

**State of Maryland Department of Natural Resources**

Larry Hogan

**Governor**

Jeannie Haddaway-Riccio

**Secretary**

Fishing and Boating Services

580 Taylor Ave.

Annapolis, MD 21401

dnr.maryland.gov

Toll free in Maryland: 877-620-8305

Out of state call: 410-260-8305

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Department of Natural Resources

580 Taylor Ave., C 3

Annapolis MD 21401

Telephone: (410) 260-8058

Email: ndc.dnr@maryland.gov

National Oceanic and Atmospheric Administration

Office of Inclusion and Civil Rights Leadership

Mr. Ken Bailey - Deputy Director

Building SSMC4, Suite 7500

1305 East-West Highway

Silver Spring, MD 20910

02/2022 DNR

**United States**

**Department of Commerce**

**National Oceanic and Atmospheric Administration**

**National Marine Fisheries Service**

**Office of Sustainable Fisheries**

**Highly Migratory Species Division**

**Final Report**

|  |  |  |
| --- | --- | --- |
| Grantee: | Maryland Department of Natural Resources | |
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| Contract Number: | 20-0105.5 | |
|  |  | |
| Project Title: | Maryland Catch Card Census Reporting | |
|  |  | |
| Period Covered: | 2021 | |
| Prepared By: |  | |
|  | Angel Willey, Coastal Fisheries Program Manager | Date |
| Approved By: |  | |
|  | Mike Luisi, Acting Director, Fishing and Boating Services | Date |
| Approved By: |  | |
|  | Matt Fleming, Acting Assistant Secretary, Aquatic Resources | Date |

# Introduction

Globally, tunas, billfishes and some sharks are governed by the International Commission for the Conservation of Atlantic Tunas. In the United States, the Atlantic Tunas Convention and Magnuson Stevens acts provide the Highly Migratory Species Division of the National Marine Fisheries Service the authority to implement recommendations, such as minimum sizes and quotas.

In the late 1990’s, the National Marine Fisheries Service required all recreational anglers to report bluefin tuna (*Thunnus thynnus*) landings via a toll free phone number. In Maryland, that system was determined to be ineffective for accurately documenting recreational bluefin tuna landings. The Catch Card Census was implemented in 1999 as a solution to the recreational reporting problem, and the program has expanded to include billfishes (2002) and sharks (2013).

# Objectives

* + Continue long-term monitoring of all recreationally landed bluefin tuna, billfishes, and sharks in Maryland and supply those data to the National Marine Fisheries Service for use in management of highly migratory species.
  + Continue development of program awareness among anglers for high compliance rates.

# Materials and Methods

Information pertaining to the Catch Card Census was available on the department’s [website](http://dnr.maryland.gov/fisheries/Pages/coastal/tagging.aspx). Letters were emailed or mailed to highly migratory species permit holders (April) reminding them of the requirements and the ability to download catch cards which can speed up the dockside tagging process. A similar letter was emailed or mailed to tournament operators.

Eight businesses signed a cooperative reporting station participation agreement to cover all species in the census ([Table 1](#Table1) and [Appendix A](#AppenA)). Two additional tackle shops were reporting stations specifically for sharks and signed a species specific agreement ([Appendix B](#AppenB)). The contracts required reporting stations to distribute and collect catch cards, issue tags, and return leftover supplies to the department for inventory at the conclusion of the fishing season.

Each reporting station received catch cards and tags at the start of the season. Staff contacted reporting stations twice a week, from June 6 through September 30, to maintain adequate supplies and collect completed catch cards. After September 30, staff checked reporting stations weekly. Tags and unused catch cards were collected at the end of the season from select reporting stations. Returned tags were reconciled with what was distributed ([Appendix C](#AppenC)). One self-serve kiosk was also available to anglers ([Appendix D](#AppenD)).

Anglers were responsible for completing a catch card before removing the fish from the vessel (Appendix [E](#_Appendix_E._Examples) and [F](#AppenF)). A tag was provided from the reporting station for each completed catch card to be placed around the tail of the fish. If fishing from shore, a catch card was completed before removing a shark from the point of landing. Anglers using a self-serve kiosk were expected to complete the catch card and retain the attached receipt in place of a tag. The catch card was to be deposited into a locked box that was fastened directly to the kiosk. Trailered boats could not be pulled from the water until the tag was in place or a receipt was in hand.

Throughout the season, reporting reminders were included in the department’s fishing reports, social media posts, a flyer targeted to swordfish anglers ([Appendix G](#AppenG)), and a shark poster for remote areas in Chincoteague Bay ([Appendix H](#AppenH)). Popular fishing newspapers and social media sites were monitored for catch card compliance. Fishermen were contacted to complete a catch card if a corresponding catch card was not received.

