.g. due to limited, unavailable, or untimely landings and/or data, or lack of inseason closure authority). Any time an ACL is determined to have been exceeded, AM measures are required to automatically be enacted. Accountability measures are required for each ACL established by the Council and may be established at the fishery, sector, or sub-sector levels. There are two types of accountability measures under consideration: proactive and reactive. Proactive AMs are intended to prevent, as much as is practicable, the ACL from being exceeded. Examples of proactive AMs include adjustment of possession limits, closure of directed fisheries, or modification of measures to slow landing rates. Reactive AMs are in response to an ACL overage and are designed to mitigate that overage and/or prevent it from occurring in the subsequent year. Examples of reactive AMs include modification of subsequent year trip or possession limits, reduction in landing levels in the subsequent year, adjustments to transfer amounts (e.g., bluefish) or other automatic reactive adjustments. Box 2 provides a brief summary of all of the alternatives discussed in this document that address the issue of ACLs and AMs.

Box 2. Brief description of the alternatives included in this amendment that address the issue of ACLs and AMs. “Status” refers to whether an alternative is proposed or has been considered but rejected from further analysis in this EA. Detailed descriptions of each alternative are provided in section 1.0.

Issue	Sub-Issue	Alternative	Status of Alternative	Description of Action (more starts detail on page 19)
Annual Catch Limits and Accountability Measures	<i>All Stocks</i>	3A	Proposed (No action)	No established ACL/AM framework in FMPs
	<i>Species Alternatives</i>	Atlantic Mackerel	Proposed	Council establishes ACL=ABC; and utilize sector-specific ACTs w/ AMs
		Butterfish	Proposed	Council establishes ACL=ABC; and utilize ACT w/ AMs
		Atlantic Bluefish	Proposed	Council establishes ACL=ABC; and utilize sector-specific ACTs w/ AMs
		Spiny Dogfish	Proposed	Council establishes ACL=ABC; and utilize ACT w/ AMs
		Summer Flounder	Proposed	Council establishes ACL=ABC; and utilize sector-specific ACTs w/ AMs
		Scup	Proposed	Council establishes ACL=ABC; and utilize sector-specific ACTs w/ AMs
		Black Sea Bass	Proposed	Council establishes ACL=ABC; and utilize sector-specific ACTs w/ AMs
		Atlantic Surfclam	Proposed	Council establishes ACL=ABC; and utilize TAL w/ AMs
		Ocean Quahog	Proposed	Council establishes ACL=ABC; and utilize dual ACTs w/ AMs
Tilefish	Proposed	Council establishes ACL=ABC; and utilize ACT w/ AMs		

ES-4.0 Review and Modification of ABC, ACLs, and AMs

Box 3 provides a brief summary of all of the alternatives discussed in this document that address the issue of review and modification of ACLs and AMs.

Box 3. Brief description of the alternatives included in this amendment that address the issue of review and modification of ACLs and AMs. “Status” refers to whether an alternative is proposed or has been considered but rejected from further analysis in this EA. Detailed descriptions of each alternative are provided in section 1.0.

Issue	Sub-Issue	Alternative	Status of Alternative	Description of Action (more detail starts on page 69)
Review and Modification of ABCs, ACLs, and AMs	<i>Periodic Review Process</i>	4A	Proposed (No action)	No established Periodic Review Process in FMPs
		4B	Proposed	Council establishes a process by which ABC control rule, ACLs, and AMs are reviewed and modified
	<i>Modification of Action</i>	5	Proposed	Description of process to modify measures

This document was presented to the Council at its April 2010 meeting, at which time the Council voted to take this to the public without selecting preferred alternatives. Following the Council's recommendations, a comment period will begin during which several meetings will be held to allow for open review of the proposed alternatives by fishery participants and concerned members of the public. Once the public comment period ends, comments will be compiled and presented to the Council. Council response to public comments will determine the final selection of preferred management actions. It is anticipated that the selection of preferred alternatives and the vote on final preferred measures in the Omnibus Amendment document will occur at the August 2010 Council Meeting. The Council will then submit the Omnibus Amendment to NMFS for review, evaluation, and implementation by the Secretary of Commerce via rulemaking under the authority of the MSA § 303.

ES-5.0 Impact Analysis

Analysis of all management alternatives and independent management measures under consideration is provided in this document in relation to a series of valued ecosystem components, or VECs. VECs represent the resources that may be affected by a proposed action, including non-preferred alternatives, and by other actions that have occurred or will occur outside the proposed action. An analysis of impacts is performed on each VEC to assess the direct/indirect effects of an alternative and whether these effects add to or subtract from effects of the past, present and future actions on that VEC from outside the proposed action (i.e. cumulative effects). The VECs identified for this Omnibus ACL/AM Amendment include: the managed resources, non-target species, habitat (including EFH), protected resources, and human communities.

This amendment is wholly procedural in nature—focused on the methodology and mechanisms by which ABCs, ACLs, and AMs will be developed for each of the managed resources subject to the MSA requirements.

Overall and due to the nature of the measures to be implemented through this amendment, there very few functional differences (as far as environmental effects generally considered in an EA are concerned) between the status quo alternatives and the other alternatives under consideration. The expected direct effects are generally well-defined for most fishery management actions, but indirect effects are often less so. While NEPA requires consideration of “reasonably foreseeable effects,” it does not require consideration of remote and speculative impacts; these effects remain outside the scope of a NEPA analysis (Bass et al. 2001). During the development of this amendment, there have been occasions when discussions shifted from the process to account for scientific and management uncertainty when establishing catch levels for the managed resources to what the actual catches established through this process might be (i.e. same as current catch levels, higher, lower, for each species). These types of effects are considered too remote and speculative to be appropriate for consideration in this amendment. While this amendment is focused on establishing a clear and transparent process to account for scientific and management uncertainty when establishing catch levels designed to prevent overfishing of stocks, there is nothing to indicate whether the catch levels established under this process would not be similar to the status quo. Secondly, there is no way to predict the effect on the managed resources, non-target species, habitat (including EFH), protected resources, and human communities for the newly described process to account for scientific and management uncertainty when establishing catch levels would have on the managed resources, non-target species, habitat (including EFH), protected resources, and human communities. Lastly, the actual catch levels that would be establish through the processes described in this Amendment cannot be predicted. Biological impacts are driven not only by the potential catch level, which cannot be predicted, but also the biological state (demographics) of the target and non-target species which also cannot be predicted. Therefore, because the proposed management actions covered in this Amendment are too remote and speculative to be adequately or meaningfully addressed, this NEPA analysis focuses solely on the potential direct, indirect, and cumulative effects expected to be immediately associated with the proposed action and primary alternatives. Any future management actions that may result from implementation of these processes would be subject to all the requirements of NEPA at the appropriate time.

A more detailed analysis of impacts will be prepared to assess the direct, indirect, and cumulative effects immediately expected from the alternatives given below on each of the VECs; that analysis will be a part of the final amendment document.

DETAILED DESCRIPTIONS OF THE ALTERNATIVES

Section 1.0: Acceptable Biological Catch (ABC) Alternatives

Alternative 1A: No Action on ABC control rule

Under this no action alternative, there would be no new action to establish ABC control rules specified for the stocks under MAFMC management jurisdiction subject to these requirements beyond what currently exist in the FMP as ABC control rules. This option would be selected if the current provisions in the FMP are determined to be sufficient and are found to be consistent with the new MSA requirements.

These current ABC provisions may need to be re-described and formalized in the context of the new MSA requirements to provide justification and support for the no action alternative.

Alternative 1B: ABC Control Rule Framework – Four Assessment Levels

A multi-level approach will be used for setting an ABC for each Mid-Atlantic stock, based on the overall level of scientific uncertainty associated with its assessment. The stock assessment will be required to provide estimates of the maximum fishing mortality threshold and future biomass, the probability distributions of these estimates, the probability distribution of the overfishing limit (OFL; level of catch that would achieve maximum fishing mortality threshold given the current or future biomass) and a description of factors considered and methods used to estimate their distributions. The multi-level approach defines four levels of overall assessment uncertainty defined by characteristics of the stock assessment and determination by the SSC that the uncertainty in the probability distribution of OFL adequately represents best available science. The procedure used to determine ABCs is different in each level of the framework. The SSC will determine which level the assessment for a particular stock belongs when setting single or multi-year ABC specifications, and a description of the justification for assignment to a level will be provided with the ABC recommendation. The rationale for assigning an assessment to a level will be reviewed each time an ABC determination is made. Other factors, in addition to those listed, may be used to assign an assessment to a specific level.

The levels of stock assessments, their characteristics, and procedures for determining ABCs are defined as follows:

Level 1

Level 1 represents the highest level to which an assessment can be assigned. Assignment of a stock to this level implies that all important sources of uncertainty are fully and formally captured in the stock assessment model and the probability distribution of the OFL calculated within the assessment provides an adequate description of uncertainty of OFL. Accordingly, the OFL distribution will be estimated directly from the stock assessment. In addition, for a stock assessment to be assigned to Level 1, the SSC must

determine that the OFL probability distribution represents best available science. Examples of attributes of the stock assessment that would lead to inclusion in Level 1 are:

- Assessment model structure and any treatment of the data prior to inclusion in the model includes appropriate and necessary details of the biology of the stock, the fisheries that exploit the stock, and the data collection methods;
- Estimation of stock status and reference points integrated in the same framework such that the OFL calculations promulgate all uncertainties (stock status and reference points) throughout estimation and forecasting;
- Assessment estimates relevant quantities including F_{MSY}^2 , OFL, biomass reference points, stock status, and their respective uncertainties; and
- No substantial retrospective patterns in the estimates of fishing mortality (F), biomass (B), and recruitment (R) are present in the stock assessment estimates.

The important part of Level 1 is that the precision estimated using a purely statistical routine will define the OFL probability distribution. Thus, all of the important sources of uncertainty are formally captured in the stock assessment model. When a Level 1 assessment is achieved, the assessment results are likely unbiased and fully consider uncertainty in the precision of estimates. Under Level 1, the ABC will be determined solely on the basis of an acceptable probability of overfishing (P^*), determined by the Council's risk policy, and the probability distribution of the OFL.

Level 2

Level 2 indicates that an assessment has greater uncertainty than Level 1. Specifically, the estimation of the probability distribution of the OFL directly from the stock assessment model fails to include some important sources of uncertainty, necessitating expert judgment during the preparation of the stock assessment, and the OFL probability distribution is deemed best available science by the SSC. Examples of attributes of the stock assessment that would lead to inclusion in Level 2 are:

- Key features of the biology of the stock, the fisheries that exploit it, or the data collection methods are missing from the stock assessment;
- Assessment estimates relevant quantities, including reference points (which may be proxies) and stock status, together with their respective uncertainties, but the uncertainty is not fully promulgated through the model or some important sources may be lacking;
- Estimates of the precision of biomass, fishing mortality rates, and their respective reference points are provided in the stock assessment; and
- Accuracy of the MFMT and future biomass is estimated in the stock assessment by using *ad hoc* methods.

² With justification, F_{MSY} may be replaced with an alternative maximum fishing mortality threshold to define the OFL.

In this level, ABC will be determined by using the Council's risk policy, as with a Level 1 assessment, but with the OFL probability distribution based on the specified distribution in the stock assessment.

Level 3

Attributes of a stock assessment that would lead to inclusion in Level 3 are the same as Level 2, except that

- The assessment does not contain estimates of the probability distribution of the OFL or the probability distribution provided is not considered best available science by the SSC.

Assessments in this level are judged to over- or underestimate the accuracy of the OFL. The SSC will adjust the distribution of the OFL and develop an ABC recommendation by applying the Council's risk policy to the modified OFL probability distribution. The SSC will develop a set of default levels of uncertainty in the OFL probability distribution for this level based on literature review and a planned evaluation of ABC control rules.

Level 4

Stock assessments in Level 4 are deemed to have reliable estimates of trends in abundance and catch, but absolute abundance, fishing mortality rates, and reference points are suspect or absent. Additionally, there are limited circumstances that may not fit the standard approaches to specification of reference points and management measures set forth in these guidelines (i.e., ABC determination). In these circumstances, the SSC may propose alternative approaches for satisfying the NS1 requirements of the Magnuson-Stevens Act than those set forth in the NS1 guidelines. In particular, stocks in this level do not have point estimates of the OFL or probability distributions of the OFL that are considered best available science. In most cases, stock assessments that fail peer review or are deemed highly uncertain by the SSC will be assigned to this level. Examples of potential attributes for inclusion in this category are:

- Assessment approach is missing essential features of the biology of the stock, characteristics of data collection, and the fisheries that exploit it;
- Stock status and reference points are estimated, but are not considered reliable;
- Assessment may estimate some relevant quantities including biomass, fishing mortality or relative abundance, but only trends are deemed reliable;
- Large retrospective patterns usually present; and
- Uncertainty may or may not be considered, but estimates of uncertainty are probably substantially underestimated.

In this level, a simple control rule will be used based on biomass and catch history and the Council's risk policy.

The SSC will determine, based on the assessment level to which a stock is classified, the specifics of the control rule to specify ABC that would be expected to attain the probability of overfishing specified in the Council's risk policy. The SSC may deviate from the above assessment level framework and recommend an ABC that differs from the result of the ABC control rule calculation, but must provide justification for doing so.

Section 2.0: Council Risk Policy Alternatives

The Council risk policy alternatives given below would be applied all to the stocks under MAFMC management jurisdiction. Under any of the action risk alternatives selected below (i.e. excludes alternative 2A) the following would also apply.

For stocks that are under rebuilding plans, the upper limit on the probability of exceeding the rebuilding F would be 50 percent unless modified to a lesser value through a rebuilding plan amendment. In addition, if no overfishing definition is available for a stock (i.e. No F_{MSY} or F_{MSY} proxy; can't determine if overfishing is or is not occurring) and no overfishing limit is specified then an upper limit (cap) on allowable increases in catch levels will be established. Catch levels may not be increased until an appropriate F_{MSY} or F_{MSY} proxy has been identified.

It should be noted in the alternatives below that if the ratio of biomass (B) to biomass at maximum sustainable yield (B_{MSY}) is less than 1.0, then the current stock biomass is less than B_{MSY} ; if the ratio of B to B_{MSY} is greater than or equal to 1.0, then the current stock biomass is B_{MSY} or greater.

The Council is considering variations on the action alternatives given below (alternatives 2B - 2F) as part of the public hearing process and is seeking input from the public. Specifically, modification of the variables included in each alternative are considered (e.g. such as stock status, assessment level, life history, stock history) as well as the associated values incorporated in each of the action alternatives (e.g. maximum probabilities of overfishing, inflection points, etc.).

Alternative 2A: No Action on Council Risk Policy

Under this no action alternative, there would be no action to establish a formal Council risk policy to be applied to the stocks under MAFMC management jurisdiction.

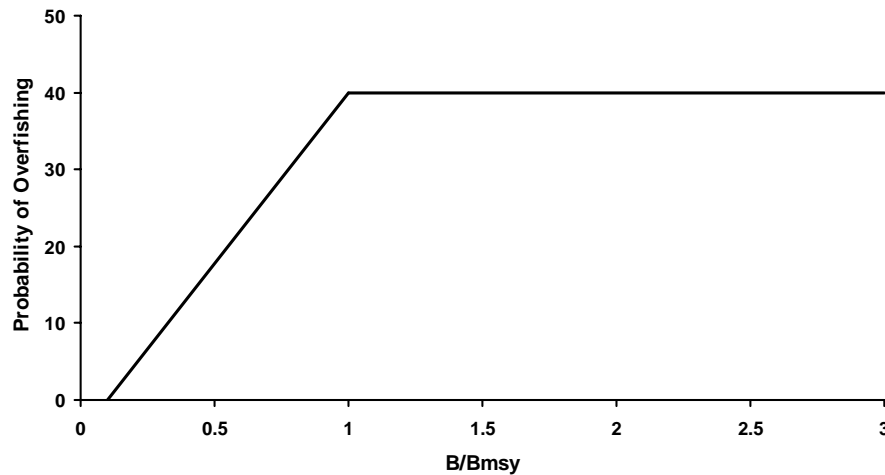
Alternative 2B: Constant Probability of Overfishing = 25 Percent

Under this alternative, the probability of overfishing will be 25 percent under all circumstances (i.e. irrespective of stock condition, rebuilding status, life history, etc.).

The Council is considering variations on this alternative as part of the public hearing process. A different percentage for the probability of overfishing under this alternative (e.g. 20 percent, etc.) could be considered by the Council.

Alternative 2C: Stock Replenishment Threshold with Inflection at $B/B_{MSY} = 1.0$, X-Intercept at $B/B_{MSY} = 0.1$ - Under this alternative, a stock replenishment threshold defined as the ratio of $B/B_{MSY} = 0.10$, will be utilized to ensure the stock does not reach low levels from which it cannot recover. The probability of overfishing will be 0 percent if the ratio of B/B_{MSY} is less than or equal to 0.10. Probability of overfishing increases linearly as the ratio of B/B_{MSY} increases, until the inflection point of $B/B_{MSY} = 1.0$ is reached and a 40 percent probability of overfishing is utilized for ratios equal to or greater than 1.0.

