

PIFSC Report on the Logbook Program for the American Samoa Longline Fishery January-March 2010¹

Fisheries Monitoring and Socioeconomics Division
Pacific Islands Fisheries Science Center

The American Samoa longline fishery's summary catch and effort statistics for the first quarter of 2010, based on date of haul, are shown in Table 1. The table is derived from all logbook data submitted as of May 21, 2010. This table contains 96.6% of the known effort, with data from one of the 29 large longline vessel trips not yet received or entered in the database.

According to the longline logbook data, 22 vessels turned in some or all of their longline logs for sets made during the first quarter of 2010. These 22 vessels made 665 sets and deployed 2,003,049 hooks. Compared to the first quarter of 2009 the number of vessels turning in logs this quarter decreased by 8.3% (Fig. 1).

The first quarter of 2010 showed a decline in catch for most species compared to the first quarter of 2009, with a roughly proportional decline in effort. This decline was not surprising as a result of the devastation caused by the September 2009 tsunami and subsequent closure of one of the two canneries in American Samoa. Compared to the first quarter of 2009, the number of sets decreased by 35% (Fig. 2) and the number of hooks used decreased by 35.9% (Fig. 3). The average number of hooks used per set decreased slightly by 2%, from 3072 to 3012, the first decrease since the first quarter of 2006.

The total catch for all species combined was 28,061 fish (Fig. 4) which is a decrease of 34.7% compared to the first quarter of last year (Fig. 4). Albacore continued to dominate the catch with 18,033 fish caught in the first quarter of 2010, a 43% decrease from the 31,680 albacore caught in the first quarter of 2009 (Fig. 5). With the exception of skipjack, the catch of other tuna species showed a steep decrease over the first quarter of last year, with bigeye tuna decreasing by 49.8% (Fig. 6) and yellowfin tuna decreasing by 39.8% (Fig. 8). Skipjack tuna catch increased 75.8% (Fig. 7). The only non-tuna incidental catch species to increase was mahimahi, which increased by 66.1% (Fig. 9). The catch of the other non-tuna species decreased, with wahoo down by 4.1% (Fig. 10), billfishes down by 26.5% (Fig. 11), and shark down by 17.8% (Fig. 12).

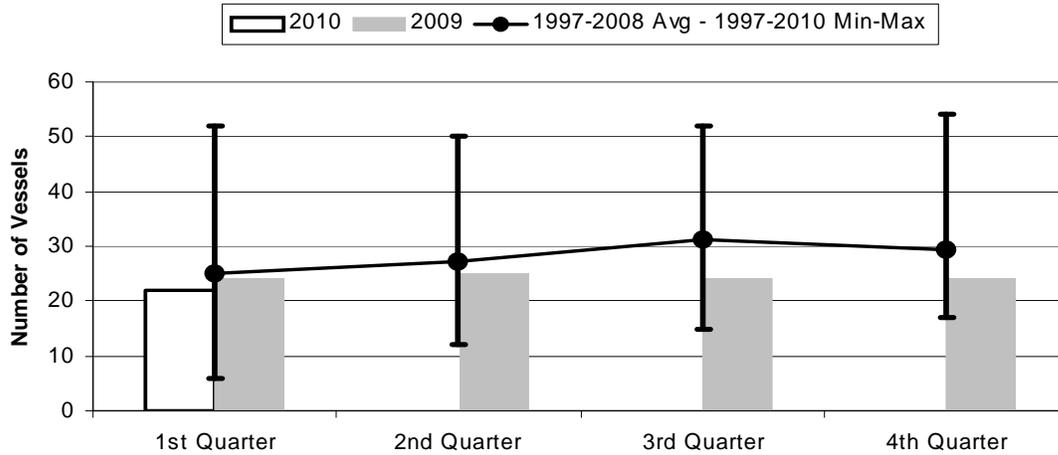
Compared to the first quarter of 2009, there were two notable differences in the catches per unit of effort (CPUE), measured by catch per 1000 hooks. The CPUE for albacore, bigeye, and yellowfin tuna decreased, while the CPUE of all other fish increased. The CPUE of albacore decreased by 11.2% (Fig. 13), bigeye tuna decreased by 21.6% (Fig. 14), yellowfin tuna decreased by 5.3% (Fig. 16), while skipjack tuna increased by 175% (Fig. 15). The CPUE of wahoo increased by 50% (Fig. 18), billfishes increased by 16.6% (Fig. 19), mahimahi increased by 150% (Fig. 17), and sharks increased by 30.3% (Fig. 20).

¹ PIFSC Data Report DR-10-007
Issued 7 June 2010

Table 1. Summary of fish catch and nominal fishing effort by American Samoa Longline vessels during the first quarter of 2010 based on longline logbooks submitted before May 21, 2010

