

## APPENDIX A1

**Table 1** Summary of percentage changes in loggerhead, leatherback, and other sea turtle interactions, swordfish, yellowfin tuna, bigeye tuna, and blue and white marlin catches based on three different alternatives. Source: Pelagic Longline Observer Program and Pelagic Longline Logbook data 2001-2002. Blue and white marlin data are for combined live and dead discards.

	<b>Without redistribution of effort</b>					
	Alternative 13		Alternative 14		Alternative 15	
	Observer Data	Logbook Data	Observer Data	Logbook Data	Observer Data	Logbook Data
Leatherback	-41%	-47%	-43%	-58%	-35%	-35%
Loggerhead	-17%	-9%	-34%	-56%	-29%	-44%
Other Sea Turtles	-100%	-100%	-100%	-50%	0%	0%
Swordfish		-21%		-21%		-15%
Yellowfin Tuna		-38%		-38%		-25%
Bigeye Tuna		-12%		-12%		-8%
Blue Marlin		-37%		-38%		-34%
White Marlin		-30%		-34%		-31%

	<b>With redistribution of effort</b>					
	Alternative 13		Alternative 14		Alternative 15	
	Observer Data	Logbook Data	Observer Data	Logbook Data	Observer Data	Logbook Data
Leatherback	-16%	-19%	-10%	-37%	-14%	-24%
Loggerhead	+5%	+38%	-7%	-35%	-18%	-34%
Other Sea Turtles	-100%	-100%	-100%	-28%	0%	+11%
Swordfish		+17%		+18%		+5%
Yellowfin Tuna		-2%		-2%		+3%

Bigeye Tuna		+32%		+33%		+17%
Blue Marlin		-1%		+3%		-8%
White Marlin		+10%		-3%		-1%

**Table 2**      **Percent change in loggerhead, leatherback, and other sea turtle takes with the central Gulf of Mexico time/area closure in effect.** Based on data from the Pelagic Longline Observer Program and Pelagic Longline Logbook data with and without redistribution of effort.

	Without redistribution of effort from 2001-2002		With redistribution of effort based on data from 2001-2002	
	Observer Data	Logbook Data	Observer Data	Logbook Data
Leatherback	-41%	-47%	-16%	-19%
Loggerhead	-17%	-9%	5% <sup>+</sup>	38% <sup>+</sup>
Other*	-100%	-100%	-100%	-100%

\* Other sea turtles include Kemp's Ridley, Hawksbill, and Green.

+ indicates an increase in catch

**Table 3 Example of temporal variation in effectiveness of the central Gulf of Mexico time/area closure on leatherback sea turtle bycatch without redistribution of effort.** Source: Pelagic Observer Program data 2001-2002 (Observer Data) and Pelagic Logbook Data 2002 (Logbook Data)

Month	Number of leatherbacks observed caught inside the time/area closure		Number of leatherbacks observed caught outside the time/area closure		Percentage reduction in leatherbacks caught if time/area is closed	
	Observer Data	Logbook Data	Observer Data	Logbook Data	Observer Data	Logbook Data
January	1	3	6	12	14%	20%
February	0	3	7	19	0%	14%
March	2	8	5	14	29%	36%
April	2	7	8	17	20%	29%
May	8	11	4	5	67%	69%
June	4	11	5	20	44%	35%
July	13	33	4	20	76%	62%
August	0	8	3	24	0%	25%
September	2	11	0	6	100%	65%
October	2	14	2	8	50%	64%
November	1	12	4	16	20%	43%
December	1	34	4	15	20%	69%
<b>Total</b>	<b>36</b>	<b>155</b>	<b>52</b>	<b>176</b>	<b>41%</b>	<b>47%</b>

**Table 4 Example of temporal variation in effectiveness of the central Gulf of Mexico time/area closure on loggerhead sea turtle bycatch without redistribution of effort.** Source: Pelagic Observer Program data 2001-2002 (Observer Data) and Pelagic Logbook Data 2002 (Logbook Data)

Month	Number of loggerheads observed caught inside the time/area closure		Number of loggerheads observed caught outside the time/area closure		Percentage reduction in loggerheads caught if time/area is closed	
	Observer Data	Logbook Data	Observer Data	Logbook Data	Observer Data	Logbook Data
January	0	1	3	7	0%	13%
February	0	0	6	11	0%	0%
March	0	0	5	8	0%	0%
April	2	0	3	3	40%	0%
May	3	5	0	2	100%	71%
June	0	0	7	23	0%	0%
July	1	1	1	10	50%	9%
August	0	0	0	5	0%	0%
September	0	1	0	4	0%	0%
October	1	0	5	6	17%	0%
November	0	0	2	6	0%	0%
December	0	1	2	2	0%	0%
<b>Total</b>	<b>7</b>	<b>9</b>	<b>34</b>	<b>87</b>	<b>17%</b>	<b>9%</b>

**Table 5 Example of temporal variation in effectiveness of the central Gulf of Mexico time/area closure on other sea turtle bycatch without redistribution of effort.**  
 Source: Pelagic Observer Program data 2001-2002 (Observer Data) and Pelagic Logbook Data 2001-2002 (Logbook Data)

Month	Number of other sea turtles observed caught inside the time/area closure		Number of other sea turtles observed caught outside the time/area closure		Percentage reduction in other sea turtles caught if time/area is closed	
	Observer Data	Logbook Data	Observer Data	Logbook Data	Observer Data	Logbook Data
January	0	0	0	0	0%	0%
February	0	0	0	0	0%	0%
March	0	0	0	0	0%	0%
April	1	2	0	0	100%	100%
May	0	0	0	0	0%	??
June	0	0	0	0	0%	0%
July	0	0	0	0	0%	0%
August	0	0	0	0	0%	0%
September	0	0	0	0	0%	0%
October	0	0	0	0	0%	0%
November	0	0	0	0	0%	0%
December	1	3	0	0	0%	0%
<b>Total</b>	<b>2</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>100%</b>	<b>100%</b>

**Table 6**      **Redistribution of fishing effort and leatherback sea turtle interactions in the central Gulf of Mexico time/area closure alternative.** Source: Pelagic Observer Program data from 2001-2002.

	A	B	C	D	E	F	G	H	I	J	K	L
Month	Number of hooks in the Atlantic and Gulf of Mexico	Number of sea turtles caught in the Atl. & the Gulf of Mexico	Number of hooks in the time/area closure	Number of sea turtles caught in time/area closure	Number of sea turtles caught in open Atl. & Gulf of Mexico (B-D)	Sea turtle CPUE in the open Atl. & Gulf of Mexico (E/(A-C))	Number of additional sea turtles caught in open Atl. & GOM by displaced effort (C*F)	Sea turtles catch from open Atl. & GOM with displaced fishing effort (E+G)	Number of sea turtles avoided by area closure (B-H)	Cumulative catch avoided by month (sum of I)	Percent of total sea turtle interactions avoided by month (I/88)	Cumulative percent of total sea turtle interactions avoided by closure (J/88)
Jan	53,531	7	16,182	1	6	1.61e-04	3	9	-2	(2)	-1.8%	-2.3%
Feb	40,163	7	7,278	0	7	2.13e-04	2	9	-2	(4)	-1.8%	-4.0%
Mar	41,457	7	9,359	2	5	1.56e-04	1	6	1	(3)	0.6%	-3.4%
Apr	79,944	10	14,137	2	8	1.22e-04	2	10	0	(3)	0.3%	-3.1%
May	59,689	12	41,818	8	4	2.24e-04	9	13	-1	(4)	-1.5%	-4.6%
June	47,708	9	14,916	4	5	1.52e-04	2	7	2	(2)	2.0%	-2.7%
July	112,631	17	24,369	13	4	4.53e-05	1	5	12	10	13.5%	10.8%
Aug	150,119	3	14,721	0	3	2.22e-05	0	3	0	10	-0.4%	11.4%
Sept	225,159	2	18,648	2	0	0.00e+00	0	0	2	12	2.3%	13.6%
Oct	261,587	4	13,140	2	2	8.05e-06	0	2	2	14	2.2%	15.8%
Nov	56,929	5	9,161	1	4	8.37e-05	1	5	0	14	0.3%	16.1%
Dec	32,673	5	6,773	1	4	1.54e-04	1	5	0	14	-0.1%	16.0%
<b>Total</b>	<b>1,161,590</b>	<b>88</b>	<b>190,502</b>	<b>36</b>	<b>52</b>	<b>0</b>	<b>22</b>	<b>74</b>	<b>14</b>			

**Table 7      Redistribution of fishing effort and leatherback sea turtle interactions in the central Gulf of Mexico time/area closure alternative.** Source: Pelagic Longline Logbook data from 2001-2002.

