DISCUSSION DOCUMENT
POTENTIAL MANAGEMENT MEASURES
FRAMEWORK 28

Contents

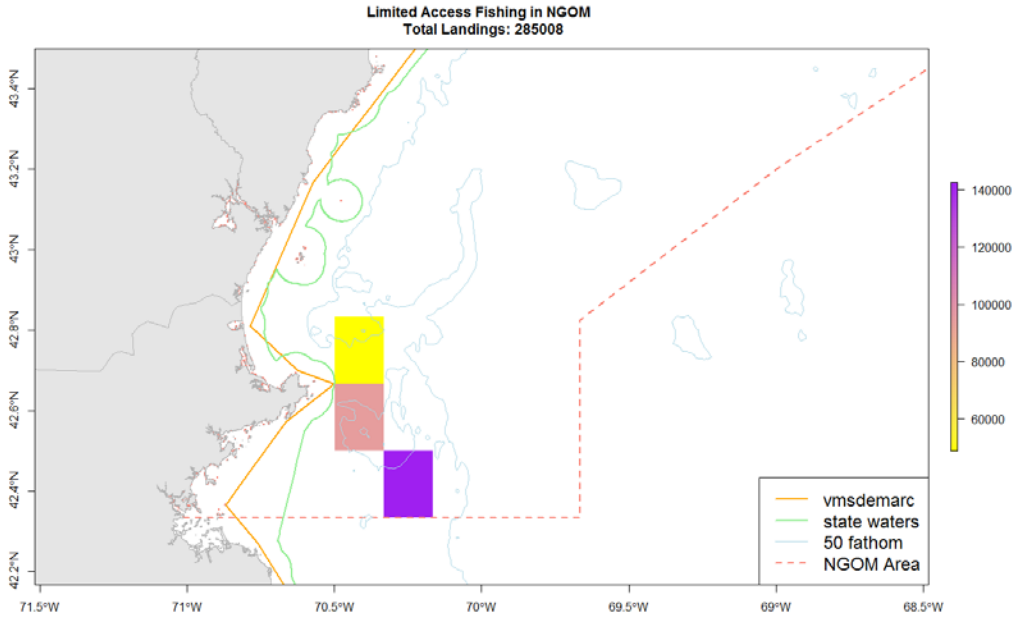
1.0 Possession of Shell Stock Inshore of the Day-At-Sea Monitoring Line

Background: In response to concerns about the ability of Limited Access vessels to possess more than 50 bu of in-shell scallops once inside the VMS/DAS demarcation line when fishing north of 42°20′ N. lat, the Council identified this as a new priority for 2016 at its April meeting in Mystic, CT. This measure would expand upon an existing regulation that prohibits the possession of more than 50 bushels of in-shell scallop product inside the VMS demarcation line south of 42° 20’ N. Prior to Council action, the Scallop AP recommended this approach at their March 22, 2016 meeting.

Available data on LA fishing in NGOM:

- Background information on scallop fishing in the Northern Gulf of Maine (Staff memo to Council, April 8, 2016)
- There have been no landings from the NGOM management area by LA vessels since the NGOM program was adopted until FY2016.
- For FY2016, LA vessels are estimated to have harvested over 300,000 lbs from the NGOM Management Area (working in areas east and southeast of Cape Ann - see Figure 1).
    - The FY2016 estimate assigns LA landings to NGOM based VTR point locations.
    - LA vessels operating under DAS may fish inside and outside of NGOM management area within the same statistical reporting area (ex: SRA 514) on the same trip (or haul).

Figure 1 - FY2016 LA landings in NGOM management area based on VTR point locations (as of 6/10/16).



Proposed Language for this Measure:

1.1.1 No Action

There would be no change to existing restrictions on the possession of shell stock inshore of the day-at-sea demarcation line. A vessel with a limited access or general category scallop permit that fishes or transits any are south of 42°20' N latitude during any portion of a trip, it will be prohibited from possessing more than 50 US bushels when inshore of the day-at-sea monitoring line and from landing more than 50 US bushels from a fishing trip. Scallop shell stock must be compliant with the 3½-inch minimum size shell height standards (§648.50). Any vessel fishing in the state waters exemption program (§648.54) would also be exempt from the scallop shell stock limit.

Rationale: This measure is intended to allow a limited fishery to continue north of 42°20 N. latitude by some vessels that have traditionally landed in-shell scallops.

1.1.2 Restrict the Possession of Shell Stock Inshore of the Day-At-Sea Monitoring Line

If a vessel with a limited access or general category scallop permit fishes or transits inshore of the day-at-sea monitoring line during any portion of a trip, it will be prohibited from possessing more than 50 US bushels when inshore of the day-at-sea monitoring line and from landing more than 50 US bushels from a fishing trip. Scallop shell stock must be compliant with the 3½-inch minimum size shell height standards (§648.50).

Any vessel fishing in the state waters exemption program (§648.54) would also be exempt from the scallop shell stock limit. NMFS would monitor trips through the VMS program.

Rationale: The FMP relies on day-at-sea restrictions and crew limits to achieve its mortality targets and prevent overfishing. As catch rates rise, it becomes more attractive for vessels to

deckload sea scallops and shuck them inside of the day-at-sea monitoring line, thereby circumventing the regulation's intent. Recently, limited access vessels began fishing in areas north of 42°20' N latitude within the NGOM management area, where there is no limit on the number of bushels a vessel may possess inside the demarcation line. This measure would restrict the number of bushels that limited access or general category vessels can possess to 50 when inshore of the day-at-sea monitoring line, effectively expanding an existing provision that only applied to fishing activity south of 42°20' N latitude. Another adverse effect is that the discarded scallop shells and viscera may also cover important habitats and foul inshore waters, especially where temperatures are high and currents are slow. This measure will prevent scallop vessels from possessing excessive amounts of shell stock inshore of the day-at-sea monitoring line, eliminating the incentive to deckload and shuck scallops "off the clock". The 50 US bushel limit will enable the vessels to bring a moderate amount of shell stock in to avoid poor weather and/or to land some shell stock for a small market for whole scallops or scallop parts.

AP and CTE: This is an updated section. Please review and be prepared to provide input on the range of alternatives. Key Questions: Measures to remove? New ideas to add?

2.0 Spatial Management and Management Uncertainty (ACL Flowchart Measures)

Recent PDT Discussions: The PDT discussed this 2016 priority at its July 21 and Aug. 30/31 meetings. The group has updated the draft problem statement and draft objectives (below). At these meetings, the PDT noted that earlier iterations of the draft problem statement blended management uncertainty issues with setting allocations for the LAGC IFQ and LA on available biomass. The PDT is recommending that the concepts/issues be decoupled, and addressed through different management alternatives in FW28 (structure shown below).