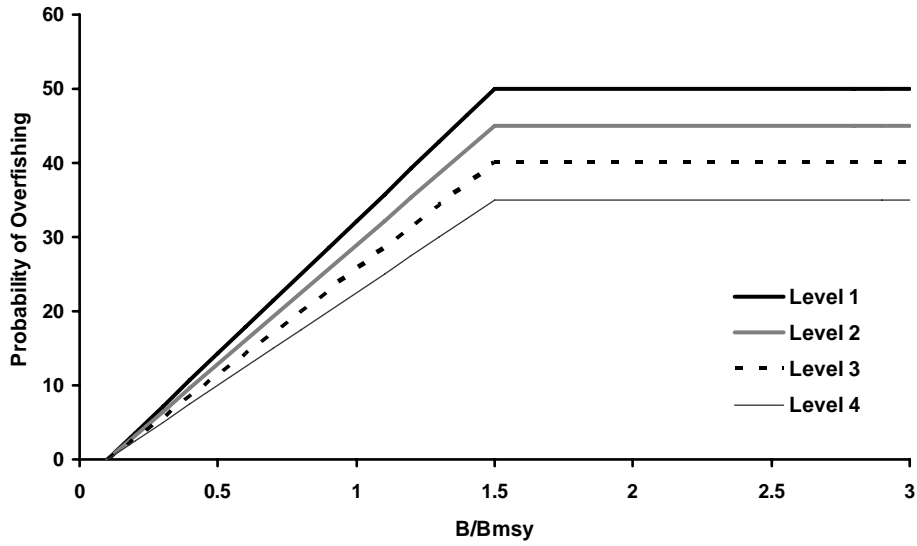
The Council is considering variations on this alternative. Specifically, the Council could consider modification of the inflection point from $B/B_{MSY} = 1.0$, to some higher value such as 1.5 or 2.0. Similarly, the Council is contemplating the appropriateness of a maximum probability of overfishing in the risk policy of 40 percent, versus the application of a higher value such as 45 percent or 50 percent. The Council is also considering the appropriateness of a stock replenishment threshold and whether it should be included in this risk policy.



Alternative 2D: Stock Status/Assessment Level Offset, Replenishment Threshold, with Inflection at $B/B_{MSY} = 1.5$

Under this alternative, a stock replenishment threshold defined as the ratio of $B/B_{MSY} = 0.10$, will be utilized to ensure the stock does not reach low levels from which it cannot recover. The probability of overfishing will be 0 percent if the ratio of B/B_{MSY} is less than or equal to 0.10. Probability of overfishing increases linearly at similar rates as the ratio of B/B_{MSY} increases; until the inflection point of $B/B_{MSY} = 1.5$ is reached and a 50 percent probability of overfishing is utilized for assessment level 1, 45 percent for level 2, 40 percent for level 3, and 35 percent for level 4.

The Council is considering variations on this alternative. Specifically, the Council could consider modification of the inflection point from $B/B_{MSY} = 1.5$, to some other value such as 1.0 or 2.0. Similarly, the Council is contemplating the appropriateness of a maximum probability of overfishing in the risk policy of 50 percent, versus the application of a lower value such as 45 percent or 40 percent. The Council is also considering the appropriateness of a stock replenishment threshold and whether it should be included in this risk policy.

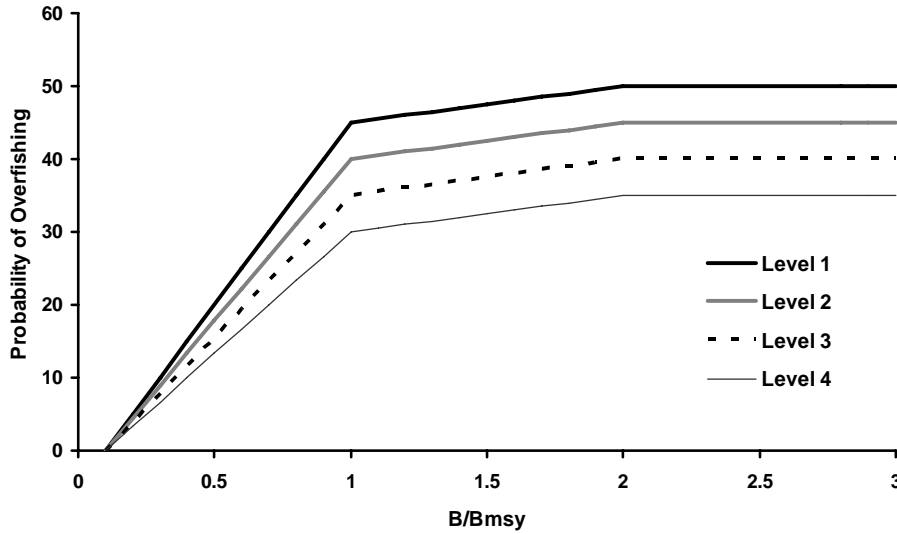


Alternative 2E: Stock Status/Assessment Level Offset, Replenishment Threshold, with 2 Inflection Points at $B/B_{MSY} = 1.0$ and $B/B_{MSY} = 2.0$

Under this alternative, a stock replenishment threshold defined as the ratio of $B/B_{MSY} = 0.10$, will be utilized to ensure the stock does not reach low levels from which it cannot recover. The probability of overfishing will be 0 percent if the ratio of B/B_{MSY} is less than or equal to 0.10. Probability of overfishing increases linearly at similar rates as the ratio of B/B_{MSY} increases; until the inflection point of $B/B_{MSY} = 1.0$ is reached and a 45 percent probability of overfishing is utilized for assessment level 1 (see section 1.0), 40 percent for level 2, 35 percent for level 3, and 30 percent for level 4. Probability of overfishing then continues to increase to the inflection point of $B/B_{MSY} = 2.0$, where the probability of overfishing is for level 1 is 50 percent, 45 percent for level 2, 40 percent for level 3, and 35 percent for level 4, for all B/B_{MSY} ratios equal to or greater than 2.0.

The Council is considering variations on this alternative. Specifically, the Council could consider modification of the two inflection points from $B/B_{MSY} = 1.0$ and $B/B_{MSY} = 2.0$, to another set of values such as $B/B_{MSY} = 2.0$ and $B/B_{MSY} = 4.0$. Similarly, the Council is contemplating the appropriateness of a maximum probability of overfishing in the risk policy of 50 percent, versus the application of a lower value such as 45 percent or 40

percent. The Council is also considering the appropriateness of a stock replenishment threshold and whether it should be included in this risk policy.



Alternative 2F: Categorical, with range from 10 - 50 percent

Under this alternative, specification of the probability of overfishing incorporates assessment level (see section 1.0), stock history, and life history patterns. Probability of overfishing is higher for stocks which have not been overfished (either currently or previously based on best available scientific information). Probability of overfishing is also higher for stocks which have typical life history patterns, when compared to atypical life history patterns (e.g., dogfish and black sea bass). In addition, as the assessment level decreases, the probability of overfishing decreases.

The Council is considering variations on this alternative. Specifically, modification of the variables included in each alternative are considered; one such example would be the removal of stock history as an important criteria, resulting in a 2 by 4 matrix (8 probability categories), as opposed to a 4 by 4 matrix (16 categories). The Council is also contemplating the appropriateness of a maximum probability of overfishing in the risk policy of 50 percent, versus the application of a lower value such as 45 percent or 40 percent.

Probability of Overfishing				
Assessment Level	Stock History (Previously Overfished?)			
	<i>Has Never Been Overfished</i>		<i>Has Been Overfished</i>	
	<i>Life History Pattern</i>		<i>Life History Pattern</i>	
	Typical	Atypical	Typical	Atypical
1	50	45	45	40
2	40	35	35	30
3	30	25	25	20
4	20	15	15	10

Section 3.0: Annual Catch limit (ACL) and Accountability Measure (AM) Alternatives

The alternatives below are organized by FMP stock and identify options for ACLs and AMs. Catch is defined as both landings and discards. ACL frameworks have been developed which allow for management uncertainty (i.e. implementation uncertainty), if present, to be addressed. Management uncertainty can occur because of a lack of sufficient information about the catch (e.g. due to late reporting, underreporting, and misreporting of landings or bycatch), or because of a lack of management precision in many fisheries (e.g. due to limited or unavailable data, untimely data, or lack of inseason closure authority).

It should be noted that while some sources of management uncertainty may be insignificant, others may be substantial. Using recreational fisheries as an example, the limited data used to evaluate the effect of proposed recreational measures on angling effort, in the absence of information to evaluate angler behavior in response to those measures, is a source of management uncertainty. This may be one factor contributing to poor fishery performance relative to harvest targets (i.e. overages). In commercial fisheries, late submission of landings data may result in poor accounting of landings relative to the commercial quotas inseason and result in consistent overages for some fisheries.

In the action alternatives given below, the Council is considering a process by which significant sources of management uncertainty could be identified, and if appropriate, accommodated by reducing catch levels to prevent any ACLs from being exceeded and accountability measures enacted. Reducing catch limits to account for management uncertainty has both associated costs and benefits. Reduction in catch levels to address management uncertainty should be only the amount necessary to achieve the results mandated by the MSA, which are intended to prevent overfishing and, when applicable, rebuild overfished stocks. These adjustments should be considered in the general context of the entire catch framework and its performance relative to MSA.

ACLs may be established at the fishery level, sector level (i.e. recreational and commercial), or sub sector level (i.e. party-charter sub-sector, or state-federal subcomponents) or any combination thereof. ACL cannot exceed ABC and the sum of all sector or sub-sector ACLs cannot exceed the fishery-level ACL, if established. Not all stocks have significant recreational components; therefore, the degree to which a single-sector or more than one sector contribute to the overall landings and/or catch will likely drive the selection of an appropriate and ACL control rules. In addition ACLs may be specified annually or annually for a multiple years. For those stocks that already have ACL-type measures within the FMP, the following measures could be implemented in addition to the current measures, or be used to modify or formally identify the current ACL-type measures to be consistent with the new requirements.

Any time an ACL is determined to have been exceeded, automatic AM measures would be enacted. Accountability measures are required for each ACL established by the

Council and may be established at the fishery, sector, or sub-sector levels. For example, if the Council establishes ACLs for both the recreational and commercial sectors for a species fishery, AMs will need to be established for both sectors. Not all stocks have significant recreational components; therefore, the existence of a single-sector or more than one sector will likely drive the selection of AMs. Accountability measures are already utilized for many stocks contained within the FMPs. For those stocks that already have AM-type adjustment procedures within the FMP, the following measures could be implemented in addition to the current measures, or be used to modify or formally identify the current AM-type adjustments to be consistent with the new requirements. Accountability measures that are consistent with the new requirements must be automatic and cannot require Council deliberation, modification through an existing process (e.g. modification through specifications setting), or be left to the Regional Administrator's discretion.

There are two types of accountability measures under consideration: Proactive and reactive. Proactive AMs are intended to prevent as much as is practicable the ACL from being exceeded. Reactive AMs are in response to an ACL overage and are designed to mitigate that overage and/or prevent it from occurring in the subsequent year.

The trigger for AMs (i.e. comparison of ACL to observed catch, where catch is defined as landings plus discards) could be based on a single year comparison or could be based on multi year average examination, to smooth some of the interannual variability. For example, under a multi-year examination in year-1 the comparison of observed catch to the ACL would be based on single year of data. In year-2, it would be based on a two-year average, and in year-3 (and all subsequent years) it would be based on a three year moving average. The AM trigger would need to be identified as single-year or multi-year for each species. Options to utilize ACTs, a type of proactive AM, may be appropriate if ACL is set equal to ABC ($ACL=ABC$); however, setting ACL less than ABC ($ACL<ABC$) does not preclude utilizing an ACT.

Annual catch targets (ACTs) are proposed for a number of fisheries to account for management uncertainty. The guidelines on national standards 1 at §600.310(f)(6) contemplate the use of an ACT control rule. The extreme interannual and intrannual variability in the sources of management uncertainty, practicalities, and the need for flexibility, dictate that an ACT control rule be developed by the species monitoring committee concerned. For Atlantic surfclam and ocean quahog, which lack monitoring committees, the staff would develop an ACT control rule presented in the quota report. These are the groups most knowledgeable about each fishery and changing circumstances that could give rise to different levels of management uncertainty from year to year. Using the process presently included in the various species regulations, the monitoring committee should include in the recommendation to the Council the percentage, if any that the ACL should be reduced to account for management uncertainty in order that the catch of the managed resource does not exceed the ACL. The species committee concerned will recommend an ACT to the Council that has at least a 50 percent probability of not exceeding the ACL.

Optimum yield is the long-term average desired yield from a fishery which provides the greatest overall benefit to the nation particularly with respect to food production and recreational opportunity, and taking into account the protection of the marine ecosystems. OY yield is based on the maximum sustainable yield from the fishery as reduced by any relevant economic, social, or ecological factors, as those terms are described in the national standards guidelines at §600.310. The system for specifying annual catch limits (i.e. OFL-ABC-ACL-ACT) allows for the consideration of all relevant factors including scientific and management uncertainty as the ACT is derived. In the National Standard 1 Guidelines, under the response to comments, it states, "NMFS believes that fisheries managers cannot consistently meet the requirements of the MSA to prevent overfishing and achieve, on a continuing basis, OY [optimum yield] unless they address scientific and management uncertainty. The reduction in fishing levels that may be necessary in order to prevent overfishing should be only the amount necessary to achieve the results mandated by the MSA". For all of the ACL and AM frameworks described in the following alternatives for each of the stocks, the Council has specified $ACL=ABC$. Therefore, OY will be the long term average catch, which is designed not to exceed the ACL but fall between ACL and ACT that results from the application of these catch limit frameworks. This system is designed to rebuild those fisheries that are overfished and to maintain others at a level (B_{MSY}) that produces the maximum sustainable yield over time. Achieving these objectives will provide the greatest social and economic benefits to fishery participants and allow managers to set catch levels that provide the greatest overall to the nation.

Alternative 2A: No Action on ACL control rule and AMs for Stock X (i.e. substitute stock name)

Under this no action alternative, there would be no new action to establish an ACL control rule for Stock X beyond what currently exist in the FMP as ACL control rules. This option would be selected if the current provisions in the FMP are determined to be sufficient and are found to be consistent with the new MSA requirements. These current ACL provisions may need to be re-described and formalized in the context of the new MSA requirements to provide justification and support for the no action alternative.

Under this no action alternative, there would also be no new proactive or reactive AMs specified for Stock X other than those that currently exist as AM-type FMP adjustments. This option would be selected if the current provisions in the FMP are determined to be sufficient and are found to be consistent with the new MSA requirements. Administrative changes to existing regulatory language would be adopted to codify existing measures as AMs.

Action Alternatives for: Atlantic Mackerel ACLs and AMs

Domestic Acceptable Biological Catch (ABC)

Fishery removals are comprised of both U.S. and Canadian catches, and U.S. accountability measures cannot be applied or enforced on the Canadian fishery. Therefore, under this alternative, the fishery-level ACL would be set equal to the domestic acceptable biological catch (ABC) for the Atlantic mackerel stock (Figure Atlantic Mackerel; Table Atlantic Mackerel). The ABC is reduced from the overfishing limit (OFL) based on an adjustment for scientific uncertainty and the domestic ABC is defined as the ABC for the stock minus the Canadian catch.

$$\text{ABC} = \text{OFL} - \text{Scientific Uncertainty Adjustment}$$
$$\text{Domestic ABC} = \text{ABC} - \text{Canadian Catch}$$

Considered but rejected: The ACL will be set equal to the domestic ABC accounting for Canadian catch via another mechanism (i.e. creating a domestic OFL or by using a Canadian ACL) was considered but rejected. The artificial splitting of the OFL into a stock and domestic portion was undesirable as it raised a number of policy issues. Utilization of a Canadian ACLs would require accountability that is beyond the scope of the MSA or current international agreements for those components of the Canadian fishery.

Annual Catch Limit (ACL)

Under this alternative, the fishery-level ACL would be set equal to the domestic ABC for this stock.

$$\text{ACL} = \text{Domestic ABC}$$

ACL Evaluation: The ACL is exceeded when the catch from all domestic sources exceeds this value. This comparison of observed catch to ACL is based on a single-year comparison.

Accountability Measures (AMs)

Already in the FMP: The commercial fishery already has inseason closure authority when the Domestic Annual Harvest (DAH) is projected to be reached. Specifically, if 100 percent of the DAH is projected to be reached within the fishing season or year, then the fishery could be closed for the remainder of the fishing season or year (§ 648.22(a)(1)).

To slow the approach of observed landings to attaining the DAH, the directed fishery closes when 90 percent of the DAH is reached (§ 648.22(a)(1)) and an incidental 20,000 lb trip limit is implemented if the closure occurs before June 1 and a 50,000 lb trip limit if a closure occurs thereafter (§ 648.25(a)). Vessels may not fish for, possess, or land more than the applicable incidental trip limits at any time and may only land Atlantic Mackerel once per calendar day (defined as 0001 to 2400 hours).

Proactive AMs: An ACT is analytically desirable in cases where the control rule for ACL specifies $ACL=ABC$, to ensure a mechanism is available to address management uncertainty. An ACT is a type of proactive AM.

Existing allocations already defined in the FMP would be used to partition the ACL into sector-specific ACTs. A recreational fishery ACT and a commercial fishery ACT would be specified.

The Council is establishing a process to consider management uncertainty when sector-specific ACTs are specified for the commercial fishery and the recreational fishery. The Council may identify the reduction amount from ACL to the sector-specific ACTs at the time of annual specifications and would rely on the Atlantic Mackerel Monitoring Committee for recommendations on the sources of management uncertainty in these fisheries, whether an adjustment is needed, and to provide the technical basis (i.e. methods) for the reduction.

Reactive AMs: In the event the ACL is exceeded, and the commercial fishery is responsible for the overage, then the following option would apply.

Commercial Landings Overage Deduction: Landings in excess of the domestic annual harvest (DAH) will be deducted from the DAH for the following year in the final rule that establishes the DAH.

In the event the ACL is exceeded, and the recreational fishery is responsible for the overage, then the following option would apply.

Recreational Harvest Limit Overage Deduction: Landings in excess of the recreational harvest limit will be deducted from the recreational harvest limit for the following year in the final rule that establishes the recreational harvest limit.

Recreational Inseason Accountability: The NMFS Regional Administrator will monitor the recreational fishery based on MRFSS and other available information, and shall determine if the recreational landings will exceed the recreational harvest limit. The Regional Administrator shall publish notification in the Federal Register advising that, effective upon a specific date, the recreational fishery will be closed for the remainder of the fishing year.