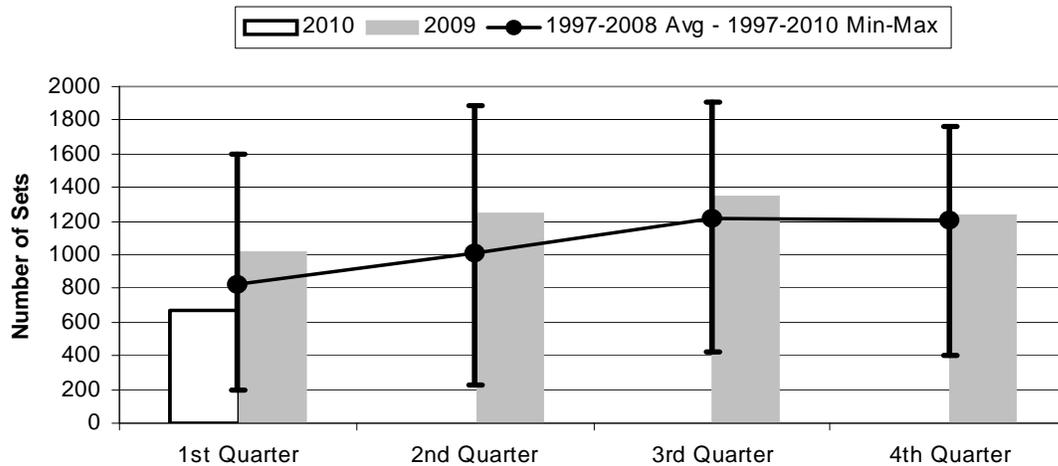
| TRIP INFORMATION | | | | |
|-----------------------------|------------------------------|--------------------|------------------------|-------------------------------------|
| | Number of Vessels: | | 22 | |
| | Number of Trips: | | 29 | |
| | Number of Sets: | | 665 | |
| | 1000's of Hooks Set: | | 2,003 | |
| | Number of Light Sticks Used: | | 3 | |
| CATCH INFORMATION | | | | |
| Species | Number Caught | Number Kept | Number Released | Number Caught per 1000 Hooks |
| BILLFISH | | | | |
| Blue marlin | 630 | 198 | 432 | 0.31 |
| Striped marlin | 51 | 18 | 33 | 0.03 |
| Sailfish | 102 | 16 | 86 | 0.05 |
| Spearfish | 141 | 16 | 125 | 0.07 |
| Swordfish | 50 | 41 | 9 | 0.03 |
| TOTAL BILLFISH | 974 | 289 | 685 | 0.49 |
| SHARKS | | | | |
| Blue shark | 644 | 5 | 639 | 0.32 |
| Shortfin mako shark | 23 | 0 | 23 | 0.01 |
| Thresher shark | 34 | 0 | 34 | 0.02 |
| White tip oceanic shark | 125 | 2 | 123 | 0.06 |
| Sharks (unknown) | 28 | 0 | 28 | 0.01 |
| TOTAL SHARKS | 854 | 7 | 847 | 0.43 |
| TUNA | | | | |
| Albacore tuna | 18,033 | 17,843 | 190 | 9.00 |
| Bigeye tuna | 579 | 551 | 28 | 0.29 |
| Bluefin tuna | 4 | 4 | 0 | 0.00 |
| Skipjack tuna | 2,432 | 2,053 | 379 | 1.21 |
| Yellowfin tuna | 1,418 | 1,345 | 73 | 0.71 |
| TOTAL TUNA | 22,466 | 21,796 | 670 | 11.22 |
| OTHER PELAGICS | | | | |
| Mahimahi | 108 | 88 | 20 | 0.05 |
| Moonfish | 78 | 17 | 61 | 0.04 |
| Oilfish | 1,144 | 3 | 1,141 | 0.57 |
| Pomfret | 65 | 21 | 44 | 0.03 |
| Wahoo | 2,289 | 1,799 | 490 | 1.14 |
| TOTAL OTHER PELAGICS | 3,684 | 1,928 | 1,756 | 1.84 |
| NON-PMUS | | | | |
| Pelagic fishes (unknown) | 83 | 4 | 79 | 0.04 |
| TOTAL NON-PMUS | 83 | 4 | 79 | 0.04 |
| TOTAL ALL SPECIES | 28,061 | 24,024 | 4,037 | 14.01 |

Figure 1. American Samoa Longline Vessels Submitting Logs by Quarter for



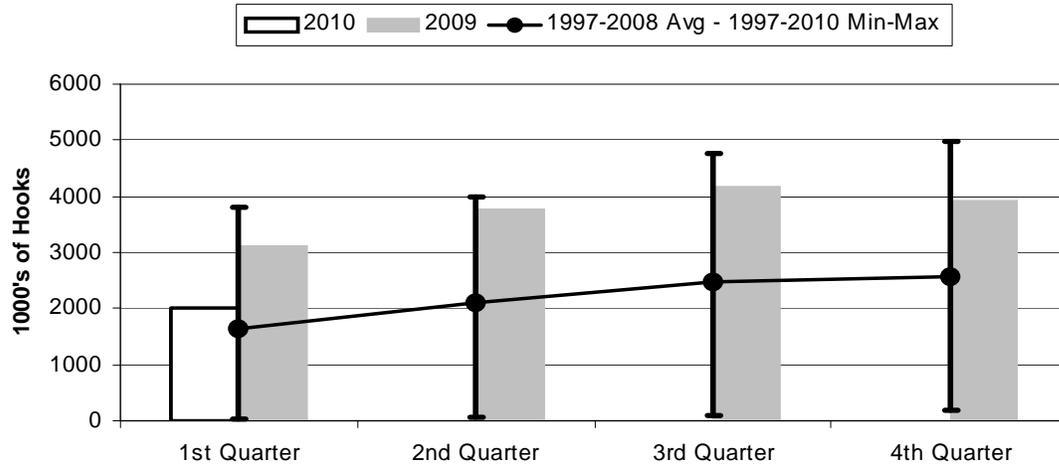
| | 1st Quarter | 2nd Quarter | 3rd Quarter | 4th Quarter |
|---------------|-------------|-------------|-------------|-------------|
| 2010 | 22 | 0 | 0 | 0 |
| 2009 | 24 | 25 | 24 | 24 |
| 1997-2010 Max | 52 | 50 | 52 | 54 |
| 1997-2010 Avg | 25 | 27 | 31 | 29 |
| 1997-2010 Min | 6 | 12 | 15 | 17 |

Figure 2. Number of Sets by American Samoa Longline Vessels by Quarter for



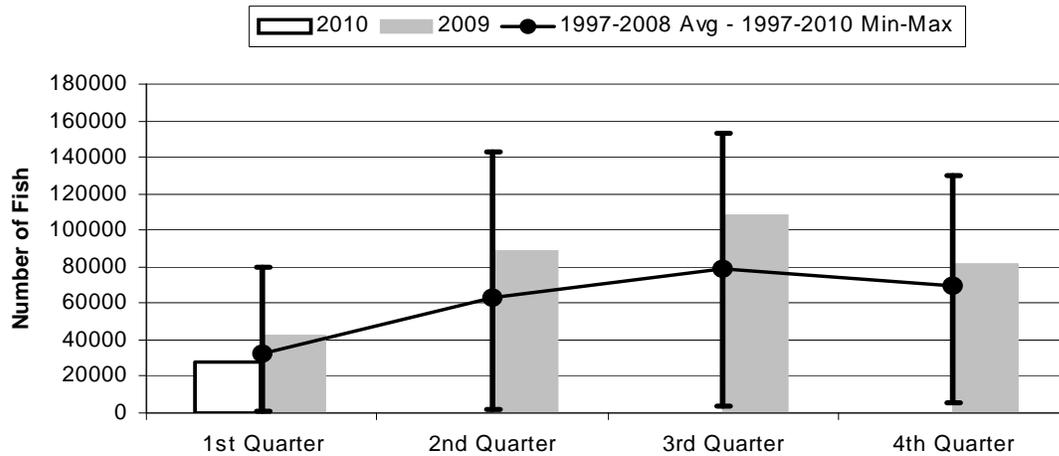
| | 1st Quarter | 2nd Quarter | 3rd Quarter | 4th Quarter |
|---------------|-------------|-------------|-------------|-------------|
| 2010 | 665 | 0 | 0 | 0 |
| 2009 | 1,024 | 1,252 | 1,353 | 1,240 |
| 1997-2010 Max | 1,602 | 1,886 | 1,904 | 1,758 |
| 1997-2010 Avg | 820 | 1,009 | 1,217 | 1,209 |
| 1997-2010 Min | 192 | 223 | 424 | 402 |