Catch card landings were entered into a Microsoft Access database. Updates and catch card data were provided to the National Marine Fisheries Service every two weeks during the season. Microsoft Excel was utilized for proofing and descriptive statistics.

# Results and Discussion

## Bluefin Tuna

In 2021, 650 bluefin tuna were reported through the Catch Card Census which was higher than the previous two years ([Table 2](#Table2) and [Figure 1](#_Figure_1._Maryland)). Ninety seven percent of those landings (632 bluefin tuna) were classified as school (27 to <47 inches, [Figure 2](#_Figure_2._Maryland)). In 2021, the mean curved fork length (all classes combined) was 35.9 inches. The peak landing period was mid-May to mid-June for the past three years ([Figure 3](#_Figure_3._Maryland)).

Charter trips landed 56.6 percent (368 tuna) of the bluefin tuna during the 2021 season ([Table 3](#Table3)). In 2021, the percentage of non-tournament bluefin tuna landings was 99.8 percent, which is higher than the previous two years. Compliance with completing the live and dead release (158 live, 17 dead) boxes was difficult to compare to 2020 due to low landings that year, however improvement was shown compared to 2019 (92 live, three dead releases). Two bluefin tuna were reported using the kiosk and zero were reported from the Automated Landings Reporting System.

## Billfishes (Blue Marlin, White Marlin, Roundscale Spearfish) and Swordfish

Ninety billfishes and swordfish were reported in 2021 through the Catch Card Census, which is lower than the previous two years ([Table 4](#Table4), [Figure 4](#_Figure_4._Comparison) and [Appendix I](#_Appendix_I._List_1)). No undersized fish were reported in 2021. Sailfish have not been reported since the program was implemented in 1999.

Blue marlin landings reported in 2021 (14 blue marlin) were higher than 2020 (10 blue marlin; Figures [4](#_Figure_4._Comparison) [-](#_Figure_5._Maryland_1) [6](#_Figure_6._Maryland)). The 2021 blue marlin mean lower jaw fork length was 114.4 inches and the mean weight was 568.4 pounds ([Table 4](#Table4)). Mean lower jaw fork length and mean weight were both higher than 2020. The majority of landings occurred in July and August for the past three years of which most were landed during tournaments: the HUK Big Fish Classic, the White Marlin Open, and the MidAtlantic ([Table 5](#Table5)). Zero blue marlin catch cards were received in the kiosk or via the Automated Landings Reporting System.

White marlin landings reported in 2021 (19 white marlin) decreased from the previous year (70 white marlin; [Table 4](#Table4) and Figures [4](#_Figure_4._Comparison) [-](#_Figure_5._Maryland_1) [6](#_Figure_6._Maryland)). The 2021 mean lower jaw fork length (71 inches) and mean weight (73.5 pounds) was higher than the previous two years. The majority of landings occurred in August for the past three years, most of which were landed during tournaments ([Table 5](#Table5)). Zero white marlin catch cards were received in the kiosk or via the Automated Landings Reporting System.

Roundscale spearfish landings in 2021 (21 roundscale spearfish) decreased from the previous year (66 roundscale spearfish; [Table 4](#Table4) and Figures [4](#_Figure_4._Comparison) [-](#_Figure_5._Maryland_1) [6](#_Figure_6._Maryland)). The 2021 mean lower jaw fork length (70.4 inches) was similar to the previous two years. The mean weight (63.2 pounds) was slightly lower than 2020 and 2019. All roundscale spearfish were landed during August fishing tournaments ([Table 5](#Table5)). Zero roundscale spearfish catch cards were received in the kiosk or via the Automated Landings Reporting System.

Roundscale spearfish were considered eligible for white marlin rewards and were targeted the same as white marlin at tournaments. The 2021 combined landings for white marlin and roundscale spearfish were 40 fish compared to 136 for both species in 2020. This substantial decrease in white marlin and roundscale spearfish can be attributed to the proactive actions taken by tournaments that increased qualifying lengths to reduce landings.

Swordfish landings for 2021 (36 swordfish) were lower than the previous year (96 swordfish; [Table 4](#Table4) and Figures [7](#_Figure_6._Comparison) - [8](#_Figure_8._Maryland)). The 2021 swordfish mean lower jaw fork length (63.9 inches) was lower than 2020, but similar to 2019. The 2021 mean weight (154.5 pounds) was higher than the previous two years. Swordfish were landed from June into December in 2021. Peak swordfish landings were similar for the past two years (September - October; [Figure 8](#_Figure_8._Maryland)). Two swordfish catch cards were received in the kiosk and zero were submitted via the Automated Landings Reporting System.