	A	B	C	D	E	F	G	H	I	J	K	L
Month	Number of hooks in the Atlantic and Gulf of Mexico	Number of sea turtles caught in the Atl. & the Gulf of Mexico	Number of hooks in the time/area closure	Number of sea turtles caught in time/area closure	Number of sea turtles caught in open Atl. & Gulf of Mexico (B-D)	Sea turtle CPUE in the open Atl. & Gulf of Mexico (E/(A-C))	Number of additional sea turtles caught in open Atl. & GOM by displaced effort (C*F)	Sea turtles catch from open Atl. & GOM with displaced fishing effort (E+G)	Number of sea turtles avoided by area closure (B-H)	Cumulative catch avoided by month (sum of I)	Percent of total sea turtle interactions avoided by month (I/331)	Percent of total sea turtle interactions avoided by closure (J/331)
Jan	1,082,142	15	335,798	3	12	1.61e-05	5	17	-2	-2	-0.7%	-0.6%
Feb	763,566	22	193,916	3	19	3.34e-05	6	25	-3	-5	-1.0%	-1.7%
Mar	897,001	22	142,441	8	14	1.86e-05	3	17	5	0	1.6%	0.0%
Apr	1,267,139	24	277,002	7	17	1.72e-05	5	22	2	2	0.7%	0.6%
May	1,317,311	16	411,194	11	5	5.52e-06	2	7	9	11	2.6%	3.3%
June	1,414,291	31	489,547	11	20	2.16e-05	11	31	0	11	0.1%	3.4%
July	1,563,985	53	712,007	33	20	2.35e-05	17	37	16	28	4.9%	8.3%
Aug	1,555,525	32	608,595	8	24	2.53e-05	15	39	-7	20	-2.2%	6.1%
Sept	1,221,082	17	550,770	11	6	8.95e-06	5	11	6	26	1.8%	7.9%
Oct	1,119,064	22	392,775	14	8	1.10e-05	4	12	10	36	2.9%	10.8%
Nov	1,020,819	28	368,359	12	16	2.45e-05	9	25	3	39	0.9%	11.7%
Dec	898,269	49	352,223	34	15	2.75e-05	10	25	24	63	7.3%	19.1%
<b>Total</b>	<b>14,120,194</b>	<b>331</b>	<b>4,834,627</b>	<b>155</b>	<b>176</b>	<b>2.33e-04</b>	<b>92</b>	<b>268</b>	<b>63</b>			

**Table 8      Redistribution of fishing effort and loggerhead sea turtle interactions in the central Gulf of Mexico time/area closure alternative.** Source: Pelagic Observer Program data from 2001-2002.

	A	B	C	D	E	F	G	H	I	J	K	L
Month	Number of hooks in the Atlantic and Gulf of Mexico	Number of sea turtles caught in the Atl. & the Gulf of Mexico	Number of hooks in the time/area closure	Number of sea turtles caught in time/area closure	Number of sea turtles caught in open Atl. & Gulf of Mexico (B-D)	Sea turtle CPUE in the open Atl. & Gulf of Mexico (E/(A-C))	Number of additional sea turtles caught in open Atl. & GOM by displaced effort (C*F)	Sea turtles catch from open Atl. & GOM with displaced fishing effort (E+G)	Number of sea turtles avoided by area closure (B-H)	Cumulative catch avoided by month (sum of I)	Percent of total sea turtle interactions avoided by month (I/41)	Percent of total sea turtle interactions avoided by closure (J/41)
Jan	53,531	3	16,182	0	3	8.03e-05	1	4	-1	(1)	-3.2%	-2.4%
Feb	40,163	6	7,278	0	6	1.82e-04	1	7	-1	(2)	-3.2%	-5.7%
Mar	41,457	5	9,359	0	5	1.56e-04	1	6	-1	(4)	-3.6%	-9.2%
Apr	79,944	5	14,137	2	3	4.56e-05	1	4	1	(2)	3.3%	-5.9%
May	59,689	3	41,818	3	0	0.00e+00	0	0	3	1	7.3%	1.4%
June	47,708	7	14,916	0	7	2.13e-04	3	10	-3	(3)	-7.8%	-6.4%
July	112,631	2	24,369	1	1	1.13e-05	0	1	1	(2)	1.8%	-4.6%
Aug	150,119	0	14,721	0	0	0.00e+00	0	0	0	(2)	0.0%	-4.6%
Sept	225,159	0	18,648	0	0	0.00e+00	0	0	0	(2)	0.0%	-4.6%
Oct	261,587	6	13,140	1	5	2.01e-05	0	5	1	(1)	1.8%	-2.8%
Nov	56,929	2	9,161	0	2	4.19e-05	0	2	0	(2)	-0.9%	-3.8%
Dec	32,673	2	6,773	0	2	7.72e-05	1	3	-1	(2)	-1.3%	-5.0%
<b>Total</b>	<b>1,161,590</b>	<b>41</b>	<b>190,502</b>	<b>7</b>	<b>34</b>	<b>0</b>	<b>9</b>	<b>43</b>	<b>(2)</b>			



**Table 9**      **Redistribution of fishing effort and loggerhead sea turtle interactions in the central Gulf of Mexico time/area closure alternative.** Source: Pelagic Longline Logbook data from 2001-2002.

	A	B	C	D	E	F	G	H	I	J	K	L
Month	Number of hooks in the Atlantic and Gulf of Mexico	Number of sea turtles caught in the Atl. & the Gulf of Mexico	Number of hooks in the time/area closure	Number of sea turtles caught in time/area closure	Number of sea turtles caught in open Atl. & Gulf of Mexico (B-D)	Sea turtle CPUE in the open Atl. & Gulf of Mexico (E/(A-C))	Number of additional sea turtles caught in open Atl. & GOM by displaced effort (C*F)	Sea turtles catch from open Atl. & GOM with displaced fishing effort (E+G)	Number of sea turtles avoided by area closure (B-H)	Cumulative catch avoided by month (sum of I)	Percent of total sea turtle interactions avoided by month (I/96)	Percent of total sea turtle interactions avoided by closure (J/96)
Jan	1,082,142	8	335,798	1	7	9.38e-06	3	10	-2	-2	-2.2%	-2.1%
Feb	763,566	11	193,916	0	11	1.93e-05	4	15	-4	-6	-3.9%	-6.0%
Mar	897,001	8	142,441	0	8	1.06e-05	2	10	-2	-7	-1.6%	-7.6%
Apr	1,267,139	3	277,002	0	3	3.03e-06	1	4	-1	-8	-0.9%	-8.4%
May	1,317,311	7	411,194	5	2	2.21e-06	1	3	4	-4	4.3%	-4.2%
June	1,414,291	23	489,547	0	23	2.49e-05	12	35	-12	-16	-12.7%	-16.9%
July	1,563,985	11	712,007	1	10	1.17e-05	8	18	-7	-24	-7.7%	-24.5%
Aug	1,555,525	5	608,595	0	5	5.28e-06	3	8	-3	-27	-3.3%	-27.9%
Sept	1,221,082	5	550,770	1	4	5.97e-06	3	7	-2	-29	-2.4%	-30.2%
Oct	1,119,064	6	392,775	0	6	8.26e-06	3	9	-3	-32	-3.4%	-33.6%
Nov	1,020,819	6	368,359	0	6	9.20e-06	3	9	-3	-36	-3.5%	-37.2%
Dec	898,269	3	352,223	1	2	3.66e-06	1	3	0	-36	-0.3%	-37.5%
<b>Total</b>	<b>14,120,194</b>	<b>96</b>	<b>4,834,627</b>	<b>9</b>	<b>87</b>	<b>1.14e-04</b>	<b>45</b>	<b>132</b>	<b>-36</b>			

**Table 10     Redistribution of fishing effort and other sea turtle interactions in the central Gulf of Mexico time/area closure alternative.**

Source: Pelagic Observer Program data from 2001-2002.

	A	B	C	D	E	F	G	H	I	J	K	L
Month	Number of hooks in the Atlantic and Gulf of Mexico	Number of sea turtles caught in the Atl. & the Gulf of Mexico	Number of hooks in the time/area closure	Number of sea turtles caught in time/area closure	Number of sea turtles caught in open Atl. & Gulf of Mexico (B-D)	Sea turtle CPUE in the open Atl. & Gulf of Mexico (E/(A-C))	Number of additional sea turtles caught in open Atl. & GOM by displaced effort (C*F)	Sea turtles catch from open Atl. & GOM with displaced fishing effort (E+G)	Number of sea turtles avoided by area closure (B-H)	Cumulative catch avoided by month (sum of I)	Percent of total sea turtle interactions avoided by month (I/7)	Percent of total sea turtle interactions avoided by closure (J/7)
Jan	53,531	0	16,182	0	0	0.00e+00	0	0	0	0	0.0%	0.0%
Feb	40,163	0	7,278	0	0	0.00e+00	0	0	0	0	0.0%	0.0%
Mar	41,457	0	9,359	0	0	0.00e+00	0	0	0	0	0.0%	0.0%
Apr	79,944	1	14,137	1	0	0.00e+00	0	0	1	1	50.0%	50.0%
May	59,689	0	41,818	0	0	0.00e+00	0	0	0	1	0.0%	50.0%
June	47,708	0	14,916	0	0	0.00e+00	0	0	0	1	0.0%	50.0%
July	112,631	0	24,369	0	0	0.00e+00	0	0	0	1	0.0%	50.0%
Aug	150,119	0	14,721	0	0	0.00e+00	0	0	0	1	0.0%	50.0%
Sept	225,159	0	18,648	0	0	0.00e+00	0	0	0	1	0.0%	50.0%
Oct	261,587	0	13,140	0	0	0.00e+00	0	0	0	1	0.0%	50.0%
Nov	56,929	0	9,161	0	0	0.00e+00	0	0	0	1	0.0%	50.0%
Dec	32,673	1	6,773	1	0	0.00e+00	0	0	1	2	50.0%	100.0%
<b>Total</b>	<b>1,161,590</b>	<b>2</b>	<b>190,502</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>			

**Table 11      Redistribution of fishing effort and other sea turtle interactions in the central Gulf of Mexico time/area closure alternative.**

Source: Pelagic Longline Logbook data from 2001-2002.

