Biological Sampling Priority Matrix

FY 2013

Biological Review Panel recommends:

- Species in the upper 25% of priority matrix be considered for funding.

- Sampling projects which cover multiple species within the upper 25% are highly recommended.

Biological Review Panel recommendations based on matrix*:

* UPPER 25% OF MATRIX

	Fishery Status	Most Recent Stock Assessment	Current/ Next Stock Assessment	Council Priority	ASMFC Priority	State Priority	NMFS Priority	Fishery Managed	Sig. change in landings w/in 24 mo	Sig. change in mgmt w/in 24 mo	Adequacy of level of sampling	Stock Resilience	# sampling strata	Seasonality of fishery	TOTAL
	K: known			0=NA	0=NA	0=NA	0=NA	0 = No	1= <25%	0= None	0=Over-	1 = resilient	1= <20	1= >9 mo	
	U: unkn	(Year)	(Year)	1=low	1=low	1=low	1=low	1 = Yes	3= 25-75%	1=Minor	sampled,	5 = vulnerable	3= 20-75	3= 1-9 mo	
	K/U: partly			5=high	5=high	5=high	5=high		5= >75%	5= Signif	5= none		5= >75	5= <1 mo	
Species	known														
Black Sea Bass (1) Centropristis striata	K	2011	2011	5	5	3.5	5.0	1	1	5	1	3	5	1	35.50
Winter Flounder Pleuronectes americanus	K	2011	Unknown	5	3	2.4	5.0	1	1	5	2	3	3	1	31.36
Snowy Grouper Epinephelus niveatus	K		2013	5	0	1.3	5.0	1	1	3	4	5	3	3	31.29
Shad Alosa sapidissima/mediocris	U	2007	Unknown	0	5	4.1	0.0	1	1	5	4	5	3	3	31.14
Spiny Dogfish Squalus acanthias	K	2009	Unknown	5	4	2.5	3.0	1	1	3	2	5	3	1	30.50
Winter Skate Raja ocellata	K	2006	Unknown	4	0	0.8	3.0	1	3	5	4	5	3	1	29.79
Blueline Tilefish Caulolatilus microps	U		2013	5	0	1.0	4.0	1	1	4	4	3	3	3	29.00
Scup Stenotomus chrysops	K/U	2002	2010?	5	5	2.3	4.0	1	3	0	1	1	5	1	28.29
Gray Triggerfish Balistes capriscus	K/U		2013	5	0	1.1	4.0	1	5	0	4	2	3	3	28.07
Summer Flounder Paralichthys dentatus	K	2008	Annual Update	5	5	3.6	5.0	1	1	0	1	2	3	1	27.57
Gag Grouper Mycteroperca microlepis	K	2006	2013	4	0	1.1	4.0	1	3	2	3	4	3	1	26.14
River Herring Alosa	U	1988	2011?	0	5	3.0	0.0	1	1	0	4	4	5	3	26.00
Weakfish Cynoscion regalis	U	2009	Unknown	1	5	3.0	0.0	1	3	5	1	3	3	1	26.00
Little Skate Raja erinacea	K	2006	Unknown	4	0	0.6	3.0	1	1	5	4	3	3	1	25.64
Yellowtail Flounder Pleuronectes ferrugineus	K	2008	2012	4	0	1.4	5.0	1	1	5	2	2	3	1	25.43
Finetooth Shark Carcharhinus isodon	K	2007	Unknown	0	1	1.0	5.0	1	3	0	3	5	3	3	25.00
Red Grouper Epinephelus morio	K/U	2010	2013	3	0	0.9	4.0	1	1	3	4	4	3	1	24.93
Tilefish (1) Lopholatilus chamaeleonticeps	K	2005	2013	3	0	1.8	4.0	1	1	0	4	4	3	3	24.79
N. Short-fin Squid Illex illecebrosus	K/U	2005	Unknown	2	0	0.7	3.0	1	1	5	2	4	3	3	24.71
American Lobster Homarus americanus	K	2009	2014	0	5	2.5	3.0	1	1	1	4	3	3	1	24.50

Bio-sampling Priority Matrix

Averaged Priority Columns	Biological Sampling Adequacy: Adequate (0 - 2)	Biological Sampling Adequacy: Inadequate (3 - 5)
High (≥ 3.0)	Black Sea Bass - Winter Flounder - Spiny Dogfish - Scup - Summer Flounder	
Low (< 3.0)	Weakfish - Yellowtail Flounder - N. Shortfin Squid	Snowy Grouper - Shad - Winter Skate - Blueline Tilefish - Gray Triggerfish - Gag Grouper - River Herring - Little Skate - Finetooth Shark - Red Grouper - Tilefish - American Lobster

Grouping of species in upper 25% of total matrix score, based on sampling adequacy and average priority (average of ASMFC, Council, NMFS and State priorities).