Species-specific discards were requested but were only reported with landed fish. In 2021, anglers reported three blue marlin, 37 white marlin, one swordfish, and two longbill spearfish released alive. Dead discard reporting remained low in 2021 as no dead discards were reported for any billfishes or swordfish.

## Sharks

Shark landings (28 sharks) were lower than the previous two years and consisted of seven species ([Table 7](#Table7) and Figures [9](#_Figure_9._Maryland) - [10](#_Figure_10._Sharks)). Shortfin mako sharks comprised 32 percent (nine sharks) of the landings which is higher than the previous two years and related to the large decrease in Atlantic sharpnose landings ([Table](#Table8) [8](#Table8)). The shark landings peaked from mid-May to mid-June, ahead of the 2020 and 2019 seasons ([Figure 11](#_Figure_11._Maryland)). The majority of sharks were landed outside of tournaments and mostly on charters (23 sharks; [Table 9](#Table9)). Discards were only reported with landed fish. One shark catch card was deposited in the kiosk.

# Recommendations

* Continue the Catch Card Census for bluefin tuna, billfishes, swordfish, and sharks in Maryland.
* Consider adding an electronic reporting option.

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# Table 1. List of the 2021 Maryland Catch Card Census reporting stations.

|  |  |  |  |
| --- | --- | --- | --- |
| Reporting Station | City /State | Phone Number | Species |
| Atlantic Tackle | Ocean City, MD | (410) 213-0421 | All |
| Bahia Marina | Ocean City, MD | (410) 289-7438 | All |
| Fisherman’s Marina | Ocean City, MD | (410) 213-2478 | All |
| Ocean City Fishing Center | Ocean City, MD | (410) 213-1121 | All |
| Talbot Street Pier & Marina | Ocean City, MD | (410) 289-9125 | All |
| White Marlin Marina | Ocean City, MD | (410) 289-6470 | All |
| Sunset Marina | Ocean City, MD | (410) 213-9600 | All |
| Pines Point Provisions and Seafood | Ocean Pines, MD | (410) 641-2248 | All |
| Buck’s | Berlin, MD | (443) 513-4661 | Shark |
| Alltackle | Ocean City, MD | (410) 213-2840 | All |
| Maryland Department of Natural Resources | Ocean City, MD | (410) 213-1531 | All |

# Table 2. Maryland Catch Card Census bluefin tuna summary statistics, 2019 to 2021.

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | 2019 | | | | 2020 | | | | 2021 | | | |
| Size Class (in.) | Count | Mean\* | Mode\* | Percent of Total | Count | Mean\* | Mode\* | Percent of Total | Count | Mean\* | Mode\* | Percent of Total |
| School (27 to <47) | 373 | 37.3 | 34 | 72.1 | 4 | 37.8 |  | 40 | 632 | 35.7 | 40 | 97.2 |
| Large School (47 to <59) | 132 | 51.8 | 52 | 25.5 | 5 | 52.1 |  | 50 | 7 | 50.4 | 50 | 1.1 |
| Small Medium (59 to <73) | 9 | 62.4 | 60 | 1.7 | 1 |  |  | 10 |  |  |  |  |
| Unknown | 3 |  |  | 0.6 |  |  |  |  | 11 |  |  | 1.7 |
| Total | 517 |  |  |  | 10 |  |  |  | 650 |  |  |  |
| \* Curved fork length | | | | | | | | | | | | |

# Table 3. Maryland bluefin tunas landings by trip type and tournament participation, 2019 to 2021.

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Trip Type | Private | | Charter | | Headboat | | Unknown | | Tournament Landings | |
| Year | Count | Percent of Landings | Count | Percent of Landings | Count | Percent of Landings | Count | Percent of Landings | Tournament | Non-Tournament |
| 2019 | 272 | 52.6 | 232 | 44.9 | 12 | 2.3 | 1 | 0.2 | 39 | 478 |
| 2020 | 2 | 20 | 8 | 80 |  |  |  |  | 6 | 4 |
| 2021 | 261 | 40.2 | 368 | 56.6 | 12 | 1.8 | 9 | 1.4 |  | 649\* |
| \* One card had no information about tournament participation | | | | | | | | | | |

