SAFMC Snapper-Grouper Amendment 17A: Closure Alternatives Options Table

National Marine Fisheries Service
Southeast Regional Office
St. Petersburg, Florida

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Premise:

The SEDAR 24 Red Snapper Benchmark Assessment may be completed prior to the SAFMC December 2010 meeting, and may suggest a reduction other than 83% is required to end overfishing of South Atlantic Red Snapper. The table in this document presents model projected reductions for current and new spatial closure alternatives under a range of parameter input scenarios.

Assumptions:

1. The spatial distribution of discards is proportional to the spatial distribution of landings,
2. If effort shifting from closed areas occurs, it is adequately captured via manipulation of the compliance rate,
3. Headboat landings are reasonable spatial proxies for private and charter boat landings,
4. Movement of fish across reserve boundaries does not increase red snapper encounter rates in adjacent areas above baseline (2005-2007) levels,
5. No disproportionate redistribution of fishing effort along reserve boundaries, and
6. Historical trends (2005-2007) are reasonable proxies for future trends (2010).

Note:

These projections are based upon the Microsoft Excel "Red Snapper Management Decision Model" distributed to Council in March 2010 entitled 'A17_RedSnapper_TotalRemovals_03_02_2010_NONCONFIDENTIAL_2.xlsx.' If the SEDAR 24 assessment baseline assumptions, such as historic release mortality rates, vary from those assumed for SEDAR 15 (40% recreational, 90% commercial), the "Red Snapper Management Decision Model" will need to be re-parameterized and these tables and figures will no longer be valid.

Table 1. Model projected reductions associated with current and new spatial closure alternatives under a range of parameter input scenarios.

Alternative	Closed Cells	Closed Depths	Area Closed (mi^2)	Area Closed (km^2)	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7
2	None	None	0.0	0.0	29%	39%	52%	55%	60%	60%	60%
NEW 1	2980	98-240 ft	1,389	3,598	44%	50%	63%	65%	70%	71%	71%
NEW 2	2880, 2980	98-240 ft	2,452	6,351	51%	55%	68%	69%	74%	75%	76%
NEW 3	2880, 2980, 3080	98-240 ft	4,827	12,503	60%	63%	74%	75%	79%	80%	81%
3A	2880, 2980, 3080, 3180	All	14,496	37,544	72%	72%	83%	83%	87%	89%	90%
3B	2880, 2980, 3080, 3180	66-240 ft	10,794	27,956	69%	70%	81%	81%	85%	87%	88%
3C*	**2880, 2980, 3080, 3180**	**98-240 ft**	**6,161**	**15,957**	**63%**	**65%**	**76%**	**77%**	**81%**	**83%**	**84%**
3D	2880, 2980, 3080, 3180	98-300 ft	6,222	16,115	63%	66%	76%	77%	81%	83%	84%
4A	2880, 2980, 3080, 3180, 3179, 3278, 3279	All	26,001	67,342	76%	77%	86%	86%	89%	91%	93%
4B	2880, 2980, 3080, 3180, 3179, 3278, 3279	66-240 ft	15,834	41,010	73%	74%	83%	84%	87%	89%	91%
4C	2880, 2980, 3080, 3180, 3179, 3278, 3279	98-240 ft	9,372	24,273	66%	69%	78%	80%	83%	85%	86%
4D	2880, 2980, 3080, 3180, 3179, 3278, 3279	98-300 ft	9,591	24,841	67%	69%	79%	80%	83%	85%	86%

Scenario 1: No impacts A13C, A16; A17A eliminates targeted trips only; 80% compliance; 60%/60% offshore release mortality; 20%/20% inshore release mortality.

Scenario 2: No impacts A13C, A16; A17A eliminates targeted trips only; 80% compliance; 40%/90% offshore release mortality, 40%/90% inshore release mortality.

Scenario 3: No impacts A13C, A16; A17A eliminates targeted trips only; 85% compliance; 40%/40% offshore release mortality, 20%/20% inshore release mortality.

Scenario 4: Directed and targeted trips eliminated by A13C, A16, A17A; 85% compliance; 40%/90% offshore release mortality; 20%/20% inshore release mortality.

Scenario 5: Directed and targeted trips eliminated by A13C, A16, A17A; 87% compliance; 40%/40% offshore release mortality; 20%/20% inshore release mortality.

Scenario 6: Directed and targeted trips eliminated by A13C, A16, A17A; 95% compliance; 40%/40% offshore release mortality; 20%/20% inshore release mortality.

Scenario 7: Directed and targeted trips eliminated by A13C, A16, A17A; 100% compliance; 40%/40% offshore release mortality; 20%/20% inshore release mortality.