Revised Draft Problem Statement and Draft Objective:

1. **Applying Spatial Management To the Specifications Setting Process:**

Draft Problem Statement: Annual catch limits (ACLs) in the scallop fishery are based on the overall biomass (projected landings at F=0.38 in all areas, including closed areas), while projected landings are limited to the harvestable biomass in areas that are open to the fishery in a given year. This catch limit structure can be problematic because the overall scallop management program is an area based system that is spatially explicit. The disconnect between annual catch limits and projected landings is more of an issue when higher levels of exploitable biomass are in closed areas and not available to the fishery. For example, in 2015 and 2016 a large proportion of total biomass was within EFH and GF closed areas as well as very large year classes of small scallops closed within scallop access areas.

The ACL split for the LA and LAGC fisheries are consistent with decisions made in Amendment 11 (94.5% to the LA fishery and 5.5% to the LAGC fishery). Since Amendment 15 (A15), the LAGC IFQ allocation has been based on scallop projected landings at F=0.38 in all areas, including closed areas, and the LA allocation has been based on projected landings for the fishing year, after accounting for the research set-aside, observer set-aside, incidental landings, and the LAGC IFQ share (5.5% of the ACL). In this way, the allocation to LA is spatially explicit, while the LAGC IFQ allocation is not. Another issue is spatial uncertainty, because allocations to the LAGC IFQ include harvestable biomass from areas that are not or may not be accessible to that IFQ component.

Draft Objectives:
Alternatives could be developed in FW28 to:

- Consider modifications to how allocations are specified to more explicitly account for the spatial management used in the scallop fishery, and
- Consider reducing potential impacts on the resource from allocations that are based on all areas, but are only fished in areas available to the fishery.

2. Potential Management Uncertainty in the LAGC IFQ Fishery:

Draft Problem Statement: Measures adopted during and since Amendment 15 have introduced the potential for management uncertainty. These include mortality from carry-over allowances, and ability of the FMP to monitor and enforce all catch. An example of a change made through A15 is that the LAGC IFQ component is now allowed to carryover up to 15% of allocated quota from one fishing year to the next.

Draft Objectives:
Alternatives could be developed in FW28 to:

- Consider adopting a management uncertainty buffer for the LAGC IFQ component to account for change in management during and since A15 (ex: carryover).

DRAFT ALTERNATIVES:

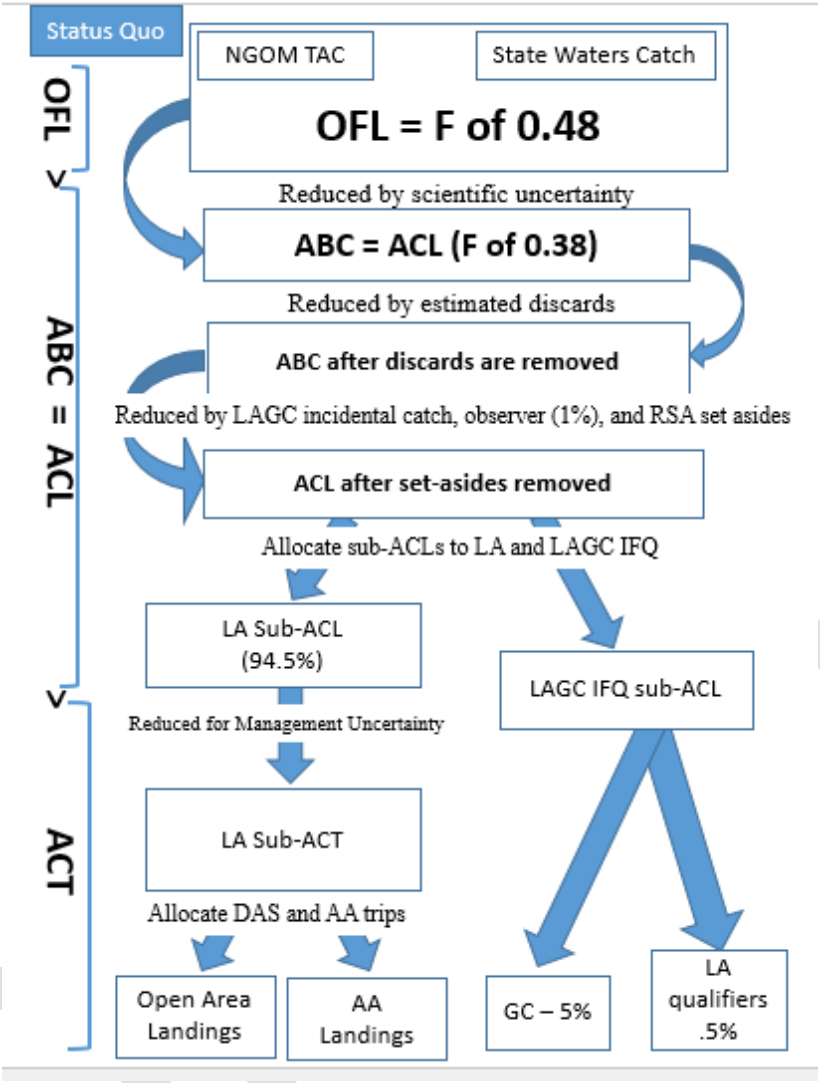
The draft alternatives below reflect the updated draft problem statement/draft objectives.

2.1 Applying Spatial Management to the Specifications Setting Process (ACL Flowchart – Setting Allocations based on Projected Landings)

2.1.1 ALTERNATIVE 1 – NO ACTION

There would be no change to the current process of specifying allocations to the LA and LAGC IFQ components of the fishery. The LAGC IFQ component would receive 5.5% of the ACL. The LA component would be based on projected landings for the fishing year, after accounting for the research set-aside, observer set-aside, incidental landings, and the LAGC IFQ share (5.5% of the ACL).

Figure 2 - Status Quo ACL flowchart



2.1.2 ALTERNATIVE 2 – FISHERY ALLOCATIONS BASED ON SPATIAL MANAGEMENT

The allocation split between the LA and LAGC IFQ components would follow the spatial management of the fishery. The LA component would receive 94.5% of the projected landings from areas open to the fishery, and the LAGC IFQ component would receive 5.5% of the projected landings from areas open to the fishery, after set-asides and incidental landings are accounted for. Because ACL in the scallop fishery is based on the overall biomass, and projected landings are based on spatial management for a given fishing year, the allocations for both components would be capped at a specified ceiling. The spatial management ceiling would be set at an F=0.34 for the LA component, which is equal to the annual catch target (ACT) for this component set in A15 to account for management uncertainty. The ceiling for the LAGC IFQ could be set at different F rates (Option A and Option B). In practice, these options specify the maximum potential allocation (A_{MAX}) for a given fishing year. The actual allocation to both components would be based on projected landings.

Rationale: Basing allocations for both the LA and LAGC IFQ components on harvestable biomass better reflects the area based management used in the scallop fishery.

2.1.2.1 OPTION A - LAGC IFQ CEILING OF F=0.34

The maximum allocation to the LAGC IFQ component would be set at a value equal to F=0.34. This is the F value that the LA ACT is based on, and represents a roughly 10% reduction in allocation from the ACL value of F=0.38.

