

# NOAA Technical Memorandum NMFS



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## **A DESCRIPTION OF THE TUNA-PORPOISE OBSERVER DATA COLLECTED BY THE U.S. NATIONAL MARINE FISHERIES SERVICE FROM 1971 TO 1990**

Alan R. Jackson

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U.S. DEPARTMENT OF COMMERCE  
National Oceanic and Atmospheric Administration  
National Marine Fisheries Service  
Southwest Fisheries Science Center

## **NOAA Technical Memorandum NMFS**

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## **NOAA Technical Memorandum NMFS**

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Alan R. Jackson

Protected Resources Division  
Southwest Fisheries Science Center  
National Marine Fisheries Service  
National Oceanic and Atmospheric Administration  
8901 La Jolla Shores Drive  
La Jolla, California 92037, USA

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### **U.S. DEPARTMENT OF COMMERCE**

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### **National Oceanic and Atmospheric Administration**

Jane Lubchenco, Undersecretary for Oceans and Atmosphere

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Samuel D. Rauch, Acting Assistant Administrator for Fisheries



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## INTRODUCTION

From 1971 to 1995, the U. S. National Marine Fisheries Service's (NMFS) Tuna-Porpoise Observer Program collected data on the mortality, life history, distribution and abundance of dolphins (colloquially referred to as “porpoise”) associated with yellowfin tuna (*Thunnus albacares*) in the eastern tropical Pacific Ocean (ETP) and their involvement in fishery operations. This program, which became mandatory for the U.S. fleet in 1976 under the Marine Mammal Protection Act, placed biological technicians (“observers”) aboard commercial U.S. purse seiners holding certificates of inclusion under a general permit to take (chase and/or set nets on) certain species of dolphins within the “permit area” (that area of the Pacific Ocean bounded by 40°N latitude, 40°S latitude, 160°W longitude and the coastlines of the Americas). The ETP yellowfin tuna purse seine fishery exploits the tuna-dolphin association by netting the highly visible, surface-swimming dolphins in an attempt to catch the tuna schooling below them. Dolphins may be killed in the purse seines before they can be separated from the tuna and returned to the open ocean. Most frequently killed in this fishery are dolphins of the genus *Stenella* and, to a lesser extent, the genus *Delphinus*. The purpose of this paper is to describe the data collected under Tuna-Porpoise Observer Program from 1971-1990 and archived by the Southwest Fisheries Science Center’s (SWFSC) Protected Resources Division (PRD).

## BACKGROUND

From 1964 to 1968 two NMFS observers made five trips aboard three different tuna purse seiners based in San Diego, California, and collected data on dolphins involved in the tuna purse seine fishery in the ETP. A formal observer program was started by the SWFSC’s Tuna-Porpoise Research program in 1971. The data collected before 1971 (Perrin 1970, 2009) were heterogenous and are not treated in full here; partial records for some of the later cruises of this period are listed in the appendices. The placement of observers on purse seiners from 1971 to 1973 was done on an opportunistic basis; observers were placed as the boat captains accepted them. Beginning in 1974 an effort was made to place observers on a random sample of the fishing fleet, and in 1975 the sampling scheme was further refined. In June 1975 the observer program was transferred from the SWFSC to the NMFS Southwest Regional office. In 1976 the placement of observers on seiners, which until then had been voluntary, became mandatory. In 1979 the Inter-American Tropical Tuna Commission (IATTC) instituted an observer program to monitor ETP dolphin mortality incidental to fishing by the international fleet. Observer trips on U.S. vessels alternated between NMFS and IATTC programs from 1979 until January of 1995 when NMFS ended its observer program. Data collected on trips assigned to the IATTC program differed in format and content from data collected under the NMFS program, and are not described in this report. The NMFS observer program was temporarily suspended by court order in 1983, so no data exist for that year. In 1987 and from 1989 onward, every fishing trip by U.S. purse seiners equipped to chase and capture dolphins was required to take a NMFS or IATTC observer. After 1990 NMFS adopted the IATTC observer program’s data collection forms and data record formats. This brought about the end of NMFS involvement in the observer data management. Although NMFS observers continued to be placed on U.S. seiners from 1991-

1995, data processing and data management for this period was done by IATTC, and therefore data collected during these years are not covered in this document.

The primary responsibility of the tuna-porpoise observer was to keep an accurate count of the number and species/management stock of dolphins killed in each purse seine set. The observers also collected data on fishing gear operations and dolphin involvement in them (including behavior before and after the net set), operator compliance with regulations, marine mammal sightings and search effort. When accessible to them, observers determined the sex and measured body lengths of dolphins killed by fishing. They also collected teeth, gonads, stomachs, heads and other specimens and samples from these dolphins depending on the needs of the researchers. These dolphin life history data are now maintained by PRD's Cetacean Health and Life History Program and are not described in this paper.

The types and amount of data collected changed over the years, especially during 1971-1974 when the program was evolving from a fairly *ad hoc* approach to a structured, standardized program with strict protocols. By 1975 more detailed data were collected on the causes and conditions of incidental mortality. Data on the type and amount of search effort also began to be collected in order to estimate dolphin densities and indices of abundance. In 1976 information pertaining to compliance to marine mammal regulations began to be collected.

## DATA QUALITY

Tuna-porpoise observers were employed under the job classification of Biological Technician (Fisheries) and were required to have at least 24 college-level semester units in the sciences or the equivalent experience; most had four-year degrees in the biological sciences. Some were seconded from other NMFS research centers and other agencies, e.g., the Smithsonian Institution. New observers underwent 80-160 hours of training that emphasized marine mammal identification, fishing regulations, fishing operations, and data collection procedures. Detailed instructions on data collection procedures, as well as supporting information, were contained in the observer manual that the observers took to sea with them. An overview of the collection and management of the tuna-porpoise observer data, especially the sightings data, is given by Perrin et al. (1983).

The observer program endeavored to ensure high-quality data through the implementation of both training and field manuals and by post-cruise observer debriefings conducted by experienced former observers immediately after the completion of a fishing trip. The observer manual was the single most complete source of information about data collection procedures, priorities and data definitions. The observer manual also contained copies of each data collection form and provided examples of data forms filled out to reflect various situations. The observer manual was updated annually and issued each year from 1972-1990. A complete set of observer manuals is held in the SWFSC library and/or the PRD archive. Observers kept notes about data collection problems or other related issues in a journal called the "green book". Data forms and the green book for each trip were turned over to the data management group after completion of the post-cruise observer debriefing.

The data forms were eventually microfilmed and transferred to the National Archive and Records Administration's storage facility in Perris, CA. As a space-saving measure, pages were removed from each green book and placed in separate folders which are held in the PRD archive.

Prior to 1974, when the number of trips was few, observer post-cruise debriefings were informal discussions among researchers and the observer. Data were collected on forms and hand tabulated into reports as needed. Summary data were coded onto computer cards, visually verified for accuracy, and analyzed. Prior to 1975, all data editing was done manually, and procedures were limited to a visual inspection of the data collection forms. Once the data were archived, additional errors were identified by various researchers during their analyses. Errors were corrected by experienced observers (employed as data editors), using all available resources and their personal knowledge of the fishery.

Beginning in 1974, data collection forms were designed with numbered data blocks to allow direct keypunching into a computerized system, in order to prepare the data more quickly for analysis. The data were routinely keypunched and verified, i.e., the key operator entered the data twice and rectified any discrepancies between the two sets of output. The development of both manual and computer-assisted methods for identifying and correcting potential errors in the data resulted from a continuing desire for better quality control and to more efficiently process an ever increasing amount of data. Beginning with the 1975 data, computer programs were used to perform checks on the data, as specified by data editors and staff researchers. These programs reduced the time required to perform the data verifications and provided standardized quality control criteria. Beginning in 1977, a project was initiated to produce structured, documented computer programs to provide this data editing function. This project was successfully completed in 1978 and implemented for use on the 1979 data. These programs were subsequently applied to many of the historical data collected between 1971 and 1978. The 1971-1973 data, which were originally collected in a non-coded, loosely structured format, were transcribed to coded data forms (1975, 1976 and 1977 versions, depending on data type) and entered into the computer system. This process was completed in early 1982. Listings of corrections made to the data since 1976 are held in the PRD archive.

Subsequent to amendments to the Marine Mammal Protection Act in 1984, the SWFSC examined the feasibility of using tuna-porpoise observer data to monitor dolphin stocks in the ETP. Edwards (1989) described many flaws or biases contained within these data, especially with respect to their use in line-transect abundance analyses. Polacheck (1988) and Anganuzzi and Buckland (1989) described techniques for reducing such biases, and Buckland et al. (1992) computed trends in abundance of dolphins based on tuna-porpoise observer data. However, Perkins (2000) concluded that population trend estimates based on observer data cannot be demonstrated to be valid. Lennart-Cody, Buckland and Marques (2001) cautioned against using tuna-porpoise observer data for estimating trends in abundance. Ward (2005) concluded that measurement error and/or selective reporting from tuna vessels were responsible for the large difference between dolphin school sizes reported by tuna seiner observers and by research vessel observers.


Despite the limitations of using tuna-porpoise observer data for absolute or relative dolphin abundance estimates, these data have been used for other purposes. The number of dolphins killed incidental to fishing operations was described by Wahlen (1986) and Wade (1995). Perrin et al. (1983) used Marine Mammal Sighting Data, in part, to show the distribution of certain species of dolphins in the ETP. Estimates of historical abundance and changes in abundance through time of certain dolphins, based in part on tuna-porpoise observer data, were given by Smith (1983), Polacheck (1987), Wade (1993), Hoyle and Maunder (2004), and Wade et al. (2007). Perkins and Edwards (1995) and Edwards and Perkins (1998) estimated bycatch rates in the purse seine fishery based on observer data. Perkins and Edwards (1999) showed that individual dolphins are chased and captured by the fishery multiple times per year, but that the rate of capture depends strongly on school size because fishermen tend to set on large schools. Hall (1998, 2000) contrasted discard rates among dolphin, floating object and unassociated modes of purse seine fishing on the basis of number of individual animals. Gerrodette et al. (2012) contrasted total biomass removals among the three modes of fishing on the basis of weight, number of individuals, trophic level, replacement time and diversity.

## **THE TUNA-PORPOISE OBSERVER DATA SETS**

There are seven primary types of tuna-porpoise observer data considered here: Cruise Specifications, Fishing Mode, Marine Mammal Watch Effort, Marine Mammal Sighting, Set Log, Tally, and Turtle. The file name, collection dates and number of records for each data set are listed in Appendix 1. Each data set is maintained in a separate file according to the designated “cruise year” associated with the start of the fishing trip. For example, Set Log data collected on a fishing trip that began in 1977 can be found in the file SL77SQnn.Dat, where “nn” designates a sequence or version number related to that file’s edit history. The “SQ” imbedded in each file name is a vestige of a naming convention used to designate that a file is an ordinary sequential, plain text (ASCII) file, as opposed to a random access indexed file (which had the letters “DB” imbedded in the name.) Some data in each file may represent activity just prior to that calendar year (if a vessel departed in late December for a trip that is intended to extend well into the next year) or after that year (if a fishing trip began late in the year and extended into the next year). That is, the data collected on a fishing trip that was active at the start of a new calendar year are all kept in a single file that represents one of the two calendar years involved.

Included in the observer data files for the years 1974-1981 are data collected by SWFSC marine mammal surveys conducted by scientists aboard NOAA research ships. These research cruises can be identified by the OBSERVER\_TYPE in the Cruise Specifications record or in Code Table 1. After 1981 the research cruise data were collected and maintained in a separate system and were no longer co-managed with the observer data. Also included in the Cruise Specifications data are records for each IATTC-observed U. S. fishing trip.

The file format and kinds of data collected changed over the duration of the observer program, often from year to year, depending on the immediate needs of the researchers and

enforcement office. (The version of each data collection form and the year it was used is given in Table 1.) Ultimately, the Cruise Specifications, Marine Mammal Watch Effort and Marine Mammal Sighting file formats were standardized so that a single format exists for each of these three data types for all years. The tuna-porpoise observer data record formats and definitions are documented in Appendix 2 (where the image of a key  indicates a field that comprises the primary key.) An alphabetized list of each data element and the years that it was collected is given in Appendix 3. In addition to the data sets, there are several code tables that contain definitions for some of the data that are numerically encoded. The code tables are located in Appendix 4.

Some of the information contained in the tuna-porpoise data is “confidential”<sup>1</sup> and cannot be disclosed to the public, except in aggregate form or if required by the Freedom of Information Act (5 U.S.C. 552), the Privacy Act (5 U.S.C. 552a), or by court order.<sup>2, 3</sup>

### **Cruise Specifications Data**

The Cruise Specifications record provides information pertaining to the equipment configuration of the vessel. The Cruise Specifications data collection forms are shown in Appendix 5. This record details vessel identification, net and safety panel lengths and depths, number of speedboats carried, vessel and operator certificate numbers, departure/arrival dates and observer information. The observer was instructed to complete the Cruise Specifications record with the aid of the captain and navigator. A single Cruise Specifications record exists for each NMFS- or IATTC-observed fishing trip and for each SWFC dolphin research vessel cruise. The Cruise Specifications data contain information for 1,559 fishing trips and research cruises.

The primary key of the Cruise Specifications record is the element CRUISE. The Cruise Specifications record can be cross-indexed (using the common element CRUISE) to all other data records existing for that fishing trip.

### **Fishing Mode Data**

Fishing Mode data were originally called Vessel Activities data in 1975 when added to the suite of data being collected by observers. The name was changed to Fishing Mode in 1976. The Fishing Mode record provides information pertaining to the investment of time by the vessel in searching, setting or inactive fishing modes. The Fishing Mode data collection forms are shown in Appendix 6. This record details vessel searching power (vessel speed, number of binoculars in use, helicopter deployment and environmental conditions) and periods of setting or inactivity (running, drifting, in port, etc.). The observer was instructed to complete a Fishing Mode record whenever there was a change in mode (searching, setting or inactive) or whenever there was a significant, long-term change within a mode. A minimum

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<sup>1</sup> Confidential data means data that are identifiable with any person, that reveal the business practices of an individual, and that are prohibited by law from being disclosed to the public.

<sup>2</sup> NOAA Administrative Order 216-100: Protection of confidential fisheries statistics. July 26, 1994.

<sup>3</sup> Fougner, Svein, and Atilio Coan. 1997. Southwest Region and Southwest Fisheries Science Center data confidentiality handbook. SWFSC Administrative Report LJ-97-01.

of one record exists for each day of the fishing trip. The Fishing Mode data contain information for 54,717 vessel-days.

The primary key of the Fishing Mode record is the combination of the elements CRUISE, DATE and TIME\_ACTIVITY. It may be possible to cross-index the Fishing Mode record (using the common elements CRUISE and SET) to a Marine Mammal Watch Effort record, a Marine Mammal Sighting record, a Set Log record, and/or a Tally record.

### **Marine Mammal Watch Effort Data**

The Marine Mammal Watch Effort record provides information pertaining to the vessel track line and sighting conditions during periods of watch effort, an activity that required the observer to be on the bridge keeping a lookout for marine mammals. The observer was not required, however, to use binoculars as long as vessel personnel were actively searching with “big-eye” binoculars (25x). The Marine Mammal Watch Effort data collection forms are shown in Appendices 7A-7F. (A single data collection form was used to collect both Marine Mammal Watch Effort data and Marine Mammal Sighting data from 1971-1974.) The Marine Mammal Watch Effort record details vessel position, course and speed, sea state, sun angles and sea surface temperature. The observer was instructed to collect effort data whenever the vessel was under way and the conditions were favorable for sighting marine mammals. The Marine Mammal Watch Effort data contain information for 192,768 hours of watch effort.

The primary key of the Marine Mammal Watch Effort record is the combination of the elements CRUISE, DATE and SERIES. It may be possible to cross-index the Marine Mammal Watch Effort record to a Fishing Mode record (using the common elements CRUISE and SET), a Marine Mammal Sighting record (CRUISE, DATE, SERIES and LEG), a Set Log record (CRUISE and SET), and/or a Tally record (CRUISE and SET).

### **Marine Mammal Sighting Data**

The Marine Mammal Sighting record provides information pertaining to cetacean sightings made during the fishing trip. The Marine Mammal Sighting data collection forms are shown in Appendices 7A-7B and 7G-7K. This record details species identification, estimated school size, position, sea surface temperature, and bearing and distance from the vessel to the animal(s). The observer was instructed to complete a Marine Mammal Sighting record for every distinct aggregation of cetaceans encountered, whether seen by him or reported to him by someone else. The data collection forms include additional notes and sketches dealing with observed behavior and appearance of the dolphins. The Marine Mammal Sighting data contain information for 110,619 marine mammal sightings.

The primary key of the Marine Mammal Sighting record is the combination of the elements CRUISE, DATE and SIGHT. It may be possible to cross-index the Marine Mammal Sighting record to a Marine Mammal Watch Effort record (using the common elements CRUISE, DATE, SERIES and LEG), a Set Log record (CRUISE and SET), and/or a Tally record (CRUISE and SET).

## **Set Log Data**

The Set Log record provides information pertaining to net setting operations and any associated marine mammals. The Set Log data collection forms are shown in Appendices 8 and 9. (A single data collection form was used to collect both marine mammal Set Log data and schoolfish/flotsam Set Log data from 1971-1974. After 1974 two separate forms were used.) This record details major set time frames, marine mammal evasion and escape, dolphin rescue procedures and causes of mortality. The observer was instructed to complete a Set Log record for every set, including sets not involving marine mammals. Additional non-coded notes on dolphin behavior exist on the data collection forms. The Set Log data contain information for a total of 41,121 sets, including 23,581 intentional sets on dolphins.

The primary key of the Set Log record is the combination of the elements CRUISE and SET. A Set Log record for a marine mammal set can be cross-indexed (using the common elements CRUISE and SET) to a Fishing Mode record, a Marine Mammal Sighting record and/or a Tally record. It may also be possible to cross-index (CRUISE and SET) the Set Log record to a Marine Mammal Watch Effort record. A set log record for a non-marine mammal set can only be cross-indexed (CRUISE and SET) to a Fishing Mode record.

## **Tally Data**

The Tally record provides information pertaining to set-related dolphin kill and injury. (Tally data were recorded on the marine mammal Set Log forms.) This record details kill and injury counts by species/stock, sex and color-pattern-based age categories (for spotted dolphins) as well as counts of uninjured dolphins observed to leave the net after the completion of the vessel's backdown maneuver. The observer was instructed to complete a tally record for every marine mammal set, including sets with unintentional marine mammal involvement. The Tally data contain information for 142,694 dolphins killed.

The primary key of the Tally record is the combination of the elements CRUISE and SET. The Tally record can be cross-indexed (using the common elements CRUISE and SET) to a Fishing Mode record, a Marine Mammal Sighting record and/or a Set Log record. It may also be possible to cross-index (CRUISE and SET) the Tally record to a Marine Mammal Watch Effort record.

## **Turtle Data**

The Turtle record provides information pertaining to turtle sightings made during the fishing trip. The Turtle data collection form is shown in Appendix 10. This record details species identification(s), quantity of turtles, turtle activity, and type of habitat. The observer was instructed to complete a Turtle record for every turtle or aggregation of turtles encountered. These data exist only for 1975, except for two turtle sightings made in 1974 and one made in 1976. (At the request of the fishing industry, NMFS agreed to stop collecting the ancillary turtle data.) The Turtle data contain information for 424 turtle sightings.

The primary key of the Turtle record is the combination of the elements CRUISE DATE and SIGHT. It may be possible to cross-index the turtle record to a Marine Mammal Watch Effort record (using the common elements CRUISE, DATE, SERIES and LEG) and/or a Set Log record (CRUISE and SET).

## **ACKNOWLEDGMENTS**

From 1971 to the end of the NMFS Tuna-Porpoise Observer Program in 1995, 430 observers logged 65,531 sea days (equivalent to nearly 180 person-years) on 1,038 fishing trips. A typical fishing trip lasted between 60 and 70 days, sometimes over 100 days, and did not end until either the fish wells were full of tuna or fuel and supplies were spent. The observer was entirely on his own to not only do his job but also to get along with a crew of 15 to 20 fishermen who might feel no compunction in making him feel less than welcome aboard their boat. Among this group of observers were nine intrepid women who in 1987 broke the gender barrier and changed forever the perception that a commercial fishing vessel was no place for a female observer. The vast amount and exceptional quality of data brought back to the laboratory by these dedicated observers is a testament to their extreme dedication and perseverance. The Tuna-Porpoise Observer Program charted the course for the multitude of fishery observer programs that followed.

Bill Perrin was most important in establishing the Tuna-Porpoise Observer Program and determining its data collection requirements, procedures and priorities. The impressive quality and quantity of the tuna-porpoise observer data are due to his hard work and dedication. Much of the information about the data management practices of the program prior to 1982 was gleaned from an unfinished manuscript written by Chuck Oliver who oversaw data management throughout much of the 1970s. Jim Coe, Frank Ralston and the author also served as data management supervisors.



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Table 1. Tuna-Porpoise Observer Program data collection forms, versions and years used.

Data Set	Cruise Year/Data Collection Form Version Number																			
	1971	1972	1973	1974	1975	1976	1977A	1977B	1978	1979	1980	1981	1982	1984	1985	1986	1987	1988	1989	1990
Cruise Specifications	N/A	N/A	N/A	N/A	1	2	3	3	3	4	4	4	4	4	4	5	5	5	5	5
Fishing Mode	N/A	N/A	N/A	N/A	1	2	2	2	2	2	2	3	3	4	4	4	4	4	5	5
Marine Mammal Sighting	1	1	1	2	3	3	4	4	4	5	5	6	6	6	6	7	7	7	7	7
Marine Mammal Watch Effort					3	3	3	3	3	4	4	5	5	6	6	6	6	6	6	6
Marine Mammal Set Log	1	1	1	2	3	4	5	6	7	8	9	9	9	9	9	9	9	10	10	10
Schoolfish/Flotsam Set Log	N/A	N/A	N/A	N/A	N/A	1	2	2	2	3	3	3	3	3	3	3	3	3	3	3
Turtle Sighting	N/A	N/A	N/A	N/A	1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Appendix 1. Tuna-porpoise observer data files with dates of collection and number of records.

Cruise Specifications Data		
File Name	Dates Inclusive	Number of Records
CS66SQ02.DAT	07/10/1966-08/11/1966	1
CS67SQ02.DAT	07/xx/1967-07/xx/1967	1
CS68SQ02.DAT	04/01/1968-04/29/1968	1
CS69SQ02.DAT	07/10/1969-08/25/1969	1
CS70SQ02.DAT	01/22/1970-01/22/1970	1
CS71SQ02.DAT	12/28/1970-12/16/1971	8
CS72SQ02.DAT	01/01/1972-12/17/1972	14
CS73SQ02.DAT	01/01/1973-12/15/1973	26
CS74SQ04.DAT	01/01/1974-12/21/1974	44
CS75SQ03.DAT	01/01/1975-12/06/1975	36
CS76SQ05.DAT	01/04/1976-12/13/1976	81
CS77SQ09.DAT	01/04/1977-02/07/1978	117
CS78SQ08.DAT	12/07/1977-02/13/1979	121
CS79SQ06.DAT	12/31/1978-02/24/1980	114
CS80SQ11.DAT	12/06/1979-04/08/1981	106
CS81SQ12.DAT	12/08/1980-04/10/1982	94
CS82SQ23.DAT	01/07/1982-06/07/1983	74
CS83SQ07.DAT	01/12/1983-02/26/1984	33
CS84SQ13.DAT	01/04/1984-02/10/1985	30
CS85SQ09.DAT	01/06/1985-02/02/1986	48
CS86SQ08.DAT	12/31/1985-12/06/1986	43
CS87SQ09.DAT	12/27/1986-04/29/1988	125
CS88SQ07.DAT	01/09/1988-03/22/1989	62
CS89SQ11.DAT	01/03/1989-03/15/1990	122
CS90SQ09.DAT	01/08/1990-03/30/1991	95
CS91SQ04.DAT	01/05/1991-02/12/1992	43
CS92SQ01.DAT	01/12/1992-02/08/1993	40
CS93SQ01.DAT	01/17/1993-01/24/1994	42

Fishing Mode Data		
File Name	Dates Inclusive	Number of Records
VA75SQ02.DAT	01/01/1975-12/06/1975	12901
VA76SQ02.DAT	01/04/1976-12/09/1976	27117
VA77SQ04.DAT	01/24/1977-02/07/1978	44373
VA78SQ04.DAT	12/07/1977-02/13/1979	59640
VA79SQ08.DAT	12/31/1978-02/24/1980	41922
VA80SQ05.DAT	01/02/1980-02/12/1981	26518
VA81SQ06.DAT	12/08/1980-04/10/1982	20961
VA82SQ17.DAT	01/07/1982-04/27/1983	22283

Appendix 1. (Continued)

File Name	Dates Inclusive	Number of Records
VA84SQ05.DAT	04/29/1984-12/20/1984	6300
VA85SQ07.DAT	01/03/1985-01/02/1986	14118
VA86SQ05.DAT	12/31/1985-11/15/1986	9751
VA87SQ07.DAT	12/27/1986-04/29/1988	53698
VA88SQ05.DAT	01/05/1988-03/22/1989	21313
VA89SQ07.DAT	01/02/1989-02/18/1990	44325
VA90SQ06.DAT	12/27/1989-11/06/1990	16782

Marine Mammal Watch Effort Data		
File Name	Dates Inclusive	Number of Records
ME71SQ02.DAT	04/26/1971-12/15/1971	134
ME72SQ02.DAT	01/01/1972-10/27/1972	479
ME73SQ03.DAT	01/02/1973-05/14/1973	1222
ME74SQ03.DAT	01/01/1974-08/27/1974	2392
ME75SQ03.DAT	01/01/1975-12/02/1975	4500
ME76SQ05.DAT	01/04/1976-12/12/1976	7903
ME77SQ08.DAT	01/05/1977-02/05/1978	14904
ME78SQ04.DAT	12/10/1977-02/12/1979	10942
ME79SQ08.DAT	01/02/1979-02/20/1980	6825
ME80SQ07.DAT	01/02/1980-01/18/1981	4950
ME81SQ11.DAT	12/09/1980-04/09/1982	4219
ME82SQ20.DAT	01/09/1982-04/26/1983	4004
ME84SQ06.DAT	04/30/1984-12/16/1984	1439
ME85SQ07.DAT	01/07/1985-12/30/1985	3428
ME86SQ05.DAT	01/03/1986-11/08/1986	2058
ME87SQ05.DAT	12/28/1986-04/22/1988	10549
ME88SQ05.DAT	01/09/1988-03/18/1989	3410
ME89SQ07.DAT	01/03/1989-02/15/1990	8848
ME90SQ06.DAT	01/16/1990-11/05/1990	3032

Marine Mammal Sighting Data		
File Name	Dates Inclusive	Number of Records
MS71SQ01.DAT	12/29/1970-12/15/1971	511
MS72SQ01.DAT	01/01/1972-10/27/1972	820
MS73SQ01.DAT	01/02/1973-12/11/1973	2706
MS74SQ09.DAT	01/01/1974-12/18/1974	3577
MS75SQ10.DAT	01/02/1975-12/02/1975	4418
MS76SQ12.DAT	01/04/1976-12/12/1976	7893
MS77SQ13.DAT	01/06/1977-02/05/1978	13850

Appendix 1. (Continued)

File Name	Dates Inclusive	Number of Records
MS78SQ13.DAT	12/08/1977-02/12/1979	14049
MS79SQ16.DAT	01/02/1979-02/20/1980	11589
MS80SQ12.DAT	01/02/1980-02/12/1981	6586
MS81SQ14.DAT	12/09/1980-04/09/1982	5047
MS82SQ22.DAT	01/09/1982-04/24/1983	6139
MS84SQ07.DAT	04/30/1984-12/15/1984	1432
MS85SQ08.DAT	01/07/1985-12/29/1985	3766
MS86SQ07.DAT	01/03/1986-11/11/1986	2177
MS87SQ06.DAT	12/29/1986-04/22/1988	11094
MS88SQ06.DAT	01/12/1988-03/20/1989	3384
MS89SQ07.DAT	01/05/1989-02/17/1990	8245
MS90SQ06.DAT	01/08/1990-11/04/1990	3336

Set Log Data		
File Name	Dates Inclusive	Number of Records
SL71SQ05.DAT	01/02/1971-12/11/1971	199
SL72SQ07.DAT	01/04/1972-10/23/1972	354
SL73SQ06.DAT	01/04/1973-12/11/1973	1006
SL74SQ08.DAT	01/02/1974-12/18/1974	1970
SL75SQ06.DAT	01/05/1975-12/02/1975	1802
SL76SQ05.DAT	01/06/1976-12/06/1976	3060
SL77SQ06.DAT	01/27/1977-02/05/1978	4798
SL78SQ07.DAT	12/14/1977-02/08/1979	6279
SL79SQ08.DAT	01/02/1979-02/20/1980	4331
SL80SQ08.DAT	01/06/1980-02/10/1981	2361
SL81SQ07.DAT	12/13/1980-04/07/1982	1819
SL82SQ21.DAT	01/11/1982-04/22/1983	1668
SL84SQ07.DAT	05/02/1984-12/14/1984	426
SL85SQ09.DAT	01/13/1985-12/29/1985	1015
SL86SQ06.DAT	01/05/1986-11/14/1986	709
SL87SQ11.DAT	01/02/1987-04/22/1988	3879
SL88SQ08.DAT	01/12/1988-03/18/1989	1373
SL89SQ07.DAT	01/05/1989-02/15/1990	2885
SL90SQ06.DAT	01/17/1990-10/18/1990	1187

Tally Data		
File Name	Dates Inclusive	Number of Records
TY71SQ04.DAT	01/02/1971-12/11/1971	68
TY72SQ05.DAT	01/04/1972-10/23/1972	276
TY73SQ05.DAT	01/04/1973-12/11/1973	772
TY74SQ04.DAT	01/02/1974-12/18/1974	1132

Appendix 1. (Continued)

File Name	Dates Inclusive	Number of Records
TY75SQ05.DAT	01/05/1975-12/02/1975	1102
TY76SQ03.DAT	01/10/1976-12/06/1976	1303
TY77SQ03.DAT	01/29/1977-01/19/1978	3428
TY78SQ04.DAT	12/14/1977-02/01/1979	1833
TY79SQ04.DAT	01/06/1979-02/20/1980	2045
TY80SQ05.DAT	01/06/1980-02/07/1981	1012
TY81SQ07.DAT	12/13/1980-04/06/1982	929
TY82SQ19.DAT	01/11/1982-04/22/1983	876
TY84SQ08.DAT	05/02/1984-12/14/1984	388
TY85SQ10.DAT	01/13/1985-12/29/1985	973
TY86SQ04.DAT	01/05/1986-10/19/1986	634
TY87SQ10.DAT	01/02/1987-04/22/1988	3070
TY88SQ07.DAT	01/12/1988-03/18/1989	847
TY89SQ06.DAT	01/05/1989-02/15/1990	2222
TY90SQ05.DAT	01/18/1990-10/09/1990	773

Turtle Data		
File Name	Dates Inclusive	Number of Records
TURTSQ01.DAT	02/01/1974-02/10/1976	424

Appendix 2A. Record format and definitions for Cruise Specifications data collected by the NMFS Tuna-Porpoise Observer Program from 1966-1993.

Field Name	Columns	Description
CRUISE	1-4	The unique four-digit number assigned to this cruise.
(FILLER)	5-6	Non-data remnant of data processing.
VESSEL_CODE	7-10	The unique four-digit number assigned to this U.S. purse seiner (Code Table 3).
YR_BOAT_BUILT	11-12	The last two digits of the year the vessel was built.
FISH_CAPACITY	13-16	The vessel's carrying capacity in short tons, 4 digits.
VESSEL_CLASS	17-17	The one-digit code classifying a vessel based on the year the boat was built and its fish capacity (Code Table 14A).
(FILLER)	18-19	Non-data remnant of data processing.
VESSEL_NAME	20-45	The name of the vessel, uppercase, left justified.
(FILLER)	46-47	Non-data remnant of data processing.
VESS_CERT HOLDER	48-76	The full name or company name of the vessel certificate holder for this vessel.
VESS_CERT_NUMBER	77-85	The certificate number of the vessel certificate holder for this vessel, 9 characters, e.g., FSW792223.
REPEAT_OCCURRENCES	86-87	Indicates the number of times (n) the following repeating group of elements repeats, 2 digits.
DATE_DEPARTED	88-93 (+96n)	The date (yymmdd) on which the vessel initially left port to begin fishing, 6 digits.
DATE_RETURNED	94-99 (+96n)	The date (yymmdd) on which the vessel returned to port to unload, 6 digits.
TRIP_COMPLETED	100-100 (+96n)	The coded answer to the question, "Was an observer on board this cruise from the time of departure until the ship returned and unloaded?" Yes = 1, No = 2.
OBSERVER	101-103 (+96n)	The unique three-digit numerical code identifying the observer on this cruise (Code Table 2.)
OBSERVER_TYPE	104-105 (+96n)	The two-digit code indicating the observer's primary purpose on this cruise (Code Table 14B).
NUMBER_TRIPS	106-107 (+96n)	The total number of purse seiner cruises participated in by this observer prior to this cruise, 2 digits.
PORP_SETS_SEEN	108-110 (+96n)	The total number of sets on marine mammals observed by this observer prior to this cruise, 3 digits.
TOTAL_OBSERVERS	111-111 (+96n)	The one-digit number indicating this observer's place in the sequence of the observers participating in this cruise.
CRUZ_TYPE	112-113 (+96n)	The two-digit code indicating the area fished or the purpose of this cruise (Code Table 14C).
GEAR_TYPE	114-115 (+96n)	The two-digit code indicating the general type of net used by this vessel on this cruise (Code Table 14D).
NUM_SPEEDBOATS	116-116 (+96n)	The number of functional speedboats on board during the cruise, whether used or not, 1 digit.
HELICOPTER	117-117 (+96n)	The coded answer to the question, "Was a functional helicopter aboard during the cruise?" Yes = 1, No = 2.
BOWTHRUSTER	118-118 (+96n)	The coded answer to the question, "Did the boat have an operable bowthruster during this cruise?" Yes = 1, No = 2.



Appendix 2A. (Continued)

Field Name	Columns	Description
ANTITORQ_CABLE	119-119 (+96n)	The coded answer to the question, "Did the boat use anti-torque purse cables during this cruise?" Yes = 1, No = 2.
YR_NET_BUILT	120-121 (+96n)	The year in which the net was originally constructed 2 digits.
NET_LENGTH	122-124 (+96n)	The total length, in fathoms, of the net during the present cruise, 3 digits.
NET_DEPTH	125-127 (+96n)	The estimated depth, in fathoms, of the net during the present cruise, 3 digits.
NET_STRIP_DEPTH	128-129 (+96n)	The number of strips in the net during the present cruise, 2 digits.
NET_MESH_SIZE	130-132 (+96n)	The mesh size, in inches and hundredths, of the webbing in the net during the present cruise, 3 digits.
PORP_PANEL	133-133 (+96n)	The coded answer to the question, "Does the net have one or more strips of webbing with ¼-inch mesh or smaller in the backdown area?" Yes = 1, No = 2.
YR_PANEL_INSTALD	134-135 (+96n)	The year in which the safety panel system or most recent current addition to the system was built into the net, 2 digits.
PANEL_LENGTH	136-138 (+96n)	The total length, in fathoms, of the safety panel system during the cruise, 3 digits.
PANEL_DEPTH	139-140 (+96n)	The depth, in fathoms, of the safety panel system in the net during the present cruise, 2 digits.
PANEL_STRP_DEPTH	141-142 (+96n)	The depth of the safety panel system, in strips, 2 digits. Note: Partial strips are rounded up to full strips, e.g., 1/3 strip is rounded up to one strip.
PANEL_MESH_SIZE	143-145 (+96n)	The mesh size of the webbing in the safety panel system, in inches and hundredths, 3 digits.
OPER_CERT HOLDER	146-171 (+96n)	The first name, middle initial and last name of the operator certificate holder on this cruise, left justified.
OPER_CODE	172-174 (+96n)	The numerical code uniquely identifying the vessel operator, 3 digits.
OPER_CERT_NUMBER	175-183 (+96n)	The certificate number of the operator certificate holder on this cruise, 9 characters, e.g., FSW792223.

Appendix 2B. Record format and definitions for Marine Mammal Watch Effort data collected by the NMFS Tuna-Porpoise Observer Program from 1971-1990.

Field Name	Columns	Description
☛CRUISE	1- 4	The unique four-digit number assigned to identify this cruise.
☛DATE	5-10	The year, month and day (yymmdd) on which this event happened, 6 digits.
☛SERIES	11-12	The consecutive number of the uninterrupted observer searching effort each day, 2 digits
SURF_TEMP_END	13-15	The surface water temperature at the start of the present leg in degrees Fahrenheit and tenths of a degree, 3 digits.
REPEAT_OCCURRENCES	16-17	Indicates the number of times (n) the group of repeating elements repeats, 2 digits.
LEG	18-19 (+42n)	The consecutive number of the constant condition time periods within a series, 2 digits.
TIME_START_LEG	20-23 (+42n)	The local time at which the present leg begins 4 digits.
SURF_TEMP_START	24-26 (+42n)	The surface water temperature at the start of the present leg in degrees Fahrenheit and tenths of a degree, 3 digits.
BEAUFORT_START	27-27 (+42n)	The sea state at the start of the present leg, coded, 1 digit.
HORIZ_SUN	28-29 (+42n)	The two-digit code indicating the position of the sun relative to the vessel. Use the clock as reference with 12 indicating the bow, 3 starboard, 6 stern, 9 port. Sun directly overhead is 12. Blank means the sun is obscured.
VERT_SUN	30-31 (+42n)	The two-digit code indicating the angle of the sun relative to the vessel. Use the clock with 12 directly overhead, 3 on the horizon. Blank means the sun is obscured.
FOG_OR_RAIN	32-32 (+42n)	One-digit code indicating the presence or absence of fog or rain, within the searching path, at the start of the present leg. 1 = no fog or rain; 2 = fog; 3 = rain; 4 = rain and fog.
HELICOPTER_UP	33-33 (+42n)	The coded answer to the question, "Was the helicopter aloft at the start of the present leg?" Yes = 1; No = 2. If there is no helicopter based aboard, leave the code block blank.
TIME_END_LEG	34-37 (+42n)	The local time at which the present leg ended, 4 digits.
COURSE	38-40 (+42n)	The compass course of the vessel during the present leg of the mammal watch in degrees true, 3 digits.
SPEED	41-43 (+42n)	The speed of the vessel in knots and tenths during the present leg of mammal watch, 3 digits.
LATITUDE	44-47 (+42n)	The latitude of the vessel in degrees and minutes north or south of the equator at the start of the present leg, 4 digits.
N_S	48-48 (+42n)	The hemisphere of the latitude, coded one-digit: North = 1, South = 2.

Appendix 2B. (Continued)

Field Name	Columns	Description
LONGITUDE	49-53 (+42n)	The longitude of the vessel degrees (3 digits) and minutes (2 digits) east or west of Greenwich, England, at the start of the present leg, 5 digits.
E_W	54-54 (+42n)	The hemisphere of the longitude, coded one-digit: East = 1, West = 2.
SIGHTINGS	55-55 (+42n)	The coded answer to the question, "Were any sighting cues that led to the marine mammals recorded during the present leg?" Yes = 1; No = 2.
LEG_END_CODE	56-56 (+42n)	The one-digit code indicating the reason for ending the present leg of mammal watch effort (Code Table 7).
SET	57-59 (+42n)	If the present leg is terminated because a set is made (end leg code 3), the number of that set is recorded here, 3 digits.

Appendix 2C. Record format and definitions for Marine Mammal Sighting data collected by the NMFS Tuna-Porpoise Observer Program from 1971-1990.

Field Name	Columns	Description
CRUISE	1-4	The unique four-digit number assigned to identify this cruise.
DATE	5-10	The year, month and day (yymmdd) on which this event happened, 6 digits.
SIGHT	11-12	The chronological number of the sighting of the day, 2 digits.
SERIES	13-14	The two-digit number of the mammal watch series in progress when this sighting was recorded; blank if mammal watch was not in progress or if the time of the sighting cue is unknown.
LEG	15-16	The two-digit number of the leg of the mammal watch during which this sighting was recorded. Blank if mammal watch was not in progress or if the time of sighting cue is unknown.
(FILLER)	17-18	Non-data remnant of data processing.
TIME_OF_SIGHTING	19-22	The local time at which the initial cue leading to marine mammals was first sighted by anyone on the boat or helicopter, i.e., cue meaning birds, splashes, etc., 4 digits.
SIGHTING_Q	23-23	The one-digit code identifying the cue that led to a marine mammal sighting (Code Table 13, Part A).
INITIAL_SIGHTING	24-24	The one-digit code identifying the person on board who sighted the cue that led to a marine mammal sighting (Code Table 13, Part B).
BEARING	25-27	The direction in degrees from the vessel to the sighting cue using the vessel as the reference, i.e., on the bow is 000°, right (starboard) beam is 090°, directly astern is 180°, left (port) beam is 270° and so on, 3 digits.
DISTANCE	28-30	The estimated distance of the sighting cue from the ship when it is first sighted, in nautical miles and tenths of a nautical mile, 3 digits.
BEAUFORT	31-31	The one-digit code identifying the sea state at the time the cue was sighted.
SURF_TEMP	32-34	The surface water temperature at the time the cue was sighted, in degrees Fahrenheit and tenths, 3 digits.
LATITUDE	35-38	The latitude of the vessel at the time the sighting of the cue leading to marine mammals was made, in degrees and whole minutes, 4 digits.
N_S	39-39	The hemisphere of the latitude, coded one-digit: North = 1, South = 2.
LONGITUDE	40-44	The longitude of the vessel at the time the sighting of the cue leading to marine mammals was made, in degrees and whole minutes, 5 digits.
E_W	45-45	The hemisphere of the longitude, coded one-digit: East = 1, West = 2.
SOURCE_OF_POSIT	46-46	The one-digit code identifying how the position of this sighting cue was obtained. 1 = D.R. aboard vessel, 2 = Verbally received, 3 = Direct readout of satellite navigation system, 4 = Developed during post-cruise procedures.

Appendix 2C. (Continued)

Field Name	Columns	Description
TIME_MM_SIGHTED	47-50	The time at which the marine mammals were sighted by anyone aboard the vessel or helicopter, 4 digits.
SET	51-53	The three-digit consecutive set number, entered only if the marine mammals indicated by the sighting cue were set on.
BIRDS	54-54	Coded answer to the question, "Were birds associated with the marine mammals?" Yes = 1, No = 2.
CREW_MN_EST_SCHL	55-58	The average of the crew's estimate of the total number of marine mammals of all species in the aggregation, 4 digits.
CREW_HI_EST_SCHL	59-62	The highest of the crew estimates of the total number of marine mammals of all species in the aggregation, 4 digits.
CREW_LO_EST_SCHL	63-66	The lowest of the crew estimates of the total number of marine mammals of all species in the aggregation, 4 digits.
OBS_BST_EST_SCHL	67-70	The observer's best estimate of the total number of marine mammals of all species in the aggregate, 4 digits. (Note: The best estimate does not have to be the mean of the best and low estimate.)
OBS_HI_EST_SCHL	71-74	The observer's estimate of the maximum possible number of marine mammals of all species in the aggregate, 4 digits.
OBS_LO_EST_SCHL	75-78	The observer's estimate of the minimum possible number of marine mammals of all species in the aggregate, 4 digits.
(FILLER)	79-83	Non-data remnant of data processing.
CREW_SP1_PERCENT	84-86	The estimated percentage of the total aggregate represented by the species indicated as species (1), 3 digits.
CREW_SP1_CODE	87-88	The two-digit code number assigned to identify the species indicated as species (1).
OBS_SP1_PERCENT	89-91	The estimated percentage of the total aggregate represented by the species indicated as species (1), 3 digits.
OBS_SP1_CODE	92-93	The two-digit code number assigned to identify the species indicated as species (1).
CREW_SP2_PERCENT	94-96	The estimated percentage of the total aggregate represented by the species indicated as species (2), 3 digits.
CREW_SP2_CODE	97-98	The two-digit code number assigned to identify the species indicated as species (2).
OBS_SP2_PERCENT	99-101	The estimated percentage of the total aggregate represented by the species indicated as species (2), 3 digits.
OBS_SP2_CODE	102-103	The two-digit code number assigned to identify the species indicated as species (2).
CREW_SP3_PERCENT	104-106	The estimated percentage of the total aggregate represented by the species indicated as species (3), 3 digits.

Appendix 2C. (Continued)

Field Name	Columns	Description
CREW_SP3_CODE	107-108	The two-digit code number assigned to identify the species indicated as species (3).
OBS_SP3_PERCENT	109-111	The estimated percentage of the total aggregate represented by the species indicated as species (3), 3 digits.
OBS_SP3_CODE	112-113	The two-digit code number assigned to identify the species indicated as species (3).
CREW_SP4_PERCENT	114-116	The estimated percentage of the total aggregate represented by the species indicated as species (4), 3 digits.
CREW_SP4_CODE	117-118	The two-digit code number assigned to identify the species indicated as species (4).
OBS_SP4_PERCENT	119-121	The estimated percentage of the total aggregate represented by the species indicated as species (4), 3 digits.
OBS_SP4_CODE	122-123	The two-digit code number assigned to identify the species indicated as species (4).
GBU	124-124	The one-digit code describing the relative reliability of the observer's species/stock identification: 1 = single species sighting that cannot be verified, 2 = verified, 3 = original ID changed by data editors and verified by supporting information, 4 = multispecies sighting and not all species IDs can be verified.
TOTAL_TIME	125-128	The total amount of time the observer observed the marine mammals, in minutes and tenths of a minute, start to finish. (For cases in which the time is six seconds or less, enter one tenth of a minute.)
ENVIR_COND	129-129	The one-digit code identifying the general quality of the environmental conditions (sea state, rain, glare, darkness, etc.) affecting the observer's observation of the marine mammals. 1 = good, 2 = fair, 3 = poor.
CLOSEST_DISTANCE	130-131	The closest approach to the school, in nautical miles and tenths of a nautical mile. Round to the nearest tenth. (For cases in which the distance is less than five hundredths of a nautical mile, or about 300 feet, enter "00".)
TIME_CLOSE	132-135	The total time at the closest distance of observation, in minutes and tenths of a minute. (For cases in which the time is six seconds or less, enter one tenth of a minute.)
TAGS	136-136	Coded answer to the question, "Were tagged marine mammals observed at any time throughout the course of this sighting?" 1 = Yes; 2 = No.
OBS_METHOD	137-137	The one-digit code identifying the type of binoculars, if any, the observer used to observe the marine mammals. 1 = Eyes; 2 = Low power (7x, 10x); 3 = High Power (20x, 25x); 4 = Eye and Low; 5 = Eye and High; 6 = Low and High; 7 = eye, Low and High.

Appendix 2C. (Continued)

Field Name	Columns	Description
DIRECTION	138-140	The direction of travel of the marine mammals indicated by the sighting cue, in degrees true, with North as the reference point; North = 000°, Southwest = 225°, etc. If the school was not moving, or was milling about, the direction of travel is coded 999, 3 digits.

Appendix 2D. Record format and data definitions for Set Log data collected by the NMFS Tuna-Porpoise Observer Program from 1971-1975.

Field Name	Columns	Description
CRUISE	1-3	The unique three-digit number assigned to this cruise.
SET	4-6	The three digit consecutive number for the present set.
(FILLER)	7-7	Non-data remnant of data processing.
DATE	8-13	The year, month and day (yymmdd) on which this event happened, 6 digits.
OBSERVER	14-16	The unique three-digit number assigned to this porpoise observer.
VESSEL_CODE	17-20	The unique four-digit number assigned to this vessel (Code Table 3).
SET_TYPE	21-22	The two-digit code number identifying the set type as determined by the observer (Code Table 8).
FISH_TYPE	23-23	The one-digit code number identifying the type of fish set on (Code Table 9).
SUCCESS_SET	24-24	The coded answer to the question, "Was the set successful?" i.e., was ¼ ton or more fish loaded on the boat? Yes = 1, No = 2.
LATITUDE	25-28	The latitude in degrees (2 digits) and minutes (2 digits) north or south of the equator at which the set is made.
N_OR_S	29-29	The hemisphere of the latitude, coded one-digit. North = 1, South = 2.
LONGITUDE	30-34	The longitude in degrees (3 digits) and minutes (2 digits) east or west of Greenwich, England, at which the set is made.
E_OR_W	35-35	The hemisphere of the longitude, coded one-digit, East = 1, West = 2.
TIME_OF_SIGHT	36-39	The time when the school is first seen, four digits.
TIME_CHASE_BEGAN	40-43	The time when the first speedboat(s) was lowered onto the water, 4 digits (blank if speedboats were not used).
WIND	44-45	The wind speed in knots at time chase began.
WIND_DIRECTION	46-46	The octant of the compass from which the wind is blowing at the time chase began, 1 digit, e.g., 1°-45°, coded as 1; 46°-90°, coded 2; 91°-135°, coded 3; etc.
WIND_SWELL	47-48	The height of the primary swell in feet at the time chase began, 2 digits. (Swell is waves raised by distant wind systems, or by winds that have ceased to blow.)
WIND_CHOP	49-50	The height of the surface chop, in feet and tenths of feet, at the time chase began, 2 digits. (Chop is a system of waves raised by the local wind at the time of observation.)
SURF_TEMP	51-53	The sea surface temperature in Fahrenheit degrees and tenths of degrees at the time chase began, 3 digits.
CURRENT_STRONG	54-54	The coded answer to the question, "Was a strong current present at any time during the set?" Yes = 1, No = 2. (NOTE: Strong currents are two knots or greater.)
FRIGATES	55-56	The best estimate of the number of frigate birds (man-o-wars) over the school, 2 digits.
BOOBIES	57-60	The best estimate of the total number of all species of booby birds over the school, 4 digits.



Appendix 2D. (Continued)

Field Name	Columns	Description
TERNNS	61-63	The best estimate of the total number of all species of terns over the school, 3 digits.
SHEARWATERS	64-67	The best estimate of the total number of all species of shearwaters over the school, 4 digits.
JAEGERS	68-70	The best estimate of the total number of all species of jaegers over the school, 3 digits.
PETRELS	71-73	The best estimate of the total number of all species of petrels over the school, 3 digits.
OTHER_BIRDS	74-76	The best estimate of the total number of all identifiable species of birds other than those listed above that are associated with the school, 3 digits.
UNIDENT_BIRDS	77-80	The best estimate of the total number of birds over the school that were not identifiable, 4 digits.
(FILLER)	81-81	Non-data remnant of data processing.
E1_PORP_TOT	82-85	The crew's estimate #1 of the entire school size before the set, 4 digits.
E1_ERROR	86-89	The +/- error of crew estimate #1 of porpoise school size before the set, 4 digits.
E1_SPT	90-92	The crew's estimate #1 of percentage of spotters in the school before set, 3 digits.
E1_SPN	93-95	The crew's estimate #1 of percentage of spinners in the school before set, 3 digits.
E1_OTHER_SP1	96-98	The crew's estimate #1 of percentage of other species (1) in the school before the set, 3 digits.
E1_OTHER_SP2	99-101	The crew's estimate #1 of percentage of other species (2) in the school before the set, 3 digits.
E2_PORP_TOT	102-105	The crew's estimate #2 of the entire school size before the set, 4 digits.
E2_ERROR	106-109	The +/- error of crew estimate #2 of porpoise school size before the set, 4 digits.
E2_SPT	110-112	The crew's estimate #2 of percentage of spotters in the school before the set, 3 digits.
E2_SPN	113-115	The crew's estimate #2 of percentage of spinners in the school before the set, 3 digits.
E2_OTHER_SP1	116-118	The crew's estimate #2 of percentage of other species (1) in the school before the set, 3 digits.
E2_OTHER_SP2	119-121	The crew's estimate #2 of percentage of other species (2) in the school before the set, 3 digits.
E3_PORP_TOT	122-125	The crew's estimate #3 of the entire school size before the set, 4 digits.
E3_ERROR	126-129	The +/- error of crew estimate #3 of porpoise school size before the set, 4 digits.
E3_SPT	130-132	The crew's estimate #3 of percentage of spotters in the school before the set, 3 digits.
E3_SPN	133-135	The crew's estimate #3 of percentage of spinners in the school before the set, 3 digits.
E3_OTHER_SP1	136-138	The crew's estimate #3 of percentage of other species (1) in the school before the set, 3 digits.
E3_OTHER_SP2	139-141	The crew's estimate #3 of percentage of other species (2) in the school before the set, 3 digits.

Appendix 2D. (Continued)

Field Name	Columns	Description
SPC_OTHER_SP1	142-143	The two-digit code number assigned to identify the species indicated as Other Sp. 1 (Code Table 4.)
SPC_OTHER_SP2	144-145	The two-digit code number assigned to identify the species indicated as Other Sp. 2 (Code Table 4.)
NUM_BOATS_USED	146-146	The maximum number of speedboats in use at any one time while herding the marine mammals, 1 digit.
TIME_NET_LET_GO	147-150	The local time at which the net skiff hits the water, 4 digits.
TOWLINE_LENGTH	151-153	The estimate of the amount of towline let out from the main winch to the stern end of the net when the boat has reached the skiff, in fathoms (6 feet = 1 fathom), 3 digits.
(FILLER)	154-155	Non-data remnant of data processing.
EVADED_SET	156-156	The coded answer to the question, "Did any marine mammals evade being encircled by behavioral dexterity or slyness? Yes = 1, No = 2.
TOT_EVADED_SET	157-160	The observer's estimate of the number of marine mammals that evade being encircled by behavioral dexterity or slyness, 4 digits.
SPC_EVADED_SET	161-162	The two-digit code number assigned to identify the major species/stock that evaded encirclement.
ESCAP_BEF_RNG_UP	163-163	The coded answer to the question, "Did any of the encircled marine mammals evade being captured by escaping the net, unaided, prior to rings up?" Yes = 1, No = 2.
NUM_ESCAP_BEF	164-167	The observer's estimate of the number of marine mammals encircled that evaded capture by escaping the net, unaided, prior to rings up, 4 digits.
SPC_ESCAP_BEF	168-169	The two-digit code assigned to identify the major species/stock that escaped the net before the rings came up.
TIME_RINGS_UP	170-173	The local time at which the purse rings were brought above the surface of the water, 4 digits.
TIME_ROLL_NET	174-177	The time at which the stern end of the net was passed over the power block, marking the beginning of the net retrieval process, 4 digits.
NUM_BUNCHES	178-178	The number of bow corkline bunches pulled at the time backdown started, 1 digit; blank if no backdown.
NET_DUMPED	179-179	The coded answer to the question, "Were the contents of the net deliberately released after the rings came up?" Yes = 1, No = 2.
TIME_NET_DUMPED	180-183	The local time at which the contents of the net were deliberately released, 4 digits.
E1_TOT_CATCH	184-187	The crew's estimate #1 of the total number of live marine mammals in the net when the rings came up, 4 digits.
E1_SPT_CATCH	188-190	The crew's estimate #1 of the percentage of spotters in the net when the rings came up, 3 digits.
E1_SPN_CATCH	191-193	The crew's estimate #1 of the percentage of spinners in the net when the rings came up, 3 digits.
E1_OTHER1_CATCH	194-196	The crew's estimate #1 of the percentage of other species (1) in the net when the rings came up, 3 digits.

Appendix 2D. (Continued)

Field Name	Columns	Description
E1_OTHER2_CATCH	197-199	The crew's estimate #1 of the percentage of other species (2) in the net when the rings came up, 3 digits.
E2_TOT_CATCH	200-203	The crew's estimate #2 of the total number of live marine mammals in the net when the rings came up, 4 digits.
E2_SPT_CATCH	204-206	The crew's estimate #2 of the percentage of spotters in the net when the rings came up, 3 digits.
E2_SPN_CATCH	207-209	The crew's estimate #2 of the percentage of spinners in the net when the rings came up, 3 digits.
E2_OTHER1_CATCH	210-212	The crew's estimate #2 of the percentage of other species (1) in the net when the rings came up, 3 digits.
E2_OTHER2_CATCH	213-215	The crew's estimate #2 of the percentage of other species (2) in the net when the rings came up.
E3_TOT_CATCH	216-219	The crew's estimate #3 of the total number of live marine mammals in the net when the rings came up, 4 digits.
E3_SPT_CATCH	220-222	The crew's estimate # 3 of the percentage of spotters in the net when the rings came up, 3 digits.
E3_SPN_CATCH	223-225	The crew's estimate #3 of the percentage of spinners in the net when the rings came up, 3 digits.
E3_OTHER1_CATCH	226-228	The crew's estimate #3 of the percentage of other species (1) in the net when the rings came up, 3 digits.
(FILLER)	229-229	Non-data remnant of data processing.
E3_OTHER2_CATCH	230-232	The crew's estimate #3 of the percentage of other species (2) in the net when the rings came up, 3 digits.
OTHER1CODE_CATCH	233-234	The two-digit code number assigned to identify the species indicated as Other SP. 1.
OTHER2CODE_CATCH	235-236	The two-digit code number assigned to identify the species indicated as Other SP. 2.
OVER_CORKS	237-237	The coded answer to the question, "DID any of the captured porpoise escape over the corkline before backdown?" Yes = 1, No = 2.
TOT_OVER_CORKS	238-241	The estimated cont of the number of captured porpoise that escaped over the corkline before backdown, 4 digits.
SPC_OVER_CORKS	242-243	The two-digit code number assigned to identify the major species that escaped over the corkline before backdown.
DEAD_BEFORE_BD	244-244	The coded answer to the question, "Did any porpoise deaths occur before backdown?" Yes = 1, No = 2.
TOT_DEAD_BEF_BD	245-248	The best estimate of the number of porpoise deaths occurring before backdown, 4 digits. Only an estimate, actual kill goes on tally sheet.
SPC_DEAD_BEF_BD	249-250	The two-digit code number assigned to identify the major species that suffered deaths prior to backdown (Code Table 4.)
EQUIP_MALF	251-251	The coded answer to the question, "Did any equipment malfunction(s) occur during the progress of this set, from start of chase until the time the boat was underway again?" Yes = 1, No = 2.

Appendix 2D. (Continued)

Field Name	Columns	Description
MALF_DELAY_SET	252-252	The coded answer to the question, "Did one or more of the equipment malfunctions that occurred in this set result in an actual delay of the set procedure?" Yes = 1, No = 2, Not Applicable = 3, if no malfunction. (NOTE: Some malfunctions may not cause effective delay of the set procedure, but may be jury-rigged or worked around, and repaired after the set.)
PORP_IN_NET	253-253	The coded answer to the question, "Were marine mammals in the net during the malfunction(s) that occurred during this set?" Yes = 1, No = 2, Not Applicable = 3, if no malfunction.
SET_ABORTED	254-254	The coded answer to the question, "Were the entire contents of the net lost involuntarily or released by the crew, due to circumstances beyond their control?" This applies to a set in which normal completion of the set is impossible because of a malfunction. Yes = 1, No = 2.
TIME_SET_ABORT	255-258	The local time at which the set was aborted, 4 digits.
NET_COLLAPSED	259-259	The coded answer to the question, "For whatever reason, was the open surface area of the net so seriously reduced that animals in the net were forced into contact with the webbing before backdown was initiated?" Yes = 1, No = 2. Note: A "collapsed" net is usually the result of some equipment malfunction which halts the set procedure for a time. It may also be the result of a severe current ("tide rip".)
NET_HELD_OPEN	260-260	The coded answer to the question, "Was the net held open using speedboats in order to prevent the collapse of the net?" Yes = 1, No = 2.
BACKDOWN	261-261	The coded answer to the question, "Did the vessel employ the backdown technique to rescue marine mammals during this set?" Yes = 1, No=2.
TIME_START_BD	262-265	The local time at which the backdown procedure is initiated; i.e., the first time at which the engines are shifted into reverse after the net is tied down, 4 digits; blank if no backdown.
TIME_END_BD	266-269	The local time at which the backdown procedure was finished, i.e., the time at which the engines are shifted out of reverse for the last time and the corks at the apex of the channel are up, 4 digits; blank if no backdown.
TOT_RELEASED	270-273	The observer's count to the number of porpoise released by the backdown procedure, 4 digits.
ERR_EST_RELEASED	274-277	The +/- error that the observer feels would be most likely to include the actual number of porpoises released by the backdown procedure (see Usage Notes 10), 4 digits.
TOT_AFTER_BD	278-280	The observer's estimate of the total number of live porpoise in the net after backdown has been completed, 3 digits.
ERR_EST_AFTER_BD	281-283	The +/- error on the estimate of live porpoise in the net after backdown (Col. 56-58) that the observer feels would be most likely to include the actual number, 3 digits.

Appendix 2D. (Continued)

Field Name	Columns	Description
RESCUERS	284-284	Commencing with backdown, were two men in a position whereby hand removal of porpoise could be accomplished? Yes = 1, No = 2.
NUM_MEN	285-285	The number of men in the boat at the corkline during and after backdown, 1 digit.
TOT_RESCUED	286-288	The observer's count of the number of porpoise released alive after backdown by the men in the boat, 3 digits. If dead animals are removed here, enter them on the Tally Sheet (See Usage Notes 121, 12).
SACKUP	289-289	The coded answer to the question, "Were the contents of the net sacked up?" Yes = 1, No = 2. (NOTE: The "sacking up" procedure is a method of evenly pulling in the excess webbing at the end of the net so that the contents are evenly supported when finally concentrated for brailing.)
TIME_START_SACK	290-293	The local time at which the first pull of the net to begin sacking up is taken.
BRAILING	294-294	The coded answer to the question, "Were contents of the net brailed aboard?" Yes = 1, No = 2.
TIME_START_BRAIL	295-298	The local time at which the first brailer of fish is scooped out of the net, 4 digits; blank if no brailing.
TIME_END_BRAIL	299-302	The local time at which the last brailer of fish is dumped on the boat, 4 digits; blank if no brailing.
(FILLER)	303-303	Non-data remnant of data processing.
PORP_BASKET_USED	304-304	The coded answer to the question, "Was a basket-type rescue device that suspends from the skiff while sacking up used during this set?" Yes = 1, No = 2.
TIME_END_SET	305-308	The local time at which the skiff is secured on the deck. If the skiff is not brought aboard by choice (due to factors that did not occur during the set), enter the approximate time that normal operations would have ended, 4 digits.
KNOWN_KILLED	309-312	The total number of marine mammals that were positively determined to be dead (ADD ) in this set, i.e., the sum of the checks on the tally sheet, 4 digits.
TONS_YF	313-315	The best estimate of the total tons of yellowfin tuna loaded aboard during this set, 3 digits; enter zeroes if none loaded.
TONS_SK	316-318	The best estimate of the total tons of skipjack tuna loaded aboard during this set, 3 digits; enter zeroes if none loaded.
TONS_OTHER_FISH	319-321	The best estimate of the number of tons of fish species other than yellowfin or skipjack that were loaded aboard during this set, enter zeroes if none loaded.
OTHER_FISH_CODE	322-323	The two-digit code number assigned to the species of fish designated under Tons Other Sp. in this set (Code Table 10).

Appendix 2D. (Continued)

Field Name	Columns	Description
EQUIP_FAILURE	324-324	The observer's rating (coded) of the effect of equipment failure on porpoise mortality during this set: 1 = no effect; 2 = some effect; 3 = major effect; 9 = don't know (Usage Notes 13.) Note: Equipment failure here refers to physical and mechanical disfunction or shortcomings of the machinery, lines, etc., as opposed to human shortcomings.
ENVIRONMENT	325-325	The observer's rating of the effect of the environmental conditions on porpoise mortality during this set: 1 = no effect; 2 = some effect; 3 = major effect; 9 = don't know (Usage Notes 13.)
OPERATIONS	326-326	The observer's rating of the effect on porpoise mortality of the method of carrying out the purse seining operation during this set: 1 = no effect; 2 = some effect; 3 = major effect; 9 = don't know (Usage Notes 13.) Note: This factor includes the effect modus operandi, and human misjudgment or error, as opposed to equipment failure.
PORP_BEHAVIOR	327-327	The observer's rating of the effect on porpoise mortality of porpoise behavioral responses in the net during this set: 1 = no effect; 2 = some effect; 3 = major effect; 9 = don't know (Usage Notes 13.)
FISH_BEHAVIOR	328-328	The observer's rating of the effect on porpoise mortality of the behavioral responses of the fish in the net during this set: 1 = no effect; 2 = some effect; 3 = major effect; 9 = don't know (Usage Notes 13.)
TANGL_SPT_KILL	329-331	The observer's best estimate of the percentage of total spotters killed that died due to known entanglement, 3 digits. (Note: Entanglement means stuck to the net by a part of the body, i.e., flukes, snout or flipper.)
TANGL_SPN_KILL	332-334	The observer's best estimate of the percentage of total spinners killed that died due to known entanglement, 3 digits.
TANGL_OTH_KILL	335-337	The observer's best estimate of the percentage of the total "Other Species" killed due to known entanglement, 3 digits.
TRAP_SPT_KILL	338-340	The observer's best estimate of the percentage of the total spotters killed that died due to known entrapment in folds or canopies of webbing, 3 digits. (Note: Entrapment means forced contact with the net webbing due to a configuration of the net which traps or poses unusual hazard to marine mammals.)
TRAP_SPN_KILL	341-343	The observer's best estimate of the percentage of the total spinners killed that died due to known entrapment in folds or canopies of webbing, 3 digits.
TRAP_OTH_KILL	344-346	The observer's best estimate of the percentage of the total "Other Species" killed due to known entrapment in folds or canopies of webbing, 3 digits.
SACKUP_SPT_KILL	347-349	The observer's best estimate of the percentage of the total spotters killed that died during the sacking-up process, 3 digits.