	A	B	C	D	E	F	G	H	I	J	K	L
Month	Number of hooks in the Atlantic and Gulf of Mexico	Number of sea turtles caught in the Atl. & the Gulf of Mexico	Number of hooks in the time/area closure	Number of sea turtles caught in time/area closure	Number of sea turtles caught in open Atl. & Gulf of Mexico (B-D)	Sea turtle CPUE in the open Atl. & Gulf of Mexico (E/(A-C))	Number of additional sea turtles caught in open Atl. & GOM by displaced effort (C*F)	Sea turtles catch from open Atl. & GOM with displaced fishing effort (E+G)	Number of sea turtles avoided by area closure (B-H)	Cumulative catch avoided by month (sum of I)	Percent of total sea turtle interactions avoided by month (I/5)	Percent of total sea turtle interactions avoided by closure (J/5)
Jan	1,082,142	0	335,798	0	0	0.00e+00	0	0	0	0	0.0%	0.0%
Feb	763,566	0	193,916	0	0	0.00e+00	0	0	0	0	0.0%	0.0%
Mar	897,001	0	142,441	0	0	0.00e+00	0	0	0	0	0.0%	0.0%
Apr	1,267,139	2	277,002	2	0	0.00e+00	0	0	2	2	40.0%	40.0%
May	1,317,311	0	411,194	0	0	0.00e+00	0	0	0	2	0.0%	40.0%
June	1,414,291	0	489,547	0	0	0.00e+00	0	0	0	2	0.0%	40.0%
July	1,563,985	0	712,007	0	0	0.00e+00	0	0	0	2	0.0%	40.0%
Aug	1,555,525	0	608,595	0	0	0.00e+00	0	0	0	2	0.0%	40.0%
Sept	1,221,082	0	550,770	0	0	0.00e+00	0	0	0	2	0.0%	40.0%
Oct	1,119,064	0	392,775	0	0	0.00e+00	0	0	0	2	0.0%	40.0%
Nov	1,020,819	0	368,359	0	0	0.00e+00	0	0	0	2	0.0%	40.0%
Dec	898,269	3	352,223	3	0	0.00e+00	0	0	3	5	60.0%	100.0%
<b>Total</b>	<b>14,120,194</b>	<b>5</b>	<b>4,834,627</b>	<b>5</b>	<b>0</b>	<b>0.00e+00</b>	<b>0</b>	<b>0</b>	<b>5</b>			

**Table 12** Percent change in catch of swordfish, yellowfin and bigeye tuna with the central Gulf of Mexico time/area closure in effect. Based on Pelagic Longline Logbook data with and without redistribution of effort.

	Without redistribution of effort from 2001-2002	With redistribution of effort based on data from 2001-2002
	Logbook Data	Logbook Data
Swordfish	-21%	17% *
Yellowfin	-38%	-2%
Bigeye	-12%	32% *

\* positive sign indicates an increase in catch

**Table 13** Example of temporal variation in effectiveness of the central Gulf of Mexico time/area closure on swordfish, yellowfin and bigeye tuna without redistribution of effort. Source: Pelagic Logbook Data 2001-2002.

Month	Number reported caught inside the time/area closure			Number reported caught outside the time/area closure			Percentage reduction in number caught if time/area is closed		
	Swordfish	Yellowfin	Bigeye	Swordfish	Yellowfin	Bigeye	Swordfish	Yellowfin	Bigeye
January	1,056	3,316	177	7,495	3,401	1,831	12%	49%	9%
February	663	813	95	6,447	1,533	2,311	0%	35%	4%
March	446	729	38	7,191	2,262	3,459	6%	24%	1%
April	449	3,076	11	7,182	5,139	2,343	6%	37%	0%
May	532	3,232	15	7,055	6,958	604	7%	32%	2%
June	2,332	3,916	685	4,983	10,352	811	32%	27%	46%
July	3,308	5,924	421	3,816	9,535	696	46%	38%	38%
August	2,746	6,565	349	3,705	8,870	2,419	43%	43%	13%
September	2,462	5,742	466	3,274	5,765	3,485	43%	50%	12%
October	1,242	3,235	356	5,244	8,424	3,022	19%	28%	11%
November	866	2,724	622	4,744	4,716	3,468	15%	37%	15%
December	1,065	3,376	378	4,681	3,552	1,823	19%	49%	17%
<b>Total</b>	<b>17,167</b>	<b>42,648</b>	<b>3,613</b>	<b>65,817</b>	<b>70,507</b>	<b>26,272</b>	<b>21%</b>	<b>38%</b>	<b>12%</b>

**Table 14     Redistribution of fishing effort and swordfish catch in the central Gulf of Mexico time/area closure alternative.** Source: Pelagic Longline Logbook data from 2001-2002.

	A	B	C	D	E	F	G	H	I	J	K	L
Month	Number of hooks in the Atlantic & Gulf of Mexico	Number of swordfish caught in Atl. & Gulf of Mexico	Number of hooks in the time/area closure	Number of swordfish caught in time/area closure	Number of swordfish caught in open Atl. & Gulf of Mexico (B-D)	Swordfish CPUE in the open Atl. & Gulf of Mexico (E/(A-C))	Number of additional swordfish caught in open Atl. & GOM by displaced effort (C*F)	Swordfish catch from open Atl & GOM with displaced fishing effort (E+G)	Number of swordfish avoided by area closure (B-H)	Cumulative catch avoided by month (sum of I)	Percent of total swordfish avoided by month (I/82,984)	Percent of total swordfish avoided by closure (J/82,984)
Jan	1,082,142	8,551	335,798	1,056	7,495	1.00e-02	3,372	10,867	-2316	-2316	-2.8%	-2.8%
Feb	763,566	7,110	193,916	663	6,447	1.13e-02	2,195	8,642	-1532	-3848	-1.8%	-4.6%
Mar	897,001	7,637	142,441	446	7,191	9.53e-03	1,357	8,548	-911	-4759	-1.1%	-5.7%
Apr	1,267,139	7,631	277,002	449	7,182	7.25e-03	2,009	9,191	-1560	-6319	-1.9%	-7.6%
May	1,317,311	7,587	411,194	532	7,055	7.79e-03	3,202	10,257	-2670	-8989	-3.2%	-10.8%
June	1,414,291	7,315	489,547	2,332	4,983	5.39e-03	2,638	7,621	-306	-9295	-0.4%	-11.2%
July	1,563,985	7,124	712,007	3,308	3,816	4.48e-03	3,189	7,005	119	-9176	0.1%	-11.1%
Aug	1,555,525	6,451	608,595	2,746	3,705	3.91e-03	2,381	6,086	365	-8811	0.4%	-10.6%
Sept	1,221,082	5,736	550,770	2,462	3,274	4.88e-03	2,690	5,964	-228	-9039	-0.3%	-10.9%
Oct	1,119,064	6,486	392,775	1,242	5,244	7.22e-03	2,836	8,080	-1594	-10633	-1.9%	-12.8%
Nov	1,020,819	5,610	368,359	866	4,744	7.27e-03	2,678	7,422	-1812	-12445	-2.2%	-15.0%
Dec	898,269	5,746	352,223	1,065	4,681	8.57e-03	3,019	7,700	-1954	-14400	-2.4%	-17.4%
<b>Total</b>	<b>14,120,194</b>	<b>82,984</b>	<b>4,834,627</b>	<b>17,167</b>	<b>65,817</b>	<b>8.77e-02</b>	<b>31,567</b>	<b>97,384</b>	<b>-14400</b>			

**Table 15     Redistribution of fishing effort and yellowfin tuna catch in the central Gulf of Mexico time/area closure alternative.** Source: Pelagic Longline Logbook data from 2001-2002.