Considered but rejected: A mechanism which would allow for inseason adjustments to management measures (i.e. fish size, season, and possession limits) was considered but rejected as no current management measures are presently utilized for the recreational fishery providing no basis for evaluating the effectiveness of measures for constraining landings. In addition, the development of triggers for recreational fishery closure based on recreational data availability (by wave) was also considered but rejected. The recreational fishery has landed 4 - 11 percent of the annual 33.01 million lb (15.00 million kg) allocation over the last 9 years. The recreational data available does not allow

for the development of indicators of imminent fishery overages given no overages have occurred in the recreational fishery; therefore, the data do not support development of fixed/prescriptive triggers to close the fishery.

Reactive accountability for recreational and commercial landings overages that result in the ACL being exceeded are contemplated in this amendment; however, accountability for other catch components (other than commercial and recreational landings) that result in the ACL being exceeded must also be addressed. In the event the ACL is exceeded, and that overage has not been accommodated through other mechanisms in the FMP (i.e. discards and/or unlikely event RSA is exceeded), then the following measures would apply.

Sector-specific ACT Adjustment: The commercial fishery and/or recreational fishery ACT would be adjusted in response to the ACL being exceeded if other reactive AMs have not addressed the overage. Specifically, the amount by which the ACL was exceeded would be used to adjust the sector-specific ACTs the subsequent year based on the sectors contribution to the overage. The ACT adjustment would be a single-year adjustment.

Atlantic Mackerel Flowchart

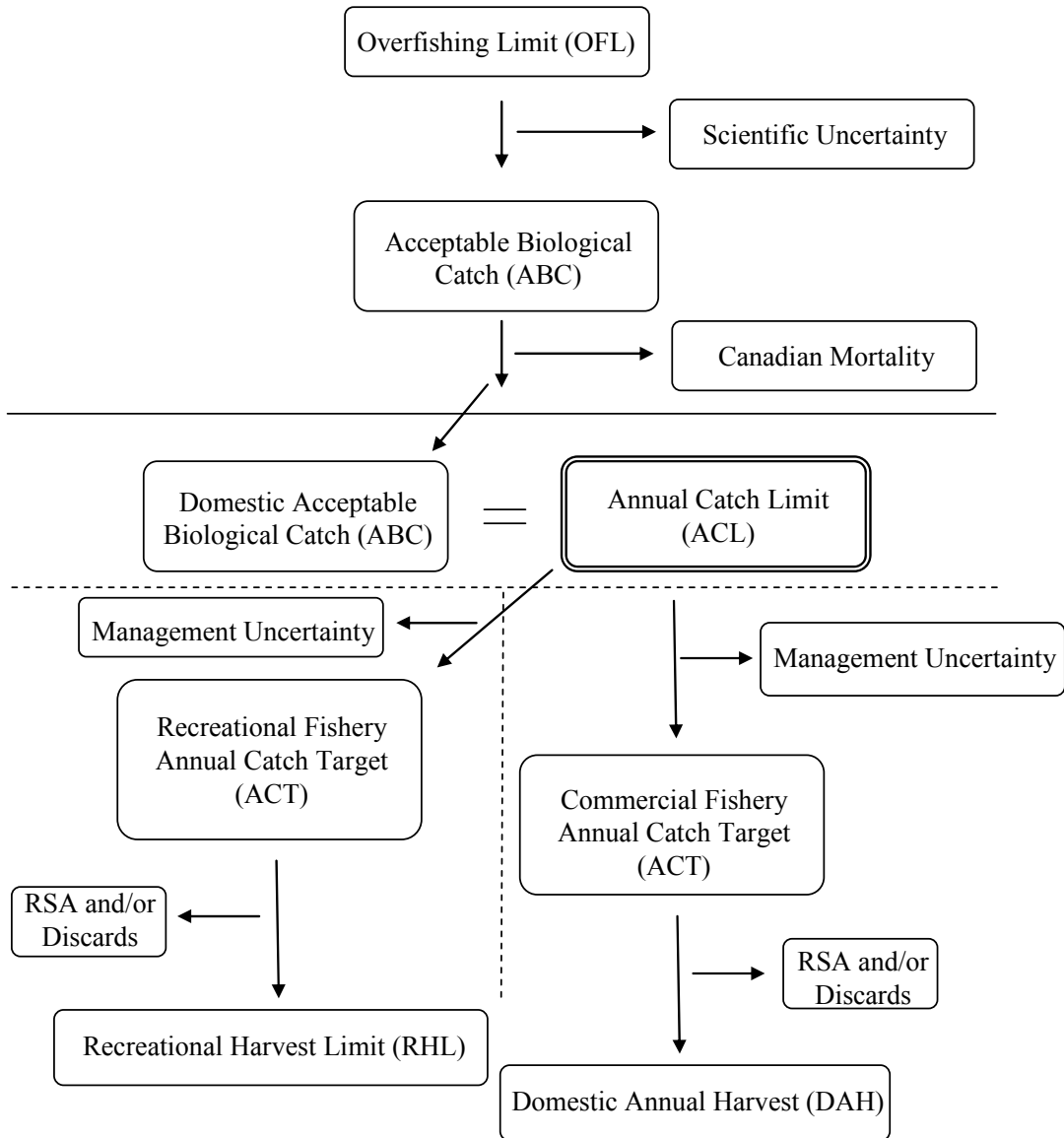


Figure Atlantic Mackerel. Key features of the ACL and AM framework.

Table Atlantic Mackerel. Atlantic Mackerel Terms

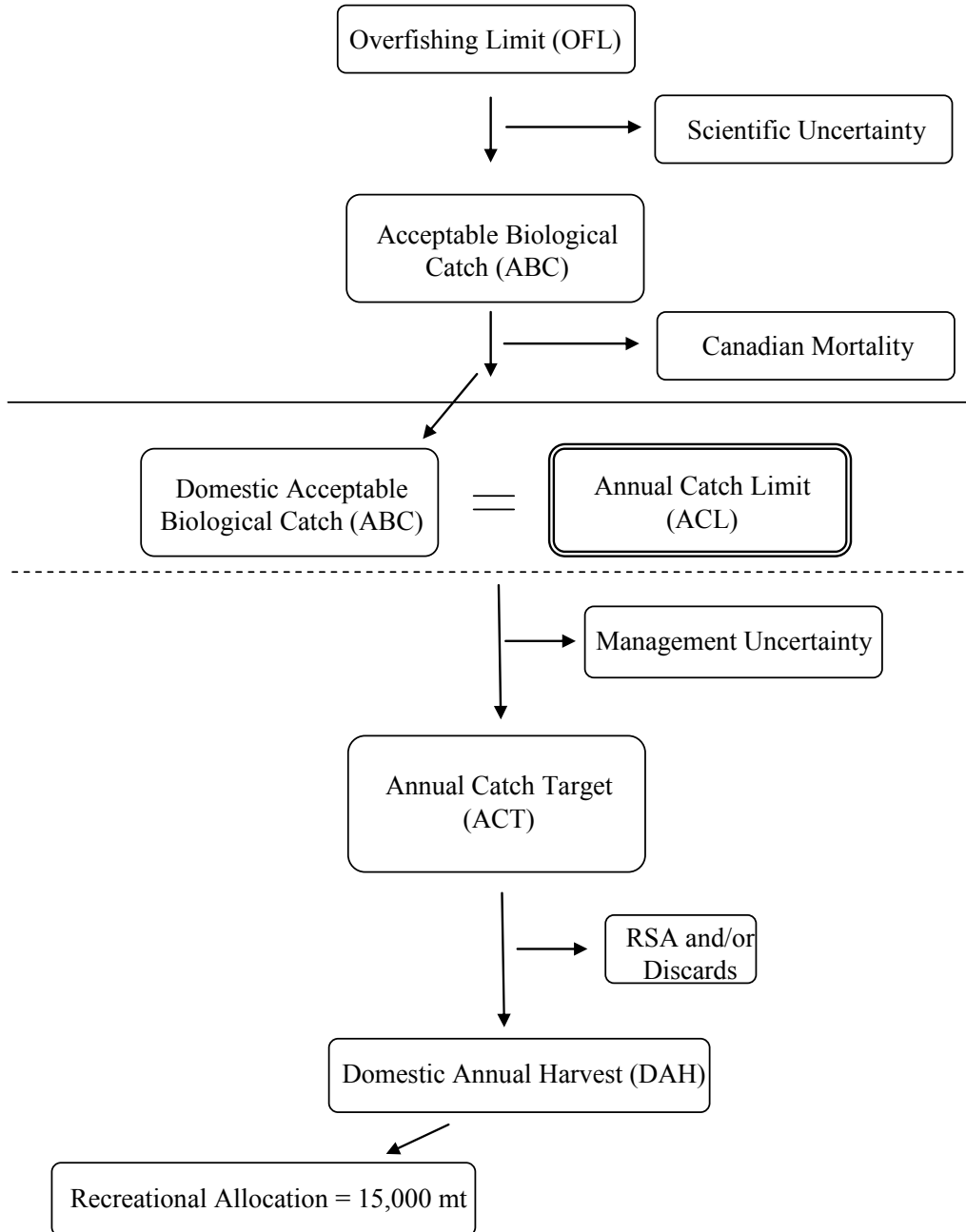
Previous Term	New Term	Definition	Use in Omnibus
Overfishing Limit (OFL)	Unchanged	The OFL is an estimate of the catch level above which overfishing is occurring. The amount of catch that corresponds to the estimate of MFMT applied to a stock and is expressed in terms of numbers or weight of fish.	OFL = catch level calculated by MFMT
Acceptable Biological Catch (ABC)	Unchanged	The level of a stock's annual catch that accounts for the scientific uncertainty in the estimate of OFL. May not exceed OFL.	ABC is established by SSC
	Annual Catch Limit (ACL)	The level of annual catch of a stock that serves as the basis for invoking AMs. IOY is a modification of ABC, based on social, economic, and ecological factors. It must be less than or equal to ABC. IOY is composed of RQ, DAH, DAP, and may include JVP and TALFF if specified.	ACL = Domestic ABC
	Sector	Distinct user group to which separate management strategies and separate catch quotas apply. For Atlantic Mackerel, there are recreational and commercial sectors.	Recreational Sector, Commercial Sector
Initial Optimum Yield (IOY)	Sector Annual Catch Target (ACT)	An amount of annual catch of a stock that is the management target of the fishery and accounts for management uncertainty in controlling the actual catch at or below ACL. IOY is a modification of ABC, based on social, economic, and ecological factors. It must be less than or equal to ABC. The sector ACT could account for all these factors.	Recreational ACT, Commercial ACT
Domestic Annual Harvest (DAH)	Unchanged	Annual amount of total domestic commercial landings permitted after removing estimated discards.	DAH = Commercial ACT – discards
Domestic Annual Processing (DAP)	Not specified	DAP is the IOY minus the recreational sector ACT. It is part of the overall ACL structure.	DAP = IOY – recreational sector ACT

Research Quota (RQ)	Research set-Aside (RSA) <i>Term change!</i>	Amount of annual landings up to 3 percent that may be set aside to fund research activities.	ACL – X% (up to 3%) = DAH and Recreational fishery allocation
	Recreational Harvest Level (RHL)	Annual management target for the recreational sector landings after removing research set-aside.	Recreational Sector ACT – discards = RHL
Optimum Yield (OY)	Optimum Yield (OY)	The long-term average amount of desired yield from a stock or fishery. OY cannot exceed MSY. For Atlantic Mackerel, OY is the quantity of catch that is less than or equal to the ABC in U.S. waters	OY
$\frac{1}{2} B_{MSY}$	Minimum Stock Size Threshold (MSST)	Level of stock biomass below which the stock is considered to be overfished.	$MSST = \frac{1}{2} B_{MSY}$
F_{MSY}	Maximum Fishing Mortality Threshold (MFMT)	The level of fishing mortality (F), on an annual basis, above which overfishing is occurring.	$MFMT = F_{MSY}$

Additional Considerations

This Atlantic mackerel alternative assumes Amendment 11 to the FMP will establish a hard allocation for the recreational and commercial sector; therefore, ACTs could be used for each sector along with associated sector-specific accountability. In the event, this action is not taken and no hard allocations are established, then reactive accountability if the ACL is exceeded (regardless of overage cause) would be needed, and accountability would occur at the fishery level and the ACL would be reduced. Specifically, the amount by which the ACL was exceeded would be used to adjust the ACL the subsequent year as a single year adjustment. The alternative provided above would be modified to reflect the following revised flowchart.

**Modified Atlantic Mackerel Flowchart if
Amendment 11 Allocations Not Established**



Action Alternatives for: Butterfish ACL and AMs

Annual Catch Limit (ACL)

Under this alternative, the fishery-level ACL would be set equal to the acceptable biological catch (ABC) for the butterfish stock (Figure Butterfish; Table Butterfish).

$$\text{ACL} = \text{ABC}$$

ACL Examination: The ACL is exceeded when the catch from the total fishery exceeds this value. This comparison of observed catch to ACL is based on a single-year comparison.

Accountability Measures (AMs)

Already in the FMP: The directed fishery already has inseason closure authority when 80 percent the Domestic Annual Harvest (DAH) is projected to be reached. The directed fishery closure remains effective for the remainder of the fishing period with incidental catch permitted, as outlined below. (§ 648.22(a)(4)).

During a directed fishery closure, an incidental trip limit of 250 lb is implemented if the closure occurs before October 1 and a 600 lb trip limit if closure occurs thereafter (§ 648.25(b)(1)). Vessels may not fish for, possess, or land more than the applicable incidental trip limits at any time and may only land butterfish once per calendar day (defined as 0001 to 2400 hours). Vessels issued an incidental catch permit for butterfish may not fish for, possess, or land more than 600 lb of butterfish at any time and may land only once per day unless the directed fishery closes before October 1. Then the incidental catch permit possession and landing limit becomes 250 lb (per calendar day).

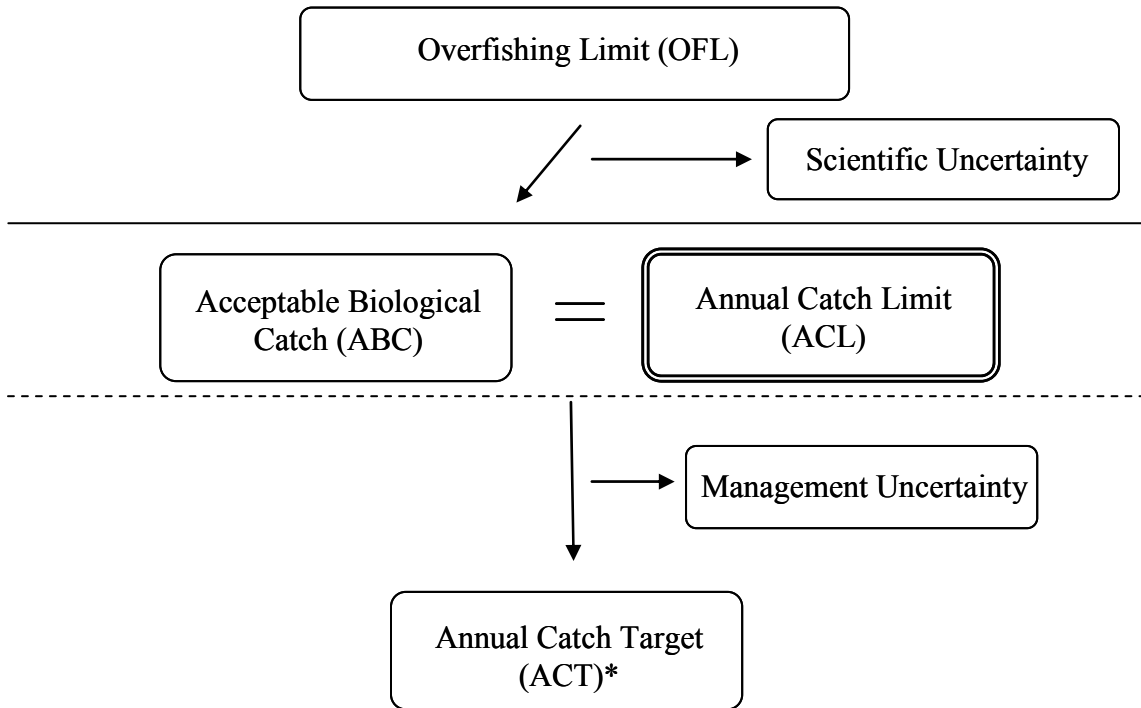
Proactive AMs: Utilizing an ACT is analytically desirable in cases where the control rule for ACL specifies $\text{ACL}=\text{ABC}$, to ensure a mechanism is available to address management uncertainty. An ACT is a type of proactive AM.

Existing allocations already defined in the FMP would be used to partition the ACL into an ACT for the *Loligo* fishery cap and an ACT for the “other fisheries” cap, after discards have been deducted.

The Council is establishing a process to consider management uncertainty when the ACT is specified for the butterfish fishery. The Council may identify the reduction amount from ACL to the ACT at the time of annual specifications and would rely on the Butterfish Monitoring Committee for recommendations on the sources of management uncertainty in this fishery, whether an adjustment is needed, and to provide the technical basis (i.e. methods) for the reduction.

Reactive AMs: If the ACL is exceeded (regardless of overage cause), then accountability would occur at the fishery level and the ACL would be reduced. Specifically, the amount by which the ACL was exceeded would be used to adjust the ACL the subsequent year as a single year adjustment.

Considered but rejected: Additional corrective measures could not be developed for butterfish at this time given the multiple sources of mortality for this fishery, many of which are non-directed.



* Landings are controlled through trip limits and inseason closures. The majority of discards will be controlled through a butterfish cap on the *Loligo* fishery (final rule pending). RSA would be deducted from IOY=ACT for this fishery.

Figure Butterfish. Key features of the ACL and AM framework.