Appendix 2D. (Continued)

Field Name	Columns	Description
SACKUP_SPN_KILL	350-352	The observer's best estimate of the percentage of the total spinners killed that died during the sacking-up process, 3 digits.
SACKUP_OTH_KILL	353-355	The observer's best estimate of the percentage of "Other Species" killed that died during the sacking-up process, 3 digits.
OTHER_SPT_KILL	356-358	The observer's best estimate of the percentage of total spotters killed that died due to reasons other than described above, 3 digits.
OTHER_SPN_KILL	359-361	The observer's best estimate of the percentage of total spinners killed that died due to reasons other than described above, 3 digits.
OTHER_OTH_KILL	362-364	The observer's best estimate of the percentage of total "Other Species" killed that died due to reasons other than described above, 3 digits.
UNK_SPT_KILL	365-367	The observer's best estimate of the percentage of total spotters killed that died because of unknown causes, 3 digits.
UNK_SPN_KILL	368-370	The observer's best estimate of the percentage of total spinners killed that died because of unknown causes, 3 digits.
UNK_OTH_KILL	371-373	The observer's best estimate of the percentage of total "Other Species" killed that died because of unknown causes, 3 digits.
OTHER_SPC_KILL	374-375	The two-digit code number assigned to identify the "Other Species" referred to in Col. 39-41, Card IV. (Code Table 4.)
(FILLER)	376-376	Non-data remnant of data processing.

Appendix 2E. Record format and definitions for Set Log data collected by the NMFS Tuna-Porpoise Observer Program for 1976.

Field Name	Columns	Description
CRUISE	1-3	The unique three-digit number assigned to this cruise.
SET	4-6	The three digit consecutive number for the present set.
(FILLER)	7-7	Non-data remnant of data processing.
DATE	8-13	The year, month and day (yymmdd) on which this event happened, 6 digits.
OBSERVER	14-16	The unique three-digit number assigned to this porpoise observer.
VESSEL_CODE	17-20	The unique four-digit number assigned to this vessel (Code Table 3).
SET_TYPE	21-22	The two-digit code number identifying the set type as determined by the observer (Code Table 8).
FISH_TYPE	23-23	The one-digit code number identifying the type of fish set on (Code Table 9).
SUCCESS_SET	24-24	The coded answer to the question, "Was the set successful?" i.e., was ¼ ton or more fish loaded on the boat? Yes = 1, No = 2.
LATITUDE	25-28	The latitude in degrees (2 digits) and minutes (2 digits) north or south of the equator at which the set is made.
N_OR_S	29-29	The hemisphere of the latitude, coded one-digit. North = 1, South = 2.
LONGITUDE	30-34	The longitude in degrees (3 digits) and minutes (2 digits) east or west of Greenwich, England, at which the set is made.
E_OR_W	35-35	The hemisphere of the longitude, coded one-digit. East = 1, West = 2.
TIME_OF_SIGHT	36-39	The time when the school is first seen, four digits.
TIME_CHASE_BEGAN	40-43	The time when the first speedboat(s) was lowered onto the water, 4 digits (blank if speedboats were not used).
WIND	44-45	The wind speed in knots at time chase began.
WIND_DIRECTION	46-46	The octant of the compass from which the wind is blowing at the time chase began, 1 digit, e.g., 1°-45°, coded as 1; 46°-90°, coded 2; 91°-135°, coded 3; etc.
WIND_SWELL	47-48	The height of the primary swell in feet at the time chase began, 2 digits. (Swell is waves raised by distant wind systems, or by winds that have ceased to blow.)
WIND_CHOP	49-50	The height of the surface chop, in feet and tenths of feet, at the time chase began, 2 digits. (Chop is a system of waves raised by the local wind at the time of observation.)
SURF_TEMP	51-53	The sea surface temperature in Fahrenheit degrees and tenths of degrees at the time chase began, 3 digits.
CURRENT_STRONG	54-54	The coded answer to the question, "Was a strong current present at any time during the set?" Yes = 1, No = 2. (NOTE: Strong currents are two knots or greater.)
(FILLER)	55-56	Non-data remnant of data processing.
TIME_SIGHT_BIRDS	57-60	The time at which the birds were first sighted, four digits.
BIRDS_DISTANCE	61-63	The estimated distance of the birds at the initial time of sighting, in nautical miles and tenths, 3 digits.



Appendix 2E. (Continued)

Field Name	Columns	Description
NUM_BIRDS	64-67	Best estimate of total number of birds of all species sighted, 4 digits.
(FILLER)	68-81	Non-data remnant of data processing.
E1_PORP_TOT	82-85	The crew's estimate #1 of the entire school size before the set, 4 digits.
E1_ERROR	86-89	The +/- error of crew estimate #1 of porpoise school size before the set, 4 digits.
E1_SPT	90-92	The crew's estimate #1 of percentage of spotters in the school before set, 3 digits.
E1_SPN	93-95	The crew's estimate #1 of percentage of spinners in the school before set, 3 digits.
E1_OTHER_SP1	96-98	The crew's estimate #1 of percentage of other species (1) in the school before the set, 3 digits.
E1_OTHER_SP2	99-101	The crew's estimate #1 of percentage of other species (2) in the school before the set, 3 digits.
E2_PORP_TOT	102-105	The crew's estimate #2 of the entire school size before the set, 4 digits.
E2_ERROR	106-109	The +/- error of crew estimate #2 of porpoise school size before the set, 4 digits.
E2_SPT	110-112	The crew's estimate #2 of percentage of spotters in the school before the set, 3 digits.
E2_SPN	113-115	The crew's estimate #2 of percentage of spinners in the school before the set, 3 digits.
E2_OTHER_SP1	116-118	The crew's estimate #2 of percentage of other species (1) in the school before the set, 3 digits.
E2_OTHER_SP2	119-121	The crew's estimate #2 of percentage of other species (2) in the school before the set, 3 digits.
E3_PORP_TOT	122-125	The crew's estimate #3 of the entire school size before the set, 4 digits.
E3_ERROR	126-129	The +/- error of crew estimate #3 of porpoise school size before the set, 4 digits.
E3_SPT	130-132	The crew's estimate #3 of percentage of spotters in the school before the set, 3 digits.
E3_SPN	133-135	The crew's estimate #3 of percentage of spinners in the school before the set, 3 digits.
E3_OTHER_SP1	136-138	The crew's estimate #3 of percentage of other species (1) in the school before the set, 3 digits.
E3_OTHER_SP2	139-141	The crew's estimate #3 of percentage of other species (2) in the school before the set, 3 digits.
SPC_OTHER_SP1	142-143	The two-digit code number assigned to identify the species indicated as Other Sp. 1 (Code Table 4.)
SPC_OTHER_SP2	144-145	The two-digit code number assigned to identify the species indicated as Other Sp. 2 (Code Table 4.)
NUM_BOATS_USED	146-146	The maximum number of speedboats in use at any one time while herding the marine mammals 1 digit.
TIME_NET_LET_GO	147-150	The local time at which the net skiff hits the water, 4 digits.

Appendix 2E. (Continued)

Field Name	Columns	Description
TOWLINE_LENGTH	151-153	The estimate of the amount of towline let out from the main winch to the stern end of the net when the boat has reached the skiff, in fathoms (6 feet = 1 fathom), 3 digits.
(FILLER)	154-155	Non-data remnant of data processing.
EVADED_SET	156-156	The coded answer to the question, "Did any marine mammals evade being encircled by behavioral dexterity or slyness? Yes = 1, No = 2.
TOT_EVADED_SET	157-160	The observer's estimate of the number of marine mammals that evade being encircled by behavioral dexterity or slyness, 4 digits.
SPC_EVADED_SET	161-162	The two-digit code number assigned to identify the major species/stock that evaded encirclement.
ESCAP_BEF_RNG_UP	163-163	The coded answer to the question, "Did any of the encircled marine mammals evade being captured by escaping the net, unaided, prior to rings up?" Yes = 1, No = 2.
NUM_ESCAP_BEF	164-167	The observer's estimate of the number of marine mammals encircled that evaded capture by escaping the net, unaided, prior to rings up, 4 digits.
SPC_ESCAP_BEF	168-169	The two-digit code assigned to identify the major species/stock that escaped the net before the rings came up.
TIME_RINGS_UP	170-173	The local time at which the purse rings were brought above the surface of the water, 4 digits.
TIME_ROLL_NET	174-177	The time at which the stern end of the net was passed over the power block, marking the beginning of the net retrieval process, 4 digits.
NUM_BUNCHES	178-178	The number of bow corkline bunches pulled at the time backdown started, 1 digit; blank if no backdown.
NET_DUMPED	179-179	The coded answer to the question, "Were the contents of the net deliberately released after the rings came up?" Yes = 1, No = 2.
TIME_NET_DUMPED	180-183	The local time at which the contents of the net were deliberately released, 4 digits.
E1_TOT_CATCH	184-187	The crew's estimate #1 of the total number of live marine mammals in the net when the rings came up, 4 digits.
E1_SPT_CATCH	188-190	The crew's estimate #1 of the percentage of spotters in the net when the rings came up, 3 digits.
E1_SPN_CATCH	191-193	The crew's estimate #1 of the percentage of spinners in the net when the rings came up, 3 digits.
E1_OTHER1_CATCH	194-196	The crew's estimate #1 of the percentage of other species (1) in the net when the rings came up, 3 digits.
E1_OTHER2_CATCH	197-199	The crew's estimate #1 of the percentage of other species (2) in the net when the rings came up, 3 digits.
E2_TOT_CATCH	200-203	The crew's estimate #2 of the total number of live marine mammals in the net when the rings came up, 4 digits.
E2_SPT_CATCH	204-206	The crew's estimate #2 of the percentage of spotters in the net when the rings came up, 3 digits.

Appendix 2E. (Continued)

Field Name	Columns	Description
E2_SPN_CATCH	207-209	The crew's estimate #2 of the percentage of spinners in the net when the rings came up, 3 digits.
E2_OTHER1_CATCH	210-212	The crew's estimate #2 of the percentage of other species (1) in the net when the rings came up, 3 digits.
E2_OTHER2_CATCH	213-215	The crew's estimate #2 of the percentage of other species (2) in the net when the rings came up.
E3_TOT_CATCH	216-219	The crew's estimate #3 of the total number of live marine mammals in the net when the rings came up, 4 digits.
E3_SPT_CATCH	220-222	The crew's estimate # 3 of the percentage of spotters in the net when the rings came up, 3 digits.
E3_SPN_CATCH	223-225	The crew's estimate #3 of the percentage of spinners in the net when the rings came up, 3 digits.
E3_OTHER1_CATCH	226-228	The crew's estimate #3 of the percentage of other species (1) in the net when the rings came up, 3 digits.
(FILLER)	229-229	Non-data remnant of data processing.
E3_OTHER2_CATCH	230-232	The crew's estimate #3 of the percentage of other species (2) in the net when the rings came up, 3 digits.
OTHER1CODE_CATCH	233-234	The two-digit code number assigned to identify the species indicated as Other SP. 1.
OTHER2CODE_CATCH	235-236	The two-digit code number assigned to identify the species indicated as Other SP. 2.
OVER_CORKS	237-237	The coded answer to the question, "DID any of the captured porpoise escape over the corkline before backdown?" Yes = 1, No = 2.
TOT_OVER_CORKS	238-241	The estimated cont of the number of captured porpoise that escaped over the corkline before backdown, 4 digits.
SPC_OVER_CORKS	242-243	The two-digit code number assigned to identify the major species that escaped over the corkline before backdown.
DEAD_BEFORE_BD	244-244	The coded answer to the question, "Did any porpoise deaths occur before backdown?" Yes = 1, No = 2.
TOT_DEAD_BEF_BD	245-248	The best estimate of the number of porpoise deaths occurring before backdown, 4 digits. Only an estimate, actual kill goes on tally sheet.
SPC_DEAD_BEF_BD	249-250	The two-digit code number assigned to identify the major species that suffered deaths prior to backdown (Code Table 4.)
EQUIP_MALF	251-251	The coded answer to the question, "Did any equipment malfunction(s) occur during the progress of this set, from start of chase until the time the boat was underway again?" Yes = 1, No = 2.
MALF_DELAY_SET	252-252	The coded answer to the question, "Did one or more of the equipment malfunctions that occurred in this set result in an actual delay of the set procedure?" Yes = 1, No = 2, Not Applicable = 3, if no malfunction. (NOTE: Some malfunctions may not cause effective delay of the set procedure, but may be jury-rigged or worked around, and repaired after the set.)

Appendix 2E. (Continued)

Field Name	Columns	Description
PORP_IN_NET	253-253	The coded answer to the question, "Were marine mammals in the net during the malfunction(s) that occurred during this set?" Yes = 1, No = 2, Not Applicable = 3, if no malfunction.
SET_ABORTED	254-254	The coded answer to the question, "Were the entire contents of the net lost involuntarily or released by the crew, due to circumstances beyond their control?" This applies to a set in which normal completion of the set is impossible because of a malfunction. Yes = 1, No = 2.
TIME_SET_ABORT	255-258	The local time at which the set was aborted, 4 digits.
NET_COLLAPSED	259-259	The coded answer to the question, "For whatever reason, was the open surface area of the net so seriously reduced that animals in the net were forced into contact with the webbing before backdown was initiated?" Yes = 1, No = 2. Note: A "collapsed" net is usually the result of some equipment malfunction which halts the set procedure for a time. It may also be the result of a severe current ("tide rip".)
NET_HELD_OPEN	260-260	The coded answer to the question, "Was the net held open using speedboats in order to prevent the collapse of the net?" Yes = 1, No = 2.
BACKDOWN	261-261	The coded answer to the question, "Did the vessel employ the backdown technique to rescue marine mammals during this set?" Yes = 1, No=2.
TIME_START_BD	262-265	The local time at which the backdown procedure is initiated; i.e., the first time at which the engines are shifted into reverse after the net is tied down, 4 digits; blank if no backdown.
TIME_END_BD	266-269	The local time at which the backdown procedure was finished, i.e., the time at which the engines are shifted out of reverse for the last time and the corks at the apex of the channel are up, 4 digits; blank if no backdown.
TOT_RELEASED	270-273	The observer's count to the number of porpoise released by the backdown procedure, 4 digits.
ERR_EST_RELEASED	274-277	The +/- error that the observer feels would be most likely to include the actual number of porpoises released by the backdown procedure (see Usage Notes 10), 4 digits.
TOT_AFTER_BD	278-280	The observer's estimate of the total number of live porpoise in the net after backdown has been completed, 3 digits.
ERR_EST_AFTER_BD	281-283	The +/- error on the estimate of live porpoise in the net after backdown (Col. 56-58) that the observer feels would be most likely to include the actual number, 3 digits.
RESCUERS	284-284	Commencing with backdown, were two men in a position whereby hand removal of porpoise could be accomplished? Yes = 1, No = 2.
NUM_MEN	285-285	The number of men in the boat at the corkline during and after backdown, 1 digit.

Appendix 2E. (Continued)

Field Name	Columns	Description
TOT_RESCUED	286-288	The observer's count of the number of porpoise released alive after backdown by the men in the boat, 3 digits. If dead animals are removed here, enter them on the Tally Sheet (See Usage Notes 121, 12).
SACKUP	289-289	The coded answer to the question, "Were the contents of the net sacked up?" Yes = 1, No = 2. (NOTE: The "sacking up" procedure is a method of evenly pulling in the excess webbing at the end of the net so that the contents are evenly supported when finally concentrated for brailing.)
TIME_START_SACK	290-293	The local time at which the first pull of the net to begin sacking up is taken.
BRAILING	294-294	The coded answer to the question, "Were contents of the net brailed aboard?" Yes = 1, No = 2.
TIME_START_BRAIL	295-298	The local time at which the first brailer of fish is scooped out of the net, 4 digits; blank if no brailing.
TIME_END_BRAIL	299-302	The local time at which the last brailer of fish is dumped on the boat, 4 digits; blank if no brailing.
(FILLER)	303-303	Non-data remnant of data processing.
PORP_BASKET_USED	304-304	The coded answer to the question, "Was a basket-type rescue device that suspends from the skiff while sacking up used during this set?" Yes = 1, No = 2.
TIME_END_SET	305-308	The local time at which the skiff is secured on the deck. If the skiff is not brought aboard by choice (due to factors that did not occur during the set), enter the approximate time that normal operations would have ended, 4 digits.
KNOWN_KILLED	309-312	The total number of marine mammals that were positively determined to be dead (ADD ) in this set, i.e., the sum of the checks on the tally sheet, 4 digits.
TONS_YF	313-315	The best estimate of the total tons of yellowfin tuna loaded aboard during this set, 3 digits; enter zeroes if none loaded.
TONS_SK	316-318	The best estimate of the total tons of skipjack tuna loaded aboard during this set, 3 digits; enter zeroes if none loaded.
TONS_OTHER_FISH	319-321	The best estimate of the number of tons of fish species other than yellowfin or skipjack that were loaded aboard during this set, enter zeroes if none loaded.
OTHER_FISH_CODE	322-323	The two-digit code number assigned to the species of fish designated under Tons Other Sp. in this set (Code Table 10).
(FILLER)	324-328	Non-data remnant of data processing.
TANGL_SPT_KILL	329-331	The observer's best estimate of the percentage of total spotters killed that died due to known entanglement, 3 digits. (Note: Entanglement means stuck to the net by a part of the body, i.e., flukes, snout or flipper.)
TANGL_SPN_KILL	332-334	The observer's best estimate of the percentage of total spinners killed that died due to known entanglement, 3 digits.

Appendix 2E. (Continued)

Field Name	Columns	Description
TANGL_OTH_KILL	335-337	The observer's best estimate of the percentage of the total "Other Species" killed due to known entanglement, 3 digits.
TRAP_SPT_KILL	338-340	The observer's best estimate of the percentage of the total spotters killed that died due to known entrapment in folds or canopies of webbing, 3 digits. (Note: Entrapment means forced contact with the net webbing due to a configuration of the net which traps or poses unusual hazard to marine mammals.)
TRAP_SPN_KILL	341-343	The observer's best estimate of the percentage of the total spinners killed that died due to known entrapment in folds or canopies of webbing, 3 digits.
TRAP_OTH_KILL	344-346	The observer's best estimate of the percentage of the total "Other Species" killed due to known entrapment in folds or canopies of webbing, 3 digits.
SACKUP_SPT_KILL	347-349	The observer's best estimate of the percentage of the total spotters killed that died during the sacking-up process, 3 digits.
SACKUP_SPN_KILL	350-352	The observer's best estimate of the percentage of the total spinners killed that died during the sacking-up process, 3 digits.
SACKUP_OTH_KILL	353-355	The observer's best estimate of the percentage of "Other Species" killed that died during the sacking-up process, 3 digits.
OTHER_SPT_KILL	356-358	The observer's best estimate of the percentage of total spotters killed that died due to reasons other than described above, 3 digits.
OTHER_SPN_KILL	359-361	The observer's best estimate of the percentage of total spinners killed that died due to reasons other than described above, 3 digits.
OTHER_OTH_KILL	362-364	The observer's best estimate of the percentage of total "Other Species" killed that died due to reasons other than described above, 3 digits.
UNK_SPT_KILL	365-367	The observer's best estimate of the percentage of total spotters killed that died because of unknown causes, 3 digits.
UNK_SPN_KILL	368-370	The observer's best estimate of the percentage of total spinners killed that died because of unknown causes, 3 digits.
UNK_OTH_KILL	371-373	The observer's best estimate of the percentage of total "Other Species" killed that died because of unknown causes, 3 digits.
OTHER_SPC_KILL	374-375	The two-digit code number assigned to identify the "Other Species" referred to in Col. 39-41, Card IV. (Code Table 4.)
(FILLER)	376-377	Non-data remnant of data processing.

Appendix 2E. (Continued)

Field Name	Columns	Description
NUM_BD_SPEEDBOAT	378-378	The total number of manned speedboats in the water continuously until backdown commenced or, if no backdown, until the time the normal tie-down point for backdown is reached, 1 digit. Note: Continuously means from the time the net was let go until the time the vessel begins preparation for the backdown maneuver; i.e., around the time of tiedown.
KNEW_2BOAT_REG	379-379	Coded answer to the question, "For vessels greater than 400 tons carrying capacity, if a minimum of two speedboats were not manned and in the water prepared to hook onto bunchline towing points until backdown commenced, did you ascertain whether the certificate holder understood the required procedure and that it is required for every set made on tuna associated with porpoise?" Yes = 1, No = 2.
KNEW_1BOAT_REG	380-380	Coded answer to the question, "For vessels of 400 tons carrying capacity or less which have a government observer aboard, if a minimum of one speedboat was not manned and in the water prepared to hook onto bunchline towing points until backdown commenced, did you ascertain whether the certificate holder understood the required procedure and that it is required for every set made on tuna associated with porpoise?" Yes = 1, No = 2
REASON_NO_BOATS	381-381	Coded answer to the question, "If manned speedboat(s) were not in the water prepared to hook onto bunchline towline points until backdown commenced on this set, were there any apparent reasons or extenuating circumstances for not doing so?" Yes = 1, No = 2.
REASON_NOT_USED	382-382	Coded answer to the question, "If net collapse occurred on this set and speedboats were not used to hold the net open by towing on bunchlines, were there any apparent reasons or extenuating circumstances for not doing so?" Yes = 1, No = 2.
REASON_NOT_WORK	383-383	Coded answer to the question, "If speedboats were used to tow on bunchlines, but net collapse was not prevented, were there any apparent reasons or extenuating circumstances as to why the procedure was not effective?" Yes = 1, No = 2.
KNEW_BD_REG	384-384	Coded answer to the question, "If live marine mammals were in the net and the backdown procedure was not used, DID YOU ASCERTAIN whether the vessel operator understood the required procedure and that it is required for every set involving marine mammals?" Yes = 1, No = 2, Not Applicable = 3. Refer to "Backdown Y/N" on page 3 of the Set Log (card 05 Col. 69).
REASON_NO_BD	385-385	Coded answer to the question, "If the backdown procedure was not used, were there any apparent reasons or extenuating circumstances for not doing so" Yes = 1, No = 2.

Appendix 2E. (Continued)

Field Name	Columns	Description
KNEW_2MEN_REG	386-386	Coded answer to the question, "Commencing with backdown* and continuing after backdown if live marine mammals were in the net and a minimum of two men weren't actively engaged in hand removal of marine mammals DID YOU ASCERTAIN whether the vessel operator understood the required procedure and that it is required for every set involving marine mammals?" *If no backdown, then replace backdown with, "time normal tie down point for backdown is reached," in the question. Yes = 1, No = 2, N/A = 3. Refer to "Total number of rescuers during backdown" on Page 3 of the Set Log (Card 06, Col. 54) and the "total number of rescuers after backdown, (Card 07, Col. 18-19).
HAND_REMOVAL	387-387	Coded answer to the question, "Were hand removal procedures continued on this set after backdown until there were no remaining live porpoise in the net prior to initiating brailing operation?" Yes = 1, No = 2.
KNEW_REMOVAL_REG	388-388	Coded answer to the question, "If live marine mammals were in the net, and hand removal was not continuous until all live porpoise were released, DID YOU ASCERTAIN whether the vessel operator understood the required procedure and that it is required for every set involving marine mammals?" Note: This question pertains to the time period from backdown through sacking up, but if no backdown, then it applies to continuous effort after the tiedown point for backdown is reached. Continuous means an uninterrupted effort to release porpoise. Yes = 1, No = 2, Not Applicable = 3. Refer to your notes to determine if rescue efforts were continuous (No interruptions.) Also refer to live animals in sack and whether release took place from the sack on Page 4 of the Set Log (Card 06, Col. 76 and Card 07, Col. 24).
REASON_NO_REMOVE	389-389	Coded answer to the question, "If hand removal procedures were not continued on this set after backdown until there were no remaining live porpoise in the net prior to initiating brailing operations, were there any apparent reasons or extenuating circumstances for not doing so?" Yes = 1, No = 2.
KNEW_STREAKR_REG	390-390	Coded answer to the question, "If a pure school of striped dolphin, <i>Stenella coeruleoalba</i> , often referred to a streaker porpoise, was encircled, did you ascertain whether the certificate holder understood that encircling pure schools of this species is prohibited by U.S. Marine Mammal Regulations?" Yes = 1, No = 2.
REASON_STREAKR	391-391	Coded answer to the question, "If a pure school of striped dolphin was encircled, were there any apparent reasons or extenuating circumstances for doing so?" Yes = 1, No = 2.



Appendix 2E. (Continued)

Field Name	Columns	Description
SKIPPER_COMMENTS	392-392	Coded answer to the question, "Are there any skipper comments* recorded on page 18?" *Note: A skipper comment is a comment recorded on your logs by the skipper with his initials and is an additional comment to what you have already recorded?" Yes = 1, No = 2. (Not Applicable (3) is not to be used for this question.)
WITH_APRON_CHUTE	393-393	The coded answer to the question, "Was the net equipped with the apron-chute system during this set?" Yes = 1, No = 2.
WITH_SMALL_MESH	394-394	The coded answer to the question, "Was the net equipped with 2 strips of 1¼-inch, 340 meshes deep across the backdown area?" Yes = 1, No = 2.
APRON_NO_CHUTE	395-395	The coded answer to the question, "Was the net equipped with the 'porpoise apron' but not with the chute?" Yes = 1, No = 2.
MAINTENANCE	396-396	The coded answer to the question, "Was maintenance required on the apron system or small mesh (1¼-inch) safety panel after this set?" Yes = 1, No = 2, Not Applicable = 3. (Note: If your vessel doesn't have an apron system or small mesh, this question is coded 3 (N/A) for all sets.)
BD_AREA_COLLAPSE	397-397	The coded answer to the question, "Did the length of the corkline that eventually formed the backdown channel and apex develop major folds or irregularities prior to the initiation of backdown?" Yes = 1, No = 2.
BOAT_ADJ_BD_AREA	398-398	The coded answer to the question, "Was a speedboat used to open or adjust the corkline that formed the backdown area prior to backdown?" Yes = 1, No = 2, Not Applicable = 3.
NUM_MINUTES_USED	399-400	The number of minutes that a speedboat actually engaged in pulling or adjusting the corkline that formed the backdown area prior to backdown, 2 digits.
NET_TIED_DOWN	401-401	The coded answer to the question, "Was the net tied down for backdown at the marked floats in the stern and at the marked bunchlines at the bow?" Yes = 1, No = 2, Not Applicable = 3, if vessel does not have an apron system; blank if no backdown.
CANOPIES_PRESENT	402-402	The coded answer to the question, "During the backdown process, did you observe canopies of webbing with marine mammals in them?" Yes = 1, No = 2; blank if no backdown.
COLLAPSE_AFT_BD	403-403	The coded answer to the question, "Did the surface area enclosed by the corkline become so reduced as to force the remaining live marine mammals to come into contact with the webbing after backdown, or if no backdown, at any time during the set?" Yes = 1, No = 2, Not Applicable = 3.
PERCENT_SPOT	404-406	The estimated percent of total porpoise left alive in the net after backdown that were spotted porpoise, 3 digits.
PERCENT_SPIN	407-409	The estimated percent of total porpoise left alive in the net after backdown that were spinner porpoise, 3 digits.

Appendix 2E. (Continued)

Field Name	Columns	Description
PERCENT_OTHER	410-412	The estimated percent of total porpoise left alive in the net after backdown that were neither spotter nor spinner porpoise, 3 digits.
RAFT_USED_BEF_BD	413-413	The coded answer to the question, "Was a life raft used to aid porpoise rescue before the backdown process began?" Yes = 1, No = 2.
NUM_SAVED_BEF_BD	414-416	The estimated number of porpoise rescued using a life raft before the backdown process began, 3 digits.
RAFT_USED_DUR_BD	417-417	The coded answer to the question, "Was a life raft used to aid porpoise rescue during the backdown process?" Yes = 1, No = 2.
NUM_SAVED_DUR_BD	418-420	The estimated number of porpoise rescued using a life raft during the backdown process, 3 digits.
RAFT_USED_AFT_BD	421-421	The coded answer to the question, "Was a life raft used to aid porpoise rescue after the backdown process?" Yes = 1, No = 2.
NUM_SAVED_AFT_BD	422-424	The estimated number of porpoise rescued using a life raft after the backdown process, 3 digits.
SKIFF_RESCUE	425-425	The coded answer to the question, "Were porpoise rescued from the seine skiff during the sacking-up process?" Yes = 1, No = 2.
NUM_SKIFF_RESCUE	426-428	The estimated number of porpoise that were rescued (alive) from the net during sacking-up, 3 digits. Note: This number will be a subset of the +'s on your tally sheet for this set.
CROOK_RESCUE	429-429	The coded answer to the question, "At any time during the set, was a porpoise crook used to aid in the rescue of live marine mammals?" Yes = 1, No = 2.
NUM_CROOK_RESCUE	430-432	The total number of live marine mammals released with the aid of a porpoise crook, 2 digits. NOTE: The porpoise crook data is not broken down as to before, during or after backdown. Animals included here should also be counted in the release categories.
TANGL_MESH_125	433-434	The observer's best estimate of marine mammals killed by entanglement and/or entrapment in 1¼-inch mesh webbing, 2 digits.
TANGL_MESH_200	435-436	The observer's best estimate of marine mammals killed by entanglement and/or entrapment in 2-inch mesh webbing, 2 digits.
TANGL_MESH_425	437-438	The observer's best estimate of marine mammals killed by entanglement and/or entrapment in 4¼-inch mesh webbing, 2 digits.
TANGL_MESH_UNK	439-440	The observer's best estimate of marine mammals killed by entanglement and/or entrapment in unknown size webbing, 2 digits.
(FILLER)	441-450	Non-data remnant of data processing.

Appendix 2F. Record format and definitions for Set Log data collected by the NMFS Tuna-Porpoise Observer Program from 1977-1978.

Field Name	Columns	Description
CRUISE	1-3	The unique three-digit number assigned to this cruise.
SET	4-6	The three digit consecutive number for the present set.
(FILLER)	7-8	Non-data remnant of data processing.
DATE	9-14	The year, month and day (yymmdd) on which this event happened, 6 digits.
OBSERVER	15-17	The unique three-digit number assigned to this porpoise observer.
LATITUDE	18-21	The latitude in degrees (2 digits) and minutes (2 digits) north or south of the equator at which the set is made.
N_OR_S	22-22	The hemisphere of the latitude, coded one-digit: North = 1, South = 2.
LONGITUDE	23-27	The longitude in degrees (3 digits) and minutes (2 digits) east or west of Greenwich, England, at which the set is made.
E_OR_W	28-28	The hemisphere of the longitude, coded one-digit: East = 1, West = 2.
SET_TYPE	29-30	The two-digit code number identifying the set type as determined by the observer (Code Table 8).
BIRDS	31-31	The coded answer to the question, "Were birds associated with this set?" Yes = 1, No = 2.
TIME_SIGHT_BIRDS	32-35	The time at which the birds were first sighted, four digits.
BIRDS_DISTANCE	36-38	The estimated distance of the birds at the initial time of sighting, in nautical miles and tenths, 3 digits.
NUM_BIRDS	39-42	Best estimate of total number of birds of all species sighted, 4 digits.
TIME_SIGHT_PORP	43-46	The time when the porpoise school or other marine mammals were first sighted by anyone onboard, 4 digits.
TIME_CHASE_BEGAN	47-50	The time when the first speedboat(s) was lowered onto the water, 4 digits (blank if speedboats were not used).
NUM_BOATS_USED	51-51	The maximum number of speedboats in use at any one time while herding the marine mammals, 1 digit.
WIND	52-53	The wind speed in knots at time chase began.
WIND_DIRECTION	54-54	The octant of the compass from which the wind is blowing at the time chase began, 1 digit, e.g., 1°-45°, coded as 1; 46°-90°, coded 2; 91°-135°, coded 3; etc.
WIND_SWELL	55-56	The height of the primary swell in feet at the time chase began, 2 digits. (Swell is waves raised by distant wind systems, or by winds that have ceased to blow.)
WIND_CHOP	57-58	The height of the surface chop, in feet and tenths of feet, at the time chase began, 2 digits. (Chop is a system of waves raised by the local wind at the time of observation.)
SURF_TEMP	59-61	The sea surface temperature in Fahrenheit degrees and tenths of degrees at the time chase began, 3 digits.
E1_PORP_TOT	62-65	The crew's estimate #1 of the entire school size before the set, 4 digits.

Appendix 2F. (Continued)

Field Name	Columns	Description
E1_SPT	66-68	The crew's estimate #1 of percentage of spotters in the school before set, 3 digits.
E1_SPN	69-71	The crew's estimate #1 of percentage of spinners in the school before set, 3 digits.
E1_OTHER_SP1	72-74	The crew's estimate #1 of percentage of other species (1) in the school before the set, 3 digits.
E1_OTHER_SP2	75-77	The crew's estimate #1 of percentage of other species (2) in the school before the set, 3 digits.
SPC_OTHER_SP1	78-79	The two-digit code number assigned to identify the species indicated as Other SP. 1.
(FILLER)	80-82	Non-data remnant of data processing.
E2_PORP_TOT	83-86	The crew's estimate #2 of the entire school size before the set, 4 digits.
E2_SPT	87-89	The crew's estimate #2 of percentage of spotters in the school before the set, 3 digits.
E2_SPN	90-92	The crew's estimate #2 of percentage of spinners in the school before the set, 3 digits.
E2_OTHER_SP1	93-95	The crew's estimate #2 of percentage of other species (1) in the school before the set, 3 digits.
E2_OTHER_SP2	96-98	The crew's estimate #2 of percentage of other species (2) in the school before the set, 3 digits.
SPC_OTHER_SP2	99-100	The two-digit code number assigned to identify the species indicated as Other Sp. 2.
E3_PORP_TOT	101-104	The crew's estimate #3 of the entire school size before the set, 4 digits.
E3_SPT	105-107	The crew's estimate #3 of percentage of spotters in the school before the set, 3 digits.
E3_SPN	108-110	The crew's estimate #3 of percentage of spinners in the school before the set, 3 digits.
E3_OTHER_SP1	111-113	The crew's estimate #3 of percentage of other species (1) in the school before the set, 3 digits.
E3_OTHER_SP2	114-116	The crew's estimate #3 of percentage of other species (2) in the school before the set, 3 digits.
OBS_BST_EST_BEF	117-120	The observer's best estimate of the total number of marine mammals in the entire school before the set, 4 digits. (Note: The best estimate does not have to be the mean of the high and low estimates.)
OBS_HI_EST_BEF	121-124	The observer's estimate of the maximum possible number of marine mammals in the entire school before the set, 4 digits.
OBS_LO_EST_BEF	125-128	The observer's estimate of the minimum possible number of marine mammals in the entire school before the set, 4 digits.
OBS_SPT_BEF	129-131	The observer's estimate of percentage of spotters in the school before the set, 3 digits.
OBS_EASTERN_BEF	132-134	The observer's estimate of percentage of eastern spinners in the school before the set, 3 digits.
OBS_WB_BEF	135-137	The observer's estimate of percentage of whitebelly spinners in the school before the set, 3 digits.
OBS_SPN2_BEF	138-140	The observer's estimate of percentage of other or unidentified spinners in the school before the set, 3 digits.

Appendix 2F. (Continued)

Field Name	Columns	Description
OBS_OTHR1_BEF	141-143	The observer's estimate of percentage of other species (1) in the school before the set, 3 digits.
OBS_OTHR2_BEF	144-146	The observer's estimate of percentage of other species (2) in the school before the set, 3 digits.
OBS_SPT_CD_BEF	147-148	The two-digit code number assigned to identify the spotted stock.
OBS_SPN2_CD_BEF	149-150	The two-digit code number assigned to identify other spinner or unidentified spinner stocks.
OBS_OTHR1_CD_BEF	151-152	The two-digit code number assigned to identify the species indicated as Other SP. 1.
OBS_OTHR2_CD_BEF	153-154	The two-digit code number assigned to identify the species indicated as Other SP. 2.
(FILLER)	155-156	Non-data remnant of data processing.
TIME_NET_LET_GO	157-160	The local time at which the net skiff hits the water, 4 digits.
EVADED_SET	161-161	The coded answer to the question, "Did any marine mammals evade being encircled by behavioral dexterity or slyness?" Yes = 1, No = 2.
TOT_EVADED_SET	162-165	The observer's estimate of the number of marine mammals that evade being encircled by behavioral dexterity or slyness, 4 digits.
SPC_EVADED_SET	166-167	The two-digit code number assigned to identify the major species/stock that evaded encirclement.
OBS_BST_EST_ENC	168-171	The observer's best estimate of the total number of marine mammals encircled, 4 digits.
OBS_HI_EST_ENC	172-175	The observer's estimate of the maximum possible number of marine mammals encircled, 4 digits.
OBS_LO_EST_ENC	176-179	The observer's estimate of the minimum possible number of marine mammals encircled, 4 digits.
OBS_SPT_ENC	180-182	The observer's estimate of percentage of spotters encircled, 3 digits.
OBS_EASTERN_ENC	183-185	The observer's estimate of percentage of eastern spinners encircled, 3 digits.
OBS_WB_ENC	186-188	The observer's estimate of percentage of whitebelly spinners encircled, 3 digits.
OBS_SPN2_ENC	189-191	The observer's estimate of percentage of other or unidentified spinners encircled, 3 digits.
OBS_OTHR1_ENC	192-194	The observer's estimate of percentage of other species (1) encircled, 3 digits.
OBS_OTHR2_ENC	195-197	The observer's estimate of percentage of other species (2) encircled, 3 digits.
OBS_SPT_CD_ENC	198-199	The two-digit code number assigned to identify the spotted stock.
OBS_SPN2_CD_ENC	200-201	The two-digit code number assigned to identify other spinners or unidentified spinner stocks.
OBS_OTHR1_CD_ENC	202-203	The two-digit code number assigned to identify the species indicated as Other Sp. 1.
OBS_OTHR2_CD_ENC	204-205	The two-digit code number assigned to identify the species indicated as Other Sp. 2.

Appendix 2F. (Continued)

Field Name	Columns	Description
ESCAP_BEF_RNG_UP	206-206	The coded answer to the question, "Did any of the encircled marine mammals evade being captured by escaping the net, unaided, prior to rings up?" Yes = 1, No = 2.
NUM_ESCAP_BEF	207-210	The observer's estimate of the number of marine mammals encircled that evaded capture by escaping the net, unaided, prior to rings up, 4 digits.
SPC_ESCAP_BEF	211-212	The two-digit code assigned to identify the major species/stock that escaped the net before the rings came up.
TIME_RINGS_UP	213-216	The local time at which the purse rings were brought above the surface of the water, 4 digits.
TIME_ROLL_NET	217-220	The time at which the stern end of the net was passed over the power block, marking the beginning of the net retrieval process, 4 digits.
NUM_BUNCHES	221-221	The number of bow corkline bunches pulled at the time backdown started, 1 digit; blank if no backdown.
NET_DUMPED	222-222	The coded answer to the question, "Were the contents of the net deliberately released after the rings came up?" Yes = 1, No = 2.
TIME_NET_DUMPED	223-226	The local time at which the contents of the net were deliberately released, 4 digits.
(FILLER)	227-230	Non-data remnant of data processing.
WIND_RNG_UP	231-232	The wind speed in knots at time rings up.
WIND_DIR_RNG_UP	233-233	The octant of the compass from which the wind is blowing at the time rings up, 1 digit, e.g., 1°-45°, coded as 1; 46°-90°, coded 2; 91°-135°, coded 3; etc.
WIND_SWEL_RNG_UP	234-235	The height of the primary swell in feet at time rings up, 2 digits. (Swell is waves raised by distant wind systems, or by winds that have ceased to blow.)
WIND_CHOP_RNG_UP	236-237	The height of the surface chop in feet and tenths of feet at time rings up, 2 digits. (Chop is a system of waves raised by the local wind at time of observations.)
SURF_TEMP_RNG_UP	238-240	The sea surface temperature in Fahrenheit degrees and tenths of degrees at time rings up, 3 digits.
CUR_STRNG_RNG_UP	241-241	Coded answer to the question, "Was a strong differential current present at time rings up?" (Strong currents are two knots or greater.)
E1_TOT_CATCH	242-245	The crew's estimate #1 of the total number of live marine mammals in the net when the rings came up, 4 digits.
E1_SPT_CATCH	246-248	The crew's estimate #1 of the percentage of spotters in the net when the rings came up, 3 digits.
E1_SPN_CATCH	249-251	The crew's estimate #1 of the percentage of spinners in the net when the rings came up, 3 digits.
E1_OTHER1_CATCH	252-254	The crew's estimate #1 of the percentage of other species (1) in the net when the rings came up, 3 digits.
E1_OTHER2_CATCH	255-257	The crew's estimate #1 of the percentage of other species (2) in the net when the rings came up, 3 digits.
OTHER1CODE_CATCH	258-259	The two-digit code number assigned to identify the species indicated as Other SP. 1.

Appendix 2F. (Continued)

Field Name	Columns	Description
E2_TOT_CATCH	260-263	The crew's estimate #2 of the total number of live marine mammals in the net when the rings came up, 4 digits.
E2_SPT_CATCH	264-266	The crew's estimate #2 of the percentage of spotters in the net when the rings came up, 3 digits.
E2_SPN_CATCH	267-269	The crew's estimate #2 of the percentage of spinners in the net when the rings came up, 3 digits.
E2_OTHER1_CATCH	270-272	The crew's estimate #2 of the percentage of other species (1) in the net when the rings came up, 3 digits.
E2_OTHER2_CATCH	273-275	The crew's estimate #2 of the percentage of other species (2) in the net when the rings came up.
OTHER2CODE_CATCH	276-277	The two-digit code number assigned to identify the species indicated as Other SP. 2.
E3_TOT_CATCH	278-281	The crew's estimate #3 of the total number of live marine mammals in the net when the rings came up, 4 digits.
E3_SPT_CATCH	282-284	The crew's estimate #3 of the percentage of spotters in the net when the rings came up, 3 digits.
E3_SPN_CATCH	285-287	The crew's estimate #3 of the percentage of spinners in the net when the rings came up, 3 digits.
E3_OTHER1_CATCH	288-290	The crew's estimate #3 of the percentage of other species (1) in the net when the rings came up, 3 digits.
E3_OTHER2_CATCH	291-293	The crew's estimate #3 of the percentage of other species (2) in the net when the rings came up, 3 digits.
OBS_BST_EST_CAP	294-297	The observer's best estimate of the total number of marine mammals in the net when the rings came up, 4 digits. (Note: The best estimate does not have to be the mean of the high and low estimates.)
OBS_HI_EST_CAP	298-301	The observer's estimate of the maximum possible number of marine mammals in the net when the rings came up, 4 digits.
(FILLER)	302-304	Non-data remnant of data processing.
OBS_LO_EST_CAP	305-308	The observer's estimate of the minimum possible number of marine mammals in the net when the rings came up, 4 digits.
OBS_SPT_CAP	309-311	The observer's estimate of the percentage of spotters in the net when rings came up, 3 digits.
OBS_EASTERN_CAP	312-314	The observer's estimate of the percentage of eastern spinners in the net when the rings came up, 3 digits.
OBS_WB_CAP	315-317	The observer's estimate of the percentage of whitebelly spinners in the net when the rings came up, 3 digits.
OBS_SPN2_CAP	318-320	The observer's estimate of the percentage of other or unidentified spinners in the net when the rings came up, 3 digits.
OBS_OTHR1_CAP	321-323	The observer's estimate of the percentage of other species (1) in the net when the rings came up, 3 digits.
OBS_OTHR2_CAP	324-326	The observer's estimate of the percentage of other species (2) in the net when the rings came up, 3 digits.
OBS_SPT_CD_CAP	327-328	The two-digit code number assigned to identify the spotted stock.
OBS_SPN2_CD_CAP	329-330	The two-digit code number assigned to identify other spinners or unidentified spinner stocks.

Appendix 2F. (Continued)

Field Name	Columns	Description
OBS_OTHR1_CD_CAP	331-332	The two-digit code number assigned to identify the species indicated as Other SP. 1.
OBS_OTHR2_CD_CAP	333-334	The two-digit code number assigned to identify the species indicated as Other SP. 2.
RELS_RAFT_BEF_BD	335-335	The coded answer to the question, "Was a raft used to aid marine mammal rescue effort prior to backdown?" Yes = 1, No = 2.
NUM_MEN_RAFT_BEF	336-336	The number of men actively engaged in rescue effort to aid in release of marine mammals from rafts prior to backdown, 1 digit.
NUM_REL_RAFT_BEF	337-339	The number of live marine mammals released by men in raft(s) prior to backdown, 3 digits.
RELS_BOAT_BEF_BD	340-340	The coded answer to the question, "Were speedboat(s) at the corkline used to aid marine mammal rescue effort prior to backdown?" Yes = 1, No = 2.
NUM_MEN_BOAT_BEF	341-341	The number of men actively engaged in rescue effort to aid in release of marine mammals from speedboat(s) prior to backdown, 1 digit.
NUM_REL_BOAT_BEF	342-344	The number of live marine mammals released by men in speedboat(s) prior to backdown, 3 digits.
RELS_SWMR_BEF_BD	345-345	The coded answer to the question, "Were men in the water involved in rescue effort to aid in release of marine mammals prior to backdown?" Yes = 1, No = 2.
NUM_SWMR_BEF_BD	346-346	The number of men in the water actively engaged in rescue effort to aid in release of marine mammals prior to backdown, 1 digit.
NUM_REL_SWMR_BEF	347-349	The number of live marine mammals released by swimmers prior to backdown, 3 digits.
RELS_OTHR_BEF_BD	350-350	The coded answer to the question, "Were other methods used to aid marine mammal rescue effort prior to backdown?" Yes = 1, No = 2.
NUM_MEN_OTHR_BEF	351-351	The number of men actively engaged in other methods of rescue effort to aid in release of marine mammals prior to backdown, 1 digit.
NUM_REL_OTHR_BEF	352-354	The number of live marine mammals released by other methods prior to backdown, 3 digits.
RELS_DECK_BEF_BD	355-355	The coded answer to the question, "Were live marine mammals brought on board and released over the deck alive prior to backdown? Yes = 1, No = 2.
NUM_REL_DECK_BEF	356-358	The number of live marine mammals released over the deck prior to backdown, 3 digits.
ESCAP_AFT_RNG_UP	359-359	The coded answer to the question, "Did any captured marine mammals escape unaided from the net after rings up but before backdown started?" Yes = 1, No = 2.
NUM_ESCAP_AFT	360-362	The observer's best estimate of the number of live or live injured captured marine mammals that escaped unaided after rings up but before backdown started, 3 digits.
NUM_RESCUERS_BEF	363-364	The total number of men actively engaged in rescue effort prior to backdown, 2 digits.



Appendix 2F. (Continued)

Field Name	Columns	Description
BACKDOWN	365-365	The coded answer to the question, "Did the vessel employ the backdown technique to rescue marine mammals during this set?" Yes = 1, No=2.
TIME_START_BD	366-369	The local time at which the backdown procedure is initiated; i.e., the first time at which the engines are shifted into reverse after the net is tied down, 4 digits; blank if no backdown.
TIME_END_BD	370-373	The local time at which the backdown procedure was finished, i.e., the time at which the engines are shifted out of reverse for the last time and the corks at the apex of the channel are up, 4 digits; blank if no backdown.
(FILLER)	374-378	Non-data remnant of data processing.
BST_EST_RELS_DUR	379-382	The observer's best estimate of the total number of marine mammals released due to the backdown process, 4 digits; blank if no backdown or if backdown occurs in darkness. (Do not include animals hand released by rescuers during backdown.)
HI_EST_RELS_DUR	383-386	The observer's best estimate of the maximum possible number of marine mammals released due to the backdown process, 4 digits; blank if no backdown or if backdown occurs in darkness. (Do not include animals hand released by rescuers during backdown.)
LO_EST_RELS_DUR	387-390	The observer's best estimate of the minimum possible number of marine mammals released due to the backdown process, 4 digits; blank if no backdown or if backdown occurs in darkness. (Do not include animals hand released by rescuers during backdown.)
FISH_LOSS_DUR_BD	391-391	The coded answer to the question, "Did tuna escape the net during the backdown process?" Yes = 1, No = 2; blank if no backdown.
NUM_LOSS_DUR_BD	392-394	The observer's best estimate of the number of short tons of tuna lost during backdown, 3 digits; blank if none lost or if backdown did not occur. (Input from cork tenders and Captain should be solicited.)
LIVE_SPT_AFT_BD	395-397	The total number of live spotted porpoise left in the net after backdown, 3 digits.
LIVE_SPN_AFT_BD	398-400	The total number of live spinner porpoise left in the net after backdown, 3 digits.
LIVE_OTHR_AFT_BD	401-403	The total number of all other live marine mammals left in the net after backdown, 3 digits.
RELS_RAFT_DUR_BD	404-404	The coded answer to the question, "Was a raft in the water prepared to aid cetacean rescue effort during backdown?" Yes = 1, No = 2; blank if no backdown.
NUM_MEN_RAFT_DUR	405-405	The number of men prepared to engage in rescue effort to aid in release of marine mammals from rafts during backdown, 1 digit.
NUM_REL_RAFT_DUR	406-408	The number of live marine mammals hand released by men in raft(s) during backdown, 3 digits.
RELS_BOAT_DUR_BD	409-409	The coded answer to the question, "Were speedboat(s) at the corkline prepared to aid cetacean rescue effort during backdown?" Yes = 1, No = 2; blank if no backdown.

Appendix 2F. (Continued)

Field Name	Columns	Description
NUM_MEN_BOAT_DUR	410-410	The number of men prepared to engage in rescue effort to aid in release of marine mammals from speedboat(s) during backdown, 1 digit.
NUM_REL_BOAT_DUR	411-413	The number of live marine mammals hand released by men in speedboat(s) during backdown, 3 digits.
RELS_SWMR_DUR_BD	414-414	The coded answer to the question, "Were men in the water prepared to engage in rescue effort to aid in the release of cetaceans during backdown?" Yes = 1, No = 2; blank if no backdown.
NUM_SWMR_DUR_BD	415-415	The number of men in the water prepared to engage in rescue effort to aid in release of marine mammals during backdown, 1 digit.
NUM_REL_SWMR_DUR	416-418	The number of live marine mammals hand released by men in the water during backdown, 3 digits.
RELS_OTHR_DUR_BD	419-419	The coded answer to the question, "Were other methods used to aid cetacean rescue effort during backdown?" Yes = 1, No = 2; blank if no backdown.
NUM_MEN_OTHR_DUR	420-420	The number of men actively engaged in other methods of rescue effort to aid in release of marine mammals during backdown, 1 digit.
NUM_REL_OTHR_DUR	421-423	The number of live marine mammals released by other methods during backdown, 3 digits.
NUM_RESCUERS_DUR	424-425	The total number of men prepared to engage in rescue effort during backdown, 2 digits; blank if no backdown. Count each man only once if involved in different types of rescue.
RELS_RAFT_AFT_BD	426-426	The coded answer to the question, "Was a raft used to aid marine mammal rescue effort after backdown, or if no backdown, at anytime during the set?" Yes = 1, No = 2.
NUM_MEN_RAFT_AFT	427-427	The number of men actively engaged in rescue effort to aid in release of marine mammals from raft(s) after backdown, or if no backdown, at anytime during the set, 1 digit.
NUM_REL_RAFT_AFT	428-430	The number of live or live injured marine mammals released by men in raft(s) after back-down, or if no backdown, at anytime during the set, 3 digits.
RELS_BOAT_AFT_BD	431-431	The coded answer to the question, "Were speedboats at the corkline used to aid marine mammal rescue effort after backdown, or if no backdown, at anytime during the set?" Yes = 1, No = 2.
NUM_MEN_BOAT_AFT	432-432	The number of men actively engaged in rescue effort to aid in release of marine mammals from speedboat(s) after backdown, or if no backdown, at anytime during the set, 1 digit
NUM_REL_BOAT_AFT	433-435	The number of live or live injured marine mammals released by men in speedboat(s) after backdown, or if no backdown, at anytime during the set, 3 digits.
RELS_SWMR_AFT_BD	436-436	The coded answer to the question, "Were men in the water involved in rescue effort to aid in release of marine mammals after backdown, or if no backdown, at anytime during the set?" Yes = 1, No = 2.

Appendix 2F. (Continued)

Field Name	Columns	Description
NUM_SWMR_AFT_BD	437-437	The number of men in the water actively engaged in rescue effort to aid in release of marine mammals after backdown, or anytime during the set, 1 digit.
NUM_REL_SWMR_AFT	438-440	The number of live or live injured marine mammals released by men in the backdown or, if no backdown, at anytime the set, 3 digits.
RELS_OTHR_AFT_BD	441-441	The coded answer to the question, "Were other methods used to aid marine mammal rescue effort after backdown, or if no backdown, at anytime during the set?" Yes = 1, No = 2.
NUM_MEN_OTHR_AFT	442-442	The number of men actively engaged in other methods of rescue effort to aid in release of marine mammals after backdown, or if no backdown, at anytime during the set, 1 digit.
NUM_REL_OTHR_AFT	443-445	The number of live or live injured marine mammals released by other methods after backdown, or if no backdown, at anytime during the set, 3 digits.
RELS_SACK_AFT_BD	446-446	The coded answer to the question, "Was there an effort to release live marine mammals from the net after sack up was initiated?" Yes = 1, No = 2; blank if no sack up.
NUM_MEN_SACK_AFT	447-447	The number of men actively engaged in rescue effort to aid in release of marine mammals from the sack, 1 digit; blank if no sack up or rescue effort.
NUM_REL_SACK_AFT	448-450	The number of live or live injured marine mammals released from the sack due to rescue effort, 3 digits; blank if no sack up or rescue effort.
(FILLER)	451-452	Non-data remnant of data processing.
PORP_BASKET_USED	453-453	The coded answer to the question, "Was a basket-type rescue device that suspends from the skiff while sacking up used during this set?" Yes = 1, No = 2.
RELS_DECK_AFT_BD	454-454	The coded answer to the question, "Were live marine mammals brought on board and released over the deck alive after backdown, or if no backdown, at anytime during the set?" Yes = 1, No = 2.
NUM_REL_DECK_AFT	455-457	The number of live or live injured marine mammals released over the deck after backdown or, if no backdown, at anytime during the set, 3 digits.
ESCAP_AFT_BD	458-458	The coded answer to the question, "Did captured marine mammals escape unaided after backdown, or if no backdown, at anytime during the set?" Yes = 1, No = 2.
NUM_ESCAP_AFT_BD	459-461	The number of live or live injured marine mammals that escaped unaided after backdown, or if no backdown, at anytime during the set after capture, 3 digits.
NUM_RESCUERS_AFT	462-463	The total number of men actively engaged in rescue effort after backdown, or if no backdown, at anytime during the set, 2 digits; enter zeroes if no rescue effort. (Count each man only once if involved in more than one type of rescue.) Note: Don't count men releasing marine mammals from deck or from sack.

Appendix 2F. (Continued)

Field Name	Columns	Description
CROOK_RESCUE	464-464	The coded answer to the question, "At any time during the set, was a porpoise crook used to aid in the rescue of live marine mammals?" Yes = 1, No = 2.
NUM_CROOK_RESCUE	465-466	The total number of live marine mammals released with the aid of a porpoise crook, 2 digits. NOTE: The porpoise crook data is not broken down as to before, during or after backdown. Animals included here should also be counted in the release categories.
SACKUP	467-467	The coded answer to the question, "Were the contents of the net sacked up?" Yes = 1, No = 2. (NOTE: The "sacking up" procedure is a method of evenly pulling in the excess webbing at the end of the net so that the contents are evenly supported when finally concentrated for brailing.)
NUM_LIV_SRT_SACK	468-470	The total number of live marine mammals in the net at the time sack up was initiated, 3 digits; blank if no sack up.
TIME_START_SACK	471-474	The local time at which the first pull of the net to begin sacking up is taken, 4 digits; blank if no sack up.
BRAILING	475-475	The coded answer to the question, "Were contents of the net brailed aboard?" Yes = 1, No = 2.
NUM_LIV_BEF_BRAL	476-478	The total number of live or live injured marine mammals in the net at time brailing commenced, 3 digits.
TIME_START_BRAIL	479-482	The local time at which the first brailer of fish is scooped out of the net, 4 digits; blank if no brailing.
TIME_END_BRAIL	483-486	The local time at which the last brailer of fish is dumped on the boat, 4 digits; blank if no brailing.
TIME_END_SET	487-490	The local time at which the skiff is secured on the deck. If the skiff is not brought aboard by choice (due to factors that did not occur during the set), enter the approximate time that normal operations would have ended, 4 digits.
CURRENT_STRONG	491-491	The coded answer to the question, "Was a strong current present at any time during the set?" Yes = 1, No = 2. (NOTE: Strong currents are two knots or greater.)
KNOWN_KILLED	492-495	The total number of marine mammals that were positively determined to be dead (ADD ) in this set, i.e., the sum of the checks on the tally sheet, 4 digits.
KNOWN_INJURED	496-497	The total number of marine mammals that were injured in this set, 2 digits. Sum all + and ? on tally sheet, plus all injured prior to and during backdown.
SUCCESS_SET	498-498	The coded answer to the question, "Was the set successful?" i.e., was ¼ ton or more fish loaded on the boat? Yes = 1, No = 2.
TONS_YF	499-501	The best estimate of the total tons of yellowfin tuna loaded aboard during this set, 3 digits; enter zeroes if none loaded.
TONS_SK	502-504	The best estimate of the total tons of skipjack tuna loaded aboard during this set, 3 digits; enter zeroes if none loaded.

Appendix 2F. (Continued)

Field Name	Columns	Description
TONS_OTHER_FISH	505-507	The best estimate of the number of tons of fish species other than yellowfin or skipjack that were loaded aboard during this set, enter zeroes if none loaded.
OTHER_FISH_CODE	508-509	The two-digit code number assigned to the species of fish designated under Tons Other Sp. in this set (Code Table 10).
TANGL_SPT_KILL	510-512	The observer's best estimate of the percentage of total spotters killed that died due to known entanglement, 3 digits. (Note: Entanglement means stuck to the net by a part of the body, i.e., flukes, snout or flipper.)
TANGL_SPN_KILL	513-515	The observer's best estimate of the percentage of total spinners killed that died due to known entanglement, 3 digits.
TANGL_OTH_KILL	516-518	The observer's best estimate of the percentage of the total "Other Species" killed due to known entanglement, 3 digits.
TANGL_KIL_BEF_BD	519-521	The observer's best estimate of the number of marine mammals killed due to entanglement prior to backdown, 3 digits.
TANGL_KIL_DUR_BD	522-524	The observer's best estimate of the number of marine mammals killed due to entanglement during backdown, 3 digits.
(FILLER)	525-526	Non-data remnant of data processing.
TANGL_KIL_AFT_BD	527-529	The observer's best estimate of the number of marine mammals killed due to entanglement after backdown or, if no backdown, at any time during the set, 3 digits.
TRAP_SPT_KILL	530-532	The observer's best estimate of the percentage of the total spotters killed that died due to known entrapment in folds or canopies of webbing, 3 digits. (Note: Entrapment means forced contact with the net webbing due to a configuration of the net which traps or poses unusual hazard to marine mammals.)
TRAP_SPN_KILL	533-535	The observer's best estimate of the percentage of the total spinners killed that died due to known entrapment in folds or canopies of webbing, 3 digits.
TRAP_OTH_KILL	536-538	The observer's best estimate of the percentage of the total "Other Species" killed due to known entrapment in folds or canopies of webbing, 3 digits.
TRAP_KIL_BEF_BD	539-541	The observer's best estimate of the number of marine mammals killed by entrapment in folds or canopies of webbing before backdown, 3 digits.
TRAP_KIL_DUR_BD	542-544	The observer's best estimate of the number of marine mammals killed by entrapment in folds or canopies of webbing during backdown, 3 digits.
TRAP_KIL_AFT_BD	545-547	The observer's best estimate of the number of marine mammals killed by entrapment in folds or canopies of webbing after backdown or, if no backdown, at any time during the set, 3 digits.
SACKUP_SPT_KILL	548-550	The observer's best estimate of the percentage of the total spotters killed that died during the sacking-up process, 3 digits.

Appendix 2F. (Continued)

Field Name	Columns	Description
SACKUP_SPN_KILL	551-553	The observer's best estimate of the percentage of the total spinners killed that died during the sacking-up process, 3 digits.
SACKUP_OTH_KILL	554-556	The observer's best estimate of the percentage of "Other Species" killed that died during the sacking-up process, 3 digits.
OTHER_SPT_KILL	557-559	The observer's best estimate of the percentage of total spotters killed that died due to reasons other than described above, 3 digits.
OTHER_SPN_KILL	560-562	The observer's best estimate of the percentage of total spinners killed that died due to reasons other than described above, 3 digits.
OTHER_OTH_KILL	563-565	The observer's best estimate of the percentage of total "Other Species" killed that died due to reasons other than described above, 3 digits.
TANGL_MESH_125	566-567	The observer's best estimate of marine mammals killed by entanglement and/or entrapment in 1¼-inch mesh webbing, 2 digits.
TANGL_MESH_200	568-569	The observer's best estimate of marine mammals killed by entanglement and/or entrapment in 2-inch mesh webbing, 2 digits.
TANGL_MESH_425	570-571	The observer's best estimate of marine mammals killed by entanglement and/or entrapment in 4¼-inch mesh webbing, 2 digits.
TANGL_MESH_UNK	572-573	The observer's best estimate of marine mammals killed by entanglement and/or entrapment in unknown size webbing, 2 digits.
UNK_SPT_KILL	574-576	The observer's best estimate of the percentage of total spotters killed that died because of unknown causes, 3 digits.
UNK_SPN_KILL	577-579	The observer's best estimate of the percentage of total spinners killed that died because of unknown causes, 3 digits.
UNK_OTH_KILL	580-582	The observer's best estimate of the percentage of total "Other Species" killed that died because of unknown causes, 3 digits.
OTHER_SPC_KILL	583-584	The two-digit code number assigned to the "Other Species" referred to in percentage Other Species column.
NUM_BD_SPEEDBOAT	585-585	The total number of manned speedboats in the water continuously until backdown commenced or, if no backdown, until the time the normal tie-down point for backdown is reached, 1 digit. Note: Continuously means from the time the net was let go until the time the vessel begins preparation for the backdown maneuver; i.e., around the time of tiedown.
BOAT_TOW_BEF_BD	586-586	The coded answer to the question, "Did speedboats attach to the net (corkline or bunches) and tow on the net prior to backdown?" Yes = 1, No = 2; Not Applicable = 3, if no backdown).

Appendix 2F. (Continued)

Field Name	Columns	Description
COLLAPSE_BEF_BD	587-587	The coded answer to the question, "For whatever reason, was the open surface area of the net so seriously reduced that marine mammals in the net were forced into contact with the webbing before backdown was initiated?" Yes = 1, No = 2, Not Applicable = 3, if no backdown.
COLLAPSE_KIL_BEF	588-588	The coded answer to the question, "Were marine mammals killed as a result of a net collapse prior to backdown? Yes = 1, No = 2, Not Applicable = 3, if no backdown.
CORKS_TOGETH_BEF	589-589	The coded answer to the question, "Did the corkline floats come together at any point along the backdown channel before backdown (Porpoise not involved)? Yes = 1, No = 2, Not Applicable = 3.
BOAT_ADJ_BD_AREA	590-590	The coded answer to the question, "Was a speedboat used to open or adjust the corkline that formed the backdown area prior to backdown?" Yes = 1, No = 2, Not Applicable = 3.
NET_TIED_DOWN	591-591	The coded answer to the question, "Was the net tied down for backdown at the marked floats in the stern and at the marked bunchlines at the bow?" Yes = 1, No = 2, Not Applicable = 3, if vessel does not have an apron system; blank if no backdown.
PNL_COVR_BD_AREA	592-592	Coded answer to the question, "Did the porpoise safety panel and/or apron (1-1/4" mesh) start at the outboard end of the last bunch pulled and extend around the backdown channel to two-thirds the distance from the backdown apex to the stern tie down point?" Yes = 1, No = 2; blank if no backdown.
CANOPIES_PRESENT	593-593	The coded answer to the question, "During the backdown process, did you observe canopies of webbing with marine mammals in them?" Yes = 1, No = 2; blank if no backdown.
CANOPY_BD_KILL	594-594	The coded answer to the question, "Were marine mammals killed as a result of canopies that occurred during backdown?" Yes = 1, No = 2, Not Applicable = 3, if no canopies; blank if no backdown.
CORKS_TOGETH_AFT	595-595	The coded answer to the question, "After completing the backdown process, did the corkline floats come together at any point along the backdown channel?" Yes = 1, No = 2, Not Applicable = 3.
COLLAPSE_AFT_BD	596-596	The coded answer to the question, "Did the surface area enclosed by the corkline become so reduced as to force the remaining live marine mammals to come into contact with the webbing after backdown, or if no backdown, at any time during the set?" Yes = 1, No = 2, Not Applicable = 3.
COLLAPSE_KIL_AFT	597-597	The coded answer to the question, "Were marine mammals killed as a result of net collapse after backdown, or if no backdown, at any time during the set?" Yes = 1, No = 2, Not Applicable = 3.