	A	B	C	D	E	F	G	H	I	J	K	L
Month	Number of hooks in the Atlantic & Gulf of Mexico	Number of tuna caught in Atl. & Gulf of Mexico	Number of hooks in the time/area closure	Number of tuna caught in time/area closure	Number of tuna caught in open Atl. & Gulf of Mexico (B-D)	Tuna CPUE in the open Atl. & Gulf of Mexico (E/(A-C))	Number of additional tuna caught in open Atl. & GOM by displaced effort (C*F)	Tuna catch from open Atl. & GOM with displaced fishing effort (E+G)	Number of tuna avoided by area closure (B-H)	Cumulative catch avoided by month (sum of I)	Percent of total tunas avoided by month (I/113,155)	Percent of total tunas avoided by closure (J/113,155)
Jan	1,082,142	6,717	335,798	3,316	3,401	4.56e-03	1,530	4,931	1786	1786	1.6%	1.6%
Feb	763,566	2,346	193,916	813	1,533	2.69e-03	522	2,055	291	2077	0.3%	1.8%
Mar	897,001	2,991	142,441	729	2,262	3.00e-03	427	2,689	302	2379	0.3%	2.1%
Apr	1,267,139	8,215	277,002	3,076	5,139	5.19e-03	1,438	6,577	1638	4017	1.4%	3.6%
May	1,317,311	10,190	411,194	3,232	6,958	7.68e-03	3,158	10,116	74	4092	0.1%	3.6%
June	1,414,291	14,268	489,547	3,916	10,352	1.12e-02	5,480	15,832	-1564	2528	-1.4%	2.2%
July	1,563,985	15,459	712,007	5,924	9,535	1.12e-02	7,969	17,504	-2045	483	-1.8%	0.4%
Aug	1,555,525	15,435	608,595	6,565	8,870	9.37e-03	5,701	14,571	864	1347	0.8%	1.2%
Sept	1,221,082	11,507	550,770	5,742	5,765	8.60e-03	4,737	10,502	1005	2353	0.9%	2.1%
Oct	1,119,064	11,659	392,775	3,235	8,424	1.16e-02	4,556	12,980	-1321	1032	-1.2%	0.9%
Nov	1,020,819	7,440	368,359	2,724	4,716	7.23e-03	2,663	7,379	61	1093	0.1%	1.0%
Dec	898,269	6,928	352,223	3,376	3,552	6.50e-03	2,291	5,843	1085	2178	1.0%	1.9%
<b>Total</b>	<b>14,120,194</b>	<b>113,155</b>	<b>4,834,627</b>	<b>42,648</b>	<b>70,507</b>	<b>8.88e-02</b>	<b>40,470</b>	<b>110,977</b>	<b>2178</b>			

**Table 16**      **Redistribution of fishing effort and bigeye tuna catch in the central Gulf of Mexico time/area closure alternative.** Source: Pelagic Longline Logbook data from 2001-2002.

	A	B	C	D	E	F	G	H	I	J	K	L
Month	Number of hooks in the Atlantic & Gulf of Mexico	Number of tuna caught in Atl. & Gulf of Mexico	Number of hooks in the time/area closure	Number of tuna caught in time/area closure	Number of tuna caught in open Atl. & Gulf of Mexico (B-D)	Tuna CPUE in the open Atl. & Gulf of Mexico (E/(A-C))	Number of additional tuna caught in open Atl. & GOM by displaced effort (C*F)	Tuna catch from open Atl. & GOM with displaced fishing effort (E+G)	Number of tuna avoided by area closure (B-H)	Cumulative catch avoided by month (sum of I)	Percent of total tunas avoided by month (I/29,885)	Percent of total tunas avoided by closure (J/29,885)
Jan	1,082,142	2,008	335,798	177	1,831	2.45e-03	824	2655	-647	-647	-2.2%	-2.2%
Feb	763,566	2,406	193,916	95	2,311	4.06e-03	787	3098	-692	-1339	-2.3%	-4.5%
Mar	897,001	3,497	142,441	38	3,459	4.58e-03	653	4112	-615	-1954	-2.1%	-6.5%
Apr	1,267,139	2,354	277,002	11	2,343	2.37e-03	655	2998	-644	-2598	-2.2%	-8.7%
May	1,317,311	619	411,194	15	604	0.00e+00	0	604	15	-2583	0.1%	-8.6%
June	1,414,291	1,496	489,547	685	811	8.77e-04	429	1240	256	-2327	0.9%	-7.8%
July	1,563,985	1,117	712,007	421	696	8.17e-04	582	1278	-161	-2488	-0.5%	-8.3%
Aug	1,555,525	2,768	608,595	349	2,419	2.55e-03	1555	3974	-1206	-3694	-4.0%	-12.4%
Sept	1,221,082	3,951	550,770	466	3,485	5.20e-03	2863	6348	-2397	-6091	-8.0%	-20.4%
Oct	1,119,064	3,378	392,775	356	3,022	4.16e-03	1634	4656	-1278	-7370	-4.3%	-24.7%
Nov	1,020,819	4,090	368,359	622	3,468	5.32e-03	1958	5426	-1336	-8706	-4.5%	-29.1%
Dec	898,269	2,201	352,223	378	1,823	3.34e-03	1176	2999	-798	-9503	-2.7%	-31.8%
<b>Total</b>	<b>14,120,194</b>	<b>29,885</b>	<b>4,834,627</b>	<b>3,613</b>	<b>26,272</b>	<b>3.57e-02</b>	<b>13116</b>	<b>39388</b>	<b>-9503</b>			



**Table 17**      **Percent change in catch of blue and white marlin dead and live discards with the central Gulf of Mexico time/area closure in effect.** Based on Pelagic Longline Logbook data with and without redistribution of effort.

Species	Disposition	Without redistribution of effort from 2001-2002	With redistribution of effort based on data from 2001-2002
		Logbook Data	Logbook Data
<b>Blue Marlin</b>	Dead Discards	-57%	-30%
	Live Discards	-29%	10%*
	All Discards	-37%	-1%
<b>White Marlin</b>	Dead Discards	-39%	-5%
	Live Discards	-26%	17%*
	All Discards	-30%	10%*

\* positive sign indicates an increase in catch

**Table 18 Example of temporal variation in effectiveness of the central Gulf of Mexico time/area closure on blue marlin discards without redistribution of effort.** Source: Pelagic Observer Program data 2001-2002 (Observer Data) and Pelagic Logbook Data 2002 (Logbook Data)

Month	Number reported caught inside the time/area closure			Number reported caught outside the time/area closure			Percentage reduction in number caught if time/area is closed		
	Dead Discards	Live Discards	Combined Discards	Dead Discards	Live Discards	Combined Discards	Dead Discards	Live Discards	Combined Discards
January	6	9	15	9	71	80	40%	11%	16%
February	0	4	4	4	49	53	0%	8%	7%
March	0	1	1	16	111	127	0%	1%	1%
April	1	10	11	17	87	104	6%	10%	10%
May	9	19	28	14	66	80	39%	22%	26%
June	35	49	84	35	73	110	50%	40%	43%
July	174	150	324	60	156	216	74%	49%	60%
August	23	30	53	32	129	161	42%	19%	25%
September	22	52	74	23	82	108	49%	39%	41%
October	10	35	45	6	27	33	63%	56%	58%
November	12	12	24	1	34	35	92%	26%	41%
December	4	5	9	10	43	53	29%	10%	15%
<b>Total</b>	<b>296</b>	<b>376</b>	<b>672</b>	<b>227</b>	<b>928</b>	<b>1160</b>	<b>57%</b>	<b>29%</b>	<b>37%</b>

**Table 19     Redistribution of fishing effort and blue marlin dead discards in the central Gulf of Mexico time/area closure alternative.**  
Source: Pelagic Longline Logbook data from 2001-2002.