Figure 3. Number of Hooks Set by the American Samoa Longline Fleet by Quarter for



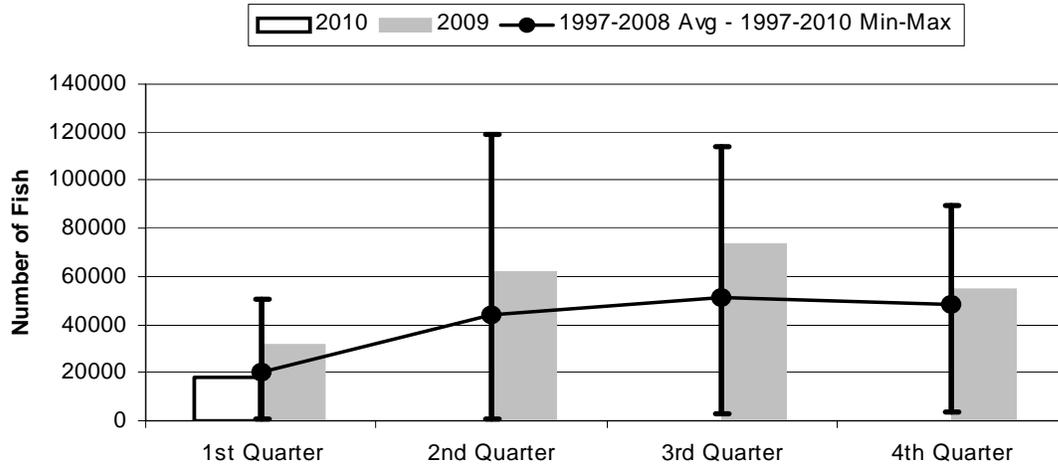
| | 1st Quarter | 2nd Quarter | 3rd Quarter | 4th Quarter |
|---------------|-------------|-------------|-------------|-------------|
| 2010 | 2,003 | 0 | 0 | 0 |
| 2009 | 3,125 | 3,788 | 4,162 | 3,923 |
| 1997-2010 Max | 3,805 | 3,993 | 4,769 | 4,985 |
| 1997-2008 Avg | 1,653 | 2,104 | 2,488 | 2,558 |
| 1997-2010 Min | 41 | 51 | 101 | 175 |

Figure 4. American Samoa Longline Total Catch (All Species) by Quarter for



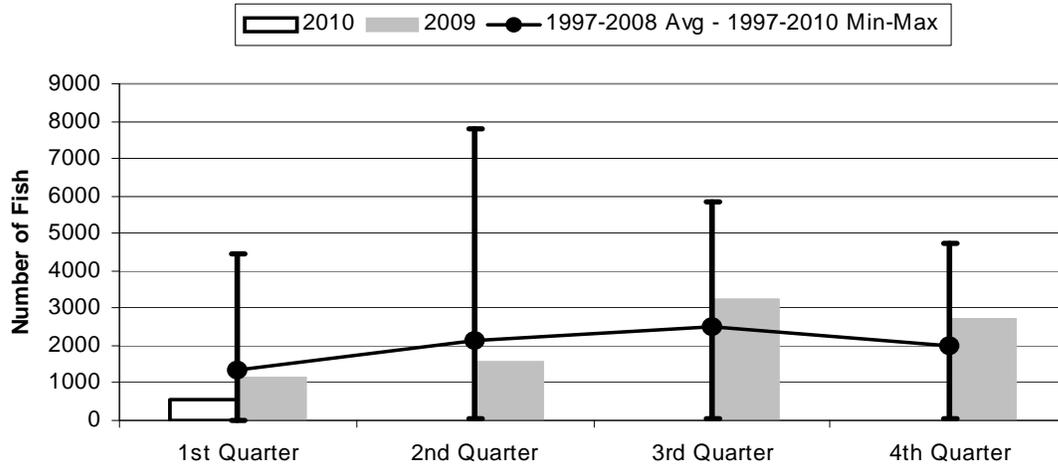
| | 1st Quarter | 2nd Quarter | 3rd Quarter | 4th Quarter |
|---------------|-------------|-------------|-------------|-------------|
| 2010 | 28,061 | 0 | 0 | 0 |
| 2009 | 43,026 | 88,705 | 108,384 | 81,337 |
| 1997-2010 Max | 79,567 | 142,603 | 153,301 | 130,238 |
| 1997-2008 Avg | 32,782 | 63,485 | 79,153 | 69,270 |
| 1997-2010 Min | 1,315 | 1,416 | 4,127 | 5,204 |