Table Butterfish. Butterfish Terms

Previous Term	New Term	Definition	Use in Omnibus
Overfishing Limit (OFL)	Unchanged	The OFL is an estimate of the catch level above which overfishing is occurring. The amount of catch that corresponds to the estimate of MFMT applied to a stock and is expressed in terms of numbers or weight of fish.	OFL = catch level calculated by MFMT
Acceptable Biological Catch (ABC)	Unchanged	The level of a stock's annual catch that accounts for the scientific uncertainty in the estimate of OFL. May not exceed OFL.	ABC is established by SSC
	Annual Catch Limit (ACL)	The level of annual catch of a stock that serves as the basis for invoking AMs. IOY is a modification of ABC, based on social, economic, and ecological factors. It must be less than or equal to ABC. IOY is composed of RQ, DAH, DAP, and may include JVP and TALFF if specified.	ACL = ABC
Initial Optimum Yield (IOY)	Annual Catch Target (ACT)	An amount of annual catch of a stock that is the management target of the fishery and accounts for management uncertainty in controlling the actual catch at or below ACL. IOY could be reduced from ABC, based on social, economic, and ecological factors. The ACT could account for all these factors.	IOY = ACT
Domestic Annual Harvest (DAH)	Unchanged	DAH is the IOY after removal of estimated discards.	DAH = IOY - discards
Domestic Annual Processing (DAP)	Unchanged	DAP is the <i>Loligo</i> and other fishery catch cap.	DAP = <i>Loligo</i> Fishery Cap + Commercial Fishery Cap
Research Quota (RQ)	Research set-Aside (RSA)	Amount of Annual Catch Limit (ACL) up to 3 percent that may be set aside to fund research activities	ACL – X% (up to 3%) = ACT
Optimum Yield (OY)	Optimum Yield (OY)	The long-term average amount of desired yield from a stock or fishery. OY cannot exceed MSY.	OY
$\frac{1}{2} B_{MSY}$	Minimum Stock Size Threshold (MSST)	Level of stock biomass below which the stock is considered to be overfished.	MSST = $\frac{1}{2} B_{MSY}$
F_{MSY}	Maximum Fishing Mortality Threshold (MFMT)	The level of fishing mortality (F), on an annual basis, above which overfishing is occurring.	MFMT = F_{MSY}

Action Alternative for: Atlantic Bluefish ACL and AMs

Annual Catch Limit (ACL)

Under this alternative, the fishery-level ACL would be set equal to the ABC for the bluefish stock (Figure Bluefish; Table Bluefish).

$$\text{ACL} = \text{ABC}$$

ACL Evaluation: The ACL is exceeded when the catch from all sources exceeds this value. This comparison of observed catch to ACL is based on a single-year comparison. *Considered but rejected:* The issue of a three year average for observed recreational catch to compare to the ACL was considered but rejected, owing to complication associated with the transfer process for this fishery.

Accountability Measures (AMs)

Already in the FMP: There is an overage deduction mechanism (i.e. commercial landing repayment lb for lb) in place by which state-specific overages are deducted from their subsequent year allocation (§ 648.160(e)(2)).

When 100 percent of the commercial quota in a given state is projected to be reached within the fishing season or year, commercial landings are prohibited to the state in question (§ 648.161(b)). The Exclusive Economic Zone (EEZ) may be closed to commercial fishing for the remainder of the year if all individual states have been closed or inaction by a state or states will cause the established fishing mortality (F) to be exceeded during the fishing year (§ 648.161(a)).

There is a mechanism which allows for transfer between the recreational and commercial sectors ((§ 648.160(c)(2)) and to transfer commercial fishery quota allocated pounds between individual states (§ 648.161(f)).

Proactive AMs: Utilizing an ACT is analytically desirable in cases where the control rule for ACL specifies $\text{ACL}=\text{ABC}$, to ensure a mechanism is available to address management uncertainty.

Existing allocations already defined in the FMP would be used to partition the ACL into sector-specific ACTs. A recreational fishery ACT and a commercial fishery ACT would be specified.

The Council is establishing a process to consider management uncertainty (for both sectors combined) prior to sector-specific ACTs being specified for the commercial fishery and the recreational fishery. The Council may identify the reduction amount from ACL to the ACTs at the time of annual specifications and would rely on the Bluefish Monitoring Committee for recommendations on the sources of management uncertainty in these fisheries, whether an adjustment is needed, and to provide the technical basis (i.e. methods) for the reduction.

Reactive AMs: If the ACL is exceeded and the commercial fishery is responsible for the overage, then the commercial lb for lb repayment (i.e., existing FMP mechanisms) would be applied.

In the event the ACL is exceeded, and the recreational fishery is responsible for the overage in a year when no transfer has occurred from the recreational to commercial fishery, then the following option would apply.

Recreational Harvest Limit Overage Deduction: Landings in excess of the recreational harvest limit will be deducted from the recreational harvest limit (RHL) for the following year in the final rule that establishes the recreational harvest limit.

In the event the ACL is exceeded, and the recreational fishery is responsible for the overage when a transfer has occurred from the recreational to commercial fishery, then the following option would apply. The Council must decide which sub-option would be applied.

Sub-option A: The RHL overage deduction option given above would be applied. Essentially, the recreational fishery would be responsible for the overage incurred.

Sub-option B: Then accountability for the recreational overage would occur at the fishery level and the ACL would be reduced. Specifically, the amount by which the ACL was exceeded would be used to adjust the ACL the subsequent year as a single year adjustment. In effect, the commercial and recreational fisheries would share responsibility for that overage.

Sub-option C: Then accountability for the recreational overage would occur at the fishery level; the ACL would be reduced and the subsequent year transfer would be reduced by the overage amount if it is determined that the overage resulted from too liberal a transfer.

Recreational Inseason Accountability:

General Recreational Closure Authority: The NMFS Regional Administrator will monitor the recreational fishery based on MRFSS and other available information, and shall determine if the recreational landings will exceed the RHL. The Regional Administrator shall publish notification in the Federal Register advising that, effective upon a specific date, the bluefish recreational fishery in the EEZ will be closed for the remainder of the fishing year.

Considered but rejected: A mechanism which would allow for automatic inseason adjustments to management measures (i.e. fish size, season, and possession limits) based on landings triggers was considered but rejected as the lack of adjustment of management measures limits the ability to evaluate the effectiveness of measures at constraining landings (i.e. no history of landings response to regulations). In addition, triggers for recreational fishery closure based on recreational data availability (by wave) was also considered but rejected. Recreational landings have exceeded the RHL in 1 of the most recent 9 years from 2000-2008; the overage was 6 percent. The recreational data available does not allow for the development of indicators of recreational landings

overages given only one overage has occurred recently in the recreational fishery; therefore, the data do not support development of fixed/prescriptive triggers to close the fishery. In addition, the effectiveness of these types of inseason measures may be limited unless concurrent state measures are implemented for these fisheries.

Reactive accountability for recreational landings overages that result in the ACL being exceeded are contemplated in this amendment, and mechanisms to address commercial landings overages already exists; however, accountability for other catch components (other than commercial and recreational landings) that result in the ACL being exceeded must also be addressed. In the event the ACL is exceeded, and that overage has not been accommodated through other mechanisms in the FMP (i.e. discards and/or unlikely event RSA is exceeded), then the following measures would apply.

Fishery-level Accountability: Then accountability would occur at the fishery level and the ACL would be reduced. Specifically, the amount by which the ACL was exceeded would be used to adjust the ACL the subsequent year as a single year adjustment.

Atlantic Bluefish Flowchart

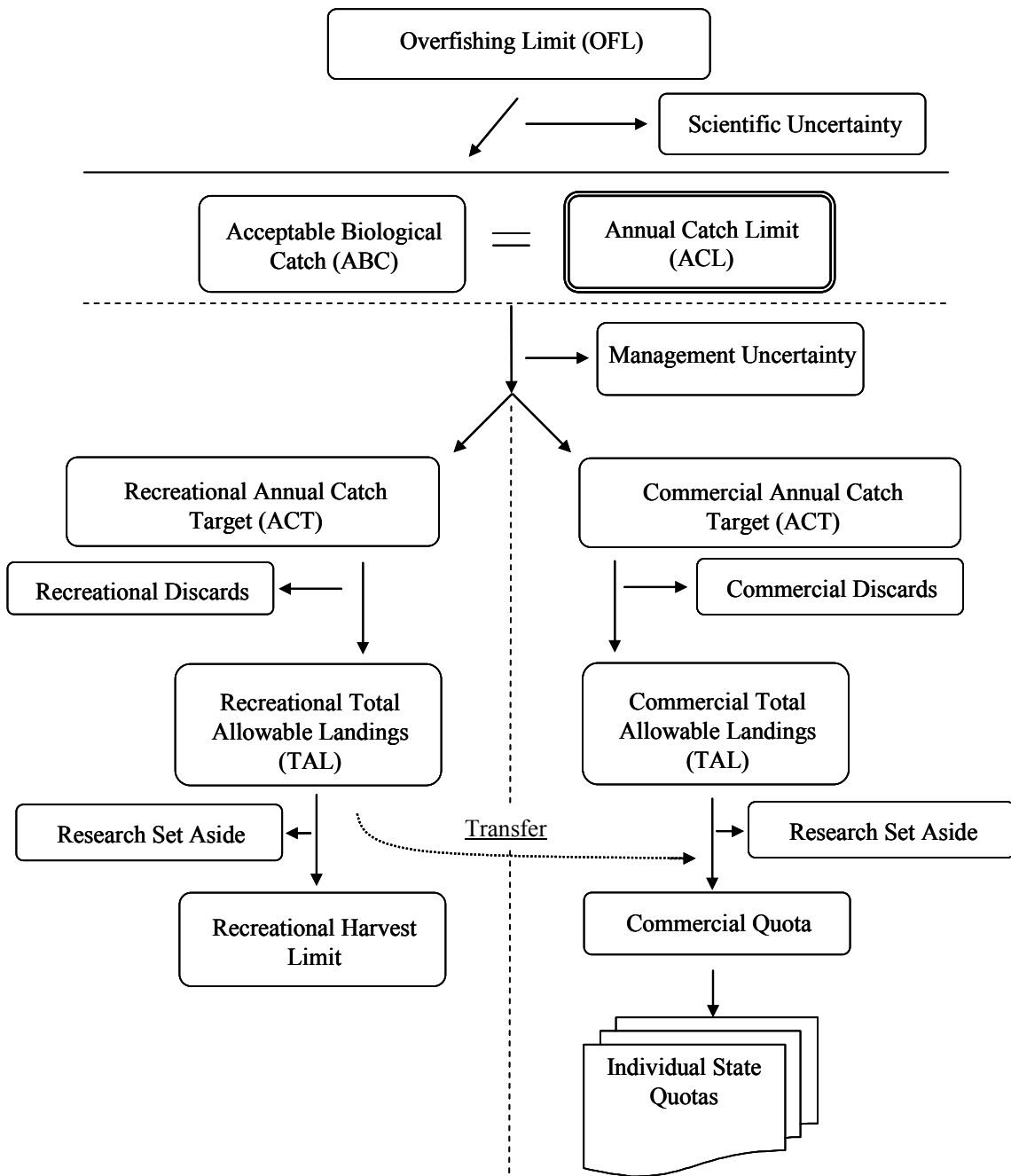


Figure Atlantic Bluefish. Key features of the ACL and AM framework.

Table Bluefish. Atlantic Bluefish Terms

Previous Term	New Term	Definition	Use in Omnibus
Overfishing Limit (OFL)	Unchanged	The OFL is an estimate of the catch level above which overfishing is occurring. The amount of catch that corresponds to the estimate of MFMT applied to a stock and is expressed in terms of numbers or weight of fish.	OFL = catch level calculated by MFMT
Acceptable Biological Catch (ABC)	Unchanged	The level of a stock's annual catch that accounts for the scientific uncertainty in the estimate of OFL. May not exceed OFL.	ABC is established by SSC
Total Allowable Catch (TAC)	Annual Catch Limit (ACL)	The level of annual catch of a stock that serves as the basis for invoking AMs. ACL may not exceed ABC. For Atlantic Bluefish ACL is set equal to ABC.	ACL = ABC
	Sector	Distinct user group to which separate management strategies and separate catch quotas apply. For bluefish, there are recreational and commercial sectors.	Recreational Sector, Commercial Sector
	Sector Annual Catch Target (ACT)	An amount of annual catch of a stock that is the management target of the fishery, inclusive of discards, and accounts for management uncertainty in controlling the actual catch at or below ACL.	Recreational ACT, Commercial ACT
Total Allowable Landings (TAL)	Sector Total Allowable Landings (TAL)	Annual amount of total landings permitted by sector after removing estimated discards.	Sector TAL = sector ACT – sector discards
Research Set-Aside (RSA)	Unchanged	Amount of landings TAL up to 3 percent that may be set aside to fund research activities	TAL – X% (up to 3%) = RHL and Commercial Quota
Recreational Harvest Limit (RHL)	Unchanged	Annual management target for the recreational sector after removing research set-aside.	RHL = Recreational Sector TAL- RSA
Commercial Quota	Unchanged	Annual management target for the commercial sector after removing research set-aside and receiving transfer from the recreational harvest limit.	Commercial Quota = Commercial Sector TAL- RSA

Optimum Yield (OY)	Unchanged	The long-term average amount of desired yield from a stock or fishery. OY cannot exceed MSY.	OY
$\frac{1}{2} B_{MSY}$ or B_{MSY} Proxy	Minimum Stock Size Threshold (MSST)	Level of stock biomass below which the stock is considered to be overfished.	$MSST = \frac{1}{2} B_{MSY}$ Proxy
$F_{THRESHOLD}$ (Also F_{MAX} , F_{MSY})	Maximum Fishing Mortality Threshold (MFMT)	The level of fishing mortality (F), on an annual basis, above which overfishing is occurring.	$MFMT = F_{THRESHOLD} = F_{MSY} = F_{MAX}$

Action Alternative for: Spiny Dogfish ACL and AMs

Domestic Acceptable Biological Catch (ABC)

Fishery removals are comprised of both U.S. and Canadian catches, and U.S. accountability measures cannot be applied or enforced on the Canadian fishery. Therefore under this alternative, the ABC is reduced from the overfishing limit (OFL) based on an adjustment for scientific uncertainty and the domestic ABC is defined as the ABC for the stock minus the Canadian catch. The fishery-level ACL would be set equal to the domestic ABC for the spiny dogfish stock.

$$\text{ABC} = \text{OFL} - \text{Scientific Uncertainty Adjustment}$$
$$\text{Domestic ABC} = \text{ABC} - \text{Canadian Catch}$$

Considered but rejected: The ACL will be set equal to the domestic ABC accounting for Canadian catch via another mechanism (i.e. creating a domestic OFL or by using a Canadian ACL) was considered but rejected. The artificial splitting of the OFL into a stock and domestic portion was undesirable as it raised a number of policy issues and utilization of a Canadian ACL; would require accountability that is beyond the scope of the MSA or current international agreements for those components of the Canadian fishery.

Annual Catch Limit (ACL)

Under this alternative, the fishery-level ACL would be set equal to the domestic ABC for this stock.

$$\text{ACL} = \text{Domestic ABC}$$

ACL Evaluation: The ACL is exceeded when the catch from all sources exceeds this value. This comparison of observed catch to ACL is based on a single-year comparison.

Accountability Measures (AMs)

Already in the FMP: Trip limits may be implemented through the specifications process for spiny dogfish (§ 648.230(b)(4)) and have been utilized at varying levels in recent years.

The semi-annual quota may be closed in the EEZ when projected landings indicate that the semi-annual quota will be attained (§ 648.231). Closures are effective for the remainder of the semi-annual quota period in question.

Proactive AMs: Under this alternative, an ACT would be specified and serve as a buffer from the ACL. Utilizing an ACT is analytically desirable in cases where the control rule for ACL specifies $\text{ACL} = \text{ABC}$, to ensure a mechanism is available to address management uncertainty.

The Council is establishing a process to consider management uncertainty when the ACT is specified for the spiny dogfish fishery. The Council may identify the reduction amount

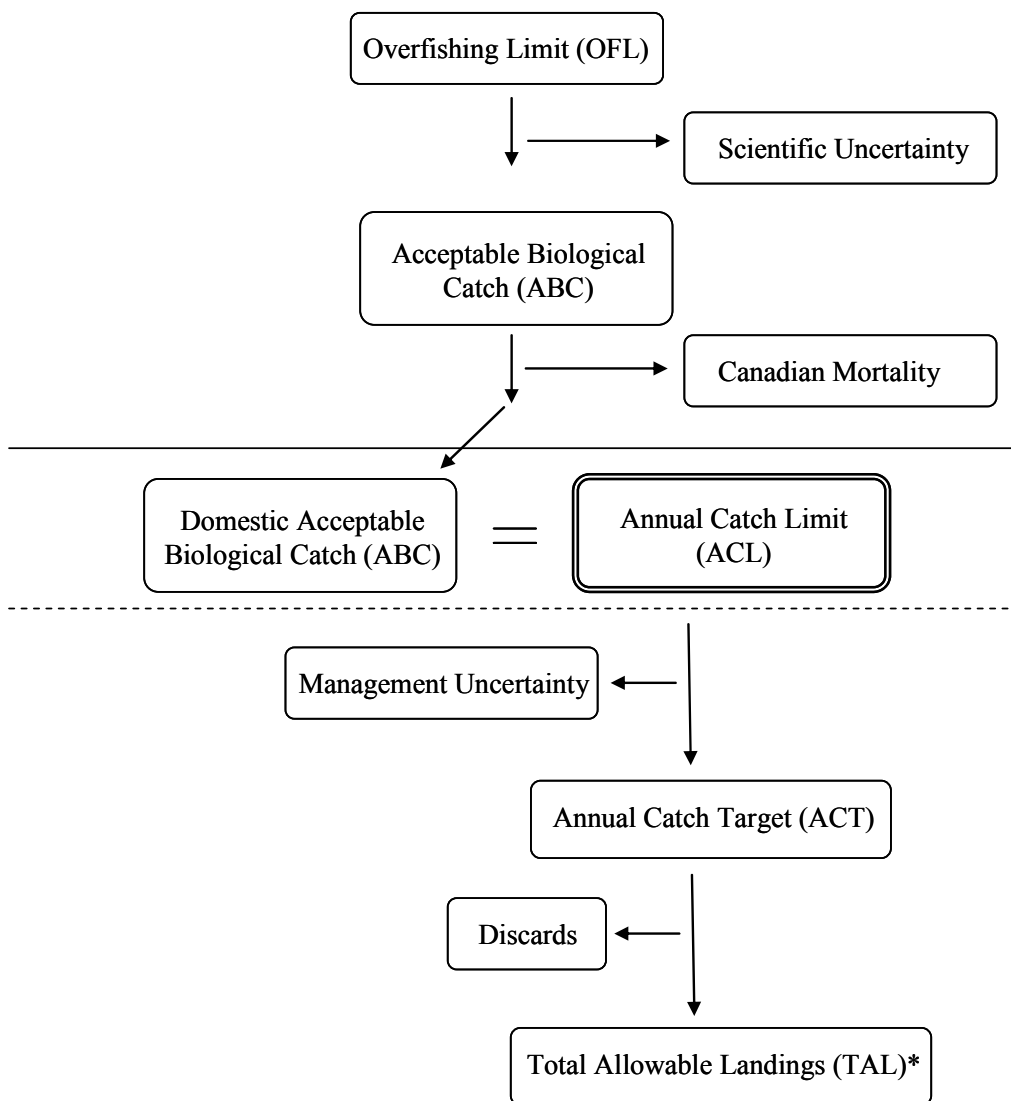
from ACL to the ACT at the time of annual specifications and would rely on the Spiny Dogfish Monitoring Committee for recommendations on the sources of management uncertainty in these fisheries, whether an adjustment is needed, and to provide the technical basis (i.e. methods) for the reduction.