# Table 4. Maryland Catch Card Census billfish and swordfish summary statistics, 2019 to 2021.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Year | Count | Percent of Annual Billfish Total | Lower Jaw Fork Length (Inches) | | | Weight (Pounds) | |
| Mean | Mode | Range | Mean | Range |
| Blue Marlin | | | | | | | |
| 2019 | 11 | 6.5 | 111.3 |  | 105.3 - 121.8 | 465.2 | 345 - 630 |
| 2020 | 10 | 4.1 | 107.5 |  | 88.5 - 129.5 | 470 | 322 - 815 |
| 2021 | 14 | 15.6 | 114.4 | 104 | 99.8 - 136.5 | 568.4 | 355 - 1135 |
| White Marlin | | | | | | | |
| 2019 | 31 | 18.5 | 68.1 | 68 | 62 - 73 | 64 | 53 - 81 |
| 2020 | 70 | 28.9 | 69.8 | 70 | 66 -77 | 68.3 | 54 - 97 |
| 2021 | 19 | 21.1 | 71.0 | 69 | 66 - 79 | 73.5 | 60.5 - 89 |
| Roundscale Spearfish | | | | | | | |
| 2019 | 28 | 16.7 | 69.4 | 68 | 66.8 - 72 | 65.3 | 56 - 79 |
| 2020 | 66 | 27.3 | 69.6 | 69 | 66.5 - 75.5 | 65.4 | 55.5 - 83.5 |
| 2021 | 21 | 23.3 | 70.4 | 70 | 68.5 - 74 | 63.2 | 57 - 70 |
| Swordfish | | | | | | | |
| 2019 | 98 | 58.3 | 63.5 | 54 | 48 - 101 | 150.9 | 50 - 437 |
| 2020 | 96 | 39.7 | 65.9 | 62 | 48 - 102.5 | 153.8 | 55 - 422.5 |
| 2021 | 36 | 40 | 63.9 | 50 | 48.5 - 87 | 154.5 | 60 - 318.5 |

# Table 5. Maryland Catch Card Census tournament participation by billfish species, 2019 to 2021.

|  |  |  |  |
| --- | --- | --- | --- |
| Year | Count | Tournament | Non-Tournament |
| Blue Marlin | | | |
| 2019 | 11 | 9 | 2 |
| 2020 | 10 | 5 | 5 |
| 2021 | 14 | 13 | 1 |
| White Marlin | | | |
| 2019 | 31 | 28 | 3 |
| 2020 | 70 | 62 | 8 |
| 2021 | 19 | 12 | 7 |
| Roundscale Spearfish | | | |
| 2019 | 28 | 27 | 1 |
| 2020 | 66 | 66 |  |
| 2021 | 21 | 21 |  |
| Swordfish | | | |
| 2019 | 98 | 8 | 90 |
| 2020 | 96 | 31 | 65 |
| 2021 | 36 | 13 | 23 |

# Table 6. Maryland Catch Card Census billfish and swordfish landings by trip type, 2019 to 2021.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Private | | Charter | | Unknown | | Headboat | |
| Year | Count | Percent of Total Landings | Count | Percent of Total Landings | Count | Percent of Total Landings | Count | Percent of  Total Landings |
| 2019 | 126 | 75 | 41 | 24.4 |  |  | 1 | 0.6 |
| 2020 | 111 | 45.9 | 40 | 16.5 | 91 | 37.6 |  |  |
| 2021 | 60 | 68.9 | 26 | 28.9 | 1 | 1.1 | 1 | 1.1 |

# Table 7. Summary of the 2021 shark landings reported through the Maryland Catch Card Census n = 28.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Species | Count | Sex | | | Mean Length (Inches) | Mode (Inches) | Length Range (Inches) | Weight Range (Pounds) |
| M | F | U |
| Atlantic Sharpnose | 7 | 7 |  |  | 30.1 | 32 | 24 - 32 |  |
| Blacktip | 1 |  | 1 |  |  |  | 70 | 100 |
| Common Thresher | 5 | 3 | 2 |  | 81.3 | 81 | 80 - 84.5 | 267 - 542 |
| Scalloped Hammerhead | 1 |  | 1 |  |  |  | 96 | 185 |
| Shortfin Mako | 9 | 9 |  |  | 79.1 | \* | 71 - 93 | 120 - 314 |
| Smooth Dogfish | 4 | 2 | 2 |  | 18.8 | 15 | 15 - 27 |  |
| Tiger | 1 | 1 |  |  |  |  | 70 | 132.5 |
| Total | 28 |  |  |  |  |  |  |  |
| \*No mode as all lengths are different. | | | | | | | | |

# Table 8. Maryland Catch Card Census summary of the 2019 to 2021 shortfin mako landings, n = 28.

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Year | Species | Count | Sex | | | Mean Length (Inches) | Mode (Inches) | Length Range (Inches) | Weight Range (Pounds) |
| M | F | U |
| 2019 | Shortfin Mako | 13 | 8 | 5 |  | 82 | 74 | 72 - 106 | 133 - 487 |
| 2020 | Shortfin Mako | 6 | 4 | 2 |  | 80 | 84 | 72 - 88 | 130 - 330 |
| 2021 | Shortfin Mako | 9 | 9 |  |  | 79.1 | \* | 71 - 93 | 120 - 314 |
|  | Total | 28 | 13 | 9 |  |  |  |  |  |
| \*No mode as all lengths are different. | | | | | | | | | |