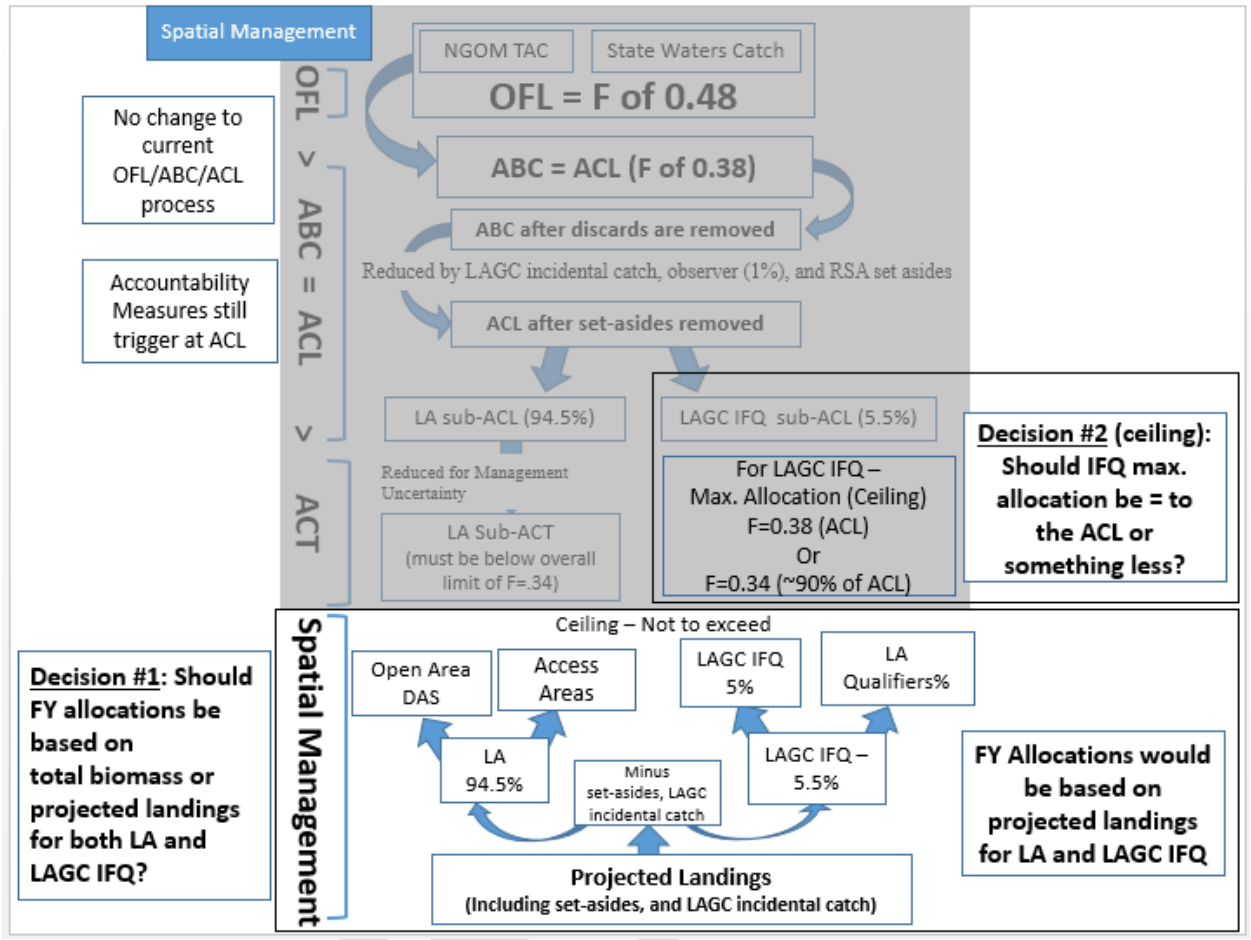
2.1.2.2 OPTION B – LAGC IFQ CEILING OF F=0.38

The maximum allocation to the LAGC IFQ component would be set at a value equal to F=0.38. This is the F value associated with the ACL in the scallop fishery. In practice, this would allow the LAGC IFQ allocation to be set equal to the component's ACL in years when overall biomass is equal to projected landings.

Table 1 - Comparison of Spatial Management Alternatives (2.1) for LAGC IFQ using past fishing year data.

			Decision 1: What will FY allocation be based on? (total biomass or projected landings)		Decision 2: What is the max. allocation IFQ *COULD* receive (ceiling).	
A	**B**	**C**	**D**	**E**	**F**	**G**
Ref:			**2.2.1**	**2.2.2**	2.2.2.1	2.2.2.2
			Actual Allocations/Landings Limit		Maximum allocation (Ceiling)	
	Projected Landings for Fishery	LAGC Actual Landings	**"Status Quo" 5.5% of ACL (total biomass)**	**"Spatial Mgmt" 5.5% Projected Landings**	"OPTION A" F=0.34 (~90% of F=0.38, = to LA buffer)	"OPTION B" F=0.38 (status quo, = to ACL)
				(B*0.055)	(D*0.9)	(D)
FY2011	52,300,262	3,046,245	**3,201,112**	**2,876,514**	2,881,001	3,201,112
FY2012	57,198,934	3,331,284	**3,403,937**	**3,145,941**	3,063,544	3,403,937
FY2013	38,217,133	2,414,256	**2,449,336**	**2,101,942**	2,204,402	2,449,336
FY2014	38,199,496	2,089,589	**2,422,880**	**2,100,972**	2,180,592	2,422,880
FY2015	47,399,386	2,559,567	**2,971,831**	**2,606,966**	2,674,648	2,971,831
FY2016	46,932,006	n/a	**4,473,179**	**2,581,260**	4,025,861	4,473,179

Figure 3 - Applying spatial management to specification setting process(Alternatives 2.1.2, 2.1.2.1, 2.1.2.2), including decision points for Council.



2.2 LAGC IFQ Management Uncertainty Buffer

2.2.1 ALTERNATIVE 1 – NO ACTION

The LAGC IFQ allocation would be set equal to the LAGC IFQ ACL. There would be no reduction for management uncertainty.

2.2.2 ALTERNATIVE 2 – ESTABLISH A MANAGEMENT UNCERTAINTY BUFFER FOR THE LAGC IFQ COMPONENT

The LAGC IFQ ACL allocation would be reduced by a percentage (5%, 10%, 20%) to account for management uncertainty. Management uncertainty for this component includes mortality from carry-over allowances, and ability of the FMP to monitor and enforce all catch.

2.2.2.1 OPTION A – 5% MANAGEMENT UNCERTAINTY BUFFER

The LAGC IFQ ACL would be reduced by 5%.

2.2.2.2 OPTION B – 10% MANAGEMENT UNCERTAINTY BUFFER

The LAGC IFQ ACL would be reduced by 10%.