While the recreational fishery is not actively managed in this FMP, the recreational mortality (landings and discards) are accounted for in the stock assessment.

Considered but rejected: Development of proactive inseason adjustments and associated trip limit triggers was considered but rejected. An inseason adjustment to the Federal spiny dogfish commercial trip limit would affect the rate at which spiny dogfish landings from the EEZ accumulate and thus slow landings relative to the annual or periodic (seasonal) quota. Importantly, however, a substantial portion (~ 90% + according to dealer weighout data from 2000-2008) of reported commercial spiny dogfish landings do not come from the EEZ. Because of this, the prevailing source of landings is likely to remain unaffected by a potential Federal in-season adjustment. For vessels that currently possess a Federal spiny dogfish permit, the option of responding to reduced trip limits or even closure of the EEZ by relinquishing their Federal permit and fishing in state waters is available. Additionally, under Addendum II (October 2008), the Interstate Fishery Management Plan (ISFMP) allocates the commercial quota regionally rather than seasonally; thus as the Federal periodic (seasonal) quota is being approached, the regional quotas may be less than half landed. Lastly, Amendment 3 to the Federal Spiny Dogfish FMP is contemplating a transition to regional allocation of the commercial quota that would complement the ISFMP allocation scheme. The appropriateness of inseason adjustments to trip limits as a pro-active AM should be further evaluated through the development of that amendment.

Reactive AMs: If the ACL is exceeded, then accountability would occur at the fishery level and the ACL would be reduced. Specifically, the amount by which the ACL was exceeded would be used to adjust the ACL the subsequent year as a single year adjustment.

Spiny Dogfish Flowchart



* RSA for spiny dogfish is contemplated in proposed Amendment 3. RSA would be deducted from the TAL.

Figure Spiny Dogfish. Key features of the ACL and AM framework.

Table Spiny Dogfish. Spiny Dogfish Terms.

Previous Term	New Term	Definition	Use in Omnibus
Overfishing Limit (OFL)	Unchanged	The OFL is an estimate of the catch level above which overfishing is occurring. The amount of catch that corresponds to the estimate of MFMT applied to a stock and is expressed in terms of numbers or weight of fish.	OFL = catch level calculated by MFMT
Acceptable Biological Catch (ABC)	Unchanged	The level of a stock's annual catch that accounts for the scientific uncertainty in the estimate of OFL. May not exceed OFL.	ABC is established by SSC
Total Allowable Catch (TAC)	Annual Catch Limit (ACL)	The level of annual catch of a stock that serves as the basis for invoking AMs. For spiny dogfish ACL is set equal to ABC.	ACL = Domestic ABC
	Annual Catch Target (ACT)	An amount of annual catch of the stock that is the management target of the fishery, inclusive of discards, and accounts for management uncertainty in controlling the actual catch at or below ACL.	ACT
Total Allowable Landings (TAL)	Unchanged	Annual amount of total landings permitted after removing estimated discards from the total catch level.	ACT – discards = TAL
Optimum Yield (OY)	Optimum Yield (OY)	The long-term average amount of desired yield from a stock or fishery. OY cannot exceed MSY.	OY
$B_{\text{THRESHOLD}}$	Minimum Stock Size Threshold (MSST)	Level of stock biomass below which the stock is considered to be overfished.	MSST = $B_{\text{THRESHOLD}}$
$F_{\text{THRESHOLD}}$	Maximum Fishing Mortality Threshold (MFMT)	The level of fishing mortality (F), on an annual basis, above which overfishing is occurring.	MFMT = $F_{\text{THRESHOLD}}$

Action Alternative for: Summer Flounder ACLs and AMs

Annual Catch Limits (ACLs)

Under this alternative, the ACLs for each sector (commercial and recreational) would be set equal to the acceptable biological catch (ABC) for the summer flounder stock (Figure Summer Flounder; Table Summer Flounder). The formula reads as the summation of all sector-specific ACL equals the ABC. The ABC would be allocated to each sector ACL according to the allocation guidelines of the FMP.

$$\Sigma(\text{ACL}_{\text{SECTOR}}) = \text{ABC}$$

ACL Evaluation: The ACLs are exceeded when the recreational catch exceeds the recreational sector ACL or the commercial catch exceeds the commercial sector ACL. In the commercial fishery this is based on a single-year comparison. For the recreational sector, two options exist: evaluation based on a single year comparison or on a three-year moving average. An analysis conducted with MRFSS recreational landings data from 2000-2008 and the associated recreational harvest limits (RHLs), on the potential effect of overage adjustments in response to either single-year or three-year averages, suggest that while a three-year average may provide reduced adjustments in year+1 following the overage, the overage is carried through for years+2 and +3, resulting in lower adjusted RHLs overall relative to a single-year adjustment process. One of the following sub-options could be applied:

Sub-option A – Single-year: The comparison of recreational catch to the recreational sector ACL would be based on a single-year comparison.

Sub-option B – Three-year: The comparison of recreational catch to the recreational sector ACL would be based on a three-year comparison.

Accountability Measures (AMs)

Already in the FMP: There is an overage deduction mechanism (i.e. commercial landing repayment lb for lb) in place by which state-specific landings overages are deducted from their subsequent year allocation (§ 648.100(d)(1)(ii)).

If 100 percent of the commercial quota in a given state is projected to be reached within the fishing year, then the fishery could be closed for the remainder of the fishing year (§ 684.101(b)). The EEZ may also be closed for the remainder of the year if the commercial fishery in all states has been closed or if inaction by one or more states will cause the target F to be exceeded (§ 648.101(a)).

Proactive AMs: Existing allocations already defined in the FMP would be used to partition the ABC into sector-specific ACLs. A recreational sector ACT and a commercial sector ACT would be specified and may be reduced from the sector-specific ACLs to address management uncertainty. Utilizing an ACT is analytically desirable in cases where the control rule for ACL specifies $\text{ACL}=\text{ABC}$, to ensure a mechanism is available to address management uncertainty. *Considered but rejected:* Use of a separate ACT for the party/charter component of the recreational fishery was considered but rejected from further analysis on the basis that accountability measures could not be addressed without an allocation for that fishery component.

The Council is establishing a process to consider management uncertainty when sector-specific ACTs are specified for the commercial fishery and the recreational fishery. The Council may identify the reduction amount from the sector-specific ACLs to the sector-specific ACTs at the time of annual specifications and would rely on the Summer Flounder Monitoring Committee for recommendations on the sources of management uncertainty in these fisheries, whether an adjustment is needed, and to provide the technical basis (i.e. methods) for the reduction.

Recreational Inseason Accountability:

General Recreational Closure Authority: The NMFS Regional Administrator will monitor the recreational fishery based on MRFSS and other available information, and shall determine if the recreational landings will exceed the RHL. The Regional Administrator shall publish notification in the Federal Register advising that, effective upon a specific date, the summer flounder recreational fishery in the EEZ will be closed for the remainder of the fishing year.

Triggers for summer flounder recreational fishery closure based on the MRFSS data (by wave) were developed; however, there are significant limitations to these types of approaches. It is difficult to predict changes in angler behavior (i.e. catch rates) in response to annual or seasonal fish availability events. Similarly, it is difficult to predict shifts in fishing effort in response to changes in management measures (intra-annually). This in conjunction with the timing of the data may prevent these types of inseason approaches from being highly successful. Only MRFSS data from wave 3 was used to develop a prescribed trigger for fishery closure, because wave 4 data (i.e. January-August) becomes available in October at which point the ability to significantly influence current year landings is substantially reduced. It is a policy decision as to whether accountability measures to close the fishery inseason using data that may not be fully predictive of an overage outweighs the types of potential reactive AMs that may be required if the ACL is exceeded. *Considered but rejected:* A mechanism which would allow for inseason adjustments to management measures (i.e. fish size, season, and possession limits) was considered but rejected. The timing of the availability of the recreational data is insufficient to adequately inform when these measures should be deployed with sufficient time to be highly effective.

Inseason Fishery Closure at 50 Percent Utilization: If 50 percent of the recreational harvest limit has been utilized by the end of MRFSS wave 3 (i.e., landings through June, data typically available in mid-August), then the summer flounder recreational fishery in the EEZ would be closed on September 1 for the remainder of the fishing season or year. This is based on MRFSS data from 2000-2008, which suggests in the six years in which overages occurred, in four of those six year about 50 percent or more of the recreational harvest limit had been utilized by wave 3.

The effectiveness of recreational inseason measures may be limited unless complementary actions are taken within state waters. For summer flounder, self-reported area information from MRFSS which anglers specify where the majority of their fishing

occurred, indicates an average of 10.1 percent of the landings from 1999-2008 occurred in the EEZ. Each state has a different set of requirements for application of inseason measures. Some states can take action through declaration; others must take action through emergency rulemaking. The criteria under which action can be taken varies and in many cases requires the stock be threatened, in jeopardy, or imminent public health threat or danger to a fishing resource or habitat involving finfish can be cited.

Reactive AMs: If the commercial sector ACL is exceeded, then mechanisms already in the FMP described above would be applied.

If the recreational sector ACL is exceeded, the recreational harvest limit overage would be deducted from the subsequent year's recreational harvest limit (i.e. recreational landings repayment) which would reduce the recreational sector ACT the subsequent year. The Atlantic States Marine Fisheries Commission (ASMFC) may explore state-by-state accountability if conservation equivalency is utilized; however, the Federal FMP is not empowered to impose such repayment requirements to individual states.

Reactive accountability for recreational landings overages that result in the ACL being exceeded are contemplated in this amendment, and mechanisms to address commercial landings overages already exists; however, accountability for other catch components (other than commercial and recreational landings) that result in the sector-specific ACLs being exceeded must also be addressed. In the event the sector-specific ACL is exceeded, and that overage has not been accommodated through other mechanisms already in the FMP (i.e. discards and/or unlikely event RSA is exceeded), then the following measures would apply.

Sector-specific Accountability: Accountability for overages of the commercial sector ACL and/or recreational sector ACL would occur at the sector-specific ACL. Specifically, the amount by which the commercial sector ACL and/or recreational sector ACL was exceeded would be used to adjust the ACL the subsequent year as a single year adjustment.

The following would need to be jointly adopted under Council and ASMFC rules:

If the ASMFC implements commercial quotas and recreational harvest limits that differ substantially from recommendations made by the Council for Federal waters, administrative action will be taken, if practicable, to reconvene the Council and Summer Flounder, Scup, Black Sea Bass Board, at earliest convenience, to revisit their recommendations.

Summer Flounder Flowchart

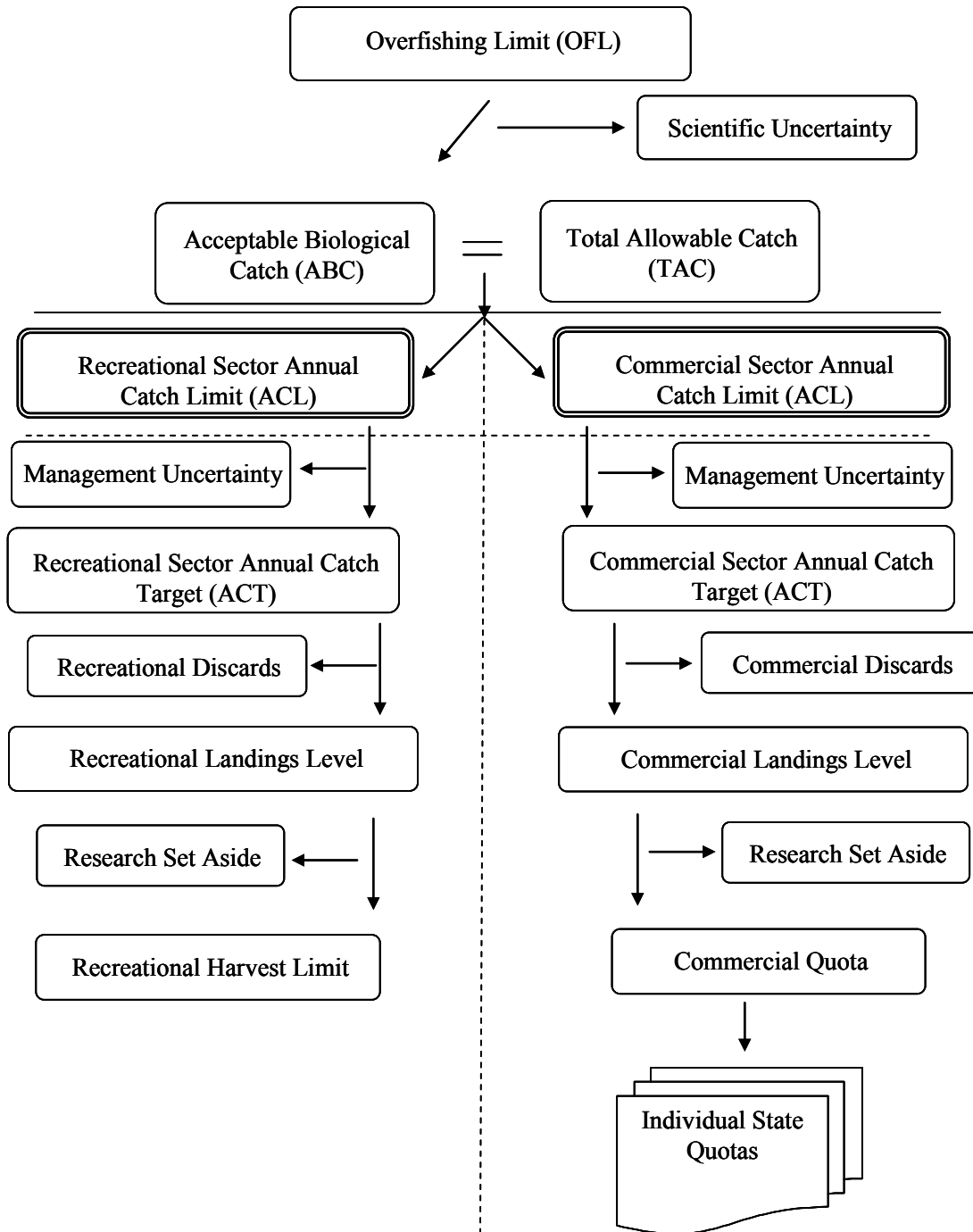


Figure Summer Flounder. Key features of the ACL and AM framework.

Table Summer Flounder. Summer Flounder Terms.

Previous Term	New Term	Definition	Use in Omnibus
Overfishing Limit (OFL)	Unchanged	The OFL is an estimate of the catch level above which overfishing is occurring. The amount of catch that corresponds to the estimate of MFMT applied to a stock and is expressed in terms of numbers or weight of fish.	OFL = catch level calculated by MFMT
Acceptable Biological Catch (ABC)	Unchanged	The level of a stock's annual catch that accounts for the scientific uncertainty in the estimate of OFL. May not exceed OFL.	ABC is established by SSC
	Sector	Distinct user group to which separate management strategies and separate catch quotas apply. For summer flounder, there are recreational and commercial sectors.	Recreational Sector, Commercial Sector
Total Allowable Catch (TAC)	Sum of Sector Annual Catch Limits (ACL)	The level of annual catch of a stock that serves as the basis for invoking AMs. The sum of the sector ACLs may not exceed ABC. For summer flounder Σ sector ACLs is set equal to ABC.	Σ sector ACLs = ABC
	Sector Annual Catch Target (ACT)	An amount of annual catch of a stock by sector that is the management target of the fishery, inclusive of discards, and accounts for management uncertainty in controlling the actual catch at or below ACL.	Recreational ACT, Commercial ACT
Total Allowable Landings (TAL)	Sector Total Allowable Landings (TAL)	Annual amount of total landings permitted by sector after removing estimated discards.	Sector TALs = sector ACT – sector discards
Research Set-Aside (RSA)	Unchanged	Amount of Total Allowable Landings (TAL) up to 3 percent that may be set aside to fund research activities	TAL – X% (up to 3%) = RHL and Commercial Quota
Recreational Harvest Limit (RHL)	Unchanged	Annual management target for the recreational sector after removing research set-aside.	RHL = Recreational Sector TAL - RSA
Commercial Quota	Unchanged	Annual management target for the commercial sector after removing research set-aside.	Commercial Quota = Commercial Sector TAL - RSA

Optimum Yield (OY)	Optimum Yield (OY)	The long-term average amount of desired yield from a stock or fishery. OY cannot exceed MSY.	OY
$\frac{1}{2} B_{MSY}$ Proxy	Minimum Stock Size Threshold (MSST)	Level of stock biomass below which the stock is considered to be overfished.	MSST = $\frac{1}{2} B_{MSY}$ Proxy
$F_{35\%} = F_{MSY}$ Proxy	Maximum Fishing Mortality Threshold (MFMT)	The level of fishing mortality (F), on an annual basis, above which overfishing is occurring.	MFMT = $F_{40\%} = F_{MSY}$ Proxy

Action Alternative for: Scup ACL and AMs

Annual Catch Limits (ACLs)

Under this alternative, the ACLs for each sector (commercial and recreational) would be set equal to the acceptable biological catch (ABC) for the scup stock (Figure Scup; Table Scup). The formula reads as the summation of all sector-specific ACL equals the ABC. The ABC would be allocated to each sector ACL according to the allocation precepts of the FMP.

$$\Sigma(\text{ACL}_{\text{SECTOR}}) = \text{ABC}$$

ACL Evaluation: The ACLs are exceeded when the recreational catch exceeds the recreational sector ACL or the commercial catch exceeds the commercial sector ACL. In the commercial fishery this is based on a single-year comparison. For the recreational sector, two options exist: evaluation based on a single year comparison or on a three-year moving average. An analysis conducted with MRFSS recreational landings data from 2000-2008 and the associated recreational harvest limits (RHLs), on the potential effect of overage adjustments in response to either single-year or three-year averages, suggest that while a three-year average may provide reduced adjustments in year+1 following the overage, the overage is carried through for years+2 and +3, resulting in lower adjusted RHLs overall relative to a single-year adjustment process. One of the following sub-options could be applied:

Sub-option A – Single-year: The comparison of recreational catch to the recreational sector ACL would be based on a single-year comparison.