Appendix 2F. (Continued)

Field Name	Columns	Description
BOAT_TOW_AFT_BD	598-598	Coded answer to question, "Did speedboats attach to the net (corkline or bunches) and tow on the net after backdown, or if no backdown, at anytime during the set?" Yes = 1, No = 2, Not Applicable = 3.
(FILLER)	599-600	Non-data remnant of data processing.
JELLYFISH	601-601	Coded answer to the question, "Were concentrations of jellyfish encountered during this set?" Yes = 1, No = 2, (Do not use N/A, coded = 3).
JELLYFISH_PROBLM	602-602	Coded answer to the question, "Did the presence of concentrations of jellyfish during this set result in any problems with the net?" Yes = 1, No = 2, Not Applicable = 3.
MAINTENANCE	603-603	The coded answer to the question, "Was maintenance required on the apron system or small mesh (1¼-inch) safety panel after this set?" Yes = 1, No = 2, Not Applicable = 3. (Note: If your vessel doesn't have an apron system or small mesh, this question is coded 3 (N/A) for all sets.)
EQUIP_MALF	604-604	The coded answer to the question, "Did any equipment malfunction(s) occur during the progress of this set, from start of chase until the time the boat was underway again?" Yes = 1, No = 2.
MALF_DELAY_SET	605-605	The coded answer to the question, "Did one or more of the equipment malfunctions that occurred in this set result in an actual delay of the set procedure?" Yes = 1, No = 2, Not Applicable = 3, if no malfunction. (NOTE: Some malfunctions may not cause effective delay of the set procedure, but may be jury-rigged or worked around, and repaired after the set.)
PORP_IN_NET	606-606	The coded answer to the question, "Were marine mammals in the net during the malfunction(s) that occurred during this set? Yes = 1, No = 2, Not Applicable = 3, if no malfunction.
SET_ABORTED	607-607	The coded answer to the question, "Were the entire contents of the net lost involuntarily or released by the crew, due to circumstances beyond their control?" This applies to a set in which normal completion of the set is impossible because of a malfunction. Yes = 1, No = 2.
TIME_SET_ABORT	608-611	The local time at which the set was aborted, 4 digits.
KNEW_SCHOOL_REG	612-612	Coded answer to the question, "If a prohibited school of marine mammals was encircled, DID YOU ASCERTAIN whether the vessel operator understood the prohibition and what stocks are prohibited?" Yes = 1, No = 2, Not Applicable = 3. Refer to Observer estimates of Porpoise encircled, captured and the tally sheet for any occurrence of prohibited marine mammals specified in the U.S. Marine Mammal Regulations.



Appendix 2F. (Continued)

Field Name	Columns	Description
OBS_WHY_SCHOOL	613-613	Coded answer to the question, "Did you visually OBSERVE any CIRCUMSTANCES as to why a prohibited school was encircled?" Yes = 1, No = 2, Not Applicable = 3. If yes, document the obvious reasons on the lines provided.
SKIPR_WHY_SCHOOL	614-614	Coded answer to the question, "Did you RECEIVE any JUSTIFYING REASONS from the vessel operator as to why a prohibited school was encircled?" Yes = 1, No = 2, Not Applicable = 3. If yes, document the vessel operator's reason on the lines provided.
COMPLY_TO_SCHOOL	615-615	One-digit code number assigned to identify compliance (Not to be filled in by observer).
KNEW_BOATS_REG	616-616	Coded answer to the question, "If marine mammals were encircled and a minimum of two manned speedboats (one for Class 1 vessels) were not in the water continuously from the time the net was let go until backdown commenced (if no backdown, until the normal tiedown point is reached), DID YOU ASCERTAIN whether the vessel operator understood the required procedure and that it is required for every set involving marine mammals? Yes = 1, No = 2, Not Applicable = 3. Refer to the "number of manned speedboats in the water continuously" on Page 7 of the Set Log (card 08, column 67).
OBS_WHY_BOATS	617-617	Coded answer to the question, "Did you visually OBSERVE any CIRCUMSTANCES for not having two manned speedboats in the water continuously?" Yes = 1, No = 2, Not Applicable = 3. If yes, document the obvious reasons on the lines provided.
SKIPR_WHY_BOATS	618-618	Coded answer to the question, "Did you RECEIVE any JUSTIFYING REASONS from the vessel operator for not having two manned speedboats in the water continuously? Yes = 1, No = 2, Not Applicable = 3. If yes, document the vessel operator's reason on the lines provided.
COMPLY_TO_BOATS	619-619	One-digit code number assigned to identify compliance (Not to be filled in by observer).
KNEW_BUNCHS_REG	620-620	Coded answer to the question, "If marine mammals were captured and exactly three bow bunches were not pulled, DID YOU ASCERTAIN whether the certificate holder understood the required procedure and that it is required for every set involving marine mammals? Yes = 1, No = 2, Not Applicable 3. Refer to the # bunches on page 2 of the Set Log (Card 03 Col. 73).
OBS_WHY_BUNCHS	621-621	Coded answer to the question, "Did you visually OBSERVE any CIRCUMSTANCES as to why three bow bunches were not pulled?" Yes = 1, No = 2, Not Applicable = 3. If yes, document the obvious reasons on the lines provided.

Appendix 2F. (Continued)

Field Name	Columns	Description
SKIPR_WHY_BUNCHS	622-622	Coded answer to the question, "Did you RECEIVE any JUSTIFYING REASONS from the vessel operator as to why three bow bunches were not pulled?" Yes = 1, No = 2, Not Applicable = 3. If yes, document the vessel operator's reason on the lines provided.
COMPLY_TO_BUNCHS	623-623	One-digit code number assigned to identify compliance. (Not to be filled in by observer).
KNEW_BD_REG	624-624	Coded answer to the question, "If live marine mammals were in the net and the backdown procedure was not used, DID YOU ASCERTAIN whether the vessel operator understood the required procedure and that it is required for every set involving marine mammals?" Yes = 1, No = 2, Not Applicable = 3. Refer to "Backdown Y/N" on page 3 of the Set Log (card 05 Col. 69).
OBS_WHY_BD	625-625	Coded answer to the question, "Did you visually OBSERVE any CIRCUMSTANCES as to why the backdown procedure was not used?" Yes = 1, No = 2, Not Applicable = 3. If yes, document the obvious reasons on the lines provided.
SKIPR_WHY_BD	626-626	Coded answer to the question, "Did you RECEIVE any JUSTIFYING REASONS from the vessel operator as to why the backdown procedure was not used?" Yes = 1, No = 2, Not Applicable = 3. If yes, document the vessel operator's reason on the lines provided.
COMPLY_TO_BD	627-627	One-digit code number assigned to identify compliance (Not to be filled in by observer).
KNEW_PANEL_REG	628-628	Coded answer to the question, "If the backdown procedure was employed, and the porpoise safety panel did not cover the perimeter of the backdown channel, DID YOU ASCERTAIN whether the vessel operator understood the required procedure and that it is required for every set on marine mammals?" Yes = 1, No = 2, Not Applicable = 3. Refer to "Safety panel cover the perimeter of the backdown area" on page 7 of the Set Log (Card 08 Col. 74).
OBS_WHY_PANEL	629-629	Coded answer to the question, "Did you visually OBSERVE any CIRCUMSTANCES as to why the porpoise safety panel did not cover the entire perimeter of the backdown channel during backdown?" Yes = 1, No = 2, N/A = 3. If yes, document the obvious reasons on the lines provided.
SKIPR_WHY_PANEL	630-630	Coded answer to the question, "Did you RECEIVE any JUSTIFYING REASONS from the vessel operator as to why the porpoise safety panel did not cover the entire perimeter of the backdown channel during backdown?" Yes = 1, No = 2, N/A = 3. If yes, document the reason on the lines provided.
COMPLY_TO_PANEL	631-631	One-digit code number assigned to identify compliance (Not to be filled in by observer).

Appendix 2F. (Continued)

Field Name	Columns	Description
KNEW_2MEN_REG	632-632	Coded answer to the question, "Commencing with backdown* and continuing after backdown if live marine mammals were in the net and a minimum of two men weren't actively engaged in hand removal of marine mammals DID YOU ASCERTAIN whether the vessel operator understood the required procedure and that it is required for every set involving marine mammals?" *If no backdown, then replace backdown with, "time normal tie down point for backdown is reached," in the question. Yes = 1, No = 2, N/A = 3. Refer to "Total number of rescuers during backdown" on Page 3 of the Set Log (Card 06, Col. 54) and the "total number of rescuers after backdown, (Card 07, Col. 18-19).
OBS_WHY_2MEN	633-633	Coded answer to the question, "Did you visually OBSERVE any CIRCUMSTANCES as to why two rescuers were not actively engaged in hand removal?" Yes = 1, No = 2, N/A = 3. If yes, document the obvious reasons on the lines provided.
SKIPR_WHY_2MEN	634-634	Coded answer to the question, "Did you RECEIVE any JUSTIFYING REASONS from the VESSEL OPERATOR as to why two rescuers were not actively engaged in hand removal?" Yes = 1, No = 2, Not Applicable = 3. If yes, document the vessel operator's reason on the lines provided.
COMPLY_TO_2MEN	635-635	One-digit code number assigned to identify compliance. (Not to be filled in by observer).
KNEW_REMOVAL_REG	636-636	Coded answer to the question, "If live marine mammals were in the net, and hand removal was not continuous until all live porpoise were released, DID YOU ASCERTAIN whether the vessel operator understood the required procedure and that it is required for every set involving marine mammals?" Note: This question pertains to the time period from backdown through sacking up, but if no backdown, then it applies to continuous effort after the tiedown point for backdown is reached. Continuous means an uninterrupted effort to release porpoise. Yes = 1, No = 2, Not Applicable = 3. Refer to your notes to determine if rescue efforts were continuous (No interruptions.) Also refer to live animals in sack and whether release took place from the sack on Page 4 of the Set Log (Card 06, Col. 76 and Card 07, Col. 24).
OBS_WHY_REMUVL	637-637	Coded answer to the question, "Did you visually OBSERVE any CIRCUMSTANCES as to why hand removal efforts were not continuous?" Yes = 1, No = 2, N/A = 3. If yes, document the obvious reasons.
SKIPR_WHY_REMUVL	638-638	Coded answer to the question, "Did you RECEIVE any JUSTIFYING REASONS from the vessel operator as to why hand removal efforts were not continuous?" Yes = 1, No = 2, N/A = 3. If yes, document the vessel operator's reason on lines provided.

Appendix 2F. (Continued)

Field Name	Columns	Description
COMPLY_TO_REMUVL	639-639	One-digit code number assigned to identify compliance (Not to be filled in by observer).
KNEW_BRAIL_REG	640-640	Coded answer to the question "If live marine mammals were brailed* out of the net, DID YOU ASCERTAIN whether the vessel operator understood the required procedure and that it is required for every set involving marine mammals?" *Note: If there is no brailing this question would read, "If the total contents of the net was brought on board and live porpoise were in this sack, DID YOU ASCERTAIN whether the vessel operator understood the required procedure and that it is required for every set involving marine mammals?" Yes = 1, No = 2, Not Applicable = 3. Refer to number of live marine mammals in net at start of brailing on Page 4 of the Set Log (Card 07, Col. 32).
OBS_WHY_BRAIL	641-641	Coded answer to the question, "Did you visually OBSERVE any CIRCUMSTANCE as to why live marine mammals were brailed out of the net?" Yes = 1, No = 2, N/A = 3. If yes, document the obvious reasons on the lines provided.
SKIPR_WHY_BRAIL	642-642	Coded answer to the question, "Did you RECEIVE any JUSTIFYING REASONS from the vessel operator as to why live marine mammals were brailed out of the net?" Yes = 1, No = 2, N/A = 3. If yes, document the vessel operator's reason on the lines provided.
COMPLY_TO_BRAIL	643-643	One-digit code number assigned to identify compliance (Not to be filled in by observer).
KNEW_POINT_REG	644-644	Coded answer to the question, "If a sharp or pointed instrument was used on marine mammals, DID YOU ASCERTAIN whether the vessel operator understood the required procedure and that it is required for every set involving marine mammals?" Yes = 1, No = 2, N/A = 3. Refer to your notes on any indication of gaffs or other sharp or pointed instruments used on marine mammals.
OBS_WHY_POINT	645-645	Coded answer to the question, "Did you visually OBSERVE any CIRCUMSTANCES as to why a sharp or pointed instrument was used on marine mammals?" Yes = 1, No = 2, N/A = 3. If yes, document the obvious reasons on the lines provided.
SKIPR_WHY_POINT	646-646	Coded answer to the question, "Did you RECEIVE any JUSTIFYING REASONS from the vessel operator as to why a sharp or pointed instrument was used on marine mammals?" Yes = 1, No = 2, N/A = 3. If yes, document the vessel operator's reason on the lines provided.
COMPLY_TO_POINT	647-647	One-digit code number assigned to identify compliance (Not to be filled in by observer).

Appendix 2F. (Continued)

Field Name	Columns	Description
SKIPPER_COMMENTS	648-648	Coded answer to the question, "Are there any skipper comments* recorded on page 18?" *Note: A skipper comment is a comment recorded on your logs by the skipper with his initials and is an additional comment to what you have already recorded. Yes = 1, No = 2. (Not Applicable (3) is not to be used for this question.)
KNEW_RAFT_REG	649-649	Coded answer to the question, "If a rubber raft was not launched inside the net during backdown and employed by a rescuer to assist in the release of marine mammals during and after backdown*, DID YOU ASCERTAIN whether the vessel operator understood the required procedure and that it is required for every set involving marine mammals?" Yes = 1, No = 2, Not Applicable = 3. *If no backdown occurred, then replace backdown with "time normal tie down point for backdown is reached", in the question. Refer to "Released by Raft during Backdown" on Page 3 of the Set Log (Card 6, Col. 34) and to "Released by Raft after Backdown" on Page 4 of the Set Log (Card 6, Col 56).
OBS_WHY_RAFT	650-650	Coded answer to the question, "Did you visually OBSERVE any CIRCUMSTANCES as to why a rescuer in a rubber raft was not used to assist in the rescue of marine mammals?" Yes = 1, No = 2, N/A = 3. If yes, document the obvious reasons on the lines provided.
SKIPR_WHY_RAFT	651-651	Coded answer to the question, "Did you RECEIVE any JUSTIFYING REASONS from the vessel operator as to why a rescuer in a rubber raft was not used to assist in the rescue of marine mammals?" Yes = 1, No = 2, Not Applicable = 3. If yes, document the vessel operator's reasons on the lines provided.
COMPLY_TO_RAFT	652-652	One-digit code number assigned to identify compliance. (Not to be filled in by observer.)
KNEW_SNORKL_REG	653-653	Coded answer to the question, "If a rescuer in a rubber raft did not use a facemask and snorkel to determine if all live marine mammals were out of the net, DID YOU ASCERTAIN whether the vessel operator understood the required procedure and that it is required for every set involving marine mammals?" Yes = 1, No = 2, N/A = 3. Refer to your notes on rescue during or after backdown on pages 3 and 4 of the Set Log.
OBS_WHY_SNORKL	654-654	Coded answer to the question, "Did you visually OBSERVE any CIRCUMSTANCES as to why a facemask and snorkel were not used to determine if all live marine mammals were out of the net?" Yes = 1, No = 2, N/A = 3. If yes, document the obvious reasons on the lines provided.

Appendix 2F. (Continued)

Field Name	Columns	Description
SKIPR_WHY_SNORKL	655-655	Coded answer to the question, "Did you RECEIVE any JUSTIFYING REASONS from the vessel operator as to why a facemask and snorkel were not used to determine if all live marine mammals were out of the net?" Yes = 1, No = 2, N/A = 3. If yes, record the vessel operator's reasons on lines provided.
COMPLY_TO_SNORKL	656-656	One-digit code number assigned to identify compliance. (Not to be filled in by observer.)
BACKDOWN_LIGHTS	657-657	Coded answer to the question, "If the backdown maneuver or other required marine mammal release procedures occurs in darkness, were lights used to aid rescue procedures?" Yes = 1, No = 2, N/A = 3. For all sundown sets describe the use of lights including how and when used, areas illuminated, number of lights used, etc. If lights were not used record the vessel operator's reasons as to why lights were not used.
(FILLER)	658-672	Non-data remnant of data processing.
MODIFY_GEAR	673-673	The coded answer to the question, "Were any gear modifications specifically designed for non-porpoise fishing used this set?" Yes = 1, No = 2.

Appendix 2G. Record format and definitions for Set Log data collected by the NMFS Tuna-Porpoise Observer Program from 1979-1980.

Field Name	Columns	Description
CRUISE	1-3	The unique four-digit number assigned to this cruise.
SET	4-6	The three digit consecutive number for the present set.
(FILLER)	7-8	Non-data remnant of data processing.
DATE	9-14	The year, month and day (yymmdd) on which this event happened, 6 digits.
LATITUDE	15-18	The latitude in degrees (2 digits) and minutes (2 digits) north or south of the equator at which the set is made.
N_OR_S	19-19	The hemisphere of the latitude, coded one-digit: North = 1, South = 2.
LONGITUDE	20-24	The longitude in degrees (3 digits) and minutes (2 digits) east or west of Greenwich, England, at which the set is made.
E_OR_W	25-25	The hemisphere of the longitude, coded one-digit: East = 1, West = 2.
SET_TYPE	26-27	The two-digit code number identifying the set type as determined by the observer (Code Table 8).
TIME_CHASE_BEGAN	28-31	The time when the first speedboat(s) was lowered onto the water, 4 digits (blank if speedboats were not used).
NUM_BOATS_USED	32-32	The maximum number of speedboats in use at any one time while herding the marine mammals 1 digit.
E1_PORP_TOT	33-36	The crew's estimate #1 of the entire school size before the set, 4 digits.
E1_SPT	37-39	The crew's estimate #1 of percentage of spotters in the school before set, 3 digits.
E1_SPN	40-42	The crew's estimate #1 of percentage of spinners in the school before set, 3 digits.
E1_OTHER_SP1	43-45	The crew's estimate #1 of percentage of other species (1) in the school before the set, 3 digits.
E1_OTHER_SP2	46-48	The crew's estimate #1 of percentage of other species (2) in the school before the set, 3 digits.
SPC_OTHER_SP1	49-50	The two-digit code number assigned to identify the species indicated as Other SP. 1.
E2_PORP_TOT	51-54	The crew's estimate #2 of the entire school size before the set, 4 digits.
E2_SPT	55-57	The crew's estimate #2 of percentage of spotters in the school before the set, 3 digits.
E2_SPN	58-60	The crew's estimate #2 of percentage of spinners in the school before the set, 3 digits.
E2_OTHER_SP1	61-63	The crew's estimate #2 of percentage of other species (1) in the school before the set, 3 digits.
E2_OTHER_SP2	64-66	The crew's estimate #2 of percentage of other species (2) in the school before the set, 3 digits.
SPC_OTHER_SP2	67-68	The two-digit code number assigned to identify the species indicated as Other Sp. 2.
(FILLER)	69-82	Non-data remnant of data processing.
E3_PORP_TOT	83-86	The crew's estimate #3 of the entire school size before the set, 4 digits.
E3_SPT	87-89	The crew's estimate #3 of percentage of spotters in the school before the set, 3 digits.

Appendix 2G. (Continued)

Field Name	Columns	Description
E3_SPN	90-92	The crew's estimate #3 of percentage of spinners in the school before the set, 3 digits.
E3_OTHER_SP1	93-95	The crew's estimate #3 of percentage of other species (1) in the school before the set, 3 digits.
E3_OTHER_SP2	96-98	The crew's estimate #3 of percentage of other species (2) in the school before the set, 3 digits.
OBS_BST_EST_BEF	99-102	The observer's best estimate of the total number of marine mammals in the entire school before the set, 4 digits. (Note: The best estimate does not have to be the mean of the high and low estimates.)
OBS_HI_EST_BEF	103-106	The observer's estimate of the maximum possible number of marine mammals in the entire school before the set, 4 digits.
OBS_LO_EST_BEF	107-110	The observer's estimate of the minimum possible number of marine mammals in the entire school before the set, 4 digits.
OBS_SPT_BEF	111-113	The observer's estimate of percentage of spotters in the school before the set, 3 digits.
OBS_EASTERN_BEF	114-116	The observer's estimate of percentage of eastern spinners in the school before the set, 3 digits.
OBS_WB_BEF	117-119	The observer's estimate of percentage of whitebelly spinners in the school before the set, 3 digits.
OBS_SPN2_BEF	120-122	The observer's estimate of percentage of other or unidentified spinners in the school before the set, 3 digits.
OBS_OTHR1_BEF	123-125	The observer's estimate of percentage of other species (1) in the school before the set, 3 digits.
OBS_OTHR2_BEF	126-128	The observer's estimate of percentage of other species (2) in the school before the set, 3 digits.
OBS_SPT_CD_BEF	129-130	The two-digit code number assigned to identify the spotted stock.
OBS_SPN2_CD_BEF	131-132	The two-digit code number assigned to identify other spinner or unidentified spinner stocks.
OBS_OTHR1_CD_BEF	133-134	The two-digit code number assigned to identify the species indicated as Other SP. 1.
OBS_OTHR2_CD_BEF	135-136	The two-digit code number assigned to identify the species indicated as Other SP. 2.
TIME_NET_LET_GO	137-140	The local time at which the net skiff hits the water, 4 digits.
EVADED_SET	141-141	The coded answer to the question, "Did any marine mammals evade being encircled by behavioral dexterity or slyness? Yes = 1, No = 2.
TOT_EVADED_SET	142-145	The observer's estimate of the number of marine mammals that evade being encircled by behavioral dexterity or slyness, 4 digits.
SPC_EVADED_SET	146-147	The two-digit code number assigned to identify the major species/stock that evaded encirclement.
(FILLER)	148-156	Non-data remnant of data processing.
OBS_BST_EST_ENC	157-160	The observer's best estimate of the total number of marine mammals encircled, 4 digits.



Appendix 2G. (Continued)

Field Name	Columns	Description
OBS_HI_EST_ENC	161-164	The observer's estimate of the maximum possible number of marine mammals encircled, 4 digits.
OBS_LO_EST_ENC	165-168	The observer's estimate of the minimum possible number of marine mammals encircled, 4 digits.
OBS_SPT_ENC	169-171	The observer's estimate of percentage of spotters encircled, 3 digits.
OBS_EASTERN_ENC	172-174	The observer's estimate of percentage of eastern spinners encircled, 3 digits.
OBS_WB_ENC	175-177	The observer's estimate of percentage of whitebelly spinners encircled, 3 digits.
OBS_SPN2_ENC	178-180	The observer's estimate of percentage of other or unidentified spinners encircled, 3 digits.
OBS_OTHR1_ENC	181-183	The observer's estimate of percentage of other species (1) encircled, 3 digits.
OBS_OTHR2_ENC	184-186	The observer's estimate of percentage of other species (2) encircled, 3 digits.
OBS_SPT_CD_ENC	187-188	The two-digit code number assigned to identify the spotted stock.
OBS_SPN2_CD_ENC	189-190	The two-digit code number assigned to identify other spinners or unidentified spinner stocks.
OBS_OTHR1_CD_ENC	191-192	The two-digit code number assigned to identify the species indicated as Other Sp. 1.
OBS_OTHR2_CD_ENC	193-194	The two-digit code number assigned to identify the species indicated as Other Sp. 2.
WIND_TOWLINE_IN	195-196	The wind speed in knots at the time the towline was brought aboard, 2 digits.
WIND_BEARING	197-199	The direction in degrees from which the wind was blowing at the time the towline was brought aboard, using the vessel as the reference; i.e., bow is 000°, right (starboard) beam is 090°, directly astern is 180°, left (port) beam is 270°, and so on, 3 digits.
SWELL_TOWLINE_IN	200-201	The height of the primary swell in feet at the time the towline was brought aboard, 2 digits. (Swell is waves raised by distant wind systems, or by winds that have ceased to blow.)
TIME_RINGS_UP	202-205	The local time at which the purse rings were brought above the surface of the water, 4 digits.
ESCAP_BEF_RNG_UP	206-206	The coded answer to the question, "Did any of the encircled marine mammals evade being captured by escaping the net, unaided, prior to rings up?" Yes = 1, No = 2.
NUM_ESCAP_BEF	207-210	The observer's estimate of the number of marine mammals encircled that evaded capture by escaping the net, unaided, prior to rings up, 4 digits.
SPC_ESCAP_BEF	211-212	The two-digit code assigned to identify the major species/stock that escaped the net before the rings came up.
E1_TOT_CATCH	213-216	The crew's estimate #1 of the total number of live marine mammals in the net when the rings came up, 4 digits.
E1_SPT_CATCH	217-219	The crew's estimate #1 of the percentage of spotters in the net when the rings came up, 3 digits.

Appendix 2G. (Continued)

Field Name	Columns	Description
E1_SPN_CATCH	220-222	The crew's estimate #1 of the percentage of spinners in the net when the rings came up, 3 digits.
E1_OTHER1_CATCH	223-225	The crew's estimate #1 of the percentage of other species (1) in the net when the rings came up, 3 digits.
E1_OTHER2_CATCH	226-228	The crew's estimate #1 of the percentage of other species (2) in the net when the rings came up, 3 digits.
(FILLER)	229-230	Non-data remnant of data processing.
OTHER1CODE_CATCH	231-232	The two-digit code number assigned to identify the species indicated as Other SP. 1.
E2_TOT_CATCH	233-236	The crew's estimate #2 of the total number of live marine mammals in the net when the rings came up, 4 digits.
E2_SPT_CATCH	237-239	The crew's estimate #2 of the percentage of spotters in the net when the rings came up, 3 digits.
E2_SPN_CATCH	240-242	The crew's estimate #2 of the percentage of spinners in the net when the rings came up, 3 digits.
E2_OTHER1_CATCH	243-245	The crew's estimate #2 of the percentage of other species (1) in the net when the rings came up, 3 digits.
E2_OTHER2_CATCH	246-248	The crew's estimate #2 of the percentage of other species (2) in the net when the rings came up.
OTHER2CODE_CATCH	249-250	The two-digit code number assigned to identify the species indicated as Other SP. 2.
E3_TOT_CATCH	251-254	The crew's estimate #3 of the total number of live marine mammals in the net when the rings came up, 4 digits.
E3_SPT_CATCH	255-257	The crew's estimate # 3 of the percentage of spotters in the net when the rings came up, 3 digits.
E3_SPN_CATCH	258-260	The crew's estimate #3 of the percentage of spinners in the net when the rings came up, 3 digits.
E3_OTHER1_CATCH	261-263	The crew's estimate #3 of the percentage of other species (1) in the net when the rings came up, 3 digits.
E3_OTHER2_CATCH	264-266	The crew's estimate #3 of the percentage of other species (2) in the net when the rings came up, 3 digits.
OBS_BST_EST_CAP	267-270	The observer's best estimate of the total number of marine mammals in the net when the rings came up, 4 digits. (Note: The best estimate does not have to be the mean of the high and low estimates.)
OBS_HI_EST_CAP	271-274	The observer's estimate of the maximum possible number of marine mammals in the net when the rings came up, 4 digits.
OBS_LO_EST_CAP	275-278	The observer's estimate of the minimum possible number of marine mammals in the net when the rings came up, 4 digits.
OBS_SPT_CAP	279-281	The observer's estimate of the percentage of spotters in the net when rings came up, 3 digits.
OBS_EASTERN_CAP	282-284	The observer's estimate of the percentage of eastern spinners in the net when the rings came up, 3 digits.
OBS_WB_CAP	285-287	The observer's estimate of the percentage of whitebelly spinners in the net when the rings came up, 3 digits.
OBS_SPN2_CAP	288-290	The observer's estimate of the percentage of other or unidentified spinners in the net when the rings came up, 3 digits.

Appendix 2G. (Continued)

Field Name	Columns	Description
OBS_OTHR1_CAP	291-293	The observer's estimate of the percentage of other species (1) in the net when the rings came up, 3 digits.
OBS_OTHR2_CAP	294-296	The observer's estimate of the percentage of other species (2) in the net when the rings came up, 3 digits.
OBS_SPT_CD_CAP	297-298	The two-digit code number assigned to identify the spotted stock.
OBS_SPN2_CD_CAP	299-300	The two-digit code number assigned to identify other spinners or unidentified spinner stocks.
OBS_OTHR1_CD_CAP	301-302	The two-digit code number assigned to identify the species indicated as Other SP. 1.
(FILLER)	303-304	Non-data remnant of data processing.
OBS_OTHR2_CD_CAP	305-306	The two-digit code number assigned to identify the species indicated as Other SP. 2.
NUM_BD_SPEEDBOAT	307-307	The total number of manned speedboats in the water continuously until backdown commenced or, if no backdown, until the time the normal tie-down point for backdown is reached, 1 digit. Note: Continuously means from the time the net was let go until the time the vessel begins preparation for the backdown maneuver; i.e., around the time of tiedown.
BOAT_TOW_BEF_BD	308-308	The coded answer to the question, "Did speedboats attach to the net (corkline or bunches) and tow on the net prior to backdown?" Yes = 1, No = 2; Not Applicable = 3, if no backdown).
COLLAPSE_BEF_BD	309-309	The coded answer to the question, "For whatever reason, was the open surface area of the net so seriously reduced that marine mammals in the net were forced into contact with the webbing before backdown was initiated?" Yes = 1, No = 2, Not Applicable = 3, if no backdown.
COLLAPSE_KIL_BEF	310-310	The coded answer to the question, "Were marine mammals killed as a result of a net collapse prior to backdown?" Yes = 1, No = 2, Not Applicable = 3, if no backdown.
BOAT_INFLU_PORP	311-311	The coded answer to the question, "During the period between rings up and start backdown, were speedboats used to attempt to influence either the behavior or location of marine mammals in the net?" Yes = 1, No = 2, Not Applicable = 3, if no backdown.
BOAT_ADJ_BD_AREA	312-312	The coded answer to the question, "Was a speedboat used to open or adjust the corkline that formed the backdown area prior to backdown?" Yes = 1, No = 2, Not Applicable = 3.
RESCU_EFF_BEF_BD	313-313	The coded answer to the question, "Was anyone actively engaged in rescue effort to aid in the release of marine mammals prior to backdown?" Yes = 1, No = 2.
NUM_RESCUERS_BEF	314-315	The total number of men actively engaged in rescue effort prior to backdown, 2 digits.
RELS_RAFT_BEF_BD	316-316	The coded answer to the question, "Was a raft used to aid marine mammal rescue effort prior to backdown?" Yes = 1, No = 2.

Appendix 2G. (Continued)

Field Name	Columns	Description
RELS_BOAT_BEF_BD	317-317	The coded answer to the question, "Were speedboat(s) at the corkline used to aid marine mammal rescue effort prior to backdown?" Yes = 1, No = 2.
RELS_SWMR_BEF_BD	318-318	The coded answer to the question, "Were men in the water involved in rescue effort to aid in release of marine mammals prior to backdown?" Yes = 1, No = 2.
RELS_OTHR_BEF_BD	319-319	The coded answer to the question, "Were other methods used to aid marine mammal rescue effort prior to backdown?" Yes = 1, No = 2.
LIVE_REL_BEF_BD	320-322	The observer's best estimate of the total number of live or live injured marine mammals released prior to backdown, 3 digits.
ESCAP_AFT_RNG_UP	323-323	The coded answer to the question, "Did any captured marine mammals escape unaided from the net after rings up but before backdown started?" Yes = 1, No = 2.
NUM_ESCAP_AFT	324-326	The observer's best estimate of the number of live or live injured captured marine mammals that escaped unaided after rings up but before backdown started, 3 digits.
BACKDOWN	327-327	The coded answer to the question, "Did the vessel employ the backdown technique to rescue marine mammals during this set?" Yes = 1, No=2.
TIME_START_BD	328-331	The local time at which the backdown procedure is initiated; i.e., the first time at which the engines are shifted into reverse after the net is tied down, 4 digits; blank if no backdown.
NUM_BUNCHES	332-332	The number of bow corkline bunches pulled at the time backdown started, 1 digit; blank if no backdown.
SUNDOWN	333-333	The coded answer to the question, "Did any or all of the backdown maneuver occur in darkness?" Yes = 1, No = 2; blank if no backdown.
LIGHTS_DUR_BD	334-334	The coded answer to the question. "Were floodlights and/or spotlights used to enhance the release of marine mammals during backdown?" Yes = 1, No = 2.
PNL_COVR_BD_AREA	335-335	Coded answer to the question, "Did the porpoise safety panel and/or apron (1-1/4" mesh) start at the outboard end of the last bunch pulled and extend around the backdown channel to two-thirds the distance from the backdown apex to the stern tie down point?" Yes = 1, No = 2; blank if no backdown.
NET_TIED_DOWN	336-336	The coded answer to the question, "Was the net tied down for backdown at the marked floats in the stern and at the marked bunchlines at the bow?" Yes = 1, No = 2, Not Applicable = 3, if vessel does not have an apron system; blank if no backdown.
TIME_END_BD	337-340	The local time at which the backdown procedure was finished, i.e., the time at which the engines are shifted out of reverse for the last time and the corks at the apex of the channel are up, 4 digits; blank if no backdown.

Appendix 2G. (Continued)

Field Name	Columns	Description
BST_EST_RELS_DUR	341-344	The observer's best estimate of the total number of marine mammals released due to the backdown process, 4 digits; blank if no backdown or if backdown occurs in darkness. (Do not include animals hand released by rescuers during backdown.)
HI_EST_RELS_DUR	345-348	The observer's best estimate of the maximum possible number of marine mammals released due to the backdown process, 4 digits; blank if no backdown or if backdown occurs in darkness. (Do not include animals hand released by rescuers during backdown.)
LO_EST_RELS_DUR	349-352	The observer's best estimate of the minimum possible number of marine mammals released due to the backdown process, 4 digits; blank if no backdown or if backdown occurs in darkness. (Do not include animals hand released by rescuers during backdown.)
FISH_LOSS_DUR_BD	353-353	The coded answer to the question, "Did tuna escape the net during the backdown process?" Yes = 1, No = 2; blank if no backdown.
NUM_LOSS_DUR_BD	354-356	The observer's best estimate of the number of short tons of tuna lost during backdown, 3 digits; blank if none lost or if backdown did not occur. (Input from cork tenders and Captain should be solicited.)
CANOPIES_PRESENT	357-357	The coded answer to the question, "During the backdown process, did you observe canopies of webbing with marine mammals in them?" Yes = 1, No = 2; blank if no backdown.
CANOPY_BD_KILL	358-358	The coded answer to the question, "Were marine mammals killed as a result of canopies that occurred during backdown?" Yes = 1, No = 2, Not Applicable = 3, if no canopies; blank if no backdown.
RESCU_EFF_DUR_BD	359-359	The coded answer to the question, "Were men in position prepared to aid in the rescue of cetaceans during backdown?" Yes = 1, No = 2; blank if no backdown.
NUM_RESCUERS_DUR	360-361	The total number of men prepared to engage in rescue effort during backdown, 2 digits; blank if no backdown. Count each man only once if involved in different types of rescue.
RELS_BOAT_DUR_BD	362-362	The coded answer to the question, "Were speedboat(s) at the corkline prepared to aid cetacean rescue effort during backdown?" Yes = 1, No = 2; blank if no backdown.
RELS_RAFT_DUR_BD	363-363	The coded answer to the question, "Was a raft in the water prepared to aid cetacean rescue effort during backdown?" Yes = 1, No = 2; blank if no backdown.
FACEMASK_EFF_DUR	364-364	The coded answer to the question, "Did one of the rescuers in position during backdown use a facemask to look into the net?" Yes = 1. No = 2; blank if no backdown.

Appendix 2G. (Continued)

Field Name	Columns	Description
RELS_SWMR_DUR_BD	365-365	The coded answer to the question, "Were men in the water prepared to engage in rescue effort to aid in the release of cetaceans during backdown?" Yes = 1, No = 2; blank if no backdown.
RELS_OTHR_DUR_BD	366-366	The coded answer to the question, "Were other methods used to aid cetacean rescue effort during backdown?" Yes = 1, No = 2; blank if no backdown.
LIVE_REL_DUR_BD	367-369	The observer's best estimate of the total number of live cetaceans released during backdown, three digits; blank if no backdown.
TOT_LIVE_AFT_BD	370-372	The observer's best estimate of the total number of live cetaceans left in the net after backdown, three digits; blank if no backdown.
(FILLER)	373-378	Non-data remnant of data processing.
RELS_RAFT_AFT_BD	379-379	The coded answer to the question, "Was a raft used to aid marine mammal rescue effort after backdown, or if no backdown, at anytime during the set?" Yes = 1, No = 2.
NUM_MEN_RAFT_AFT	380-380	The number of men actively engaged in rescue effort to aid in release of marine mammals from raft(s) after backdown, or if no backdown, at anytime during the set, 1 digit.
NUM_REL_RAFT_AFT	381-383	The number of live or live injured marine mammals released by men in raft(s) after back-down, or if no backdown, at anytime during the set, 3 digits.
RELS_BOAT_AFT_BD	384-384	The coded answer to the question, "Were speedboats at the corkline used to aid marine mammal rescue effort after backdown, or if no backdown, at anytime during the set?" Yes = 1, No = 2.
NUM_MEN_BOAT_AFT	385-385	The number of men actively engaged in rescue effort to aid in release of marine mammals from speedboat(s) after backdown, or if no backdown, at anytime during the set, 1 digit
NUM_REL_BOAT_AFT	386-388	The number of live or live injured marine mammals released by men in speedboat(s) after backdown, or if no backdown, at anytime during the set, 3 digits.
RELS_SWMR_AFT_BD	389-389	The coded answer to the question, "Were men in the water involved in rescue effort to aid in release of marine mammals after backdown, or if no backdown, at anytime during the set?" Yes = 1, No = 2.
NUM_SWMR_AFT_BD	390-390	The number of men in the water actively engaged in rescue effort to aid in release of marine mammals after backdown, or anytime during the set, 1 digit.
NUM_REL_SWMR_AFT	391-393	The number of live or live injured marine mammals released by men in the backdown or, if no backdown, at anytime the set, 3 digits.
RELS_OTHR_AFT_BD	394-394	The coded answer to the question, "Were other methods used to aid marine mammal rescue effort after backdown, or if no backdown, at anytime during the set?" Yes = 1, No = 2.

Appendix 2G. (Continued)

Field Name	Columns	Description
NUM_MEN_OTHR_AFT	395-395	The number of men actively engaged in other methods of rescue effort to aid in release of marine mammals after backdown, or if no backdown, at anytime during the set, 1 digit.
NUM_REL_OTHR_AFT	396-398	The number of live or live injured marine mammals released by other methods after backdown, or if no backdown, at anytime during the set, 3 digits.
NUM_RESCUERS_AFT	399-400	The total number of men actively engaged in rescue effort after backdown, or if no backdown, at anytime during the set, 2 digits; enter zeroes if no rescue effort. (Count each man only once if involved in more than one type of rescue.) Note: Don't count men releasing marine mammals from deck or from sack.
RELS_DECK_AFT_BD	401-401	The coded answer to the question, "Were live marine mammals brought on board and released over the deck alive after backdown, or if no backdown, at anytime during the set?" Yes = 1, No = 2.
NUM_REL_DECK_AFT	402-404	The number of live or live injured marine mammals released over the deck after backdown or, if no backdown, at anytime during the set, 3 digits.
ESCAP_AFT_BD	405-405	The coded answer to the question, "Did captured marine mammals escape unaided after backdown, or if no backdown, at anytime during the set?" Yes = 1, No = 2.
NUM_ESCAP_AFT_BD	406-408	The number of live or live injured marine mammals that escaped unaided after backdown, or if no backdown, at anytime during the set after capture, 3 digits.
SACKUP	409-409	The coded answer to the question, "Were the contents of the net sacked up?" Yes = 1, No = 2. (NOTE: The "sacking up" procedure is a method of evenly pulling in the excess webbing at the end of the net so that the contents are evenly supported when finally concentrated for brailing.)
TIME_START_SACK	410-413	The local time at which the first pull of the net to begin sacking up is taken, 4 digits; blank if no sack up.
NUM_LIV_SRT_SACK	414-416	The total number of live marine mammals in the net at the time sack up was initiated, 3 digits; blank if no sack up.
RELS_SACK_AFT_BD	417-417	The coded answer to the question, "Was there an effort to release live marine mammals from the net after sack up was initiated?" Yes = 1, No = 2; blank if no sack up.
NUM_MEN_SACK_AFT	418-418	The number of men actively engaged in rescue effort to aid in release of marine mammals from the sack, 1 digit; blank if no sack up or rescue effort.
NUM_REL_SACK_AFT	419-421	The number of live or live injured marine mammals released from the sack due to rescue effort, 3 digits; blank if no sack up or rescue effort.
BRAILING	422-422	The coded answer to the question, "Were contents of the net brailed aboard?" Yes = 1, No = 2.
TIME_START_BRAIL	423-426	The local time at which the first brailer of fish is scooped out of the net, 4 digits; blank if no brailing.

Appendix 2G. (Continued)

Field Name	Columns	Description
NUM_LIV_BEF_BRAL	427-429	The total number of live or live injured marine mammals in the net at time brailing commenced, 3 digits.
TIME_END_BRAIL	430-433	The local time at which the last brailer of fish is dumped on the boat, 4 digits; blank if no brailing.
TIME_END_SET	434-437	The local time at which the skiff is secured on the deck. If the skiff is not brought aboard by choice (due to factors that did not occur during the set), enter the approximate time that normal operations would have ended, 4 digits.
CURRENT_STRONG	438-438	The coded answer to the question, "Was a strong current present at any time during the set?" Yes = I, No = 2. (NOTE: Strong currents are two knots or greater.)
KNOWN_KILLED	439-442	The total number of marine mammals that were positively determined to be dead (ADD ) in this set, i.e., the sum of the checks on the tally sheet, 4 digits.
KNOWN_INJURED	443-444	The total number of marine mammals that were injured in this set, 2 digits. Sum all + and ? on tally sheet, plus all injured prior to and during backdown.
TONS_YF	445-447	The best estimate of the total tons of yellowfin tuna loaded aboard during this set, 3 digits; enter zeroes if none loaded.
TONS_SK	448-450	The best estimate of the total tons of skipjack tuna loaded aboard during this set, 3 digits; enter zeroes if none loaded.
(FILLER)	451-452	Non-data remnant of data processing.
TONS_OTHER_FISH	453-455	The best estimate of the number of tons of fish species other than yellowfin or skipjack that were loaded aboard during this set, enter zeroes if none loaded.
OTHER_FISH_CODE	456-457	The two-digit code number assigned to the species of fish designated under Tons Other Sp. in this set (Code Table 10).
TANGL_SPT_KILL	458-460	The observer's best estimate of the percentage of total spotters killed that died due to known entanglement, 3 digits. (Note: Entanglement means stuck to the net by a part of the body, i.e., flukes, snout or flipper.)
TANGL_SPN_KILL	461-463	The observer's best estimate of the percentage of total spinners killed that died due to known entanglement, 3 digits.
TANGL_OTH_KILL	464-466	The observer's best estimate of the percentage of the total "Other Species" killed due to known entanglement, 3 digits.
TRAP_SPT_KILL	467-469	The observer's best estimate of the percentage of the total spotters killed that died due to known entrapment in folds or canopies of webbing, 3 digits. (Note: Entrapment means forced contact with the net webbing due to a configuration of the net which traps or poses unusual hazard to marine mammals.
TRAP_SPN_KILL	470-472	The observer's best estimate of the percentage of the total spinners killed that died due to known entrapment in folds or canopies of webbing. 3 digits.



Appendix 2G. (Continued)

Field Name	Columns	Description
TRAP_OTH_KILL	473-475	The observer's best estimate of the percentage of the total "Other Species" killed due to known entrapment in folds or canopies of webbing, 3 digits.
SACKUP_SPT_KILL	476-478	The observer's best estimate of the percentage of the total spotters killed that died during the sacking-up process, 3 digits.
SACKUP_SPN_KILL	479-481	The observer's best estimate of the percentage of the total spinners killed that died during the sacking-up process, 3 digits.
SACKUP_OTH_KILL	482-484	The observer's best estimate of the percentage of "Other Species" killed that died during the sacking-up process, 3 digits.
OTHER_SPT_KILL	485-487	The observer's best estimate of the percentage of total spotters killed that died due to reasons other than described above, 3 digits.
OTHER_SPN_KILL	488-490	The observer's best estimate of the percentage of total spinners killed that died due to reasons other than described above, 3 digits.
OTHER_OTH_KILL	491-493	The observer's best estimate of the percentage of total "Other Species" killed that died due to reasons other than described above, 3 digits.
UNK_SPT_KILL	494-496	The observer's best estimate of the percentage of total spotters killed that died because of unknown causes, 3 digits.
UNK_SPN_KILL	497-499	The observer's best estimate of the percentage of total spinners killed that died because of unknown causes, 3 digits.
UNK_OTH_KILL	500-502	The observer's best estimate of the percentage of total "Other Species" killed that died because of unknown causes, 3 digits.
OTHER_SPC_KILL	503-504	The two-digit code number assigned to the "Other Species" referred to in percentage Other Species column.
EQUIP_MALF	505-505	The coded answer to the question, "Did any equipment malfunction(s) occur during the progress of this set, from start of chase until the time the boat was underway again?" Yes = 1, No = 2.
MALF_DELAY_SET	506-506	The coded answer to the question, "Did one or more of the equipment malfunctions that occurred in this set result in an actual delay of the set procedure?" Yes = 1, No = 2, Not Applicable = 3, if no malfunction. (NOTE: Some malfunctions may not cause effective delay of the set procedure, but may be jury-rigged or worked around, and repaired after the set.)
MALF_DELAY_MIN	507-509	The estimated number of minutes that the completion of the set was delayed due to equipment malfunction, 3 digits.
PORP_IN_NET	510-510	The coded answer to the question, "Were marine mammals in the net during the malfunction(s) that occurred during this set?" Yes = 1, No = 2, Not Applicable = 3, if no malfunction.

Appendix 2G. (Continued)

Field Name	Columns	Description
SET_ABORTED	511-511	The coded answer to the question, "Were the entire contents of the net lost involuntarily or released by the crew, due to circumstances beyond their control?" This applies to a set in which normal completion of the set is impossible because of a malfunction. Yes = 1, No = 2.
TIME_SET_ABORT	512-515	The local time at which the set was aborted, 4 digits.
NET_DUMPED	516-516	The coded answer to the question, "Were the contents of the net deliberately released after the rings came up?" Yes = 1, No = 2.
TIME_NET_DUMPED	517-520	The local time at which the contents of the net were deliberately released, 4 digits.
(FILLER)	521-524	Non-data remnant of data processing.
BIRDS	525-525	The coded answer to the question, "Were birds associated with this set?" Yes = 1, No = 2.
TIME_SIGHT_BIRDS	526-529	The time (local, 24-hour clock) at which the birds were first sighted on the day of the set, 4 digits. (Blank, if sighted on previous day.)
BIRDS_DISTANCE	530-532	The estimated distance of the birds at the initial time of sighting, in nautical miles and tenths, 3 digits. (Blank, if sighted on previous day.)
NUM_BIRDS	533-536	Best estimate of total number of birds of all species sighted, 4 digits.
FISHLOSS	537-537	The coded answer to the question, "Did tuna escape the net over the corks at anytime after rings up?" Yes = 1, No = 2.
MODIFY_GEAR	538-538	The coded answer to the question, "Were any gear modifications specifically designed for non-porpoise fishing used this set?" Yes = 1, No = 2.

Appendix 2H. Record format and definitions for Set Log data collected by the NMFS Tuna-Porpoise Observer Program from 1981-1982.

Field Name	Columns	Description
CRUISE	1-3	The unique four-digit number assigned to this cruise.
SET	4-6	The three digit consecutive number for the present set.
(FILLER)	7-8	Non-data remnant of data processing.
DATE	9-14	The year, month and day (yymmdd) on which this event happened, 6 digits.
LATITUDE	15-18	The latitude in degrees (2 digits) and minutes (2 digits) north or south of the equator at which the set is made.
N_OR_S	19-19	The hemisphere of the latitude, coded one-digit: North = 1, South = 2.
LONGITUDE	20-24	The longitude in degrees (3 digits) and minutes (2 digits) east or west of Greenwich, England, at which the set is made.
E_OR_W	25-25	The hemisphere of the longitude, coded one-digit: East = 1, West = 2.
SET_TYPE	26-27	The two-digit code number identifying the set type as determined by the observer (Code Table 8).
TIME_CHASE_BEGAN	28-31	The time when the first speedboat(s) was lowered onto the water, 4 digits (blank if speedboats were not used).
NUM_BOATS_USED	32-32	The maximum number of speedboats in use at any one time while herding the marine mammals 1 digit.
E1_PORP_TOT	33-36	The crew's estimate #1 of the entire school size before the set, 4 digits.
E1_SPT	37-39	The crew's estimate #1 of percentage of spotters in the school before set, 3 digits.
E1_SPN	40-42	The crew's estimate #1 of percentage of spinners in the school before set, 3 digits.
E1_OTHER_SP1	43-45	The crew's estimate #1 of percentage of other species (1) in the school before the set, 3 digits.
E1_OTHER_SP2	46-48	The crew's estimate #1 of percentage of other species (2) in the school before the set, 3 digits.
SPC_OTHER_SP1	49-50	The two-digit code number assigned to identify the species indicated as Other SP. 1.
E2_PORP_TOT	51-54	The crew's estimate #2 of the entire school size before the set, 4 digits.
E2_SPT	55-57	The crew's estimate #2 of percentage of spotters in the school before the set, 3 digits.
E2_SPN	58-60	The crew's estimate #2 of percentage of spinners in the school before the set, 3 digits.
E2_OTHER_SP1	61-63	The crew's estimate #2 of percentage of other species (1) in the school before the set, 3 digits.
E2_OTHER_SP2	64-66	The crew's estimate #2 of percentage of other species (2) in the school before the set, 3 digits.
SPC_OTHER_SP2	67-68	The two-digit code number assigned to identify the species indicated as Other Sp. 2.
(FILLER)	69-82	Non-data remnant of data processing.
E3_PORP_TOT	83-86	The crew's estimate #3 of the entire school size before the set, 4 digits.
E3_SPT	87-89	The crew's estimate #3 of percentage of spotters in the school before the set, 3 digits.

Appendix 2H. (Continued)

Field Name	Columns	Description
E3_SPN	90-92	The crew's estimate #3 of percentage of spinners in the school before the set, 3 digits.
E3_OTHER_SP1	93-95	The crew's estimate #3 of percentage of other species (1) in the school before the set, 3 digits.
E3_OTHER_SP2	96-98	The crew's estimate #3 of percentage of other species (2) in the school before the set, 3 digits.
OBS_BST_EST_BEF	99-102	The observer's best estimate of the total number of marine mammals in the entire school before the set, 4 digits. (Note: The best estimate does not have to be the mean of the high and low estimates.)
OBS_HI_EST_BEF	103-106	The observer's estimate of the maximum possible number of marine mammals in the entire school before the set, 4 digits.
OBS_LO_EST_BEF	107-110	The observer's estimate of the minimum possible number of marine mammals in the entire school before the set, 4 digits.
OBS_SPT_BEF	111-113	The observer's estimate of percentage of spotters in the school before the set, 3 digits.
OBS_EASTERN_BEF	114-116	The observer's estimate of percentage of eastern spinners in the school before the set, 3 digits.
OBS_WB_BEF	117-119	The observer's estimate of percentage of whitebelly spinners in the school before the set, 3 digits.
OBS_SPN2_BEF	120-122	The observer's estimate of percentage of other or unidentified spinners in the school before the set, 3 digits.
OBS_OTHR1_BEF	123-125	The observer's estimate of percentage of other species (1) in the school before the set, 3 digits.
OBS_OTHR2_BEF	126-128	The observer's estimate of percentage of other species (2) in the school before the set, 3 digits.
OBS_SPT_CD_BEF	129-130	The two-digit code number assigned to identify the spotted stock.
OBS_SPN2_CD_BEF	131-132	The two-digit code number assigned to identify other spinner or unidentified spinner stocks.
OBS_OTHR1_CD_BEF	133-134	The two-digit code number assigned to identify the species indicated as Other SP. 1.
OBS_OTHR2_CD_BEF	135-136	The two-digit code number assigned to identify the species indicated as Other SP. 2.
TIME_NET_LET_GO	137-140	The local time at which the net skiff hits the water, 4 digits.
EVADED_SET	141-141	The coded answer to the question, "Did any marine mammals evade being encircled by behavioral dexterity or slyness? Yes = 1, No = 2.
TOT_EVADED_SET	142-145	The observer's estimate of the number of marine mammals that evade being encircled by behavioral dexterity or slyness, 4 digits.
SPC_EVADED_SET	146-147	The two-digit code number assigned to identify the major species/stock that evaded encirclement.
(FILLER)	148-156	Non-data remnant of data processing.
OBS_BST_EST_ENC	157-160	The observer's best estimate of the total number of marine mammals encircled, 4 digits.

Appendix 2H. (Continued)

Field Name	Columns	Description
OBS_HI_EST_ENC	161-164	The observer's estimate of the maximum possible number of marine mammals encircled, 4 digits.
OBS_LO_EST_ENC	165-168	The observer's estimate of the minimum possible number of marine mammals encircled, 4 digits.
OBS_SPT_ENC	169-171	The observer's estimate of percentage of spotters encircled, 3 digits.
OBS_EASTERN_ENC	172-174	The observer's estimate of percentage of eastern spinners encircled, 3 digits.
OBS_WB_ENC	175-177	The observer's estimate of percentage of whitebelly spinners encircled, 3 digits.
OBS_SPN2_ENC	178-180	The observer's estimate of percentage of other or unidentified spinners encircled, 3 digits.
OBS_OTHR1_ENC	181-183	The observer's estimate of percentage of other species (1) encircled, 3 digits.
OBS_OTHR2_ENC	184-186	The observer's estimate of percentage of other species (2) encircled, 3 digits.
OBS_SPT_CD_ENC	187-188	The two-digit code number assigned to identify the spotted stock.
OBS_SPN2_CD_ENC	189-190	The two-digit code number assigned to identify other spinners or unidentified spinner stocks.
OBS_OTHR1_CD_ENC	191-192	The two-digit code number assigned to identify the species indicated as Other Sp. 1.
OBS_OTHR2_CD_ENC	193-194	The two-digit code number assigned to identify the species indicated as Other Sp. 2.
WIND_TOWLINE_IN	195-196	The wind speed in knots at the time the towline was brought aboard, 2 digits.
WIND_BEARING	197-199	The direction in degrees from which the wind was blowing at the time the towline was brought aboard, using the vessel as the reference; i.e., bow is 000°, right (starboard) beam is 090°, directly astern is 180°, left (port) beam is 270°, and so on, 3 digits.
SWELL_TOWLINE_IN	200-201	The height of the primary swell in feet at the time the towline was brought aboard, 2 digits. (Swell is waves raised by distant wind systems, or by winds that have ceased to blow.)
TIME_RINGS_UP	202-205	The local time at which the purse rings were brought above the surface of the water, 4 digits.
ESCAP_BEF_RNG_UP	206-206	The coded answer to the question, "Did any of the encircled marine mammals evade being captured by escaping the net, unaided, prior to rings up?" Yes = 1, No = 2.
NUM_ESCAP_BEF	207-210	The observer's estimate of the number of marine mammals encircled that evaded capture by escaping the net, unaided, prior to rings up, 4 digits.
SPC_ESCAP_BEF	211-212	The two-digit code assigned to identify the major species/stock that escaped the net before the rings came up.
E1_TOT_CATCH	213-216	The crew's estimate #1 of the total number of live marine mammals in the net when the rings came up, 4 digits.
E1_SPT_CATCH	217-219	The crew's estimate #1 of the percentage of spotters in the net when the rings came up, 3 digits.

Appendix 2H. (Continued)

Field Name	Columns	Description
E1_SPN_CATCH	220-222	The crew's estimate #1 of the percentage of spinners in the net when the rings came up, 3 digits.
E1_OTHER1_CATCH	223-225	The crew's estimate #1 of the percentage of other species (1) in the net when the rings came up, 3 digits.
E1_OTHER2_CATCH	226-228	The crew's estimate #1 of the percentage of other species (2) in the net when the rings came up, 3 digits.
(FILLER)	229-230	Non-data remnant of data processing.
OTHER1CODE_CATCH	231-232	The two-digit code number assigned to identify the species indicated as Other SP. 1.
E2_TOT_CATCH	233-236	The crew's estimate #2 of the total number of live marine mammals in the net when the rings came up, 4 digits.
E2_SPT_CATCH	237-239	The crew's estimate #2 of the percentage of spotters in the net when the rings came up, 3 digits.
E2_SPN_CATCH	240-242	The crew's estimate #2 of the percentage of spinners in the net when the rings came up, 3 digits.
E2_OTHER1_CATCH	243-245	The crew's estimate #2 of the percentage of other species (1) in the net when the rings came up, 3 digits.
E2_OTHER2_CATCH	246-248	The crew's estimate #2 of the percentage of other species (2) in the net when the rings came up.
OTHER2CODE_CATCH	249-250	The two-digit code number assigned to identify the species indicated as Other SP. 2.
E3_TOT_CATCH	251-254	The crew's estimate #3 of the total number of live marine mammals in the net when the rings came up, 4 digits.
E3_SPT_CATCH	255-257	The crew's estimate # 3 of the percentage of spotters in the net when the rings came up, 3 digits.
E3_SPN_CATCH	258-260	The crew's estimate #3 of the percentage of spinners in the net when the rings came up, 3 digits.
E3_OTHER1_CATCH	261-263	The crew's estimate #3 of the percentage of other species (1) in the net when the rings came up, 3 digits.
E3_OTHER2_CATCH	264-266	The crew's estimate #3 of the percentage of other species (2) in the net when the rings came up, 3 digits.
OBS_BST_EST_CAP	267-270	The observer's best estimate of the total number of marine mammals in the net when the rings came up, 4 digits. (Note: The best estimate does not have to be the mean of the high and low estimates.)
OBS_HI_EST_CAP	271-274	The observer's estimate of the maximum possible number of marine mammals in the net when the rings came up, 4 digits.
OBS_LO_EST_CAP	275-278	The observer's estimate of the minimum possible number of marine mammals in the net when the rings came up, 4 digits.
OBS_SPT_CAP	279-281	The observer's estimate of the percentage of spotters in the net when rings came up, 3 digits.
OBS_EASTERN_CAP	282-284	The observer's estimate of the percentage of eastern spinners in the net when the rings came up, 3 digits.
OBS_WB_CAP	285-287	The observer's estimate of the percentage of whitebelly spinners in the net when the rings came up, 3 digits.
OBS_SPN2_CAP	288-290	The observer's estimate of the percentage of other or unidentified spinners in the net when the rings came up, 3 digits.

Appendix 2H. (Continued)

Field Name	Columns	Description
OBS_OTHR1_CAP	291-293	The observer's estimate of the percentage of other species (1) in the net when the rings came up, 3 digits.
OBS_OTHR2_CAP	294-296	The observer's estimate of the percentage of other species (2) in the net when the rings came up, 3 digits.
OBS_SPT_CD_CAP	297-298	The two-digit code number assigned to identify the spotted stock.
OBS_SPN2_CD_CAP	299-300	The two-digit code number assigned to identify other spinners or unidentified spinner stocks.
OBS_OTHR1_CD_CAP	301-302	The two-digit code number assigned to identify the species indicated as Other SP. 1.
(FILLER)	303-304	Non-data remnant of data processing.
OBS_OTHR2_CD_CAP	305-306	The two-digit code number assigned to identify the species indicated as Other SP. 2.
NUM_BD_SPEEDBOAT	307-307	The total number of manned speedboats in the water continuously until backdown commenced or, if no backdown, until the time the normal tie-down point for backdown is reached, 1 digit. Note: Continuously means from the time the net was let go until the time the vessel begins preparation for the backdown maneuver; i.e., around the time of tiedown.
BOAT_TOW_BEF_BD	308-308	The coded answer to the question, "Did speedboats attach to the net (corkline or bunches) and tow on the net prior to backdown?" Yes = 1, No = 2; Not Applicable = 3, if no backdown).
COLLAPSE_BEF_BD	309-309	The coded answer to the question, "For whatever reason, was the open surface area of the net so seriously reduced that marine mammals in the net were forced into contact with the webbing before backdown was initiated?" Yes = 1, No = 2, Not Applicable = 3, if no backdown.
COLLAPSE_KIL_BEF	310-310	The coded answer to the question, "Were marine mammals killed as a result of a net collapse prior to backdown?" Yes = 1, No = 2, Not Applicable = 3, if no backdown.
BOAT_INFLU_PORP	311-311	The coded answer to the question, "During the period between rings up and start backdown, were speedboats used to attempt to influence either the behavior or location of marine mammals in the net?" Yes = 1, No = 2, Not Applicable = 3, if no backdown.
BOAT_ADJ_BD_AREA	312-312	The coded answer to the question, "Was a speedboat used to open or adjust the corkline that formed the backdown area prior to backdown?" Yes = 1, No = 2, Not Applicable = 3.
RESCU_EFF_BEF_BD	313-313	The coded answer to the question, "Was anyone actively engaged in rescue effort to aid in the release of marine mammals prior to backdown?" Yes = 1, No = 2.
NUM_RESCUERS_BEF	314-315	The total number of men actively engaged in rescue effort prior to backdown, 2 digits.
RELS_RAFT_BEF_BD	316-316	The coded answer to the question, "Was a raft used to aid marine mammal rescue effort prior to backdown?" Yes = 1, No = 2.

Appendix 2H. (Continued)

Field Name	Columns	Description
RELS_BOAT_BEF_BD	317-317	The coded answer to the question, "Were speedboat(s) at the corkline used to aid marine mammal rescue effort prior to backdown?" Yes = 1, No = 2.
RELS_SWMR_BEF_BD	318-318	The coded answer to the question, "Were men in the water involved in rescue effort to aid in release of marine mammals prior to backdown?" Yes = 1, No = 2.
RELS_OTHR_BEF_BD	319-319	The coded answer to the question, "Were other methods used to aid marine mammal rescue effort prior to backdown?" Yes = 1, No = 2.
LIVE_REL_BEF_BD	320-322	The observer's best estimate of the total number of live or live injured marine mammals released prior to backdown, 3 digits.
ESCAP_AFT_RNG_UP	323-323	The coded answer to the question, "Did any captured marine mammals escape unaided from the net after rings up but before backdown started?" Yes = 1, No = 2.
NUM_ESCAP_AFT	324-326	The observer's best estimate of the number of live or live injured captured marine mammals that escaped unaided after rings up but before backdown started, 3 digits.
BACKDOWN	327-327	The coded answer to the question, "Did the vessel employ the backdown technique to rescue marine mammals during this set?" Yes = 1, No=2.
TIME_START_BD	328-331	The local time at which the backdown procedure is initiated; i.e., the first time at which the engines are shifted into reverse after the net is tied down, 4 digits; blank if no backdown.
NUM_BUNCHES	332-332	The number of bow corkline bunches pulled at the time backdown started, 1 digit; blank if no backdown.
SUNDOWN	333-333	The coded answer to the question, "Did any or all of the backdown maneuver occur in darkness?" Yes = 1, No = 2; blank if no backdown.
LIGHTS_DUR_BD	334-334	The coded answer to the question. "Were floodlights and/or spotlights used to enhance the release of marine mammals during backdown?" Yes = 1, No = 2.
PNL_COVR_BD_AREA	335-335	Coded answer to the question, "Did the porpoise safety panel and/or apron (1-1/4" mesh) start at the outboard end of the last bunch pulled and extend around the backdown channel to two-thirds the distance from the backdown apex to the stern tie down point?" Yes = 1, No = 2; blank if no backdown.
NET_TIED_DOWN	336-336	The coded answer to the question, "Was the net tied down for backdown at the marked floats in the stern and at the marked bunchlines at the bow?" Yes = 1, No = 2, Not Applicable = 3, if vessel does not have an apron system; blank if no backdown.
TIME_END_BD	337-340	The local time at which the backdown procedure was finished, i.e., the time at which the engines are shifted out of reverse for the last time and the corks at the apex of the channel are up, 4 digits; blank if no backdown.



Appendix 2H. (Continued)

Field Name	Columns	Description
BST_EST_RELS_DUR	341-344	The observer's best estimate of the total number of marine mammals released due to the backdown process, 4 digits; blank if no backdown or if backdown occurs in darkness. (Do not include animals hand released by rescuers during backdown.)
HI_EST_RELS_DUR	345-348	The observer's best estimate of the maximum possible number of marine mammals released due to the backdown process, 4 digits; blank if no backdown or if backdown occurs in darkness. (Do not include animals hand released by rescuers during backdown.)
LO_EST_RELS_DUR	349-352	The observer's best estimate of the minimum possible number of marine mammals released due to the backdown process, 4 digits; blank if no backdown or if backdown occurs in darkness. (Do not include animals hand released by rescuers during backdown.)
FISH_LOSS_DUR_BD	353-353	The coded answer to the question, "Did tuna escape the net during the backdown process?" Yes = 1, No = 2; blank if no backdown.
NUM_LOSS_DUR_BD	354-356	The observer's best estimate of the number of short tons of tuna lost during backdown, 3 digits; blank if none lost or if backdown did not occur. (Input from cork tenders and Captain should be solicited.)
CANOPIES_PRESENT	357-357	The coded answer to the question, "During the backdown process, did you observe canopies of webbing with marine mammals in them?" Yes = 1, No = 2; blank if no backdown.
CANOPY_BD_KILL	358-358	The coded answer to the question, "Were marine mammals killed as a result of canopies that occurred during backdown?" Yes = 1, No = 2, Not Applicable = 3, if no canopies; blank if no backdown.
RESCU_EFF_DUR_BD	359-359	The coded answer to the question, "Were men in position prepared to aid in the rescue of cetaceans during backdown?" Yes = 1, No = 2; blank if no backdown.
NUM_RESCUERS_DUR	360-361	The total number of men prepared to engage in rescue effort during backdown, 2 digits; blank if no backdown. Count each man only once if involved in different types of rescue.
RELS_BOAT_DUR_BD	362-362	The coded answer to the question, "Were speedboat(s) at the corkline prepared to aid cetacean rescue effort during backdown?" Yes = 1, No = 2; blank if no backdown.
RELS_RAFT_DUR_BD	363-363	The coded answer to the question, "Was a raft in the water prepared to aid cetacean rescue effort during backdown?" Yes = 1, No = 2; blank if no backdown.
FACEMASK_EFF_DUR	364-364	The coded answer to the question, "Did one of the rescuers in position during backdown use a facemask to look into the net?" Yes = 1, No = 2; blank if no backdown.