# Table 9. Maryland Catch Card Census shark landings by trip type and tournament participation, 2019 to 2021.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Trip Type | Private | | Charter | | Unknown | | Tournament Landings | |
| Year | Count | Percent of Landings | Count | Percent of Landings | Count | Percent of Landings | Tournament | Non-Tournament |
| 2019 | 18 | 18 | 81 | 82 |  |  | 1 | 98 |
| 2020 | 2 | 3 | 75 | 97 |  |  |  | 77 |
| 2021 | 8 | 29 | 20 | 71 |  |  | 5 | 23 |

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# Figure 1. Maryland Catch Card Census weekly cumulative bluefin tuna landings, 2019 to 2021.

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# Figure 2. Maryland Catch Card Census bluefin tuna size class frequency comparison, 2019 to 2021.

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# Figure 3. Maryland Catch Card Census weekly landings of bluefin tuna, 2019 to 2021.

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# Figure 4. Comparison of the frequency of billfishes and swordfish from the Maryland Catch Card Census, 2019 to 2021.

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# Figure 5. Maryland Catch Card Census cumulative billfish landings, 2019 to 2021.

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# Figure 6. Maryland Catch Card Census weekly billfish landings, 2019 to 2021.

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# Figure 7. Maryland Catch Card Census cumulative swordfish landings, 2019 to 2021.

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# Figure 8. Maryland Catch Card Census weekly swordfish landings, 2019 to 2021.

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# Figure 9. Maryland Catch Card Census cumulative shark landings, 2019 to 2021.

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# Figure 10. Sharks reported to the Maryland Catch Card Census, 2019 to 2021.

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# Figure 11. Maryland Catch Card Census weekly shark landings, 2019 to 2021.

# Appendix A. Example of the 2021 Catch Card Census Reporting Station Agreement.

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| **2021 Cooperative Agreement to Act as a**  **Recreational Atlantic Bluefin Tuna, Billfish/Swordfish and Shark Reporting Station**  **Between**  **The Maryland Department of Natural Resources**  **&**  **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**  The signatory operates this facility as a place of business open to the public with regular posted operating hours and will act as a reporting station for recreationally harvested Atlantic bluefin tuna and billfish (white marlin, blue marlin, sailfish), swordfish, and sharks landed in the State of Maryland in accordance with the following conditions. **\***  **On a Daily Basis:**   1. From bluefin tuna anglers, collect COMPLETED Maryland bluefin tuna catch cards and issue a uniquely numbered bluefin tuna tag to the angler. Tags issued only upon receipt of the COMPLETED catch card. Bluefin tuna cannot be removed from a vessel before the angler attaches the tag to the appropriate tuna. 2. From billfish/swordfish anglers, collect COMPLETED Maryland billfish catch cards and issue a uniquely numbered billfish/swordfish tag to the angler. Tags are issued only upon receipt of the COMPLETED catch card. The billfish/swordfish cannot be removed from a vessel before the angler attaches the tag to the appropriate billfish/swordfish. 3. From shark anglers, collect COMPLETED Maryland shark catch cards and issue a uniquely numbered shark tag to the angler. Tags are issued only upon receipt of the COMPLETED catch card. The shark cannot be removed from a vessel before the angler attaches the tag to the appropriate shark. 4. The signatory, representing the reporting station, must account for all tags. 5. The reporting station will allow personnel from the Maryland Department of Natural Resources to collect completed catch cards and inventory remaining tuna, billfish/swordfish and shark tags. All tags must be kept in a secure location.   Physical location address: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Business mailing address: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Telephone number: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Hours of operation: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Owner/Manager name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Contact person: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Person(s) responsible for checking catch cards & issuing tags: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  **\* The Department reserves the right to terminate reporting station status for any reason including but not limited to failure to maintain inventory of bluefin tuna, billfish/swordfish and shark tags and collect completed catch cards and/or failure to cooperate with Department personnel in retrieval of said items.**  **Authorized signature:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**  **Title:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** |