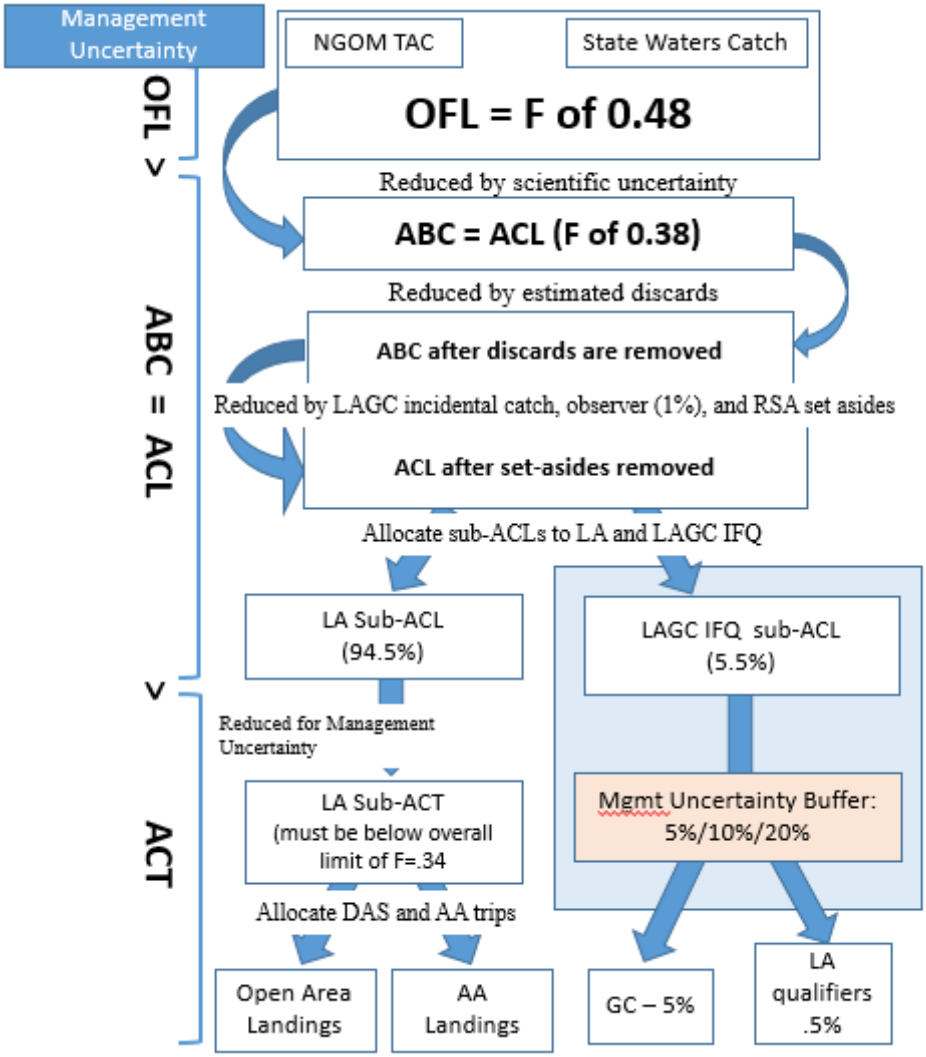
2.2.2.3 OPTION C – 20% MANAGEMENT UNCERTAINTY BUFFER

The LAGC IFQ ACL would be reduced by 20%.

Table 2 - Comparison of management uncertainty buffers with LAGC IFQ ACL and actual landings (lbs).

FY	LAGC IFQ sub-ACL	LAGC actual landings	Management Uncertainty Buffers		
			5% Buffer	10% Buffer	20% Buffer
FY2011	3,201,112	3,046,245	3,041,056	2,881,001	2,560,890
FY2012	3,403,937	3,331,284	3,233,740	3,063,544	2,723,150
FY2013	2,449,336	2,414,256	2,326,869	2,204,402	1,959,469
FY2014	2,422,880	2,089,589	2,301,736	2,180,592	1,938,304
FY2015	2,971,831	2,559,567	2,823,240	2,674,648	2,377,465
FY2016	4,473,179	n/a	4,249,520	4,025,861	3,578,543

Figure 4 - ACL flowchart with potential management uncertainty buffers applied.



2.3 Information (data, figures) on Spatial Management and Management Uncertainty (ACL Flowchart Measures)

Information on LAGC IFQ Carryover: Table 1 describes LAGC IFQ carryover, beginning in FY2010. The PDT noted that if the percent carryover declines from one year to the next, it may be possible for the fishery to exceed its ACL. Carryover was 12% in FY 2013 and then 9% in FY 2014, which suggests that the fishery utilized 3% of its carryover in FY2014.

Table 3 - LACG IFQ carryover data, FY2010 - FY2016.

Fishing Year	Sum of carry_over	Sum of base allocation	% carryover
2010	0	2329500	0%
2011	131881	3044151	4%
2012	194049	3273502	6%
2013	301354	2494866	12%
2014	209897	2375277	9%
2015	243041	2939585	8%
2016	312796	4369333	7%
Total	1393018	20826214	7%

Information on allocations and landings: **Table 2** describes recent scallop fishery ACLs and projected landings. In years when the ACL is larger than projected landings, the LAGC IFQ's realized allocation exceeds 5.5%.