- Weakfish, yellowtail flounder and northern short-fin squid are being sampled adequately and have low priority so additional sampling is not needed.
- Projects that target multiple upper quartile species should also be given a higher priority.

NOAA FISHERIES

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Biological Sample Size

13 June, 2013

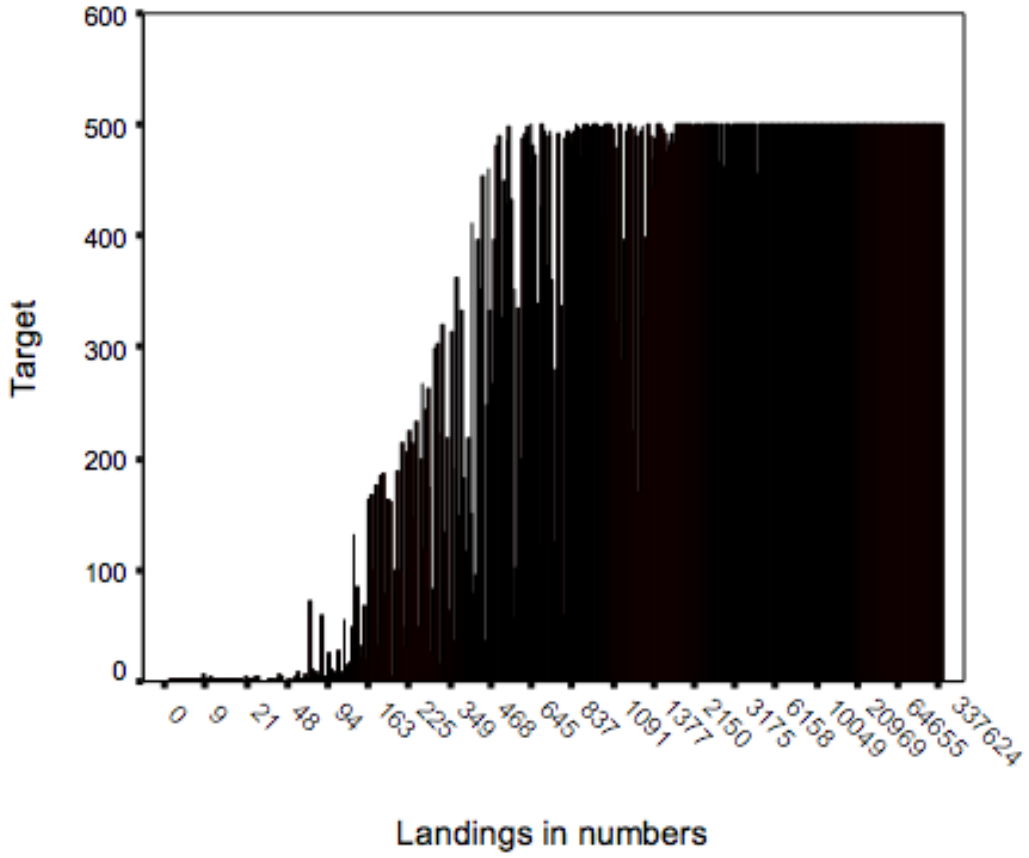
Bio Sample Size Selections

- Estimates are made for each species by strata (quarter, gear and area combination)
- Goal is to sample at a rate that enables estimation of desired parameter (length, age) with the desired level of precision
- Designed to optimize efficiency by avoiding over sampling and under sampling

Steps to Set Sample Size by Strata

- Analyze past data to determine sample size needed to achieve desired precision based on variance of the parameter.
- Scale that sample size for strata with low landings and high variance
- For strata with very low landings and high variance such that estimated sample size > landings, sample 100% of landings, or at 0 if strata landings < 5% of annual landings

Example results of process for length sample size



Vermilion snapper target sample size targets in numbers for otolith and length collections