

**DRAFT**

**Summary Report to NRCC**

**On ACL WG Progress**

**Action Item**

4. *Subject: Develop a transition plan for implementation of new assessment process beginning in 2013; including, 1) a master schedule for operational assessments, 2) a recommendation on topics and/or assessments to be included in the preliminary research track, 3) a rollout and communications plan, and 4) identification of potentially necessary regulatory changes to FMPs to accommodate operational assessments.*

*Responsible Party: Standing NRCC ACL Working Group*

*Timeframe: September 2011*

**Overview of Work To Date**

1. The current ACL Working Group is composed of staff from the ASMFC (Beal, Camfield), MAFMC (Seagraves), NEFMC (Kellogg), NEFSC (McBride, Merrick, Rago, Robillard, Serchuk, Weinberg), and NERO (Darcy, Ruccio). The WG has met by phone three times to date (monthly) focusing on the 4 items included in the AI.

2. Master schedule for operational assessments – Most of the discussion to date has focused on developing the master schedule. Results so far:

a. The WG has largely concluded that tying the frequency of assessments too literally to the biology is awkward and will make scheduling very difficult (See Strawman Alternative 1 in Appendix I). For example, the number of assessments per year could vary between 0 and 49.

b. Instead the group has proposed either a 2/4 year or 3/6 year frequency (Strawman Schedules 2-4 and 5 in Appendix I). Based on these frequencies, the WG has developed master schedules for implementation beginning in Calendar Year 2013 with scheduling aligned to match management requirements.

c. These master schedules were then used to generate estimates of NEFSC staffing requirements (in both the Population Dynamics and Population Biology Branches) which include the time to work on assessments as well as the time to support under Council and management demands (but not support of the research track). Appendix I provides a sample of the resource needs estimated under the five scheduling scenarios.

3. Topics and/or assessments to be included in the preliminary research track – A short list of topics is being developed, much of which focuses on improving the quality of assessment models for individual stocks. Scheduling of this work, however, will be conditioned on time remaining after the Operational Assessments are scheduled.

4. Rollout and communications plan – No progress to date
5. Identification of potentially necessary regulatory changes to FMPs to accommodate OA – Explored but awaiting resolution of scheduling discussions.

### **Conclusions To Date**

1. A schedule of Operational Assessments that matches existing management requirements and specification setting processes can be developed but produces several issues:
  - a. The staffing required from both the Population Dynamics and Population Biology Branches to provide more frequent assessments generally exceeds available staff.
  - b. Attempting to produce 20-30 final operational assessments during the 3 month period available between when Dealer/VTR data are made available (April) and when the Councils need the assessments (July) is not risk averse.
  - c. Smoothing the schedule to avoid peaks of 20-30 Operational Assessments every third year, while reducing the work load/staff stress, would not allow time for a Research Track,
2. So, if the revised protocol is going to be implementable using existing resources, the WG must:
  - a. Find ways to increase the window for producing assessments (e.g., by making the Dealer/VTR data available earlier or by relaxing the July SSC deadline or both)
  - b. Find ways to decrease the time to produce individual assessments (e.g., decrease the number of structures aged, use older data, consider additional stocks for non analytic assessments)
3. There are also several implementation issues that need to be dealt with for 2013
  - a. Need to provide assessment support to ASMFC for 3 stocks
  - b. Consideration of a phase in of the new assessment process (so we can work out the kinks)
  - c. 2013 is another groundfish update

## APPENDIX I

### Evaluation of Alternative Assessment Schedules.

July 5, 2011

ACL Working Group

#### **Objective:**

Assess the feasibility of alternative assessment schedules given estimates of relative workload requirements for stock assessment scientist and age readers for each stock.