Figure 5. American Samoa Longline Albacore Catch by Quarter for



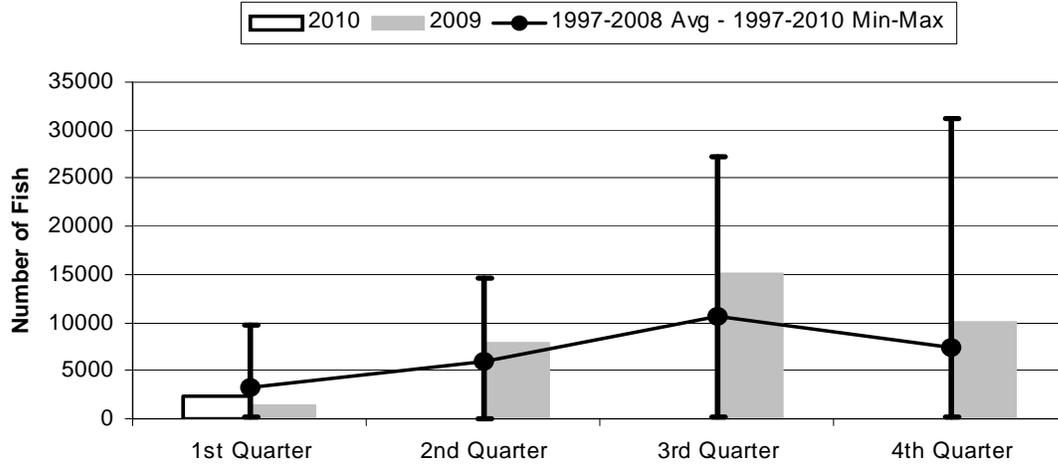
| | 1st Quarter | 2nd Quarter | 3rd Quarter | 4th Quarter |
|---------------|-------------|-------------|-------------|-------------|
| 2010 | 18,033 | 0 | 0 | 0 |
| 2009 | 31,680 | 62,186 | 73,400 | 54,722 |
| 1997-2010 Max | 50,382 | 118,994 | 113,831 | 89,389 |
| 1997-2008 Avg | 20,450 | 44,004 | 50,878 | 48,635 |
| 1997-2010 Min | 940 | 851 | 3,182 | 3,466 |

Figure 6. American Samoa Longline Bigeye Tuna Catch by Quarter for



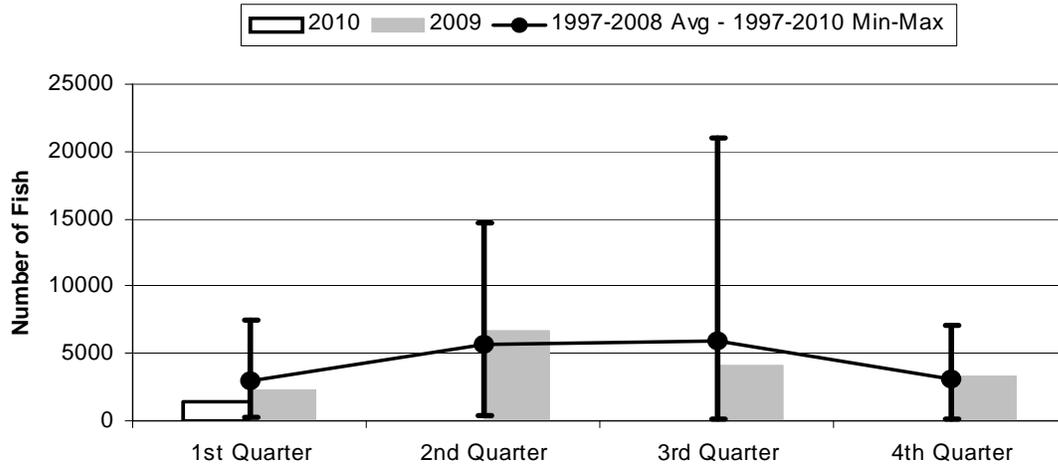
| | 1st Quarter | 2nd Quarter | 3rd Quarter | 4th Quarter |
|---------------|-------------|-------------|-------------|-------------|
| 2010 | 579 | 0 | 0 | 0 |
| 2009 | 1,154 | 1,565 | 3,233 | 2,736 |
| 1997-2010 Max | 4,466 | 7,785 | 5,824 | 4,728 |
| 1997-2008 Avg | 1,348 | 2,155 | 2,502 | 1,979 |
| 1997-2010 Min | 6 | 26 | 55 | 55 |

Figure 7. American Samoa Longline Skipjack Tuna Catch by Quarter for



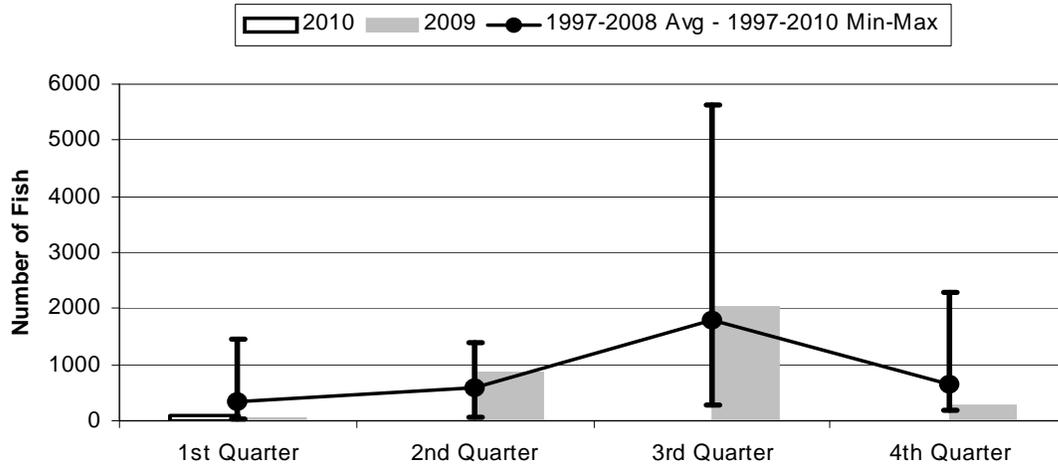
| | 1st Quarter | 2nd Quarter | 3rd Quarter | 4th Quarter |
|---------------|-------------|-------------|-------------|-------------|
| 2010 | 2,432 | 0 | 0 | 0 |
| 2009 | 1,383 | 7,882 | 15,081 | 10,037 |
| 1997-2010 Max | 9,809 | 14,606 | 27,234 | 31,191 |
| 1997-2008 Avg | 3,170 | 5,957 | 10,657 | 7,357 |
| 1997-2010 Min | 115 | 6 | 244 | 178 |