# Appendix B. Example of the 2021 Catch Card Census Shark Reporting Station Agreement.

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| **2021 Cooperative Agreement to Act as a**  **Recreational Shark Reporting Station**  **Between**  **The Maryland Department of Natural Resources**  **&**  **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**  The signatory operates this facility as a place of business open to the public with regular posted operating hours  and will act as a reporting station for recreationally harvested sharks landed in the State of Maryland in accordance with the following conditions. **\***  **On a Daily Basis:**  1. From shark anglers, collect COMPLETED Maryland Shark Landing Cards and issue a uniquely  numbered shark tag to the angler. Tags are issued only upon receipt of the COMPLETED landing  card. The shark cannot be removed from the point of landing before the angler attaches the tag to  the appropriate shark.  2. The signatory, representing the reporting station, must account for all tags.  3. The reporting station will allow personnel from the Maryland Department of Natural Resources to  collect completed landing cards and inventory remaining shark tags. All tags must be kept in a  secure location.  Physical location address: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Business mailing address: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Telephone number: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Hours of operation: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Owner/Manager name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Contact person: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Person(s) responsible for checking catch cards & issuing tags: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  **\* The Department reserves the right to terminate reporting station status for any reason including but**  **not limited to failure to maintain inventory of shark tags and collect completed catch cards and/or failure to cooperate with Department personnel in retrieval of said items.**  **Authorized signature:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**  **Title:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** |

Figure 5. Example of the 2013 Maryland ABT/Billfish/Shark Catch Card and Tagging Program contract between MDNR and tackle shops to act as a recreational reporting station for sharks.

# Appendix C. Maryland Catch Card Census 2021 Reporting Station Tag Summary.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Bluefin | | | | | Billfish | | | | | Sharks | | | | |
| Station | Issued | Used | Returned | No Tag Number | Unsettled | Issued | Used | Returned | No Tag Number | Unsettled | Issued | Used | Returned | No Tag Number | Unsettled |
| Atlantic Tackle | 172 | 59 | 95 | 18 |  | 10 |  | 10 |  |  | 10 |  | 10 |  |  |
| Bahia Marina | 50 | 16 | 33 | 1 |  | 10 | 1 | 9 |  |  | 10 | 3 | 7 |  |  |
| Fisherman’s Marina | 111 | 39 | 70 | 2 |  | 10 | 6 | 4 |  |  | 10 | 2 | 8 |  |  |
| O.C. Fishing Center | 366 | 199 | 144 | 23 |  | 19 | 6 | 13 |  |  | 30 | 18 | 12 |  |  |
| Talbot Street Pier & Marina | 87 | 51 | 36 |  |  | 27 | 17 | 10 |  |  | 20 |  | 20 |  |  |
| Sunset Marina a | 359 | 187 | 159 | 13 |  | 56 | 20 | 36 |  |  | 18 | 0 | 18 |  |  |
| Pines Point Provisions and Seafood | 21 | 7 | 14 |  |  | 8 |  | 8 |  |  | 10 |  | 10 |  |  |
| White Marlin Marina | 53 | 28 | 25 |  |  | 6 | 1 | 5 |  |  | 11 | 2 | 9 |  |  |
| Buck’s | N/A | N/A | N/A |  |  | N/A | N/A | N/A |  |  | 10 |  | 10 |  |  |
| Alltackle | 19 |  | 19 |  |  | 11 | 1 | 10 |  |  | 10 |  | 10 |  |  |
| Huk Big Fish Classic | 10 |  | 10 |  |  | 40 | 1b | 39 |  |  | 10 |  | 10 |  |  |
| White Marlin Open | 10 |  | 10 |  |  | 64 | 17d | 47 |  |  | 10 | 2 | 8 |  |  |
| MidAtlantic | 10 |  | 10 |  |  | 47 | 18 | 29 |  |  | N/A | N/A | N/A |  |  |
| O.C. Marlin Club | N/A | N/A | N/A |  |  | 25 |  | 25 |  |  | N/A | N/A | N/A |  |  |
| Kiosk (receipt) | N/A | N/A | N/A | 2 |  |  |  |  | 2 |  |  |  |  | 1 |  |
| Unreportedc | N/A | N/A | N/A | 5 |  |  |  |  |  |  |  |  |  |  |  |
| Totals | 1268 | 586 | 625 | 64 |  | 333 | 88 | 245 | 2 |  | 159 | 27 | 132 |  |  |
| a One bluefin tag used for billfish. The marina did not have the HMS permit holder’s number. Could not find vessel contact information in permit list.  b Dockhands began using tags issued to the marina instead of tags issued to the tournament.  c The department completed catch cards for unreported landings discovered online. The fishermen and or HMS permit holders were comtacted for these fish.  d Two billfish were tagged at other marinas instead of the tournament. | | | | | | | | | | | | | | | |

# Appendix D. Photograph of the Maryland Catch Card Census Kiosk Located in Ocean City.



# Appendix E. Examples of the 5 x 7 Maryland Bluefin Tuna and Billfish Catch Cards and Tags.

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# Appendix F. Example of the 5 x 7 Maryland Shark Catch Card and Tag.