Appendix 2H. (Continued)

Field Name	Columns	Description
RELS_SWMR_DUR_BD	365-365	The coded answer to the question, "Were men in the water prepared to engage in rescue effort to aid in the release of cetaceans during backdown?" Yes = 1, No = 2; blank if no backdown.
RELS_OTHR_DUR_BD	366-366	The coded answer to the question, "Were other methods used to aid cetacean rescue effort during backdown?" Yes = 1, No = 2; blank if no backdown.
LIVE_REL_DUR_BD	367-369	The observer's best estimate of the total number of live cetaceans released during backdown, three digits; blank if no backdown.
TOT_LIVE_AFT_BD	370-372	The observer's best estimate of the total number of live cetaceans left in the net after backdown, three digits; blank if no backdown.
(FILLER)	373-378	Non-data remnant of data processing.
RELS_RAFT_AFT_BD	379-379	The coded answer to the question, "Was a raft used to aid marine mammal rescue effort after backdown, or if no backdown, at anytime during the set?" Yes = 1, No = 2.
NUM_MEN_RAFT_AFT	380-380	The number of men actively engaged in rescue effort to aid in release of marine mammals from raft(s) after backdown, or if no backdown, at anytime during the set, 1 digit.
NUM_REL_RAFT_AFT	381-383	The number of live or live injured marine mammals released by men in raft(s) after back-down, or if no backdown, at anytime during the set, 3 digits.
RELS_BOAT_AFT_BD	384-384	The coded answer to the question, "Were speedboats at the corkline used to aid marine mammal rescue effort after backdown, or if no backdown, at anytime during the set?" Yes = 1, No = 2.
NUM_MEN_BOAT_AFT	385-385	The number of men actively engaged in rescue effort to aid in release of marine mammals from speedboat(s) after backdown, or if no backdown, at anytime during the set, 1 digit
NUM_REL_BOAT_AFT	386-388	The number of live or live injured marine mammals released by men in speedboat(s) after backdown, or if no backdown, at anytime during the set, 3 digits.
RELS_SWMR_AFT_BD	389-389	The coded answer to the question, "Were men in the water involved in rescue effort to aid in release of marine mammals after backdown, or if no backdown, at anytime during the set?" Yes = 1, No = 2.
NUM_SWMR_AFT_BD	390-390	The number of men in the water actively engaged in rescue effort to aid in release of marine mammals after backdown, or anytime during the set, 1 digit.
NUM_REL_SWMR_AFT	391-393	The number of live or live injured marine mammals released by men in the backdown or, if no backdown, at anytime the set, 3 digits.
RELS_OTHR_AFT_BD	394-394	The coded answer to the question, "Were other methods used to aid marine mammal rescue effort after backdown, or if no backdown, at anytime during the set?" Yes = 1, No = 2.

Appendix 2H. (Continued)

Field Name	Columns	Description
NUM_MEN_OTHR_AFT	395-395	The number of men actively engaged in other methods of rescue effort to aid in release of marine mammals after backdown, or if no backdown, at anytime during the set, 1 digit.
NUM_REL_OTHR_AFT	396-398	The number of live or live injured marine mammals released by other methods after backdown, or if no backdown, at anytime during the set, 3 digits.
NUM_RESCUERS_AFT	399-400	The total number of men actively engaged in rescue effort after backdown, or if no backdown, at anytime during the set, 2 digits; enter zeroes if no rescue effort. (Count each man only once if involved in more than one type of rescue.) Note: Don't count men releasing marine mammals from deck or from sack.
RELS_DECK_AFT_BD	401-401	The coded answer to the question, "Were live marine mammals brought on board and released over the deck alive after backdown, or if no backdown, at anytime during the set?" Yes = 1, No = 2.
NUM_REL_DECK_AFT	402-404	The number of live or live injured marine mammals released over the deck after backdown or, if no backdown, at anytime during the set, 3 digits.
ESCAP_AFT_BD	405-405	The coded answer to the question, "Did captured marine mammals escape unaided after backdown, or if no backdown, at anytime during the set?" Yes = 1, No = 2.
NUM_ESCAP_AFT_BD	406-408	The number of live or live injured marine mammals that escaped unaided after backdown, or if no backdown, at anytime during the set after capture, 3 digits.
SACKUP	409-409	The coded answer to the question, "Were the contents of the net sacked up?" Yes = 1, No = 2. (NOTE: The "sacking up" procedure is a method of evenly pulling in the excess webbing at the end of the net so that the contents are evenly supported when finally concentrated for brailing.)
TIME_START_SACK	410-413	The local time at which the first pull of the net to begin sacking up is taken, 4 digits; blank if no sack up.
NUM_LIV_SRT_SACK	414-416	The total number of live marine mammals in the net at the time sack up was initiated, 3 digits; blank if no sack up.
RELS_SACK_AFT_BD	417-417	The coded answer to the question, "Was there an effort to release live marine mammals from the net after sack up was initiated?" Yes = 1, No = 2; blank if no sack up.
NUM_MEN_SACK_AFT	418-418	The number of men actively engaged in rescue effort to aid in release of marine mammals from the sack, 1 digit; blank if no sack up or rescue effort.
NUM_REL_SACK_AFT	419-421	The number of live or live injured marine mammals released from the sack due to rescue effort, 3 digits; blank if no sack up or rescue effort.
BRAILING	422-422	The coded answer to the question, "Were contents of the net brailed aboard?" Yes = 1, No = 2.
TIME_START_BRAIL	423-426	The local time at which the first brailer of fish is scooped out of the net, 4 digits; blank if no brailing.

Appendix 2H. (Continued)

Field Name	Columns	Description
NUM_LIV_BEF_BRAL	427-429	The total number of live or live injured marine mammals in the net at time brailing commenced, 3 digits.
TIME_END_BRAIL	430-433	The local time at which the last brailer of fish is dumped on the boat, 4 digits; blank if no brailing.
TIME_END_SET	434-437	The local time at which the skiff is secured on the deck. If the skiff is not brought aboard by choice (due to factors that did not occur during the set), enter the approximate time that normal operations would have ended, 4 digits.
CURRENT_STRONG	438-438	The coded answer to the question, "Was a strong current present at any time during the set?" Yes = I, No = 2. (NOTE: Strong currents are two knots or greater.)
KNOWN_KILLED	439-442	The total number of marine mammals that were positively determined to be dead (ADD ) in this set, i.e., the sum of the checks on the tally sheet, 4 digits.
KNOWN_INJURED	443-444	The total number of marine mammals that were injured in this set, 2 digits. Sum all + and ? on tally sheet, plus all injured prior to and during backdown.
TONS_YF	445-447	The best estimate of the total tons of yellowfin tuna loaded aboard during this set, 3 digits; enter zeroes if none loaded.
TONS_SK	448-450	The best estimate of the total tons of skipjack tuna loaded aboard during this set, 3 digits; enter zeroes if none loaded.
(FILLER)	451-452	Non-data remnant of data processing.
TONS_OTHER_FISH	453-455	The best estimate of the number of tons of fish species other than yellowfin or skipjack that were loaded aboard during this set, enter zeroes if none loaded.
OTHER_FISH_CODE	456-457	The two-digit code number assigned to the species of fish designated under Tons Other Sp. in this set (Code Table 10).
TANGL_SPT_KILL	458-460	The observer's best estimate of the percentage of total spotters killed that died due to known entanglement, 3 digits. (Note: Entanglement means stuck to the net by a part of the body, i.e., flukes, snout or flipper.)
TANGL_SPN_KILL	461-463	The observer's best estimate of the percentage of total spinners killed that died due to known entanglement, 3 digits.
TANGL_OTH_KILL	464-466	The observer's best estimate of the percentage of the total "Other Species" killed due to known entanglement, 3 digits.
TRAP_SPT_KILL	467-469	The observer's best estimate of the percentage of the total spotters killed that died due to known entrapment in folds or canopies of webbing, 3 digits. (Note: Entrapment means forced contact with the net webbing due to a configuration of the net which traps or poses unusual hazard to marine mammals.
TRAP_SPN_KILL	470-472	The observer's best estimate of the percentage of the total spinners killed that died due to known entrapment in folds or canopies of webbing. 3 digits.

Appendix 2H. (Continued)

Field Name	Columns	Description
TRAP_OTH_KILL	473-475	The observer's best estimate of the percentage of the total "Other Species" killed due to known entrapment in folds or canopies of webbing, 3 digits.
SACKUP_SPT_KILL	476-478	The observer's best estimate of the percentage of the total spotters killed that died during the sacking-up process, 3 digits.
SACKUP_SPN_KILL	479-481	The observer's best estimate of the percentage of the total spinners killed that died during the sacking-up process, 3 digits.
SACKUP_OTH_KILL	482-484	The observer's best estimate of the percentage of "Other Species" killed that died during the sacking-up process, 3 digits.
OTHER_SPT_KILL	485-487	The observer's best estimate of the percentage of total spotters killed that died due to reasons other than described above, 3 digits.
OTHER_SPN_KILL	488-490	The observer's best estimate of the percentage of total spinners killed that died due to reasons other than described above, 3 digits.
OTHER_OTH_KILL	491-493	The observer's best estimate of the percentage of total "Other Species" killed that died due to reasons other than described above, 3 digits.
UNK_SPT_KILL	494-496	The observer's best estimate of the percentage of total spotters killed that died because of unknown causes, 3 digits.
UNK_SPN_KILL	497-499	The observer's best estimate of the percentage of total spinners killed that died because of unknown causes, 3 digits.
UNK_OTH_KILL	500-502	The observer's best estimate of the percentage of total "Other Species" killed that died because of unknown causes, 3 digits.
OTHER_SPC_KILL	503-504	The two-digit code number assigned to the "Other Species" referred to in percentage Other Species column.
EQUIP_MALF	505-505	The coded answer to the question, "Did any equipment malfunction(s) occur during the progress of this set, from start of chase until the time the boat was underway again?" Yes = 1, No = 2.
MALF_DELAY_SET	506-506	The coded answer to the question, "Did one or more of the equipment malfunctions that occurred in this set result in an actual delay of the set procedure?" Yes = 1, No = 2, Not Applicable = 3, if no malfunction. (NOTE: Some malfunctions may not cause effective delay of the set procedure, but may be jury-rigged or worked around, and repaired after the set.)
MALF_DELAY_MIN	507-509	The estimated number of minutes that the completion of the set was delayed due to equipment malfunction, 3 digits.
PORP_IN_NET	510-510	The coded answer to the question, "Were marine mammals in the net during the malfunction(s) that occurred during this set?" Yes = 1, No = 2, Not Applicable = 3, if no malfunction.

Appendix 2H. (Continued)

Field Name	Columns	Description
SET_ABORTED	511-511	The coded answer to the question, "Were the entire contents of the net lost involuntarily or released by the crew, due to circumstances beyond their control?" This applies to a set in which normal completion of the set is impossible because of a malfunction. Yes = 1, No = 2.
TIME_SET_ABORT	512-515	The local time at which the set was aborted, 4 digits.
NET_DUMPED	516-516	The coded answer to the question, "Were the contents of the net deliberately released after the rings came up?" Yes = 1, No = 2.
TIME_NET_DUMPED	517-520	The local time at which the contents of the net were deliberately released, 4 digits.
(FILLER)	521-524	Non-data remnant of data processing.
BIRDS_CUE	525-525	The coded answer to the question, "Were birds the initial cue leading to this set?" Yes = 1, No = 2.
BIRDS	526-526	The coded answer to the question, "Were birds associated with this set?" Yes = 1, No = 2.
FISHLOSS	527-527	The coded answer to the question, "Did tuna escape the net over the corks at anytime after rings up?" Yes = 1, No = 2.
MODIFY_GEAR	528-528	The coded answer to the question, "Were any gear modifications specifically designed for non-porpoise fishing used this set?" Yes = 1, No = 2.

Appendix 2I. Record format and definitions for Set Log data collected by the NMFS Tuna-Porpoise Observer Program from 1984-1985.

Field Name	Columns	Description
CRUISE	1-3	The unique four-digit number assigned to this cruise.
SET	4-6	The three digit consecutive number for the present set.
(FILLER)	7-8	Non-data remnant of data processing.
DATE	9-14	The year, month and day (yymmdd) on which this event happened, 6 digits.
LATITUDE	15-18	The latitude in degrees (2 digits) and minutes (2 digits) north or south of the equator at which the set is made.
N_OR_S	19-19	The hemisphere of the latitude, coded one-digit: North = 1, South = 2.
LONGITUDE	20-24	The longitude in degrees (3 digits) and minutes (2 digits) east or west of Greenwich, England, at which the set is made.
E_OR_W	25-25	The hemisphere of the longitude, coded one-digit: East = 1, West = 2.
SET_TYPE	26-27	The two-digit code number identifying the set type as determined by the observer (Code Table 8).
TIME_CHASE_BEGAN	28-31	The time when the first speedboat(s) was lowered onto the water, 4 digits (blank if speedboats were not used).
NUM_BOATS_USED	32-32	The maximum number of speedboats in use at any one time while herding the marine mammals 1 digit.
E1_PORP_TOT	33-36	The crew's estimate #1 of the entire school size before the set, 4 digits.
E1_SPT	37-39	The crew's estimate #1 of percentage of spotters in the school before set, 3 digits.
E1_SPN	40-42	The crew's estimate #1 of percentage of spinners in the school before set, 3 digits.
E1_OTHER_SP1	43-45	The crew's estimate #1 of percentage of other species (1) in the school before the set, 3 digits.
E1_OTHER_SP2	46-48	The crew's estimate #1 of percentage of other species (2) in the school before the set, 3 digits.
SPC_OTHER_SP1	49-50	The two-digit code number assigned to identify the species indicated as Other SP. 1.
E2_PORP_TOT	51-54	The crew's estimate #2 of the entire school size before the set, 4 digits.
E2_SPT	55-57	The crew's estimate #2 of percentage of spotters in the school before the set, 3 digits.
E2_SPN	58-60	The crew's estimate #2 of percentage of spinners in the school before the set, 3 digits.
E2_OTHER_SP1	61-63	The crew's estimate #2 of percentage of other species (1) in the school before the set, 3 digits.
E2_OTHER_SP2	64-66	The crew's estimate #2 of percentage of other species (2) in the school before the set, 3 digits.
SPC_OTHER_SP2	67-68	The two-digit code number assigned to identify the species indicated as Other Sp. 2.
(FILLER)	69-82	Non-data remnant of data processing.
SKIP_PORP_TOT	83-86	The Captain's estimate #3 of the entire school size before the set, 4 digits.
SKIP_SPT	87-89	The Captain's estimate #3 of percentage of spotters in the school before the set, 3 digits.

Appendix 2I. (Continued)

Field Name	Columns	Description
SKIP_SPN	90-92	The Captain's estimate #3 of percentage of spinners in the school before the set, 3 digits.
SKIP_OTHER_SP1	93-95	The Captain's estimate #3 of percentage of other species (1) in the school before the set, 3 digits.
SKIP_OTHER_SP2	96-98	The Captain's estimate #3 of percentage of other species (2) in the school before the set, 3 digits.
OBS_BST_EST_BEF	99-102	The observer's best estimate of the total number of marine mammals in the entire school before the set, 4 digits. (Note: The best estimate does not have to be the mean of the high and low estimates.)
OBS_HI_EST_BEF	103-106	The observer's estimate of the maximum possible number of marine mammals in the entire school before the set, 4 digits.
OBS_LO_EST_BEF	107-110	The observer's estimate of the minimum possible number of marine mammals in the entire school before the set, 4 digits.
OBS_SPT_BEF	111-113	The observer's estimate of percentage of spotters in the school before the set, 3 digits.
OBS_EASTERN_BEF	114-116	The observer's estimate of percentage of eastern spinners in the school before the set, 3 digits.
OBS_WB_BEF	117-119	The observer's estimate of percentage of whitebelly spinners in the school before the set, 3 digits.
OBS_SPN2_BEF	120-122	The observer's estimate of percentage of other or unidentified spinners in the school before the set, 3 digits.
OBS_OTHR1_BEF	123-125	The observer's estimate of percentage of other species (1) in the school before the set, 3 digits.
OBS_OTHR2_BEF	126-128	The observer's estimate of percentage of other species (2) in the school before the set, 3 digits.
OBS_SPT_CD_BEF	129-130	The two-digit code number assigned to identify the spotted stock.
OBS_SPN2_CD_BEF	131-132	The two-digit code number assigned to identify other spinner or unidentified spinner stocks.
OBS_OTHR1_CD_BEF	133-134	The two-digit code number assigned to identify the species indicated as Other SP. 1.
OBS_OTHR2_CD_BEF	135-136	The two-digit code number assigned to identify the species indicated as Other SP. 2.
TIME_NET_LET_GO	137-140	The local time at which the net skiff hits the water, 4 digits.
EVADED_SET	141-141	The coded answer to the question, "Did any marine mammals evade being encircled by behavioral dexterity or slyness? Yes = 1, No = 2.
TOT_EVADED_SET	142-145	The observer's estimate of the number of marine mammals that evade being encircled by behavioral dexterity or slyness, 4 digits.
SPC_EVADED_SET	146-147	The two-digit code number assigned to identify the major species/stock that evaded encirclement.
(FILLER)	148-156	Non-data remnant of data processing.
OBS_BST_EST_ENC	157-160	The observer's best estimate of the total number of marine mammals encircled, 4 digits.



Appendix 2I. (Continued)

Field Name	Columns	Description
OBS_HI_EST_ENC	161-164	The observer's estimate of the maximum possible number of marine mammals encircled, 4 digits.
OBS_LO_EST_ENC	165-168	The observer's estimate of the minimum possible number of marine mammals encircled, 4 digits.
OBS_SPT_ENC	169-171	The observer's estimate of percentage of spotters encircled, 3 digits.
OBS_EASTERN_ENC	172-174	The observer's estimate of percentage of eastern spinners encircled, 3 digits.
OBS_WB_ENC	175-177	The observer's estimate of percentage of whitebelly spinners encircled, 3 digits.
OBS_SPN2_ENC	178-180	The observer's estimate of percentage of other or unidentified spinners encircled, 3 digits.
OBS_OTHR1_ENC	181-183	The observer's estimate of percentage of other species (1) encircled, 3 digits.
OBS_OTHR2_ENC	184-186	The observer's estimate of percentage of other species (2) encircled, 3 digits.
OBS_SPT_CD_ENC	187-188	The two-digit code number assigned to identify the spotted stock.
OBS_SPN2_CD_ENC	189-190	The two-digit code number assigned to identify other spinners or unidentified spinner stocks.
OBS_OTHR1_CD_ENC	191-192	The two-digit code number assigned to identify the species indicated as Other Sp. 1.
OBS_OTHR2_CD_ENC	193-194	The two-digit code number assigned to identify the species indicated as Other Sp. 2.
WIND_TOWLINE_IN	195-196	The wind speed in knots at the time the towline was brought aboard, 2 digits.
WIND_BEARING	197-199	The direction in degrees from which the wind was blowing at the time the towline was brought aboard, using the vessel as the reference; i.e., bow is 000°, right (starboard) beam is 090°, directly astern is 180°, left (port) beam is 270°, and so on, 3 digits.
SWELL_TOWLINE_IN	200-201	The height of the primary swell in feet at the time the towline was brought aboard, 2 digits. (Swell is waves raised by distant wind systems, or by winds that have ceased to blow.)
TIME_RINGS_UP	202-205	The local time at which the purse rings were brought above the surface of the water, 4 digits.
ESCAP_BEF_RNG_UP	206-206	The coded answer to the question, "Did any of the encircled marine mammals evade being captured by escaping the net, unaided, prior to rings up?" Yes = 1, No = 2.
NUM_ESCAP_BEF	207-210	The observer's estimate of the number of marine mammals encircled that evaded capture by escaping the net, unaided, prior to rings up, 4 digits.
SPC_ESCAP_BEF	211-212	The two-digit code assigned to identify the major species/stock that escaped the net before the rings came up.
E1_TOT_CATCH	213-216	The crew's estimate #1 of the total number of live marine mammals in the net when the rings came up, 4 digits.
E1_SPT_CATCH	217-219	The crew's estimate #1 of the percentage of spotters in the net when the rings came up, 3 digits.

Appendix 2I. (Continued)

Field Name	Columns	Description
E1_SPN_CATCH	220-222	The crew's estimate #1 of the percentage of spinners in the net when the rings came up, 3 digits.
E1_OTHER1_CATCH	223-225	The crew's estimate #1 of the percentage of other species (1) in the net when the rings came up, 3 digits.
E1_OTHER2_CATCH	226-228	The crew's estimate #1 of the percentage of other species (2) in the net when the rings came up, 3 digits.
(FILLER)	229-230	Non-data remnant of data processing.
OTHER1CODE_CATCH	231-232	The two-digit code number assigned to identify the species indicated as Other SP. 1.
E2_TOT_CATCH	233-236	The crew's estimate #2 of the total number of live marine mammals in the net when the rings came up, 4 digits.
E2_SPT_CATCH	237-239	The crew's estimate #2 of the percentage of spotters in the net when the rings came up, 3 digits.
E2_SPN_CATCH	240-242	The crew's estimate #2 of the percentage of spinners in the net when the rings came up, 3 digits.
E2_OTHER1_CATCH	243-245	The crew's estimate #2 of the percentage of other species (1) in the net when the rings came up, 3 digits.
E2_OTHER2_CATCH	246-248	The crew's estimate #2 of the percentage of other species (2) in the net when the rings came up.
OTHER2CODE_CATCH	249-250	The two-digit code number assigned to identify the species indicated as Other SP. 2.
SKIP_TOT_CATCH	251-254	The Captain's estimate #3 of the total number of live marine mammals in the net when the rings came up, 4 digits.
SKIP_SPT_CATCH	255-257	The Captain's estimate # 3 of the percentage of spotters in the net when the rings came up, 3 digits.
SKIP_SPN_CATCH	258-260	The Captain's estimate #3 of the percentage of spinners in the net when the rings came up, 3 digits.
SKIP_OTHER1_CATCH	261-263	The Captain's estimate #3 of the percentage of other species (1) in the net when the rings came up, 3 digits.
SKIP_OTHER2_CATCH	264-266	The Captain's estimate #3 of the percentage of other species (2) in the net when the rings came up, 3 digits.
OBS_BST_EST_CAP	267-270	The observer's best estimate of the total number of marine mammals in the net when the rings came up, 4 digits. (Note: The best estimate does not have to be the mean of the high and low estimates.)
OBS_HI_EST_CAP	271-274	The observer's estimate of the maximum possible number of marine mammals in the net when the rings came up, 4 digits.
OBS_LO_EST_CAP	275-278	The observer's estimate of the minimum possible number of marine mammals in the net when the rings came up, 4 digits.
OBS_SPT_CAP	279-281	The observer's estimate of the percentage of spotters in the net when rings came up, 3 digits.
OBS_EASTERN_CAP	282-284	The observer's estimate of the percentage of eastern spinners in the net when the rings came up, 3 digits.
OBS_WB_CAP	285-287	The observer's estimate of the percentage of whitebelly spinners in the net when the rings came up, 3 digits.
OBS_SPN2_CAP	288-290	The observer's estimate of the percentage of other or unidentified spinners in the net when the rings came up, 3 digits.

Appendix 2I. (Continued)

Field Name	Columns	Description
OBS_OTHR1_CAP	291-293	The observer's estimate of the percentage of other species (1) in the net when the rings came up, 3 digits.
OBS_OTHR2_CAP	294-296	The observer's estimate of the percentage of other species (2) in the net when the rings came up, 3 digits.
OBS_SPT_CD_CAP	297-298	The two-digit code number assigned to identify the spotted stock.
OBS_SPN2_CD_CAP	299-300	The two-digit code number assigned to identify other spinners or unidentified spinner stocks.
OBS_OTHR1_CD_CAP	301-302	The two-digit code number assigned to identify the species indicated as Other SP. 1.
(FILLER)	303-304	Non-data remnant of data processing.
OBS_OTHR2_CD_CAP	305-306	The two-digit code number assigned to identify the species indicated as Other SP. 2.
NUM_BD_SPEEDBOAT	307-307	The total number of manned speedboats in the water continuously until backdown commenced or, if no backdown, until the time the normal tie-down point for backdown is reached, 1 digit. Note: Continuously means from the time the net was let go until the time the vessel begins preparation for the backdown maneuver; i.e., around the time of tiedown.
BOAT_TOW_BEF_BD	308-308	The coded answer to the question, "Did speedboats attach to the net (corkline or bunches) and tow on the net prior to backdown?" Yes = 1, No = 2; Not Applicable = 3, if no backdown).
COLLAPSE_BEF_BD	309-309	The coded answer to the question, "For whatever reason, was the open surface area of the net so seriously reduced that marine mammals in the net were forced into contact with the webbing before backdown was initiated?" Yes = 1, No = 2, Not Applicable = 3, if no backdown.
COLLAPSE_KIL_BEF	310-310	The coded answer to the question, "Were marine mammals killed as a result of a net collapse prior to backdown?" Yes = 1, No = 2, Not Applicable = 3, if no backdown.
BOAT_INFLU_PORP	311-311	The coded answer to the question, "During the period between rings up and start backdown, were speedboats used to attempt to influence either the behavior or location of marine mammals in the net?" Yes = 1, No = 2, Not Applicable = 3, if no backdown.
BOAT_ADJ_BD_AREA	312-312	The coded answer to the question, "Was a speedboat used to open or adjust the corkline that formed the backdown area prior to backdown?" Yes = 1, No = 2, Not Applicable = 3.
RESCU_EFF_BEF_BD	313-313	The coded answer to the question, "Was anyone actively engaged in rescue effort to aid in the release of marine mammals prior to backdown?" Yes = 1, No = 2.
NUM_RESCUERS_BEF	314-315	The total number of men actively engaged in rescue effort prior to backdown, 2 digits.
RELS_RAFT_BEF_BD	316-316	The coded answer to the question, "Was a raft used to aid marine mammal rescue effort prior to backdown?" Yes = 1, No = 2.

Appendix 2I. (Continued)

Field Name	Columns	Description
RELS_BOAT_BEF_BD	317-317	The coded answer to the question, "Were speedboat(s) at the corkline used to aid marine mammal rescue effort prior to backdown?" Yes = 1, No = 2.
RELS_SWMR_BEF_BD	318-318	The coded answer to the question, "Were men in the water involved in rescue effort to aid in release of marine mammals prior to backdown?" Yes = 1, No = 2.
RELS_OTHR_BEF_BD	319-319	The coded answer to the question, "Were other methods used to aid marine mammal rescue effort prior to backdown?" Yes = 1, No = 2.
LIVE_REL_BEF_BD	320-322	The observer's best estimate of the total number of live or live injured marine mammals released prior to backdown, 3 digits.
ESCAP_AFT_RNG_UP	323-323	The coded answer to the question, "Did any captured marine mammals escape unaided from the net after rings up but before backdown started?" Yes = 1, No = 2.
NUM_ESCAP_AFT	324-326	The observer's best estimate of the number of live or live injured captured marine mammals that escaped unaided after rings up but before backdown started, 3 digits.
BACKDOWN	327-327	The coded answer to the question, "Did the vessel employ the backdown technique to rescue marine mammals during this set?" Yes = 1, No=2.
TIME_START_BD	328-331	The local time at which the backdown procedure is initiated; i.e., the first time at which the engines are shifted into reverse after the net is tied down, 4 digits; blank if no backdown.
NUM_BUNCHES	332-332	The number of bow corkline bunches pulled at the time backdown started, 1 digit; blank if no backdown.
SUNDOWN	333-333	The coded answer to the question, "Did any or all of the backdown maneuver occur in darkness?" Yes = 1, No = 2; blank if no backdown.
LIGHTS_DUR_BD	334-334	The coded answer to the question. "Were floodlights and/or spotlights used to enhance the release of marine mammals during backdown?" Yes = 1, No = 2.
PNL_COVR_BD_AREA	335-335	Coded answer to the question, "Did the porpoise safety panel and/or apron (1-1/4" mesh) start at the outboard end of the last bunch pulled and extend around the backdown channel to two-thirds the distance from the backdown apex to the stern tie down point?" Yes = 1, No = 2; blank if no backdown.
NET_TIED_DOWN	336-336	The coded answer to the question, "Was the net tied down for backdown at the marked floats in the stern and at the marked bunchlines at the bow?" Yes = 1, No = 2, Not Applicable = 3, if vessel does not have an apron system; blank if no backdown.
TIME_END_BD	337-340	The local time at which the backdown procedure was finished, i.e., the time at which the engines are shifted out of reverse for the last time and the corks at the apex of the channel are up, 4 digits; blank if no backdown.

Appendix 2I. (Continued)

Field Name	Columns	Description
BST_EST_RELS_DUR	341-344	The observer's best estimate of the total number of marine mammals released due to the backdown process, 4 digits; blank if no backdown or if backdown occurs in darkness. (Do not include animals hand released by rescuers during backdown.)
HI_EST_RELS_DUR	345-348	The observer's best estimate of the maximum possible number of marine mammals released due to the backdown process, 4 digits; blank if no backdown or if backdown occurs in darkness. (Do not include animals hand released by rescuers during backdown.)
LO_EST_RELS_DUR	349-352	The observer's best estimate of the minimum possible number of marine mammals released due to the backdown process, 4 digits; blank if no backdown or if backdown occurs in darkness. (Do not include animals hand released by rescuers during backdown.)
FISH_LOSS_DUR_BD	353-353	The coded answer to the question, "Did tuna escape the net during the backdown process?" Yes = 1, No = 2; blank if no backdown.
NUM_LOSS_DUR_BD	354-356	The observer's best estimate of the number of short tons of tuna lost during backdown, 3 digits; blank if none lost or if backdown did not occur. (Input from cork tenders and Captain should be solicited.)
CANOPIES_PRESENT	357-357	The coded answer to the question, "During the backdown process, did you observe canopies of webbing with marine mammals in them?" Yes = 1, No = 2; blank if no backdown.
CANOPY_BD_KILL	358-358	The coded answer to the question, "Were marine mammals killed as a result of canopies that occurred during backdown?" Yes = 1, No = 2, Not Applicable = 3, if no canopies; blank if no backdown.
RESCU_EFF_DUR_BD	359-359	The coded answer to the question, "Were men in position prepared to aid in the rescue of cetaceans during backdown?" Yes = 1, No = 2; blank if no backdown.
NUM_RESCUERS_DUR	360-361	The total number of men prepared to engage in rescue effort during backdown, 2 digits; blank if no backdown. Count each man only once if involved in different types of rescue.
RELS_BOAT_DUR_BD	362-362	The coded answer to the question, "Were speedboat(s) at the corkline prepared to aid cetacean rescue effort during backdown?" Yes = 1, No = 2; blank if no backdown.
RELS_RAFT_DUR_BD	363-363	The coded answer to the question, "Was a raft in the water prepared to aid cetacean rescue effort during backdown?" Yes = 1, No = 2; blank if no backdown.
FACEMASK_EFF_DUR	364-364	The coded answer to the question, "Did one of the rescuers in position during backdown use a facemask to look into the net?" Yes = 1. No = 2; blank if no backdown.

Appendix 2I. (Continued)

Field Name	Columns	Description
RELS_SWMR_DUR_BD	365-365	The coded answer to the question, "Were men in the water prepared to engage in rescue effort to aid in the release of cetaceans during backdown?" Yes = 1, No = 2; blank if no backdown.
RELS_OTHR_DUR_BD	366-366	The coded answer to the question, "Were other methods used to aid cetacean rescue effort during backdown?" Yes = 1, No = 2; blank if no backdown.
LIVE_REL_DUR_BD	367-369	The observer's best estimate of the total number of live cetaceans released during backdown, three digits; blank if no backdown.
TOT_LIVE_AFT_BD	370-372	The observer's best estimate of the total number of live cetaceans left in the net after backdown, three digits; blank if no backdown.
(FILLER)	373-378	Non-data remnant of data processing.
RELS_RAFT_AFT_BD	379-379	The coded answer to the question, "Was a raft used to aid marine mammal rescue effort after backdown, or if no backdown, at anytime during the set?" Yes = 1, No = 2.
NUM_MEN_RAFT_AFT	380-380	The number of men actively engaged in rescue effort to aid in release of marine mammals from raft(s) after backdown, or if no backdown, at anytime during the set, 1 digit.
NUM_REL_RAFT_AFT	381-383	The number of live or live injured marine mammals released by men in raft(s) after back-down, or if no backdown, at anytime during the set, 3 digits.
RELS_BOAT_AFT_BD	384-384	The coded answer to the question, "Were speedboats at the corkline used to aid marine mammal rescue effort after backdown, or if no backdown, at anytime during the set?" Yes = 1, No = 2.
NUM_MEN_BOAT_AFT	385-385	The number of men actively engaged in rescue effort to aid in release of marine mammals from speedboat(s) after backdown, or if no backdown, at anytime during the set, 1 digit
NUM_REL_BOAT_AFT	386-388	The number of live or live injured marine mammals released by men in speedboat(s) after backdown, or if no backdown, at anytime during the set, 3 digits.
RELS_SWMR_AFT_BD	389-389	The coded answer to the question, "Were men in the water involved in rescue effort to aid in release of marine mammals after backdown, or if no backdown, at anytime during the set?" Yes = 1, No = 2.
NUM_SWMR_AFT_BD	390-390	The number of men in the water actively engaged in rescue effort to aid in release of marine mammals after backdown, or anytime during the set, 1 digit.
NUM_REL_SWMR_AFT	391-393	The number of live or live injured marine mammals released by men in the backdown or, if no backdown, at anytime the set, 3 digits.
RELS_OTHR_AFT_BD	394-394	The coded answer to the question, "Were other methods used to aid marine mammal rescue effort after backdown, or if no backdown, at anytime during the set?" Yes = 1, No = 2.

Appendix 2I. (Continued)

Field Name	Columns	Description
NUM_MEN_OTHR_AFT	395-395	The number of men actively engaged in other methods of rescue effort to aid in release of marine mammals after backdown, or if no backdown, at anytime during the set, 1 digit.
NUM_REL_OTHR_AFT	396-398	The number of live or live injured marine mammals released by other methods after backdown, or if no backdown, at anytime during the set, 3 digits.
NUM_RESCUERS_AFT	399-400	The total number of men actively engaged in rescue effort after backdown, or if no backdown, at anytime during the set, 2 digits; enter zeroes if no rescue effort. (Count each man only once if involved in more than one type of rescue.) Note: Don't count men releasing marine mammals from deck or from sack.
RELS_DECK_AFT_BD	401-401	The coded answer to the question, "Were live marine mammals brought on board and released over the deck alive after backdown, or if no backdown, at anytime during the set?" Yes = 1, No = 2.
NUM_REL_DECK_AFT	402-404	The number of live or live injured marine mammals released over the deck after backdown or, if no backdown, at anytime during the set, 3 digits.
ESCAP_AFT_BD	405-405	The coded answer to the question, "Did captured marine mammals escape unaided after backdown, or if no backdown, at anytime during the set?" Yes = 1, No = 2.
NUM_ESCAP_AFT_BD	406-408	The number of live or live injured marine mammals that escaped unaided after backdown, or if no backdown, at anytime during the set after capture, 3 digits.
SACKUP	409-409	The coded answer to the question, "Were the contents of the net sacked up?" Yes = 1, No = 2. (NOTE: The "sacking up" procedure is a method of evenly pulling in the excess webbing at the end of the net so that the contents are evenly supported when finally concentrated for brailing.)
TIME_START_SACK	410-413	The local time at which the first pull of the net to begin sacking up is taken, 4 digits; blank if no sack up.
NUM_LIV_SRT_SACK	414-416	The total number of live marine mammals in the net at the time sack up was initiated, 3 digits; blank if no sack up.
RELS_SACK_AFT_BD	417-417	The coded answer to the question, "Was there an effort to release live marine mammals from the net after sack up was initiated?" Yes = 1, No = 2; blank if no sack up.
NUM_MEN_SACK_AFT	418-418	The number of men actively engaged in rescue effort to aid in release of marine mammals from the sack, 1 digit; blank if no sack up or rescue effort.
NUM_REL_SACK_AFT	419-421	The number of live or live injured marine mammals released from the sack due to rescue effort, 3 digits; blank if no sack up or rescue effort.
BRAILING	422-422	The coded answer to the question, "Were contents of the net brailed aboard?" Yes = 1, No = 2.
TIME_START_BRAIL	423-426	The local time at which the first brailer of fish is scooped out of the net, 4 digits; blank if no brailing.

Appendix 2I. (Continued)

Field Name	Columns	Description
NUM_LIV_BEF_BRAL	427-429	The total number of live or live injured marine mammals in the net at time brailing commenced, 3 digits.
TIME_END_BRAIL	430-433	The local time at which the last brailer of fish is dumped on the boat, 4 digits; blank if no brailing.
TIME_END_SET	434-437	The local time at which the skiff is secured on the deck. If the skiff is not brought aboard by choice (due to factors that did not occur during the set), enter the approximate time that normal operations would have ended, 4 digits.
CURRENT_STRONG	438-438	The coded answer to the question, "Was a strong current present at any time during the set?" Yes = 1, No = 2. (NOTE: Strong currents are two knots or greater.)
KNOWN_KILLED	439-442	The total number of marine mammals that were positively determined to be dead (ADD ) in this set, i.e., the sum of the checks on the tally sheet, 4 digits.
KNOWN_INJURED	443-444	The total number of marine mammals that were injured in this set, 2 digits. Sum all + and ? on tally sheet, plus all injured prior to and during backdown.
TONS_YF	445-447	The best estimate of the total tons of yellowfin tuna loaded aboard during this set, 3 digits; enter zeroes if none loaded.
TONS_SK	448-450	The best estimate of the total tons of skipjack tuna loaded aboard during this set, 3 digits; enter zeroes if none loaded.
(FILLER)	451-452	Non-data remnant of data processing.
TONS_OTHER_FISH	453-455	The best estimate of the number of tons of fish species other than yellowfin or skipjack that were loaded aboard during this set, enter zeroes if none loaded.
OTHER_FISH_CODE	456-457	The two-digit code number assigned to the species of fish designated under Tons Other Sp. in this set (Code Table 10).
TANGL_SPT_KILL	458-460	The observer's best estimate of the percentage of total spotters killed that died due to known entanglement, 3 digits. (Note: Entanglement means stuck to the net by a part of the body, i.e., flukes, snout or flipper.)
TANGL_SPN_KILL	461-463	The observer's best estimate of the percentage of total spinners killed that died due to known entanglement, 3 digits.
TANGL_OTH_KILL	464-466	The observer's best estimate of the percentage of the total "Other Species" killed due to known entanglement, 3 digits.
TRAP_SPT_KILL	467-469	The observer's best estimate of the percentage of the total spotters killed that died due to known entrapment in folds or canopies of webbing, 3 digits. (Note: Entrapment means forced contact with the net webbing due to a configuration of the net which traps or poses unusual hazard to marine mammals.
TRAP_SPN_KILL	470-472	The observer's best estimate of the percentage of the total spinners killed that died due to known entrapment in folds or canopies of webbing. 3 digits.



Appendix 2I. (Continued)

Field Name	Columns	Description
TRAP_OTH_KILL	473-475	The observer's best estimate of the percentage of the total "Other Species" killed due to known entrapment in folds or canopies of webbing, 3 digits.
SACKUP_SPT_KILL	476-478	The observer's best estimate of the percentage of the total spotters killed that died during the sacking-up process, 3 digits.
SACKUP_SPN_KILL	479-481	The observer's best estimate of the percentage of the total spinners killed that died during the sacking-up process, 3 digits.
SACKUP_OTH_KILL	482-484	The observer's best estimate of the percentage of "Other Species" killed that died during the sacking-up process, 3 digits.
OTHER_SPT_KILL	485-487	The observer's best estimate of the percentage of total spotters killed that died due to reasons other than described above, 3 digits.
OTHER_SPN_KILL	488-490	The observer's best estimate of the percentage of total spinners killed that died due to reasons other than described above, 3 digits.
OTHER_OTH_KILL	491-493	The observer's best estimate of the percentage of total "Other Species" killed that died due to reasons other than described above, 3 digits.
UNK_SPT_KILL	494-496	The observer's best estimate of the percentage of total spotters killed that died because of unknown causes, 3 digits.
UNK_SPN_KILL	497-499	The observer's best estimate of the percentage of total spinners killed that died because of unknown causes, 3 digits.
UNK_OTH_KILL	500-502	The observer's best estimate of the percentage of total "Other Species" killed that died because of unknown causes, 3 digits.
OTHER_SPC_KILL	503-504	The two-digit code number assigned to the "Other Species" referred to in percentage Other Species column.
EQUIP_MALF	505-505	The coded answer to the question, "Did any equipment malfunction(s) occur during the progress of this set, from start of chase until the time the boat was underway again?" Yes = 1, No = 2.
MALF_DELAY_SET	506-506	The coded answer to the question, "Did one or more of the equipment malfunctions that occurred in this set result in an actual delay of the set procedure?" Yes = 1, No = 2, Not Applicable = 3, if no malfunction. (NOTE: Some malfunctions may not cause effective delay of the set procedure, but may be jury-rigged or worked around, and repaired after the set.)
MALF_DELAY_MIN	507-509	The estimated number of minutes that the completion of the set was delayed due to equipment malfunction, 3 digits.
PORP_IN_NET	510-510	The coded answer to the question, "Were marine mammals in the net during the malfunction(s) that occurred during this set?" Yes = 1, No = 2, Not Applicable = 3, if no malfunction.

Appendix 2I. (Continued)

Field Name	Columns	Description
SET_ABORTED	511-511	The coded answer to the question, "Were the entire contents of the net lost involuntarily or released by the crew, due to circumstances beyond their control?" This applies to a set in which normal completion of the set is impossible because of a malfunction. Yes = 1, No = 2.
TIME_SET_ABORT	512-515	The local time at which the set was aborted, 4 digits.
NET_DUMPED	516-516	The coded answer to the question, "Were the contents of the net deliberately released after the rings came up?" Yes = 1, No = 2.
TIME_NET_DUMPED	517-520	The local time at which the contents of the net were deliberately released, 4 digits.
(FILLER)	521-524	Non-data remnant of data processing.
BIRDS_CUE	525-525	The coded answer to the question, "Were birds the initial cue leading to this set?" Yes = 1, No = 2.
BIRDS	526-526	The coded answer to the question, "Were birds associated with this set?" Yes = 1, No = 2.
FISHLOSS	527-527	The coded answer to the question, "Did tuna escape the net over the corks at anytime after rings up?" Yes = 1, No = 2.
MODIFY_GEAR	528-528	The coded answer to the question, "Were any gear modifications specifically designed for non-porpoise fishing used this set?" Yes = 1, No = 2.

Appendix 2J. Record format and definitions for Set Log data collected by the NMFS Tuna-Porpoise Observer Program from 1986-1988.

Field Name	Columns	Description
CRUISE	1-4	The unique four-digit number assigned to this cruise.
SET	5-7	The three digit consecutive number for the present set.
(FILLER)	8-9	Non-data remnant of data processing.
DATE	10-15	The year, month and day (yymmdd) on which this event happened, 6 digits.
LATITUDE	16-19	The latitude in degrees (2 digits) and minutes (2 digits) north or south of the equator at which the set is made.
N_OR_S	20-20	The hemisphere of the latitude, coded one-digit: North = 1, South = 2.
LONGITUDE	21-25	The longitude in degrees (3 digits) and minutes (2 digits) east or west of Greenwich, England, at which the set is made.
E_OR_W	26-26	The hemisphere of the longitude, coded one-digit: East = 1, West = 2.
SET_TYPE	27-28	The two-digit code number identifying the set type as determined by the observer (Code Table 8).
TIME_CHASE_BEGAN	29-32	The time when the first speedboat(s) was lowered onto the water, 4 digits (blank if speedboats were not used).
NUM_BOATS_USED	33-33	The maximum number of speedboats in use at any one time while herding the marine mammals 1 digit.
E1_PORP_TOT	34-37	The crew's estimate #1 of the entire school size before the set, 4 digits.
E1_SPT	38-40	The crew's estimate #1 of percentage of spotters in the school before set, 3 digits.
E1_SPN	41-43	The crew's estimate #1 of percentage of spinners in the school before set, 3 digits.
E1_OTHER_SP1	44-46	The crew's estimate #1 of percentage of other species (1) in the school before the set, 3 digits.
E1_OTHER_SP2	47-49	The crew's estimate #1 of percentage of other species (2) in the school before the set, 3 digits.
SPC_OTHER_SP1	50-51	The two-digit code number assigned to identify the species indicated as Other SP. 1.
E2_PORP_TOT	52-55	The crew's estimate #2 of the entire school size before the set, 4 digits.
E2_SPT	56-58	The crew's estimate #2 of percentage of spotters in the school before the set, 3 digits.
E2_SPN	59-61	The crew's estimate #2 of percentage of spinners in the school before the set, 3 digits.
E2_OTHER_SP1	62-64	The crew's estimate #2 of percentage of other species (1) in the school before the set, 3 digits.
E2_OTHER_SP2	65-67	The crew's estimate #2 of percentage of other species (2) in the school before the set, 3 digits.
SPC_OTHER_SP2	68-69	The two-digit code number assigned to identify the species indicated as Other Sp. 2.
(FILLER)	70-83	Non-data remnant of data processing.
SKIP_PORP_TOT	84-87	The Captain's estimate #3 of the entire school size before the set, 4 digits.
SKIP_SPT	88-90	The Captain's estimate #3 of percentage of spotters in the school before the set, 3 digits.

Appendix 2J. (Continued)

Field Name	Columns	Description
SKIP_SPN	91-93	The Captain's estimate #3 of percentage of spinners in the school before the set, 3 digits.
SKIP_OTHER_SP1	94-96	The Captain's estimate #3 of percentage of other species (1) in the school before the set, 3 digits.
SKIP_OTHER_SP2	97-99	The Captain's estimate #3 of percentage of other species (2) in the school before the set, 3 digits.
OBS_BST_EST_BEF	100-103	The observer's best estimate of the total number of marine mammals in the entire school before the set, 4 digits. (Note: The best estimate does not have to be the mean of the high and low estimates.)
OBS_HI_EST_BEF	104-107	The observer's estimate of the maximum possible number of marine mammals in the entire school before the set, 4 digits.
OBS_LO_EST_BEF	108-111	The observer's estimate of the minimum possible number of marine mammals in the entire school before the set, 4 digits.
OBS_SPT_BEF	112-114	The observer's estimate of percentage of spotters in the school before the set, 3 digits.
OBS_EASTERN_BEF	115-117	The observer's estimate of percentage of eastern spinners in the school before the set, 3 digits.
OBS_WB_BEF	118-120	The observer's estimate of percentage of whitebelly spinners in the school before the set, 3 digits.
OBS_SPN2_BEF	121-123	The observer's estimate of percentage of other or unidentified spinners in the school before the set, 3 digits.
OBS_OTHR1_BEF	124-126	The observer's estimate of percentage of other species (1) in the school before the set, 3 digits.
OBS_OTHR2_BEF	127-129	The observer's estimate of percentage of other species (2) in the school before the set, 3 digits.
OBS_SPT_CD_BEF	130-131	The two-digit code number assigned to identify the spotted stock.
OBS_SPN2_CD_BEF	132-133	The two-digit code number assigned to identify other spinner or unidentified spinner stocks.
OBS_OTHR1_CD_BEF	134-135	The two-digit code number assigned to identify the species indicated as Other SP. 1.
OBS_OTHR2_CD_BEF	136-137	The two-digit code number assigned to identify the species indicated as Other SP. 2.
TIME_NET_LET_GO	138-141	The local time at which the net skiff hits the water, 4 digits.
EVADED_SET	142-142	The coded answer to the question, "Did any marine mammals evade being encircled by behavioral dexterity or slyness? Yes = 1, No = 2.
TOT_EVADED_SET	143-146	The observer's estimate of the number of marine mammals that evade being encircled by behavioral dexterity or slyness, 4 digits.
SPC_EVADED_SET	147-148	The two-digit code number assigned to identify the major species/stock that evaded encirclement.
(FILLER)	149-157	Non-data remnant of data processing.
OBS_BST_EST_ENC	158-161	The observer's best estimate of the total number of marine mammals encircled, 4 digits.

Appendix 2J. (Continued)

Field Name	Columns	Description
OBS_HI_EST_ENC	162-165	The observer's estimate of the maximum possible number of marine mammals encircled, 4 digits.
OBS_LO_EST_ENC	166-169	The observer's estimate of the minimum possible number of marine mammals encircled, 4 digits.
OBS_SPT_ENC	170-172	The observer's estimate of percentage of spotters encircled, 3 digits.
OBS_EASTERN_ENC	173-175	The observer's estimate of percentage of eastern spinners encircled, 3 digits.
OBS_WB_ENC	176-178	The observer's estimate of percentage of whitebelly spinners encircled, 3 digits.
OBS_SPN2_ENC	179-181	The observer's estimate of percentage of other or unidentified spinners encircled, 3 digits.
OBS_OTHR1_ENC	182-184	The observer's estimate of percentage of other species (1) encircled, 3 digits.
OBS_OTHR2_ENC	185-187	The observer's estimate of percentage of other species (2) encircled, 3 digits.
OBS_SPT_CD_ENC	188-189	The two-digit code number assigned to identify the spotted stock.
OBS_SPN2_CD_ENC	190-191	The two-digit code number assigned to identify other spinners or unidentified spinner stocks.
OBS_OTHR1_CD_ENC	192-193	The two-digit code number assigned to identify the species indicated as Other Sp. 1.
OBS_OTHR2_CD_ENC	194-195	The two-digit code number assigned to identify the species indicated as Other Sp. 2.
WIND_TOWLINE_IN	196-197	The wind speed in knots at the time the towline was brought aboard, 2 digits.
WIND_BEARING	198-200	The direction in degrees from which the wind was blowing at the time the towline was brought aboard, using the vessel as the reference; i.e., bow is 000°, right (starboard) beam is 090°, directly astern is 180°, left (port) beam is 270°, and so on, 3 digits.
SWELL_TOWLINE_IN	201-202	The height of the primary swell in feet at the time the towline was brought aboard, 2 digits. (Swell is waves raised by distant wind systems, or by winds that have ceased to blow.)
TIME_RINGS_UP	203-206	The local time at which the purse rings were brought above the surface of the water, 4 digits.
ESCAP_BEF_RNG_UP	207-207	The coded answer to the question, "Did any of the encircled marine mammals evade being captured by escaping the net, unaided, prior to rings up?" Yes = 1, No = 2.
NUM_ESCAP_BEF	208-211	The observer's estimate of the number of marine mammals encircled that evaded capture by escaping the net, unaided, prior to rings up, 4 digits.
SPC_ESCAP_BEF	212-213	The two-digit code assigned to identify the major species/stock that escaped the net before the rings came up.
E1_TOT_CATCH	214-217	The crew's estimate #1 of the total number of live marine mammals in the net when the rings came up, 4 digits.
E1_SPT_CATCH	218-220	The crew's estimate #1 of the percentage of spotters in the net when the rings came up, 3 digits.

Appendix 2J. (Continued)

Field Name	Columns	Description
E1_SPN_CATCH	221-223	The crew's estimate #1 of the percentage of spinners in the net when the rings came up, 3 digits.
E1_OTHER1_CATCH	224-226	The crew's estimate #1 of the percentage of other species (1) in the net when the rings came up, 3 digits.
E1_OTHER2_CATCH	227-229	The crew's estimate #1 of the percentage of other species (2) in the net when the rings came up, 3 digits.
(FILLER)	230-231	Non-data remnant of data processing.
OTHER1CODE_CATCH	232-233	The two-digit code number assigned to identify the species indicated as Other SP. 1.
E2_TOT_CATCH	234-237	The crew's estimate #2 of the total number of live marine mammals in the net when the rings came up, 4 digits.
E2_SPT_CATCH	238-240	The crew's estimate #2 of the percentage of spotters in the net when the rings came up, 3 digits.
E2_SPN_CATCH	241-243	The crew's estimate #2 of the percentage of spinners in the net when the rings came up, 3 digits.
E2_OTHER1_CATCH	244-246	The crew's estimate #2 of the percentage of other species (1) in the net when the rings came up, 3 digits.
E2_OTHER2_CATCH	247-249	The crew's estimate #2 of the percentage of other species (2) in the net when the rings came up.
OTHER2CODE_CATCH	250-251	The two-digit code number assigned to identify the species indicated as Other SP. 2.
SKIP_TOT_CATCH	252-255	The Captain's estimate #3 of the total number of live marine mammals in the net when the rings came up, 4 digits.
SKIP_SPT_CATCH	256-258	The Captain's estimate # 3 of the percentage of spotters in the net when the rings came up, 3 digits.
SKIP_SPN_CATCH	259-261	The Captain's estimate #3 of the percentage of spinners in the net when the rings came up, 3 digits.
SKIP_OTHER1_CATCH	262-264	The Captain's estimate #3 of the percentage of other species (1) in the net when the rings came up, 3 digits.
SKIP_OTHER2_CATCH	265-267	The Captain's estimate #3 of the percentage of other species (2) in the net when the rings came up, 3 digits.
OBS_BST_EST_CAP	268-271	The observer's best estimate of the total number of marine mammals in the net when the rings came up, 4 digits. (Note: The best estimate does not have to be the mean of the high and low estimates.)
OBS_HI_EST_CAP	272-275	The observer's estimate of the maximum possible number of marine mammals in the net when the rings came up, 4 digits.
OBS_LO_EST_CAP	276-279	The observer's estimate of the minimum possible number of marine mammals in the net when the rings came up, 4 digits.
OBS_SPT_CAP	280-282	The observer's estimate of the percentage of spotters in the net when rings came up, 3 digits.
OBS_EASTERN_CAP	283-285	The observer's estimate of the percentage of eastern spinners in the net when the rings came up, 3 digits.
OBS_WB_CAP	286-288	The observer's estimate of the percentage of whitebelly spinners in the net when the rings came up, 3 digits.
OBS_SPN2_CAP	289-291	The observer's estimate of the percentage of other or unidentified spinners in the net when the rings came up, 3 digits.

Appendix 2J. (Continued)

Field Name	Columns	Description
OBS_OTHR1_CAP	292-294	The observer's estimate of the percentage of other species (1) in the net when the rings came up, 3 digits.
OBS_OTHR2_CAP	295-297	The observer's estimate of the percentage of other species (2) in the net when the rings came up, 3 digits.
OBS_SPT_CD_CAP	298-299	The two-digit code number assigned to identify the spotted stock.
OBS_SPN2_CD_CAP	300-301	The two-digit code number assigned to identify other spinners or unidentified spinner stocks.
OBS_OTHR1_CD_CAP	302-303	The two-digit code number assigned to identify the species indicated as Other SP. 1.
(FILLER)	304-305	Non-data remnant of data processing.
OBS_OTHR2_CD_CAP	306-307	The two-digit code number assigned to identify the species indicated as Other SP. 2.
NUM_BD_SPEEDBOAT	308-308	The total number of manned speedboats in the water continuously until backdown commenced or, if no backdown, until the time the normal tie-down point for backdown is reached, 1 digit. Note: Continuously means from the time the net was let go until the time the vessel begins preparation for the backdown maneuver; i.e., around the time of tiedown.
BOAT_TOW_BEF_BD	309-309	The coded answer to the question, "Did speedboats attach to the net (corkline or bunches) and tow on the net prior to backdown?" Yes = 1, No = 2; Not Applicable = 3, if no backdown).
COLLAPSE_BEF_BD	310-310	The coded answer to the question, "For whatever reason, was the open surface area of the net so seriously reduced that marine mammals in the net were forced into contact with the webbing before backdown was initiated?" Yes = 1, No = 2, Not Applicable = 3, if no backdown.
COLLAPSE_KIL_BEF	311-311	The coded answer to the question, "Were marine mammals killed as a result of a net collapse prior to backdown?" Yes = 1, No = 2, Not Applicable = 3, if no backdown.
BOAT_INFLU_PORP	312-312	The coded answer to the question, "During the period between rings up and start backdown, were speedboats used to attempt to influence either the behavior or location of marine mammals in the net?" Yes = 1, No = 2, Not Applicable = 3, if no backdown.
BOAT_ADJ_BD_AREA	313-313	The coded answer to the question, "Was a speedboat used to open or adjust the corkline that formed the backdown area prior to backdown?" Yes = 1, No = 2, Not Applicable = 3.
RESCU_EFF_BEF_BD	314-314	The coded answer to the question, "Was anyone actively engaged in rescue effort to aid in the release of marine mammals prior to backdown?" Yes = 1, No = 2.
NUM_RESCUERS_BEF	315-316	The total number of men actively engaged in rescue effort prior to backdown, 2 digits.
RELS_RAFT_BEF_BD	317-317	The coded answer to the question, "Was a raft used to aid marine mammal rescue effort prior to backdown?" Yes = 1, No = 2.

Appendix 2J. (Continued)

Field Name	Columns	Description
RELS_BOAT_BEF_BD	318-318	The coded answer to the question, "Were speedboat(s) at the corkline used to aid marine mammal rescue effort prior to backdown?" Yes = 1, No = 2.
RELS_SWMR_BEF_BD	319-319	The coded answer to the question, "Were men in the water involved in rescue effort to aid in release of marine mammals prior to backdown?" Yes = 1, No = 2.
RELS_OTHR_BEF_BD	320-320	The coded answer to the question, "Were other methods used to aid marine mammal rescue effort prior to backdown?" Yes = 1, No = 2.
LIVE_REL_BEF_BD	321-323	The observer's best estimate of the total number of live or live injured marine mammals released prior to backdown, 3 digits.
ESCAP_AFT_RNG_UP	324-324	The coded answer to the question, "Did any captured marine mammals escape unaided from the net after rings up but before backdown started?" Yes = 1, No = 2.
NUM_ESCAP_AFT	325-327	The observer's best estimate of the number of live or live injured captured marine mammals that escaped unaided after rings up but before backdown started, 3 digits.
BACKDOWN	328-328	The coded answer to the question, "Did the vessel employ the backdown technique to rescue marine mammals during this set?" Yes = 1, No=2.
TIME_START_BD	329-332	The local time at which the backdown procedure is initiated; i.e., the first time at which the engines are shifted into reverse after the net is tied down, 4 digits; blank if no backdown.
NUM_BUNCHES	333-333	The number of bow corkline bunches pulled at the time backdown started, 1 digit; blank if no backdown.
SUNDOWN	334-334	The coded answer to the question, "Did any or all of the backdown maneuver occur in darkness?" Yes = 1, No = 2; blank if no backdown.
LIGHTS_DUR_BD	335-335	The coded answer to the question. "Were floodlights and/or spotlights used to enhance the release of marine mammals during backdown?" Yes = 1, No = 2.
PNL_COVR_BD_AREA	336-336	Coded answer to the question, "Did the porpoise safety panel and/or apron (1-1/4" mesh) start at the outboard end of the last bunch pulled and extend around the backdown channel to two-thirds the distance from the backdown apex to the stern tie down point?" Yes = 1, No = 2; blank if no backdown.
NET_TIED_DOWN	337-337	The coded answer to the question, "Was the net tied down for backdown at the marked floats in the stern and at the marked bunchlines at the bow?" Yes = 1, No = 2, Not Applicable = 3, if vessel does not have an apron system; blank if no backdown.
TIME_END_BD	338-341	The local time at which the backdown procedure was finished, i.e., the time at which the engines are shifted out of reverse for the last time and the corks at the apex of the channel are up, 4 digits; blank if no backdown.



Appendix 2J. (Continued)

Field Name	Columns	Description
BST_EST_RELS_DUR	342-345	The observer's best estimate of the total number of marine mammals released due to the backdown process, 4 digits; blank if no backdown or if backdown occurs in darkness. (Do not include animals hand released by rescuers during backdown.)
HI_EST_RELS_DUR	346-349	The observer's best estimate of the maximum possible number of marine mammals released due to the backdown process, 4 digits; blank if no backdown or if backdown occurs in darkness. (Do not include animals hand released by rescuers during backdown.)
LO_EST_RELS_DUR	350-353	The observer's best estimate of the minimum possible number of marine mammals released due to the backdown process, 4 digits; blank if no backdown or if backdown occurs in darkness. (Do not include animals hand released by rescuers during backdown.)
FISH_LOSS_DUR_BD	354-354	The coded answer to the question, "Did tuna escape the net during the backdown process?" Yes = 1, No = 2; blank if no backdown.
NUM_LOSS_DUR_BD	355-357	The observer's best estimate of the number of short tons of tuna lost during backdown, 3 digits; blank if none lost or if backdown did not occur. (Input from cork tenders and Captain should be solicited.)
CANOPIES_PRESENT	358-358	The coded answer to the question, "During the backdown process, did you observe canopies of webbing with marine mammals in them?" Yes = 1, No = 2; blank if no backdown.
CANOPY_BD_KILL	359-359	The coded answer to the question, "Were marine mammals killed as a result of canopies that occurred during backdown?" Yes = 1, No = 2, Not Applicable = 3, if no canopies; blank if no backdown.
RESCU_EFF_DUR_BD	360-360	The coded answer to the question, "Were men in position prepared to aid in the rescue of cetaceans during backdown?" Yes = 1, No = 2; blank if no backdown.
NUM_RESCUERS_DUR	361-362	The total number of men prepared to engage in rescue effort during backdown, 2 digits; blank if no backdown. Count each man only once if involved in different types of rescue.
RELS_BOAT_DUR_BD	363-363	The coded answer to the question, "Were speedboat(s) at the corkline prepared to aid cetacean rescue effort during backdown?" Yes = 1, No = 2; blank if no backdown.
RELS_RAFT_DUR_BD	364-364	The coded answer to the question, "Was a raft in the water prepared to aid cetacean rescue effort during backdown?" Yes = 1, No = 2; blank if no backdown.
FACEMASK_EFF_DUR	365-365	The coded answer to the question, "Did one of the rescuers in position during backdown use a facemask to look into the net?" Yes = 1. No = 2; blank if no backdown.

Appendix 2J. (Continued)

Field Name	Columns	Description
RELS_SWMR_DUR_BD	366-366	The coded answer to the question, "Were men in the water prepared to engage in rescue effort to aid in the release of cetaceans during backdown?" Yes = 1, No = 2; blank if no backdown.
RELS_OTHR_DUR_BD	367-367	The coded answer to the question, "Were other methods used to aid cetacean rescue effort during backdown?" Yes = 1, No = 2; blank if no backdown.
LIVE_REL_DUR_BD	368-370	The observer's best estimate of the total number of live cetaceans released during backdown, three digits; blank if no backdown.
TOT_LIVE_AFT_BD	371-373	The observer's best estimate of the total number of live cetaceans left in the net after backdown, three digits; blank if no backdown.
(FILLER)	374-379	Non-data remnant of data processing.
RELS_RAFT_AFT_BD	380-380	The coded answer to the question, "Was a raft used to aid marine mammal rescue effort after backdown, or if no backdown, at anytime during the set?" Yes = 1, No = 2.
NUM_MEN_RAFT_AFT	381-381	The number of men actively engaged in rescue effort to aid in release of marine mammals from raft(s) after backdown, or if no backdown, at anytime during the set, 1 digit.
NUM_REL_RAFT_AFT	382-384	The number of live or live injured marine mammals released by men in raft(s) after back-down, or if no backdown, at anytime during the set, 3 digits.
RELS_BOAT_AFT_BD	385-385	The coded answer to the question, "Were speedboats at the corkline used to aid marine mammal rescue effort after backdown, or if no backdown, at anytime during the set?" Yes = 1, No = 2.
NUM_MEN_BOAT_AFT	386-386	The number of men actively engaged in rescue effort to aid in release of marine mammals from speedboat(s) after backdown, or if no backdown, at anytime during the set, 1 digit
NUM_REL_BOAT_AFT	387-389	The number of live or live injured marine mammals released by men in speedboat(s) after backdown, or if no backdown, at anytime during the set, 3 digits.
RELS_SWMR_AFT_BD	390-390	The coded answer to the question, "Were men in the water involved in rescue effort to aid in release of marine mammals after backdown, or if no backdown, at anytime during the set?" Yes = 1, No = 2.
NUM_SWMR_AFT_BD	391-391	The number of men in the water actively engaged in rescue effort to aid in release of marine mammals after backdown, or anytime during the set, 1 digit.
NUM_REL_SWMR_AFT	392-394	The number of live or live injured marine mammals released by men in the backdown or, if no backdown, at anytime the set, 3 digits.
RELS_OTHR_AFT_BD	395-395	The coded answer to the question, "Were other methods used to aid marine mammal rescue effort after backdown, or if no backdown, at anytime during the set?" Yes = 1, No = 2.