Figure 8. American Samoa Longline Yellowfin Tuna Catch by Quarter for



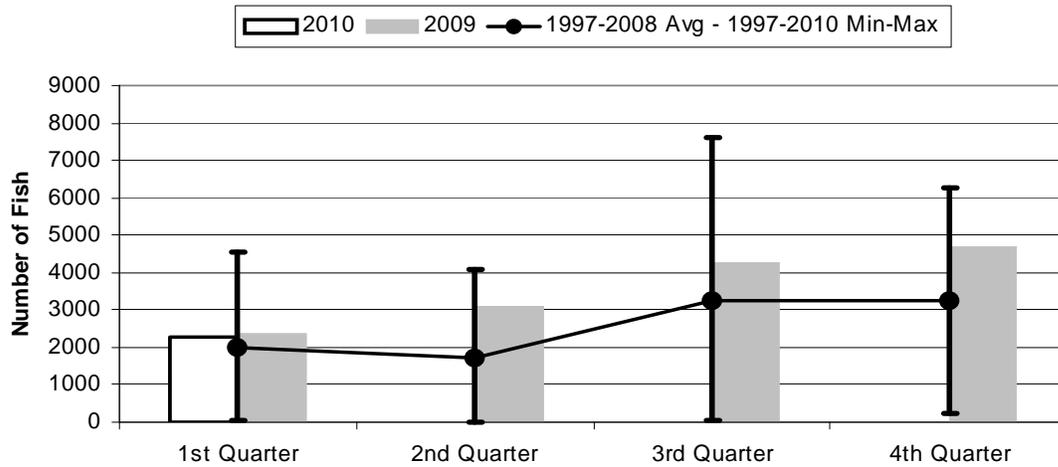
| | 1st Quarter | 2nd Quarter | 3rd Quarter | 4th Quarter |
|---------------|-------------|-------------|-------------|-------------|
| 2010 | 1,418 | 0 | 0 | 0 |
| 2009 | 2,357 | 6,666 | 4,111 | 3,362 |
| 1997-2010 Max | 7,428 | 14,681 | 20,993 | 7,104 |
| 1997-2008 Avg | 2,955 | 5,680 | 5,949 | 3,052 |
| 1997-2010 Min | 213 | 356 | 84 | 177 |

Figure 9. American Samoa Mahimahi Catch by Quarter for



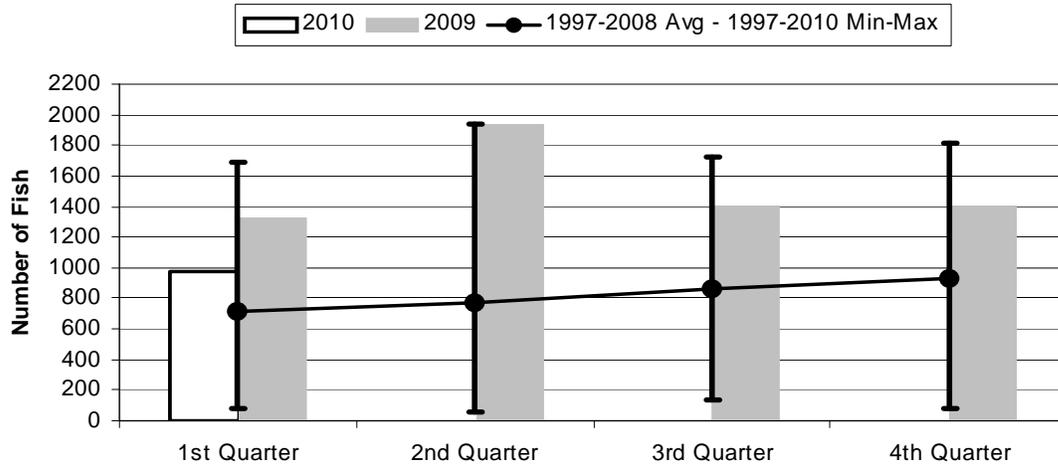
| | 1st Quarter | 2nd Quarter | 3rd Quarter | 4th Quarter |
|---------------|-------------|-------------|-------------|-------------|
| 2010 | 108 | 0 | 0 | 0 |
| 2009 | 65 | 862 | 2,027 | 277 |
| 1997-2010 Max | 1,455 | 1,391 | 5,642 | 2,297 |
| 1997-2008 Avg | 328 | 591 | 1,792 | 647 |
| 1997-2010 Min | 30 | 59 | 280 | 181 |

Figure 10. American Samoa Wahoo Catch by Quarter for



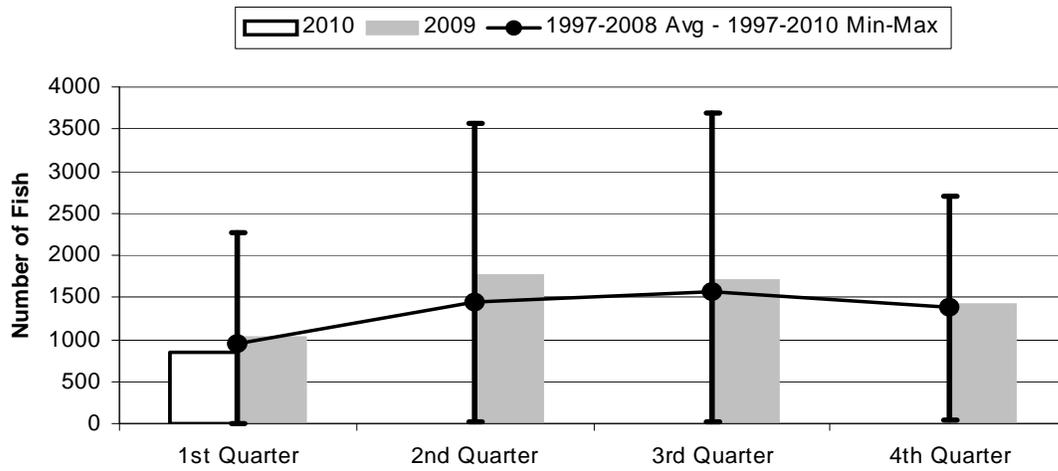
| | 1st Quarter | 2nd Quarter | 3rd Quarter | 4th Quarter |
|---------------|-------------|-------------|-------------|-------------|
| 2010 | 2,289 | 0 | 0 | 0 |
| 2009 | 2,388 | 3,106 | 4,265 | 4,687 |
| 1997-2010 Max | 4,524 | 4,076 | 7,629 | 6,281 |
| 1997-2008 Avg | 1,981 | 1,739 | 3,256 | 3,242 |
| 1997-2010 Min | 27 | 20 | 68 | 210 |