Sub-option B – Three-year: The comparison of recreational catch to the recreational sector ACL would be based on a three-year comparison.

Accountability Measures (AMs)

Already in the FMP: There is an overage deduction mechanism (i.e. commercial landing repayment lb for lb) in place by which quota period-specific landings overages are deducted from the same subsequent year quota period allocation (§ 648.120(d)(4)(i) and (ii)).

The specifications process permits possession limits to be established for the Winter I and II quota periods (§ 648.120(b)(3)) and the percent of landings attained at which the Winter I landing limit will be reduced ((§ 648.120(b)(4)). In recent years, the Winter I fishery has carried a 30,000 lb Federal landing limit that drops to 1,000 lb when 80 percent of the Winter I quota period has been attained. A variable trip limit scale has been used for Winter II dependent on the amount of unused Winter I quota rolled over to the Winter II period.

Proactive AMs: Existing allocations already defined in the FMP would be used to partition the ABC into sector-specific ACLs. A recreational sector ACT and a commercial sector ACT would be specified and may be reduced from the sector-specific ACLs to address management uncertainty. Utilizing an ACT is analytically desirable in

cases where the control rule for ACL specifies $ACL=ABC$, to ensure a mechanism is available to address management uncertainty.

The Council is establishing a process to consider management uncertainty when sector-specific ACTs are specified for the commercial fishery and the recreational fishery. The Council may identify the reduction amount from the sector-specific ACLs to the sector-specific ACTs at the time of annual specifications and would rely on the Scup Monitoring Committee for recommendations on the sources of management uncertainty in these fisheries, whether an adjustment is needed, and to provide the technical basis (i.e. methods) for the reduction. *Considered but rejected:* Use of a separate ACT for the party/charter component of the recreational fishery was considered but rejected from further analysis on the basis that accountability measures could not be addressed without an allocation for that fishery component.

Recreational Inseason Accountability:

General Recreational Closure Authority: The NMFS Regional Administrator will monitor the recreational fishery based on MRFSS and other available information, and shall determine if the recreational landings will exceed the RHL. The Regional Administrator shall publish notification in the Federal Register advising that, effective upon a specific date, the scup recreational fishery in the EEZ will be closed for the remainder of the fishing year.

Triggers for scup recreational fishery closure based on the MRFSS data (by wave) were developed; however, there are significant limitations to these types of approaches. It is difficult to predict changes in angler behavior (i.e. catch rates) in response to annual or seasonal fish availability events. Similarly, it is difficult to predict shifts in fishing effort in response to changes in management measures (intra-annually). This in conjunction with the timing of the data may prevent these types of inseason approaches from being highly successful. Only MRFSS data from wave 3 was used to develop a prescribed trigger for fishery closure, because wave 4 data (i.e. January-August) becomes available in October at which point the ability to significantly influence current year landings is substantially reduced. It is a policy decision as to whether accountability measures to close the fishery inseason using data that may not be fully predictive of an overage outweighs the types of potential reactive AMs that may be required if the ACL is exceeded. *Considered but rejected:* A mechanism which would allow for inseason adjustments to management measures (i.e. fish size, season, and possession limits) was considered but rejected. The timing of the availability of the recreational data is insufficient to adequately inform when these measures should be deployed with sufficient time to be highly effective.

Inseason Fishery Closure at 15 Percent Utilization: If 15 percent of the recreational harvest limit has been utilized by the end of MRFSS wave 3 (i.e., landings through June, data typically available in mid-August), then the scup recreational fishery in the EEZ would be closed on September 1 for the remainder of the fishing season or year. This is based on MRFSS data from 2000-2008, which suggests in the seven years in which

overages occurred, in all of those years 15 percent or more of the recreational harvest limit had been utilized by wave 3.

The effectiveness of recreational inseason measures may be limited unless complementary actions are taken within state waters. For scup, self-reported area information from MRFSS which anglers specify where the majority of their fishing occurred, indicates an average of 6.1 percent of the landings from 1999-2008 occurred in the EEZ. Each state has a different set of requirements for application of inseason measures. Some states can take action through declaration; others must take action through emergency rulemaking. The criteria under which action can be taken varies and in many cases requires the stock be threatened, in jeopardy, or an imminent public health threat or danger to a fishing resource or habitat involving finfish can be cited.

Reactive AMs: If the commercial sector ACL is exceeded, then mechanisms already in the FMP described above would be applied.

If the recreational sector ACL is exceeded, then the RHL overage would be deducted from the subsequent year's recreational harvest limit (i.e. recreational landings repayment) which would reduce the recreational sector ACT the subsequent year. The ASMFC may explore accountability for the regional conservation equivalency applied in state-waters only; however, the Federal FMP is not empowered to impose such repayment requirements to those regions.

Reactive accountability for recreational landings overages that result in the ACL being exceeded are contemplated in this amendment, and mechanisms to address commercial landings overages already exists; however, accountability for other catch components (other than commercial and recreational landings) that result in the sector-specific ACLs being exceeded must also be addressed. In the event the sector-specific ACL is exceeded, and that overage has not been accommodated through other mechanisms already in the FMP (i.e. discards and/or unlikely event RSA is exceeded), then the following measures would apply.

Sector-specific Accountability: Accountability for overages of the commercial sector ACL and/or recreational sector ACL would occur at the sector-specific ACL. Specifically, the amount by which the commercial sector ACL and/or recreational sector ACL was exceeded would be used to adjust the ACL the subsequent year as a single year adjustment.

The following would need to be jointly adopted under Council and ASMFC rules:

If the ASMFC implements quotas and recreational harvest limits that differ substantially from recommendations made by the Council for Federal waters, administrative action will be taken, if practicable, to reconvene the Council and Summer Flounder, Scup, Black Sea Bass Board, at earliest convenience, to revisit their recommendations.

Scup Flowchart

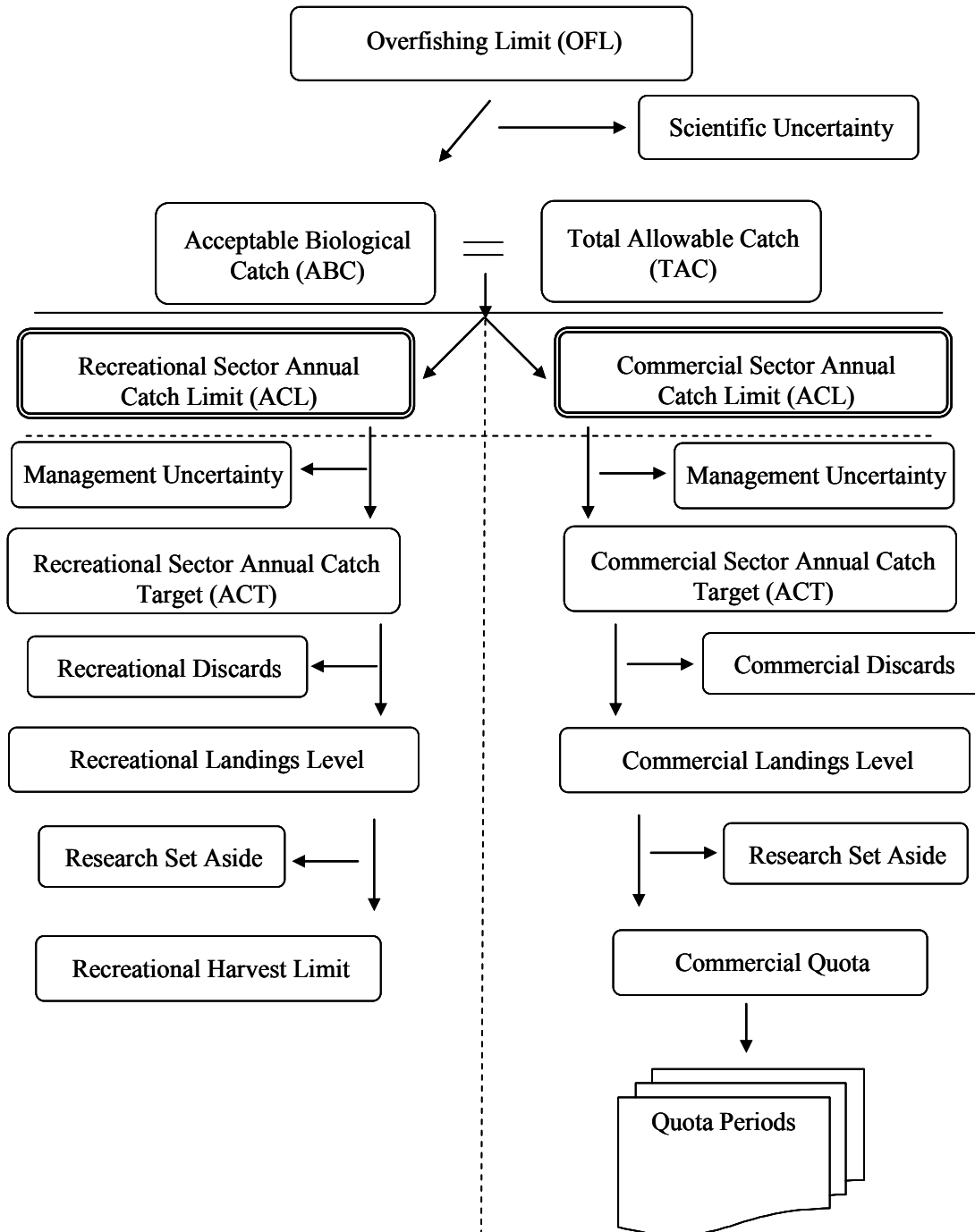


Figure Scup. Key features of the ACL and AM framework.

Table Scup. ScupTerms.

Previous Term	New Term	Definition	Use in Omnibus
Overfishing Limit (OFL)	Unchanged	The OFL is an estimate of the catch level above which overfishing is occurring. The amount of catch that corresponds to the estimate of MFMT applied to a stock and is expressed in terms of numbers or weight of fish.	OFL = catch level calculated by MFMT
Acceptable Biological Catch (ABC)	Unchanged	The level of a stock's annual catch that accounts for the scientific uncertainty in the estimate of OFL. May not exceed OFL.	ABC is established by SSC
	Sector	Distinct user group to which separate management strategies and separate catch quotas apply. For scup, there are recreational and commercial sectors.	Recreational Sector, Commercial Sector
Total Allowable Catch (TAC)	Sum of Sector Annual Catch Limits (ACL)	The level of annual catch of a stock that serves as the basis for invoking AMs. The sum of the sector ACLs may not exceed ABC. For scup Σ sector ACLs is set equal to ABC.	Σ sector ACLs = TAC = ABC
	Sector Annual Catch Target (ACT)	An amount of annual catch of a stock by sector that is the management target of the fishery, inclusive of discards, and accounts for management uncertainty in controlling the actual catch at or below ACL.	Recreational ACT, Commercial ACT
Total Allowable Landings (TAL)	Sector Total Allowable Landings (TAL)	Annual amount of total landings permitted by sector after removing estimated discards.	Sector TAL = sector ACT – sector discards
Research Set-Aside (RSA)	Unchanged	Amount of Total Allowable Landings (TAL) up to 3 percent that may be set aside to fund research activities	TAL – X% (up to 3%) = RHL and Commercial Quota
Recreational Harvest Limit (RHL)	Unchanged	Annual management target for the recreational sector after removing research set-aside.	RHL = Recreational Sector TAL - RSA
Commercial Quota	Unchanged	Annual management target for the commercial sector after removing research set-aside.	Commercial Quota = Commercial Sector TAL - RSA

Optimum Yield (OY)	Optimum Yield (OY)	The long-term average amount of desired yield from a stock or fishery. OY cannot exceed MSY.	OY
$\frac{1}{2} B_{MSY}$ Proxy	Minimum Stock Size Threshold (MSST)	Level of stock biomass below which the stock is considered to be overfished.	MSST = $\frac{1}{2} B_{MSY}$ Proxy
$F_{40\%} = F_{MSY}$ Proxy	Maximum Fishing Mortality Threshold (MFMT)	The level of fishing mortality (F), on an annual basis, above which overfishing is occurring.	MFMT = $F_{40\%} = F_{MSY}$ Proxy

Action Alternative for: Black Sea Bass ACLs and AMs

Annual Catch Limits (ACLs)

Under this alternative, the ACLs for each sector (commercial and recreational) would be set equal to the acceptable biological catch (ABC) for the black sea bass stock (Figure Black Sea Bass; Table Black Sea Bass). The formula reads as the summation of all sector-specific ACL equals the ABC. The ABC would be allocated to each sector ACL according to the allocation precepts of the FMP.

$$\Sigma(\text{ACL}_{\text{SECTOR}}) = \text{ABC}$$

ACL Evaluation: The ACLs are exceeded when the recreational catch exceeds the recreational sector ACL or the commercial catch exceeds the commercial sector ACL. In the commercial fishery this is based on a single-year comparison. For the recreational sector, two options exist: evaluation based on a single year comparison or on a three-year moving average. An analysis conducted with MRFSS recreational landings data from 2000-2008 and the associated recreational harvest limits (RHLs), on the potential effect of overage adjustments in response to either single-year or three-year averages, suggest that while a three-year average may provide reduced adjustments in year+1 following the overage, the overage is carried through for years+2 and +3, resulting in lower adjusted RHLs overall relative to a single-year adjustment process. One of the following sub-options could be applied:

Sub-option A – Single-year: The comparison of recreational catch to the recreational sector ACL would be based on a single-year comparison.

Sub-option B – Three-year: The comparison of recreational catch to the recreational sector ACL would be based on a three-year comparison.

Accountability Measures (AMs)

Already in the FMP: There is an overage deduction mechanism (i.e. commercial landing repayment lb for lb) in place by which coastwide landing overages are deducted from their subsequent year allocation (§ 648.140(d)(3)).

If 100 percent of the coastwide commercial quota is projected to be reached within the fishing year, then the fishery could be closed for the remainder of the fishing year (§ 684.141). The EEZ may also be closed for the remainder of the year if inaction by one or more states will cause the target F to be exceeded (§ 648.141)

Proactive AMs: Existing allocations already defined in the FMP would be used to partition the ABC into sector-specific ACLs. A recreational sector ACT and a commercial sector ACT would be specified and may be reduced from the ACLs to address management uncertainty. Utilizing an ACT is analytically desirable in cases where the control rule for ACL specifies $\text{ACL}=\text{ABC}$, to ensure a mechanism is available to address management uncertainty. *Considered but rejected:* Use of a separate ACT for the party/charter component of the recreational fishery was considered but rejected from further analysis on the basis that accountability measures could not be addressed without an allocation for that fishery component.

The Council is establishing a process to consider management uncertainty when sector-specific ACTs are specified for the commercial fishery and the recreational fishery. The Council may identify the reduction amount from the sector-specific ACLs to the sector-specific ACTs at the time of annual specifications and would rely on the Black sea Bass Monitoring Committee for recommendations on the sources of management uncertainty in these fisheries, whether an adjustment is needed, and to provide the technical basis (i.e. methods) for the reduction.

Recreational Inseason Accountability:

General Recreational Closure Authority: The NMFS Regional Administrator will monitor the recreational fishery based on MRFSS and other available information, and shall determine if the recreational landings will exceed the RHL. The Regional Administrator shall publish notification in the Federal Register advising that, effective upon a specific date, the black sea bass recreational fishery in the EEZ will be closed for the remainder of the fishing year.

Triggers for black sea bass recreational fishery closure based on the MRFSS data (by wave) were developed; however, there are significant limitations to these types of approaches. It is difficult to predict changes in angler behavior (i.e. catch rates) in response to annual or seasonal fish availability events. Similarly, it is difficult to predict shifts in fishing effort in response to changes in management measures (intra-annually). This in conjunction with the timing of the data may prevent these types of inseason approaches from being highly successful. Only MRFSS data from wave 3 was used to develop a prescribed trigger for fishery closure, because wave 4 data (i.e. January-August) becomes available in October at which point the ability to significantly influence current year landings is substantially reduced. It is a policy decision as to whether accountability measures to close the fishery inseason using data that may not be fully predictive of an overage outweighs the types of potential reactive AMs that may be required if the ACL is exceeded. *Considered but rejected:* A mechanism which would allow for inseason adjustments to management measures (i.e. fish size, season, and possession limits) was considered but rejected. The timing of the availability of the recreational data is insufficient to adequately inform when these measures should be deployed with sufficient time to be highly effective.