	A	B	C	D	E	F	G	H	I	J	K	L
Month	Number of hooks in the Atlantic & Gulf of Mexico	Number of dead discards in Atl. & Gulf of Mexico	Number of hooks in the time/area closure	Number of dead discards in time/area closure	Number of discards in open Atl. & Gulf of Mexico (B-D)	Marlin CPUE in the open Atl. & Gulf of Mexico (E/(A-C))	Number of additional marlin discards in open Atl. & GOM by displaced effort (C*F)	Marlin discards from open Atl. & GOM with displaced fishing effort (E+G)	Number of marlin discards avoided by area closure (B-H)	Cumulative discards avoided by month (sum of I)	Percent of total marlin discards by month (I/523)	Percent of total marlin discards avoided by closure (J/523)
Jan	1,082,142	15	335,798	6	9	1.21e-05	4	13	2	2	0.4%	0.4%
Feb	763,566	4	193,916	0	4	7.02e-06	1	5	-1	1	-0.3%	0.1%
Mar	897,001	16	142,441	0	16	2.12e-05	3	19	-3	-2	-0.6%	-0.5%
Apr	1,267,139	18	277,002	1	17	1.72e-05	5	22	-4	-6	-0.7%	-1.2%
May	1,317,311	23	411,194	9	14	1.55e-05	6	20	3	-3	0.5%	-0.7%
June	1,414,291	70	489,547	35	35	3.78e-05	19	54	16	13	3.1%	2.5%
July	1,563,985	234	712,007	174	60	7.04e-05	50	110	124	137	23.7%	26.2%
Aug	1,555,525	55	608,595	23	32	3.38e-05	21	53	2	139	0.5%	26.6%
Sept	1,221,082	45	550,770	22	23	3.43e-05	19	42	3	142	0.6%	27.2%
Oct	1,119,064	16	392,775	10	6	8.26e-06	3	9	7	149	1.3%	28.5%
Nov	1,020,819	13	368,359	12	1	1.53e-06	1	2	11	161	2.2%	30.7%
Dec	898,269	14	352,223	4	10	1.83e-05	6	16	-2	158	-0.5%	30.2%
<b>Total</b>	<b>14,120,194</b>	<b>523</b>	<b>4,834,627</b>	<b>296</b>	<b>227</b>	<b>2.77e-04</b>	<b>138</b>	<b>365</b>	<b>158</b>			

**Table 20      Redistribution of fishing effort and blue marlin live discards in the central Gulf of Mexico time/area closure alternative.**  
Source: Pelagic Longline Logbook data from 2001-2002.

	A	B	C	D	E	F	G	H	I	J	K	L
Month	Number of hooks in the Atlantic & Gulf of Mexico	Number of live discards in Atl. & Gulf of Mexico	Number of hooks in the time/area closure	Number of live discards in time/area closure	Number of discards in open Atl. & Gulf of Mexico (B-D)	Marlin CPUE in the open Atl. & Gulf of Mexico (E/(A-C))	Number of additional marlin discards in open Atl. & GOM by displaced effort (C*F)	Marlin discards from open Atl. & GOM with displaced fishing effort (E+G)	Number of marlin discards avoided by area closure (B-H)	Cumulative discards avoided by month (sum of I)	Percent of total marlin discards by month (I/1304)	Percent of total marlin discards avoided by closure (J/1304)
Jan	1,082,142	80	335,798	9	71	9.51e-05	32	103	-23	-23	-1.8%	-1.8%
Feb	763,566	53	193,916	4	49	8.60e-05	17	66	-13	-36	-1.0%	-2.7%
Mar	897,001	112	142,441	1	111	1.47e-04	21	132	-20	-56	-1.5%	-4.3%
Apr	1,267,139	97	277,002	10	87	8.79e-05	24	111	-14	-70	-1.1%	-5.4%
May	1,317,311	85	411,194	19	66	7.28e-05	30	96	-11	-81	-0.8%	-6.2%
June	1,414,291	122	489,547	49	73	7.89e-05	39	112	10	-71	0.8%	-5.4%
July	1,563,985	306	712,007	150	156	1.83e-04	130	286	20	-51	1.5%	-3.9%
Aug	1,555,525	159	608,595	30	129	1.36e-04	83	212	-53	-104	-4.1%	-8.0%
Sept	1,221,082	134	550,770	52	82	1.22e-04	67	149	-15	-119	-1.2%	-9.1%
Oct	1,119,064	62	392,775	35	27	3.72e-05	15	42	20	-99	1.6%	-7.6%
Nov	1,020,819	46	368,359	12	34	5.21e-05	19	53	-7	-106	-0.6%	-8.1%
Dec	898,269	48	352,223	5	43	7.87e-05	28	71	-23	-129	-1.7%	-9.9%
<b>Total</b>	<b>14,120,194</b>	<b>1304</b>	<b>4,834,627</b>	<b>376</b>	<b>928</b>	<b>1.18e-03</b>	<b>505</b>	<b>1433</b>	<b>-129</b>			

**Table 21**      **Redistribution of fishing effort and blue marlin dead and live discards combined in the central Gulf of Mexico time/area closure alternative.** Source: Pelagic Longline Logbook data from 2001-2002.

	A	B	C	D	E	F	G	H	I	J	K	L
Month	Number of hooks in the Atlantic & Gulf of Mexico	Number of discards in Atl. & Gulf of Mexico	Number of hooks in the time/area closure	Number of discards in time/area closure	Number of discards in open Atl. & Gulf of Mexico (B-D)	Marlin CPUE in the open Atl. & Gulf of Mexico (E/(A-C))	Number of additional marlin discards in open Atl. & GOM by displaced effort (C*F)	Marlin discards from open Atl. & GOM with displaced fishing effort (E+G)	Number of marlin discards avoided by area closure (B-H)	Cumulative discards avoided by month (sum of I)	Percent of total marlin discards by month (I/1832)	Percent of total marlin discards avoided by closure (J/1832)
Jan	1,082,142	95	335,798	15	80	1.07e-04	36	116	-21	-21	-1.1%	-1.1%
Feb	763,566	57	193,916	4	53	9.30e-05	18	71	-14	-35	-0.8%	-1.9%
Mar	897,001	128	142,441	1	127	1.68e-04	24	151	-23	-58	-1.3%	-3.2%
Apr	1,267,139	115	277,002	11	104	1.05e-04	29	133	-18	-76	-1.0%	-4.2%
May	1,317,311	108	411,194	28	80	8.83e-05	36	116	-8	-84	-0.5%	-4.6%
June	1,414,291	194	489,547	84	110	1.19e-04	58	168	26	-59	1.4%	-3.2%
July	1,563,985	540	712,007	324	216	2.54e-04	181	397	143	85	7.8%	4.6%
Aug	1,555,525	214	608,595	53	161	1.70e-04	103	264	-50	34	-2.8%	1.9%
Sept	1,221,082	182	550,770	74	108	1.61e-04	89	197	-15	20	-0.8%	1.1%
Oct	1,119,064	78	392,775	45	33	4.54e-05	18	51	27	47	1.5%	2.6%
Nov	1,020,819	59	368,359	24	35	5.36e-05	20	55	4	51	0.2%	2.8%
Dec	898,269	62	352,223	9	53	9.71e-05	34	87	-25	26	-1.4%	1.4%
<b>Total</b>	<b>14,120,194</b>	<b>1832</b>	<b>4,834,627</b>	<b>672</b>	<b>1160</b>	<b>1.46e-03</b>	<b>646</b>	<b>1806</b>	<b>26</b>			

**Table 22 Example of temporal variation in effectiveness of the central Gulf of Mexico time/area closure on white marlin discards without redistribution of effort.** Source: Pelagic Observer Program data 2001-2002 (Observer Data) and Pelagic Logbook Data 2002 (Logbook Data).

Month	Number reported caught inside the time/area closure			Number reported caught outside the time/area closure			Percentage reduction in number caught if time/area is closed		
	Dead Discards	Live Discards	Combined Discards	Dead Discards	Live Discards	Combined Discards	Dead Discards	Live Discards	Combined Discards
January	1	12	13	25	69	94	4%	15%	12%
February	0	4	4	9	43	52	0%	9%	7%
March	0	3	3	29	60	89	0%	5%	3%
April	0	8	8	38	120	158	0%	6%	5%
May	9	31	40	34	105	139	21%	23%	22%
June	43	53	96	78	159	240	36%	25%	29%
July	161	170	331	78	162	240	67%	51%	58%
August	23	48	71	80	242	322	22%	17%	18%
September	13	33	46	27	128	149	33%	20%	24%
October	15	16	31	11	43	54	58%	27%	36%
November	13	20	33	6	19	25	68%	51%	57%
December	1	12	13	18	33	51	5%	27%	20%
<b>Total</b>	<b>279</b>	<b>410</b>	<b>689</b>	<b>433</b>	<b>1,183</b>	<b>1613</b>	<b>39%</b>	<b>26%</b>	<b>30%</b>

**Table 23      Redistribution of fishing effort and white marlin dead discards in the central Gulf of Mexico time/area closure alternative.**  
Source: Pelagic Longline Logbook data from 2001-2002.