#### **Methods:**

1. Five alternative assessment schedules were prepared by NERO staff based on anticipated management requirements and candidate assessment frequencies. It was assumed that the new stock assessment system would begin in 2013; existing schedules for the TRAC, SARC and Mid-Atlantic updates would continue through calendar year 2012.
2. Estimates of workload requirements for stock assessment updates were prepared by the PopDy Branch Chief. Workload estimates assume minimal change in model configuration and a limited scope for terms of reference. It is also assumed that the peer review process is expedited through integrated peer-reviews and/or greater involvement of the SSC.
3. Estimates of age-reading staff time were prepared by the PopBio Branch Chief. These estimates reflect current workloads of samples from research surveys and commercial landings.
4. No explicit consideration is given to benchmark assessments (from the Research Track). Many of the index species which are relatively easy to update now would likely increase in complexity and staff requirements with improvements in assessment quality.
5. The time necessary to address species in the Research Track could occur in years with reduced number of operational assessments. In contrast to operational assessments, benchmark assessments demand much greater commitments of NEFSC staff, the SSCs, NERO, the Councils and external reviewers. These commitments have not been estimated in this exercise.

#### **Results:**

1. The spreadsheet "Optimal assessment freq....\_Task#2" contains the details of the alternative assessment schedules, staff estimates for update assessments, and summaries of current age processing requirements and inventory backlogs.
2. The red tab worksheet "Table3 rev" contains updated estimates of staff time for assessment updates per assessment and per annum basis. The per annum costs are based on the total time divided by the assessment frequency.
3. The orange tab worksheets "Strawman#1, Strawman#2,..., Strawman#5" contain the proposals submitted by NERO staff.
4. The turquoise tab worksheets "Eval#1, Eval#2,...,Eval#5" contain analyses of the assessment and age-reader staff requirements for each Strawman proposal.
5. Staff requirements are examined in terms of total assessment cost and annualized assessment cost. The total assessment cost reflects staff requirements that must occur in the current year or years prior to the assessment. Total costs can be met by steady work by a team of analysts or by

scrambling responsibilities of different analysts to ensure that all work products are prepared in time for an assessment.

6. Annualized assessment costs reflect those that would be incurred in a given assessment year assuming that species responsibilities were well defined and no major data or model issues arise during the assessment.
7. Annualized assessment costs also indicate the amount of available staff time dedicated to the assessments occurring in a given year. Stock assessment scientists not currently responsible for an assessment in a given year would either be preparing stock assessments for future years or working on species assessments or topics in the Research Track.
8. The difference between the total available staff years and the annual requirements for all species is one measure of the residual time available for Research Track assessments, publications, and scientific advances.
9. The costs of catching up on backlogs of age samples are not included in these analyses.
10. No assumptions were made about assessment requirements for ASMFC species including lobster, shrimp, striped bass, shad, river herrings, eel, sturgeons, and hagfish. These requirements should be included in a future iteration.
11. The updated stock assessment requirements by stock assessment scientists may underestimate the ancillary costs of serving on various PDTs, FMATs, etc as well as project related reviews and related tasks.
12. The Population Dynamics Branch currently has 24 FTE and contract staff to work on non-salmon stock assessments. See No attempt has been made to check the feasibility of specific schedules with respect to individual workloads.
13. Strawman Tables below give the aggregate statistics for each assessment year in terms of PopDy staffing and Age readers.

Table 3. Estimated staff time necessary for **operational** stock assessments.  
 Annualized person months are total person months/assessment frequency.