Inseason Fishery Closure at 40 Percent Utilization: If 40 percent of the recreational harvest limit has been utilized by the end of MRFSS wave 3 (i.e., landings through June, data typically available in mid-August), then the black sea bass recreational fishery in the EEZ would be closed on September 1 for the remainder of the fishing season or year. This is based MRFSS data from 2000-2008, which suggests in the three years in which overages occurred, about 40 percent of the recreational harvest limit had been utilized by wave 3.

The effectiveness of recreational inseason measures may be limited unless complementary actions are taken within state waters. For black sea bass, self-reported area information from MRFSS which anglers specify where the majority of their fishing

occurred, indicates an average of 73.0 percent of the landings from 1999-2008 occurred in the EEZ. Each state has a different set of requirements for application of inseason measures. Some states can take action through declaration; others must take action through emergency rulemaking. The criteria under which action can be taken varies and in many cases requires the stock be threatened, in jeopardy, or an imminent public health threat or danger to a fishing resource or habitat involving finfish can be cited.

Reactive AMs: If the commercial sector ACL is exceeded, then mechanisms already in the FMP described above would be applied.

If the recreational sector ACL is exceeded, the RHL overage would be deducted from the subsequent year's recreational harvest limit (i.e. recreational landings repayment) which would reduce the recreational sector ACT the subsequent year.

Reactive accountability for recreational landings overages that result in the ACL being exceeded are contemplated in this amendment, and mechanisms to address commercial landings overages already exists; however, accountability for other catch components (other than commercial and recreational landings) that result in the sector-specific ACLs being exceeded must also be addressed. In the event the sector-specific ACL is exceeded, and that overage has not been accommodated through other mechanisms already in the FMP (i.e. discards and/or unlikely event RSA is exceeded), then the following measures would apply.

Sector-specific Accountability: Accountability for overages of the commercial sector ACL and/or recreational sector ACL would occur at the sector-specific ACL. Specifically, the amount by which the commercial sector ACL and/or recreational sector ACL was exceeded would be used to adjust the ACL the subsequent year as a single year adjustment.

The following would need to be jointly adopted under Council and ASMFC rules:

If the ASMFC implements quotas and recreational harvest limits that differ substantially from recommendations made by the Council for Federal waters, administrative action will be taken, if practicable, to reconvene the Council and Summer Flounder, Scup, Black Sea Bass Board, at earliest convenience, to revisit their recommendations.

Black Sea Bass Flowchart

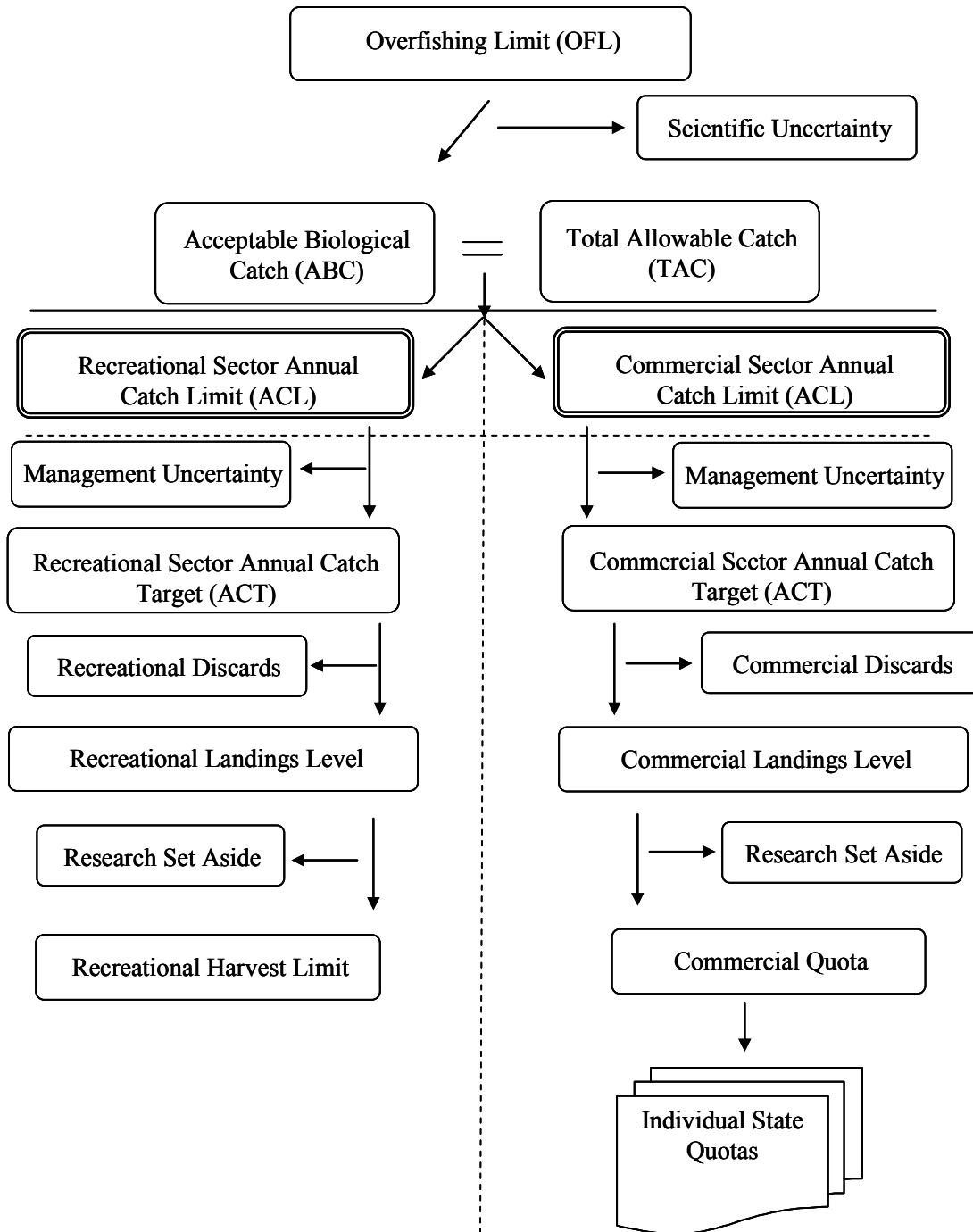


Figure Black Sea Bass. Key features of the ACL and AM framework.

Table Black Sea Bass. Black Sea Bass Terms.

Previous Term	New Term	Definition	Use in Omnibus
Overfishing Limit (OFL)	Unchanged	The OFL is an estimate of the catch level above which overfishing is occurring. The amount of catch that corresponds to the estimate of MFMT applied to a stock and is expressed in terms of numbers or weight of fish.	OFL = catch level calculated by MFMT
Acceptable Biological Catch (ABC)	Unchanged	The level of a stock's annual catch that accounts for the scientific uncertainty in the estimate of OFL. May not exceed OFL.	ABC is established by SSC
	Sector	Distinct user group to which separate management strategies and separate catch quotas apply. For black sea bass, there are recreational and commercial sectors.	Recreational Sector, Commercial Sector
Total Allowable Catch (TAC)	Sum of Sector Annual Catch Limit (ACL)	The level of annual catch of a stock that serves as the basis for invoking AMs. The sum of the sector ACLs may not exceed ABC. For black sea bass Σ sector ACLs is set equal to ABC.	TAC = Σ sector ACLs = ABC
	Sector Annual Catch Target (ACT)	An amount of annual catch of a stock by sector that is the management target of the fishery, inclusive of discards, and accounts for management uncertainty in controlling the actual catch at or below ACL.	Recreational ACT, Commercial ACT
Total Allowable Landings (TAL)	Sector Total Allowable Landings (TAL)	Annual amount of total landings permitted by sector after removing estimated discards. For black sea bass Σ sector TALs is equal to TAL.	Sector TAL = sector ACT – sector discards
Research Set-Aside (RSA)	Unchanged	Amount of Total Allowable Landings (TAL) up to 3 percent that may be set aside to fund research activities	TAL – X% (up to 3%) = RHL and Commercial Quota
Recreational Harvest Limit (RHL)	Unchanged	Annual management target for the recreational sector after removing research set-aside.	RHL = Recreational Sector TAL- RSA
Commercial Quota	Unchanged	Annual management target for the commercial sector after removing research set-aside.	Commercial Quota = Commercial Sector TAL- RSA

Optimum Yield (OY)	Optimum Yield (OY)	The long-term average amount of desired yield from a stock or fishery. OY cannot exceed MSY.	OY
$\frac{1}{2} B_{MSY}$ Proxy	Minimum Stock Size Threshold (MSST)	Level of stock biomass below which the stock is considered to be overfished.	MSST = $\frac{1}{2} B_{MSY}$ Proxy
$F_{40\%} = F_{MSY}$ Proxy	Maximum Fishing Mortality Threshold (MFMT)	The level of fishing mortality (F), on an annual basis, above which overfishing is occurring.	MFMT = $F_{40\%} = F_{MSY}$ Proxy

Action Alternative for: Atlantic Surfclam ACL and AMs

Annual Catch Limit (ACL)

The fishery-level ACL would be set equal to the acceptable biological catch (ABC) for the Atlantic surfclam stock.

$$\text{ACL} = \text{ABC}$$

ACL Evaluation: The ACL is exceeded when the catch from the total fishery exceeds this value. This comparison of observed catch to ACL is based on a single-year comparison.

Accountability Measures (AMs)

The total allowable landings (TAL) for the surfclam fishery would be less than the ACL based on the optimum yield (OY) range for this stock, and then allocated to individual ITQ permit holders based on the precepts of the FMP.

$$\text{TAL (based on OY range)} < \text{ACL}$$

Already in the FMP:

No AM-like authorities exist for the ocean quahog or surfclam fisheries. Areas may be closed due to environmental degradation, small surfclams, and/or paralytic shellfish toxin (§ 648.73(a), (b), and (d)).

Proactive AMs: The Council is establishing a process to consider management uncertainty when the TAL is specified for this fishery. Mid-Atlantic Council staff will recommend measures to address management uncertainty and fishery discards, as needed, as part of the annual quota recommendation paper to the SSC and the Council outlined in §648.71(1). Language contained within §648.71(1) will be modified such that, on an annual basis, MAFMC staff will produce an Atlantic surfclam and ocean quahog annual quota recommendation paper to the SSC prior to the MAFMC, which may consider reduction from the ACL based on sources of management uncertainty or any other emerging issues not presently addressed such as discards, and is based on the latest stock assessment report prepared by NMFS, data reported by harvesters and processors, and other relevant data, as well as information contained in paragraphs (a)(1)(i) through (vi) of this section.

Reactive AMs: If the ACL is exceeded, then accountability for that overage would occur at the ITQ permit level. Specifically, individual ITQ permits would be reduced in the subsequent year by 100 percent of the overage (i.e. bushel per bushel deduction), as a single-year adjustment only.

Atlantic Surfclam Flowchart

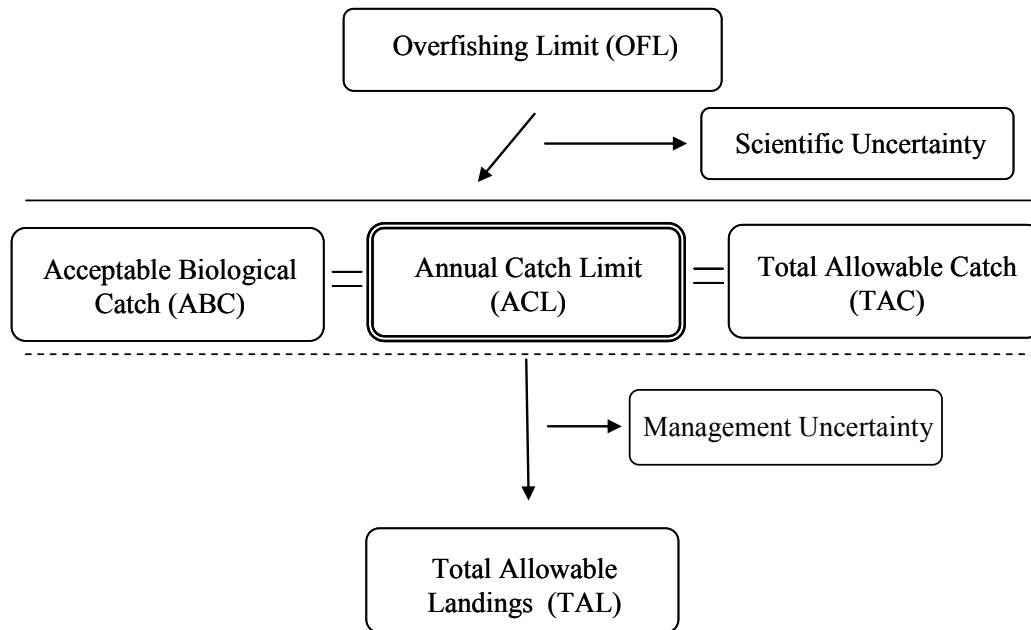


Figure Atlantic Surfclam. Key features of the ACL and AM framework.

Table Ocean Quahog. Ocean Quahog Terms.

Previous Term	New Term	Definition	Use in Omnibus
Overfishing Limit (OFL)	Unchanged	The OFL is an estimate of the catch level above which overfishing is occurring. The amount of catch that corresponds to the estimate of MFMT applied to a stock and is expressed in terms of numbers or weight of clams.	OFL = catch level calculated by MFMT
Acceptable Biological Catch (ABC)	Unchanged	The level of a stock's annual catch that accounts for the scientific uncertainty in the estimate of OFL. May not exceed OFL.	ABC established by SSC = TAC = ACL = TAL
Total Allowable Catch (TAC)	Annual Catch Limit (ACL)	The level of annual catch of a stock that serves as the basis for invoking AMs. ACL may not exceed ABC. For Atlantic Surfclam ACL is set equal to ABC.	ACL = ABC
Total Allowable Landings (TAL)	Unchanged	Annual amount of total landings permitted.	TAL < ACL
Optimum Yield (OY)	Optimum Yield (OY)	The long-term average amount of desired yield from a stock or fishery. OY cannot exceed MSY.	OY
$\frac{1}{2}$ B _{MSY} Proxy	Minimum Stock Size Threshold (MSST)	Level of stock biomass below which the stock is considered to be overfished.	MSST = $\frac{1}{2}$ B _{MSY} Proxy
F _{MSY} Proxy	Maximum Fishing Mortality Threshold (MFMT)	The level of fishing mortality (F), on an annual basis, above which overfishing is occurring.	MFMT = F _{MSY} Proxy

Action Alternative for: Ocean Quahog ACL and AMs

Annual Catch Limit (ACL)

Under this alternative, the fishery-level ACL would be set equal to the acceptable biological catch (ABC) for the ocean quahog stock.

$$\text{ACL} = \text{ABC}$$

ACL Evaluation: The ACL is exceeded when the catch from the total fishery exceeds this value. This comparison of observed catch to ACL is based on a single-year comparison.

Accountability Measures (AMs)

After reducing catch levels from the ACL to address optimum yield for this fishery, the allocation precepts of the FMP would be used to partition the ACL into sector-specific ACTs. In this case, ACTs would be specified for the Non-Maine fishery (all fishery components less Maine) and Maine fishery component.

$$\text{(Maine Fishery ACT + Non-Maine Fishery; based on OY range)} < \text{ACL}$$

Already in the FMP: The Maine mahogany quahog quota is monitored inseason and may be closed when the quota is projected to be taken (§ 648.76(b)(1)(i)-(iv)). All Maine mahogany quahog permitted vessels landing quahogs while not utilizing an individual allocation of ocean quahogs are applied against the annual Maine mahogany quahog quota. The Regional Administrator will close the Maine mahogany fishery for the remainder of the fishing year when dealer reports and other information indicate the Maine mahogany quahog quota will be reached.

No AM-like authorities exist for the ocean quahog or surfclam fisheries. Areas may be closed due to environmental degradation, small surfclams, and/or paralytic shellfish toxin (§ 648.73(a), (b), and (d))

Proactive AMs: The Council is establishing a process to consider management uncertainty when ACTs are specified for these fisheries. Mid-Atlantic Council staff will recommend measures to address management uncertainty and fishery discards, as needed, as part of the annual quota recommendation paper to the SSC and the Council outlined in §648.71(1). Language contained within §648.71(1) will be modified such that, on an annual basis, MAFMC staff will produce an Atlantic surfclam and ocean quahog annual quota recommendation paper to the SSC prior to the MAFMC, which may consider reduction from the ACL based on sources of management uncertainty or any other emerging issues not presently addressed such as discards, and is based on the latest stock assessment report prepared by NMFS, data reported by harvesters and processors, and other relevant data, as well as information contained in paragraphs (a)(1)(i) through (vi) of this section.

Reactive AMs: If the ACL is exceeded and the Non-Maine fishery is responsible for the overage, then the Non-Maine Fishery ACT is adjusted. Accountability for that overage would occur at the ITQ permit level. Specifically, individual ITQ permits would be reduced in the subsequent year by 100 percent of the overage (i.e. bushel per bushel deduction), as a single-year adjustment.

If the ACL is exceeded and the Maine fishery is responsible for the overage, then the Maine Fishery ACT is adjusted. The amount by which the ACL was exceeded would be used to adjust the Maine fishery ACT the subsequent year. The adjustment to the ACT would be a single-year adjustment.