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# Appendix G. Maryland Catch Card Census Swordfish Flyer.

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# Appendix H. Maryland Catch Card Census Shark Poster.

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# Appendix I. List of the 2021 Billfishes and Swordfish Reported to the Maryland Catch Card Census.

| Date | Common Name | Length  (Inches) | Weight  (Pounds) | Trip Type | Tournament |
| --- | --- | --- | --- | --- | --- |
| 7/23/2021 | Blue Marlin | 104.5 | 436 | Private | Huk Big Fish Classic |
| 8/2/2021 | Blue Marlin | 116.5 | 559.5 | Private | White Marlin Open |
| 8/6/2021 | Blue Marlin | 128 | 775 | Private | White Marlin Open |
| 8/6/2021 | Blue Marlin | 115.5 | 511.8 | Private | White Marlin Open |
| 8/6/2021 | Blue Marlin | 109 | 450 | Charter | White Marlin Open |
| 8/16/2021 | Blue Marlin | 122 | 681 | Private | MidAtlantic |
| 8/16/2021 | Blue Marlin | 112.5 | 487 | Private | MidAtlantic |
| 8/18/2021 | Blue Marlin | 135 | 958 | Private | MidAtlantic |
| 8/18/2021 | Blue Marlin | 104 | 383 | Private | MidAtlantic |
| 8/18/2021 | Blue Marlin | 104 | 355 | Private | MidAtlantic |
| 8/18/2021 | Blue Marlin | 108 | 382 | Private | MidAtlantic |
| 8/20/2021 | Blue Marlin | 107 | 472 | Charter | MidAtlantic |
| 8/21/2021 | Blue Marlin | 136.5 | 1135 | Private | MidAtlantic |
| 9/7/2021 | Blue Marlin | 99.75 | 372 | Private | N/A |
| 7/24/2021 | Roundscale Spearfish | 71.5 | 59.5 | Charter | Huk Big Fish Classic |
| 7/24/2021 | Roundscale Spearfish | 70 | 59 | Private | Huk Big Fish Classic |
| 8/2/2021 | Roundscale Spearfish | 72.5 | 66 | Private | White Marlin Open |
| 8/3/2021 | Roundscale Spearfish | 70.5 | 68 | Charter | White Marlin Open |
| 8/3/2021 | Roundscale Spearfish | 70 | 59 | Charter | White Marlin Open |
| 8/3/2021 | Roundscale Spearfish | 69.5 | Unknown | Unknown | White Marlin Open |
| 8/6/2021 | Roundscale Spearfish | 69 | Unknown | Private | White Marlin Open |
| 8/6/2021 | Roundscale Spearfish | 71 | 65 | Private | White Marlin Open |
| 8/6/2021 | Roundscale Spearfish | 73 | 66 | Private | White Marlin Open |
| 8/6/2021 | Roundscale Spearfish | 74 | 70 | Private | White Marlin Open |
| 8/6/2021 | Roundscale Spearfish | 71 | 57 | Private | White Marlin Open |
| 8/16/2021 | Roundscale Spearfish | 68.75 | Unknown | Private | MidAtlantic |
| 8/16/2021 | Roundscale Spearfish | 71.25 | 68 | Private | MidAtlantic |
| 8/16/2021 | Roundscale Spearfish | 68.5 | Unknown | Private | MidAtlantic |
| 8/16/2021 | Roundscale Spearfish | 69.5 | 59 | Private | MidAtlantic |
| 8/16/2021 | Roundscale Spearfish | 70.5 | 66 | Private | MidAtlantic |
| 8/16/2021 | Roundscale Spearfish | 70.75 | 68 | Private | MidAtlantic |
| 8/17/2021 | Roundscale Spearfish | 69 | 60 | Private | MidAtlantic |
| 8/18/2021 | Roundscale Spearfish | 68.5 | Unknown | Private | MidAtlantic |
| 8/18/2021 | Roundscale Spearfish | 69.25 | 58 | Private | MidAtlantic |
| 8/20/2021 | Roundscale Spearfish | 70.25 | 63 | Private | MidAtlantic |
| 6/7/2021 | Swordfish | 60 | 176 | Charter | N/A |
| 6/10/2021 | Swordfish | 54 | Unknown | Charter | N/A |
| 6/14/2021 | Swordfish | 86 | 291 | Private | N/A |