Figure 11. American Samoa Billfish Catch by Quarter for



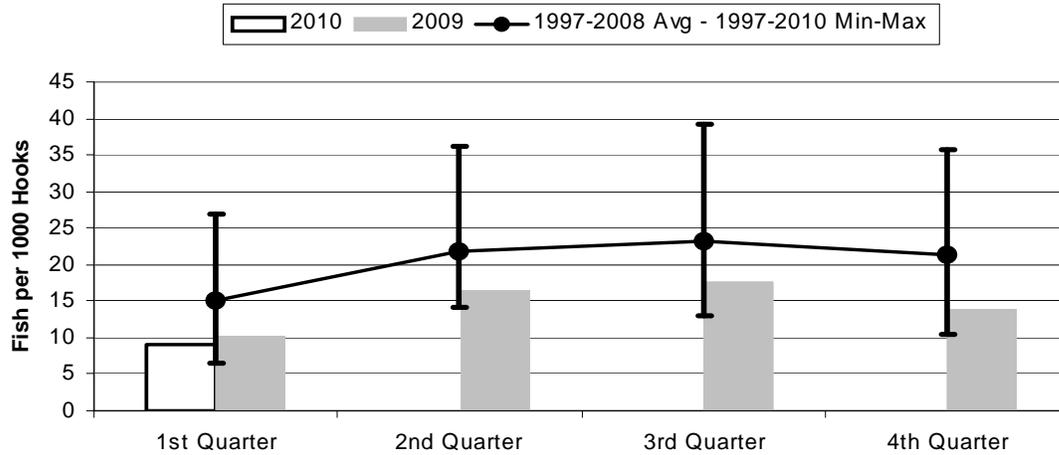
| | 1st Quarter | 2nd Quarter | 3rd Quarter | 4th Quarter |
|---------------|-------------|-------------|-------------|-------------|
| 2010 | 974 | 0 | 0 | 0 |
| 2009 | 1,326 | 1,934 | 1,409 | 1,401 |
| 1997-2010 Max | 1,692 | 1,934 | 1,729 | 1,819 |
| 1997-2008 Avg | 710 | 772 | 861 | 932 |
| 1997-2010 Min | 83 | 58 | 132 | 84 |

Figure 12. American Samoa Shark Catch by Quarter for



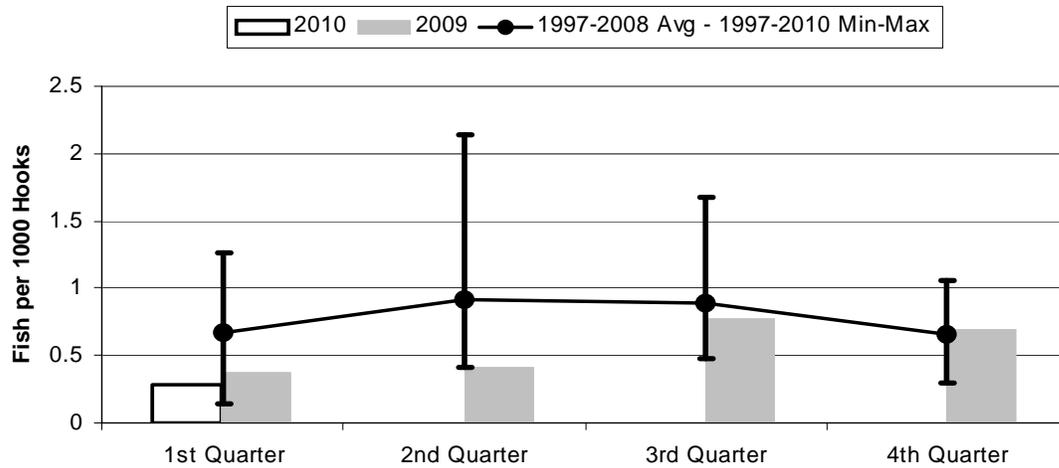
| | 1st Quarter | 2nd Quarter | 3rd Quarter | 4th Quarter |
|---------------|-------------|-------------|-------------|-------------|
| 2010 | 854 | 0 | 0 | 0 |
| 2009 | 1,039 | 1,777 | 1,721 | 1,426 |
| 1997-2010 Max | 2,262 | 3,562 | 3,686 | 2,695 |
| 1997-2008 Avg | 941 | 1,449 | 1,576 | 1,375 |
| 1997-2010 Min | 5 | 16 | 26 | 49 |

Figure 13. American Samoa Longline Albacore Catch per 1000 Hooks by Quarter for



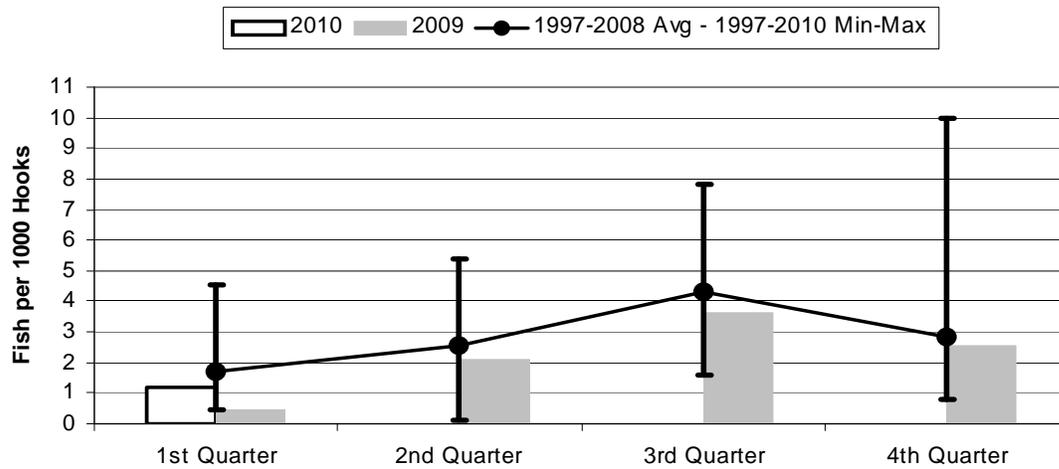
| | 1st Quarter | 2nd Quarter | 3rd Quarter | 4th Quarter |
|---------------|-------------|-------------|-------------|-------------|
| 2010 | 9.00 | 0.00 | 0.00 | 0.00 |
| 2009 | 10.14 | 16.41 | 17.63 | 13.95 |
| 1997-2010 Max | 27.01 | 36.18 | 39.13 | 35.75 |
| 1997-2008 Avg | 15.00 | 21.83 | 23.23 | 21.29 |
| 1997-2010 Min | 6.58 | 14.09 | 12.96 | 10.54 |

Figure 14. American Samoa Longline Bigeye Tuna Catch per 1000 Hooks by Quarter for