Species Common Name	Potential frequency (yr) (Darcy#5)	Last assessment	Per Assessment Workload			Annualized workload		
			Direct Person Months	Indirect Person Months	Total Person Months	Assessment Requirement	Age Reading Requirements (person Months)	Annualized person months =(total PM/freq)
Bluefish	4	2010	6	1	7	1.8	0	1.8
Atlantic Mackerel	2	2010	36	12	48	24.0	4	28.0
Longfin Squid	2	2010	8	6	14	7.0	0	7.0
Northern Shortfin Squid	2	2005	8	6	14	7.0	0	7.0
Butterfish	4	2009	6	3	9	2.3	3.25	5.5
Summer Flounder	2	2010	12	4	16	8.0	14	22.0
Scup	2	2008	12	4	16	8.0	4.25	12.3
Black Sea Bass	2	2010	8	2	10	5.0	5.5	10.5
Tilefish	6	2009	6	2	8	1.3	0	1.3
Spiny Dogfish	4	2010	2	2	4	1.0	0	1.0
Ocean Quahog	4	2009	12	12	24	6.0	0	6.0
Atlantic Surfclam	4	2009	12	12	24	6.0	6	12.0
Atlantic Salmon	1	2011	12	0	12	12.0	0	12.0
Goosefish - N	6	2010	8	12	20	3.3	1.75	5.1
Goosefish - S	6	2010	8	12	20	3.3	2	5.3
Deep Sea Red Crab	6	2008	8	4	12	2.0	0	2.0
Skates--Barndoor	4	2011	1	1	2	0.5	0	0.5
Skates--Thorny	4	2011	1	1	2	0.5	0	0.5
Skates--Winter	4	2011	1	1	2	0.5	0	0.5
Skates--Little	4	2011	1	1	2	0.5	0	0.5
Skates--Rosette	4	2011	1	1	2	0.5	0	0.5
Skates--Clearnose	4	2011	1	1	2	0.5	0	0.5
Skates--Smooth	4	2011	1	1	2	0.5	0	0.5
Atlantic Herring	2	2009	36	12	48	24.0	6	30.0
Red Hake - N	6	2010	4	1	5	0.8	3	3.8
Red Hake - S	6	2010	4	1	5	0.8	3	3.8
Silverhake - N	6	2010	4	1	5	0.8	5	5.8
Silverhake - S	6	2010	4	1	5	0.8	5	5.8
Offshore Hake	6	2010	2	1	3	0.5	0	0.5
Sea Scallops	2	2010	24	12	36	18.0	0	18.0
Atlantic Cod GM	2	2008	12	8	20	10.0	5	15.0
Atlantic Cod GB	2	2008	12	8	20	10.0	5	15.0
Haddock - GB	2	2008	12	6	18	9.0	12	21.0
Haddock - GOM	2	2008	12	6	18	9.0	3	12.0
Acadian Redfish	6	2008	12	6	18	3.0	0	3.0
Yellowtail Flounder - SNE/MA	2	2010	12	4	16	8.0	3	11.0
Yellowtail Flounder - GB	2	2010	12	6	18	9.0	3	12.0
Yellowtail Flounder - CC	2	2008	12	4	16	8.0	3	11.0
American Plaice	4	2008	12	4	16	4.0	14	18.0
Windowpane - N	6	2008	2	1	3	0.5	0	0.5
Windowpane - S	6	2008	2	1	3	0.5	0	0.5
Pollock	4	2010	24	8	32	8.0	9	17.0
White Hake	4	2008	18	6	24	6.0	6	12.0
Atlantic Wolffish	6	2008	6	3	9	1.5	0	1.5
Ocean Pout	6	2008	3	1	4	0.7	0	0.7
Winter Flounder - SNE MA	4	2011	8	6	14	3.5	4	7.5
Winter Flounder - GB	4	2011	8	6	14	3.5	4	7.5
Winter Flounder - GM	4	2011	8	6	14	3.5	4	7.5
Atlantic Halibut	8	2008	3	1	4	0.5	0	0.5
Witch Flounder	4	2008	12	8	20	5.0	14	19.0
Cusk	6	2010	6	2	8	1.3	0	1.3
American Lobster	6	2008	24	8	32	5.3	0	5.3
Northern Shrimp	1	2011	4	2	6	6.0	0	6.0
Striped Bass	3	2008	6	2	8	2.7	0	2.7
American Shad	6	xx	4	0	4	0.7	0	0.7
River Herring	6	xx	12	4	16	2.7	0	2.7
American Eel	6	xx	4	0	4	0.7	0	0.7
Atlantic Sturgeon	9	xx	6	4	10	1.1	0	1.1
Shortnose Sturgeon	9	xx	6	2	8	0.9	0	0.9
Atlantic Hagfish	9	2003	3	1	4	0.4	0	0.4
person months			526.0	254.0	780.0	272.3	151.8	424.0
person years			43.8	21.2	65.0	22.7	12.6	35.3