	A	B	C	D	E	F	G	H	I	J	K	L
Month	Number of hooks in the Atlantic & Gulf of Mexico	Number of discards in Atl. & Gulf of Mexico	Number of hooks in the time/area closure	Number of discards in time/area closure	Number of discards in open Atl. & Gulf of Mexico (B-D)	Marlin CPUE in the open Atl. & Gulf of Mexico (E/(A-C))	Number of additional marlin discards in open Atl. & GOM by displaced effort (C*F)	Marlin discards from open Atl. & GOM with displaced fishing effort (E+G)	Number of marlin discards avoided by area closure (B-H)	Cumulative discards avoided by month (sum of I)	Percent of total marlin discards by month (I/712)	Percent of total marlin discards avoided by closure (J/712)
Jan	1,082,142	26	335,798	1	25	3.35e-05	11	36	-10	-10	-1.4%	-1.4%
Feb	763,566	9	193,916	0	9	1.58e-05	3	12	-3	-13	-0.4%	-1.8%
Mar	897,001	29	142,441	0	29	3.84e-05	5	34	-5	-19	-0.8%	-2.6%
Apr	1,267,139	38	277,002	0	38	3.84e-05	11	49	-11	-29	-1.5%	-4.1%
May	1,317,311	43	411,194	9	34	3.75e-05	15	49	-6	-36	-0.9%	-5.0%
June	1,414,291	121	489,547	43	78	8.43e-05	41	119	2	-34	0.2%	-4.8%
July	1,563,985	239	712,007	161	78	9.16e-05	65	143	96	62	13.5%	8.7%
Aug	1,555,525	103	608,595	23	80	8.45e-05	51	131	-28	34	-4.0%	4.7%
Sept	1,221,082	40	550,770	13	27	4.03e-05	22	49	-9	24	-1.3%	3.4%
Oct	1,119,064	26	392,775	15	11	1.51e-05	6	17	9	33	1.3%	4.7%
Nov	1,020,819	19	368,359	13	6	9.20e-06	3	9	10	43	1.4%	6.0%
Dec	898,269	19	352,223	1	18	3.30e-05	12	30	-11	32	-1.5%	4.5%
<b>Total</b>	<b>14,120,194</b>	<b>712</b>	<b>4,834,627</b>	<b>279</b>	<b>433</b>	<b>5.22e-04</b>	<b>247</b>	<b>680</b>	<b>32</b>			

**Table 24     Redistribution of fishing effort and white marlin live discards in the central Gulf of Mexico time/area closure alternative.**  
Source: Pelagic Longline Logbook data from 2001-2002.

	A	B	C	D	E	F	G	H	I	J	K	L
Month	Number of hooks in the Atlantic & Gulf of Mexico	Number of live discards in Atl. & Gulf of Mexico	Number of hooks in the time/area closure	Number of live discards in time/area closure	Number of live discards in open Atl. & Gulf of Mexico (B-D)	Marlin CPUE in the open Atl. & Gulf of Mexico (E/(A-C))	Number of additional marlin discards in open Atl. & GOM by displaced effort (C*F)	Marlin discards from open Atl. & GOM with displaced fishing effort (E+G)	Number of marlin discards avoided by area closure (B-H)	Cumulative discards avoided by month (sum of I)	Percent of total marlin discards by month (I/1593)	Percent of total marlin discards avoided by closure (J/1593)
Jan	1,082,142	81	335,798	12	69	9.25e-05	31	100	-19	-19	-1.2%	-1.2%
Feb	763,566	47	193,916	4	43	7.55e-05	15	58	-11	-30	-0.7%	-1.9%
Mar	897,001	63	142,441	3	60	7.95e-05	11	71	-8	-38	-0.5%	-2.4%
Apr	1,267,139	128	277,002	8	120	1.21e-04	34	154	-26	-64	-1.6%	-4.0%
May	1,317,311	136	411,194	31	105	1.16e-04	48	153	-17	-80	-1.0%	-5.0%
June	1,414,291	212	489,547	53	159	1.72e-04	84	243	-31	-111	-2.0%	-7.0%
July	1,563,985	332	712,007	170	162	1.90e-04	135	297	35	-77	2.2%	-4.8%
Aug	1,555,525	290	608,595	48	242	2.56e-04	156	398	-108	-184	-6.8%	-11.6%
Sept	1,221,082	161	550,770	33	128	1.91e-04	105	233	-72	-256	-4.5%	-16.1%
Oct	1,119,064	59	392,775	16	43	5.92e-05	23	66	-7	-264	-0.5%	-16.6%
Nov	1,020,819	39	368,359	20	19	2.91e-05	11	30	9	-254	0.6%	-16.0%
Dec	898,269	45	352,223	12	33	6.04e-05	21	54	-9	-264	-0.6%	-16.6%
<b>Total</b>	<b>14,120,194</b>	<b>1593</b>	<b>4,834,627</b>	<b>410</b>	<b>1183</b>	<b>1.44e-03</b>	<b>674</b>	<b>1857</b>	<b>-264</b>			



**Table 25     Redistribution of fishing effort and white marlin dead and live discards combined in the central Gulf of Mexico time/area closure alternative.** Source: Pelagic Longline Logbook data from 2001-2002.

	A	B	C	D	E	F	G	H	I	J	K	L
Month	Number of hooks in the Atlantic & Gulf of Mexico	Number of discards in Atl. & Gulf of Mexico	Number of hooks in the time/area closure	Number of discards in time/area closure	Number of discards in open Atl. & Gulf of Mexico (B-D)	Marlin CPUE in the open Atl. & Gulf of Mexico (E/(A-C))	Number of additional marlin discards in open Atl. & GOM by displaced effort (C*F)	Marlin discards from open Atl. & GOM with displaced fishing effort (E+G)	Number of marlin discards avoided by area closure (B-H)	Cumulative discards avoided by month (sum of I)	Percent of total marlin discards by month (I/2302)	Percent of total marlin discards avoided by closure (J/2302)
Jan	1,082,142	107	335,798	13	94	1.26e-04	42	136	-29	-29	-1.3%	-1.3%
Feb	763,566	56	193,916	4	52	9.13e-05	18	70	-14	-43	-0.6%	-1.9%
Mar	897,001	92	142,441	3	89	1.18e-04	17	106	-14	-57	-0.6%	-2.5%
Apr	1,267,139	166	277,002	8	158	1.60e-04	44	202	-36	-93	-1.6%	-4.0%
May	1,317,311	179	411,194	40	139	1.53e-04	63	202	-23	-116	-1.0%	-5.0%
June	1,414,291	336	489,547	96	240	2.60e-04	127	367	-31	-147	-1.3%	-6.4%
July	1,563,985	571	712,007	331	240	2.82e-04	201	441	130	-16	5.7%	-0.7%
Aug	1,555,525	393	608,595	71	322	3.40e-04	207	529	-136	-152	-5.9%	-6.6%
Sept	1,221,082	195	550,770	46	149	2.22e-04	122	271	-76	-229	-3.3%	-9.9%
Oct	1,119,064	85	392,775	31	54	7.44e-05	29	83	2	-227	0.1%	-9.9%
Nov	1,020,819	58	368,359	33	25	3.83e-05	14	39	19	-208	0.8%	-9.0%
Dec	898,269	64	352,223	13	51	9.34e-05	33	84	-20	-228	-0.9%	-9.9%
<b>Total</b>	<b>14,120,194</b>	<b>2302</b>	<b>4,834,627</b>	<b>689</b>	<b>1613</b>	<b>1.96e-03</b>	<b>917</b>	<b>2530</b>	<b>-228</b>			

Figure 1. Map showing location and coordinates of proposed central Gulf of Mexico time/area closure.