Appendix 2J. (Continued)

Field Name	Columns	Description
NUM_MEN_OTHR_AFT	396-396	The number of men actively engaged in other methods of rescue effort to aid in release of marine mammals after backdown, or if no backdown, at anytime during the set, 1 digit.
NUM_REL_OTHR_AFT	397-399	The number of live or live injured marine mammals released by other methods after backdown, or if no backdown, at anytime during the set, 3 digits.
NUM_RESCUERS_AFT	400-401	The total number of men actively engaged in rescue effort after backdown, or if no backdown, at anytime during the set, 2 digits; enter zeroes if no rescue effort. (Count each man only once if involved in more than one type of rescue.) Note: Don't count men releasing marine mammals from deck or from sack.
RELS_DECK_AFT_BD	402-402	The coded answer to the question, "Were live marine mammals brought on board and released over the deck alive after backdown, or if no backdown, at anytime during the set?" Yes = 1, No = 2.
NUM_REL_DECK_AFT	403-405	The number of live or live injured marine mammals released over the deck after backdown or, if no backdown, at anytime during the set, 3 digits.
ESCAP_AFT_BD	406-406	The coded answer to the question, "Did captured marine mammals escape unaided after backdown, or if no backdown, at anytime during the set?" Yes = 1, No = 2.
NUM_ESCAP_AFT_BD	407-409	The number of live or live injured marine mammals that escaped unaided after backdown, or if no backdown, at anytime during the set after capture, 3 digits.
SACKUP	410-410	The coded answer to the question, "Were the contents of the net sacked up?" Yes = 1, No = 2. (NOTE: The "sacking up" procedure is a method of evenly pulling in the excess webbing at the end of the net so that the contents are evenly supported when finally concentrated for brailing.)
TIME_START_SACK	411-414	The local time at which the first pull of the net to begin sacking up is taken, 4 digits; blank if no sack up.
NUM_LIV_SRT_SACK	415-417	The total number of live marine mammals in the net at the time sack up was initiated, 3 digits; blank if no sack up.
RELS_SACK_AFT_BD	418-418	The coded answer to the question, "Was there an effort to release live marine mammals from the net after sack up was initiated?" Yes = 1, No = 2; blank if no sack up.
NUM_MEN_SACK_AFT	419-419	The number of men actively engaged in rescue effort to aid in release of marine mammals from the sack, 1 digit; blank if no sack up or rescue effort.
NUM_REL_SACK_AFT	420-422	The number of live or live injured marine mammals released from the sack due to rescue effort, 3 digits; blank if no sack up or rescue effort.
BRAILING	423-423	The coded answer to the question, "Were contents of the net brailed aboard?" Yes = 1, No = 2.
TIME_START_BRAIL	424-427	The local time at which the first brailer of fish is scooped out of the net, 4 digits; blank if no brailing.

Appendix 2J. (Continued)

Field Name	Columns	Description
NUM_LIV_BEF_BRAL	428-430	The total number of live or live injured marine mammals in the net at time brailing commenced, 3 digits.
TIME_END_BRAIL	431-434	The local time at which the last brailer of fish is dumped on the boat, 4 digits; blank if no brailing.
TIME_END_SET	435-438	The local time at which the skiff is secured on the deck. If the skiff is not brought aboard by choice (due to factors that did not occur during the set), enter the approximate time that normal operations would have ended, 4 digits.
CURRENT_STRONG	439-439	The coded answer to the question, "Was a strong current present at any time during the set?" Yes = I, No = 2. (NOTE: Strong currents are two knots or greater.)
KNOWN_KILLED	440-443	The total number of marine mammals that were positively determined to be dead (ADD ) in this set, i.e., the sum of the checks on the tally sheet, 4 digits.
KNOWN_INJURED	444-445	The total number of marine mammals that were injured in this set, 2 digits. Sum all + and ? on tally sheet, plus all injured prior to and during backdown.
TONS_YF	446-448	The best estimate of the total tons of yellowfin tuna loaded aboard during this set, 3 digits; enter zeroes if none loaded.
TONS_SK	449-451	The best estimate of the total tons of skipjack tuna loaded aboard during this set, 3 digits; enter zeroes if none loaded.
(FILLER)	452-453	Non-data remnant of data processing.
TONS_OTHER_FISH	454-456	The best estimate of the number of tons of fish species other than yellowfin or skipjack that were loaded aboard during this set, enter zeroes if none loaded.
OTHER_FISH_CODE	457-458	The two-digit code number assigned to the species of fish designated under Tons Other Sp. in this set (Code Table 10).
TANGL_SPT_KILL	459-461	The observer's best estimate of the percentage of total spotters killed that died due to known entanglement, 3 digits. (Note: Entanglement means stuck to the net by a part of the body, i.e., flukes, snout or flipper.)
TANGL_SPN_KILL	462-464	The observer's best estimate of the percentage of total spinners killed that died due to known entanglement, 3 digits.
TANGL_OTH_KILL	465-467	The observer's best estimate of the percentage of the total "Other Species" killed due to known entanglement, 3 digits.
TRAP_SPT_KILL	468-470	The observer's best estimate of the percentage of the total spotters killed that died due to known entrapment in folds or canopies of webbing, 3 digits. (Note: Entrapment means forced contact with the net webbing due to a configuration of the net which traps or poses unusual hazard to marine mammals.
TRAP_SPN_KILL	471-473	The observer's best estimate of the percentage of the total spinners killed that died due to known entrapment in folds or canopies of webbing. 3 digits.

Appendix 2J. (Continued)

Field Name	Columns	Description
TRAP_OTH_KILL	474-476	The observer's best estimate of the percentage of the total "Other Species" killed due to known entrapment in folds or canopies of webbing, 3 digits.
SACKUP_SPT_KILL	477-479	The observer's best estimate of the percentage of the total spotters killed that died during the sacking-up process, 3 digits.
SACKUP_SPN_KILL	480-482	The observer's best estimate of the percentage of the total spinners killed that died during the sacking-up process, 3 digits.
SACKUP_OTH_KILL	483-485	The observer's best estimate of the percentage of "Other Species" killed that died during the sacking-up process, 3 digits.
OTHER_SPT_KILL	486-488	The observer's best estimate of the percentage of total spotters killed that died due to reasons other than described above, 3 digits.
OTHER_SPN_KILL	489-491	The observer's best estimate of the percentage of total spinners killed that died due to reasons other than described above, 3 digits.
OTHER_OTH_KILL	492-494	The observer's best estimate of the percentage of total "Other Species" killed that died due to reasons other than described above, 3 digits.
UNK_SPT_KILL	495-497	The observer's best estimate of the percentage of total spotters killed that died because of unknown causes, 3 digits.
UNK_SPN_KILL	498-500	The observer's best estimate of the percentage of total spinners killed that died because of unknown causes, 3 digits.
UNK_OTH_KILL	501-503	The observer's best estimate of the percentage of total "Other Species" killed that died because of unknown causes, 3 digits.
OTHER_SPC_KILL	504-505	The two-digit code number assigned to the "Other Species" referred to in percentage Other Species column.
EQUIP_MALF	506-506	The coded answer to the question, "Did any equipment malfunction(s) occur during the progress of this set, from start of chase until the time the boat was underway again?" Yes = 1, No = 2.
MALF_DELAY_SET	507-507	The coded answer to the question, "Did one or more of the equipment malfunctions that occurred in this set result in an actual delay of the set procedure?" Yes = 1, No = 2, Not Applicable = 3, if no malfunction. (NOTE: Some malfunctions may not cause effective delay of the set procedure, but may be jury-rigged or worked around, and repaired after the set.)
MALF_DELAY_MIN	508-510	The estimated number of minutes that the completion of the set was delayed due to equipment malfunction, 3 digits.
PORP_IN_NET	511-511	The coded answer to the question, "Were marine mammals in the net during the malfunction(s) that occurred during this set?" Yes = 1, No = 2, Not Applicable = 3, if no malfunction.

Appendix 2J. (Continued)

Field Name	Columns	Description
SET_ABORTED	512-512	The coded answer to the question, "Were the entire contents of the net lost involuntarily or released by the crew, due to circumstances beyond their control?" This applies to a set in which normal completion of the set is impossible because of a malfunction. Yes = 1, No = 2.
TIME_SET_ABORT	513-516	The local time at which the set was aborted, 4 digits.
NET_DUMPED	517-517	The coded answer to the question, "Were the contents of the net deliberately released after the rings came up?" Yes = 1, No = 2.
TIME_NET_DUMPED	518-521	The local time at which the contents of the net were deliberately released, 4 digits.
(FILLER)	522-525	Non-data remnant of data processing.
BIRDS_CUE	526-526	The coded answer to the question, "Were birds the initial cue leading to this set?" Yes = 1, No = 2.
BIRDS	527-527	The coded answer to the question, "Were birds associated with this set?" Yes = 1, No = 2.
FISHLOSS	528-528	The coded answer to the question, "Did tuna escape the net over the corks at anytime after rings up?" Yes = 1, No = 2.
MODIFY_GEAR	529-529	The coded answer to the question, "Were any gear modifications specifically designed for non-porpoise fishing used this set?" Yes = 1, No = 2.

Appendix 2K. Record format and definitions for Set Log data collected by the NMFS Tuna-Porpoise Observer Program from 1989-1990.

Field Name	Columns	Description
CRUISE	1-4	The unique four-digit number assigned to this cruise.
SET	5-7	The three digit consecutive number for the present set.
(FILLER)	8-9	Non-data remnant of data processing.
DATE	10-15	The year, month and day (yymmdd) on which this event happened, 6 digits.
LATITUDE	16-19	The latitude in degrees (2 digits) and minutes (2 digits) north or south of the equator at which the set is made.
N_OR_S	20-20	The hemisphere of the latitude, coded one-digit: North = 1, South = 2.
LONGITUDE	21-25	The longitude in degrees (3 digits) and minutes (2 digits) east or west of Greenwich, England, at which the set is made.
E_OR_W	26-26	The hemisphere of the longitude, coded one-digit: East = 1, West = 2.
SET_TYPE	27-28	The two-digit code number identifying the set type as determined by the observer (Code Table 8).
TIME_CHASE_BEGAN	29-32	The time when the first speedboat(s) was lowered onto the water, 4 digits (blank if speedboats were not used).
NUM_BOATS_USED	33-33	The maximum number of speedboats in use at any one time while herding the marine mammals 1 digit.
E1_PORP_TOT	34-37	The crew's estimate #1 of the entire school size before the set, 4 digits.
E1_SPT	38-40	The crew's estimate #1 of percentage of spotters in the school before set, 3 digits.
E1_SPN	41-43	The crew's estimate #1 of percentage of spinners in the school before set, 3 digits.
E1_OTHER_SP1	44-46	The crew's estimate #1 of percentage of other species (1) in the school before the set, 3 digits.
E1_OTHER_SP2	47-49	The crew's estimate #1 of percentage of other species (2) in the school before the set, 3 digits.
SPC_OTHER_SP1	50-51	The two-digit code number assigned to identify the species indicated as Other SP. 1.
E2_PORP_TOT	52-55	The crew's estimate #2 of the entire school size before the set, 4 digits.
E2_SPT	56-58	The crew's estimate #2 of percentage of spotters in the school before the set, 3 digits.
E2_SPN	59-61	The crew's estimate #2 of percentage of spinners in the school before the set, 3 digits.
E2_OTHER_SP1	62-64	The crew's estimate #2 of percentage of other species (1) in the school before the set, 3 digits.
E2_OTHER_SP2	65-67	The crew's estimate #2 of percentage of other species (2) in the school before the set, 3 digits.
SPC_OTHER_SP2	68-69	The two-digit code number assigned to identify the species indicated as Other Sp. 2.
(FILLER)	70-83	Non-data remnant of data processing.
SKIP_PORP_TOT	84-87	The Captain's estimate #3 of the entire school size before the set, 4 digits.
SKIP_SPT	88-90	The Captain's estimate #3 of percentage of spotters in the school before the set, 3 digits.

Appendix 2K. (Continued)

Field Name	Columns	Description
SKIP_SPN	91-93	The Captain's estimate #3 of percentage of spinners in the school before the set, 3 digits.
SKIP_OTHER_SP1	94-96	The Captain's estimate #3 of percentage of other species (1) in the school before the set, 3 digits.
SKIP_OTHER_SP2	97-99	The Captain's estimate #3 of percentage of other species (2) in the school before the set, 3 digits.
OBS_BST_EST_BEF	100-103	The observer's best estimate of the total number of marine mammals in the entire school before the set, 4 digits. (Note: The best estimate does not have to be the mean of the high and low estimates.)
OBS_HI_EST_BEF	104-107	The observer's estimate of the maximum possible number of marine mammals in the entire school before the set, 4 digits.
OBS_LO_EST_BEF	108-111	The observer's estimate of the minimum possible number of marine mammals in the entire school before the set, 4 digits.
OBS_SPT_BEF	112-114	The observer's estimate of percentage of spotters in the school before the set, 3 digits.
OBS_EASTERN_BEF	115-117	The observer's estimate of percentage of eastern spinners in the school before the set, 3 digits.
OBS_WB_BEF	118-120	The observer's estimate of percentage of whitebelly spinners in the school before the set, 3 digits.
OBS_SPN2_BEF	121-123	The observer's estimate of percentage of other or unidentified spinners in the school before the set, 3 digits.
OBS_OTHR1_BEF	124-126	The observer's estimate of percentage of other species (1) in the school before the set, 3 digits.
OBS_OTHR2_BEF	127-129	The observer's estimate of percentage of other species (2) in the school before the set, 3 digits.
OBS_SPT_CD_BEF	130-131	The two-digit code number assigned to identify the spotted stock.
OBS_SPN2_CD_BEF	132-133	The two-digit code number assigned to identify other spinner or unidentified spinner stocks.
OBS_OTHR1_CD_BEF	134-135	The two-digit code number assigned to identify the species indicated as Other SP. 1.
OBS_OTHR2_CD_BEF	136-137	The two-digit code number assigned to identify the species indicated as Other SP. 2.
TIME_NET_LET_GO	138-141	The local time at which the net skiff hits the water, 4 digits.
EVADED_SET	142-142	The coded answer to the question, "Did any marine mammals evade being encircled by behavioral dexterity or slyness? Yes = 1, No = 2.
TOT_EVADED_SET	143-146	The observer's estimate of the number of marine mammals that evade being encircled by behavioral dexterity or slyness, 4 digits.
SPC_EVADED_SET	147-148	The two-digit code number assigned to identify the major species/stock that evaded encirclement.



Appendix 2K. (Continued)

Field Name	Columns	Description
EXPL_CLASS3_USED	149-149	The coded answer to the question, "Were any Class "C" explosives, aka seal bombs, used within 100 yards of the porpoise in this school at any time during the chase or set?" Yes = 1, No = 2, Blank if unobservable or undetermined.
(FILLER)	150-157	Non-data remnant of data processing.
OBS_BST_EST_ENC	158-161	The observer's best estimate of the total number of marine mammals encircled, 4 digits.
OBS_HI_EST_ENC	162-165	The observer's estimate of the maximum possible number of marine mammals encircled, 4 digits.
OBS_LO_EST_ENC	166-169	The observer's estimate of the minimum possible number of marine mammals encircled, 4 digits.
OBS_SPT_ENC	170-172	The observer's estimate of percentage of spotters encircled, 3 digits.
OBS_EASTERN_ENC	173-175	The observer's estimate of percentage of eastern spinners encircled, 3 digits.
OBS_WB_ENC	176-178	The observer's estimate of percentage of whitebelly spinners encircled, 3 digits.
OBS_SPN2_ENC	179-181	The observer's estimate of percentage of other or unidentified spinners encircled, 3 digits.
OBS_OTHR1_ENC	182-184	The observer's estimate of percentage of other species (1) encircled, 3 digits.
OBS_OTHR2_ENC	185-187	The observer's estimate of percentage of other species (2) encircled, 3 digits.
OBS_SPT_CD_ENC	188-189	The two-digit code number assigned to identify the spotted stock.
OBS_SPN2_CD_ENC	190-191	The two-digit code number assigned to identify other spinners or unidentified spinner stocks.
OBS_OTHR1_CD_ENC	192-193	The two-digit code number assigned to identify the species indicated as Other Sp. 1.
OBS_OTHR2_CD_ENC	194-195	The two-digit code number assigned to identify the species indicated as Other Sp. 2.
WIND_TOWLINE_IN	196-197	The wind speed in knots at the time the towline was brought aboard, 2 digits.
WIND_BEARING	198-200	The direction in degrees from which the wind was blowing at the time the towline was brought aboard, using the vessel as the reference; i.e., bow is 000°, right (starboard) beam is 090°, directly astern is 180°, left (port) beam is 270°, and so on, 3 digits.
SWELL_TOWLINE_IN	201-202	The height of the primary swell in feet at the time the towline was brought aboard, 2 digits. (Swell is waves raised by distant wind systems, or by winds that have ceased to blow.)
TIME_RINGS_UP	203-206	The local time at which the purse rings were brought above the surface of the water, 4 digits.
ESCAP_BEF_RNG_UP	207-207	The coded answer to the question, "Did any of the encircled marine mammals evade being captured by escaping the net, unaided, prior to rings up?" Yes = 1, No = 2.
NUM_ESCAP_BEF	208-211	The observer's estimate of the number of marine mammals encircled that evaded capture by escaping the net, unaided, prior to rings up, 4 digits.

Appendix 2K. (Continued)

Field Name	Columns	Description
SPC_ESCAP_BEF	212-213	The two-digit code assigned to identify the major species/stock that escaped the net before the rings came up.
E1_TOT_CATCH	214-217	The crew's estimate #1 of the total number of live marine mammals in the net when the rings came up, 4 digits.
E1_SPT_CATCH	218-220	The crew's estimate #1 of the percentage of spotters in the net when the rings came up, 3 digits.
E1_SPN_CATCH	221-223	The crew's estimate #1 of the percentage of spinners in the net when the rings came up, 3 digits.
E1_OTHER1_CATCH	224-226	The crew's estimate #1 of the percentage of other species (1) in the net when the rings came up, 3 digits.
E1_OTHER2_CATCH	227-229	The crew's estimate #1 of the percentage of other species (2) in the net when the rings came up, 3 digits.
(FILLER)	230-231	Non-data remnant of data processing.
OTHER1CODE_CATCH	232-233	The two-digit code number assigned to identify the species indicated as Other SP. 1.
E2_TOT_CATCH	234-237	The crew's estimate #2 of the total number of live marine mammals in the net when the rings came up, 4 digits.
E2_SPT_CATCH	238-240	The crew's estimate #2 of the percentage of spotters in the net when the rings came up, 3 digits.
E2_SPN_CATCH	241-243	The crew's estimate #2 of the percentage of spinners in the net when the rings came up, 3 digits.
E2_OTHER1_CATCH	244-246	The crew's estimate #2 of the percentage of other species (1) in the net when the rings came up, 3 digits.
E2_OTHER2_CATCH	247-249	The crew's estimate #2 of the percentage of other species (2) in the net when the rings came up.
OTHER2CODE_CATCH	250-251	The two-digit code number assigned to identify the species indicated as Other SP. 2.
SKIP_TOT_CATCH	252-255	The Captain's estimate #3 of the total number of live marine mammals in the net when the rings came up, 4 digits.
SKIP_SPT_CATCH	256-258	The Captain's estimate # 3 of the percentage of spotters in the net when the rings came up, 3 digits.
SKIP_SPN_CATCH	259-261	The Captain's estimate #3 of the percentage of spinners in the net when the rings came up, 3 digits.
SKIP_OTHER1_CATCH	262-264	The Captain's estimate #3 of the percentage of other species (1) in the net when the rings came up, 3 digits.
SKIP_OTHER2_CATCH	265-267	The Captain's estimate #3 of the percentage of other species (2) in the net when the rings came up, 3 digits.
OBS_BST_EST_CAP	268-271	The observer's best estimate of the total number of marine mammals in the net when the rings came up, 4 digits. (Note: The best estimate does not have to be the mean of the high and low estimates.)
OBS_HI_EST_CAP	272-275	The observer's estimate of the maximum possible number of marine mammals in the net when the rings came up, 4 digits.
OBS_LO_EST_CAP	276-279	The observer's estimate of the minimum possible number of marine mammals in the net when the rings came up, 4 digits.

Appendix 2K. (Continued)

Field Name	Columns	Description
OBS_SPT_CAP	280-282	The observer's estimate of the percentage of spotters in the net when rings came up, 3 digits.
OBS_EASTERN_CAP	283-285	The observer's estimate of the percentage of eastern spinners in the net when the rings came up, 3 digits.
OBS_WB_CAP	286-288	The observer's estimate of the percentage of whitebelly spinners in the net when the rings came up, 3 digits.
OBS_SPN2_CAP	289-291	The observer's estimate of the percentage of other or unidentified spinners in the net when the rings came up, 3 digits.
OBS_OTHR1_CAP	292-294	The observer's estimate of the percentage of other species (1) in the net when the rings came up, 3 digits.
OBS_OTHR2_CAP	295-297	The observer's estimate of the percentage of other species (2) in the net when the rings came up, 3 digits.
OBS_SPT_CD_CAP	298-299	The two-digit code number assigned to identify the spotted stock.
OBS_SPN2_CD_CAP	300-301	The two-digit code number assigned to identify other spinners or unidentified spinner stocks.
OBS_OTHR1_CD_CAP	302-303	The two-digit code number assigned to identify the species indicated as Other SP. 1.
(FILLER)	304-305	Non-data remnant of data processing.
OBS_OTHR2_CD_CAP	306-307	The two-digit code number assigned to identify the species indicated as Other SP. 2.
NUM_BD_SPEEDBOAT	308-308	The total number of manned speedboats in the water continuously until backdown commenced or, if no backdown, until the time the normal tie-down point for backdown is reached, 1 digit. Note: Continuously means from the time the net was let go until the time the vessel begins preparation for the backdown maneuver; i.e., around the time of tiedown.
BOAT_TOW_BEF_BD	309-309	The coded answer to the question, "Did speedboats attach to the net (corkline or bunches) and tow on the net prior to backdown?" Yes = 1, No = 2; Not Applicable = 3, if no backdown).
COLLAPSE_BEF_BD	310-310	The coded answer to the question, "For whatever reason, was the open surface area of the net so seriously reduced that marine mammals in the net were forced into contact with the webbing before backdown was initiated?" Yes = 1, No = 2, Not Applicable = 3, if no backdown.
COLLAPSE_KIL_BEF	311-311	The coded answer to the question, "Were marine mammals killed as a result of a net collapse prior to backdown?" Yes = 1, No = 2, Not Applicable = 3, if no backdown.
BOAT_INFLU_PORP	312-312	The coded answer to the question, "During the period between rings up and start backdown, were speedboats used to attempt to influence either the behavior or location of marine mammals in the net?" Yes = 1, No = 2, Not Applicable = 3, if no backdown.
BOAT_ADJ_BD_AREA	313-313	The coded answer to the question, "Was a speedboat used to open or adjust the corkline that formed the backdown area prior to backdown?" Yes = 1, No = 2, Not Applicable = 3.

Appendix 2K. (Continued)

Field Name	Columns	Description
RESCU_EFF_BEF_BD	314-314	The coded answer to the question, "Was anyone actively engaged in rescue effort to aid in the release of marine mammals prior to backdown?" Yes = 1, No = 2.
NUM_RESCUERS_BEF	315-316	The total number of men actively engaged in rescue effort prior to backdown, 2 digits.
RELS_RAFT_BEF_BD	317-317	The coded answer to the question, "Was a raft used to aid marine mammal rescue effort prior to backdown?" Yes = 1, No = 2.
RELS_BOAT_BEF_BD	318-318	The coded answer to the question, "Were speedboat(s) at the corkline used to aid marine mammal rescue effort prior to backdown?" Yes = 1, No = 2.
RELS_SWMR_BEF_BD	319-319	The coded answer to the question, "Were men in the water involved in rescue effort to aid in release of marine mammals prior to backdown?" Yes = 1, No = 2.
RELS_OTHR_BEF_BD	320-320	The coded answer to the question, "Were other methods used to aid marine mammal rescue effort prior to backdown?" Yes = 1, No = 2.
LIVE_REL_BEF_BD	321-323	The observer's best estimate of the total number of live or live injured marine mammals released prior to backdown, 3 digits.
ESCAP_AFT_RNG_UP	324-324	The coded answer to the question, "Did any captured marine mammals escape unaided from the net after rings up but before backdown started?" Yes = 1, No = 2.
NUM_ESCAP_AFT	325-327	The observer's best estimate of the number of live or live injured captured marine mammals that escaped unaided after rings up but before backdown started, 3 digits.
BACKDOWN	328-328	The coded answer to the question, "Did the vessel employ the backdown technique to rescue marine mammals during this set?" Yes = 1, No=2.
TIME_START_BD	329-332	The local time at which the backdown procedure is initiated; i.e., the first time at which the engines are shifted into reverse after the net is tied down, 4 digits; blank if no backdown.
NUM_BUNCHES	333-333	The number of bow corkline bunches pulled at the time backdown started, 1 digit; blank if no backdown.
SUNDOWN	334-334	The coded answer to the question, "Did any or all of the backdown maneuver occur in darkness?" Yes = 1, No = 2; blank if no backdown.
LITS_140K_DUR_BD	335-335	The coded answer to the question. "Was a lighting system capable of 140,000 lumens of output used to enhance the release of cetaceans during backdown?" Yes = 1, No = 2; blank if no backdown.
PNL_COVR_BD_AREA	336-336	Coded answer to the question, "Did the porpoise safety panel and/or apron (1-1/4" mesh) start at the outboard end of the last bunch pulled and extend around the backdown channel to two-thirds the distance from the backdown apex to the stern tie down point?" Yes = 1, No = 2; blank if no backdown.

Appendix 2K. (Continued)

Field Name	Columns	Description
NET_TIED_DOWN	337-337	The coded answer to the question, "Was the net tied down for backdown at the marked floats in the stern and at the marked bunchlines at the bow?" Yes = 1, No = 2, Not Applicable = 3, if vessel does not have an apron system; blank if no backdown.
TIME_END_BD	338-341	The local time at which the backdown procedure was finished, i.e., the time at which the engines are shifted out of reverse for the last time and the corks at the apex of the channel are up, 4 digits; blank if no backdown.
BST_EST_RELS_DUR	342-345	The observer's best estimate of the total number of marine mammals released due to the backdown process, 4 digits; blank if no backdown or if backdown occurs in darkness. (Do not include animals hand released by rescuers during backdown.)
HI_EST_RELS_DUR	346-349	The observer's best estimate of the maximum possible number of marine mammals released due to the backdown process, 4 digits; blank if no backdown or if backdown occurs in darkness. (Do not include animals hand released by rescuers during backdown.)
LO_EST_RELS_DUR	350-353	The observer's best estimate of the minimum possible number of marine mammals released due to the backdown process, 4 digits; blank if no backdown or if backdown occurs in darkness. (Do not include animals hand released by rescuers during backdown.)
FISH_LOSS_DUR_BD	354-354	The coded answer to the question, "Did tuna escape the net during the backdown process?" Yes = 1, No = 2; blank if no backdown.
NUM_LOSS_DUR_BD	355-357	The observer's best estimate of the number of short tons of tuna lost during backdown, 3 digits; blank if none lost or if backdown did not occur. (Input from cork tenders and Captain should be solicited.)
CANOPIES_PRESENT	358-358	The coded answer to the question, "During the backdown process, did you observe canopies of webbing with marine mammals in them?" Yes = 1, No = 2; blank if no backdown.
CANOPY_BD_KILL	359-359	The coded answer to the question, "Were marine mammals killed as a result of canopies that occurred during backdown?" Yes = 1, No = 2, Not Applicable = 3, if no canopies; blank if no backdown.
RESCU_EFF_DUR_BD	360-360	The coded answer to the question, "Were men in position prepared to aid in the rescue of cetaceans during backdown?" Yes = 1, No = 2; blank if no backdown.
NUM_RESCUERS_DUR	361-362	The total number of men prepared to engage in rescue effort during backdown, 2 digits; blank if no backdown. Count each man only once if involved in different types of rescue.
RELS_BOAT_DUR_BD	363-363	The coded answer to the question, "Were speedboat(s) at the corkline prepared to aid cetacean rescue effort during backdown?" Yes = 1, No = 2; blank if no backdown.

Appendix 2K. (Continued)

Field Name	Columns	Description
RELS_RAFT_DUR_BD	364-364	The coded answer to the question, "Was a raft in the water prepared to aid cetacean rescue effort during backdown?" Yes = 1, No = 2; blank if no backdown.
FACEMASK_EFF_DUR	365-365	The coded answer to the question, "Did one of the rescuers in position during backdown use a facemask to look into the net?" Yes = 1. No = 2; blank if no backdown.
RELS_SWMR_DUR_BD	366-366	The coded answer to the question, "Were men in the water prepared to engage in rescue effort to aid in the release of cetaceans during backdown?" Yes = 1, No = 2; blank if no backdown.
RELS_OTHR_DUR_BD	367-367	The coded answer to the question, "Were other methods used to aid cetacean rescue effort during backdown?" Yes = 1, No = 2; blank if no backdown.
LIVE_REL_DUR_BD	368-370	The observer's best estimate of the total number of live cetaceans released during backdown, three digits; blank if no backdown.
TOT_LIVE_AFT_BD	371-373	The observer's best estimate of the total number of live cetaceans left in the net after backdown, three digits; blank if no backdown.
NUM_DEAD_DECK	374-377	The total number of dead cetaceans that were brailed aboard or in any other way came onto or across the work deck during this set, four digits; if no dead cetaceans cross the deck, enter zeroes. Do not count animals that were thrown overboard directly from the net or net pile.
(FILLER)	378-379	Non-data remnant of data processing.
RELS_RAFT_AFT_BD	380-380	The coded answer to the question, "Was a raft used to aid marine mammal rescue effort after backdown, or if no backdown, at anytime during the set?" Yes = 1, No = 2.
NUM_MEN_RAFT_AFT	381-381	The number of men actively engaged in rescue effort to aid in release of marine mammals from raft(s) after backdown, or if no backdown, at anytime during the set, 1 digit.
NUM_REL_RAFT_AFT	382-384	The number of live or live injured marine mammals released by men in raft(s) after back-down, or if no backdown, at anytime during the set, 3 digits.
RELS_BOAT_AFT_BD	385-385	The coded answer to the question, "Were speedboats at the corkline used to aid marine mammal rescue effort after backdown, or if no backdown, at anytime during the set?" Yes = 1, No = 2.
NUM_MEN_BOAT_AFT	386-386	The number of men actively engaged in rescue effort to aid in release of marine mammals from speedboat(s) after backdown, or if no backdown, at anytime during the set, 1 digit
NUM_REL_BOAT_AFT	387-389	The number of live or live injured marine mammals released by men in speedboat(s) after backdown, or if no backdown, at anytime during the set, 3 digits.

Appendix 2K. (Continued)

Field Name	Columns	Description
RELS_SWMR_AFT_BD	390-390	The coded answer to the question, "Were men in the water involved in rescue effort to aid in release of marine mammals after backdown, or if no backdown, at anytime during the set?" Yes = 1, No = 2.
NUM_SWMR_AFT_BD	391-391	The number of men in the water actively engaged in rescue effort to aid in release of marine mammals after backdown, or anytime during the set, 1 digit.
NUM_REL_SWMR_AFT	392-394	The number of live or live injured marine mammals released by men in the backdown or, if no backdown, at anytime the set, 3 digits.
RELS_OTHR_AFT_BD	395-395	The coded answer to the question, "Were other methods used to aid marine mammal rescue effort after backdown, or if no backdown, at anytime during the set?" Yes = 1, No = 2.
NUM_MEN_OTHR_AFT	396-396	The number of men actively engaged in other methods of rescue effort to aid in release of marine mammals after backdown, or if no backdown, at anytime during the set, 1 digit.
NUM_REL_OTHR_AFT	397-399	The number of live or live injured marine mammals released by other methods after backdown, or if no backdown, at anytime during the set, 3 digits.
NUM_RESCUERS_AFT	400-401	The total number of men actively engaged in rescue effort after backdown, or if no backdown, at anytime during the set, 2 digits; enter zeroes if no rescue effort. (Count each man only once if involved in more than one type of rescue.) Note: Don't count men releasing marine mammals from deck or from sack.
RELS_DECK_AFT_BD	402-402	The coded answer to the question, "Were live marine mammals brought on board and released over the deck alive after backdown, or if no backdown, at anytime during the set?" Yes = 1, No = 2.
NUM_REL_DECK_AFT	403-405	The number of live or live injured marine mammals released over the deck after backdown or, if no backdown, at anytime during the set, 3 digits.
ESCAP_AFT_BD	406-406	The coded answer to the question, "Did captured marine mammals escape unaided after backdown, or if no backdown, at anytime during the set?" Yes = 1, No = 2.
NUM_ESCAP_AFT_BD	407-409	The number of live or live injured marine mammals that escaped unaided after backdown, or if no backdown, at anytime during the set after capture, 3 digits.
SACKUP	410-410	The coded answer to the question, "Were the contents of the net sacked up?" Yes = 1, No = 2. (NOTE: The "sacking up" procedure is a method of evenly pulling in the excess webbing at the end of the net so that the contents are evenly supported when finally concentrated for brailing.)
TIME_START_SACK	411-414	The local time at which the first pull of the net to begin sacking up is taken, 4 digits; blank if no sack up.

Appendix 2K. (Continued)

Field Name	Columns	Description
NUM_LIV_SRT_SACK	415-417	The total number of live marine mammals in the net at the time sack up was initiated, 3 digits; blank if no sack up.
RELS_SACK_AFT_BD	418-418	The coded answer to the question, "Was there an effort to release live marine mammals from the net after sack up was initiated?" Yes = 1, No = 2; blank if no sack up.
NUM_MEN_SACK_AFT	419-419	The number of men actively engaged in rescue effort to aid in release of marine mammals from the sack, 1 digit; blank if no sack up or rescue effort.
NUM_REL_SACK_AFT	420-422	The number of live or live injured marine mammals released from the sack due to rescue effort, 3 digits; blank if no sack up or rescue effort.
BRAILING	423-423	The coded answer to the question, "Were contents of the net brailed aboard?" Yes = 1, No = 2.
TIME_START_BRAIL	424-427	The local time at which the first brailer of fish is scooped out of the net, 4 digits; blank if no brailing.
NUM_LIV_BEF_BRAL	428-430	The total number of live or live injured marine mammals in the net at time brailing commenced, 3 digits.
TIME_END_BRAIL	431-434	The local time at which the last brailer of fish is dumped on the boat, 4 digits; blank if no brailing.
TIME_END_SET	435-438	The local time at which the skiff is secured on the deck. If the skiff is not brought aboard by choice (due to factors that did not occur during the set), enter the approximate time that normal operations would have ended, 4 digits.
CURRENT_STRONG	439-439	The coded answer to the question, "Was a strong current present at any time during the set?" Yes = 1, No = 2. (NOTE: Strong currents are two knots or greater.)
KNOWN_KILLED	440-443	The total number of marine mammals that were positively determined to be dead (ADD) in this set, i.e., the sum of the checks on the tally sheet, 4 digits.
KNOWN_INJURED	444-445	The total number of marine mammals that were injured in this set, 2 digits. Sum all + and ? on tally sheet, plus all injured prior to and during backdown.
TONS_YF	446-448	The best estimate of the total tons of yellowfin tuna loaded aboard during this set, 3 digits; enter zeroes if none loaded.
TONS_SK	449-451	The best estimate of the total tons of skipjack tuna loaded aboard during this set, 3 digits; enter zeroes if none loaded.
(FILLER)	452-453	Non-data remnant of data processing.
TONS_OTHER_FISH	454-456	The best estimate of the number of tons of fish species other than yellowfin or skipjack that were loaded aboard during this set, enter zeroes if none loaded.
OTHER_FISH_CODE	457-458	The two-digit code number assigned to the species of fish designated under Tons Other Sp. in this set (Code Table 10).
TANGL_SPT_KILL	459-461	The observer's best estimate of the percentage of total spotters killed that died due to known entanglement, 3 digits. (Note: Entanglement means stuck to the net by a part of the body, i.e., flukes, snout or flipper.)



Appendix 2K. (Continued)

Field Name	Columns	Description
TANGL_SPN_KILL	462-464	The observer's best estimate of the percentage of total spinners killed that died due to known entanglement, 3 digits.
TANGL_OTH_KILL	465-467	The observer's best estimate of the percentage of the total "Other Species" killed due to known entanglement, 3 digits.
TRAP_SPT_KILL	468-470	The observer's best estimate of the percentage of the total spotters killed that died due to known entrapment in folds or canopies of webbing, 3 digits. (Note: Entrapment means forced contact with the net webbing due to a configuration of the net which traps or poses unusual hazard to marine mammals.
TRAP_SPN_KILL	471-473	The observer's best estimate of the percentage of the total spinners killed that died due to known entrapment in folds or canopies of webbing, 3 digits.
TRAP_OTH_KILL	474-476	The observer's best estimate of the percentage of the total "Other Species" killed due to known entrapment in folds or canopies of webbing, 3 digits.
SACKUP_SPT_KILL	477-479	The observer's best estimate of the percentage of the total spotters killed that died during the sacking-up process, 3 digits.
SACKUP_SPN_KILL	480-482	The observer's best estimate of the percentage of the total spinners killed that died during the sacking-up process, 3 digits.
SACKUP_OTH_KILL	483-485	The observer's best estimate of the percentage of "Other Species" killed that died during the sacking-up process, 3 digits.
OTHER_SPT_KILL	486-488	The observer's best estimate of the percentage of total spotters killed that died due to reasons other than described above, 3 digits.
OTHER_SPN_KILL	489-491	The observer's best estimate of the percentage of total spinners killed that died due to reasons other than described above, 3 digits.
OTHER_OTH_KILL	492-494	The observer's best estimate of the percentage of total "Other Species" killed that died due to reasons other than described above, 3 digits.
UNK_SPT_KILL	495-497	The observer's best estimate of the percentage of total spotters killed that died because of unknown causes, 3 digits.
UNK_SPN_KILL	498-500	The observer's best estimate of the percentage of total spinners killed that died because of unknown causes, 3 digits.
UNK_OTH_KILL	501-503	The observer's best estimate of the percentage of total "Other Species" killed that died because of unknown causes, 3 digits.
OTHER_SPC_KILL	504-505	The two-digit code number assigned to the "Other Species" referred to in percentage Other Species column.
EQUIP_MALF	506-506	The coded answer to the question, "Did any equipment malfunction(s) occur during the progress of this set, from start of chase until the time the boat was underway again?" Yes = 1, No = 2.

Appendix 2K. (Continued)

Field Name	Columns	Description
MALF_DELAY_SET	507-507	The coded answer to the question, "Did one or more of the equipment malfunctions that occurred in this set result in an actual delay of the set procedure?" Yes = 1, No = 2, Not Applicable = 3, if no malfunction. (NOTE: Some malfunctions may not cause effective delay of the set procedure, but may be jury-rigged or worked around, and repaired after the set.)
MALF_DELAY_MIN	508-510	The estimated number of minutes that the completion of the set was delayed due to equipment malfunction, 3 digits.
PORP_IN_NET	511-511	The coded answer to the question, "Were marine mammals in the net during the malfunction(s) that occurred during this set?" Yes = 1, No = 2, Not Applicable = 3, if no malfunction.
SET_ABORTED	512-512	The coded answer to the question, "Were the entire contents of the net lost involuntarily or released by the crew, due to circumstances beyond their control?" This applies to a set in which normal completion of the set is impossible because of a malfunction. Yes = 1, No = 2.
TIME_SET_ABORT	513-516	The local time at which the set was aborted, 4 digits.
NET_DUMPED	517-517	The coded answer to the question, "Were the contents of the net deliberately released after the rings came up?" Yes = 1, No = 2.
TIME_NET_DUMPED	518-521	The local time at which the contents of the net were deliberately released, 4 digits.
TIME_SUNDOWN	522-525	If sunset occurs during the chase/set sequence, record the local time when the sun disappears below the horizon, 4 digits; otherwise, leave blank.
BIRDS_CUE	526-526	The coded answer to the question, "Were birds the initial cue leading to this set?" Yes = 1, No = 2.
BIRDS	527-527	The coded answer to the question, "Were birds associated with this set?" Yes = 1, No = 2.
FISHLOSS	528-528	The coded answer to the question, "Did tuna escape the net over the corks at anytime after rings up?" Yes = 1, No = 2.
MODIFY_GEAR	529-529	The coded answer to the question, "Were any gear modifications specifically designed for non-porpoise fishing used this set?" Yes = 1, No = 2.

Appendix 2L. Record format and definitions for Tally data collected by the NMFS Tuna-Porpoise Observer Program from 1971-1976.

Field Name	Columns	Description
CRUISE	1-3	The unique four-digit number assigned to this cruise.
SET	4-6	The three-digit consecutive number for the present set.
(FILLER)	7-7	Non-data remnant of data processing.
DEAD_NEO_M	8-10	The number of neonate male spotted dolphins that were observed to have been removed from the net in a postmortem status or to have gone through the power block.
DEAD_NEO_F	11-13	The number of neonate female spotted dolphins that were observed to have been removed from the net in a postmortem status or to have gone through the power block.
DEAD_NEO_Q	14-16	The number of neonate spotted dolphins of undetermined sex that were observed to have been removed from the net in a postmortem status or to have gone through the power block.
DEAD_2TONE_M	17-19	The number of two-tone male spotted dolphins that were observed to have been removed from the net in a postmortem status or to have gone through the power block.
DEAD_2TONE_F	20-22	The number of two-tone female spotted dolphins that were observed to have been removed from the net in a postmortem status or to have gone through the power block.
DEAD_2TONE_Q	23-25	The number of two-tone spotted dolphins of undetermined sex that were observed to have been removed from the net in a postmortem status or to have gone through the power block.
DEAD_SPECKL_M	26-28	The number of speckled male spotted dolphins that were observed to have been removed from the net in a postmortem status or to have gone through the power block.
DEAD_SPECKL_F	29-31	The number of speckled female spotted dolphins that were observed to have been removed from the net in a postmortem status or to have gone through the power block.
DEAD_SPECKL_Q	32-34	The number of speckled spotted dolphins of undetermined sex that were observed to have been removed from the net in a postmortem status or to have gone through the power block.
DEAD_MOTL_M	35-37	The number of mottled male spotted dolphins that were observed to have been removed from the net in a postmortem status or to have gone through the power block.
DEAD_MOTL_F	38-40	The number of mottled female spotted dolphins that were observed to have been removed from the net in a postmortem status or to have gone through the power block.

Appendix 2L. (Continued)

Field Name	Columns	Description
DEAD_MOTL_Q	41-43	The number of mottled spotted dolphins of undetermined sex that were observed to have been removed from the net in a postmortem status or to have gone through the power block.
DEAD_ADULT_M	44-46	The number of adult male spotted dolphins that were observed to have been removed from the net in a postmortem status or to have gone through the power block.
DEAD_ADULT_F	47-49	The number of adult female spotted dolphins that were observed to have been removed from the net in a postmortem status or to have gone through the power block.
DEAD_ADULT_Q	50-52	The number of adult spotted dolphins of undetermined sex that were observed to have been removed from the net in a postmortem status or to have gone through the power block.
DEAD_AGE_UNK	53-55	The number of spotted dolphins of unknown age (maturity based on developmental color pattern) or sex that were observed to have been removed from the net in a postmortem status or to have gone through the power block.
DEAD_EASTERN_M	56-58	The number of male eastern spinner dolphins that were observed to have been removed from the net in a postmortem status or to have gone through the power block.
DEAD_EASTERN_F	59-61	The number of female eastern spinner dolphins that were observed to have been removed from the net in a postmortem status or to have gone through the power block.
DEAD_EASTERN_Q	62-64	The number of eastern spinner dolphins of undetermined sex that were observed to have been removed from the net in a postmortem status or to have gone through the power block.
DEAD_WB_M	65-67	The number of male whitebelly spinner dolphins that were observed to have been removed from the net in a postmortem status or to have gone through the power block.
DEAD_WB_F	68-70	The number of female whitebelly spinner dolphins that were observed to have been removed from the net in a postmortem status or to have gone through the power block.
DEAD_WB_Q	71-73	The number of whitebelly spinner dolphins of undetermined sex that were observed to have been removed from the net in a postmortem status or to have gone through the power block.
DEAD_UNID_SPN_M	74-76	The number of male unidentified/other spinner dolphins that were observed to have been removed from the net in a postmortem status or to have gone through the power block.

Appendix 2L. (Continued)

Field Name	Columns	Description
DEAD_UNID_SPN_F	77-79	The number of female unidentified/other spinner dolphins that were observed to have been removed from the net in a postmortem status or to have gone through the power block.
(FILLER)	80-81	Non-data remnant of data processing.
DEAD_UNID_SPN_Q	82-84	The number of unidentified/other spinner dolphins of undetermined sex that were observed to have been removed from the net in a postmortem status or to have gone through the power block.
DEAD_DELF_M	85-87	The number of male <i>Delphinus</i> dolphins that were observed to have been killed in this set.
DEAD_DELF_F	88-90	The number of female <i>Delphinus</i> dolphins that were observed to have been killed in this set.
DEAD_DELF_Q	91-93	The number of <i>Delphinus</i> dolphins of undetermined sex that were observed to have been killed in this set.
DEAD_OTHER_M	94-96	The number of male other species dolphins that were observed to have been killed in this set.
DEAD_OTHER_F	97-99	The number of female other species dolphins that were observed to have been killed in this set.
DEAD_OTHER_Q	100-102	The number of other species dolphins of undetermined sex that were observed to have been killed in this set.
DEAD_UNIDENT	103-105	The number of unidentified dolphins that were observed to have been removed from the net in a postmortem status or to have gone through the power block.
ALIVE_NEO_M	106-108	The number of neonate male spotted dolphins that were observed to have left the net alive and uninjured after backdown or, if there was no backdown, at any time during this set.
ALIVE_NEO_F	109-111	The number of neonate female spotted dolphins that were observed to have left the net alive and uninjured after backdown or, if there was no backdown, at any time during this set.
ALIVE_NEO_Q	112-114	The number of neonate spotted dolphins of undetermined sex that were observed to have left the net alive and uninjured after backdown or, if there was no backdown, at any time during this set.
ALIVE_2TONE_M	115-117	The number of two-tone male spotted dolphins that were observed to have left the net alive and uninjured after backdown or, if there was no backdown, at any time during this set.
ALIVE_2TONE_F	118-120	The number of two-tone female spotted dolphins that were observed to have left the net alive and uninjured after backdown or, if there was no backdown, at any time during this set.
ALIVE_2TONE_Q	121-123	The number of two-tone spotted dolphins of undetermined sex that were observed to have left the net alive and uninjured after backdown or, if there was no backdown, at any time during this set.

Appendix 2L. (Continued)

Field Name	Columns	Description
ALIVE_SPECKL_M	124-126	The number of speckled male spotted dolphins that were observed to have left the net alive and uninjured after backdown or, if there was no backdown, at any time during this set.
ALIVE_SPECKL_F	127-129	The number of speckled female spotted dolphins that were observed to have left the net alive and uninjured after backdown or, if there was no backdown, at any time during this set.
ALIVE_SPECKL_Q	130-132	The number of speckled spotted dolphins of undetermined sex that were observed to have left the net alive and uninjured after backdown or, if there was no backdown, at any time during this set.
ALIVE_MOTL_M	133-135	The number of mottled male spotted dolphins that were observed to have left the net alive and uninjured after backdown or, if there was no backdown, at any time during this set.
ALIVE_MOTL_F	136-138	The number of mottled female spotted dolphins that were observed to have left the net alive and uninjured after backdown or, if there was no backdown, at any time during this set.
ALIVE_MOTL_Q	139-141	The number of mottled spotted dolphins of undetermined sex that were observed to have left the net alive and uninjured after backdown or, if there was no backdown, at any time during this set.
ALIVE_ADULT_M	142-144	The number of adult male spotted dolphins that were observed to have left the net alive and uninjured after backdown or, if there was no backdown, at any time during this set.
ALIVE_ADULT_F	145-147	The number of adult female spotted dolphins that were observed to have left the net alive and uninjured after backdown or, if there was no backdown, at any time during this set.
ALIVE_ADULT_Q	148-150	The number of adult spotted dolphins of undetermined sex that were observed to have left the net alive and uninjured after backdown or, if there was no backdown, at any time during this set.
ALIVE_AGE_UNK	151-153	The number of spotted dolphins of unknown age (maturity based on developmental color pattern) or sex that were observed to have left the net alive and uninjured after backdown or, if there was no backdown, at any time during this set.
(FILLER)	154-155	Non-data remnant of data processing.
ALIVE_EASTERN_M	156-158	The number of male eastern spinner dolphins that were observed to have left the net alive and uninjured after backdown or, if there was no backdown, at any time during this set.
ALIVE_EASTERN_F	159-161	The number of female eastern spinner dolphins that were observed to have left the net alive and uninjured after backdown or, if there was no backdown, at any time during this set.

Appendix 2L. (Continued)

Field Name	Columns	Description
ALIVE_EASTERN_Q	162-164	The number of eastern spinner dolphins of undetermined sex that were observed to have left the net alive and uninjured after backdown or, if there was no backdown, at any time during this set.
ALIVE_WB_M	165-167	The number of male whitebelly spinner dolphins that were observed to have left the net alive and uninjured after backdown or, if there was no backdown, at any time during this set.
ALIVE_WB_F	168-170	The number of female whitebelly spinner dolphins that were observed to have left the net alive and uninjured after backdown or, if there was no backdown, at any time during this set.
ALIVE_WB_Q	171-173	The number of whitebelly spinner dolphins of undetermined sex that were observed to have left the net alive and uninjured after backdown or, if there was no backdown, at any time during this set.
ALIVE_UNID_SPN_M	174-176	The number of male unidentified/other spinner dolphins that were observed to have left the net alive and uninjured after backdown or, if there was no backdown, at any time during this set.
ALIVE_UNID_SPN_F	177-179	The number of female unidentified/other spinner dolphins that were observed to have left the net alive and uninjured after backdown or, if there was no backdown, at any time during this set.
ALIVE_UNID_SPN_Q	180-182	The number of unidentified/other spinner dolphins of undetermined sex that were observed to have left the net alive and uninjured after backdown or, if there was no backdown, at any time during this set.
ALIVE_DELF_M	183-185	The number of alive and uninjured male <i>Delphinus</i> dolphins that were either hand-removed prior to backdown, came on the deck or were taken out of the sack, or if no backdown, were released at any time during this set.
ALIVE_DELF_F	186-188	The number of alive and uninjured female <i>Delphinus</i> dolphins that were either hand-removed prior to backdown, came on the deck or were taken out of the sack, or if no backdown, were released at any time during this set.
ALIVE_DELF_Q	189-191	The number of alive and uninjured <i>Delphinus</i> dolphins of undetermined sex that were either hand-removed prior to backdown, came on the deck or were taken out of the sack, or if no backdown, were released at any time during this set.
ALIVE_OTHER_M	192-194	The number of alive and uninjured male other species dolphins that were either hand-removed prior to backdown, came on the deck or were taken out of the sack, or if no backdown, were released at any time during this set.

Appendix 2L. (Continued)

Field Name	Columns	Description
ALIVE_OTHER_F	195-197	The number of alive and uninjured female other species dolphins that were either hand-removed prior to backdown, came on the deck or were taken out of the sack, or if no backdown, were released at any time during this set.
ALIVE_OTHER_Q	198-200	The number of alive and uninjured other species dolphins of undetermined sex that were either hand-removed prior to backdown, came on the deck or were taken out of the sack, or if no backdown, were released at any time during this set.
ALIVE_UNIDENT	201-203	The number of unidentified dolphins that were observed to have left the net alive and uninjured after backdown or, if there was no backdown, at any time during this set.
INJ_NEO_M	204-206	The number of neonate male spotted dolphins that were observed to have left the net alive but injured (bleeding or broken bones) after backdown or, if there was no backdown, at any time during this set.
INJ_NEO_F	207-209	The number of neonate female spotted dolphins that were observed to have left the net alive but injured (bleeding or broken bones) after backdown or, if there was no backdown, at any time during this set.
INJ_NEO_Q	210-212	The number of neonate spotted dolphins of undetermined sex that were observed to have left the net alive but injured (bleeding or broken bones) after backdown or, if there was no backdown, at any time during this set.
INJ_2TONE_M	213-215	The number of two-tone male spotted dolphins that were observed to have left the net alive but injured (bleeding or broken bones) after backdown or, if there was no backdown, at any time during this set.
INJ_2TONE_F	216-218	The number of two-tone female spotted dolphins that were observed to have left the net alive but injured (bleeding or broken bones) after backdown or, if there was no backdown, at any time during this set.
INJ_2TONE_Q	219-221	The number of two-tone spotted dolphins of undetermined sex that were observed to have left the net alive but injured (bleeding or broken bones) after backdown or, if there was no backdown, at any time during this set.
INJ_SPECKL_M	222-224	The number of speckled male spotted dolphins that were observed to have left the net alive but injured (bleeding or broken bones) after backdown or, if there was no backdown, at any time during this set.
INJ_SPECKL_F	225-227	The number of speckled female spotted dolphins that were observed to have left the net alive but injured (bleeding or broken bones) after backdown or, if there was no backdown, at any time during this set.
(FILLER)	228-229	Non-data remnant of data processing.



Appendix 2L. (Continued)

Field Name	Columns	Description
INJ_SPECKL_Q	230-232	The number of speckled spotted dolphins of undetermined sex that were observed to have left the net alive but injured (bleeding or broken bones) after backdown or, if there was no backdown, at any time during this set.
INJ_MOTL_M	233-235	The number of mottled male spotted dolphins that were observed to have left the net alive but injured (bleeding or broken bones) after backdown or, if there was no backdown, at any time during this set.
INJ_MOTL_F	236-238	The number of mottled female spotted dolphins that were observed to have left the net alive but injured (bleeding or broken bones) after backdown or, if there was no backdown, at any time during this set.
INJ_MOTL_Q	239-241	The number of mottled spotted dolphins of undetermined sex that were observed to have left the net alive but injured (bleeding or broken bones) after backdown or, if there was no backdown, at any time during this set.
INJ_ADULT_M	242-244	The number of adult male spotted dolphins that were observed to have left the net alive but injured (bleeding or broken bones) after backdown or, if there was no backdown, at any time during this set.
INJ_ADULT_F	245-247	The number of adult female spotted dolphins that were observed to have left the net alive but injured (bleeding or broken bones) after backdown or, if there was no backdown, at any time during this set.
INJ_ADULT_Q	248-250	The number of adult spotted dolphins of undetermined sex that were observed to have left the net alive but injured (bleeding or broken bones) after backdown or, if there was no backdown, at any time during this set.
INJ_AGE_UNK	251-253	The number of spotted dolphins of unknown age (maturity based on developmental color pattern) or sex that were observed to have left the net alive but injured (bleeding or broken bones) after backdown or, if there was no backdown, at any time during this set.
INJ_EASTERN_M	254-256	The number of male eastern spinner dolphins that were observed to have left the net alive but injured (bleeding or broken bones) after backdown or, if there was no backdown, at any time during this set.
INJ_EASTERN_F	257-259	The number of female eastern spinner dolphins that were observed to have left the net alive but injured (bleeding or broken bones) after backdown or, if there was no backdown, at any time during this set.
INJ_EASTERN_Q	260-262	The number of eastern spinner dolphins of undetermined sex that were observed to have left the net alive but injured (bleeding or broken bones) after backdown or, if there was no backdown, at any time during this set.
INJ_WB_M	263-265	The number of male whitebelly spinner dolphins that were observed to have left the net alive but injured (bleeding or broken bones) after backdown or, if there was no backdown, at any time during this set.

Appendix 2L. (Continued)

Field Name	Columns	Description
INJ_WB_F	266-268	The number of female whitebelly spinner dolphins that were observed to have left the net alive but injured (bleeding or broken bones) after backdown or, if there was no backdown, at any time during this set.
INJ_WB_Q	269-271	The number of whitebelly spinner dolphins of undetermined sex that were observed to have left the net alive but injured (bleeding or broken bones) after backdown or, if there was no backdown, at any time during this set.
INJ_UNID_SPN_M	272-274	The number of male unidentified/other spinner dolphins that were observed to have left the net alive but injured (bleeding or broken bones) after backdown or, if there was no backdown, at any time during this set.
INJ_UNID_SPN_F	275-277	The number of female unidentified/other spinner dolphins that were observed to have left the net alive but injured (bleeding or broken bones) after backdown or, if there was no backdown, at any time during this set.
INJ_UNID_SPN_Q	278-280	The number of unidentified/other spinner dolphins of undetermined sex that were observed to have left the net alive but injured (bleeding or broken bones) after backdown or, if there was no backdown, at any time during this set.
INJ_DELF_M	281-283	The number of alive but injured (bleeding, broken bones or through the power block) male <i>Delphinus</i> dolphins that were either hand-removed prior to backdown, came on the deck or were taken out of the sack, or if no backdown, were released at any time during this set.
INJ_DELF_F	284-286	The number of alive but injured (bleeding, broken bones or through the power block) female <i>Delphinus</i> dolphins that were either hand-removed prior to backdown, came on the deck or were taken out of the sack, or if no backdown, were released at any time during this set.
INJ_DELF_Q	287-289	The number of alive but injured (bleeding, broken bones or through the power block) <i>Delphinus</i> dolphins of undetermined sex that were either hand-removed prior to backdown, came on the deck or were taken out of the sack, or if no backdown, were released at any time during this set.
INJ_OTHER_M	290-292	The number of alive but injured (bleeding, broken bones or through the power block) male other species dolphins that were either hand-removed prior to backdown, came on the deck or were taken out of the sack, or if no backdown, were released at any time during this set.

Appendix 2L. (Continued)

Field Name	Columns	Description
INJ_OTHER_F	293-295	The number of alive but injured (bleeding, broken bones or through the power block) female other species dolphins that were either hand-removed prior to backdown, came on the deck or were taken out of the sack, or if no backdown, were released at any time during this set.
INJ_OTHER_Q	296-298	The number of alive but injured (bleeding, broken bones or through the power block) other species dolphins of undetermined sex that were either hand-removed prior to backdown, came on the deck or were taken out of the sack, or if no backdown, were released at any time during this set.
INJ_UNIDENT	299-301	The number of unidentified dolphins that were observed to have left the net alive but injured (bleeding or broken bones) after backdown or, if there was no backdown, at any time during this set.
(FILLER)	302-303	Non-data remnant of data processing.
Q_NEO_M	304-306	The number of neonate male spotted dolphins that were observed to have left the net in a condition that could not be categorized as dead or alive.
Q_NEO_F	307-309	The number of neonate female spotted dolphins that were observed to have left the net in a condition that could not be categorized as dead or alive.
Q_NEO_Q	310-312	The number of neonate spotted dolphins of undetermined sex that were observed to have left the net in a condition that could not be categorized as dead or alive.
Q_2TONE_M	313-315	The number of two-tone male spotted dolphins that were observed to have left the net in a condition that could not be categorized as dead or alive.
Q_2TONE_F	316-318	The number of two-tone female spotted dolphins that were observed to have left the net in a condition that could not be categorized as dead or alive.
Q_2TONE_Q	319-321	The number of two-tone spotted dolphins of undetermined sex that were observed to have left the net in a condition that could not be categorized as dead or alive.
Q_SPECKL_M	322-324	The number of speckled male spotted dolphins that were observed to have left the net in a condition that could not be categorized as dead or alive.
Q_SPECKL_F	325-327	The number of speckled female spotted dolphins that were observed to have left the net in a condition that could not be categorized as dead or alive.
Q_SPECKL_Q	328-330	The number of speckled spotted dolphins of undetermined sex that were observed to have left the net in a condition that could not be categorized as dead or alive.
Q_MOTL_M	331-333	The number of mottled male spotted dolphins that were observed to have left the net in a condition that could not be categorized as dead or alive.

Appendix 2L. (Continued)

Field Name	Columns	Description
Q_MOTL_F	334-336	The number of mottled female spotted dolphins that were observed to have left the net in a condition that could not be categorized as dead or alive.
Q_MOTL_Q	337-339	The number of mottled spotted dolphins of undetermined sex that were observed to have left the net in a condition that could not be categorized as dead or alive.
Q_ADULT_M	340-342	The number of adult male spotted dolphins that were observed to have left the net in a condition that could not be categorized as dead or alive.
Q_ADULT_F	343-345	Q_ADULT_F: The number of adult female spotted dolphins that were observed to have left the net in a condition that could not be categorized as dead or alive.
Q_ADULT_Q	346-348	The number of adult spotted dolphins of undetermined sex that were observed to have left the net in a condition that could not be categorized as dead or alive.
Q_AGE_UNK	349-351	The number of spotted dolphins of unknown age (maturity based on developmental color pattern) or sex that were observed to have left the net in a condition that could not be categorized as dead or alive.
Q_EASTERN_M	352-354	The number of male eastern spinner dolphins that were observed to have left the net in a condition that could not be categorized as dead or alive.
Q_EASTERN_F	355-357	The number of female eastern spinner dolphins that were observed to have left the net in a condition that could not be categorized as dead or alive.
Q_EASTERN_Q	358-360	The number of eastern spinner dolphins of undetermined sex that were observed to have left the net in a condition that could not be categorized as dead or alive.
Q_WB_M	361-363	The number of male whitebelly spinner dolphins that were observed to have left the net in a condition that could not be categorized as dead or alive.
Q_WB_F	364-366	The number of female whitebelly spinner dolphins that were observed to have left the net in a condition that could not be categorized as dead or alive.
Q_WB_Q	367-369	The number of whitebelly spinner dolphins of undetermined sex that were observed to have left the net in a condition that could not be categorized as dead or alive.
Q_UNID_SPN_M	370-372	The number of male unidentified/other spinner dolphins that were observed to have left the net in a condition that could not be categorized as dead or alive.
Q_UNID_SPN_F	373-375	The number of female unidentified/other spinner dolphins that were observed to have left the net in a condition that could not be categorized as dead or alive.
(FILLER)	376-377	Non-data remnant of data processing.

Appendix 2L. (Continued)

Field Name	Columns	Description
Q_UNID_SPN_Q	378-380	The number of unidentified/other spinner dolphins of undetermined sex that were observed to have left the net in a condition that could not be categorized as dead or alive.
Q_DELF_M	381-383	The number of male <i>Delphinus</i> dolphins that were observed to be in a condition that could not be categorized as dead or alive.
Q_DELF_F	384-386	The number of female <i>Delphinus</i> dolphins that were observed to be in a condition that could not be categorized as dead or alive.
Q_DELF_Q	387-389	The number of <i>Delphinus</i> dolphins of undetermined sex that were observed to be in a condition that could not be categorized as dead or alive.
Q_OTHER_M	390-392	The number of male other species dolphins that were observed to be in a condition that could not be categorized as dead or alive.
Q_OTHER_F	393-395	The number of female other species dolphins that were observed to be in a condition that could not be categorized as dead or alive.
Q_OTHER_Q	396-398	The number of other species dolphins of undetermined sex that were observed to be in a condition that could not be categorized as dead or alive.
Q_UNIDENT	399-401	The number of unidentified dolphins that were observed to have left the net in a condition that could not be categorized as dead or alive.
Q_INJ_NEO_M	402-404	The number of neonate male spotted dolphins that were observed to have left the net in an injured condition (bleeding or broken bones) that could not be categorized as dead or alive.
Q_INJ_NEO_F	405-407	The number of neonate female spotted dolphins that were observed to have left the net in an injured condition (bleeding or broken bones) that could not be categorized as dead or alive.
Q_INJ_NEO_Q	408-410	The number of neonate spotted dolphins of undetermined sex that were observed to have left the net in an injured condition (bleeding or broken bones) that could not be categorized as dead or alive.
Q_INJ_2TONE_M	411-413	The number of two-tone male spotted dolphins that were observed to have left the net in an injured condition (bleeding or broken bones) that could not be categorized as dead or alive.
Q_INJ_2TONE_F	414-416	The number of two-tone female spotted dolphins that were observed to have left the net in an injured condition (bleeding or broken bones) that could not be categorized as dead or alive.

Appendix 2L. (Continued)

Field Name	Columns	Description
Q_INJ_2TONE_Q	417-419	The number of two-tone spotted dolphins of undetermined sex that were observed to have left the net in an injured condition (bleeding or broken bones) that could not be categorized as dead or alive.
Q_INJ_SPECKL_M	420-422	The number of speckled male spotted dolphins that were observed to have left the net in an injured condition (bleeding or broken bones) that could not be categorized as dead or alive.
Q_INJ_SPECKL_F	423-425	The number of speckled female spotted dolphins that were observed to have left the net in an injured condition (bleeding or broken bones) that could not be categorized as dead or alive.
Q_INJ_SPECKL_Q	426-428	The number of speckled spotted dolphins of undetermined sex that were observed to have left the net in an injured condition (bleeding or broken bones) that could not be categorized as dead or alive.
Q_INJ_MOTL_M	429-431	The number of mottled male spotted dolphins that were observed to have left the net in an injured condition (bleeding or broken bones) that could not be categorized as dead or alive.
Q_INJ_MOTL_F	432-434	The number of mottled female spotted dolphins that were observed to have left the net in an injured condition (bleeding or broken bones) that could not be categorized as dead or alive.
Q_INJ_MOTL_Q	435-437	The number of mottled spotted dolphins of undetermined sex that were observed to have left the net in an injured condition (bleeding or broken bones) that could not be categorized as dead or alive.
Q_INJ_ADULT_M	438-440	The number of adult male spotted dolphins that were observed to have left the net in an injured condition (bleeding or broken bones) that could not be categorized as dead or alive.
Q_INJ_ADULT_F	441-443	The number of adult female spotted dolphins that were observed to have left the net in an injured condition (bleeding or broken bones) that could not be categorized as dead or alive.
Q_INJ_ADULT_Q	444-446	The number of adult spotted dolphins of undetermined sex that were observed to have left the net in an injured condition (bleeding or broken bones) that could not be categorized as dead or alive.
Q_INJ_AGE_UNK	447-449	The number of spotted dolphins of unknown age (maturity based on developmental color pattern) or sex that were observed to have left the net in an injured condition (bleeding or broken bones) that could not be categorized as dead or alive.
(FILLER)	450-451	Non-data remnant of data processing.
Q_INJ_EASTERN_M	452-454	The number of male eastern spinner dolphins that were observed to have left the net in an injured condition (bleeding or broken bones) that could not be categorized as dead or alive.