Ocean Quahog Flowchart

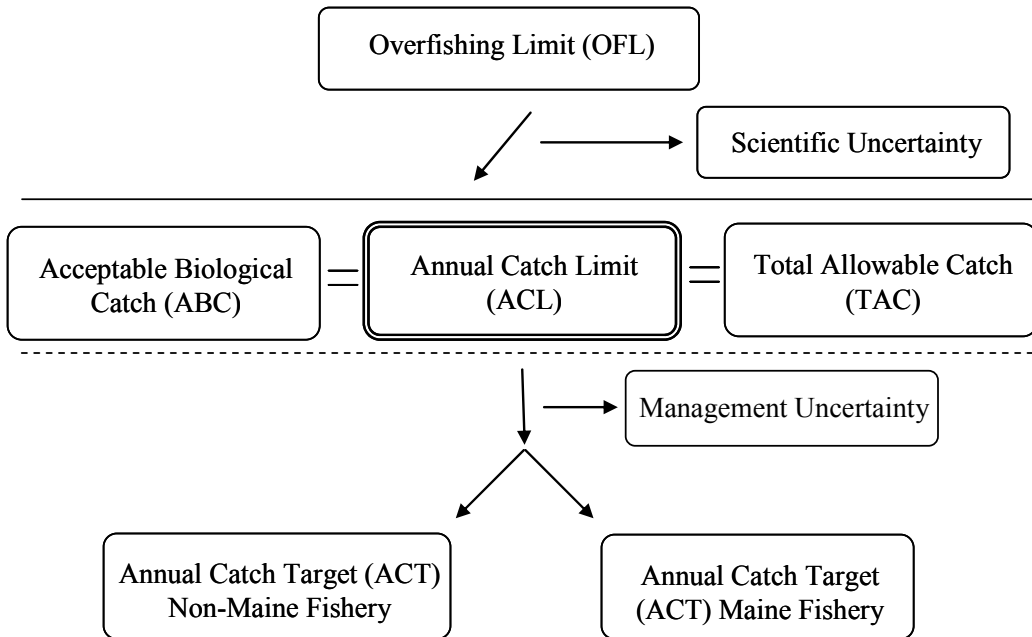


Figure Ocean Quahog. Key features of the ACL and AM framework.

Table Ocean Quahog. Ocean Quahog Terms.

Previous Term	New Term	Definition	Use in Omnibus
Overfishing Limit (OFL)	Unchanged	The OFL is an estimate of the catch level above which overfishing is occurring. The amount of catch that corresponds to the estimate of MFMT applied to a stock and is expressed in terms of numbers or weight of clams.	OFL = catch level calculated by MFMT
Acceptable Biological Catch (ABC)	Unchanged	The level of a stock's annual catch that accounts for the scientific uncertainty in the estimate of OFL. May not exceed OFL.	ABC is established by SSC = TAC = ACL
Total Allowable Catch (TAC)	Annual Catch Limit (ACL)	The level of annual catch of a stock that serves as the basis for invoking AMs. ACL may not exceed ABC. For Atlantic Surfclam ACL is set equal to ABC.	ACL = ABC
	Annual Catch Target (ACT)	An amount of annual catch of a stock that is the management target of the fishery, exclusive of discards and broken clams, for controlling the actual catch at or below ACL. There are two subdivisions of ACTs in the ocean quahog plan: Maine fishery and non-Maine fishery.	Σ Maine Fishery ACT and Non-Maine Fishery ACT < ACL
F _{MSY} Proxy = Optimum Yield (OY)	Optimum Yield (OY)	The long-term average amount of desired yield from a stock or fishery. OY cannot exceed MSY.	OY
$\frac{1}{2}$ B _{MSY} Proxy	Minimum Stock Size Threshold (MSST)	Level of stock biomass below which the stock is considered to be overfished.	MSST = $\frac{1}{2}$ B _{MSY} Proxy
F _{MSY} Proxy	Maximum Fishing Mortality Threshold (MFMT)	The level of fishing mortality (F), on an annual basis, above which overfishing is occurring.	MFMT = F _{MSY} Proxy

Action Alternative for: Tilefish ACL and AMs

Annual Catch Limit (ACL)

Under this alternative, the fishery-level ACL would be set equal to the acceptable biological catch (ABC) for the tilefish stock.

$$\text{ACL} = \text{ABC}$$

ACL Evaluation: The ACL is exceeded when the catch from the total fishery exceeds this value. This comparison of observed catch to ACL is based on a single-year comparison.

Accountability Measures (AMs)

Already in the FMP: The tilefish fishery has a mechanism to adjust the tilefish incidental trip limit if the incidental category exceeds 5 percent of the Total Allowable Landings (TAL) (§ 648.290(c)). A trip limit of 300 lb exists for the incidental category (§ 648.293). If the incidental catch exceeds 5 percent of the incidental trip limit of 300 lb may be reduced in the following fishing year.

Individual fishing quota (IFQ) overages, including amounts of tilefish landed by a lessee in excess of a temporary transfer of IFQ allocation are deducted from the subsequent fishing year allocation (§ 648.291(f)). If the deduction cannot be made in the subsequent fishing year because the individual allocation has already been taken, the reduction in quota may occur in the following fishing year.

Proactive AMs: The Council is establishing a process to consider management uncertainty when the ACT is specified for the tilefish fishery. The Council may identify the reduction amount from ACL to the ACT at the time of annual specifications and would rely on the Tilefish Monitoring Committee for recommendations on the sources of management uncertainty in these fisheries, whether an adjustment is needed, and to provide the technical basis (i.e. methods) for the reduction.

The recreational fishery for tilefish appears to be small (i.e. less than 1 metric ton annually from 48th SAW; NEFSC, 2009) based on the landings information available through MRFSS; however, the recreational landings are highly imprecise because tilefish is a “rare event” in the sampling. Concerns have been raised about the potential emergence of a recreational tilefish fishery and the ability of the recreational landings survey (i.e. MRFSS) to accurately capture the magnitude of that fishery given the levels of sampling. Mortality from the recreational fishery is not presently accounted for through the stock assessment, which would be the appropriate place to address sources of fishing mortality. If not accommodated under scientific uncertainty, uncertainty associated with the imprecision of the recreational fishery (i.e. inability to accurately capture the true magnitude of that fishery) could be accommodated under management uncertainty.

Measures designed to slow or halt incidental fishery landings relative to the allocation

Reduce Trip Limit: When the tilefish incidental fishery reaches when 90 percent of its allocation, then a trip limit of 200 lb is implemented. ***Analysis currently underway to evaluate the efficacy of this option; Council will revisit in June ***

Inseason Closure Authority: The Regional Administrator will monitor the incidental category fishery and shall determine the date when the allocation will be harvested. The Regional Administrator shall publish notification in the Federal Register advising that, effective upon a specific date, the incidental category has been harvested and will be closed for the remainder of the fishing year.

Reactive AMs: If the ACL is exceeded and the directed IFQ fishery is responsible for the overage, then accountability for that overage would occur at the ITQ permit level. Specifically, individual ITQ permits would be reduced in the subsequent year by the overage amount, as a single-year adjustment.

If the ACL is exceeded and the incidental fishery is responsible for the overage, then accountability would occur by one of the two options below.

Reducing the allocation for the incidental fishery, may not reduce landings in the incidental fishery, as the trip limits determine the rate at which landings are accrued throughout the fishing season.***Analyses are being conducted to determine the feasibility of each option; Council will revisit in June***

Sub-option A – The amount by which the ACL was exceeded by the incidental fishery would be used to reduce the allocation the subsequent year.

Sub-option B – The amount by which the ACL was exceeded by the incidental fishery would be taken from the ITQ fishery allocation to increase the incidental fishery allocation the subsequent year.

Sub-option C – Current FMP provisions which allow for trip limit adjustment in the subsequent year would be applied.

Accountability for other catch components (other than ITQ and incidental fishery landings) that result in the ACL being exceeded must also be addressed. In the event the ACL is exceeded, and that overage has not been accommodated through other mechanisms in the FMP (i.e. discards and/or unlikely event RSA is exceeded), then the following measures would apply.

Sub-Option F: Fishery-level Accountability

Then accountability would occur at the fishery level and the ACL would be reduced. Specifically, the amount by which the ACL was exceeded would be used to adjust the ACL the subsequent year as a single year adjustment.

Tilefish Flowchart

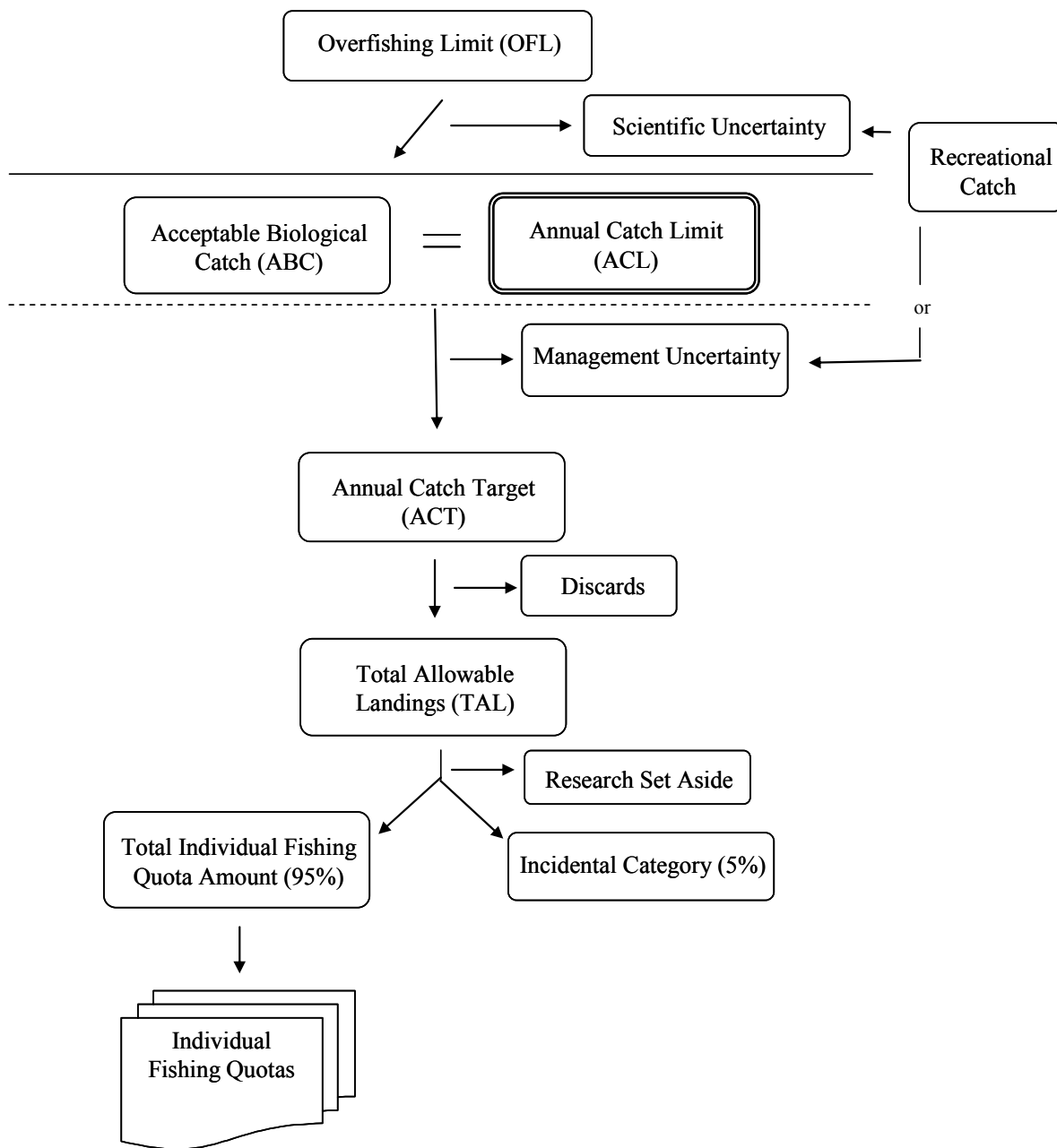


Figure Tilefish. Key features of the ACL and AM framework.

Table Tilefish. Tilefish Terms.

Previous Term	New Term	Definition	Use in Omnibus
Overfishing Limit (OFL)	Unchanged	The OFL is an estimate of the catch level above which overfishing is occurring. The amount of catch that corresponds to the estimate of MFMT applied to a stock and is expressed in terms of numbers or weight of fish.	OFL = catch level calculated by MFMT
Acceptable Biological Catch (ABC)	Unchanged	The level of a stock's annual catch that accounts for the scientific uncertainty in the estimate of OFL. May not exceed OFL.	ABC is established by SSC
	Annual Catch Limit (ACL)	The level of annual catch of a stock that serves as the basis for invoking AMs.	ACL = ABC
	Annual Catch Target (ACT)	An amount of annual catch of a stock that is the management target of the fishery, inclusive of discards, and accounts for management uncertainty in controlling the actual catch at or below ACL.	ACT
Total Allowable Landings (TAL)	Unchanged	Annual amount of total landings permitted after removing estimated discards.	TAL = ACT – discards
Research Total Allowable Catch (TAC)	Research Set-Aside (RSA)	Amount of Total Allowable Landings (TAL) up to 3 percent that may be set aside to fund research activities	TAL – X% (up to 3%) = IFQs + Incidental Category
Total IFQ Amount	Unchanged	95 percent of the annual TAL (After deducting RSA).	IFQ Allocations
Incidental Category	Unchanged	5 percent of the annual TAL (After deducting RSA).	Incidental Category
Optimum Yield (OY)	Optimum Yield (OY)	The long-term average amount of desired yield from a stock or fishery. OY cannot exceed MSY.	OY
$\frac{1}{2} B_{MSY}$	Minimum Stock Size Threshold (MSST)	Level of stock biomass below which the stock is considered to be overfished.	MSST = $\frac{1}{2} B_{MSY}$
F_{MSY}	Maximum Fishing Mortality Threshold (MFMT)	The level of fishing mortality (F), on an annual basis, above which overfishing is occurring.	MFMT = F_{MSY}

Section 4.0: Periodic Review of ABC, ACL, and AM Alternatives

Alternative 4A: No action on required periodic review control rules and AMs

Under this no action alternative, there would be no formalized system for the periodic opportunity to revise the ABC and ACL control rules and AMs by the Council based on performance reviews and recommendations of the SSC and/or any species specific Monitoring Committees.

Alternative 4B: Review of control rules by SSC and Council

Under this action alternative, a formal review by the SSC which provides the opportunity to revisit and evaluate ABC control rules will occur periodically after control rule implementation. If it is determined by the SSC that the ABC control rules are not performing as intended regarding preventing and ending overfishing, modification could occur and those rules would again be reviewed after several years of implementation. The frequency of these periodic reviews will vary, and be largely dependent on the frequency of stock assessment updates and benchmarks. The SSC and/or Council will need to identify the timing of these reviews.

If it is determined that the ACL for a specific stock is exceeded with a frequency greater than 25 percent, the ACL control rules and system of AMs shall be revisited by the Council. If the ACL is exceeded in two consecutive years, a review would be required in year three (i.e. review cause for prior two years ACL overage and revise). The Council may specify more frequent review periodicity for stocks that enter into a formal rebuilding plan and the timing will be included in the rebuilding plan, when crafted. The Council may seek advice from its Monitoring Committee's (if applicable), and ACL control rules and AMs could be reviewed and revisions recommended as appropriate by the species specific Monitoring Committee. Again, the Council may specify a more frequent review process.

These periodic formal reviews do not substitute for the specification setting review which updates catch level recommendations for the upcoming fishing year(s). These specification updates provide information on the fishery and management, stock status, and other relevant considerations.

Recommended adjustments by the SSC and/or Monitoring Committees to measures contained within this amendment could be addressed as described in the following section.

Section 5.0: Description of Process to Modify Actions

The actions taken in this Omnibus Amendment to establish catch limit frameworks for the purposes of specifying ABCs, ACLs, ACTs, and their associated AMs for each of the managed resources are intended to be dynamic to ensure these catch frameworks and associated system of accountability are flexible so that they do achieve the objectives of the FMP, prevent overfishing and when required, rebuild fisheries. Flexibility is imperative and must allow for timely modifications given the dynamic nature of fisheries and the environment. This action, therefore, contemplates a process that allows for the timely modification of the action alternatives proposed in this document through the annual specification or framework process. Undoubtedly, there will be modifications to the program as yet not contemplated that will have to go through a formal amendment process.

The action proposed in this document would establish an ABC control rule framework comprised of four levels to which a stock could be classified. Each level would apply different ABC control rules. Those specific control rules, including the levels and criteria [including aspects of the risk policy which is part of the control rule], that are applied to derive ABC for the upcoming fishing year(s) would be conceptually expressed in the regulations implementing the amendment and given effect through the annual specifications process. Modifications to these control rules would be based upon the best available scientific and other relevant information and implemented through subsequent annual specifications rulemaking.

The current specifications process already allows for modification of annual catch levels required for management of these fisheries through rulemaking as well as modification to other types of fishery management measures (e.g. trip limits, trip limit triggers, seasons, minimum sizes, possession and trip limits, etc.) through the specifications process for the managed resources on the basis that the dynamic nature of these fisheries requires the ability to respond to changing conditions in a timely fashion. The ACT control rules that are applied to derive ACTs, for the upcoming fishing year(s) would be developed by the various species Monitoring Committees, given the dynamic nature of these fisheries and resulting variability in the sources of management uncertainty, within the specifications development process. Recommendations regarding the level at which to set the ACT will be guided by the principles established by the court in *NRDC v. Daley* that a quota has at least a 50 percent probability of meeting its target.

In order for the system of catch limits and accountability proposed in this document to be effective for each of the managed resources, modification to the system of accountability (AMs) is necessary to respond to the dynamic nature of these fisheries and prevent the ACL(s) from being exceeded. Essentially, modification of accountability measures which are designed to impose either greater or lesser restrictions to control catch are necessary to prevent overfishing while achieving, on a continuing basis, the optimum yield from each fishery. As such, it is contemplated that accountability measures may need to be modified or strengthened which prevent, as much as is practicable, the ACL from being exceeded or to mitigate that overage and/or prevent it from occurring in the subsequent

year. The introduction of ACTs, a type of proactive AM may be necessary to address catch components of the fishery which contribute to a lack of control in the total catch relative to the ACL and require the ability to manage that catch component independently. New or improved sources of data may allow for the development of more effective accountability measures in the future, such as annual or inseason accountability approaches for either the commercial or recreational fisheries, and the ability to respond to dynamic changes in the scientific and technical data available on which to base management measure is essential for preventing the ACL(s) from being exceeded.