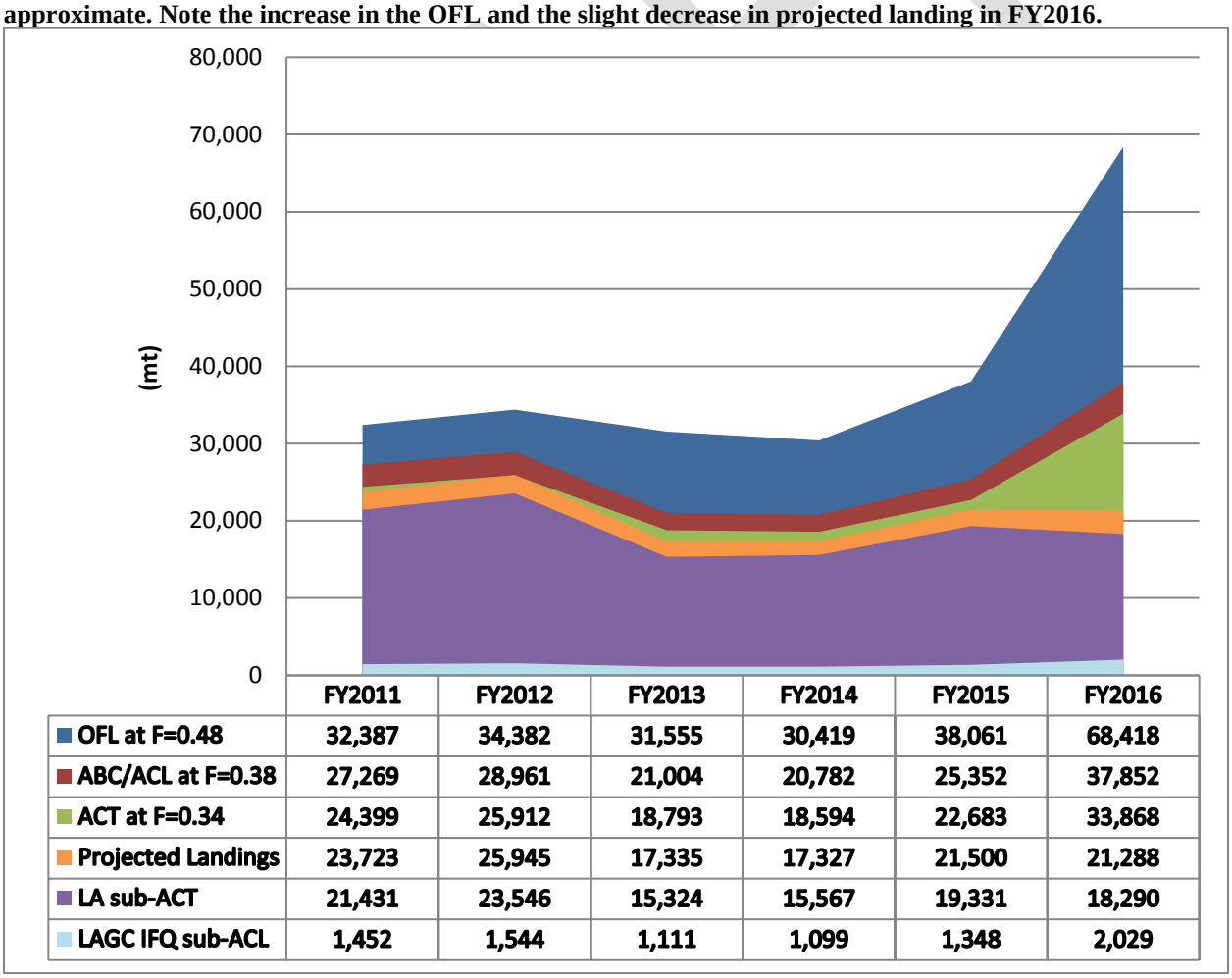
Table 4 - Recent ACLs (mt), Projected Landings (mt), and Projected Landings as % of ACL.

FY	ACL	Projected Landings	PL % of ACL
2010			
2011	27269	23723	87%
2012	28961	25945	90%
2013	21004	17335	83%
2014	20782	17327	83%
2015	25352	21500	85%
2016	37852	21288	56%

Table 5 - Comparison of actual landings by LA and LAGC IFQ components.

Actual Landings by LA and LAGC IFQ							
	LA		LAGC IFQ		Combined Landings (LA and LAGC IFQ – No set-asides or LAGC incidental)		
FY	mt	%	%	mt	mt	% of Projected Landings	% of the ACL
2011	24,462	94.7%	5.3%	1,382	25,844	109%	95%
2012	23,711	94.0%	6.0%	1,511	25,222	97%	87%
2013	16,213	93.7%	6.3%	1,095	17,308	100%	82%
2014	12,948	93.2%	6.8%	948	13,895	80%	67%
2015	14,317	92.5%	7.5%	1,161	15,478	72%	61%

Figure 5 - OFL, ABC/ACL, ACT, and Projected Landing values for FY2011 - 2015. ACT values are approximate. Note the increase in the OFL and the slight decrease in projected landing in FY2016.



	FY2011	FY2012	FY2013	FY2014	FY2015	FY2016
OFL at F=0.48	32,387	34,382	31,555	30,419	38,061	68,418
ABC/ACL at F=0.38	27,269	28,961	21,004	20,782	25,352	37,852
ACT at F=0.34	24,399	25,912	18,793	18,594	22,683	33,868
Projected Landings	23,723	25,945	17,335	17,327	21,500	21,288
LA sub-ACT	21,431	23,546	15,324	15,567	19,331	18,290
LAGC IFQ sub-ACL	1,452	1,544	1,111	1,099	1,348	2,029

Table 6 - Recent Scallop Fishery Specifications, including allocations and actual landings.

		Allocated		% of Total Allocated	Actual		% Difference (allocated vs actual)	% of Total Actual
		mt	lb		mt	lb		
2011	OFL	32,387	71,401,113					81.88%
	ABC/ACL	27,269	60,117,854					97.24%
	Total Projected Landings	23,723	52,300,000		26,518	58,461,465	112%	
	incidental	23	50,000	0.10%	18	38,700	77%	0.07%
	RSA	567	1,250,000	2.39%	553	1,218,781	98%	2.08%
	OBS	273	601,170	1.15%	104	228,370	38%	0.39%
	IFQ	1,452	3,201,880	6.12%	1,382	3,046,245	95%	5.21%
	LA ACT	21,431	47,247,267	90.34%	24,462	53,929,369	114%	92.25%
	LA ACL	24,954	55,014,153		24,462	53,929,369		
2012	OFL	34,382	75,799,335					75.33%
	ABC/ACL	28,961	63,848,076					89.43%
	Total Projected Landings	25,945	57,200,000		25,900	57,098,684	100%	
	incidental	23	50,000	0.09%	28	61,869	124%	0.11%
	RSA	567	1,250,000	2.19%	529	1,167,316	93%	2.04%
	OBS	290	638,470	1.12%	120	263,700	41%	0.46%
	IFQ	1,544	3,405,000	5.95%	1,511	3,331,284	98%	5.83%
	LA ACT	23,546	51,910,044	90.75%	23,711	52,274,515	101%	91.55%
	LA ACL	26,537	58,503,960					
2013	OFL	31,555	69,566,867					57.22%
	ABC/ACL	21,004	46,305,894					85.97%
	Total Projected Landings	17,335	38,216,741		18,056	39,807,589	104%	
	incidental	23	50,000	0.13%	21	47,337	95%	0.12%
	RSA	567	1,250,000	3.27%	553	1,218,204	97%	3.06%
	OBS	210	463,059	1.21%	174	384,545	83%	0.97%
	IFQ	1,111	2,449,856	6.41%	1,095	2,414,256	99%	6.06%
	LA ACT	15,324	33,783,637	88.40%	16,213	35,743,247	106%	89.79%
	LA ACL	19,093	42,092,979		16,213	35,743,247		
2014	OFL	30,419	67,062,415		0			47.75%
	ABC/ACL	20,782	45,816,467		0			69.89%
	Total Projected Landings	17,327	38,463,656		14,524	32,020,980	83%	
	incidental	23	50,000	0.13%	19	42,107	84%	0.13%
	RSA	567	1,250,000	3.27%	433	954,011	76%	2.98%
	OBS	208	458,562	1.20%	177	390,579	85%	1.22%
	IFQ	1,099	2,423,145	6.34%	948	2,089,589	86%	6.53%
	LA ACT	15,567	34,319,360	89.84%	12,948	28,544,694	83%	89.14%
	LA ACL	18,885	41,634,305		12,948	28,544,694		