Appendix 2L. (Continued)

Field Name	Columns	Description
Q_INJ_EASTERN_F	455-457	The number of female eastern spinner dolphins that were observed to have left the net in an injured condition (bleeding or broken bones) that could not be categorized as dead or alive.
Q_INJ_EASTERN_Q	458-460	The number of eastern spinner dolphins of undetermined sex that were observed to have left the net in an injured condition (bleeding or broken bones) that could not be categorized as dead or alive.
Q_INJ_WB_M	461-463	The number of male whitebelly spinner dolphins that were observed to have left the net in an injured condition (bleeding or broken bones) that could not be categorized as dead or alive.
Q_INJ_WB_F	464-466	The number of female whitebelly spinner dolphins that were observed to have left the net in an injured condition (bleeding or broken bones) that could not be categorized as dead or alive.
Q_INJ_WB_Q	467-469	The number of whitebelly spinner dolphins of undetermined sex that were observed to have left the net in an injured condition (bleeding or broken bones) that could not be categorized as dead or alive.
Q_INJ_UNID_SPN_M	470-472	The number of male unidentified/other spinner dolphins that were observed to have left the net in an injured condition (bleeding or broken bones) that could not be categorized as dead or alive.
Q_INJ_UNID_SPN_F	473-475	The number of female unidentified/other spinner dolphins that were observed to have left the net in an injured condition (bleeding or broken bones) that could not be categorized as dead or alive.
Q_INJ_UNID_SPN_Q	476-478	The number of unidentified/other spinner dolphins of undetermined sex that were observed to have left the net in an injured condition (bleeding or broken bones) that could not be categorized as dead or alive.
Q_INJ_DELF_M	479-481	The number of male <i>Delphinus</i> dolphins that were observed to be injured (bleeding, broken bones or through the power block) and in a condition that could not be categorized as dead or alive.
Q_INJ_DELF_F	482-484	The number of female <i>Delphinus</i> dolphins that were observed to be injured (bleeding, broken bones or through the power block) and in a condition that could not be categorized as dead or alive.
Q_INJ_DELF_Q	485-487	The number of <i>Delphinus</i> dolphins of undetermined sex that were observed to be injured (bleeding, broken bones or through the power block) and in a condition that could not be categorized as dead or alive.
Q_INJ_OTHER_M	488-490	The number of male other species dolphins that were observed to be injured (bleeding, broken bones or through the power block) and in a condition that could not be categorized as dead or alive.
Q_INJ_OTHER_F	491-493	The number of female other species dolphins that were observed to be injured (bleeding, broken bones or through the power block) and in a condition that could not be categorized as dead or alive.

Appendix 2L. (Continued)

Field Name	Columns	Description
Q_INJ_OTHER_Q	494-496	The number of other species dolphins of undetermined sex that were observed to be injured (bleeding, broken bones or through the power block) and in a condition that could not be categorized as dead or alive.
Q_INJ_UNIDENT	497-499	The number of unidentified dolphins that were observed to have left the net in an injured condition (bleeding or broken bones) that could not be categorized as dead or alive.
OTHER_SPC_TALLY	500-501	The two-digit code number assigned to identify the species referred to as "other species".
(FILLER)	502-524	Non-data remnant of data processing.



Appendix 2M. Record format and definitions for Tally data collected by the NMFS Tuna-Porpoise Observer Program from 1977-1982.

Field Name	Columns	Description
CRUISE	1-3	The unique four-digit number assigned to this cruise.
SET	4-6	The three-digit consecutive number for the present set.
(FILLER)	7-8	Non-data remnant of data processing.
DEAD_NEO_M	9-11	The number of neonate male spotted dolphins that were observed to have been removed from the net in a postmortem status or to have gone through the power block.
DEAD_NEO_F	12-14	The number of neonate female spotted dolphins that were observed to have been removed from the net in a postmortem status or to have gone through the power block.
DEAD_NEO_Q	15-17	The number of neonate spotted dolphins of undetermined sex that were observed to have been removed from the net in a postmortem status or to have gone through the power block.
DEAD_2TONE_M	18-20	The number of two-tone male spotted dolphins that were observed to have been removed from the net in a postmortem status or to have gone through the power block.
DEAD_2TONE_F	21-23	The number of two-tone female spotted dolphins that were observed to have been removed from the net in a postmortem status or to have gone through the power block.
DEAD_2TONE_Q	24-26	The number of two-tone spotted dolphins of undetermined sex that were observed to have been removed from the net in a postmortem status or to have gone through the power block.
DEAD_SPECKL_M	27-29	The number of speckled male spotted dolphins that were observed to have been removed from the net in a postmortem status or to have gone through the power block.
DEAD_SPECKL_F	30-32	The number of speckled female spotted dolphins that were observed to have been removed from the net in a postmortem status or to have gone through the power block.
DEAD_SPECKL_Q	33-35	The number of speckled spotted dolphins of undetermined sex that were observed to have been removed from the net in a postmortem status or to have gone through the power block.
DEAD_MOTL_M	36-38	The number of mottled male spotted dolphins that were observed to have been removed from the net in a postmortem status or to have gone through the power block.
DEAD_MOTL_F	39-41	The number of mottled female spotted dolphins that were observed to have been removed from the net in a postmortem status or to have gone through the power block.

Appendix 2M. (Continued)

Field Name	Columns	Description
DEAD_MOTL_Q	42-44	The number of mottled spotted dolphins of undetermined sex that were observed to have been removed from the net in a postmortem status or to have gone through the power block.
DEAD_ADULT_M	45-47	The number of adult male spotted dolphins that were observed to have been removed from the net in a postmortem status or to have gone through the power block.
DEAD_ADULT_F	48-50	The number of adult female spotted dolphins that were observed to have been removed from the net in a postmortem status or to have gone through the power block.
DEAD_ADULT_Q	51-53	The number of adult spotted dolphins of undetermined sex that were observed to have been removed from the net in a postmortem status or to have gone through the power block.
DEAD_AGE_UNK	54-56	The number of spotted dolphins of unknown age (maturity based on developmental color pattern) or sex that were observed to have been removed from the net in a postmortem status or to have gone through the power block.
DEAD_EASTERN_M	57-59	The number of male eastern spinner dolphins that were observed to have been removed from the net in a postmortem status or to have gone through the power block.
DEAD_EASTERN_F	60-62	The number of female eastern spinner dolphins that were observed to have been removed from the net in a postmortem status or to have gone through the power block.
DEAD_EASTERN_Q	63-65	The number of eastern spinner dolphins of undetermined sex that were observed to have been removed from the net in a postmortem status or to have gone through the power block.
DEAD_WB_M	66-68	The number of male whitebelly spinner dolphins that were observed to have been removed from the net in a postmortem status or to have gone through the power block.
DEAD_WB_F	69-71	The number of female whitebelly spinner dolphins that were observed to have been removed from the net in a postmortem status or to have gone through the power block.
DEAD_WB_Q	72-74	The number of whitebelly spinner dolphins of undetermined sex that were observed to have been removed from the net in a postmortem status or to have gone through the power block.
DEAD_UNID_SPN_M	75-77	The number of male unidentified/other spinner dolphins that were observed to have been removed from the net in a postmortem status or to have gone through the power block.

Appendix 2M. (Continued)

Field Name	Columns	Description
DEAD_UNID_SPN_F	78-80	The number of female unidentified/other spinner dolphins that were observed to have been removed from the net in a postmortem status or to have gone through the power block.
(FILLER)	81-82	Non-data remnant of data processing.
DEAD_UNID_SPN_Q	83-85	The number of unidentified/other spinner dolphins of undetermined sex that were observed to have been removed from the net in a postmortem status or to have gone through the power block.
DEAD_OTHR_SP1_M	86-88	The number of male other species (1) dolphins that were observed to have been removed from the net in a postmortem status or to have gone through the power block.
DEAD_OTHR_SP1_F	89-91	The number of female other species (1) dolphins that were observed to have been removed from the net in a postmortem status or to have gone through the power block.
DEAD_OTHR_SP1_Q	92-94	The number of other species (1) dolphins of undetermined sex that were observed to have been removed from the net in a postmortem status or to have gone through the power block.
DEAD_OTHR_SP2_M	95-97	The number of male other species (2) dolphins that were observed to have been removed from the net in a postmortem status or to have gone through the power block.
DEAD_OTHR_SP2_F	98-100	The number of female other species (2) dolphins that were observed to have been removed from the net in a postmortem status or to have gone through the power block.
DEAD_OTHR_SP2_Q	101-103	The number of other species (2) dolphins of undetermined sex that were observed to have been removed from the net in a postmortem status or to have gone through the power block.
DEAD_UNIDENT	104-106	The number of unidentified dolphins that were observed to have been removed from the net in a postmortem status or to have gone through the power block.
ALIVE_NEO_M	107-109	The number of neonate male spotted dolphins that were observed to have left the net alive and uninjured after backdown or, if there was no backdown, at any time during this set.
ALIVE_NEO_F	110-112	The number of neonate female spotted dolphins that were observed to have left the net alive and uninjured after backdown or, if there was no backdown, at any time during this set.
ALIVE_NEO_Q	113-115	The number of neonate spotted dolphins of undetermined sex that were observed to have left the net alive and uninjured after backdown or, if there was no backdown, at any time during this set.

Appendix 2M. (Continued)

Field Name	Columns	Description
ALIVE_2TONE_M	116-118	The number of two-tone male spotted dolphins that were observed to have left the net alive and uninjured after backdown or, if there was no backdown, at any time during this set.
ALIVE_2TONE_F	119-121	The number of two-tone female spotted dolphins that were observed to have left the net alive and uninjured after backdown or, if there was no backdown, at any time during this set.
ALIVE_2TONE_Q	122-124	The number of two-tone spotted dolphins of undetermined sex that were observed to have left the net alive and uninjured after backdown or, if there was no backdown, at any time during this set.
ALIVE_SPECKL_M	125-127	The number of speckled male spotted dolphins that were observed to have left the net alive and uninjured after backdown or, if there was no backdown, at any time during this set.
ALIVE_SPECKL_F	128-130	The number of speckled female spotted dolphins that were observed to have left the net alive and uninjured after backdown or, if there was no backdown, at any time during this set.
ALIVE_SPECKL_Q	131-133	The number of speckled spotted dolphins of undetermined sex that were observed to have left the net alive and uninjured after backdown or, if there was no backdown, at any time during this set.
ALIVE_MOTL_M	134-136	The number of mottled male spotted dolphins that were observed to have left the net alive and uninjured after backdown or, if there was no backdown, at any time during this set.
ALIVE_MOTL_F	137-139	The number of mottled female spotted dolphins that were observed to have left the net alive and uninjured after backdown or, if there was no backdown, at any time during this set.
ALIVE_MOTL_Q	140-142	The number of mottled spotted dolphins of undetermined sex that were observed to have left the net alive and uninjured after backdown or, if there was no backdown, at any time during this set.
ALIVE_ADULT_M	143-145	The number of adult male spotted dolphins that were observed to have left the net alive and uninjured after backdown or, if there was no backdown, at any time during this set.
ALIVE_ADULT_F	146-148	The number of adult female spotted dolphins that were observed to have left the net alive and uninjured after backdown or, if there was no backdown, at any time during this set.
ALIVE_ADULT_Q	149-151	The number of adult spotted dolphins of undetermined sex that were observed to have left the net alive and uninjured after backdown or, if there was no backdown, at any time during this set.

Appendix 2M. (Continued)

Field Name	Columns	Description
ALIVE_AGE_UNK	152-154	The number of spotted dolphins of unknown age (maturity based on developmental color pattern) or sex that were observed to have left the net alive and uninjured after backdown or, if there was no backdown, at any time during this set.
(FILLER)	155-156	Non-data remnant of data processing.
ALIVE_EASTERN_M	157-159	The number of male eastern spinner dolphins that were observed to have left the net alive and uninjured after backdown or, if there was no backdown, at any time during this set.
ALIVE_EASTERN_F	160-162	The number of female eastern spinner dolphins that were observed to have left the net alive and uninjured after backdown or, if there was no backdown, at any time during this set.
ALIVE_EASTERN_Q	163-165	The number of eastern spinner dolphins of undetermined sex that were observed to have left the net alive and uninjured after backdown or, if there was no backdown, at any time during this set.
ALIVE_WB_M	166-168	The number of male whitebelly spinner dolphins that were observed to have left the net alive and uninjured after backdown or, if there was no backdown, at any time during this set.
ALIVE_WB_F	169-171	The number of female whitebelly spinner dolphins that were observed to have left the net alive and uninjured after backdown or, if there was no backdown, at any time during this set.
ALIVE_WB_Q	172-174	The number of whitebelly spinner dolphins of undetermined sex that were observed to have left the net alive and uninjured after backdown or, if there was no backdown, at any time during this set.
ALIVE_UNID_SPN_M	175-177	The number of male unidentified/other spinner dolphins that were observed to have left the net alive and uninjured after backdown or, if there was no backdown, at any time during this set.
ALIVE_UNID_SPN_F	178-180	The number of female unidentified/other spinner dolphins that were observed to have left the net alive and uninjured after backdown or, if there was no backdown, at any time during this set.
ALIVE_UNID_SPN_Q	181-183	The number of unidentified/other spinner dolphins of undetermined sex that were observed to have left the net alive and uninjured after backdown or, if there was no backdown, at any time during this set.
ALIVE_OTHR_SP1_M	184-186	The number of male other species (1) dolphins that were observed to have left the net alive and uninjured after backdown or, if there was no backdown, at any time during this set.
ALIVE_OTHR_SP1_F	187-189	The number of female other species (1) dolphins that were observed to have left the net alive and uninjured after backdown or, if there was no backdown, at any time during this set.

Appendix 2M. (Continued)

Field Name	Columns	Description
ALIVE_OTHR_SP1_Q	190-192	The number of other species (1) dolphins of undetermined sex that were observed to have left the net alive and uninjured after backdown or, if there was no backdown, at any time during this set.
ALIVE_OTHR_SP2_M	193-195	The number of male other species (2) dolphins that were observed to have left the net alive and uninjured after backdown or, if there was no backdown, at any time during this set.
ALIVE_OTHR_SP2_F	196-198	The number of female other species (2) dolphins that were observed to have left the net alive and uninjured after backdown or, if there was no backdown, at any time during this set.
ALIVE_OTHR_SP2_Q	199-201	The number of other species (2) dolphins of undetermined sex that were observed to have left the net alive and uninjured after backdown or, if there was no backdown, at any time during this set.
ALIVE_UNIDENT	202-204	The number of unidentified dolphins that were observed to have left the net alive and uninjured after backdown or, if there was no backdown, at any time during this set.
INJ_NEO_M	205-207	The number of neonate male spotted dolphins that were observed to have left the net alive but injured (bleeding or broken bones) after backdown or, if there was no backdown, at any time during this set.
INJ_NEO_F	208-210	The number of neonate female spotted dolphins that were observed to have left the net alive but injured (bleeding or broken bones) after backdown or, if there was no backdown, at any time during this set.
INJ_NEO_Q	211-213	The number of neonate spotted dolphins of undetermined sex that were observed to have left the net alive but injured (bleeding or broken bones) after backdown or, if there was no backdown, at any time during this set.
INJ_2TONE_M	214-216	The number of two-tone male spotted dolphins that were observed to have left the net alive but injured (bleeding or broken bones) after backdown or, if there was no backdown, at any time during this set.
INJ_2TONE_F	217-219	The number of two-tone female spotted dolphins that were observed to have left the net alive but injured (bleeding or broken bones) after backdown or, if there was no backdown, at any time during this set.
INJ_2TONE_Q	220-222	The number of two-tone spotted dolphins of undetermined sex that were observed to have left the net alive but injured (bleeding or broken bones) after backdown or, if there was no backdown, at any time during this set.
INJ_SPECKL_M	223-225	The number of speckled male spotted dolphins that were observed to have left the net alive but injured (bleeding or broken bones) after backdown or, if there was no backdown, at any time during this set.

Appendix 2M. (Continued)

Field Name	Columns	Description
INJ_SPECKL_F	226-228	The number of speckled female spotted dolphins that were observed to have left the net alive but injured (bleeding or broken bones) after backdown or, if there was no backdown, at any time during this set.
(FILLER)	229-230	Non-data remnant of data processing.
INJ_SPECKL_Q	231-233	The number of speckled spotted dolphins of undetermined sex that were observed to have left the net alive but injured (bleeding or broken bones) after backdown or, if there was no backdown, at any time during this set.
INJ_MOTL_M	234-236	The number of mottled male spotted dolphins that were observed to have left the net alive but injured (bleeding or broken bones) after backdown or, if there was no backdown, at any time during this set.
INJ_MOTL_F	237-239	The number of mottled female spotted dolphins that were observed to have left the net alive but injured (bleeding or broken bones) after backdown or, if there was no backdown, at any time during this set.
INJ_MOTL_Q	240-242	The number of mottled spotted dolphins of undetermined sex that were observed to have left the net alive but injured (bleeding or broken bones) after backdown or, if there was no backdown, at any time during this set.
INJ_ADULT_M	243-245	The number of adult male spotted dolphins that were observed to have left the net alive but injured (bleeding or broken bones) after backdown or, if there was no backdown, at any time during this set.
INJ_ADULT_F	246-248	The number of adult female spotted dolphins that were observed to have left the net alive but injured (bleeding or broken bones) after backdown or, if there was no backdown, at any time during this set.
INJ_ADULT_Q	249-251	The number of adult spotted dolphins of undetermined sex that were observed to have left the net alive but injured (bleeding or broken bones) after backdown or, if there was no backdown, at any time during this set.
INJ_AGE_UNK	252-254	The number of spotted dolphins of unknown age (maturity based on developmental color pattern) or sex that were observed to have left the net alive but injured (bleeding or broken bones) after backdown or, if there was no backdown, at any time during this set.
INJ_EASTERN_M	255-257	The number of male eastern spinner dolphins that were observed to have left the net alive but injured (bleeding or broken bones) after backdown or, if there was no backdown, at any time during this set.
INJ_EASTERN_F	258-260	The number of female eastern spinner dolphins that were observed to have left the net alive but injured (bleeding or broken bones) after backdown or, if there was no backdown, at any time during this set.

Appendix 2M. (Continued)

Field Name	Columns	Description
INJ_EASTERN_Q	261-263	The number of eastern spinner dolphins of undetermined sex that were observed to have left the net alive but injured (bleeding or broken bones) after backdown or, if there was no backdown, at any time during this set.
INJ_WB_M	264-266	The number of male whitebelly spinner dolphins that were observed to have left the net alive but injured (bleeding or broken bones) after backdown or, if there was no backdown, at any time during this set.
INJ_WB_F	267-269	The number of female whitebelly spinner dolphins that were observed to have left the net alive but injured (bleeding or broken bones) after backdown or, if there was no backdown, at any time during this set.
INJ_WB_Q	270-272	The number of whitebelly spinner dolphins of undetermined sex that were observed to have left the net alive but injured (bleeding or broken bones) after backdown or, if there was no backdown, at any time during this set.
INJ_UNID_SPN_M	273-275	The number of male unidentified/other spinner dolphins that were observed to have left the net alive but injured (bleeding or broken bones) after backdown or, if there was no backdown, at any time during this set.
INJ_UNID_SPN_F	276-278	The number of female unidentified/other spinner dolphins that were observed to have left the net alive but injured (bleeding or broken bones) after backdown or, if there was no backdown, at any time during this set.
INJ_UNID_SPN_Q	279-281	The number of unidentified/other spinner dolphins of undetermined sex that were observed to have left the net alive but injured (bleeding or broken bones) after backdown or, if there was no backdown, at any time during this set.
INJ_OTHR_SP1_M	282-284	The number of male other species (1) dolphins that were observed to have left the net alive but injured (bleeding or broken bones) after backdown or, if there was no backdown, at any time during this set.
INJ_OTHR_SP1_F	285-287	The number of female other species (1) dolphins that were observed to have left the net alive but injured (bleeding or broken bones) after backdown or, if there was no backdown, at any time during this set.
INJ_OTHR_SP1_Q	288-290	The number of other species (1) dolphins of undetermined sex that were observed to have left the net alive but injured (bleeding or broken bones) after backdown or, if there was no backdown, at any time during this set.
INJ_OTHR_SP2_M	291-293	The number of male other species (2) dolphins that were observed to have left the net alive but injured (bleeding or broken bones) after backdown or, if there was no backdown, at any time during this set.



Appendix 2M. (Continued)

Field Name	Columns	Description
INJ_OTHR_SP2_F	294-296	The number of female other species (2) dolphins that were observed to have left the net alive but injured (bleeding or broken bones) after backdown or, if there was no backdown, at any time during this set.
INJ_OTHR_SP2_Q	297-299	The number of other species (2) dolphins of undetermined sex that were observed to have left the net alive but injured (bleeding or broken bones) after backdown or, if there was no backdown, at any time during this set.
INJ_UNIDENT	300-302	The number of unidentified dolphins that were observed to have left the net alive but injured (bleeding or broken bones) after backdown or, if there was no backdown, at any time during this set.
(FILLER)	303-304	Non-data remnant of data processing.
Q_NEO_M	305-307	The number of neonate male spotted dolphins that were observed to have left the net in a condition that could not be categorized as dead or alive.
Q_NEO_F	308-310	The number of neonate female spotted dolphins that were observed to have left the net in a condition that could not be categorized as dead or alive.
Q_NEO_Q	311-313	The number of neonate spotted dolphins of undetermined sex that were observed to have left the net in a condition that could not be categorized as dead or alive.
Q_2TONE_M	314-316	The number of two-tone male spotted dolphins that were observed to have left the net in a condition that could not be categorized as dead or alive.
Q_2TONE_F	317-319	The number of two-tone female spotted dolphins that were observed to have left the net in a condition that could not be categorized as dead or alive.
Q_2TONE_Q	320-322	The number of two-tone spotted dolphins of undetermined sex that were observed to have left the net in a condition that could not be categorized as dead or alive.
Q_SPECKL_M	323-325	The number of speckled male spotted dolphins that were observed to have left the net in a condition that could not be categorized as dead or alive.
Q_SPECKL_F	326-328	The number of speckled female spotted dolphins that were observed to have left the net in a condition that could not be categorized as dead or alive.
Q_SPECKL_Q	329-331	The number of speckled spotted dolphins of undetermined sex that were observed to have left the net in a condition that could not be categorized as dead or alive.
Q_MOTL_M	332-334	The number of mottled male spotted dolphins that were observed to have left the net in a condition that could not be categorized as dead or alive.
Q_MOTL_F	335-337	The number of mottled female spotted dolphins that were observed to have left the net in a condition that could not be categorized as dead or alive.

Appendix 2M. (Continued)

Field Name	Columns	Description
Q_MOTL_Q	338-340	The number of mottled spotted dolphins of undetermined sex that were observed to have left the net in a condition that could not be categorized as dead or alive.
Q_ADULT_M	341-343	The number of adult male spotted dolphins that were observed to have left the net in a condition that could not be categorized as dead or alive.
Q_ADULT_F	344-346	Q_ADULT_F: The number of adult female spotted dolphins that were observed to have left the net in a condition that could not be categorized as dead or alive.
Q_ADULT_Q	347-349	The number of adult spotted dolphins of undetermined sex that were observed to have left the net in a condition that could not be categorized as dead or alive.
Q_AGE_UNK	350-352	The number of spotted dolphins of unknown age (maturity based on developmental color pattern) or sex that were observed to have left the net in a condition that could not be categorized as dead or alive.
Q_EASTERN_M	353-355	The number of male eastern spinner dolphins that were observed to have left the net in a condition that could not be categorized as dead or alive.
Q_EASTERN_F	356-358	The number of female eastern spinner dolphins that were observed to have left the net in a condition that could not be categorized as dead or alive.
Q_EASTERN_Q	359-361	The number of eastern spinner dolphins of undetermined sex that were observed to have left the net in a condition that could not be categorized as dead or alive.
Q_WB_M	362-364	The number of male whitebelly spinner dolphins that were observed to have left the net in a condition that could not be categorized as dead or alive.
Q_WB_F	365-367	The number of female whitebelly spinner dolphins that were observed to have left the net in a condition that could not be categorized as dead or alive.
Q_WB_Q	368-370	The number of whitebelly spinner dolphins of undetermined sex that were observed to have left the net in a condition that could not be categorized as dead or alive.
Q_UNID_SPN_M	371-373	The number of male unidentified/other spinner dolphins that were observed to have left the net in a condition that could not be categorized as dead or alive.
Q_UNID_SPN_F	374-376	The number of female unidentified/other spinner dolphins that were observed to have left the net in a condition that could not be categorized as dead or alive.
(FILLER)	377-378	Non-data remnant of data processing.
Q_UNID_SPN_Q	379-381	The number of unidentified/other spinner dolphins of undetermined sex that were observed to have left the net in a condition that could not be categorized as dead or alive.

Appendix 2M. (Continued)

Field Name	Columns	Description
Q_OTHR_SP1_M	382-384	The number of male other species (1) dolphins that were observed to have left the net in a condition that could not be categorized as dead or alive.
Q_OTHR_SP1_F	385-387	The number of female other species (1) dolphins that were observed to have left the net in a condition that could not be categorized as dead or alive.
Q_OTHR_SP1_Q	388-390	The number of other species (1) dolphins of undetermined sex that were observed to have left the net in a condition that could not be categorized as dead or alive.
Q_OTHR_SP2_M	391-393	The number of male other species (2) dolphins that were observed to have left the net in a condition that could not be categorized as dead or alive.
Q_OTHR_SP2_F	394-396	The number of female other species (2) dolphins that were observed to have left the net in a condition that could not be categorized as dead or alive.
Q_OTHR_SP2_Q	397-399	The number of other species (2) dolphins of undetermined sex that were observed to have left the net in a condition that could not be categorized as dead or alive.
Q_UNIDENT	400-402	The number of unidentified dolphins that were observed to have left the net in a condition that could not be categorized as dead or alive.
Q_INJ_NEO_M	403-405	The number of neonate male spotted dolphins that were observed to have left the net in an injured condition (bleeding or broken bones) that could not be categorized as dead or alive.
Q_INJ_NEO_F	406-408	The number of neonate female spotted dolphins that were observed to have left the net in an injured condition (bleeding or broken bones) that could not be categorized as dead or alive.
Q_INJ_NEO_Q	409-411	The number of neonate spotted dolphins of undetermined sex that were observed to have left the net in an injured condition (bleeding or broken bones) that could not be categorized as dead or alive.
Q_INJ_2TONE_M	412-414	The number of two-tone male spotted dolphins that were observed to have left the net in an injured condition (bleeding or broken bones) that could not be categorized as dead or alive.
Q_INJ_2TONE_F	415-417	The number of two-tone female spotted dolphins that were observed to have left the net in an injured condition (bleeding or broken bones) that could not be categorized as dead or alive.
Q_INJ_2TONE_Q	418-420	The number of two-tone spotted dolphins of undetermined sex that were observed to have left the net in an injured condition (bleeding or broken bones) that could not be categorized as dead or alive.
Q_INJ_SPECKL_M	421-423	The number of speckled male spotted dolphins that were observed to have left the net in an injured condition (bleeding or broken bones) that could not be categorized as dead or alive.

Appendix 2M. (Continued)

Field Name	Columns	Description
Q_INJ_SPECKL_F	424-426	The number of speckled female spotted dolphins that were observed to have left the net in an injured condition (bleeding or broken bones) that could not be categorized as dead or alive.
Q_INJ_SPECKL_Q	427-429	The number of speckled spotted dolphins of undetermined sex that were observed to have left the net in an injured condition (bleeding or broken bones) that could not be categorized as dead or alive.
Q_INJ_MOTL_M	430-432	The number of mottled male spotted dolphins that were observed to have left the net in an injured condition (bleeding or broken bones) that could not be categorized as dead or alive.
Q_INJ_MOTL_F	433-435	The number of mottled female spotted dolphins that were observed to have left the net in an injured condition (bleeding or broken bones) that could not be categorized as dead or alive.
Q_INJ_MOTL_Q	436-438	The number of mottled spotted dolphins of undetermined sex that were observed to have left the net in an injured condition (bleeding or broken bones) that could not be categorized as dead or alive.
Q_INJ_ADULT_M	439-441	The number of adult male spotted dolphins that were observed to have left the net in an injured condition (bleeding or broken bones) that could not be categorized as dead or alive.
Q_INJ_ADULT_F	442-444	The number of adult female spotted dolphins that were observed to have left the net in an injured condition (bleeding or broken bones) that could not be categorized as dead or alive.
Q_INJ_ADULT_Q	445-447	The number of adult spotted dolphins of undetermined sex that were observed to have left the net in an injured condition (bleeding or broken bones) that could not be categorized as dead or alive.
Q_INJ_AGE_UNK	448-450	The number of spotted dolphins of unknown age (maturity based on developmental color pattern) or sex that were observed to have left the net in an injured condition (bleeding or broken bones) that could not be categorized as dead or alive.
(FILLER)	451-452	Non-data remnant of data processing.
Q_INJ_EASTERN_M	453-455	The number of male eastern spinner dolphins that were observed to have left the net in an injured condition (bleeding or broken bones) that could not be categorized as dead or alive.
Q_INJ_EASTERN_F	456-458	The number of female eastern spinner dolphins that were observed to have left the net in an injured condition (bleeding or broken bones) that could not be categorized as dead or alive.
Q_INJ_EASTERN_Q	459-461	The number of eastern spinner dolphins of undetermined sex that were observed to have left the net in an injured condition (bleeding or broken bones) that could not be categorized as dead or alive.

Appendix 2M. (Continued)

Field Name	Columns	Description
Q_INJ_WB_M	462-464	The number of male whitebelly spinner dolphins that were observed to have left the net in an injured condition (bleeding or broken bones) that could not be categorized as dead or alive.
Q_INJ_WB_F	465-467	The number of female whitebelly spinner dolphins that were observed to have left the net in an injured condition (bleeding or broken bones) that could not be categorized as dead or alive.
Q_INJ_WB_Q	468-470	The number of whitebelly spinner dolphins of undetermined sex that were observed to have left the net in an injured condition (bleeding or broken bones) that could not be categorized as dead or alive.
Q_INJ_UNID_SPN_M	471-473	The number of male unidentified/other spinner dolphins that were observed to have left the net in an injured condition (bleeding or broken bones) that could not be categorized as dead or alive.
Q_INJ_UNID_SPN_F	474-476	The number of female unidentified/other spinner dolphins that were observed to have left the net in an injured condition (bleeding or broken bones) that could not be categorized as dead or alive.
Q_INJ_UNID_SPN_Q	477-479	The number of unidentified/other spinner dolphins of undetermined sex that were observed to have left the net in an injured condition (bleeding or broken bones) that could not be categorized as dead or alive.
Q_INJ_OTHR_SP1_M	480-482	The number of male other species (1) dolphins that were observed to have left the net in an injured condition (bleeding or broken bones) that could not be categorized as dead or alive.
Q_INJ_OTHR_SP1_F	483-485	The number of female other species (1) dolphins that were observed to have left the net in an injured condition (bleeding or broken bones) that could not be categorized as dead or alive.
Q_INJ_OTHR_SP1_Q	486-488	The number of other species (1) dolphins of undetermined sex that were observed to have left the net in an injured condition (bleeding or broken bones) that could not be categorized as dead or alive.
Q_INJ_OTHR_SP2_M	489-491	The number of male other species (2) dolphins that were observed to have left the net in an injured condition (bleeding or broken bones) that could not be categorized as dead or alive.
Q_INJ_OTHR_SP2_F	492-494	The number of female other species (2) dolphins that were observed to have left the net in an injured condition (bleeding or broken bones) that could not be categorized as dead or alive.
Q_INJ_OTHR_SP2_Q	495-497	The number of other species (2) dolphins of undetermined sex that were observed to have left the net in an injured condition (bleeding or broken bones) that could not be categorized as dead or alive.
Q_INJ_UNIDENT	498-500	The number of unidentified dolphins that were observed to have left the net in an injured condition (bleeding or broken bones) that could not be categorized as dead or alive.

Appendix 2M. (Continued)

Field Name	Columns	Description
SPC_TALY_SP1	501-502	The two-digit code number assigned to identify other species (1).
SPC_TALY_SP2	503-504	The two-digit code number assigned to identify other species (2).
SPC_TALY_SPT	505-506	The two-digit code number assigned to identify the spotted dolphin species/stock.
SPC_TALY_SPN	507-508	The two-digit code number assigned to identify the spinner dolphin species/stock.
(FILLER)	509-524	Non-data remnant of data processing.

Appendix 2N. Record format and definitions for Tally data collected by the NMFS Tuna-Porpoise Observer Program from 1984-1985.

Field Name	Columns	Description
CRUISE	1-3	The unique four-digit number assigned to this cruise.
SET	4-6	The three-digit consecutive number for the present set.
(FILLER)	7-8	Non-data remnant of data processing.
DEAD_NEO_M	9-11	The number of neonate male spotted dolphins that were observed to have been removed from the net in a postmortem status or to have gone through the power block.
DEAD_NEO_F	12-14	The number of neonate female spotted dolphins that were observed to have been removed from the net in a postmortem status or to have gone through the power block.
DEAD_NEO_Q	15-17	The number of neonate spotted dolphins of undetermined sex that were observed to have been removed from the net in a postmortem status or to have gone through the power block.
DEAD_2TONE_M	18-20	The number of two-tone male spotted dolphins that were observed to have been removed from the net in a postmortem status or to have gone through the power block.
DEAD_2TONE_F	21-23	The number of two-tone female spotted dolphins that were observed to have been removed from the net in a postmortem status or to have gone through the power block.
DEAD_2TONE_Q	24-26	The number of two-tone spotted dolphins of undetermined sex that were observed to have been removed from the net in a postmortem status or to have gone through the power block.
DEAD_SPECKL_M	27-29	The number of speckled male spotted dolphins that were observed to have been removed from the net in a postmortem status or to have gone through the power block.
DEAD_SPECKL_F	30-32	The number of speckled female spotted dolphins that were observed to have been removed from the net in a postmortem status or to have gone through the power block.
DEAD_SPECKL_Q	33-35	The number of speckled spotted dolphins of undetermined sex that were observed to have been removed from the net in a postmortem status or to have gone through the power block.
DEAD_MOTL_M	36-38	The number of mottled male spotted dolphins that were observed to have been removed from the net in a postmortem status or to have gone through the power block.
DEAD_MOTL_F	39-41	The number of mottled female spotted dolphins that were observed to have been removed from the net in a postmortem status or to have gone through the power block.

Appendix 2N. (Continued)

Field Name	Columns	Description
DEAD_MOTL_Q	42-44	The number of mottled spotted dolphins of undetermined sex that were observed to have been removed from the net in a postmortem status or to have gone through the power block
DEAD_ADULT_M	45-47	The number of adult male spotted dolphins that were observed to have been removed from the net in a postmortem status or to have gone through the power block.
DEAD_ADULT_F	48-50	The number of adult female spotted dolphins that were observed to have been removed from the net in a postmortem status or to have gone through the power block.
DEAD_ADULT_Q	51-53	The number of adult spotted dolphins of undetermined sex that were observed to have been removed from the net in a postmortem status or to have gone through the power block.
DEAD_AGE_UNK	54-56	The number of spotted dolphins of unknown age (maturity based on developmental color pattern) or sex that were observed to have been removed from the net in a postmortem status or to have gone through the power block.
DEAD_EASTERN_M	57-59	The number of male eastern spinner dolphins that were observed to have been removed from the net in a postmortem status or to have gone through the power block.
DEAD_EASTERN_F	60-62	The number of female eastern spinner dolphins that were observed to have been removed from the net in a postmortem status or to have gone through the power block.
DEAD_EASTERN_Q	63-65	The number of eastern spinner dolphins of undetermined sex that were observed to have been removed from the net in a postmortem status or to have gone through the power block.
DEAD_WB_M	66-68	The number of male whitebelly spinner dolphins that were observed to have been removed from the net in a postmortem status or to have gone through the power block.
DEAD_WB_F	69-71	The number of female whitebelly spinner dolphins that were observed to have been removed from the net in a postmortem status or to have gone through the power block.
DEAD_WB_Q	72-74	The number of whitebelly spinner dolphins of undetermined sex that were observed to have been removed from the net in a postmortem status or to have gone through the power block.
DEAD_UNID_SPN_M	75-77	The number of male unidentified/other spinner dolphins that were observed to have been removed from the net in a postmortem status or to have gone through the power block.



Appendix 2N. (Continued)

Field Name	Columns	Description
DEAD_UNID_SPN_F	78-80	The number of female unidentified/other spinner dolphins that were observed to have been removed from the net in a postmortem status or to have gone through the power block.
(FILLER)	81-82	Non-data remnant of data processing.
DEAD_UNID_SPN_Q	83-85	The number of unidentified/other spinner dolphins of undetermined sex that were observed to have been removed from the net in a postmortem status or to have gone through the power block.
DEAD_OTHR_SP1_M	86-88	The number of male other species (1) dolphins that were observed to have been removed from the net in a postmortem status or to have gone through the power block.
DEAD_OTHR_SP1_F	89-91	The number of female other species (1) dolphins that were observed to have been removed from the net in a postmortem status or to have gone through the power block.
DEAD_OTHR_SP1_Q	92-94	The number of other species (1) dolphins of undetermined sex that were observed to have been removed from the net in a postmortem status or to have gone through the power block.
DEAD_OTHR_SP2_M	95-97	The number of male other species (2) dolphins that were observed to have been removed from the net in a postmortem status or to have gone through the power block.
DEAD_OTHR_SP2_F	98-100	The number of female other species (2) dolphins that were observed to have been removed from the net in a postmortem status or to have gone through the power block.
DEAD_OTHR_SP2_Q	101-103	The number of other species (2) dolphins of undetermined sex that were observed to have been removed from the net in a postmortem status or to have gone through the power block.
DEAD_UNIDENT	104-106	The number of unidentified dolphins that were observed to have been removed from the net in a postmortem status or to have gone through the power block.
ALIVE_NEO_M	107-109	The number of neonate male spotted dolphins that were observed to have left the net alive and uninjured after backdown or, if there was no backdown, at any time during this set.
ALIVE_NEO_F	110-112	The number of neonate female spotted dolphins that were observed to have left the net alive and uninjured after backdown or, if there was no backdown, at any time during this set.
ALIVE_NEO_Q	113-115	The number of neonate spotted dolphins of undetermined sex that were observed to have left the net alive and uninjured after backdown or, if there was no backdown, at any time during this set.

Appendix 2N. (Continued)

Field Name	Columns	Description
ALIVE_2TONE_M	116-118	The number of two-tone male spotted dolphins that were observed to have left the net alive and uninjured after backdown or, if there was no backdown, at any time during this set.
ALIVE_2TONE_F	119-121	The number of two-tone female spotted dolphins that were observed to have left the net alive and uninjured after backdown or, if there was no backdown, at any time during this set.
ALIVE_2TONE_Q	122-124	The number of two-tone spotted dolphins of undetermined sex that were observed to have left the net alive and uninjured after backdown or, if there was no backdown, at any time during this set.
ALIVE_SPECKL_M	125-127	The number of speckled male spotted dolphins that were observed to have left the net alive and uninjured after backdown or, if there was no backdown, at any time during this set.
ALIVE_SPECKL_F	128-130	The number of speckled female spotted dolphins that were observed to have left the net alive and uninjured after backdown or, if there was no backdown, at any time during this set.
ALIVE_SPECKL_Q	131-133	The number of speckled spotted dolphins of undetermined sex that were observed to have left the net alive and uninjured after backdown or, if there was no backdown, at any time during this set.
ALIVE_MOTL_M	134-136	The number of mottled male spotted dolphins that were observed to have left the net alive and uninjured after backdown or, if there was no backdown, at any time during this set.
ALIVE_MOTL_F	137-139	The number of mottled female spotted dolphins that were observed to have left the net alive and uninjured after backdown or, if there was no backdown, at any time during this set.
ALIVE_MOTL_Q	140-142	The number of mottled spotted dolphins of undetermined sex that were observed to have left the net alive and uninjured after backdown or, if there was no backdown, at any time during this set.
ALIVE_ADULT_M	143-145	The number of adult male spotted dolphins that were observed to have left the net alive and uninjured after backdown or, if there was no backdown, at any time during this set.
ALIVE_ADULT_F	146-148	The number of adult female spotted dolphins that were observed to have left the net alive and uninjured after backdown or, if there was no backdown, at any time during this set.
ALIVE_ADULT_Q	149-151	The number of adult spotted dolphins of undetermined sex that were observed to have left the net alive and uninjured after backdown or, if there was no backdown, at any time during this set.

Appendix 2N. (Continued)

Field Name	Columns	Description
ALIVE_AGE_UNK	152-154	The number of spotted dolphins of unknown age (maturity based on developmental color pattern) or sex that were observed to have left the net alive and uninjured after backdown or, if there was no backdown, at any time during this set.
(FILLER)	155-156	Non-data remnant of data processing.
ALIVE_EASTERN_M	157-159	The number of male eastern spinner dolphins that were observed to have left the net alive and uninjured after backdown or, if there was no backdown, at any time during this set.
ALIVE_EASTERN_F	160-162	The number of female eastern spinner dolphins that were observed to have left the net alive and uninjured after backdown or, if there was no backdown, at any time during this set.
ALIVE_EASTERN_Q	163-165	The number of eastern spinner dolphins of undetermined sex that were observed to have left the net alive and uninjured after backdown or, if there was no backdown, at any time during this set.
ALIVE_WB_M	166-168	The number of male whitebelly spinner dolphins that were observed to have left the net alive and uninjured after backdown or, if there was no backdown, at any time during this set.
ALIVE_WB_F	169-171	The number of female whitebelly spinner dolphins that were observed to have left the net alive and uninjured after backdown or, if there was no backdown, at any time during this set.
ALIVE_WB_Q	172-174	The number of whitebelly spinner dolphins of undetermined sex that were observed to have left the net alive and uninjured after backdown or, if there was no backdown, at any time during this set.
ALIVE_UNID_SPN_M	175-177	The number of male unidentified/other spinner dolphins that were observed to have left the net alive and uninjured after backdown or, if there was no backdown, at any time during this set.
ALIVE_UNID_SPN_F	178-180	The number of female unidentified/other spinner dolphins that were observed to have left the net alive and uninjured after backdown or, if there was no backdown, at any time during this set.
ALIVE_UNID_SPN_Q	181-183	The number of unidentified/other spinner dolphins of undetermined sex that were observed to have left the net alive and uninjured after backdown or, if there was no backdown, at any time during this set.
ALIVE_OTHR_SP1_M	184-186	The number of male other species (1) dolphins that were observed to have left the net alive and uninjured after backdown or, if there was no backdown, at any time during this set.
ALIVE_OTHR_SP1_F	187-189	The number of female other species (1) dolphins that were observed to have left the net alive and uninjured after backdown or, if there was no backdown, at any time during this set.

Appendix 2N. (Continued)

Field Name	Columns	Description
ALIVE_OTHR_SP1_Q	190-192	The number of other species (1) dolphins of undetermined sex that were observed to have left the net alive and uninjured after backdown or, if there was no backdown, at any time during this set.
ALIVE_OTHR_SP2_M	193-195	The number of male other species (2) dolphins that were observed to have left the net alive and uninjured after backdown or, if there was no backdown, at any time during this set.
ALIVE_OTHR_SP2_F	196-198	The number of female other species (2) dolphins that were observed to have left the net alive and uninjured after backdown or, if there was no backdown, at any time during this set.
ALIVE_OTHR_SP2_Q	199-201	The number of other species (2) dolphins of undetermined sex that were observed to have left the net alive and uninjured after backdown or, if there was no backdown, at any time during this set.
ALIVE_UNIDENT	202-204	The number of unidentified dolphins that were observed to have left the net alive and uninjured after backdown or, if there was no backdown, at any time during this set.
INJ_NEO_M	205-207	The number of neonate male spotted dolphins that were observed to have left the net alive but injured (bleeding or broken bones) after backdown or, if there was no backdown, at any time during this set.
INJ_NEO_F	208-210	The number of neonate female spotted dolphins that were observed to have left the net alive but injured (bleeding or broken bones) after backdown or, if there was no backdown, at any time during this set.
INJ_NEO_Q	211-213	The number of neonate spotted dolphins of undetermined sex that were observed to have left the net alive but injured (bleeding or broken bones) after backdown or, if there was no backdown, at any time during this set.
INJ_2TONE_M	214-216	The number of two-tone male spotted dolphins that were observed to have left the net alive but injured (bleeding or broken bones) after backdown or, if there was no backdown, at any time during this set.
INJ_2TONE_F	217-219	The number of two-tone female spotted dolphins that were observed to have left the net alive but injured (bleeding or broken bones) after backdown or, if there was no backdown, at any time during this set.
INJ_2TONE_Q	220-222	The number of two-tone spotted dolphins of undetermined sex that were observed to have left the net alive but injured (bleeding or broken bones) after backdown or, if there was no backdown, at any time during this set.
INJ_SPECKL_M	223-225	The number of speckled male spotted dolphins that were observed to have left the net alive but injured (bleeding or broken bones) after backdown or, if there was no backdown, at any time during this set.

Appendix 2N. (Continued)

Field Name	Columns	Description
INJ_SPECKL_F	226-228	The number of speckled female spotted dolphins that were observed to have left the net alive but injured (bleeding or broken bones) after backdown or, if there was no backdown, at any time during this set.
(FILLER)	229-230	Non-data remnant of data processing.
INJ_SPECKL_Q	231-233	The number of speckled spotted dolphins of undetermined sex that were observed to have left the net alive but injured (bleeding or broken bones) after backdown or, if there was no backdown, at any time during this set.
INJ_MOTL_M	234-236	The number of mottled male spotted dolphins that were observed to have left the net alive but injured (bleeding or broken bones) after backdown or, if there was no backdown, at any time during this set.
INJ_MOTL_F	237-239	The number of mottled female spotted dolphins that were observed to have left the net alive but injured (bleeding or broken bones) after backdown or, if there was no backdown, at any time during this set.
INJ_MOTL_Q	240-242	The number of mottled spotted dolphins of undetermined sex that were observed to have left the net alive but injured (bleeding or broken bones) after backdown or, if there was no backdown, at any time during this set.
INJ_ADULT_M	243-245	The number of adult male spotted dolphins that were observed to have left the net alive but injured (bleeding or broken bones) after backdown or, if there was no backdown, at any time during this set.
INJ_ADULT_F	246-248	The number of adult female spotted dolphins that were observed to have left the net alive but injured (bleeding or broken bones) after backdown or, if there was no backdown, at any time during this set.
INJ_ADULT_Q	249-251	The number of adult spotted dolphins of undetermined sex that were observed to have left the net alive but injured (bleeding or broken bones) after backdown or, if there was no backdown, at any time during this set.
INJ_AGE_UNK	252-254	The number of spotted dolphins of unknown age (maturity based on developmental color pattern) or sex that were observed to have left the net alive but injured (bleeding or broken bones) after backdown or, if there was no backdown, at any time during this set.
INJ_EASTERN_M	255-257	The number of male eastern spinner dolphins that were observed to have left the net alive but injured (bleeding or broken bones) after backdown or, if there was no backdown, at any time during this set.
INJ_EASTERN_F	258-260	The number of female eastern spinner dolphins that were observed to have left the net alive but injured (bleeding or broken bones) after backdown or, if there was no backdown, at any time during this set.

Appendix 2N. (Continued)

Field Name	Columns	Description
INJ_EASTERN_Q	261-263	The number of eastern spinner dolphins of undetermined sex that were observed to have left the net alive but injured (bleeding or broken bones) after backdown or, if there was no backdown, at any time during this set.
INJ_WB_M	264-266	The number of male whitebelly spinner dolphins that were observed to have left the net alive but injured (bleeding or broken bones) after backdown or, if there was no backdown, at any time during this set.
INJ_WB_F	267-269	The number of female whitebelly spinner dolphins that were observed to have left the net alive but injured (bleeding or broken bones) after backdown or, if there was no backdown, at any time during this set.
INJ_WB_Q	270-272	The number of whitebelly spinner dolphins of undetermined sex that were observed to have left the net alive but injured (bleeding or broken bones) after backdown or, if there was no backdown, at any time during this set.
INJ_UNID_SPN_M	273-275	The number of male unidentified/other spinner dolphins that were observed to have left the net alive but injured (bleeding or broken bones) after backdown or, if there was no backdown, at any time during this set.
INJ_UNID_SPN_F	276-278	The number of female unidentified/other spinner dolphins that were observed to have left the net alive but injured (bleeding or broken bones) after backdown or, if there was no backdown, at any time during this set.
INJ_UNID_SPN_Q	279-281	The number of unidentified/other spinner dolphins of undetermined sex that were observed to have left the net alive but injured (bleeding or broken bones) after backdown or, if there was no backdown, at any time during this set.
INJ_OTHR_SP1_M	282-284	The number of male other species (1) dolphins that were observed to have left the net alive but injured (bleeding or broken bones) after backdown or, if there was no backdown, at any time during this set.
INJ_OTHR_SP1_F	285-287	The number of female other species (1) dolphins that were observed to have left the net alive but injured (bleeding or broken bones) after backdown or, if there was no backdown, at any time during this set.
INJ_OTHR_SP1_Q	288-290	The number of other species (1) dolphins of undetermined sex that were observed to have left the net alive but injured (bleeding or broken bones) after backdown or, if there was no backdown, at any time during this set.
INJ_OTHR_SP2_M	291-293	The number of male other species (2) dolphins that were observed to have left the net alive but injured (bleeding or broken bones) after backdown or, if there was no backdown, at any time during this set.

Appendix 2N. (Continued)

Field Name	Columns	Description
INJ_OTHR_SP2_F	294-296	The number of female other species (2) dolphins that were observed to have left the net alive but injured (bleeding or broken bones) after backdown or, if there was no backdown, at any time during this set.
INJ_OTHR_SP2_Q	297-299	The number of other species (2) dolphins of undetermined sex that were observed to have left the net alive but injured (bleeding or broken bones) after backdown or, if there was no backdown, at any time during this set.
INJ_UNIDENT	300-302	The number of unidentified dolphins that were observed to have left the net alive but injured (bleeding or broken bones) after backdown or, if there was no backdown, at any time during this set.
(FILLER)	303-304	Non-data remnant of data processing.
Q_NEO_M	305-307	The number of neonate male spotted dolphins that were observed to have left the net in a condition that could not be categorized as dead or alive.
Q_NEO_F	308-310	The number of neonate female spotted dolphins that were observed to have left the net in a condition that could not be categorized as dead or alive.
Q_NEO_Q	311-313	The number of neonate spotted dolphins of undetermined sex that were observed to have left the net in a condition that could not be categorized as dead or alive.
Q_2TONE_M	314-316	The number of two-tone male spotted dolphins that were observed to have left the net in a condition that could not be categorized as dead or alive.
Q_2TONE_F	317-319	The number of two-tone female spotted dolphins that were observed to have left the net in a condition that could not be categorized as dead or alive.
Q_2TONE_Q	320-322	The number of two-tone spotted dolphins of undetermined sex that were observed to have left the net in a condition that could not be categorized as dead or alive.
Q_SPECKL_M	323-325	The number of speckled male spotted dolphins that were observed to have left the net in a condition that could not be categorized as dead or alive.
Q_SPECKL_F	326-328	The number of speckled female spotted dolphins that were observed to have left the net in a condition that could not be categorized as dead or alive.
Q_SPECKL_Q	329-331	The number of speckled spotted dolphins of undetermined sex that were observed to have left the net in a condition that could not be categorized as dead or alive.
Q_MOTL_M	332-334	The number of mottled male spotted dolphins that were observed to have left the net in a condition that could not be categorized as dead or alive.
Q_MOTL_F	335-337	The number of mottled female spotted dolphins that were observed to have left the net in a condition that could not be categorized as dead or alive.

Appendix 2N. (Continued)

Field Name	Columns	Description
Q_MOTL_Q	338-340	The number of mottled spotted dolphins of undetermined sex that were observed to have left the net in a condition that could not be categorized as dead or alive.
Q_ADULT_M	341-343	The number of adult male spotted dolphins that were observed to have left the net in a condition that could not be categorized as dead or alive.
Q_ADULT_F	344-346	Q_ADULT_F: The number of adult female spotted dolphins that were observed to have left the net in a condition that could not be categorized as dead or alive.
Q_ADULT_Q	347-349	The number of adult spotted dolphins of undetermined sex that were observed to have left the net in a condition that could not be categorized as dead or alive.
Q_AGE_UNK	350-352	The number of spotted dolphins of unknown age (maturity based on developmental color pattern) or sex that were observed to have left the net in a condition that could not be categorized as dead or alive.
Q_EASTERN_M	353-355	The number of male eastern spinner dolphins that were observed to have left the net in a condition that could not be categorized as dead or alive.
Q_EASTERN_F	356-358	The number of female eastern spinner dolphins that were observed to have left the net in a condition that could not be categorized as dead or alive.
Q_EASTERN_Q	359-361	The number of eastern spinner dolphins of undetermined sex that were observed to have left the net in a condition that could not be categorized as dead or alive.
Q_WB_M	362-364	The number of male whitebelly spinner dolphins that were observed to have left the net in a condition that could not be categorized as dead or alive.
Q_WB_F	365-367	The number of female whitebelly spinner dolphins that were observed to have left the net in a condition that could not be categorized as dead or alive.
Q_WB_Q	368-370	The number of whitebelly spinner dolphins of undetermined sex that were observed to have left the net in a condition that could not be categorized as dead or alive.
Q_UNID_SPN_M	371-373	The number of male unidentified/other spinner dolphins that were observed to have left the net in a condition that could not be categorized as dead or alive.
Q_UNID_SPN_F	374-376	The number of female unidentified/other spinner dolphins that were observed to have left the net in a condition that could not be categorized as dead or alive.
(FILLER)	377-378	Non-data remnant of data processing.
Q_UNID_SPN_Q	379-381	The number of unidentified/other spinner dolphins of undetermined sex that were observed to have left the net in a condition that could not be categorized as dead or alive.



Appendix 2N. (Continued)

Field Name	Columns	Description
Q_OTHR_SP1_M	382-384	The number of male other species (1) dolphins that were observed to have left the net in a condition that could not be categorized as dead or alive.
Q_OTHR_SP1_F	385-387	The number of female other species (1) dolphins that were observed to have left the net in a condition that could not be categorized as dead or alive.
Q_OTHR_SP1_Q	388-390	The number of other species (1) dolphins of undetermined sex that were observed to have left the net in a condition that could not be categorized as dead or alive.
Q_OTHR_SP2_M	391-393	The number of male other species (2) dolphins that were observed to have left the net in a condition that could not be categorized as dead or alive.
Q_OTHR_SP2_F	394-396	The number of female other species (2) dolphins that were observed to have left the net in a condition that could not be categorized as dead or alive.
Q_OTHR_SP2_Q	397-399	The number of other species (2) dolphins of undetermined sex that were observed to have left the net in a condition that could not be categorized as dead or alive.
Q_UNIDENT	400-402	The number of unidentified dolphins that were observed to have left the net in a condition that could not be categorized as dead or alive.
Q_INJ_NEO_M	403-405	The number of neonate male spotted dolphins that were observed to have left the net in an injured condition (bleeding or broken bones) that could not be categorized as dead or alive.
Q_INJ_NEO_F	406-408	The number of neonate female spotted dolphins that were observed to have left the net in an injured condition (bleeding or broken bones) that could not be categorized as dead or alive.
Q_INJ_NEO_Q	409-411	The number of neonate spotted dolphins of undetermined sex that were observed to have left the net in an injured condition (bleeding or broken bones) that could not be categorized as dead or alive.
Q_INJ_2TONE_M	412-414	The number of two-tone male spotted dolphins that were observed to have left the net in an injured condition (bleeding or broken bones) that could not be categorized as dead or alive.
Q_INJ_2TONE_F	415-417	The number of two-tone female spotted dolphins that were observed to have left the net in an injured condition (bleeding or broken bones) that could not be categorized as dead or alive.
Q_INJ_2TONE_Q	418-420	The number of two-tone spotted dolphins of undetermined sex that were observed to have left the net in an injured condition (bleeding or broken bones) that could not be categorized as dead or alive.
Q_INJ_SPECKL_M	421-423	The number of speckled male spotted dolphins that were observed to have left the net in an injured condition (bleeding or broken bones) that could not be categorized as dead or alive.

Appendix 2N. (Continued)

Field Name	Columns	Description
Q_INJ_SPECKL_F	424-426	The number of speckled female spotted dolphins that were observed to have left the net in an injured condition (bleeding or broken bones) that could not be categorized as dead or alive.
Q_INJ_SPECKL_Q	427-429	The number of speckled spotted dolphins of undetermined sex that were observed to have left the net in an injured condition (bleeding or broken bones) that could not be categorized as dead or alive.
Q_INJ_MOTL_M	430-432	The number of mottled male spotted dolphins that were observed to have left the net in an injured condition (bleeding or broken bones) that could not be categorized as dead or alive.
Q_INJ_MOTL_F	433-435	The number of mottled female spotted dolphins that were observed to have left the net in an injured condition (bleeding or broken bones) that could not be categorized as dead or alive.
Q_INJ_MOTL_Q	436-438	The number of mottled spotted dolphins of undetermined sex that were observed to have left the net in an injured condition (bleeding or broken bones) that could not be categorized as dead or alive.
Q_INJ_ADULT_M	439-441	The number of adult male spotted dolphins that were observed to have left the net in an injured condition (bleeding or broken bones) that could not be categorized as dead or alive.
Q_INJ_ADULT_F	442-444	The number of adult female spotted dolphins that were observed to have left the net in an injured condition (bleeding or broken bones) that could not be categorized as dead or alive.
Q_INJ_ADULT_Q	445-447	The number of adult spotted dolphins of undetermined sex that were observed to have left the net in an injured condition (bleeding or broken bones) that could not be categorized as dead or alive.
Q_INJ_AGE_UNK	448-450	The number of spotted dolphins of unknown age (maturity based on developmental color pattern) or sex that were observed to have left the net in an injured condition (bleeding or broken bones) that could not be categorized as dead or alive.
(FILLER)	451-452	Non-data remnant of data processing.
Q_INJ_EASTERN_M	453-455	The number of male eastern spinner dolphins that were observed to have left the net in an injured condition (bleeding or broken bones) that could not be categorized as dead or alive.
Q_INJ_EASTERN_F	456-458	The number of female eastern spinner dolphins that were observed to have left the net in an injured condition (bleeding or broken bones) that could not be categorized as dead or alive.
Q_INJ_EASTERN_Q	459-461	The number of eastern spinner dolphins of undetermined sex that were observed to have left the net in an injured condition (bleeding or broken bones) that could not be categorized as dead or alive.

Appendix 2N. (Continued)

Field Name	Columns	Description
Q_INJ_WB_M	462-464	The number of male whitebelly spinner dolphins that were observed to have left the net in an injured condition (bleeding or broken bones) that could not be categorized as dead or alive.
Q_INJ_WB_F	465-467	The number of female whitebelly spinner dolphins that were observed to have left the net in an injured condition (bleeding or broken bones) that could not be categorized as dead or alive.
Q_INJ_WB_Q	468-470	The number of whitebelly spinner dolphins of undetermined sex that were observed to have left the net in an injured condition (bleeding or broken bones) that could not be categorized as dead or alive.
Q_INJ_UNID_SPN_M	471-473	The number of male unidentified/other spinner dolphins that were observed to have left the net in an injured condition (bleeding or broken bones) that could not be categorized as dead or alive.
Q_INJ_UNID_SPN_F	474-476	The number of female unidentified/other spinner dolphins that were observed to have left the net in an injured condition (bleeding or broken bones) that could not be categorized as dead or alive.
Q_INJ_UNID_SPN_Q	477-479	The number of unidentified/other spinner dolphins of undetermined sex that were observed to have left the net in an injured condition (bleeding or broken bones) that could not be categorized as dead or alive.
Q_INJ_OTHR_SP1_M	480-482	The number of male other species (1) dolphins that were observed to have left the net in an injured condition (bleeding or broken bones) that could not be categorized as dead or alive.
Q_INJ_OTHR_SP1_F	483-485	The number of female other species (1) dolphins that were observed to have left the net in an injured condition (bleeding or broken bones) that could not be categorized as dead or alive.
Q_INJ_OTHR_SP1_Q	486-488	The number of other species (1) dolphins of undetermined sex that were observed to have left the net in an injured condition (bleeding or broken bones) that could not be categorized as dead or alive.
Q_INJ_OTHR_SP2_M	489-491	The number of male other species (2) dolphins that were observed to have left the net in an injured condition (bleeding or broken bones) that could not be categorized as dead or alive.
Q_INJ_OTHR_SP2_F	492-494	The number of female other species (2) dolphins that were observed to have left the net in an injured condition (bleeding or broken bones) that could not be categorized as dead or alive.
Q_INJ_OTHR_SP2_Q	495-497	The number of other species (2) dolphins of undetermined sex that were observed to have left the net in an injured condition (bleeding or broken bones) that could not be categorized as dead or alive.
Q_INJ_UNIDENT	498-500	The number of unidentified dolphins that were observed to have left the net in an injured condition (bleeding or broken bones) that could not be categorized as dead or alive.

Appendix 2N. (Continued)

Field Name	Columns	Description
SPC_TALY_SP1	501-502	The two-digit code number assigned to identify other species (1).
SPC_TALY_SP2	503-504	The two-digit code number assigned to identify other species (2).
SPC_TALY_SPT	505-506	The two-digit code number assigned to identify the spotted dolphin species/stock.
SPC_TALY_SPN	507-508	The two-digit code number assigned to identify the spinner dolphin species/stock.

Appendix 2O. Record format and definitions for Tally data collected by the NMFS Tuna-Porpoise Observer Program from 1986-1990.

Field Name	Columns	Description
CRUISE	1-4	The unique four-digit number assigned to this cruise.
SET	5-7	The three-digit consecutive number for the present set.
(FILLER)	8-9	Non-data remnant of data processing.
DEAD_NEO_M	10-12	The number of neonate male spotted dolphins that were observed to have been removed from the net in a postmortem status or to have gone through the power block.
DEAD_NEO_F	13-15	The number of neonate female spotted dolphins that were observed to have been removed from the net in a postmortem status or to have gone through the power block.
DEAD_NEO_Q	16-18	The number of neonate spotted dolphins of undetermined sex that were observed to have been removed from the net in a postmortem status or to have gone through the power block.
DEAD_2TONE_M	19-21	The number of two-tone male spotted dolphins that were observed to have been removed from the net in a postmortem status or to have gone through the power block.
DEAD_2TONE_F	22-24	The number of two-tone female spotted dolphins that were observed to have been removed from the net in a postmortem status or to have gone through the power block.
DEAD_2TONE_Q	25-27	The number of two-tone spotted dolphins of undetermined sex that were observed to have been removed from the net in a postmortem status or to have gone through the power block.
DEAD_SPECKL_M	28-30	The number of speckled male spotted dolphins that were observed to have been removed from the net in a postmortem status or to have gone through the power block.
DEAD_SPECKL_F	31-33	The number of speckled female spotted dolphins that were observed to have been removed from the net in a postmortem status or to have gone through the power block.
DEAD_SPECKL_Q	34-36	The number of speckled spotted dolphins of undetermined sex that were observed to have been removed from the net in a postmortem status or to have gone through the power block.
DEAD_MOTL_M	37-39	The number of mottled male spotted dolphins that were observed to have been removed from the net in a postmortem status or to have gone through the power block.
DEAD_MOTL_F	40-42	The number of mottled female spotted dolphins that were observed to have been removed from the net in a postmortem status or to have gone through the power block.

Appendix 2O. (Continued)

Field Name	Columns	Description
DEAD_MOTL_Q	43-45	The number of mottled spotted dolphins of undetermined sex that were observed to have been removed from the net in a postmortem status or to have gone through the power block.
DEAD_ADULT_M	46-48	The number of adult male spotted dolphins that were observed to have been removed from the net in a postmortem status or to have gone through the power block.
DEAD_ADULT_F	49-51	The number of adult female spotted dolphins that were observed to have been removed from the net in a postmortem status or to have gone through the power block.
DEAD_ADULT_Q	52-54	The number of adult spotted dolphins of undetermined sex that were observed to have been removed from the net in a postmortem status or to have gone through the power block.
DEAD_AGE_UNK	55-57	The number of spotted dolphins of unknown age (maturity based on developmental color pattern) or sex that were observed to have been removed from the net in a postmortem status or to have gone through the power block.
DEAD_EASTERN_M	58-60	The number of male eastern spinner dolphins that were observed to have been removed from the net in a postmortem status or to have gone through the power block.
DEAD_EASTERN_F	61-63	The number of female eastern spinner dolphins that were observed to have been removed from the net in a postmortem status or to have gone through the power block.
DEAD_EASTERN_Q	64-66	The number of eastern spinner dolphins of undetermined sex that were observed to have been removed from the net in a postmortem status or to have gone through the power block.
DEAD_WB_M	67-69	The number of male whitebelly spinner dolphins that were observed to have been removed from the net in a postmortem status or to have gone through the power block.
DEAD_WB_F	70-72	The number of female whitebelly spinner dolphins that were observed to have been removed from the net in a postmortem status or to have gone through the power block.
DEAD_WB_Q	73-75	The number of whitebelly spinner dolphins of undetermined sex that were observed to have been removed from the net in a postmortem status or to have gone through the power block.
DEAD_UNID_SPN_M	76-78	The number of male unidentified/other spinner dolphins that were observed to have been removed from the net in a postmortem status or to have gone through the power block.