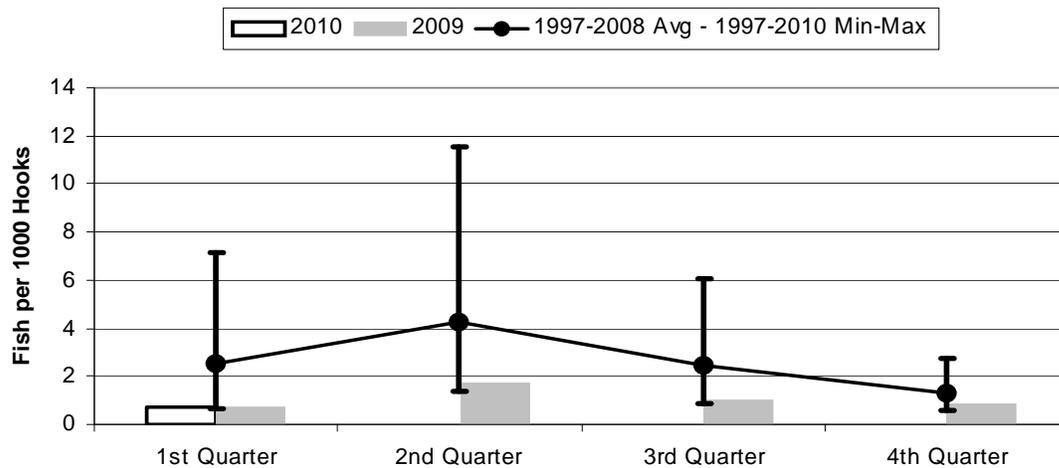
| | 1st Quarter | 2nd Quarter | 3rd Quarter | 4th Quarter |
|---------------|-------------|-------------|-------------|-------------|
| 2010 | 0.29 | 0.00 | 0.00 | 0.00 |
| 2009 | 0.37 | 0.41 | 0.78 | 0.70 |
| 1997-2010 Max | 1.27 | 2.15 | 1.68 | 1.05 |
| 1997-2008 Avg | 0.66 | 0.91 | 0.89 | 0.66 |
| 1997-2010 Min | 0.15 | 0.41 | 0.48 | 0.29 |

Figure 15. American Samoa Longline Skipjack Tuna Catch per 1000 Hooks by Quarter for



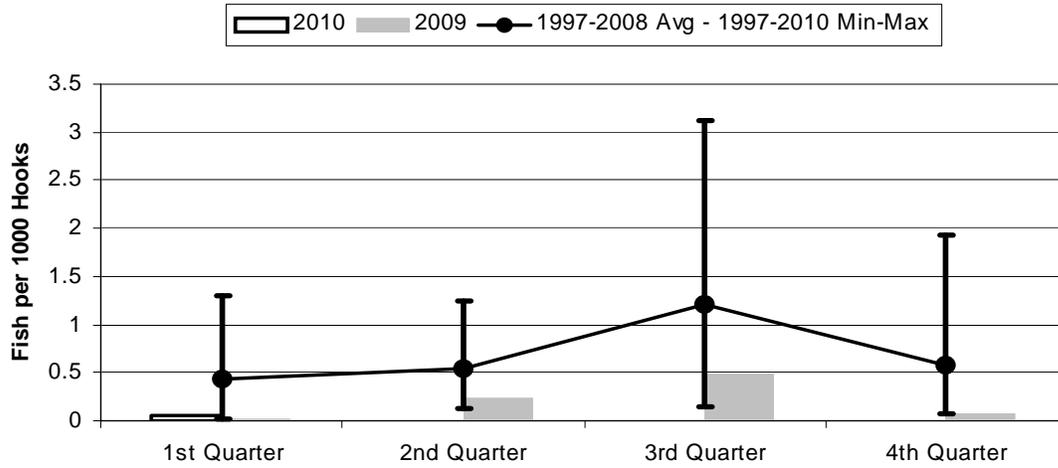
| | 1st Quarter | 2nd Quarter | 3rd Quarter | 4th Quarter |
|---------------|-------------|-------------|-------------|-------------|
| 2010 | 1.21 | 0.00 | 0.00 | 0.00 |
| 2009 | 0.44 | 2.08 | 3.62 | 2.56 |
| 1997-2010 Max | 4.56 | 5.39 | 7.84 | 9.98 |
| 1997-2008 Avg | 1.69 | 2.56 | 4.32 | 2.82 |
| 1997-2010 Min | 0.44 | 0.12 | 1.56 | 0.79 |

Figure 16. American Samoa Yellowfin Tuna Catch per 1000 Hooks by Quarter for



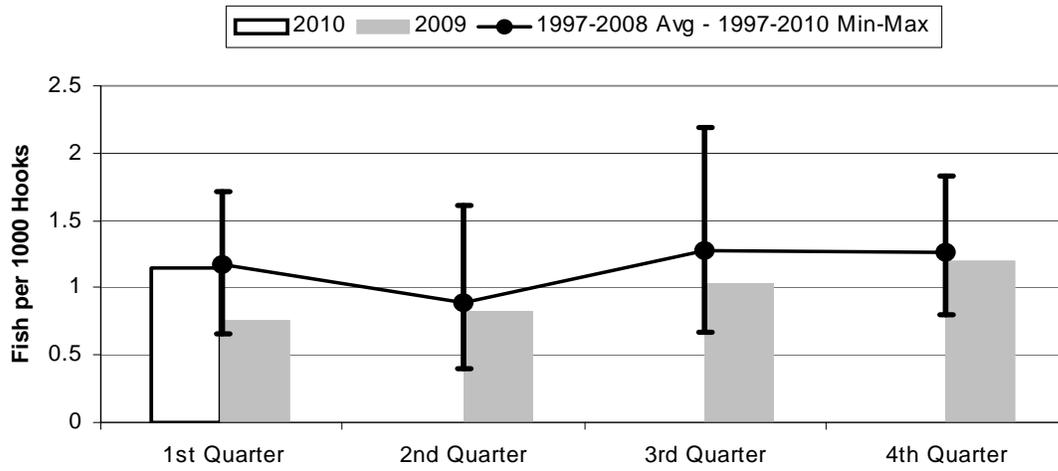
| | 1st Quarter | 2nd Quarter | 3rd Quarter | 4th Quarter |
|---------------|-------------|-------------|-------------|-------------|
| 2010 | 0.71 | 0.00 | 0.00 | 0.00 |
| 2009 | 0.75 | 1.76 | 0.99 | 0.86 |
| 1997-2010 Max | 7.12 | 11.51 | 6.04 | 2.76 |
| 1997-2008 Avg | 2.49 | 4.26 | 2.47 | 1.28 |
| 1997-2010 Min | 0.66 | 1.34 | 0.83 | 0.55 |