		Allocated		% of Total Allocated	Actual		% Difference (allocated vs actual)	% of Total Actual
		mt	lb		mt	lb		
2015	OFL	38,061	83,910,142					
	ABC/ACL	25,352	55,891,593					
	Total Projected Landings	21,500	47,400,000					
	incidental	23	50,000	0.11%				
	RSA	567	1,250,021	2.64%				
	OBS	254	559,974	1.18%	220	484,955	87%	
	IFQ	1,348	2,971,831	6.27%	1,161	2,559,595	86%	
	LA ACT	19,331	42,617,560	89.91%	14,317	31,564,479	74%	
	LA ACL	23,161	51,061,265					
2016	OFL	68,418	150,835,870					
	ABC/ACL	37,852	83,449,375					
	Total Projected Landings	21,288	46,932,006					
	incidental	23	50,000	0.11%				
	RSA	567	1,250,000	2.66%				
	OBS	379	835,552	1.78%				
	IFQ	2,029	4,473,180	9.53%				
	LA ACT	18,290	40,322,555	85.92%				
	LA ACL	34,855	76,842,135					

AP and CTE: This is an updated section. Please review and be prepared to provide input on the range of alternatives.

Key Questions: Measures to remove? New ideas to add?

3.0 Potential Modification to the Closed Area I Access Area Boundaries

Background: The Council has made recommendations to modify the existing configuration of habitat closures through Omnibus Habitat Amendment 2 (OHA2). A preliminary rule is expected in the fall or winter of 2016. Based on this timing, staff expects a final rule to be effective in the spring of 2017. Access to newly opened areas for the scallop fishery will require a Council action. Because of the uncertainty and relatively large amount of development and analyses needed to consider possible modifications to all the current GB access areas, the Council has recommended that modifications to GB access in FW28 focus on to Closed Area I.

PDT discussion: The scallop PDT discussed this measure at its July 21 and Aug. 30/31 meetings. The group recommends prioritizing initial access for unused CA I trips (~1.5 million lbs). The PDT noted that the majority of the exploitable biomass is north of the current CA I AA boundary. Two potential re-configurations of the CA I AA were discussed. One option (Option 1) would move the northern boundary of the existing CA I AA north of known exploitable biomass, and revert the rest of the closed area to open bottom. The second option would utilize the existing closure to the north as the new boundary. This approach was discussed because LAGC vessels would not be able to fish in the open bottom area of option 1 because it would fall outside of the Great South Channel dredge exemption area. Expanding the boundary of the CA I AA to the current closure configuration would allow LAGC vessels to fish throughout the area.

Figure 6 - Areas proposed by the Council in OHA2, and NEFSC scallop dredge survey (2000-2014) (numbers per tow). The "sliver" is denoted by a red oval and arrow.

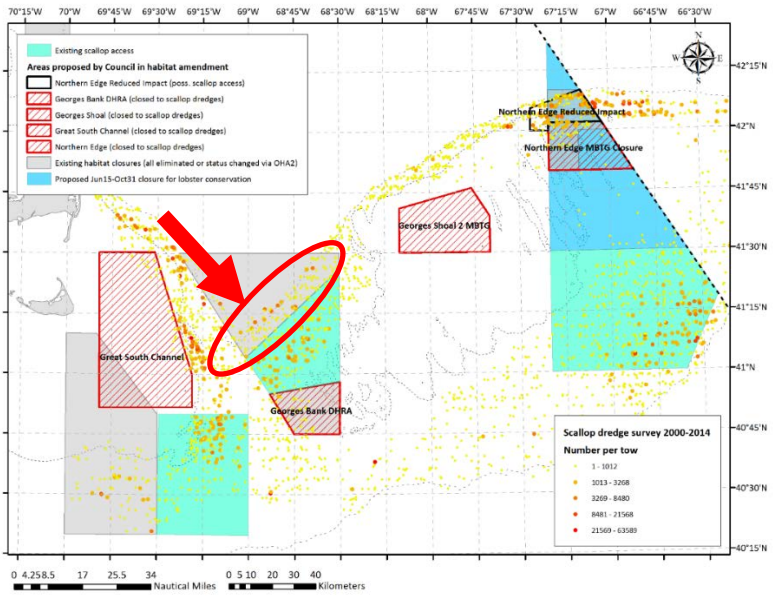


Figure 7 – Current Closed Area I Access Area configuration and existing habitat closures, including presence and absence of scallops in the 2016 SMAST drop cam survey.

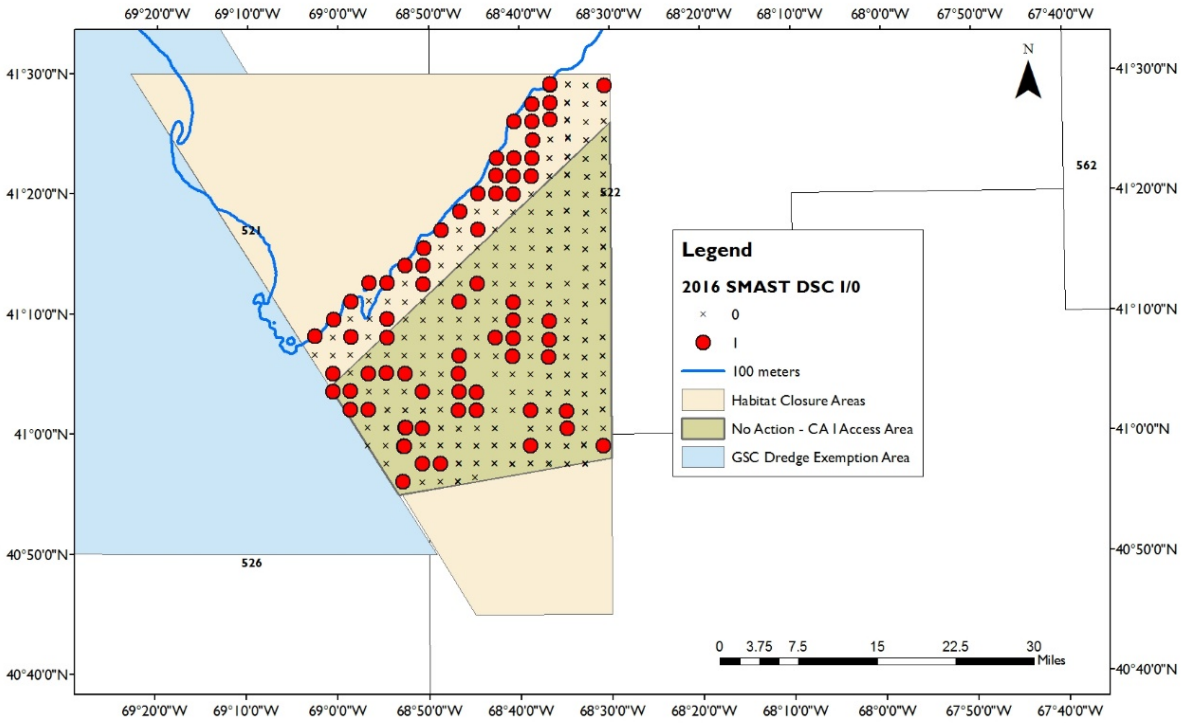


Figure 8 - Status Quo/No Action if the Council's preferred OHA2 alternative is approved by NMFS. Note that the existing habitat closure to the north of the CA I AA would remain closed. Map includes presence and absence of scallops in the 2016 SMAST drop cam survey.