Appendix 2O. (Continued)

Field Name	Columns	Description
DEAD_UNID_SPN_F	79-81	The number of female unidentified/other spinner dolphins that were observed to have been removed from the net in a postmortem status or to have gone through the power block.
(FILLER)	82-83	Non-data remnant of data processing.
DEAD_UNID_SPN_Q	84-86	The number of unidentified/other spinner dolphins of undetermined sex that were observed to have been removed from the net in a postmortem status or to have gone through the power block.
DEAD_OTHR_SP1_M	87-89	The number of male other species (1) dolphins that were observed to have been removed from the net in a postmortem status or to have gone through the power block.
DEAD_OTHR_SP1_F	90-92	The number of female other species (1) dolphins that were observed to have been removed from the net in a postmortem status or to have gone through the power block.
DEAD_OTHR_SP1_Q	93-95	The number of other species (1) dolphins of undetermined sex that were observed to have been removed from the net in a postmortem status or to have gone through the power block.
DEAD_OTHR_SP2_M	96-98	The number of male other species (2) dolphins that were observed to have been removed from the net in a postmortem status or to have gone through the power block.
DEAD_OTHR_SP2_F	99-101	The number of female other species (2) dolphins that were observed to have been removed from the net in a postmortem status or to have gone through the power block.
DEAD_OTHR_SP2_Q	102-104	The number of other species (2) dolphins of undetermined sex that were observed to have been removed from the net in a postmortem status or to have gone through the power block.
DEAD_UNIDENT	105-107	The number of unidentified dolphins that were observed to have been removed from the net in a postmortem status or to have gone through the power block.
ALIVE_NEO_M	108-110	The number of neonate male spotted dolphins that were observed to have left the net alive and uninjured after backdown or, if there was no backdown, at any time during this set.
ALIVE_NEO_F	111-113	The number of neonate female spotted dolphins that were observed to have left the net alive and uninjured after backdown or, if there was no backdown, at any time during this set.
ALIVE_NEO_Q	114-116	The number of neonate spotted dolphins of undetermined sex that were observed to have left the net alive and uninjured after backdown or, if there was no backdown, at any time during this set.

Appendix 2O. (Continued)

Field Name	Columns	Description
ALIVE_2TONE_M	117-119	The number of two-tone male spotted dolphins that were observed to have left the net alive and uninjured after backdown or, if there was no backdown, at any time during this set.
ALIVE_2TONE_F	120-122	The number of two-tone female spotted dolphins that were observed to have left the net alive and uninjured after backdown or, if there was no backdown, at any time during this set.
ALIVE_2TONE_Q	123-125	The number of two-tone spotted dolphins of undetermined sex that were observed to have left the net alive and uninjured after backdown or, if there was no backdown, at any time during this set.
ALIVE_SPECKL_M	126-128	The number of speckled male spotted dolphins that were observed to have left the net alive and uninjured after backdown or, if there was no backdown, at any time during this set.
ALIVE_SPECKL_F	129-131	The number of speckled female spotted dolphins that were observed to have left the net alive and uninjured after backdown or, if there was no backdown, at any time during this set.
ALIVE_SPECKL_Q	132-134	The number of speckled spotted dolphins of undetermined sex that were observed to have left the net alive and uninjured after backdown or, if there was no backdown, at any time during this set.
ALIVE_MOTL_M	135-137	The number of mottled male spotted dolphins that were observed to have left the net alive and uninjured after backdown or, if there was no backdown, at any time during this set.
ALIVE_MOTL_F	138-140	The number of mottled female spotted dolphins that were observed to have left the net alive and uninjured after backdown or, if there was no backdown, at any time during this set.
ALIVE_MOTL_Q	141-143	The number of mottled spotted dolphins of undetermined sex that were observed to have left the net alive and uninjured after backdown or, if there was no backdown, at any time during this set.
ALIVE_ADULT_M	144-146	The number of adult male spotted dolphins that were observed to have left the net alive and uninjured after backdown or, if there was no backdown, at any time during this set.
ALIVE_ADULT_F	147-149	The number of adult female spotted dolphins that were observed to have left the net alive and uninjured after backdown or, if there was no backdown, at any time during this set.
ALIVE_ADULT_Q	150-152	The number of adult spotted dolphins of undetermined sex that were observed to have left the net alive and uninjured after backdown or, if there was no backdown, at any time during this set.



Appendix 2O. (Continued)

Field Name	Columns	Description
ALIVE_AGE_UNK	153-155	The number of spotted dolphins of unknown age (maturity based on developmental color pattern) or sex that were observed to have left the net alive and uninjured after backdown or, if there was no backdown, at any time during this set.
(FILLER)	156-157	Non-data remnant of data processing.
ALIVE_EASTERN_M	158-160	The number of male eastern spinner dolphins that were observed to have left the net alive and uninjured after backdown or, if there was no backdown, at any time during this set.
ALIVE_EASTERN_F	161-163	The number of female eastern spinner dolphins that were observed to have left the net alive and uninjured after backdown or, if there was no backdown, at any time during this set.
ALIVE_EASTERN_Q	164-166	The number of eastern spinner dolphins of undetermined sex that were observed to have left the net alive and uninjured after backdown or, if there was no backdown, at any time during this set.
ALIVE_WB_M	167-169	The number of male whitebelly spinner dolphins that were observed to have left the net alive and uninjured after backdown or, if there was no backdown, at any time during this set.
ALIVE_WB_F	170-172	The number of female whitebelly spinner dolphins that were observed to have left the net alive and uninjured after backdown or, if there was no backdown, at any time during this set.
ALIVE_WB_Q	173-175	The number of whitebelly spinner dolphins of undetermined sex that were observed to have left the net alive and uninjured after backdown or, if there was no backdown, at any time during this set.
ALIVE_UNID_SPN_M	176-178	The number of male unidentified/other spinner dolphins that were observed to have left the net alive and uninjured after backdown or, if there was no backdown, at any time during this set.
ALIVE_UNID_SPN_F	179-181	The number of female unidentified/other spinner dolphins that were observed to have left the net alive and uninjured after backdown or, if there was no backdown, at any time during this set.
ALIVE_UNID_SPN_Q	182-184	The number of unidentified/other spinner dolphins of undetermined sex that were observed to have left the net alive and uninjured after backdown or, if there was no backdown, at any time during this set.
ALIVE_OTHR_SP1_M	185-187	The number of male other species (1) dolphins that were observed to have left the net alive and uninjured after backdown or, if there was no backdown, at any time during this set.
ALIVE_OTHR_SP1_F	188-190	The number of female other species (1) dolphins that were observed to have left the net alive and uninjured after backdown or, if there was no backdown, at any time during this set.

Appendix 2O. (Continued)

Field Name	Columns	Description
ALIVE_OTHR_SP1_Q	191-193	The number of other species (1) dolphins of undetermined sex that were observed to have left the net alive and uninjured after backdown or, if there was no backdown, at any time during this set.
ALIVE_OTHR_SP2_M	194-196	The number of male other species (2) dolphins that were observed to have left the net alive and uninjured after backdown or, if there was no backdown, at any time during this set.
ALIVE_OTHR_SP2_F	197-199	The number of female other species (2) dolphins that were observed to have left the net alive and uninjured after backdown or, if there was no backdown, at any time during this set.
ALIVE_OTHR_SP2_Q	200-202	The number of other species (2) dolphins of undetermined sex that were observed to have left the net alive and uninjured after backdown or, if there was no backdown, at any time during this set.
ALIVE_UNIDENT	203-205	The number of unidentified dolphins that were observed to have left the net alive and uninjured after backdown or, if there was no backdown, at any time during this set.
INJ_NEO_M	206-208	The number of neonate male spotted dolphins that were observed to have left the net alive but injured (bleeding or broken bones) after backdown or, if there was no backdown, at any time during this set.
INJ_NEO_F	209-211	The number of neonate female spotted dolphins that were observed to have left the net alive but injured (bleeding or broken bones) after backdown or, if there was no backdown, at any time during this set.
INJ_NEO_Q	212-214	The number of neonate spotted dolphins of undetermined sex that were observed to have left the net alive but injured (bleeding or broken bones) after backdown or, if there was no backdown, at any time during this set.
INJ_2TONE_M	215-217	The number of two-tone male spotted dolphins that were observed to have left the net alive but injured (bleeding or broken bones) after backdown or, if there was no backdown, at any time during this set.
INJ_2TONE_F	218-220	The number of two-tone female spotted dolphins that were observed to have left the net alive but injured (bleeding or broken bones) after backdown or, if there was no backdown, at any time during this set.
INJ_2TONE_Q	221-223	The number of two-tone spotted dolphins of undetermined sex that were observed to have left the net alive but injured (bleeding or broken bones) after backdown or, if there was no backdown, at any time during this set.
INJ_SPECKL_M	224-226	The number of speckled male spotted dolphins that were observed to have left the net alive but injured (bleeding or broken bones) after backdown or, if there was no backdown, at any time during this set.

Appendix 2O. (Continued)

Field Name	Columns	Description
INJ_SPECKL_F	227-229	The number of speckled female spotted dolphins that were observed to have left the net alive but injured (bleeding or broken bones) after backdown or, if there was no backdown, at any time during this set.
(FILLER)	230-231	Non-data remnant of data processing.
INJ_SPECKL_Q	232-234	The number of speckled spotted dolphins of undetermined sex that were observed to have left the net alive but injured (bleeding or broken bones) after backdown or, if there was no backdown, at any time during this set.
INJ_MOTL_M	235-237	The number of mottled male spotted dolphins that were observed to have left the net alive but injured (bleeding or broken bones) after backdown or, if there was no backdown, at any time during this set.
INJ_MOTL_F	238-240	The number of mottled female spotted dolphins that were observed to have left the net alive but injured (bleeding or broken bones) after backdown or, if there was no backdown, at any time during this set.
INJ_MOTL_Q	241-243	The number of mottled spotted dolphins of undetermined sex that were observed to have left the net alive but injured (bleeding or broken bones) after backdown or, if there was no backdown, at any time during this set.
INJ_ADULT_M	244-246	The number of adult male spotted dolphins that were observed to have left the net alive but injured (bleeding or broken bones) after backdown or, if there was no backdown, at any time during this set.
INJ_ADULT_F	247-249	The number of adult female spotted dolphins that were observed to have left the net alive but injured (bleeding or broken bones) after backdown or, if there was no backdown, at any time during this set.
INJ_ADULT_Q	250-252	The number of adult spotted dolphins of undetermined sex that were observed to have left the net alive but injured (bleeding or broken bones) after backdown or, if there was no backdown, at any time during this set.
INJ_AGE_UNK	253-255	The number of spotted dolphins of unknown age (maturity based on developmental color pattern) or sex that were observed to have left the net alive but injured (bleeding or broken bones) after backdown or, if there was no backdown, at any time during this set.
INJ_EASTERN_M	256-258	The number of male eastern spinner dolphins that were observed to have left the net alive but injured (bleeding or broken bones) after backdown or, if there was no backdown, at any time during this set.
INJ_EASTERN_F	259-261	The number of female eastern spinner dolphins that were observed to have left the net alive but injured (bleeding or broken bones) after backdown or, if there was no backdown, at any time during this set.

Appendix 2O. (Continued)

Field Name	Columns	Description
INJ_EASTERN_Q	262-264	The number of eastern spinner dolphins of undetermined sex that were observed to have left the net alive but injured (bleeding or broken bones) after backdown or, if there was no backdown, at any time during this set.
INJ_WB_M	265-267	The number of male whitebelly spinner dolphins that were observed to have left the net alive but injured (bleeding or broken bones) after backdown or, if there was no backdown, at any time during this set.
INJ_WB_F	268-270	The number of female whitebelly spinner dolphins that were observed to have left the net alive but injured (bleeding or broken bones) after backdown or, if there was no backdown, at any time during this set.
INJ_WB_Q	271-273	The number of whitebelly spinner dolphins of undetermined sex that were observed to have left the net alive but injured (bleeding or broken bones) after backdown or, if there was no backdown, at any time during this set.
INJ_UNID_SPN_M	274-276	The number of male unidentified/other spinner dolphins that were observed to have left the net alive but injured (bleeding or broken bones) after backdown or, if there was no backdown, at any time during this set.
INJ_UNID_SPN_F	277-279	The number of female unidentified/other spinner dolphins that were observed to have left the net alive but injured (bleeding or broken bones) after backdown or, if there was no backdown, at any time during this set.
INJ_UNID_SPN_Q	280-282	The number of unidentified/other spinner dolphins of undetermined sex that were observed to have left the net alive but injured (bleeding or broken bones) after backdown or, if there was no backdown, at any time during this set.
INJ_OTHR_SP1_M	283-285	The number of male other species (1) dolphins that were observed to have left the net alive but injured (bleeding or broken bones) after backdown or, if there was no backdown, at any time during this set.
INJ_OTHR_SP1_F	286-288	The number of female other species (1) dolphins that were observed to have left the net alive but injured (bleeding or broken bones) after backdown or, if there was no backdown, at any time during this set.
INJ_OTHR_SP1_Q	289-291	The number of other species (1) dolphins of undetermined sex that were observed to have left the net alive but injured (bleeding or broken bones) after backdown or, if there was no backdown, at any time during this set.
INJ_OTHR_SP2_M	292-294	The number of male other species (2) dolphins that were observed to have left the net alive but injured (bleeding or broken bones) after backdown or, if there was no backdown, at any time during this set.

Appendix 2O. (Continued)

Field Name	Columns	Description
INJ_OTHR_SP2_F	295-297	The number of female other species (2) dolphins that were observed to have left the net alive but injured (bleeding or broken bones) after backdown or, if there was no backdown, at any time during this set.
INJ_OTHR_SP2_Q	298-300	The number of other species (2) dolphins of undetermined sex that were observed to have left the net alive but injured (bleeding or broken bones) after backdown or, if there was no backdown, at any time during this set.
INJ_UNIDENT	301-303	The number of unidentified dolphins that were observed to have left the net alive but injured (bleeding or broken bones) after backdown or, if there was no backdown, at any time during this set.
(FILLER)	304-305	Non-data remnant of data processing.
Q_NEO_M	306-308	The number of neonate male spotted dolphins that were observed to have left the net in a condition that could not be categorized as dead or alive.
Q_NEO_F	309-311	The number of neonate female spotted dolphins that were observed to have left the net in a condition that could not be categorized as dead or alive.
Q_NEO_Q	312-314	The number of neonate spotted dolphins of undetermined sex that were observed to have left the net in a condition that could not be categorized as dead or alive.
Q_2TONE_M	315-317	The number of two-tone male spotted dolphins that were observed to have left the net in a condition that could not be categorized as dead or alive.
Q_2TONE_F	318-320	The number of two-tone female spotted dolphins that were observed to have left the net in a condition that could not be categorized as dead or alive.
Q_2TONE_Q	321-323	The number of two-tone spotted dolphins of undetermined sex that were observed to have left the net in a condition that could not be categorized as dead or alive.
Q_SPECKL_M	324-326	The number of speckled male spotted dolphins that were observed to have left the net in a condition that could not be categorized as dead or alive.
Q_SPECKL_F	327-329	The number of speckled female spotted dolphins that were observed to have left the net in a condition that could not be categorized as dead or alive.
Q_SPECKL_Q	330-332	The number of speckled spotted dolphins of undetermined sex that were observed to have left the net in a condition that could not be categorized as dead or alive.
Q_MOTL_M	333-335	The number of mottled male spotted dolphins that were observed to have left the net in a condition that could not be categorized as dead or alive.
Q_MOTL_F	336-338	The number of mottled female spotted dolphins that were observed to have left the net in a condition that could not be categorized as dead or alive.

Appendix 2O. (Continued)

Field Name	Columns	Description
Q_MOTL_Q	339-341	The number of mottled spotted dolphins of undetermined sex that were observed to have left the net in a condition that could not be categorized as dead or alive.
Q_ADULT_M	342-344	The number of adult male spotted dolphins that were observed to have left the net in a condition that could not be categorized as dead or alive.
Q_ADULT_F	345-347	Q_ADULT_F: The number of adult female spotted dolphins that were observed to have left the net in a condition that could not be categorized as dead or alive.
Q_ADULT_Q	348-350	The number of adult spotted dolphins of undetermined sex that were observed to have left the net in a condition that could not be categorized as dead or alive.
Q_AGE_UNK	351-353	The number of spotted dolphins of unknown age (maturity based on developmental color pattern) or sex that were observed to have left the net in a condition that could not be categorized as dead or alive.
Q_EASTERN_M	354-356	The number of male eastern spinner dolphins that were observed to have left the net in a condition that could not be categorized as dead or alive.
Q_EASTERN_F	357-359	The number of female eastern spinner dolphins that were observed to have left the net in a condition that could not be categorized as dead or alive.
Q_EASTERN_Q	360-362	The number of eastern spinner dolphins of undetermined sex that were observed to have left the net in a condition that could not be categorized as dead or alive.
Q_WB_M	363-365	The number of male whitebelly spinner dolphins that were observed to have left the net in a condition that could not be categorized as dead or alive.
Q_WB_F	366-368	The number of female whitebelly spinner dolphins that were observed to have left the net in a condition that could not be categorized as dead or alive.
Q_WB_Q	369-371	The number of whitebelly spinner dolphins of undetermined sex that were observed to have left the net in a condition that could not be categorized as dead or alive.
Q_UNID_SPN_M	372-374	The number of male unidentified/other spinner dolphins that were observed to have left the net in a condition that could not be categorized as dead or alive.
Q_UNID_SPN_F	375-377	The number of female unidentified/other spinner dolphins that were observed to have left the net in a condition that could not be categorized as dead or alive.
(FILLER)	378-379	Non-data remnant of data processing.
Q_UNID_SPN_Q	380-382	The number of unidentified/other spinner dolphins of undetermined sex that were observed to have left the net in a condition that could not be categorized as dead or alive.

Appendix 2O. (Continued)

Field Name	Columns	Description
Q_OTHR_SP1_M	383-385	The number of male other species (1) dolphins that were observed to have left the net in a condition that could not be categorized as dead or alive.
Q_OTHR_SP1_F	386-388	The number of female other species (1) dolphins that were observed to have left the net in a condition that could not be categorized as dead or alive.
Q_OTHR_SP1_Q	389-391	The number of other species (1) dolphins of undetermined sex that were observed to have left the net in a condition that could not be categorized as dead or alive.
Q_OTHR_SP2_M	392-394	The number of male other species (2) dolphins that were observed to have left the net in a condition that could not be categorized as dead or alive.
Q_OTHR_SP2_F	395-397	The number of female other species (2) dolphins that were observed to have left the net in a condition that could not be categorized as dead or alive.
Q_OTHR_SP2_Q	398-400	The number of other species (2) dolphins of undetermined sex that were observed to have left the net in a condition that could not be categorized as dead or alive.
Q_UNIDENT	401-403	The number of unidentified dolphins that were observed to have left the net in a condition that could not be categorized as dead or alive.
Q_INJ_NEO_M	404-406	The number of neonate male spotted dolphins that were observed to have left the net in an injured condition (bleeding or broken bones) that could not be categorized as dead or alive.
Q_INJ_NEO_F	407-409	The number of neonate female spotted dolphins that were observed to have left the net in an injured condition (bleeding or broken bones) that could not be categorized as dead or alive.
Q_INJ_NEO_Q	410-412	The number of neonate spotted dolphins of undetermined sex that were observed to have left the net in an injured condition (bleeding or broken bones) that could not be categorized as dead or alive.
Q_INJ_2TONE_M	413-415	The number of two-tone male spotted dolphins that were observed to have left the net in an injured condition (bleeding or broken bones) that could not be categorized as dead or alive.
Q_INJ_2TONE_F	416-418	The number of two-tone female spotted dolphins that were observed to have left the net in an injured condition (bleeding or broken bones) that could not be categorized as dead or alive.
Q_INJ_2TONE_Q	419-421	The number of two-tone spotted dolphins of undetermined sex that were observed to have left the net in an injured condition (bleeding or broken bones) that could not be categorized as dead or alive.
Q_INJ_SPECKL_M	422-424	The number of speckled male spotted dolphins that were observed to have left the net in an injured condition (bleeding or broken bones) that could not be categorized as dead or alive.

Appendix 2O. (Continued)

Field Name	Columns	Description
Q_INJ_SPECKL_F	425-427	The number of speckled female spotted dolphins that were observed to have left the net in an injured condition (bleeding or broken bones) that could not be categorized as dead or alive.
Q_INJ_SPECKL_Q	428-430	The number of speckled spotted dolphins of undetermined sex that were observed to have left the net in an injured condition (bleeding or broken bones) that could not be categorized as dead or alive.
Q_INJ_MOTL_M	431-433	The number of mottled male spotted dolphins that were observed to have left the net in an injured condition (bleeding or broken bones) that could not be categorized as dead or alive.
Q_INJ_MOTL_F	434-436	The number of mottled female spotted dolphins that were observed to have left the net in an injured condition (bleeding or broken bones) that could not be categorized as dead or alive.
Q_INJ_MOTL_Q	437-439	The number of mottled spotted dolphins of undetermined sex that were observed to have left the net in an injured condition (bleeding or broken bones) that could not be categorized as dead or alive.
Q_INJ_ADULT_M	440-442	The number of adult male spotted dolphins that were observed to have left the net in an injured condition (bleeding or broken bones) that could not be categorized as dead or alive.
Q_INJ_ADULT_F	443-445	The number of adult female spotted dolphins that were observed to have left the net in an injured condition (bleeding or broken bones) that could not be categorized as dead or alive.
Q_INJ_ADULT_Q	446-448	The number of adult spotted dolphins of undetermined sex that were observed to have left the net in an injured condition (bleeding or broken bones) that could not be categorized as dead or alive.
Q_INJ_AGE_UNK	449-451	The number of spotted dolphins of unknown age (maturity based on developmental color pattern) or sex that were observed to have left the net in an injured condition (bleeding or broken bones) that could not be categorized as dead or alive.
(FILLER)	452-453	Non-data remnant of data processing.
Q_INJ_EASTERN_M	454-456	The number of male eastern spinner dolphins that were observed to have left the net in an injured condition (bleeding or broken bones) that could not be categorized as dead or alive.
Q_INJ_EASTERN_F	457-459	The number of female eastern spinner dolphins that were observed to have left the net in an injured condition (bleeding or broken bones) that could not be categorized as dead or alive.
Q_INJ_EASTERN_Q	460-462	The number of eastern spinner dolphins of undetermined sex that were observed to have left the net in an injured condition (bleeding or broken bones) that could not be categorized as dead or alive.



Appendix 2O. (Continued)

Field Name	Columns	Description
Q_INJ_WB_M	463-465	The number of male whitebelly spinner dolphins that were observed to have left the net in an injured condition (bleeding or broken bones) that could not be categorized as dead or alive.
Q_INJ_WB_F	466-468	The number of female whitebelly spinner dolphins that were observed to have left the net in an injured condition (bleeding or broken bones) that could not be categorized as dead or alive.
Q_INJ_WB_Q	469-471	The number of whitebelly spinner dolphins of undetermined sex that were observed to have left the net in an injured condition (bleeding or broken bones) that could not be categorized as dead or alive.
Q_INJ_UNID_SPN_M	472-474	The number of male unidentified/other spinner dolphins that were observed to have left the net in an injured condition (bleeding or broken bones) that could not be categorized as dead or alive.
Q_INJ_UNID_SPN_F	475-477	The number of female unidentified/other spinner dolphins that were observed to have left the net in an injured condition (bleeding or broken bones) that could not be categorized as dead or alive.
Q_INJ_UNID_SPN_Q	478-480	The number of unidentified/other spinner dolphins of undetermined sex that were observed to have left the net in an injured condition (bleeding or broken bones) that could not be categorized as dead or alive.
Q_INJ_OTHR_SP1_M	481-483	The number of male other species (1) dolphins that were observed to have left the net in an injured condition (bleeding or broken bones) that could not be categorized as dead or alive.
Q_INJ_OTHR_SP1_F	484-486	The number of female other species (1) dolphins that were observed to have left the net in an injured condition (bleeding or broken bones) that could not be categorized as dead or alive.
Q_INJ_OTHR_SP1_Q	487-489	The number of other species (1) dolphins of undetermined sex that were observed to have left the net in an injured condition (bleeding or broken bones) that could not be categorized as dead or alive.
Q_INJ_OTHR_SP2_M	490-492	The number of male other species (2) dolphins that were observed to have left the net in an injured condition (bleeding or broken bones) that could not be categorized as dead or alive.
Q_INJ_OTHR_SP2_F	493-495	The number of female other species (2) dolphins that were observed to have left the net in an injured condition (bleeding or broken bones) that could not be categorized as dead or alive.
Q_INJ_OTHR_SP2_Q	496-498	The number of other species (2) dolphins of undetermined sex that were observed to have left the net in an injured condition (bleeding or broken bones) that could not be categorized as dead or alive.
Q_INJ_UNIDENT	499-501	The number of unidentified dolphins that were observed to have left the net in an injured condition (bleeding or broken bones) that could not be categorized as dead or alive.

Appendix 2O. (Continued)

Field Name	Columns	Description
SPC_TALY_SP1	502-503	The two-digit code number assigned to identify other species (1).
SPC_TALY_SP2	504-505	The two-digit code number assigned to identify other species (2).
SPC_TALY_SPT	506-507	The two-digit code number assigned to identify the spotted dolphin species/stock.
SPC_TALY_SPN	508-509	The two-digit code number assigned to identify the spinner dolphin species/stock.

Appendix 2P. Record format and definitions for Fishing Mode data collected by the NMFS Tuna-Porpoise Observer Program for 1975.

Field Name	Columns	Description
CRUISE	1-3	The unique three-digit number assigned to identify this cruise.
DATE	4-9	The year, month and day (yymmdd) on which this fishing mode or activity took place, 6 digits.
TIME_ACTIVITY	10-13	The local time (24-hour clock) at which the vessel changed its fishing mode or activity, four digits.
OBSERVER	14-16	The unique three-digit number assigned to the observer (Code Table 2).
SEARCHING	17-17	The coded answer to the question, "Were one or more crewmen actively looking with any power binoculars, the helicopter or any electronic device for signs of fish?" Yes = 1, No = 2.
SPEED	18-20	Vessel speed in knots and tenths of a knot at the start of the searching mode, three digits.
NUM_BINOCULARS	21-21	The number of high-powered binoculars used during the search mode, one digit.
SURF_TEMP	22-24	The surface water temperature, in degrees Fahrenheit and tenths, at the start of the searching mode, three digits.
SEA_STATE	25-25	The one-digit code describing the sea state at the beginning of the searching mode. Note: This is not Beaufort stage.
FOG_OR_RAIN	26-26	The one digit code indicating the presence or absence of fog or rain within the searching path, at the beginning of the searching mode. 1 = No rain or fog; 2 = Fog; 3 = Rain; 4 = Rain and fog.
CHASE_OR_SET	27-27	The coded answer to the question, "Is the vessel in the chase/set mode?" Yes = 1, No = 2.
SET	28-30	The consecutive set number for the cruise, three digits.
SET_TYPE	31-32	The two-digit code describing the set (Code Table 8).
DRIFT_OR_RUN	33-33	The coded answer to the question, "Is the vessel in the inactive mode?" Yes = 1, No = 2.
DRIFT_RUN_CODE	34-35	The two-digit code identifying the type of Inactive Mode (Code Table 6).
REPEAT_OCCURRENCES	36-37	Indicates the number of times (n) the following repeating group of elements repeats, 2 digits.
LATITUDE	38-41 (+21n)	The latitude in degrees (2 digits) and minutes (2 digits) north or south of the equator at the time indicated in TIME_POSITION, 4 digits.
N_OR_S	42-42 (+21n)	The hemisphere of the latitude, 1 digit, coded, 1 = North, 2 = South.
LONGITUDE	43-47 (+21n)	The longitude in degrees (3 digits) and minutes (2 digits) east or west of Greenwich, England, at the time indicated in TIME_POSITION, 5 digits.
E_OR_W	48-48 (+21n)	The hemisphere of the longitude, 1 digit, coded, 1 = East, 2 = West.
DATE_POSITION	49-54 (+21n)	The year, month and day (yymmdd) on which the position indicated on this record was taken, 6 digits (Usage Notes 6.)

Appendix 2P. (Continued)

Field Name	Columns	Description
TIME_POSITION	55-58 (+21n)	The local time (24-hour clock) at which the vessel was located at the position indicated on this record, four digits (Usage Notes 6.)

Appendix 2Q. Record format and definitions for Fishing Mode data collected by the NMFS Tuna-Porpoise Observer Program from 1976-1980.

Field Name	Columns	Description
CRUISE	1-3	The unique three-digit number assigned to identify this cruise.
DATE	4-9	The year, month and day (yymmdd) on which this fishing mode or activity took place, 6 digits.
TIME_ACTIVITY	10-13	The local time (24-hour clock) at which the vessel changed its fishing mode or activity, four digits.
OBSERVER	14-16	The unique three-digit number assigned to the observer (Code Table 2).
SEARCHING	17-17	The coded answer to the question, "Were one or more crewmen actively looking with any power binoculars, the helicopter or any electronic device for signs of fish?" Yes = 1, No = 2.
SPEED	18-20	Vessel speed in knots and tenths of a knot at the start of the searching mode, three digits.
NUM_BINOCULARS	21-21	The number of high-powered binoculars used during the search mode, one digit.
SURF_TEMP	22-24	The surface water temperature, in degrees Fahrenheit and tenths, at the start of the searching mode, three digits.
SEA_STATE	25-25	The one-digit code describing the sea state at the beginning of the searching mode. Note: This is not Beaufort stage.
FOG_OR_RAIN	26-26	The one digit code indicating the presence or absence of fog or rain within the searching path, at the beginning of the searching mode. 1 = No rain or fog; 2 = Fog; 3 = Rain; 4 = Rain and fog.
CHASE_OR_SET	27-27	The coded answer to the question, "Is the vessel in the chase/set mode?" Yes = 1, No = 2.
SET	28-30	The consecutive set number for the cruise, three digits.
SET_TYPE	31-32	The two-digit code describing the set (Code Table 8).
DRIFT_OR_RUN	33-33	The coded answer to the question, "Is the vessel in the inactive mode?" Yes = 1, No = 2.
DRIFT_RUN_CODE	34-35	The two-digit code identifying the type of Inactive Mode (Code Table 6).

Appendix 2R. Record format and definitions for Fishing Mode data collected by the NMFS Tuna-Porpoise Observer Program from 1981-1982.

Field Name	Columns	Description
CRUISE	1-3	The unique three-digit number assigned to identify this cruise.
DATE	4-9	The year, month and day (yymmdd) on which this fishing mode or activity took place, 6 digits.
TIME_ACTIVITY	10-13	The local time (24-hour clock) at which the vessel changed its fishing mode or activity, four digits.
VA_TYPE	14-16	The three-character code indicating whether extended drifting/circling data were collected (LOG) or not (STD). Note: These extended data were only collected on two trips, both in 1981.
SEARCHING	17-17	The coded answer to the question, "Were one or more crewmen actively looking with any power binoculars, the helicopter or any electronic device for signs of fish?" Yes = 1, No = 2.
SPEED	18-20	Vessel speed in knots and tenths of a knot at the start of the searching mode, three digits.
NUM_BINOCULARS	21-21	The number of high-powered binoculars used during the search mode, one digit.
SURF_TEMP	22-24	The surface water temperature, in degrees Fahrenheit and tenths, at the start of the searching mode, three digits.
SEA_STATE	25-25	The one-digit code describing the sea state at the beginning of the searching mode. Note: This is not Beaufort stage.
FOG_OR_RAIN	26-26	The one digit code indicating the presence or absence of fog or rain within the searching path, at the beginning of the searching mode. 1 = No rain or fog; 2 = Fog; 3 = Rain; 4 = Rain and fog.
CHASE_OR_SET	27-27	The coded answer to the question, "Is the vessel in the chase/set mode?" Yes = 1, No = 2.
SET	28-30	The consecutive set number for the cruise, three digits.
SET_TYPE	31-32	The two-digit code describing the set (Code Table 8).
DRIFT_OR_RUN	33-33	The coded answer to the question, "Is the vessel in the inactive mode?" Yes = 1, No = 2.
DRIFT_RUN_CODE	34-35	The two-digit code identifying the type of Inactive Mode (Code Table 6).

Appendix 2S. Record format and definitions for Fishing Mode data collected by the NMFS Tuna-Porpoise Observer Program from 1984-1985.

Field Name	Columns	Description
CRUISE	1-3	The unique three-digit number assigned to identify this cruise.
DATE	4-9	The year, month and day (yymmdd) on which this fishing mode or activity took place, 6 digits.
TIME_ACTIVITY	10-13	The local time (24-hour clock) at which the vessel changed its fishing mode or activity, four digits.
VA_TYPE	14-16	The three-character code indicating whether extended drifting/circling data were collected (LOG) or not (STD). Note: These extended data were only collected on two trips, both in 1981.
SEARCHING	17-17	The coded answer to the question, "Were one or more crewmen actively looking with any power binoculars, the helicopter or any electronic device for signs of fish?" Yes = 1, No = 2.
SPEED	18-20	Vessel speed in knots and tenths of a knot at the start of the searching mode, three digits.
NUM_BINOCULARS	21-21	The number of high-powered binoculars used during the search mode, one digit.
SURF_TEMP	22-24	The surface water temperature, in degrees Fahrenheit and tenths, at the start of the searching mode, three digits.
SEA_STATE	25-25	The one-digit code describing the sea state at the beginning of the searching mode. Note: This is not Beaufort stage.
FOG_OR_RAIN	26-26	The one digit code indicating the presence or absence of fog or rain within the searching path, at the beginning of the searching mode. 1 = No rain or fog; 2 = Fog; 3 = Rain; 4 = Rain and fog.
HELICOPTER_UP	27-27	The coded answer to the question, "Was the helicopter aloft at the start of the present searching mode?" Yes = 1, No = 2. If there is no helicopter based aboard, leave the code block blank.
CHASE_OR_SET	28-28	The coded answer to the question, "Is the vessel in the chase/set mode?" Yes = 1, No = 2.
SET	29-31	The consecutive set number for the cruise, three digits.
SET_TYPE	32-33	The two-digit code describing the set (Code Table 8).
DRIFT_OR_RUN	34-34	The coded answer to the question, "Is the vessel in the inactive mode?" Yes = 1, No = 2.
DRIFT_RUN_CODE	35-36	The two-digit code identifying the type of Inactive Mode (Code Table 6).

Appendix 2T. Record format and definitions for Fishing Mode data collected by the NMFS Tuna-Porpoise Observer Program from 1986-1990.

Field Name	Columns	Description
CRUISE	1-4	The unique four-digit number assigned to identify this cruise.
DATE	5-10	The year, month and day (yymmdd) on which this fishing mode or activity took place, 6 digits.
TIME_ACTIVITY	11-14	The local time (24-hour clock) at which the vessel changed its fishing mode or activity, four digits.
VA_TYPE	15-17	The three-character code indicating whether extended drifting/circling data were collected (LOG) or not (STD). Note: These extended data were only collected on two trips, both in 1981.
SEARCHING	18-18	The coded answer to the question, "Were one or more crewmen actively looking with any power binoculars, the helicopter or any electronic device for signs of fish?" Yes = 1, No = 2.
SPEED	19-21	Vessel speed in knots and tenths of a knot at the start of the searching mode, three digits.
NUM_BINOCULARS	22-22	The number of high-powered binoculars used during the search mode, one digit.
SURF_TEMP	23-25	The surface water temperature, in degrees Fahrenheit and tenths, at the start of the searching mode, three digits.
SEA_STATE	26-26	The one-digit code describing the sea state at the beginning of the searching mode. Note: This is not Beaufort stage.
FOG_OR_RAIN	27-27	The one digit code indicating the presence or absence of fog or rain within the searching path, at the beginning of the searching mode. 1 = No rain or fog; 2 = Fog; 3 = Rain; 4 = Rain and fog.
HELICOPTER_UP	28-28	The coded answer to the question, "Was the helicopter aloft at the start of the present searching mode?" Yes = 1, No = 2. If there is no helicopter based aboard, leave the code block blank.
CHASE_OR_SET	29-29	The coded answer to the question, "Is the vessel in the chase/set mode?" Yes = 1, No = 2.
SET	30-32	The consecutive set number for the cruise, three digits.
SET_TYPE	33-34	The two-digit code describing the set (Code Table 8).
DRIFT_OR_RUN	35-35	The coded answer to the question, "Is the vessel in the inactive mode?" Yes = 1, No = 2.
DRIFT_RUN_CODE	36-37	The two-digit code identifying the type of Inactive Mode (Code Table 6).



Appendix 2U. Record format and definitions for Turtle data collected by the NMFS Tuna-Porpoise Observer Program for 1975.

Field Name	Columns	Description
🔑CRUISE	1-3	The unique four-digit number assigned to identify this cruise.
🔑DATE	4-9	The year, month and day (yymmdd) on which this event happened, 6 digits.
🔑SIGHT	10-11	The chronological number of the sighting of the day, 2 digits.
OBSERVER	12-14	The unique three-digit numerical code identifying the observer on this cruise (Code Table 2.)
SERIES	15-16	The two-digit number of the mammal watch series in progress when this sighting was recorded; blank if mammal watch was not in progress or if the time of the sighting cue is unknown.
LEG	17-18	The two-digit number of the leg of the mammal watch during which this sighting was recorded. Blank if mammal watch was not in progress or if the time of sighting cue is unknown.
TIME_OF_SIGHTING	19-22	The local time at which the initial cue leading to marine mammals was first sighted by anyone on the boat or helicopter, i.e., cue meaning birds, splashes, etc., 4 digits.
BEARING	23-25	The direction in degrees from the vessel to the sighting cue using the vessel as the reference, i.e., on the bow is 000°, right (starboard) beam is 090°, directly astern is 180°, left (port) beam is 270° and so on, 3 digits.
DISTANCE	26-28	The estimated distance of the sighting cue from the ship when it is first sighted, in nautical miles and tenths of a nautical mile, 3 digits.
DIRECTION	29-31	The direction of travel of the marine mammals indicated by the sighting cue, in degrees true, with North as the reference point; North = 000°, Southwest = 225°, etc. If the school was not moving, or was milling about, the direction of travel is coded 999, 3 digits.
SET	32-34	The three-digit consecutive set number, entered only if the marine mammals indicated by the sighting cue were set on.
SURF_TEMP	35-37	The surface water temperature at the time the cue was sighted, in degrees Fahrenheit and tenths, 3 digits.
SCHOOL_SIZE	38-41	The observer's best estimate of the total number of turtles of all species in the aggregate, 4 digits. (Note: The best estimate does not have to be the mean of the best and low estimate.)
CONFIDENCE_INT	42-45	The observer's estimated +/- error of the total number of turtles of all species in the aggregate, 4 digits.
PERCENT_SPECIES1	46-48	The estimated percentage of the total aggregate represented by the species indicated as species (1), 3 digits.
SPECIES1_CODE	49-50	The two-digit code number assigned to identify the species indicated as species (1).

Appendix 2U. (Continued)

Field Name	Columns	Description
PERCENT_SPECIES2	51-53	The estimated percentage of the total aggregate represented by the species indicated as species (2), 3 digits.
SPECIES2_CODE	54-55	The two-digit code number assigned to identify the species indicated as species (2).
PERCENT_SPECIES3	56-58	The estimated percentage of the total aggregate represented by the species indicated as species (3), 3 digits.
SPECIES3_CODE	59-60	The two-digit code number assigned to identify the species indicated as species (3).
LATITUDE	61-64	The latitude of the vessel at the time the sighting of the cue leading to marine mammals was made, in degrees and whole minutes, 4 digits.
N_S	65-65	The hemisphere of the latitude, coded one-digit. North = 1, South = 2.
LONGITUDE	66-70	The longitude of the vessel at the time the sighting of the cue leading to marine mammals was made, in degrees and whole minutes, 5 digits.
E_W	71-71	The hemisphere of the longitude, coded one-digit. East = 1, West = 2.
ACTIVITY_CODE	72-72	The one-digit numerical code used to describe the primary observed activity of the animal(s): 1 = still; 2 = swimming; 3 = copulating; 4 = feeding; 5 = other.
SIZE_CODE	73-73	The one-digit numerical code used to describe the size the animal(s): 1 = small; 2 = medium; 3 = large; 4 = unknown.
ASSOC_ORGANISMS	74-74	The coded answer to the question, "Were there any associated organisms?" Yes = 1, No = 2.
HABITAT	75-75	The one-digit numerical code used to describe the habitat: 1 = open water; 2 = floating object; 3 = drift line; 4 = other.
NUM_LH_FORMS	76-76	The number of turtle life history forms associated with this turtle sighting, 1 digit.
PRE_SET_SIGHT	77-77	The coded answer to the question, "Was this sighting made prior to the set?" Yes = 1, No = 2.
PHOTOS	78-78	The coded answer to the question, "Were photographs taken of this sighting?" Yes = 1, No = 2.
FILLER	79-82	Non-data remnant of data processing.

Appendix 3A. Cruise Specifications data elements and years collected by the NMFS Tuna-Porpoise Observer Program from 1966-1993.

Data Element	Years Collected
ANTITORQ_CABLE	1966-1982
BOWTHRUSTER	1966-1993
CRUISE	1966-1993
CRUZ_TYPE	1966-1982
DATE_DEPARTED	1966-1993
DATE_RETURNED	1966-1993
FISH_CAPACITY	1966-1993
GEAR_TYPE	1966-1993
HELICOPTER	1966-1993
NET_DEPTH	1966-1993
NET_LENGTH	1966-1993
NET_MESH_SIZE	1966-1993
NET_STRIP_DEPTH	1966-1993
NUM_SPEEDBOATS	1966-1993
NUMBER_TRIPS	1966-1993
OBSERVER	1966-1993
OBSERVER_TYPE	1966-1993
OPER_CERT HOLDER	1975-1993
OPER_CERT_NUMBER	1976-1993
OPER_CODE	1984-1993
PANEL_DEPTH	1966-1993
PANEL_LENGTH	1966-1993
PANEL_MESH_SIZE	1966-1993
PANEL_STRP_DEPTH	1966-1993
PORP_PANEL	1966-1993
PORP_SETS_SEEN	1966-1993
REPEAT_OCCURRENCES	1966-1993
TOTAL_OBSERVERS	1966-1993
TRIP_COMPLETED	1966-1993
VESS_CERT HOLDER	1966-1993
VESS_CERT_NUMBER	1979-1993
VESSEL_CLASS	1966-1993
VESSEL_CODE	1966-1993
VESSEL_NAME	1966-1993
YR_BOAT_BUILT	1966-1993
YR_NET_BUILT	1966-1993
YR_PANEL_INSTALD	1966-1993

Appendix 3B. Marine Mammal Watch Effort data elements and years collected by the NMFS Tuna-Porpoise Observer Program from 1971-1990.

Data Element	Years Collected
BEAUFORT_START	1978-1982, 1984-1990
COURSE	1971-1982, 1984-1990
CRUISE	1971-1982, 1984-1990
DATE	1971-1982, 1984-1990
E_W	1971-1982, 1984-1990
FOG_OR_RAIN	1979-1982, 1984-1990
HELICOPTER_UP	1979-1982, 1984-1990
HORIZ_SUN	1984-1990
LATITUDE	1971-1982, 1984-1990
LEG	1971-1982, 1984-1990
LEG_END_CODE	1971-1982, 1984-1990
LONGITUDE	1971-1982, 1984-1990
N_S	1971-1982, 1984-1990
REPEAT_OCCURRENCES	1971-1982, 1984-1990
SERIES	1971-1982, 1984-1990
SET	1971-1982, 1984-1990
SIGHTINGS	1971-1982, 1984-1990
SPEED	1971-1982, 1984-1990
SURF_TEMP_END	1975-1978
SURF_TEMP_START	1975-1982, 1984-1990
TIME_END_LEG	1971-1982, 1984-1990
TIME_START_LEG	1971-1982, 1984-1990
VERT_SUN	1984-1990

Appendix 3C. Marine Mammal Sighting data elements and years collected by the NMFS Tuna-Porpoise Observer Program from 1971-1990.

Data Element	Years Collected
BEARING	1974-1982, 1984-1990
BEAUFORT	1979-1982, 1984-1990
BIRDS	1979-1982, 1984-1990
CLOSEST_DISTANCE	1979-1982, 1984-1990
CREW_HI_EST_SCHL	1971-1982, 1984-1990
CREW_LO_EST_SCHL	1971-1982, 1984-1990
CREW_MN_EST_SCHL	1971-1982, 1984-1990
CREW_SP1_CODE	1971-1982, 1984-1990
CREW_SP1_PERCENT	1971-1982, 1984-1990
CREW_SP2_CODE	1971-1982, 1984-1990
CREW_SP2_PERCENT	1971-1982, 1984-1990
CREW_SP3_CODE	1971-1982, 1984-1990
CREW_SP3_PERCENT	1971-1982, 1984-1990
CREW_SP4_CODE	1971-1982, 1984-1990
CREW_SP4_PERCENT	1971-1982, 1984-1990
CRUISE	1971-1982, 1984-1990
DATE	1971-1982, 1984-1990
DIRECTION	1974-1978
DISTANCE	1974-1982, 1984-1990
E_W	1971-1982, 1984-1990
ENVIR_COND	1986-1990
GBU	1971-1982, 1984-1990
INITIAL_SIGHTING	1977-1982, 1984-1990
LATITUDE	1971-1982, 1984-1990
LEG	1971-1982, 1984-1990
LONGITUDE	1971-1982, 1984-1990
N_S	1971-1982, 1984-1990
OBS_BST_EST_SCHL	1971-1982, 1984-1990
OBS_HI_EST_SCHL	1971-1982, 1984-1990
OBS_LO_EST_SCHL	1971-1982, 1984-1990
OBS_METHOD	1981-1982, 1984-1990
OBS_SP1_CODE	1971-1982, 1984-1990
OBS_SP1_PERCENT	1971-1982, 1984-1990
OBS_SP2_CODE	1971-1982, 1984-1990
OBS_SP2_PERCENT	1971-1982, 1984-1990
OBS_SP3_CODE	1971-1982, 1984-1990
OBS_SP3_PERCENT	1971-1982, 1984-1990
OBS_SP4_CODE	1971-1982, 1984-1990
OBS_SP4_PERCENT	1971-1982, 1984-1990
SERIES	1971-1982, 1984-1990

Appendix 3C. (Continued)

Data Element	Years Collected
SET	1971-1982, 1984-1990
SIGHT	1971-1982, 1984-1990
SIGHTING_Q	1977-1982, 1984-1990
SOURCE_OF_POSIT	1979-1982, 1984-1990
SURF_TEMP	1975-1982, 1984-1990
TAGS	1981-1982, 1984-1990
TIME_CLOSE	1979-1982, 1984-1990
TIME_MM_SIGHTED	1979-1982, 1984-1990
TIME_OF_SIGHTING	1971-1982, 1984-1990
TOTAL_TIME	1979-1982, 1984-1990

Appendix 3D. Set Log data elements and years collected by the NMFS Tuna-Porpoise Observer Program from 1971-1990.

Data Element	Years Collected
APRON_NO_CHUTE	1976
BACKDOWN	1971-1982, 1984-1990
BACKDOWN_LIGHTS	1977-1978
BD_AREA_COLLAPSE	1976
BIRDS	1977-1982, 1984-1990
BIRDS_CUE	1981-1982, 1984-1990
BIRDS_DISTANCE	1976-1980
BOAT_ADJ_BD_AREA	1976-1982, 1984-1990
BOAT_INFLU_PORP	1979-1982, 1984-1990
BOAT_TOW_AFT_BD	1977-1978
BOAT_TOW_BEF_BD	1977-1982, 1984-1990
BOOBIES	1971-1975
BRAILING	1971-1982, 1984-1990
BST_EST_RELS_DUR	1977-1982, 1984-1990
CANOPIES_PRESENT	1976-1982, 1984-1990
CANOPY_BD_KILL	1977-1982, 1984-1990
COLLAPSE_AFT_BD	1976-1978
COLLAPSE_BEF_BD	1977-1982, 1984-1990
COLLAPSE_KIL_AFT	1977-1978
COLLAPSE_KIL_BEF	1977-1982, 1984-1990
COMPLY_TO_2MEN	1977-1978
COMPLY_TO_BD	1977-1978
COMPLY_TO_BOATS	1977-1978
COMPLY_TO_BRAIL	1977-1978
COMPLY_TO_BUNCHS	1977-1978
COMPLY_TO_PANEL	1977-1978
COMPLY_TO_POINT	1977-1978
COMPLY_TO_RAFT	1977-1978
COMPLY_TO_REMUVL	1977-1978
COMPLY_TO_SCHOOL	1977-1978
COMPLY_TO_SNORKL	1977-1978
CORKS_TOGETH_AFT	1977-1978
CORKS_TOGETH_BEF	1977-1978
CROOK_RESCUE	1976-1978
CRUISE	1971-1982, 1984-1990
CUR_STRNG_RNG_UP	1977-1978
CURRENT_STRONG	1971-1982, 1984-1990
DATE	1971-1982, 1984-1990
DEAD_BEFORE_BD	1971-1976
E_OR_W	1971-1982, 1984-1990

Appendix 3D. (Continued)

Data Element	Years Collected
E1_ERROR	1971-1976
E1_OTHER_SP1	1971-1982, 1984-1990
E1_OTHER_SP2	1971-1982, 1984-1990
E1_OTHER1_CATCH	1971-1982, 1984-1990
E1_OTHER2_CATCH	1971-1982, 1984-1990
E1_PORP_TOT	1971-1982, 1984-1990
E1_SPN	1971-1982, 1984-1990
E1_SPN_CATCH	1971-1982, 1984-1990
E1_SPT	1971-1982, 1984-1990
E1_SPT_CATCH	1971-1982, 1984-1990
E1_TOT_CATCH	1971-1982, 1984-1990
E2_ERROR	1971-1976
E2_OTHER_SP1	1971-1982, 1984-1990
E2_OTHER_SP2	1971-1982, 1984-1990
E2_OTHER1_CATCH	1971-1982, 1984-1990
E2_OTHER2_CATCH	1971-1982, 1984-1990
E2_PORP_TOT	1971-1982, 1984-1990
E2_SPN	1971-1982, 1984-1990
E2_SPN_CATCH	1971-1982, 1984-1990
E2_SPT	1971-1982, 1984-1990
E2_SPT_CATCH	1971-1982, 1984-1990
E2_TOT_CATCH	1971-1982, 1984-1990
E3_ERROR	1971-1976
E3_OTHER_SP1	1971-1982
E3_OTHER_SP2	1971-1982
E3_OTHER1_CATCH	1971-1982
E3_OTHER2_CATCH	1971-1982
E3_PORP_TOT	1971-1982
E3_SPN	1971-1982
E3_SPN_CATCH	1971-1982
E3_SPT	1971-1982
E3_SPT_CATCH	1971-1982
E3_TOT_CATCH	1971-1982
ENVIRONMENT	1971-1975
EQUIP_FAILURE	1971-1975
EQUIP_MALF	1971-1982, 1984-1990
ERR_EST_AFTER_BD	1971-1976
ERR_EST_RELEASED	1971-1976
ESCAP_AFT_BD	1977-1982, 1984-1990
ESCAP_AFT_RNG_UP	1977-1982, 1984-1990
ESCAP_BEF_RNG_UP	1977-1982, 1984-1990



Appendix 3D. (Continued)

Data Element	Years Collected
ESCAPED_NET	1971-1976
EVADED_SET	1971-1982, 1984-1990
EXPL_CLASS3_USED	1989-1990
FACEMASK_EFF_DUR	1979-1982, 1984-1990
FISH_BEHAVIOR	1971-1975
FISH_LOSS_DUR_BD	1977-1982, 1984-1990
FISH_TYPE	1974-1976
FISHLOSS	1979-1982, 1984-1990
FRIGATES	1971-1975
HAND_REMOVAL	1976
HI_EST_RELS_DUR	1977-1982, 1984-1990
JAEGERS	1971-1975
JELLYFISH	1977-1978
JELLYFISH_PROBLM	1977-1978
KNEW_1BOAT_REG	1976
KNEW_2BOAT_REG	1976
KNEW_2MEN_REG	1976-1978
KNEW_BD_REG	1976-1978
KNEW_BOATS_REG	1977-1978
KNEW_BRAIL_REG	1977-1978
KNEW_BUNCHS_REG	1977-1978
KNEW_PANEL_REG	1977-1978
KNEW_POINT_REG	1977-1978
KNEW_RAFT_REG	1977-1978
KNEW_REMOVAL_REG	1976-1978
KNEW_SCHOOL_REG	1977-1978
KNEW_SNORKL_REG	1977-1978
KNEW_STREAKR_REG	1976
KNOWN_INJURED	1977-1982, 1984-1990
KNOWN_KILLED	1971-1982, 1984-1990
LATITUDE	1971-1982, 1984-1990
LIGHTS_DUR_BD	1979-1982, 1984-1988
LITS_140K_DUR_BD	1989-1990
LIVE_OTHR_AFT_BD	1977-1978
LIVE_REL_BEF_BD	1979-1982, 1984-1990
LIVE_REL_DUR_BD	1979-1982, 1984-1990
LIVE_SPN_AFT_BD	1977-1978
LIVE_SPT_AFT_BD	1977-1978
LO_EST_RELS_DUR	1977-1982, 1984-1990
LONGITUDE	1971-1982, 1984-1990
MAINTENANCE	1976-1978
MALF_DELAY_MIN	1979-1982, 1984-1990

Appendix 3D. (Continued)

Data Element	Years Collected
MALF_DELAY_SET	1971-1982, 1984-1990
MODIFY_GEAR	1977-1982, 1984-1990
N_OR_S	1971-1982, 1984-1990
NET_COLLAPSED	1971-1976
NET_DUMPED	1971-1982, 1984-1990
NET_HELD_OPEN	1971-1976
NET_TIED_DOWN	1976-1982, 1984-1990
NUM_BD_SPEEDBOAT	1976-1982, 1984-1990
NUM_BIRDS	1976-1980
NUM_BOATS_USED	1971-1982, 1984-1990
NUM_BUNCHES	1971-1982, 1984-1990
NUM_CROOK_RESCUE	1976-1978
NUM_DEAD_DECK	1989-1990
NUM_ESCAP_AFT	1977-1982, 1984-1990
NUM_ESCAP_AFT_BD	1977-1982, 1984-1990
NUM_ESCAP_BEF	1977-1982, 1984-1990
NUM_LIV_BEF_BRAL	1977-1982, 1984-1990
NUM_LIV_SRT_SACK	1977-1982, 1984-1990
NUM_LOSS_DUR_BD	1977-1982, 1984-1990
NUM_MEN	1971-1976
NUM_MEN_BOAT_AFT	1977-1982, 1984-1990
NUM_MEN_BOAT_BEF	1977-1978
NUM_MEN_BOAT_DUR	1977-1978
NUM_MEN_OTHR_AFT	1977-1982, 1984-1990
NUM_MEN_OTHR_BEF	1977-1978
NUM_MEN_OTHR_DUR	1977-1978
NUM_MEN_RAFT_AFT	1977-1982, 1984-1990
NUM_MEN_RAFT_BEF	1977-1978
NUM_MEN_RAFT_DUR	1977-1978
NUM_MEN_SACK_AFT	1977-1982, 1984-1990
NUM_MINUTES_USED	1976
NUM_REL_BOAT_AFT	1977-1982, 1984-1990
NUM_REL_BOAT_BEF	1977-1978
NUM_REL_BOAT_DUR	1977-1978
NUM_REL_DECK_AFT	1977-1982, 1984-1990
NUM_REL_DECK_BEF	1977-1978
NUM_REL_OTHR_AFT	1977-1982, 1984-1990
NUM_REL_OTHR_BEF	1977-1978
NUM_REL_OTHR_DUR	1977-1978
NUM_REL_RAFT_AFT	1977-1982, 1984-1990
NUM_REL_RAFT_BEF	1977-1978
NUM_REL_RAFT_DUR	1977-1978

Appendix 3D. (Continued)

Data Element	Years Collected
NUM_REL_SACK_AFT	1977-1982, 1984-1990
NUM_REL_SWMR_AFT	1977-1982, 1984-1990
NUM_REL_SWMR_BEF	1977-1978
NUM_REL_SWMR_DUR	1977-1978
NUM_RESCUERS_AFT	1977-1982, 1984-1990
NUM_RESCUERS_BEF	1977-1982, 1984-1990
NUM_RESCUERS_DUR	1977-1982, 1984-1990
NUM_SAVED_AFT_BD	1976
NUM_SAVED_BEF_BD	1976
NUM_SAVED_DUR_BD	1976
NUM_SKIFF_RESCUE	1976
NUM_SWMR_AFT_BD	1977-1982, 1984-1990
NUM_SWMR_BEF_BD	1977-1978
NUM_SWMR_DUR_BD	1977-1978
OBS_BST_EST_BEF	1977-1982, 1984-1990
OBS_BST_EST_CAP	1977-1982, 1984-1990
OBS_BST_EST_ENC	1977-1982, 1984-1990
OBS_EASTERN_BEF	1977-1982, 1984-1990
OBS_EASTERN_CAP	1977-1982, 1984-1990
OBS_EASTERN_ENC	1977-1982, 1984-1990
OBS_HI_EST_BEF	1977-1982, 1984-1990
OBS_HI_EST_CAP	1977-1982, 1984-1990
OBS_HI_EST_ENC	1977-1982, 1984-1990
OBS_LO_EST_BEF	1977-1982, 1984-1990
OBS_LO_EST_CAP	1977-1982, 1984-1990
OBS_LO_EST_ENC	1977-1982, 1984-1990
OBS_OTHR1_BEF	1977-1982, 1984-1990
OBS_OTHR1_CAP	1977-1982, 1984-1990
OBS_OTHR1_CD_BEF	1977-1982, 1984-1990
OBS_OTHR1_CD_CAP	1977-1982, 1984-1990
OBS_OTHR1_CD_ENC	1977-1982, 1984-1990
OBS_OTHR1_ENC	1977-1982, 1984-1990
OBS_OTHR2_BEF	1977-1982, 1984-1990
OBS_OTHR2_CAP	1977-1982, 1984-1990
OBS_OTHR2_CD_BEF	1977-1982, 1984-1990
OBS_OTHR2_CD_CAP	1977-1982, 1984-1990
OBS_OTHR2_CD_ENC	1977-1982, 1984-1990
OBS_OTHR2_ENC	1977-1982, 1984-1990
OBS_SPN2_BEF	1977-1982, 1984-1990
OBS_SPN2_CAP	1977-1982, 1984-1990
OBS_SPN2_CD_BEF	1977-1982, 1984-1990
OBS_SPN2_CD_CAP	1977-1982, 1984-1990

Appendix 3D. (Continued)

Data Element	Years Collected
OBS_SPN2_CD_ENC	1977-1982, 1984-1990
OBS_SPN2_ENC	1977-1982, 1984-1990
OBS_SPT_BEF	1977-1982, 1984-1990
OBS_SPT_CAP	1977-1982, 1984-1990
OBS_SPT_CD_BEF	1977-1982, 1984-1990
OBS_SPT_CD_CAP	1977-1982, 1984-1990
OBS_SPT_CD_ENC	1977-1982, 1984-1990
OBS_SPT_ENC	1977-1982, 1984-1990
OBS_WB_BEF	1977-1982, 1984-1990
OBS_WB_CAP	1977-1982, 1984-1990
OBS_WB_ENC	1977-1982, 1984-1990
OBS_WHY_2MEN	1977-1978
OBS_WHY_BD	1977-1978
OBS_WHY_BOATS	1977-1978
OBS_WHY_BRAIL	1977-1978
OBS_WHY_BUNCHS	1977-1978
OBS_WHY_PANEL	1977-1978
OBS_WHY_POINT	1977-1978
OBS_WHY_RAFT	1977-1978
OBS_WHY_REMUVL	1977-1978
OBS_WHY_SCHOOL	1977-1978
OBS_WHY_SNORKL	1977-1978
OBSERVER	1971-1978
OPERATIONS	1971-1975
OTHER_BIRDS	1971-1975
OTHER_FISH_CODE	1971-1982, 1984-1990
OTHER_OTH_KILL	1971-1982, 1984-1990
OTHER_SPC_KILL	1971-1982, 1984-1990
OTHER_SPN_KILL	1971-1982, 1984-1990
OTHER_SPT_KILL	1971-1982, 1984-1990
OTHER1CODE_CATCH	1971-1982, 1984-1990
OTHER2CODE_CATCH	1971-1982, 1984-1990
OVER_CORKS	1971-1976
PERCENT_OTHER	1976
PERCENT_SPIN	1976
PERCENT_SPOT	1976
PETRELS	1971-1975
PNL_COVR_BD_AREA	1977-1982, 1984-1990
PORP_BASKET_USED	1971-1978
PORP_BEHAVIOR	1971-1975
PORP_IN_NET	1971-1982, 1984-1990
RAFT_USED_AFT_BD	1976

Appendix 3D. (Continued)

Data Element	Years Collected
RAFT_USED_BEF_BD	1976
RAFT_USED_DUR_BD	1976
REASON_NO_BD	1976
REASON_NO_BOATS	1976
REASON_NO_REMOVE	1976
REASON_NOT_USED	1976
REASON_NOT_WORK	1976
REASON_STREAKR	1976
RELS_BOAT_AFT_BD	1977-1982, 1984-1990
RELS_BOAT_BEF_BD	1977-1982, 1984-1990
RELS_BOAT_DUR_BD	1977-1982, 1984-1990
RELS_DECK_AFT_BD	1977-1982, 1984-1990
RELS_DECK_BEF_BD	1977-1978
RELS_OTHR_AFT_BD	1977-1982, 1984-1990
RELS_OTHR_BEF_BD	1977-1982, 1984-1990
RELS_OTHR_DUR_BD	1977-1982, 1984-1990
RELS_RAFT_AFT_BD	1977-1982, 1984-1990
RELS_RAFT_BEF_BD	1977-1982, 1984-1990
RELS_RAFT_DUR_BD	1977-1982, 1984-1990
RELS_SACK_AFT_BD	1977-1982, 1984-1990
RELS_SWMR_AFT_BD	1977-1982, 1984-1990
RELS_SWMR_BEF_BD	1977-1982, 1984-1990
RELS_SWMR_DUR_BD	1977-1982, 1984-1990
RESCU_EFF_BEF_BD	1979-1982, 1984-1990
RESCU_EFF_DUR_BD	1979-1982, 1984-1990
RESCUERS	1971-1976
SACKUP	1971-1982, 1984-1990
SACKUP_OTH_KILL	1971-1982, 1984-1990
SACKUP_SPN_KILL	1971-1982, 1984-1990
SACKUP_SPT_KILL	1971-1982, 1984-1990
SET	1971-1982, 1984-1990
SET_ABORTED	1971-1982, 1984-1990
SET_TYPE	1971-1982, 1984-1990
SHEARWATERS	1971-1975
SKIFF_RESCUE	1976
SKIP_OTHER_SP1	1984-1990
SKIP_OTHER_SP2	1984-1990
SKIP_OTHER1_CATCH	1984-1990
SKIP_OTHER2_CATCH	1984-1990
SKIP_PORP_TOT	1984-1990
SKIP_SPN	1984-1990
SKIP_SPN_CATCH	1984-1990

Appendix 3D. (Continued)

Data Element	Years Collected
SKIP_SPT	1984-1990
SKIP_SPT_CATCH	1984-1990
SKIP_TOT_CATCH	1984-1990
SKIPPER_COMMENTS	1976-1978
SKIPR_WHY_2MEN	1977-1978
SKIPR_WHY_BD	1977-1978
SKIPR_WHY_BOATS	1977-1978
SKIPR_WHY_BRAIL	1977-1978
SKIPR_WHY_BUNCHS	1977-1978
SKIPR_WHY_PANEL	1977-1978
SKIPR_WHY_POINT	1977-1978
SKIPR_WHY_RAFT	1977-1978
SKIPR_WHY_REMUVL	1977-1978
SKIPR_WHY_SCHOOL	1977-1978
SKIPR_WHY_SNORKL	1977-1978
SPC_DEAD_BEF_BD	1971-1976
SPC_ESCAP_BEF	1977-1982, 1984-1990
SPC_ESCAPED_NET	1971-1976
SPC_EVADED_SET	1971-1982, 1984-1990
SPC_OTHER_SP1	1971-1982, 1984-1990
SPC_OTHER_SP2	1971-1982, 1984-1990
SPC_OVER_CORKS	1971-1976
SUCCESS_SET	1971-1978
SUNDOWN	1979-1982, 1984-1990
SURF_TEMP	1971-1978
SURF_TEMP_RNG_UP	1977-1978
SWELL_TOWLINE_IN	1979-1982, 1984-1990
TANGL_KIL_AFT_BD	1977-1978
TANGL_KIL_BEF_BD	1977-1978
TANGL_KIL_DUR_BD	1977-1978
TANGL_MESH_125	1976-1978
TANGL_MESH_200	1976-1978
TANGL_MESH_425	1976-1978
TANGL_MESH_UNK	1976-1978
TANGL_OTH_KILL	1971-1982, 1984-1990
TANGL_SPN_KILL	1971-1982, 1984-1990
TANGL_SPT_KILL	1971-1982, 1984-1990
TERNS	1971-1975
TIME_CHASE_BEGAN	1971-1982, 1984-1990
TIME_END_BD	1971-1982, 1984-1990
TIME_END_BRAIL	1971-1982, 1984-1990
TIME_END_SET	1971-1982, 1984-1990

Appendix 3D. (Continued)

Data Element	Years Collected
TIME_NET_DUMPED	1971-1982, 1984-1990
TIME_NET_LET_GO	1971-1982, 1984-1990
TIME_OF_SIGHT	1971-1976
TIME_RINGS_UP	1971-1982, 1984-1990
TIME_ROLL_NET	1971-1978
TIME_SET_ABORT	1971-1982, 1984-1990
TIME_SIGHT_BIRDS	1976-1980
TIME_SIGHT_PORP	1977-1978
TIME_START_BD	1971-1982, 1984-1990
TIME_START_BRAIL	1971-1982, 1984-1990
TIME_START_SACK	1971-1982, 1984-1990
TIME_SUNDOWN	1989-1990
TONS_OTHER_FISH	1971-1982, 1984-1990
TONS_SK	1971-1982, 1984-1990
TONS_YF	1971-1982, 1984-1990
TOT_AFTER_BD	1971-1976
TOT_DEAD_BEF_BD	1971-1976
TOT_ESCAPED_NET	1971-1976
TOT_EVADED_SET	1971-1982, 1984-1990
TOT_LIVE_AFT_BD	1979-1982, 1984-1990
TOT_OVER_CORKS	1971-1976
TOT_RELEASED	1971-1976
TOT_RESCUED	1971-1976
TOWLINE_LENGTH	1971-1976
TRAP_KIL_AFT_BD	1977-1978
TRAP_KIL_BEF_BD	1977-1978
TRAP_KIL_DUR_BD	1977-1978
TRAP_OTH_KILL	1971-1982, 1984-1990
TRAP_SPN_KILL	1971-1982, 1984-1990
TRAP_SPT_KILL	1971-1982, 1984-1990
UNIDENT_BIRDS	1971-1975
UNK_OTH_KILL	1971-1982, 1984-1990
UNK_SPN_KILL	1971-1982, 1984-1990
UNK_SPT_KILL	1971-1982, 1984-1990
VESSEL_CODE	1971-1976
WIND	1971-1976
WIND_BEARING	1979-1982, 1984-1990
WIND_CHOP	1971-1978
WIND_CHOP_RNG_UP	1977-1978
WIND_DIR_RNG_UP	1977-1978
WIND_DIRECTION	1971-1978
WIND_RNG_UP	1977-1978

Appendix 3D. (Continued)

Data Element	Years Collected
WIND_SWEL_RNG_UP	1977-1978
WIND_SWELL	1971-1978
WIND_TOWLINE_IN	1979-1982, 1984-1990
WITH_APRON_CHUTE	1976
WITH_SMALL_MESH	1976



Appendix 3E. Tally data elements and years collected by the NMFS Tuna-Porpoise Observer Program from 1971-1990.