| 6/14/2021 | Swordfish | 0 | 195 | Private | N/A |
| 6/17/2021 | Swordfish | 72 | 141 | Headboat | N/A |
| 7/23/2021 | Swordfish | 68.5 | 159 | Private | Huk Big Fish Classic |
| 7/23/2021 | Swordfish | 69 | 184 | Charter | Huk Big Fish Classic |
| 7/24/2021 | Swordfish | 64 | 123.5 | Charter | Huk Big Fish Classic |
| 7/24/2021 | Swordfish | 59 | 90.5 | Private | Huk Big Fish Classic |
| 7/24/2021 | Swordfish | 68 | 159.5 | Private | Huk Big Fish Classic |
| 7/24/2021 | Swordfish | 71 | 167.5 | Private | Huk Big Fish Classic |
| 7/24/2021 | Swordfish | 66.8 | 142.5 | Charter | Huk Big Fish Classic |
| 7/24/2021 | Swordfish | 85.5 | 239.5 | Private | Huk Big Fish Classic |
| 7/24/2021 | Swordfish | 83 | 301 | Private | Huk Big Fish Classic |
| 8/6/2021 | Swordfish | 87 | 318.5 | Charter | White Marlin Open |
| 8/25/2021 | Swordfish | 0 | 150 | Private | N/A |
| 8/27/2021 | Swordfish | 51 | Unknown | Charter | N/A |
| 8/29/2021 | Swordfish | 48.5 | Unknown | Private | N/A |
| 9/4/2021 | Swordfish | 57 | 90 | Private | N/A |
| 9/4/2021 | Swordfish | 50 | Unknown | Private | N/A |
| 9/5/2021 | Swordfish | 80 | 250 | Private | N/A |
| 9/7/2021 | Swordfish | 50 | Unknown | Private | N/A |
| 9/19/2021 | Swordfish | 80 | Unknown | Charter | N/A |
| 9/20/2021 | Swordfish | 50 | 62 | Charter | N/A |
| 9/27/2021 | Swordfish | 53 | 66 | Charter | N/A |
| 9/27/2021 | Swordfish | 68 | Unknown | Private | N/A |
| 10/15/2021 | Swordfish | 59 | 102 | Charter | Bishop Broadbill Bash |
| 10/15/2021 | Swordfish | 78 | 218 | Charter | Bishop Broadbill Bash |
| 10/15/2021 | Swordfish | 58 | 102 | Charter | Bishop Broadbill Bash |
| 11/2/2021 | Swordfish | 52 | 60 | Private | N/A |
| 11/2/2021 | Swordfish | 55 | 70 | Private | N/A |
| 11/2/2021 | Swordfish | 70 | Unknown | Charter | N/A |
| 11/3/2021 | Swordfish | 51.5 | 67 | Private | N/A |
| 11/3/2021 | Swordfish | 61 | 91 | Private | N/A |
| 12/14/2021 | Swordfish | 50 | Unknown | Private | N/A |
| 12/14/2021 | Swordfish | 56 | Unknown | Private | N/A |
| 7/12/2021 | White Marlin | 67 | 65 | Charter | N/A |
| 7/14/2021 | White Marlin | 66 | Unknown | Charter | N/A |
| 7/19/2021 | White Marlin | 76 | 75 | Charter | N/A |
| 7/23/2021 | White Marlin | 69 | 63 | Private | Huk Big Fish Classic |
| 7/24/2021 | White Marlin | 68 | 72 | Charter | Huk Big Fish Classic |
| 7/24/2021 | White Marlin | 69 | 62 | Private | Huk Big Fish Classic |
| 8/2/2021 | White Marlin | 72.5 | 82.5 | Private | White Marlin Open |
| 8/6/2021 | White Marlin | 76 | 85.5 | Charter | White Marlin Open |
| 8/6/2021 | White Marlin | 75 | 77 | Private | White Marlin Open |
| 8/6/2021 | White Marlin | 70 | 60.5 | Private | White Marlin Open |
| 8/6/2021 | White Marlin | 71 | 78.5 | Private | White Marlin Open |
| 8/11/2021 | White Marlin | 67 | 65 | Private | N/A |
| 8/15/2021 | White Marlin | 79 | 89 | Private | N/A |
| 8/15/2021 | White Marlin | 69 | 68 | Private | N/A |
| 8/16/2021 | White Marlin | 69.5 | 69 | Private | MidAtlantic |
| 8/16/2021 | White Marlin | 74 | 80 | Private | MidAtlantic |
| 8/17/2021 | White Marlin | 69 | 75 | Charter | MidAtlantic |
| 8/17/2021 | White Marlin | 71 | 82 | Private | MidAtlantic |
| 9/7/2021 | White Marlin | 71 | Unknown | Charter | N/A |