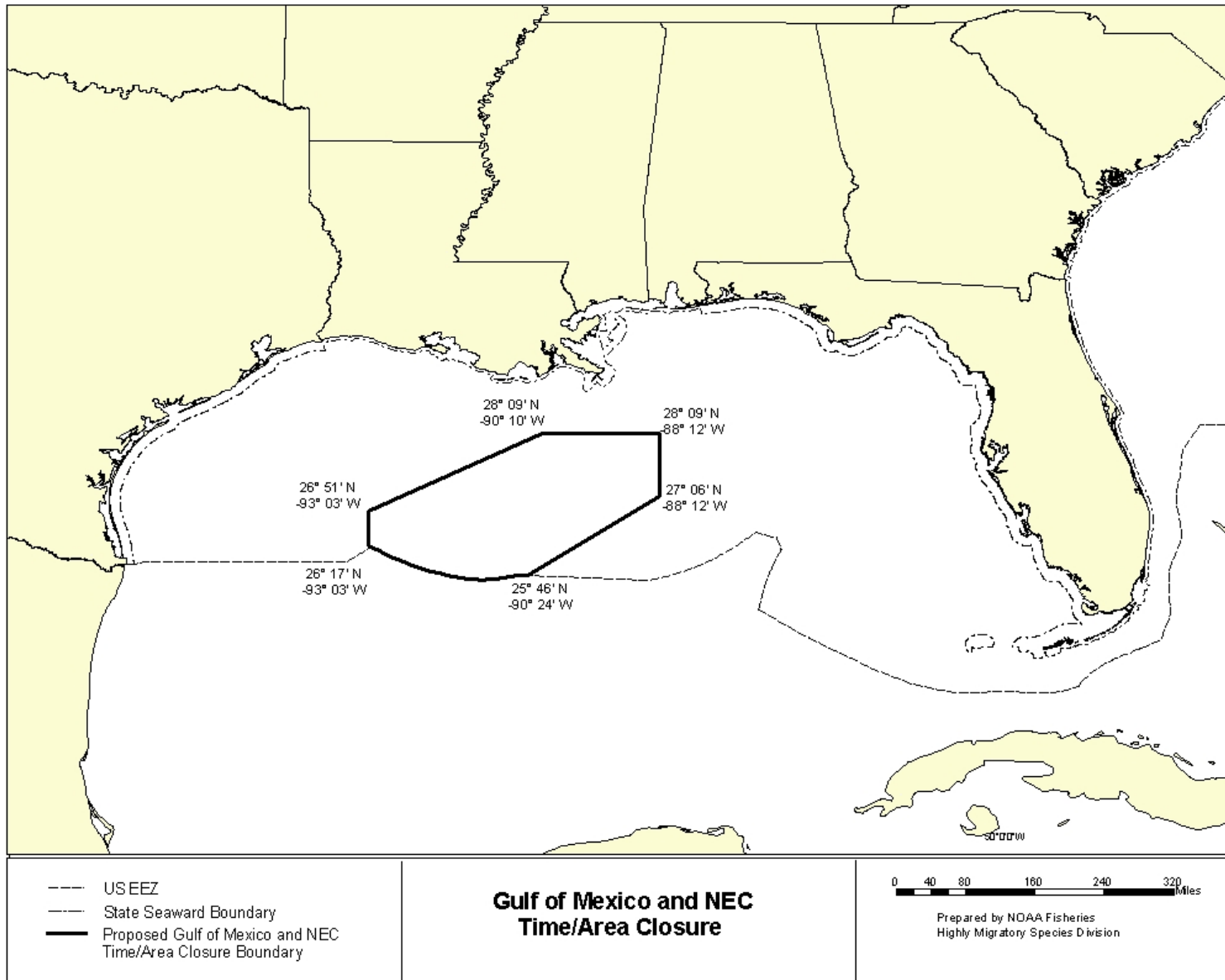


Figure 2 Map showing all observed sets and sea turtle interactions. Source: Pelagic Observer Program 2001-2002.

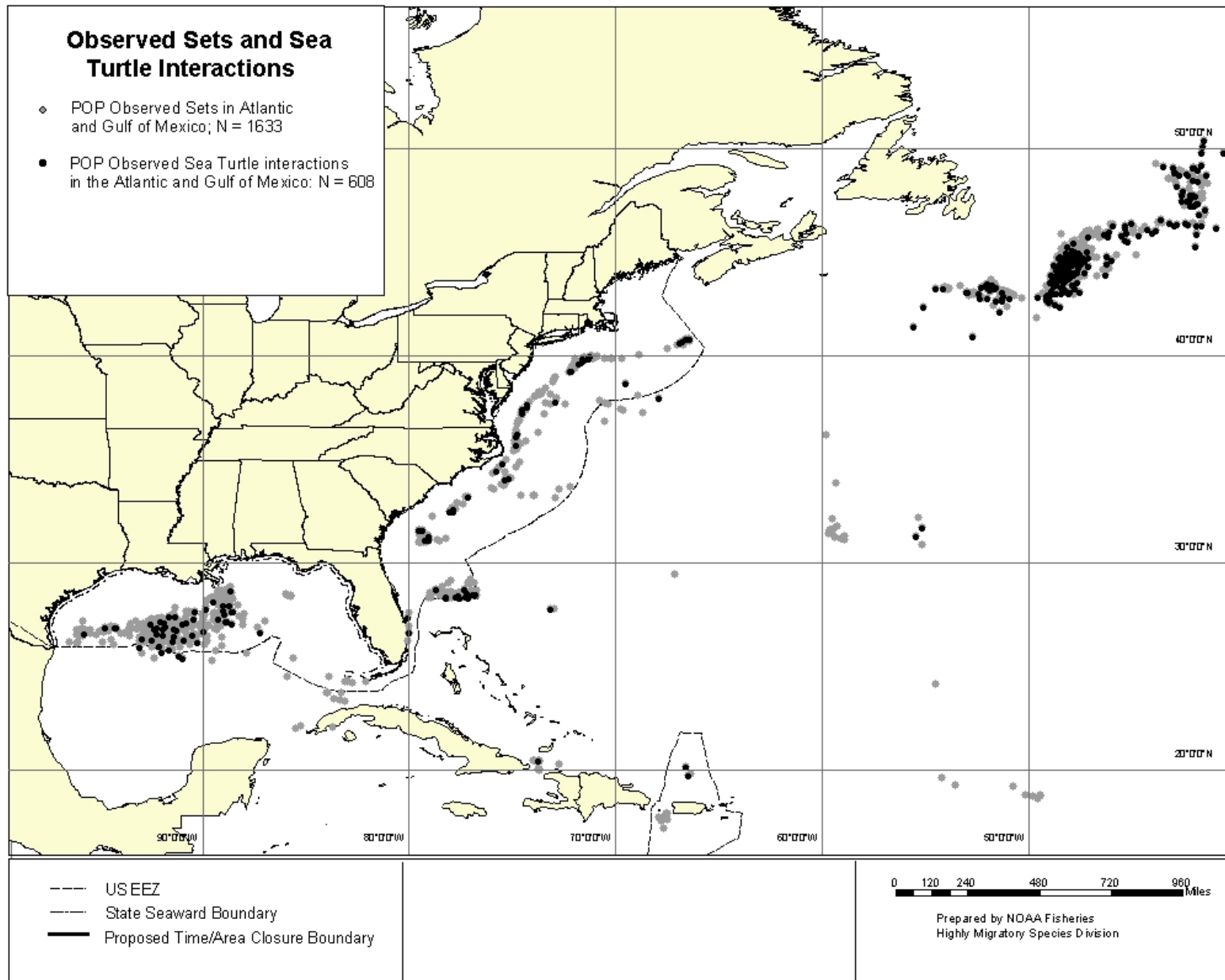
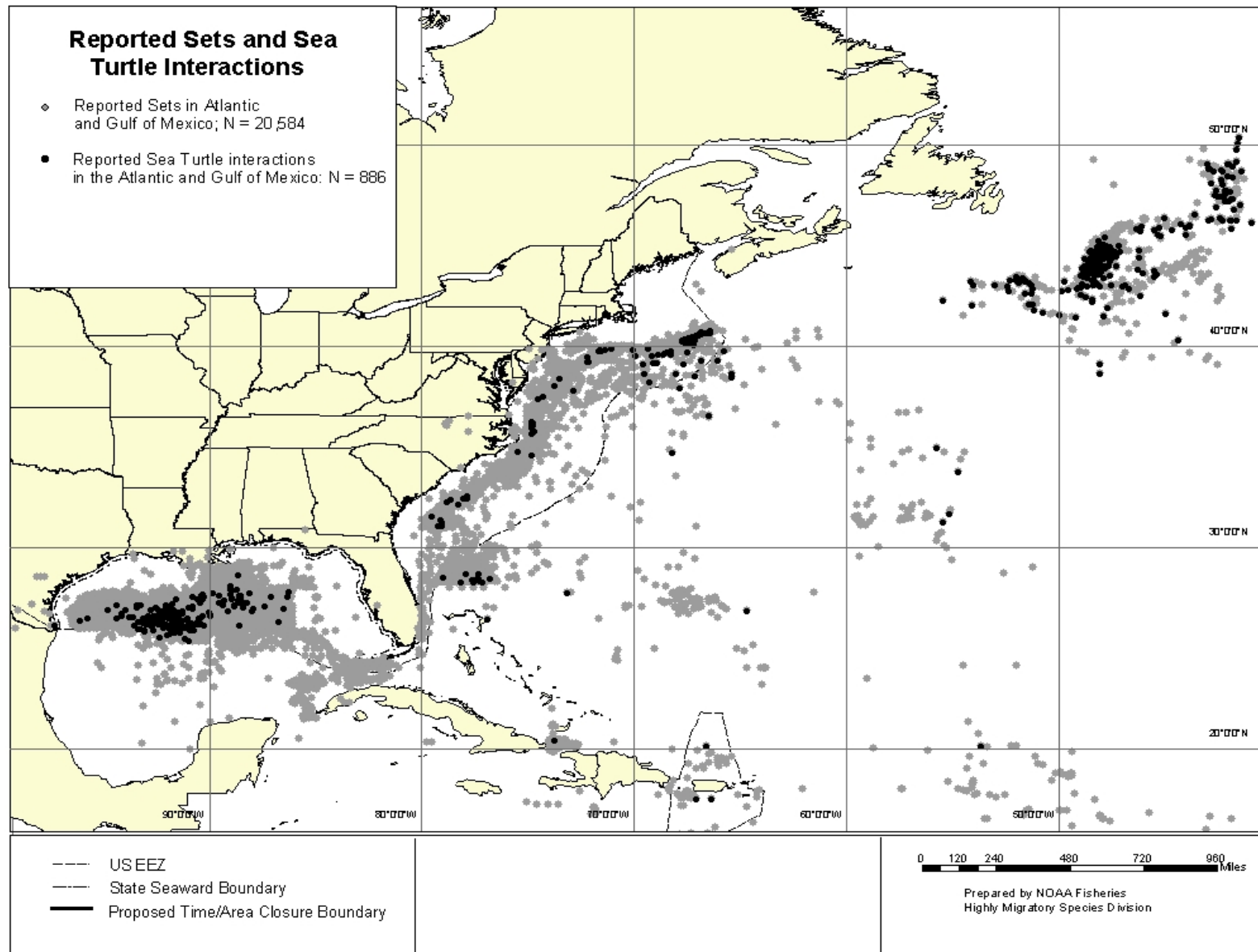
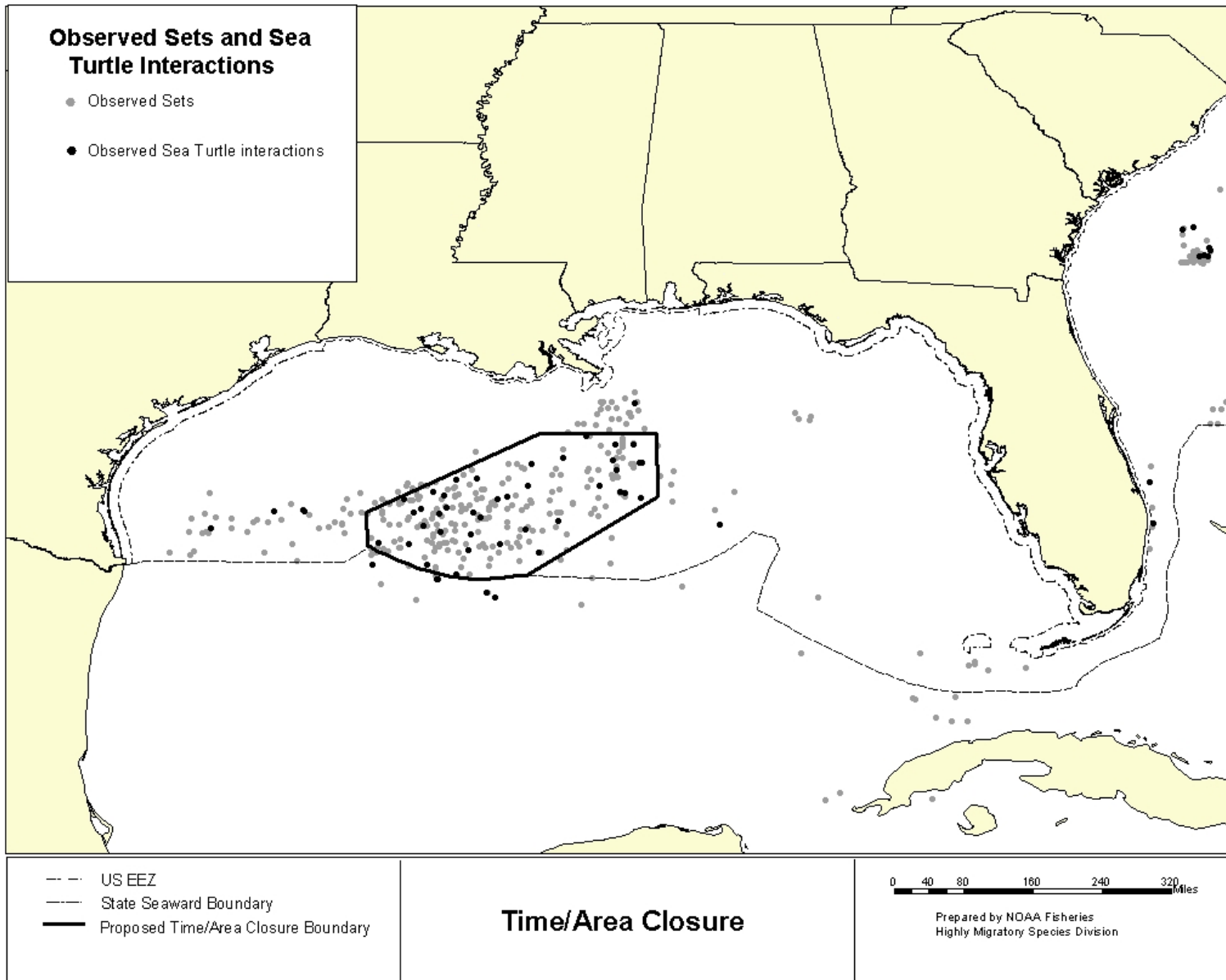