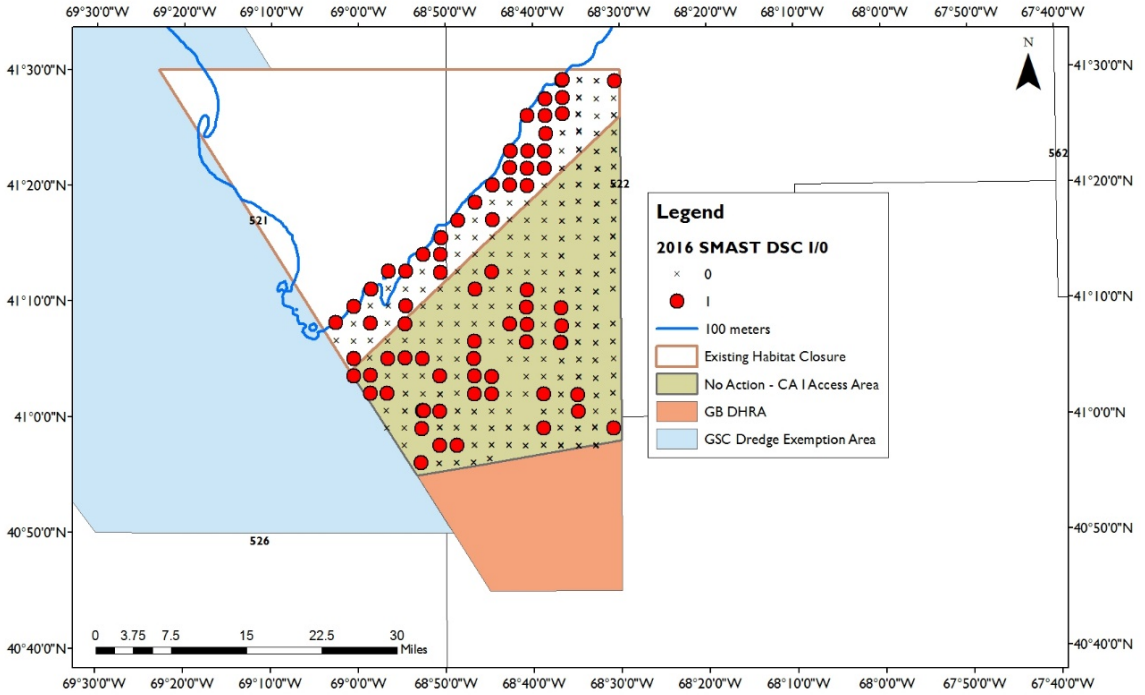


Figure 9 – Option 1 (area shown in green) would expand the CA I AA boundary to include the "sliver" and revert a portion of the former HMA to open area.

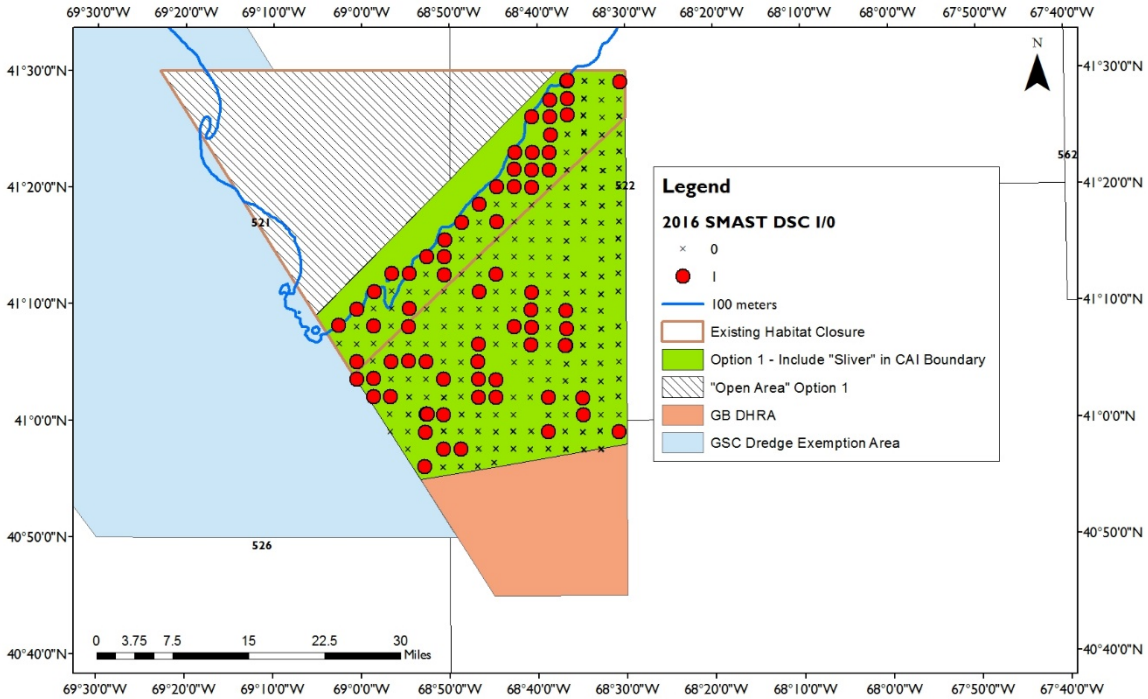


Figure 10 - Option 2 (area shown in tan) would expand the CA I AA to include the entire HMA area to the north.