Figure 17. American Samoa Longline Mahimahi Catch per 1000 Hooks by Quarter for



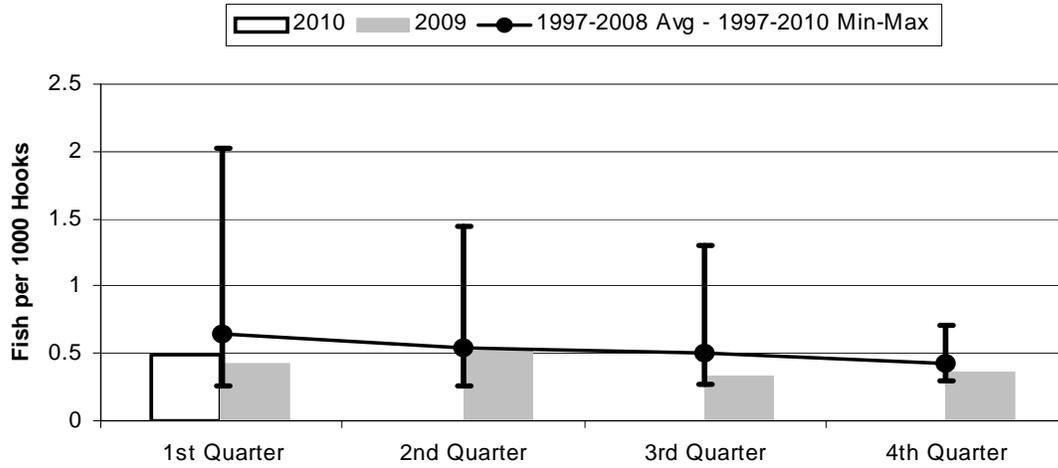
| | 1st Quarter | 2nd Quarter | 3rd Quarter | 4th Quarter |
|---------------|-------------|-------------|-------------|-------------|
| 2010 | 0.05 | 0.00 | 0.00 | 0.00 |
| 2009 | 0.02 | 0.23 | 0.49 | 0.07 |
| 1997-2010 Max | 1.30 | 1.25 | 3.13 | 1.93 |
| 1997-2008 Avg | 0.43 | 0.54 | 1.22 | 0.57 |
| 1997-2010 Min | 0.02 | 0.12 | 0.14 | 0.07 |

Figure 18. American Samoa Wahoo Catch per 1000 Hooks by Quarter for



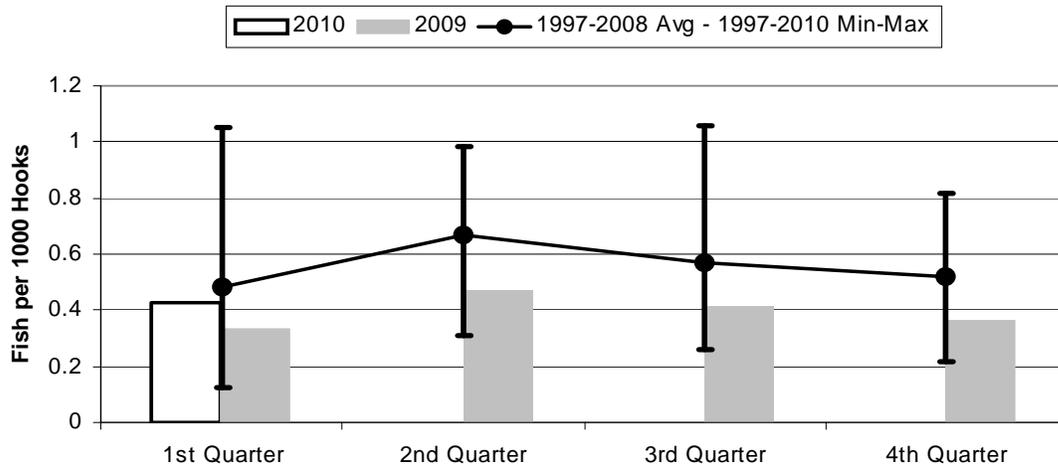
| | 1st Quarter | 2nd Quarter | 3rd Quarter | 4th Quarter |
|---------------|-------------|-------------|-------------|-------------|
| 2010 | 1.14 | 0.00 | 0.00 | 0.00 |
| 2009 | 0.76 | 0.82 | 1.02 | 1.19 |
| 1997-2010 Max | 1.71 | 1.62 | 2.20 | 1.83 |
| 1997-2008 Avg | 1.17 | 0.88 | 1.28 | 1.27 |
| 1997-2010 Min | 0.66 | 0.39 | 0.67 | 0.80 |

Figure 19. American Samoa Billfish Catch per 1000 Hooks by Quarter for



| | 1st Quarter | 2nd Quarter | 3rd Quarter | 4th Quarter |
|---------------|-------------|-------------|-------------|-------------|
| 2010 | 0.49 | 0.00 | 0.00 | 0.00 |
| 2009 | 0.42 | 0.51 | 0.34 | 0.36 |
| 1997-2010 Max | 2.02 | 1.44 | 1.31 | 0.71 |
| 1997-2008 Avg | 0.65 | 0.54 | 0.50 | 0.43 |
| 1997-2010 Min | 0.25 | 0.26 | 0.27 | 0.30 |

Figure 20. American Samoa Shark Catch per 1000 Hooks by Quarter for



| | 1st Quarter | 2nd Quarter | 3rd Quarter | 4th Quarter |
|---------------|-------------|-------------|-------------|-------------|
| 2010 | 0.43 | 0.00 | 0.00 | 0.00 |
| 2009 | 0.33 | 0.47 | 0.41 | 0.36 |
| 1997-2010 Max | 1.05 | 0.99 | 1.06 | 0.82 |
| 1997-2008 Avg | 0.48 | 0.67 | 0.57 | 0.52 |
| 1997-2010 Min | 0.12 | 0.31 | 0.26 | 0.22 |