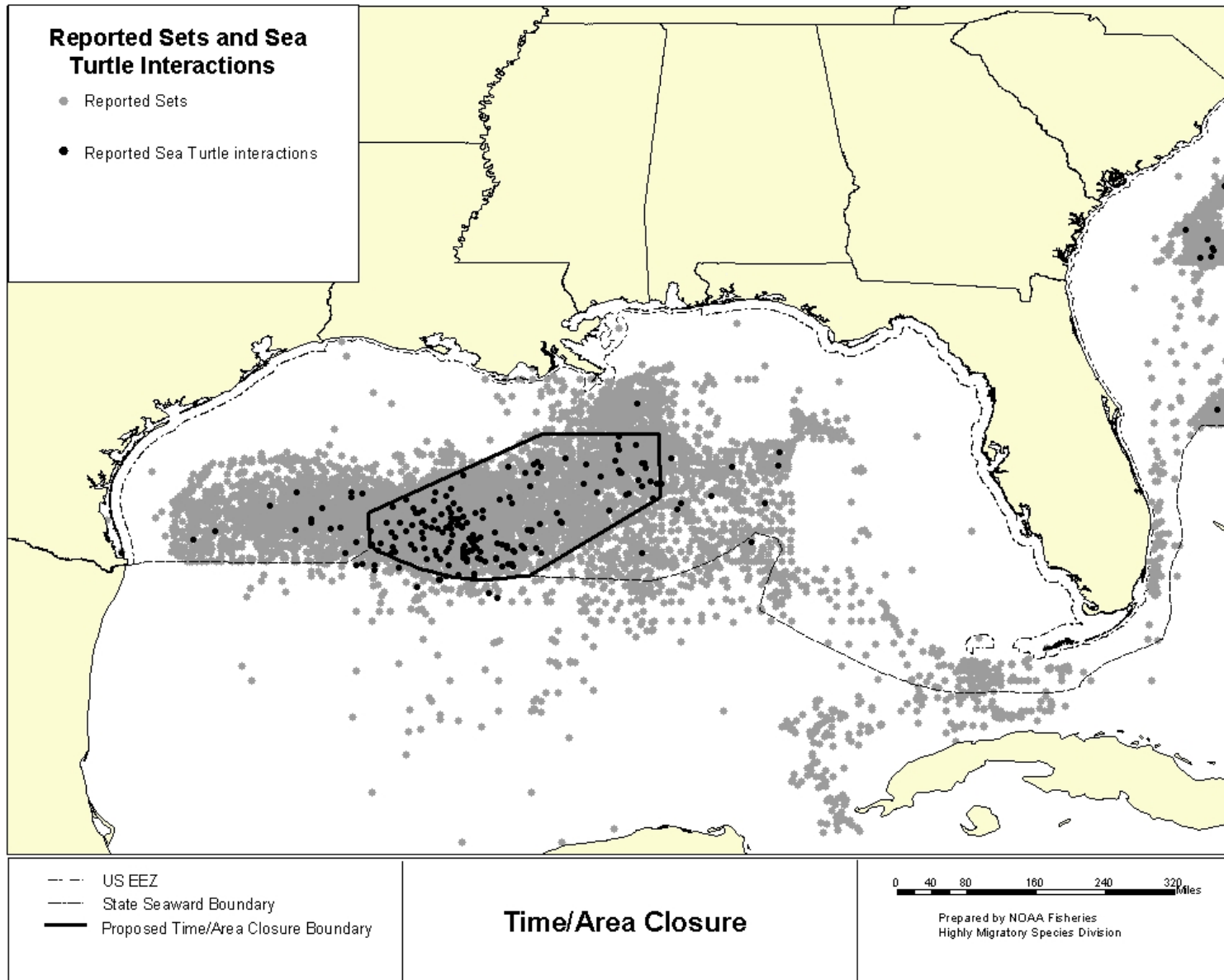
Figure 3 Map showing all reported sets and sea turtle interactions. Source: Pelagic Longline Logbook 2001-2002.



**Figure 4** Map showing all observed sets and sea turtle interactions in the Gulf of Mexico Time/Area closure. Source: Pelagic Observer Program 2001-2002.



**Figure 5** Map showing all reported sets and sea turtle interactions in the Time/Area closure compared to the rest of the Gulf of Mexico. Source: Pelagic Longline Logbook 2001-2002.



**Figure 6** Map showing all observed sets and sea turtle interactions in the time/area closure west of 88 degrees West.  
**Source: Pelagic Observer Program 2001-2002.**