Strawman Alternative 1: Operational Assessment/Specification Cycle (Draft May 10, 2011)(Variable year cycles, beginning in 2013 for the 2014 fishing years)										
	<b>Assessment Year</b>									
<b>Factor</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>
Number of Assessment Events	0	0	49	1	0	30	3	14	30	4
Assessment Person Months	0.0	0.0	640.0	36.0	0.0	456.0	76.0	92.0	456.0	88.0
Assessment Person Years	0.0	0.0	53.3	3.0	0.0	38.0	6.3	7.7	38.0	7.3
Age Reader Person Months	0.0	0.0	532.5	0.0	0.0	378.0	22.5	96.0	378.0	36.0
Age Reader Person Years	0.0	0.0	44.4	0.0	0.0	31.5	1.9	8.0	31.5	3.0
NEFSC Person Years	0.0	0.0	97.7	3.0	0.0	69.5	8.2	15.7	69.5	10.3
Annualized Assessment Months	0.0	0.0	183.1	12.0	0.0	152.0	18.7	16.0	152.0	20.4
Annualized Assessment Years	0.0	0.0	15.3	1.0	0.0	12.7	1.6	1.3	12.7	1.7
Annualized Age Reader Months	0.0	0.0	151.8	0.0	0.0	126.0	3.8	16.0	126.0	6.0
Annualized Age Reader Years	0.0	0.0	12.6	0.0	0.0	10.5	0.3	1.3	10.5	0.5
Annualized NEFSC Person Years	0.0	0.0	27.9	1.0	0.0	23.2	1.9	2.7	23.2	2.2

Strawman Alternative 2: Operational Assessment/Specification Cycle (Draft May 10, 2011)(All cycles are 3 years or multiples of 3 years, all beginning in 2013)										
	<b>Assessment Year</b>									
<b>Factor</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>
Number of Assessment Events	0	0	49	1	0	31	1	0	48	1
Assessment Person Months	0.0	0.0	640.0	36.0	0.0	460.0	36.0	0.0	636.0	36.0
Assessment Person Years	0.0	0.0	53.3	3.0	0.0	38.3	3.0	0.0	53.0	3.0
Age Reader Person Months	0.0	0.0	532.5	0.0	0.0	378.0	0.0	0.0	532.5	0.0
Age Reader Person Years	0.0	0.0	44.4	0.0	0.0	31.5	0.0	0.0	44.4	0.0
NEFSC Person Years	0.0	0.0	97.7	3.0	0.0	69.8	3.0	0.0	97.4	3.0
Annualized Assessment Months	0.0	0.0	183.1	12.0	0.0	153.3	12.0	0.0	182.7	12.0
Annualized Assessment Years	0.0	0.0	15.3	1.0	0.0	12.8	1.0	0.0	15.2	1.0
Annualized Age Reader Months	0.0	0.0	151.8	0.0	0.0	126.0	0.0	0.0	151.8	0.0
Annualized Age Reader Years	0.0	0.0	12.6	0.0	0.0	10.5	0.0	0.0	12.6	0.0
Annualized NEFSC Person Years	0.0	0.0	27.9	1.0	0.0	23.3	1.0	0.0	27.9	1.0

Strawman Alternative 3: Operational Assessment/Specification Cycle (Draft May 10, 2011)(All cycles are 3 years or multiples of 3 years, transitioning beginning in 2013)

<i>Factor</i>	<i>Assessment Year</i>									
	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>
Number of Assessment Events	0	0	34	7	4	23	6	1	33	7
Assessment Person Months	0.0	0.0	453.0	133.0	67.0	373.0	125.0	7.0	449.0	133.0
Assessment Person Years	0.0	0.0	37.8	11.1	5.6	31.1	10.4	0.6	37.4	11.1
Age Reader Person Months	0.0	0.0	378.8	21.8	36.0	452.3	21.8	0.0	378.8	21.8
Age Reader Person Years	0.0	0.0	31.6	1.8	3.0	37.7	1.8	0.0	31.6	1.8
NEFSC Person Years	0.0	0.0	69.3	12.9	8.6	68.8	12.2	0.6	69.0	12.9
Annualized Assessment Months	0.0	0.0	135.9	38.8	12.3	120.5	37.4	2.3	135.5	38.8
Annualized Assessment Years	0.0	0.0	11.3	3.2	1.0	10.0	3.1	0.2	11.3	3.2
Annualized Age Reader Months	0.0	0.0	122.5	7.3	6.0	134.8	7.3	0.0	122.5	7.3
Annualized Age Reader Years	0.0	0.0	10.2	0.6	0.5	11.2	0.6	0.0	10.2	0.6
Annualized NEFSC Person Years	0.0	0.0	21.5	3.8	1.5	21.3	3.7	0.2	21.5	3.8