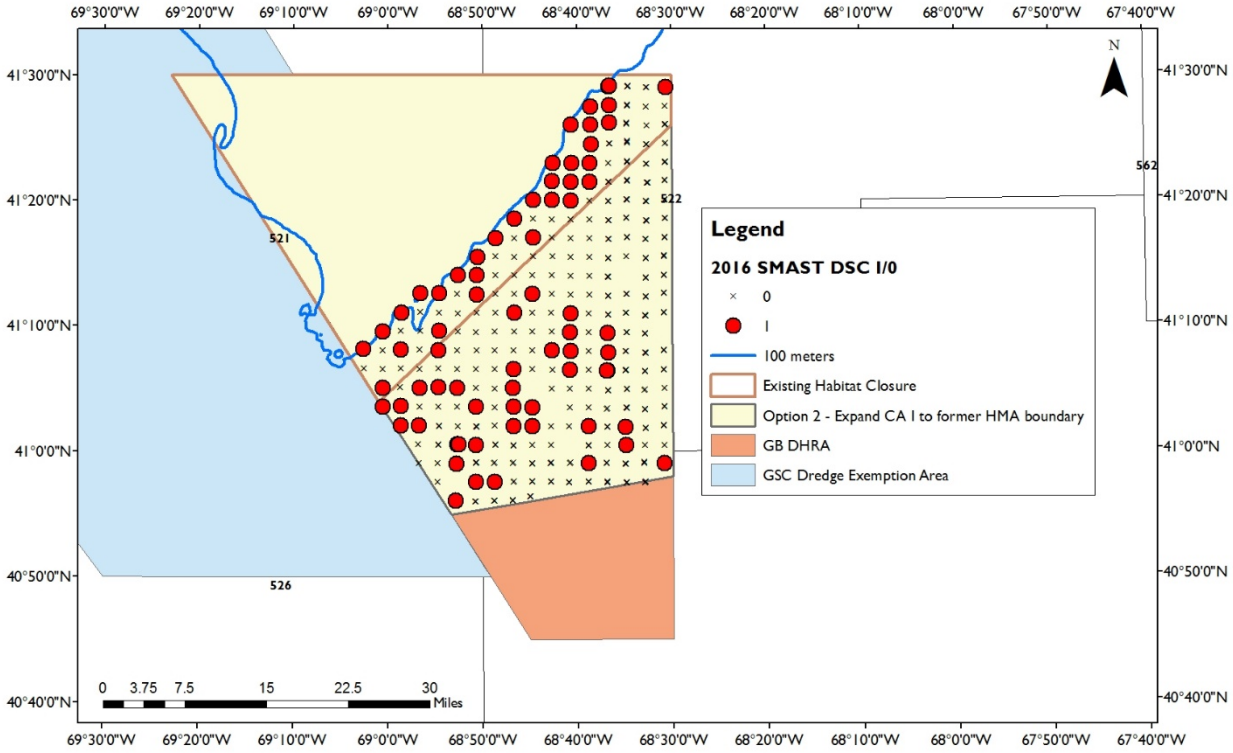


Figure 11 - SMAST Large Camera View Drop Camera Survey Results from 2014 and 2015 (Scallops Per Station and Recruits Per Station) CAI focus

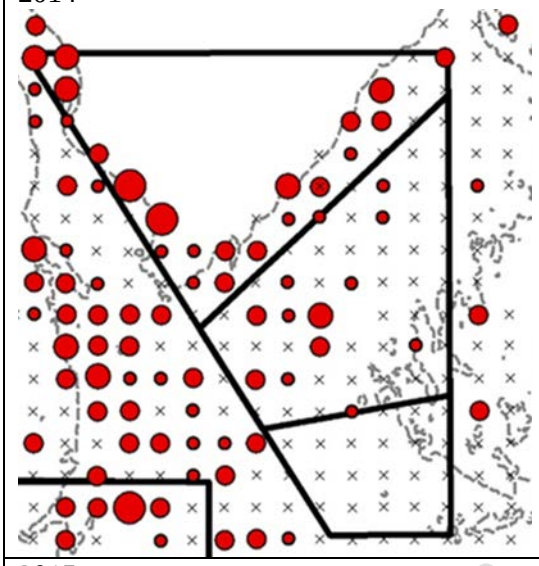
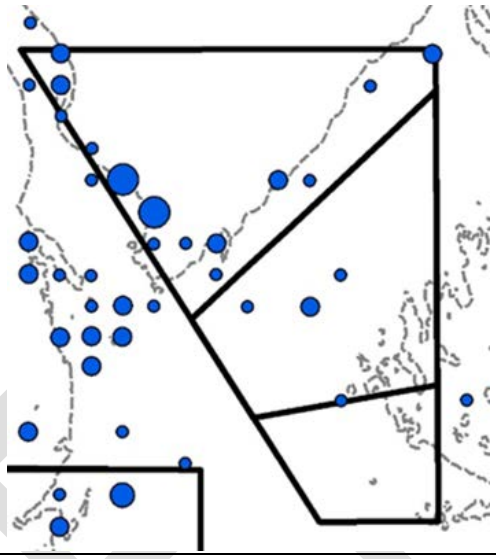
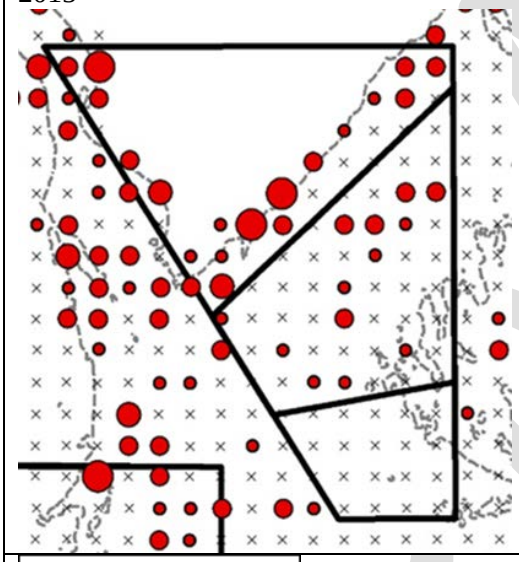
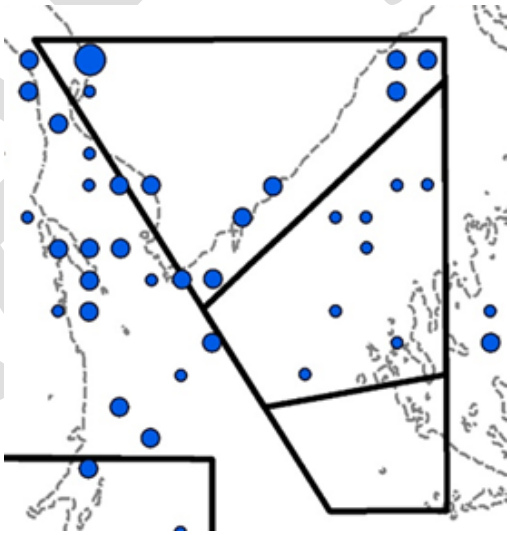
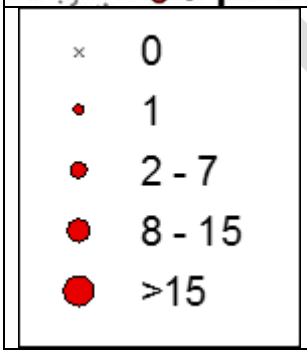
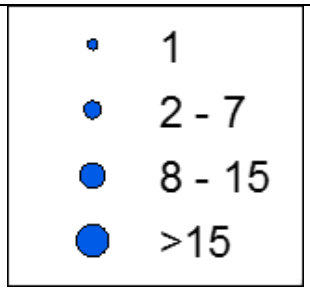
Scallops Per Station	Recruits Per Station
2014 	2014 
2015 	2015 
	

Figure 12 - 2016 NEFSC Dredge Survey Biomass Chart.