Strawman Alternative 4: Operational Assessment/Specification Cycle (Draft May 17, 2011)(All cycles are 3 years or multiples of 3 years, transitioning beginning in 2013, with staggered implementation of Oas for groundfish)

<i>Factor</i>	<i>Assessment Year</i>									
	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>
Number of Assessment Events	0	0	20	7	4	29	6	1	28	7
Assessment Person Months	0.0	0.0	284.0	133.0	67.0	414.0	125.0	7.0	412.0	133.0
Assessment Person Years	0.0	0.0	23.7	11.1	5.6	34.5	10.4	0.6	34.3	11.1
Age Reader Person Months	0.0	0.0	231.8	21.8	36.0	452.3	21.8	0.0	378.8	21.8
Age Reader Person Years	0.0	0.0	19.3	1.8	3.0	37.7	1.8	0.0	31.6	1.8
NEFSC Person Years	0.0	0.0	43.0	12.9	8.6	72.2	12.2	0.6	65.9	12.9
Annualized Assessment Months	0.0	0.0	86.7	43.0	12.3	127.1	41.7	2.3	129.3	43.0
Annualized Assessment Years	0.0	0.0	7.2	3.6	1.0	10.6	3.5	0.2	10.8	3.6
Annualized Age Reader Months	0.0	0.0	73.5	7.3	6.0	134.8	7.3	0.0	122.5	7.3
Annualized Age Reader Years	0.0	0.0	6.1	0.6	0.5	11.2	0.6	0.0	10.2	0.6
Annualized NEFSC Person Years	0.0	0.0	13.3	4.2	1.5	21.8	4.1	0.2	21.0	4.2

Strawman Alternative 5: Operational Assessment/Specification Cycle (Draft June 09, 2011)(All cycles are 2 years or multiples of 2 years, transitioning beginning in 2013, with staggered implementation of OAs for groundfish)

<i>Factor</i>	<i>Assessment Year</i>									
	<i>2011</i>	<i>2012</i>	<i>2013</i>	<i>2014</i>	<i>2015</i>	<i>2016</i>	<i>2017</i>	<i>2018</i>	<i>2019</i>	<i>2020</i>
Number of Assessment Events	0	0	20	7	12	23	17	9	14	13
Assessment Person Months	0.0	0.0	284.0	133.0	233.0	304.0	236.0	175.0	277.0	248.0
Assessment Person Years	0.0	0.0	23.7	11.1	19.4	25.3	19.7	14.6	23.1	20.7
Age Reader Person Months	0.0	0.0	192.0	21.0	133.5	282.0	169.5	39.0	212.0	186.0
Age Reader Person Years	0.0	0.0	16.0	1.8	11.1	23.5	14.1	3.3	17.7	15.5
NEFSC Person Years	0.0	0.0	39.7	12.8	30.5	48.8	33.8	17.8	40.8	36.2
Annualized Assessment Months	0.0	0.0	108.5	60.6	98.8	111.0	100.5	84.3	107.4	101.8
Annualized Assessment Years	0.0	0.0	9.0	5.0	8.2	9.3	8.4	7.0	9.0	8.5
Annualized Age Reader Months	0.0	0.0	73.5	7.3	60.8	69.0	69.8	16.3	78.5	53.0
Annualized Age Reader Years	0.0	0.0	6.1	0.6	5.1	5.8	5.8	1.4	6.5	4.4
Annualized NEFSC Person Years	0.0	0.0	15.2	5.7	13.3	15.0	14.2	8.4	15.5	12.9