Data Element	Years Collected
ALIVE_2TONE_F	1971-1982, 1984-1990
ALIVE_2TONE_M	1971-1982, 1984-1990
ALIVE_2TONE_Q	1971-1982, 1984-1990
ALIVE_ADULT_F	1971-1982, 1984-1990
ALIVE_ADULT_M	1971-1982, 1984-1990
ALIVE_ADULT_Q	1971-1982, 1984-1990
ALIVE_AGE_UNK	1971-1982, 1984-1990
ALIVE_DELF_F	1971-1976
ALIVE_DELF_M	1971-1976
ALIVE_DELF_Q	1971-1976
ALIVE_EASTERN_F	1971-1982, 1984-1990
ALIVE_EASTERN_M	1971-1982, 1984-1990
ALIVE_EASTERN_Q	1971-1982, 1984-1990
ALIVE_MOTL_F	1971-1982, 1984-1990
ALIVE_MOTL_M	1971-1982, 1984-1990
ALIVE_MOTL_Q	1971-1982, 1984-1990
ALIVE_NEO_F	1971-1982, 1984-1990
ALIVE_NEO_M	1971-1982, 1984-1990
ALIVE_NEO_Q	1971-1982, 1984-1990
ALIVE_OTHER_F	1971-1976
ALIVE_OTHER_M	1971-1976
ALIVE_OTHER_Q	1971-1976
ALIVE_OTHR_SP1_F	1977-1982, 1984-1990
ALIVE_OTHR_SP1_M	1977-1982, 1984-1990
ALIVE_OTHR_SP1_Q	1977-1982, 1984-1990
ALIVE_OTHR_SP2_F	1977-1982, 1984-1990
ALIVE_OTHR_SP2_M	1977-1982, 1984-1990
ALIVE_OTHR_SP2_Q	1977-1982, 1984-1990
ALIVE_SPECKL_F	1971-1982, 1984-1990
ALIVE_SPECKL_M	1971-1982, 1984-1990
ALIVE_SPECKL_Q	1971-1982, 1984-1990
ALIVE_UNID_SPN_F	1971-1982, 1984-1990
ALIVE_UNID_SPN_M	1971-1982, 1984-1990
ALIVE_UNID_SPN_Q	1971-1982, 1984-1990
ALIVE_UNIDENT	1971-1982, 1984-1990
ALIVE_WB_F	1971-1982, 1984-1990
ALIVE_WB_M	1971-1982, 1984-1990
ALIVE_WB_Q	1971-1982, 1984-1990
CRUISE	1971-1982, 1984-1990
DEAD_2TONE_F	1971-1982, 1984-1990

## Appendix 3E. (Continued)

Data Element	Years Collected
DEAD_2TONE_M	1971-1982, 1984-1990
DEAD_2TONE_Q	1971-1982, 1984-1990
DEAD_ADULT_F	1971-1982, 1984-1990
DEAD_ADULT_M	1971-1982, 1984-1990
DEAD_ADULT_Q	1971-1982, 1984-1990
DEAD_AGE_UNK	1971-1982, 1984-1990
DEAD_DELF_F	1971-1976
DEAD_DELF_M	1971-1976
DEAD_DELF_Q	1971-1976
DEAD_EASTERN_F	1971-1982, 1984-1990
DEAD_EASTERN_M	1971-1982, 1984-1990
DEAD_EASTERN_Q	1971-1982, 1984-1990
DEAD_MOTL_F	1971-1982, 1984-1990
DEAD_MOTL_M	1971-1982, 1984-1990
DEAD_MOTL_Q	1971-1982, 1984-1990
DEAD_NEO_F	1971-1982, 1984-1990
DEAD_NEO_M	1971-1982, 1984-1990
DEAD_NEO_Q	1971-1982, 1984-1990
DEAD_OTHER_F	1971-1976
DEAD_OTHER_M	1971-1976
DEAD_OTHER_Q	1971-1976
DEAD_OTHR_SP1_F	1977-1982, 1984-1990
DEAD_OTHR_SP1_M	1977-1982, 1984-1990
DEAD_OTHR_SP1_Q	1977-1982, 1984-1990
DEAD_OTHR_SP2_F	1977-1982, 1984-1990
DEAD_OTHR_SP2_M	1977-1982, 1984-1990
DEAD_OTHR_SP2_Q	1977-1982, 1984-1990
DEAD_SPECKL_F	1971-1982, 1984-1990
DEAD_SPECKL_M	1971-1982, 1984-1990
DEAD_SPECKL_Q	1971-1982, 1984-1990
DEAD_UNID_SPN_F	1971-1982, 1984-1990
DEAD_UNID_SPN_M	1971-1982, 1984-1990
DEAD_UNID_SPN_Q	1971-1982, 1984-1990
DEAD_UNIDENT	1971-1982, 1984-1990
DEAD_WB_F	1971-1982, 1984-1990
DEAD_WB_M	1971-1982, 1984-1990
DEAD_WB_Q	1971-1982, 1984-1990
INJ_2TONE_F	1971-1982, 1984-1990
INJ_2TONE_M	1971-1982, 1984-1990
INJ_2TONE_Q	1971-1982, 1984-1990
INJ_ADULT_F	1971-1982, 1984-1990

## Appendix 3E. (Continued)

Data Element	Years Collected
INJ_ADULT_M	1971-1982, 1984-1990
INJ_ADULT_Q	1971-1982, 1984-1990
INJ_AGE_UNK	1971-1982, 1984-1990
INJ_DELF_F	1971-1976
INJ_DELF_M	1971-1976
INJ_DELF_Q	1971-1976
INJ_EASTERN_F	1971-1982, 1984-1990
INJ_EASTERN_M	1971-1982, 1984-1990
INJ_EASTERN_Q	1971-1982, 1984-1990
INJ_MOTL_F	1971-1982, 1984-1990
INJ_MOTL_M	1971-1982, 1984-1990
INJ_MOTL_Q	1971-1982, 1984-1990
INJ_NEO_F	1971-1982, 1984-1990
INJ_NEO_M	1971-1982, 1984-1990
INJ_NEO_Q	1971-1982, 1984-1990
INJ_OTHER_F	1971-1976
INJ_OTHER_M	1971-1976
INJ_OTHER_Q	1971-1976
INJ_OTHR_SP1_F	1977-1982, 1984-1990
INJ_OTHR_SP1_M	1977-1982, 1984-1990
INJ_OTHR_SP1_Q	1977-1982, 1984-1990
INJ_OTHR_SP2_F	1977-1982, 1984-1990
INJ_OTHR_SP2_M	1977-1982, 1984-1990
INJ_OTHR_SP2_Q	1977-1982, 1984-1990
INJ_SPECKL_F	1971-1982, 1984-1990
INJ_SPECKL_M	1971-1982, 1984-1990
INJ_SPECKL_Q	1971-1982, 1984-1990
INJ_UNID_SPN_F	1971-1982, 1984-1990
INJ_UNID_SPN_M	1971-1982, 1984-1990
INJ_UNID_SPN_Q	1971-1982, 1984-1990
INJ_UNIDENT	1971-1982, 1984-1990
INJ_WB_F	1971-1982, 1984-1990
INJ_WB_M	1971-1982, 1984-1990
INJ_WB_Q	1971-1982, 1984-1990
OTHER_SPC_TALLY	1971-1976
Q_2TONE_F	1971-1976
Q_2TONE_M	1971-1976
Q_2TONE_Q	1971-1982, 1984-1990
Q_ADULT_F	1971-1982, 1984-1990
Q_ADULT_M	1971-1982, 1984-1990
Q_ADULT_Q	1971-1982, 1984-1990
Q_AGE_UNK	1971-1982, 1984-1990

## Appendix 3E. (Continued)

Data Element	Years Collected
Q_DELF_F	1971-1976
Q_DELF_M	1971-1976
Q_DELF_Q	1971-1976
Q_EASTERN_F	1971-1982, 1984-1990
Q_EASTERN_M	1971-1982, 1984-1990
Q_EASTERN_Q	1971-1982, 1984-1990
Q_INJ_2TONE_F	1971-1982, 1984-1990
Q_INJ_2TONE_M	1971-1982, 1984-1990
Q_INJ_2TONE_Q	1971-1982, 1984-1990
Q_INJ_ADULT_F	1971-1982, 1984-1990
Q_INJ_ADULT_M	1971-1982, 1984-1990
Q_INJ_ADULT_Q	1971-1982, 1984-1990
Q_INJ_AGE_UNK	1971-1982, 1984-1990
Q_INJ_DELF_F	1971-1976
Q_INJ_DELF_M	1971-1976
Q_INJ_DELF_Q	1971-1976
Q_INJ_EASTERN_F	1971-1982, 1984-1990
Q_INJ_EASTERN_M	1971-1982, 1984-1990
Q_INJ_EASTERN_Q	1971-1982, 1984-1990
Q_INJ_MOTL_F	1971-1982, 1984-1990
Q_INJ_MOTL_M	1971-1982, 1984-1990
Q_INJ_MOTL_Q	1971-1982, 1984-1990
Q_INJ_NEO_F	1971-1982, 1984-1990
Q_INJ_NEO_M	1971-1982, 1984-1990
Q_INJ_NEO_Q	1971-1982, 1984-1990
Q_INJ_OTHER_F	1971-1976
Q_INJ_OTHER_M	1971-1976
Q_INJ_OTHER_Q	1971-1976
Q_INJ_OTHR_SP1_F	1977-1982, 1984-1990
Q_INJ_OTHR_SP1_M	1977-1982, 1984-1990
Q_INJ_OTHR_SP1_Q	1977-1982, 1984-1990
Q_INJ_OTHR_SP2_F	1977-1982, 1984-1990
Q_INJ_OTHR_SP2_M	1977-1982, 1984-1990
Q_INJ_OTHR_SP2_Q	1977-1982, 1984-1990
Q_INJ_SPECKL_F	1971-1982, 1984-1990
Q_INJ_SPECKL_M	1971-1982, 1984-1990
Q_INJ_SPECKL_Q	1971-1982, 1984-1990
Q_INJ_UNID_SPN_F	1971-1982, 1984-1990
Q_INJ_UNID_SPN_M	1971-1982, 1984-1990
Q_INJ_UNID_SPN_Q	1971-1982, 1984-1990
Q_INJ_UNIDENT	1971-1982, 1984-1990
Q_INJ_WB_F	1971-1982, 1984-1990

Appendix 3E. (Continued)

Data Element	Years Collected
Q_INJ_WB_M	1971-1982, 1984-1990
Q_INJ_WB_Q	1971-1982, 1984-1990
Q_MOTL_F	1971-1982, 1984-1990
Q_MOTL_M	1971-1982, 1984-1990
Q_MOTL_Q	1971-1982, 1984-1990
Q_NEO_F	1971-1982, 1984-1990
Q_NEO_M	1971-1982, 1984-1990
Q_NEO_Q	1971-1982, 1984-1990
Q_OTHER_F	1971-1976
Q_OTHER_M	1971-1976
Q_OTHER_Q	1971-1976
Q_OTHR_SP1_F	1977-1982, 1984-1990
Q_OTHR_SP1_M	1977-1982, 1984-1990
Q_OTHR_SP1_Q	1977-1982, 1984-1990
Q_OTHR_SP2_F	1977-1982, 1984-1990
Q_OTHR_SP2_M	1977-1982, 1984-1990
Q_OTHR_SP2_Q	1977-1982, 1984-1990
Q_SPECKL_F	1971-1982, 1984-1990
Q_SPECKL_M	1971-1982, 1984-1990
Q_SPECKL_Q	1971-1982, 1984-1990
Q_UNID_SPN_F	1971-1982, 1984-1990
Q_UNID_SPN_M	1971-1982, 1984-1990
Q_UNID_SPN_Q	1971-1982, 1984-1990
Q_UNIDENT	1971-1982, 1984-1990
Q_WB_F	1971-1982, 1984-1990
Q_WB_M	1971-1982, 1984-1990
Q_WB_Q	1971-1982, 1984-1990
SET	1971-1982, 1984-1990
SPC_TALY_SP1	1977-1982, 1984-1990
SPC_TALY_SP2	1977-1982, 1984-1990
SPC_TALY_SPN	1977-1982, 1984-1990
SPC_TALY_SPT	1977-1982, 1984-1990

Appendix 3F. Fishing Mode data elements and years collected by the NMFS Tuna-Porpoise-Observer Program from 1971-1990.

Data Element	Years Collected
CHASE_OR_SET	1975-1982, 1984-1990
CRUISE	1975-1982, 1984-1990
DATE	1975-1982, 1984-1990
DATE_POSITION	1975
DRIFT_OR_RUN	1975-1982, 1984-1990
DRIFT_RUN_CODE	1975-1982, 1984-1990
E_OR_W	1975
FOG_OR_RAIN	1975-1982, 1984-1990
HELICOPTER_UP	1984-1990
LATITUDE	1975
LONGITUDE	1975
N_OR_S	1975
NUM_BINOCULARS	1975-1982, 1984-1990
OBSERVER	1975-1980
REPEAT_OCCURRENCES	1975
SEA_STATE	1975-1982, 1984-1990
SEARCHING	1975-1982, 1984-1990
SET	1975-1982, 1984-1990
SET_TYPE	1975-1982, 1984-1990
SPEED	1975-1982, 1984-1990
SURF_TEMP	1975-1982, 1984-1990
TIME_ACTIVITY	1975-1982, 1984-1990
TIME_POSITION	1975
VA_TYPE	1981-1982, 1984-1990

Appendix 3G. Turtle data elements collected by the NMFS Tuna-Porpoise Observer Program in 1975.

Data Element	Years Collected
ACTIVITY_CODE	1975
ASSOC_ORGANISMS	1975
BEARING	1975
CONFIDENCE_INT	1975
CRUISE	1975
DATE	1975
DIRECTION	1975
DISTANCE	1975
E_OR_W	1975
HABITAT	1975
LATITUDE	1975
LEG	1975
LONGITUDE	1975
N_OR_S	1975
NUM_LH_FORMS	1975
OBSERVER	1975
PERCENT_SPECIES1	1975
PERCENT_SPECIES2	1975
PERCENT_SPECIES3	1975
PHOTOS	1975
PRE_SET_SIGHT	1975
SCHOOL_SIZE	1975
SERIES	1975
SET	1975
SIGHT	1975
SIZE_CODE	1975
SPECIES1_CODE	1975
SPECIES2_CODE	1975
SPECIES3_CODE	1975
SURF_TEMP	1975
TIME_OF_SIGHTING	1975

Appendix 4A. "Code Table 1" lists cruises fielded by the NMFS Tuna-Porpoise Observer Program from 1966-1995, as well as charter, research and IATTC observer cruises.

Cruise Year	Cruise	Observer Type	Gear Type	Vessel Class	Fish Capacity (ST)	Year Built	Vessel Code	Observer Number	Observer Initials	Date Depart	Date Return
1966	0001	SWFC OBS	UNKNOWN	1	0380	51	0029	001	WFP	660710	660811
1967	0002	SWFC OBS	UNKNOWN	2	0500	55	0300	001	WFP	6707xx	6707xx
1968	0003	SWFC OBS	UNKNOWN	2	0500	58	0145	001	WFP	680401	680429
1969	0004	SWFC OBS	UNKNOWN	2	0500	58	0145	011	RWW	690710	690825
1970	0005	CHARTER	UNKNOWN	3	1200	73	0367	001	WFP	701222	701222
1971	0006	SWFC OBS	UNKNOWN	3	0300	59	0150	004	LR	701228	710205
1971	0007	SWFC OBS	UNKNOWN	2	0930	44	0067	002	JSL	701228	710125
1971	0008	SWFC OBS	UNKNOWN	1	0400	57	0141	003	RSG	701228	710305
1971	0009	SWFC OBS	UNKNOWN	1	0400	55	0136	005	JMC	710426	710629
1971	0010	SWFC OBS	UNKNOWN	3	0780	69	0187	004	LR	710512	710708
1971	0011	CHARTER	UNKNOWN	1	0400	57	0141	001	WFP	710514	710515
1971	0012	CHARTER	UNKNOWN	1	0385	56	0134	001	WFP	710907	710908
1971	0013	CHARTER	UNKNOWN	3	0540	69	0198	005	JMC	711117	711216
1972	0014	SWFC OBS	UNKNOWN	3	0650	69	0212	003	RSG	720101	720130
1972	0015	SWFC OBS	UNKNOWN	3	0540	65	0161	007	GMT	720101	720208
1972	0016	SWFC OBS	UNKNOWN	3	0650	70	0216	005	JMC	720101	720209
1972	0017	SWFC OBS	UNKNOWN	1	0377	51	0092	008	AP	720101	720213
1972	0018	SWFC OBS	UNKNOWN	3	0540	69	0198	006	DBH	720102	720129
1972	0019	SWFC OBS	UNKNOWN	3	0780	69	0187	009	JMG	720104	720220
1972	0020	SWFC OBS	UNKNOWN	1	0385	56	0134	010	CWO	720106	720208
1972	0021	SWFC OBS	UNKNOWN	3	0650	70	0216	005	JMC	720216	720308
1972	0022	SWFC OBS	UNKNOWN	3	0540	67	0174	007	GMT	720228	720405
1972	0023	SWFC OBS	UNKNOWN	3	0650	70	0216	005	JMC	720311	720417
1972	0024	SWFC OBS	UNKNOWN	2	0500	58	0148	010	CWO	720318	720609
1972	0025	SWFC OBS	UNKNOWN	3	0650	68	0186	006	DBH	720320	720413
1972	0026	CHARTER	UNKNOWN	2	0500	55	0300	005	JMC	720927	721029
1972	0027	CHARTER	UNKNOWN	2	0500	55	0300	006	DBH	721211	721217
1973	0028	SWFC OBS	UNKNOWN	2	0500	55	0300	006	DBH	730101	730213
1973	0029	SWFC OBS	UNKNOWN	3	0780	69	0187	010	CWO	730101	730215
1973	0030	SWFC OBS	UNKNOWN	3	0780	70	0301	013	RJO	730102	730216
1973	0031	SWFC OBS	UNKNOWN	3	0650	69	0212	014	CRR	730101	730219
1973	0032	SWFC OBS	UNKNOWN	3	1000	71	0302	015	KDS	730101	730220
1973	0033	SWFC OBS	UNKNOWN	3	0780	70	0303	016	CEB	730101	730222
1973	0034	SWFC OBS	UNKNOWN	3	1100	71	0304	017	JAY	730101	730222
1973	0035	SWFC OBS	UNKNOWN	2	0500	58	0145	018	DBZ	730101	730302
1973	0036	SWFC OBS	UNKNOWN	1	0385	59	0146	019	JMR	730101	730303
1973	0037	SWFC OBS	UNKNOWN	3	1400	72	0305	020	DJO	730113	730304
1973	0038	SWFC OBS	UNKNOWN	3	0650	70	0216	021	JWP	730101	730306
1973	0039	SWFC OBS	UNKNOWN	3	1400	71	0306	022	FMR	730110	730313
1973	0040	SWFC OBS	UNKNOWN	3	0650	68	0186	006	DBH	730224	730416
1973	0041	SWFC OBS	UNKNOWN	3	0850	71	0307	013	RJO	730303	730510
1973	0042	SWFC OBS	UNKNOWN	2	0600	44	0308	017	JAY	730308	730416
1973	0043	SWFC OBS	UNKNOWN	3	1000	72	0309	018	DBZ	730310	730515
1973	0044	SWFC OBS	UNKNOWN	3	0780	70	0310	015	KDS	730310	730510
1973	0045	SWFC OBS	UNKNOWN	3	0650	70	0216	021	JWP	730314	730513
1973	0046	SWFC OBS	UNKNOWN	2	1100	43	0313	019	JMR	730314	730617
1973	0047	SWFC OBS	UNKNOWN	3	0540	66	0311	023	REL	730314	730511
1973	0048	SWFC OBS	UNKNOWN	3	0650	69	0312	010	CWO	730329	730511
1973	0049	SWFC OBS	UNKNOWN	3	0540	67	0174	024	RWC	730503	730703
1973	0050	SWFC OBS	UNKNOWN	3	1400	71	0314	025	SBR	730611	730702
1973	0051	CHARTER	UNKNOWN	3	0650	70	0216	006	DBH	730523	730605
1973	0052	CHARTER	UNKNOWN	3	0800	71	0307	006	DBH	731003	731111
1973	0053	CHARTER	UNKNOWN	3	0650	70	0216	025	SBR	731110	731215
1974	0054	SWFC OBS	2 INCH	3	1000	70	0333	033	REA	740101	740309
1974	0055	SWFC OBS	2 INCH	1	330	46	0316	048	GLU	740117	740308
1974	0056	SWFC OBS	2 INCH	2	600	44	0308	024	RWC	740115	740228
1974	0057	SWFC OBS	2 INCH	3	780	70	0303	050	JAZ	740116	740310



Appendix 4A. (Continued)

Cruise Year	Cruise	Observer Type	Gear Type	Vessel Class	Fish Capacity (ST)	Year Built	Vessel Code	Observer Number	Observer Initials	Date Depart	Date Return
1974	0058	SWFC OBS	2 INCH	3	540	69	0327	003	RSG	740126	740316
1974	0059	SWFC OBS	2 INCH	3	650	70	0331	032	RCD	740116	740308
1974	0060	SWFC OBS	2 INCH	3	624	68	0186	040	TMD	740115	740308
1974	0061	SWFC OBS	2 INCH	3	540	69	0326	001	WFP	740116	740307
1974	0062	SWFC OBS	2 INCH	3	1100	74	0330	028	TDS	740201	740316
1974	0063	SWFC OBS	2 INCH	3	1625	72	0340	034	SGA	740123	740317
1974	0064	SWFC OBS	2 INCH	3	930	67	0317	049	JHT	740123	740518
1974	0065	SWFC OBS	2 INCH	3	1034	71	0335	036	REB	740117	740228
1974	0066	SWFC OBS	2 INCH	3	2151	72	0342	035	GMA	740116	740303
1974	0067	SWFC OBS	2 INCH	3	780	69	0187	037	CMF	740115	740227
1974	0068	SWFC OBS	2 INCH	3	1114	72	0324	041	JAH	740115	740314
1974	0069	SWFC OBS	2 INCH	2	900	42	0329	046		740105	740120
1974	0070	SWFC OBS	2 INCH	3	1250	71	0323	039	WCF	740101	740208
1974	0071	SWFC OBS	2 INCH	3	1400	71	0315	030	JDD	740105	740218
1974	0072	SWFC OBS	2 INCH	2	500	58	0145	045	DHP	740109	740315
1974	0073	SWFC OBS	2 INCH	3	520	65	0161	044	REH	740115	740316
1974	0074	SWFC OBS	2 INCH	3	1000	72	0338	031	PAT	740115	740316
1974	0075	SWFC OBS	2 INCH	3	1400	71	0325	047	WWS	740101	740318
1974	0076	SWFC OBS	2 INCH	3	1034	71	0339	038	TJF	740116	740312
1974	0077	SWFC OBS	2 INCH	1	368	51	0029	043	RWH	740115	740305
1974	0078	SWFC OBS	2 INCH	1	220	45	0337	042	DPH	740121	740308
1974	0079	SWFC OBS	2 INCH	3	540	68	0341	005	JMC	740226	740316
1974	0080	SWFC OBS	2 INCH	2	500	55	0300	039	WCF	740304	740428
1974	0081	SWFC OBS	2 INCH	3	1100	73	0332	036	REB	740316	740425
1974	0082	SWFC OBS	2 INCH	3	960	71	0302	035	GMA	740317	740505
1974	0083	SWFC OBS	2 INCH	3	1400	71	0306	040	TMD	740320	740621
1974	0084	RES-ETP	N/A				JRDN	052		740102	740304
1974	0085	SWFC OBS	UNKNOWN	3			0322	033	REA		
1974	0086	SWFC OBS	2 INCH	3	1038	68	0318	050	JAZ	740407	740526
1974	0087	SWFC OBS	2 INCH	3	540	68	0341	003	RSG	740331	740522
1974	0088	SWFC OBS	2 INCH	3	1100	71	0328	038	TJF	740404	740603
1974	0089	SWFC OBS	2 INCH	3	730	64	0320	045	DHP	740406	740607
1974	0090	SWFC OBS	2 INCH	3	996	72	0309	044	REH	740407	740604
1974	0091	SWFC OBS	2 INCH	3	2151	72	0342	035	GMA	740609	740908
1974	0092	SWFC OBS	2 INCH	3	1300	73	0408	054		740625	740901
1974	0093	SWFC OBS	2 INCH	3	1400	71	0322	033	REA	740824	741026
1974	0094	SWFC OBS	2 INCH	3	1114	72	0324	040	TMD	740728	740904
1974	0095	SWFC OBS	2 INCH	3	828	71	0307	040	TMD	740904	740923
1974	0096	CHARTER	EXP	3	1300	73	0408	006	DBH	741028	741201
1974	0097	CHARTER	EXP	3	540	67	0174	053		741030	741221
1975	0098	SWFC OBS	2 INCH	1	368	51	0029	055		750102	750309
1975	0099	SWFC OBS	2 INCH	1	226	42	0366	056	OS	750102	750208
1975	0100	SWFC OBS	2 INCH	2	922	43	0404	057	DAB	750114	750520
1975	0101	SWFC OBS	2 INCH	3	950	67	0378	049	JHT	750130	750504
1975	0102	SWFC OBS	2 INCH	3	1072	74	0430	040	TMD	750102	750224
1975	0103	SWFC OBS	2 INCH	3	960	71	0302	041	JAH	750104	750401
1975	0104	SWFC OBS	2 INCH	3	830	71	0347	058	SSW	750103	750223
1975	0105	SWFC OBS	2 INCH	3	1034	71	0339	059	RKF	750104	750427
1975	0106	SWFC OBS	2 INCH	3	1165	73	0367	060	RWM	750104	750223
1975	0107	SWFC OBS	2 INCH	3	606	68	0351	061	TBS	750107	750312
1975	0108	SWFC OBS	2 INCH	3	520	65	0161	062	RLC	750102	750217
1975	0109	SWFC OBS	2 INCH	3	624	68	0186	063	MJJ	750111	750311
1975	0110	SWFC OBS	2 INCH	3	1140	72	0398	064	GLF	750102	750303
1975	0111	SWFC OBS	2 INCH	3	1164	69	0344	065	CWP	750108	750407
1975	0112	SWFC OBS	2 INCH	3	1082	73	0386	066	CBP	750101	750225
1975	0113	SWFC OBS	2 INCH	3	1114	72	0324	067	WAW	750102	750312
1975	0114	SWFC OBS	2 INCH	3	1080	74	0431	068	JFL	750102	750212
1975	0115	SWFC OBS	2 INCH	3	828	71	0307	069	WHT	750103	750301
1975	0116	SWFC OBS	2 INCH	3	540	67	0174	070	ADB	750114	750325
1975	0117	SWFC OBS	2 INCH	3	948	68	0364	071	KEW	750120	750306
1975	0118	SWFC OBS	2 INCH	1	370	51	0369	072	SFB	750108	750309

Appendix 4A. (Continued)

Cruise Year	Cruise	Observer Type	Gear Type	Vessel Class	Fish Capacity (ST)	Year Built	Vessel Code	Observer Number	Observer Initials	Date Depart	Date Return
1975	0119	SWFC OBS	2 INCH	3	996	72	0309	039	WCF	750101	750301
1975	0120	SWFC OBS	2 INCH	3	1034	71	0335	073	MLF	750326	750704
1975	0121	SWFC OBS	2 INCH	3	1400	74	0433	060	RWM	750405	750610
1975	0122	SWFC OBS	2 INCH	3	1250	71	0323	068	JFL	750325	750708
1975	0123	SWFC OBS	2 INCH	3	1050	70	0358	040	TMD	750411	750618
1975	0124	SWFC OBS	2 INCH	3	740	68	0426	062	RLC	750331	750531
1975	0125	SWFC OBS	2 INCH	2	526	55	0393	056	OS	750401	750603
1975	0126	RES-OTHR	N/A					026	WEE	7502	7504
1975	0127	SWFC OBS	2 INCH	3	518	69	0198	066	CBP	750424	750621
1975	0128	SWFC OBS	2 INCH	3	802	71	0387	064	GLF	750407	750531
1975	0129	SWFC OBS	2 INCH	3	2151	72	0342	061	TBS	750411	750824
1975	0130	SWFC OBS	2 INCH	3	1400	74	0433	060	RWM	750630	750825
1975	0131	SWFC OBS	2 INCH	3	1300	73	0408	022	FMR	750703	750825
1975	0132	CHARTER	EXP	3	960	71	0302	005	JMC	750928	751204
1975	0133	CHARTER	EXP	3	520	65	0161	006	DBH	750929	751206
1976	0134	REGION	2 INCH	3	1200	75	0441	017	JAY	760104	760217
1976	0135	REGION	2 INCH	3	800	63	0359	096	DAT	760105	760611
1976	0136	REGION	2 INCH	3	1100	73	0367	091	REI	760108	760308
1976	0137	REGION	2 INCH	3	1000	72	0400	077	DTA	760108	760229
1976	0138	REGION	2 INCH	3	1200	72	0398	088	JLN	760108	760306
1976	0139	REGION	2 INCH	3	1100	73	0410	078	CAC	760108	760313
1976	0140	REGION	2 INCH	3	550	67	0174	081	WDK	760108	760310
1976	0141	REGION	2 INCH	3	1200	73	0402	090	LGP	760108	760301
1976	0142	REGION	2 INCH	3	650	69	0355	094	MSS	760109	760316
1976	0143	REGION	2 INCH	3	650	70	0216	079	VCC	760109	760226
1976	0144	REGION	2 INCH	3	1200	75	0437	086	HDM	760110	760308
1976	0145	REGION	2 INCH	3	540	69	0326	093	JS	760110	760227
1976	0146	REGION	2 INCH	3	1200	75	0440	095	PGS	760110	760228
1976	0147	REGION	2 INCH	3	650	69	0312	074	PLA	760110	760318
1976	0148	REGION	2 INCH	3	1400	72	0306	075	SOB	760112	760206
1976	0149	REGION	2 INCH	3	1200	73	0405	076	RWB	760113	760322
1976	0150	REGION	2 INCH	1	370	52	0369	085	MSL	760114	760306
1976	0151	REGION	2 INCH	3	1200	75	0379	062	RLC	760120	760224
1976	0152	REGION	2 INCH	2	500	58	0145	083	BL	760124	760325
1976	0153	REGION	2 INCH	3	1100	70	0358	084	JRG	760126	760328
1976	0154	REGION	2 INCH	1	300	46	0316	092		760126	760319
1976	0155	REGION	2 INCH	1	270	45	0381	082		760129	760304
1976	0156	REGION	2 INCH	2	960	44	0354	040	TMD	760131	760522
1976	0157	REGION	2 INCH	3	1000	71	0323	087	CCM	760201	760327
1976	0158	REGION	2 INCH	2	930	44	0067	089	SRN	760205	760325
1976	0159	GEAR	BC	3	1000	71	0302	068	JFL	760108	760324
1976	0160	GEAR	EXP	3	520	65	0161	060	RWM	760110	760316
1976	0161	REGION	2 INCH	3	600	68	0341	098	SRL	760318	760408
1976	0162	REGION	2 INCH	1	424	59	0146	090	LGP	760320	760512
1976	0163	REGION	2 INCH	3	1400	71	0325	017	JAY	760325	760924
1976	0164	REGION	2 INCH	3	1500	72	0305	091	REI	760327	760528
1976	0165	GEAR	BC	3	550	67	0174	064	GLF	760327	760613
1976	0166	GEAR	BC	3	1050	73	0332	057	DAB	760330	760528
1976	0167	GEAR	BC	3	850	71	0307	044	REH	760331	760510
1976	0168	RES-ETP	N/A		0		CROM	145	WLP	760105	760303
1976	0169	RES-ETP	N/A		0		JRDN	027	EGB	760105	760302
1976	0170	REGION	2 INCH	3	540	66	0311	093	JS	760401	760521
1976	0171	GEAR	DDSFNPL	3	1000	74	0430	103	SES	760403	760528
1976	0172	GEAR	DDSFNPL	2	600	44	0308	059	RKF	760404	760530
1976	0173	REGION	2 INCH	3	950	67	0317	081	WDK	760404	760529
1976	0174	REGION	2 INCH	3	650	68	0351	085	MSL	760406	760601
1976	0175	GEAR	BC	3	750	68	0426	101	JMS	760407	760602
1976	0176	GEAR	BC	3	1200	74	0433	100	DCC	760407	760710
1976	0177	REGION	2 INCH	2	500	55	0393	075	SOB	760408	760705
1976	0178	GEAR	DDSFNPL	3	650	69	0312	035	GMA	760411	760808
1976	0179	GEAR	BC	3	1200	74	0432	060	RWM	760412	760527

Appendix 4A. (Continued)

Cruise Year	Cruise	Observer Type	Gear Type	Vessel Class	Fish Capacity (ST)	Year Built	Vessel Code	Observer Number	Observer Initials	Date Depart	Date Return
1976	0180	GEAR	DDSFNPL	3	1082	73	0386	066	CBP	760415	760529
1976	0181	GEAR	DDSFNPL	3	1036	72	0328	106	ECJ	760418	760531
1976	0182	REGION	2 INCH	2	480	44	0350	095	PGS	760420	760524
1976	0183	GEAR	BC	3	1130	72	0356	104	JRH	760422	760720
1976	0184	GEAR	BC	3	550	65	0161	107	GJA	760425	760527
1976	0185	GEAR	DDSFNPL	3	750	70	0310	099	DR	760505	760622
1976	0186	REGION	2 INCH	3	650	68	0186	078	CAC	760508	760712
1976	0187	GEAR	DDSFNPL	3	650	70	0331	105	MSM	760607	760912
1976	0188	GEAR	BC	3	1700	75	0439	061	TBS	760614	760828
1976	0189	REG/GEAR	DDSFNPL	3	1200	75	0442	089	SRN	760703	761001
1976	0190	REG/GEAR	DDSFNPL	2	600	48	0308	086	HDM	760706	760917
1976	0191	GEAR	DDSFNPL	3	1200	74	0434	097	MWD	760708	760905
1976	0192	REGION	2 INCH	3	1500	71	0314	091	REI	760711	760723
1976	0193	REGION	2 INCH	3	540	69	0198	085	MSL	760715	760921
1976	0194	GEAR	DDSFNPL	3	1150	73	0407	103	SES	760803	761101
1976	0195	REG/GEAR	BC	3	1200	74	0433	091	REI	760815	760922
1976	0196	REGION	2 INCH	3	1100	69	0344	112	DLF	760816	761019
1976	0197	REGION	2 INCH	3	1100	72	0360	117	PPL	760821	761015
1976	0198	REG/GEAR	BC	3	1100	72	0356	109	BJB	760821	761018
1976	0199	REGION	2 INCH	2	500	55	0136	113		760824	760927
1976	0200	REGION	2 INCH	3	780	64	0320	115	TRK	760829	761019
1976	0201	REGION	2 INCH	2	1100	43	0313	108		760830	760924
1976	0202	REGION	2 INCH	1	298	56	0373	017	JAY	760901	760910
1976	0203	REGION	2 INCH	3	540	69	0385	119	WLS	760907	761019
1976	0204	REGION	2 INCH	3	1500	71	0368	116		760912	761015
1976	0205	REGION	2 INCH	2	1000	43	0404	121	PCW	760920	761213
1976	0206	REG/GEAR	DDSFNPL	3	650	70	0331	111	DBF	760921	761112
1976	0207	RES-ETP	N/A		0		JRDN	006	DBH	761005	761118
1976	0208	CHARTER	BC	3	1700	75	0439	005	JMC	761011	761209
1976	0209	REGION	2 INCH	3	1100	71	0362	110	DOB	761009	761129
1976	0210	REGION	2 INCH	1	300	46	0380	118	PLR	761028	761111
1976	0211	REGION	2 INCH	3	1038	68	0318	078	CAC	761028	761118
1976	0212	RES-ETP	N/A				SRVY	146		761116	761209
1977	0213	RES-ETP	N/A				JRDN	146		770104	770308
1977	0214	RES-ETP	N/A				CROM	145	WLP	770106	770325
1976	0215	RES-ETP	N/A		0			005	JMC	761011	761209
1976	0216	RES-ETP	N/A		0		OCNR	145	WLP	760719	760826
1977	0217	REGION	DDSFNPL	3	650	68	0186	125	JCB	770124	770207
1977	0218	REGION	2 INCH	2	900	40	0349	136		770126	770211
1977	0219	REGION	2 INCH	3	650	69	0212	140	JBN	770126	770207
1977	0220	REGION	2 INCH	3	930	67	0317	119	WLS	770128	770227
1977	0221	REGION	DDSFNPL	3	780	62	0377	110	DOB	770128	770227
1977	0222	REGION	DDSFNPL	3	1200	76	0448	116		770129	770205
1977	0223	REGION	2 INCH	2	500	57	0390	109	BJB	770130	770305
1977	0224	REG/GEAR	BC	3	780	70	0310	129	DRD	770131	770204
1977	0225	REG/GEAR	DDSFNPL	3	1100	72	0328	112	DLF	770202	770208
1977	0226	REGION	DDSFNPL	3	850	71	0347	130	TCF	770202	770207
1977	0227	REGION	2 INCH	3	1000	72	0338	117	PPL	770202	770207
1977	0228	REG/GEAR	BC	3	1100	73	0332	132		770202	770207
1977	0229	REGION	EXP	3	1700	76	0446	108		770203	770203
1977	0230	REGION	DDSFNPL	3	1400	72	0305	115	TRK	770419	770819
1977	0231	REGION	DDSFNPL	3	1200	73	0382	136		770420	770705
1977	0232	RES-ETP	N/A				OCNR	068	JFL	770324	770415
1977	0233	REGION	DDSFNPL	3	780	63	0359	133		770504	770928
1977	0234	RES-OTHR	UNKNOWN			59		075	SOB	770405	770502
1977	0235	REGION	2 INCH	2	500	59	0150	150	JTB	770511	770627
1977	0236	REGION	DDSFNPL	3	1100	73	0357	124	MIB	770512	770706
1977	0237	REG/GEAR	S APRON	3	1150	74	0432	121	PCW	770512	770701
1977	0238	REGION	DDSFNPL	3	1000	72	0343	144	RLW	770511	770705
1977	0239	REG/GEAR	DDSFNPL	3	1200	74	0434	112	DLF	770512	770701
1977	0240	REG/GEAR	S APRON	3	780	68	0426	167	JOS	770512	770613

## Appendix 4A. (Continued)

Cruise Year	Cruise	Observer Type	Gear Type	Vessel Class	Fish Capacity (ST)	Year Built	Vessel Code	Observer Number	Observer Initials	Date Depart	Date Return
1977	0241	REGION	SDSFPNL	2	500	57	0416	163	RYS	770512	770530
1977	0242	REG/GEAR	S APRON	3	850	71	0307	091	REI	770512	770704
1977	0243	REGION	DDSFNPL	3	850	71	0387	169	DAV	770512	770703
1977	0244	REGION	2 INCH	3	1100	71	0339	131	DJF	770512	770726
1977	0245	REG/GEAR	S APRON	3	650	67	0397	138	RDL	770512	770705
1977	0246	REGION	DDSFNPL	3	1200	74	0408	154	SWJ	770512	770704
1977	0247	REG/GEAR	BC	3	540	65	0161	158	JOP	770512	770701
1977	0248	REGION	DDSFNPL	3	780	70	0301	160	RCR	770514	770802
1977	0249	REGION	DDSFNPL	3	780	70	0303	110	DOB	770512	770706
1977	0250	REGION	DDSFNPL	3	1100	74	0371	143	PLT	770512	770811
1977	0251	REGION	DDSFNPL	3	780	69	0361	129	DRD	770512	770705
1977	0252	REGION	DDSFNPL	3	1000	72	0372	153	DRF	770512	770811
1977	0253	REGION	2 INCH	3	1100	71	0335	140	JBN	770512	770628
1977	0254	REGION	2 INCH	2	500	58	0148	162	JER	770516	770613
1977	0255	REGION	DDSFNPL	3	1200	73	0386	130	TCF	770514	770806
1977	0256	REGION	2 INCH	3	1200	74	0435	156	MJL	770512	770729
1977	0257	REG/GEAR	S APRON	3	1100	75	0443	135	WOK	770512	770827
1977	0258	REGION	2 INCH	3	1200	75	0436	148	CLB	770512	770801
1977	0259	REGION	DDSFNPL	3	1100	71	0391	115	TRK	770512	770810
1977	0260	REG/GEAR	S APRON	3	780	70	0310	085	MSL	770512	770703
1977	0261	REGION	DDSFNPL	3	1200	75	0444	166	LES	770515	770706
1977	0262	REGION	DDSFNPL	3	1200	75	0445	137	DEL	770514	770823
1977	0263	REGION	DDSFNPL	3	1000	73	0407	097	MWD	770514	770827
1977	0264	REGION	DDSFNPL	3	1100	72	0352	142	RBR	770512	770701
1977	0265	CHARTER	S APRON	3	2375	72	0342	060	RWM	770519	770911
1977	0266	REGION	DDSFNPL	3	540	69	0327	165	LWS	770524	770703
1977	0267	REGION	SDSFPNL	2	500	55	0136	151	GWB	770605	770703
1977	0268	REGION	2 INCH	3	1100	69	0344	149	JMB	770616	770925
1977	0269	REGION	DDSFNPL	3	930	67	0317	168	PRT	770628	771128
1977	0270	REGION	DDSFNPL	3	1100	70	0358	109	BJB	770629	771011
1977	0271	REGION	DDSFNPL	3	780	69	0187	125	JCB	770703	770916
1977	0272	REG/GEAR	S APRON	3	540	69	0385	123	MAB	770706	770823
1977	0273	REGION	2 INCH	2	500	57	0141	181	JPP	770709	770905
1977	0274	REGION	DDSFNPL	3	1200	77	0451	134	MEH	770711	770930
1977	0275	REGION	DDSFNPL	3	540	69	0198	157	TJM	770712	770905
1977	0276	REGION	DDSFNPL	3	650	69	0212	183	JVR	770714	770917
1977	0277	REGION	DDSFNPL	3	1200	73	0367	174	WMC	770717	770929
1977	0278	REGION	DDSFNPL	3	650	69	0312	184	WTS	770716	770920
1977	0279	REG/GEAR	S APRON	3	1700	75	0439	163	RYS	770719	771022
1977	0280	REG/GEAR	S APRON	3	1200	74	0433	172	WCB	770718	771015
1977	0281	REGION	DDSFNPL	3	650	69	0355	152	DLC	770720	771120
1977	0282	REGION	DDSFNPL	3	1100	72	0398	185	KLW	770719	771016
1977	0283	REGION	DDSFNPL	3	650	68	0186	175	MTC	770718	770914
1977	0284	REGION	DDSFNPL	3	1200	75	0379	167	JOS	770720	771018
1977	0285	REGION	DDSFNPL	3	780	62	0377	161	AGR	770724	770925
1977	0286	REGION	DDSFNPL	3	1200	75	0440	176	FBG	770723	770809
1977	0287	REGION	DDSFNPL	3	1200	75	0441	173	MTB	770725	770923
1977	0288	REGION	DDSFNPL	3	1200	75	0442	124	MIB	770727	770809
1977	0289	REGION	DDSFNPL	3	1100	73	0402	154	SWJ	770725	771112
1977	0290	REGION	DDSFNPL	3	1700	76	0446	169	DAV	770730	770929
1977	0291	REG/GEAR	S APRON	3	650	70	0331	177	RRJ	770728	771013
1977	0292	REGION	DDSFNPL	3	1100	73	0410	166	LES	770727	771101
1977	0293	REGION	DDSFNPL	3	1038	68	0318	144	RLW	770730	771118
1977	0294	REG/GEAR	S APRON	3	1100	72	0360	179	BKL	770728	770812
1977	0295	REG/GEAR	S APRON	3	850	71	0347	158	JOP	770731	771010
1977	0296	REGION	DDSFNPL	3	1200	73	0382	122	DNA	770801	771127
1977	0297	REGION	DDSFNPL	3	540	66	0311	180	CEM	770801	771106
1977	0298	REGION	DDSFNPL	3	570	68	0341	140	JBN	770802	770913
1977	0299	REGION	DDSFNPL	3	1000	72	0400	085	MSL	770802	771025
1977	0300	REGION	DDSFNPL	3	1200	76	0447	165	LWS	770803	771027
1977	0301	REGION	DDSFNPL	3	1100	71	0362	129	DRD	770802	771129

Appendix 4A. (Continued)

Cruise Year	Cruise	Observer Type	Gear Type	Vessel Class	Fish Capacity (ST)	Year Built	Vessel Code	Observer Number	Observer Initials	Date Depart	Date Return
1977	0302	REG/GEAR	S APRON	3	1200	73	0405	178	WKK	770804	771116
1977	0303	REGION	DDSFNPL	3	650	70	0216	110	DOB	770803	771029
1977	0304	REG/GEAR	S APRON	3	540	67	0174	171	DAA	770804	771024
1977	0305	REGION	DDSFNPL	3	540	69	0326	111	DBF	770804	771108
1977	0306	REGION	DDSFNPL	2	500	55	0393	141	JKO	770804	771106
1977	0307	REGION	DDSFNPL	3	1700	76	0449	091	REI	770806	771027
1977	0308	REGION	DDSFNPL	3	1300	70	0395	112	DLF	770806	771122
1977	0309	REG/GEAR	BC	3	1100	73	0356	162	JER	770805	771115
1977	0310	RES-ETP	N/A				OCNR	068	JFL	770627	770729
1977	0311	REGION	S APRON	3	850	64	0320	155	DMK	770816	771124
1977	0312	REGION	DDSFNPL	2	600	44	0308	131	DJF	770821	771006
1977	0313	REGION	DDSFNPL	3	1200	76	0448	130	TCF	770828	771120
1977	0314	REGION	DDSFNPL	3	1000	72	0338	179	BKL	770830	770925
1977	0315	REGION	DDSFNPL	3	1200	75	0437	189	JVG	770903	771121
1977	0316	REG/GEAR	BC	3	1100	73	0332	192	POR	770903	771128
1977	0317	REG/GEAR	S APRON	3	1100	71	0304	191	PFM	770920	771217
1977	0318	REGION	DDSFNPL	3	1200	73	0414	194	ACM	770929	771212
1977	0319	RES-ETP	N/A				JRDN	145	WLP	771003	771121
1977	0320	REGION	S APRON	3	1100	73	0330	124	MIB	771001	771209
1977	0321	REG/GEAR	BC	3	1000	71	0302	147	TEB	771004	771210
1977	0322	REGION	DDSFNPL	3	650	68	0351	187	WHB	771004	771206
1977	0323	REGION	DDSFNPL	3	540	69	0327	193	RWS	771010	771206
1977	0324	REGION	DDSFNPL	3	1100	73	0415	143	PLT	771015	771202
1977	0326	REGION	DDSFNPL	2	500	58	0145	186	TCB	771018	771221
1977	0327	REGION	DDSFNPL	3	1100	74	0431	160	RCR	771019	771204
1977	0328	CHARTER	S APRON	3	2375	72	0342	057	DAB	771027	771222
1977	0329	GEAR	S APRON	2	500	59	0150	066	CBP	771102	771212
1977	0330	REGION	DDSFNPL	3	1400	71	0325	181	JPP	771104	771113
1977	0331	REGION	S APRON	3	1100	75	0443	161	AGR	771113	780207
1977	0332	REGION	DDSFNPL	3	1100	71	0328	171	DAA	771121	771211
1978	0333	REGION	DDSFNPL	3	1200	74	0410	179	BKL	771207	780314
1978	0334	REGION	DDSFNPL	3	1100	72	0357	177	RRJ	771208	780225
1978	0335	REGION	DDSFNPL	3	1200	75	0444	181	JPP	771214	780309
1978	0336	REGION	S APRON	3	540	65	0161	142	RBR	771217	780226
1978	0338	REGION	DDSFNPL	3	1400	71	0306	220	RAT	780101	780504
1978	0339	REGION	DDSFNPL	3	1000	72	0343	190	LJH	780101	780315
1978	0340	REGION	DDSFNPL	3	1200	74	0434	163	RYS	780102	780307
1978	0341	REGION	DDSFNPL	3	850	71	0387	213	ASO	780102	780331
1978	0342	REGION	S APRON	3	780	70	0301	180	CEM	780102	780305
1978	0343	REGION	DDSFNPL	3	1200	73	0367	137	DEL	780102	780321
1978	0344	REGION	DDSFNPL	3	1200	73	0386	208	SFG	780103	780408
1978	0345	REGION	DDSFNPL	3	1000	72	0338	211	WSL	780103	780317
1978	0346	REGION	DDSFNPL	3	780	69	0361	140	JBN	780103	780315
1978	0347	REGION	DDSFNPL	3	1150	71	0328	171	DAA	780104	780402
1978	0348	REGION	DDSFNPL	3	1400	71	0322	206	GCF	780104	780328
1978	0349	REGION	S APRON	3	850	71	0307	131	DJF	780104	780226
1978	0350	REGION	S APRON	3	780	70	0310	204	CJD	780103	780306
1978	0351	REGION	DDSFNPL	3	1200	77	0451	197	COB	780105	780116
1978	0352	REGION	S APRON	3	540	69	0385	200	PAC	780105	780313
1978	0353	REGION	S APRON	3	780	68	0426	196	JLB	780104	780401
1978	0354	REGION	DDSFNPL	3	650	68	0186	201	GEC	780107	780326
1978	0355	REGION	DDSFNPL	3	1400	71	0315	207	RLF	780107	780127
1978	0356	REGION	DDSFNPL	3	1200	75	0440	205	EHE	780107	780325
1978	0357	REGION	DDSFNPL	3	1000	71	0323	214	AXP	780107	780430
1978	0358	REGION	DDSFNPL	3	1200	75	0445	209	TAG	780108	780401
1978	0359	REGION	DDSFNPL	3	1100	72	0352	198	JSB	780108	780402
1978	0360	REGION	DDSFNPL	3	1200	75	0441	216	COS	780110	780224
1978	0361	REGION	DDSFNPL	3	1200	75	0442	215		780110	780302
1978	0362	REGION	DDSFNPL	3	650	69	0212	203	JOC	780111	780308
1978	0363	REGION	S APRON	3	1150	74	0432	154	SWJ	780112	780402
1978	0364	REGION	DDSFNPL	3	570	68	0341	195	GLA	780112	780307

Appendix 4A. (Continued)

Cruise Year	Cruise	Observer Type	Gear Type	Vessel Class	Fish Capacity (ST)	Year Built	Vessel Code	Observer Number	Observer Initials	Date Depart	Date Return
1978	0365	REGION	S APRON	3	650	67	0397	199	RMB	780114	780316
1978	0366	REGION	DDSFNPL	3	1400	71	0368	165	LWS	780114	780321
1978	0367	REGION	SDSFNPL	2	1000	43	0404	222	JRW	780114	780430
1978	0368	REGION	DDSFNPL	3	1200	75	0436	210	WKI	780117	780309
1978	0369	REGION	DDSFNPL	3	1000	72	0372	192	POR	780119	780326
1978	0370	REGION	DDSFNPL	3	1200	74	0435	202	GLC	780119	780305
1978	0371	REGION	DDSFNPL	3	1160	74	0371	212	ESM	780120	780421
1978	0372	REGION	DDSFNPL	2	900	40	0349	219	RKS	780122	780503
1978	0373	REGION	DDSFNPL	3	1100	73	0407	178	WKK	780124	780329
1978	0374	REGION	DDSFNPL	3	1700	75	0446	217	RGS	780125	780406
1978	0375	CHARTER	S APRON	3	518	69	0198	076	RWB	780126	780316
1978	0376	REGION	DDSFNPL	3	1100	71	0339	187	WHB	780129	780331
1978	0377	REGION	DDSFNPL	3	1000	74	0430	186	TCB	780128	780330
1978	0378	REGION	S APRON	3	2175	72	0342	111	DBF	780202	780307
1978	0379	REGION	S APRON	3	1100	71	0391	167	JOS	780206	780402
1978	0380	REGION	DDSFNPL	3	1100	71	0335	166	LES	780210	780503
1978	0381	REGION	DDSFNPL	3	1200	75	0437	168	PRT	780326	780616
1978	0382	REGION	S APRON	3	1240	77	0452	141	JKO	780326	780615
1978	0383	REGION	DDSFNPL	3	1000	72	0400	129	DRD	780328	780625
1978	0384	REGION	DDSFNPL	3	550	66	0311	239	PGT	780330	780621
1978	0385	REGION	S APRON	3	850	71	0347	207	RLF	780402	780529
1978	0386	REGION	S APRON	3	1200	73	0405	162	JER	780402	780615
1978	0387	REGION	S APRON	3	1200	76	0448	240	JLT	780404	780605
1978	0388	REGION	DDSFNPL	3	1400	72	0305	237	RDP	780409	780624
1978	0389	REGION	DDSFNPL	3	1100	73	0410	147	TEB	780408	780626
1978	0390	REGION	S APRON	3	1200	72	0356	226	JRE	780410	780707
1978	0391	REGION	S APRON	3	1100	73	0332	224	JGB	780410	780718
1978	0392	REGION	DDSFNPL	3	1100	71	0362	233	SJK	780413	781009
1978	0393	REGION	S APRON	3	550	67	0174	189	JVG	780413	780615
1978	0394	REGION	S APRON	3	1200	74	0433	130	TCF	780417	780505
1978	0395	CHARTER	S APRON	3	518	69	0198	068	JFL	780417	780605
1978	0396	REGION	S APRON	3	1107	73	0402	228	JOG	780421	780710
1978	0397	REGION	DDSFNPL	3	1400	71	0325	111	DBF	780422	780815
1978	0398	REGION	S APRON	3	1700	75	0439	235	JJN	780422	780726
1978	0399	REGION	DDSFNPL	3	650	69	0312	223	RBB	780502	780927
1978	0400	REGION	DDSFNPL	3	750	69	0187	210	WKI	780507	780815
1978	0401	REGION	DDSFNPL	3	1700	76	0449	161	AGR	780507	781006
1978	0402	REGION	S APRON	3	780	64	0320	234	BSM	780511	780615
1978	0403	REGION	S APRON	2	500	59	0150	093	JS	780511	780716
1978	0404	REGION	DDSFNPL	3	650	69	0216	230	JMH	780516	780707
1978	0405	REGION	DDSFNPL	3	540	69	0326	238	GAS	780524	780619
1978	0406	REGION	S APRON	3	650	70	0331	227	IEG	780604	780804
1978	0407	REGION	S APRON	3	1100	70	0358	232	JEJ	780604	781205
1978	0408	REGION	DDSFNPL	3	2000	70	0346	236	KXO	780604	781031
1978	0409	REGION	DDSFNPL	3	780	69	0361	231	JOH	780619	780812
1978	0410	REGION	SDSFNPL	2	500	58	0145	225	JSC	780622	780705
1978	0411	CHARTER	S APRON	3	0518	69	0198	040	TMD	780622	780818
1978	0412	RES-OTHR	N/A					242		780122	780513
1978	0413	REGION	DDSFNPL	2	575	46	0308	199	RMB	780625	780913
1978	0414	REGION	SDSFNPL	2	500	55	0393	186	TCB	780624	780820
1978	0415	REGION	S APRON	3	650	69	0355	241	LEZ	780625	780823
1978	0416	REGION	S APRON	3	755	70	0310	214	AXP	780627	780924
1978	0417	REGION	S APRON	3	1150	73	0414	217	RGS	780708	781014
1978	0418	REGION	S APRON	3	1200	74	0434	203	JOC	780709	781013
1978	0419	REGION	S APRON	3	780	70	0301	240	JLT	780710	780924
1978	0420	REGION	S APRON	3	1200	75	0445	200	PAC	780712	781022
1978	0421	REGION	S APRON	3	0650	68	0351	198	JSB	780716	781013
1978	0422	REGION	S APRON	3	1000	72	0372	209	TAG	780717	780912
1978	0423	REGION	S APRON	3	1200	77	0451	213	ASO	780722	781001
1978	0424	REGION	S APRON	3	0550	69	0327	204	CJD	780722	781016
1978	0425	REGION	S APRON	3	1075	74	0371	208	SFG	780726	781128

Appendix 4A. (Continued)

Cruise Year	Cruise	Observer Type	Gear Type	Vessel Class	Fish Capacity (ST)	Year Built	Vessel Code	Observer Number	Observer Initials	Date Depart	Date Return
1978	0426	REGION	DDSFNPL	3	0650	69	0212	225	JSC	780731	781025
1978	0427	REGION	DDSFNPL	3	0850	71	0387	201	GEC	780803	781019
1978	0428	RES-OTHR	N/A			08	REGM	080	WES	780802	780929
1978	0429	REGION	DDSFNPL	3	1000	72	0338	234	BSM	780814	781121
1978	0430	REGION	DDSFNPL	3	1200	75	0379	257	RTM	780820	781120
1978	0431	REGION	DDSFNPL	3	1200	72	0398	265	DJT	780826	781110
1978	0432	REGION	S APRON	3	1150	74	0432	219	RKS	780827	781206
1978	0433	REGION	S APRON	3	1200	74	0435	244	MRB	780828	781101
1978	0434	CHARTER	S APRON	3	0518	69	0198	040	TMD	780912	781031
1978	0435	REGION	S APRON	3	0780	68	0426	238	GAS	780920	781220
1978	0436	REGION	S APRON	3	1100	75	0443	247	RJB	780921	781213
1978	0437	REGION	DDSFNPL	3	1100	71	0339	176	FBG	780921	790105
1978	0438	REGION	S APRON	3	0850	71	0307	224	JGB	780924	781201
1978	0439	REGION	S APRON	3	1100	73	0330	193	RWS	780928	781220
1978	0440	REGION	S APRON	3	1100	71	0304	249	VFC	780928	781215
1978	0441	REGION	S APRON	3	1100	71	0335	254	BDJ	780930	781223
1978	0442	REGION	S APRON	3	1100	72	0352	253	SCG	781001	790208
1978	0443	GEAR	EXP	3	0650	68	0186	097	MWD	781001	781207
1978	0444	REGION	DDSFNPL	3	1100	74	0430	266	TJT	781003	781226
1978	0445	REGION	S APRON	3	0650	67	0397	261	GSS	781014	781220
1978	0446	REGION	DDSFNPL	3	1200	73	0386	262	WJS	781014	790115
1978	0447	REGION	DDSFNPL	3	1000	73	0407	187	WHB	781026	781215
1978	0448	REGION	S APRON	3	1200	75	0444	258	RXM	781030	781213
1978	0449	REGION	DDSFNPL	3	1100	71	0328	260	SER	781108	790117
1978	0450	REGION	S APRON	3	1200	72	0343	245	DKB	781108	781125
1978	0451	CHARTER	S APRON	3	0540	69	0198	060	RWM	781111	781209
1978	0452	REGION	S APRON	3	1100	71	0391	252	MRD	781114	790118
1978	0453	REGION	S APRON	3	1200	73	0382	256	DJM	781118	781229
1978	0454	REGION	S APRON	3	1000	71	0302	263	BGT	781130	790213
1979	0455	REGION	S APRON	3	1700	76	0446	237	RDP	781231	790221
1979	0456	REGION	S APRON	3	1400	71	0368	235	JJN	790101	790321
1979	0457	REGION	S APRON	3	1200	74	0433	227	IEG	790101	790401
1979	0458	REGION	S APRON	3	1200	75	0436	171	DAA	790102	790403
1979	0459	REGION	S APRON	3	0650	70	0216	226	JRE	790102	790322
1979	0460	REGION	S APRON	3	0650	69	0355	214	AXP	790103	790325
1979	0461	REGION	SDSFNPL	2	0900	40	0349	248	DJC	790103	790520
1979	0462	REGION	S APRON	3	1700	75	0439	246	MPB	790103	790410
1979	0463	RES-ETP	N/A				JRDN	137	DEL	790103	790310
1979	0464	RES-ETP	N/A			63	CROM	146		790103	790316
1979	0465	REGION	S APRON	3	0780	69	0187	160	RCR	790104	790321
1979	0466	IATTC		3	1000	72	0400	125	JCB	790106	790323
1979	0467	REGION	S APRON	3	0850	71	0347	239	PGT	790107	790323
1979	0468	REGION	S APRON	3	0650	68	0186	231	JOH	790107	790311
1979	0469	REGION	DDSFNPL	3	1200	76	0448	228	JOG	790107	790402
1979	0470	REGION	S APRON	3	1100	73	0410	181	JPP	790108	790418
1979	0471	IATTC		3	0780	64	0320	147	TEB	790110	790313
1979	0472	REGION	S APRON	3	1200	73	0367	236	KXO	790111	790410
1979	0473	IATTC		3	1200	75	0437	165	LWS	790113	790412
1979	0474	REGION	S APRON	3	1200	78	0453	207	RLF	790113	790412
1979	0475	IATTC		3	0650	70	0331	122	DNA	790113	790219
1979	0476	REGION	S APRON	3	1200	75	0440	179	BKL	790113	790520
1979	0477	REGION	S APRON	3	1200	75	0441	142	RBR	790114	790504
1979	0478	REGION	S APRON	3	1160	75	0442	196	JLB	790114	790409
1979	0479	REGION	S APRON	3	1200	78	0452	223	RBB	790115	790413
1979	0480	REGION	S APRON	3	1100	74	0431	233	SIK	790117	790426
1979	0481	IATTC		3	0540	69	0385	200	PAC	790117	790320
1979	0482	REGION	S APRON	3	1200	78	0455	225	JSC	790117	790507
1979	0483	REGION	S APRON	3	1100	73	0402	203	JOC	790118	790522
1979	0484	REGION	S APRON	3	1400	71	0322	222	JRW	790118	790326
1979	0485	REGION	S APRON	3	0570	68	0341	168	PRT	790118	790316
1979	0486	REGION	DDSFNPL	3	1100	73	0415	241	LEZ	790122	790423

Appendix 4A. (Continued)

Cruise Year	Cruise	Observer Type	Gear Type	Vessel Class	Fish Capacity (ST)	Year Built	Vessel Code	Observer Number	Observer Initials	Date Depart	Date Return
1979	0487	REGION	S APRON	3	1100	73	0332	245	DKB	790122	790423
1979	0488	IATTC		3	0400	73	0405	186	TCB	790125	790427
1979	0489	REGION	SDSFPNL	2	0930	44	0067	261	GSS	790127	790326
1979	0490	REGION	S APRON	3	0540	69	0326	234	BSM	790127	790310
1979	0491	REGION	S APRON	3	1000	71	0323	204	CJD	790203	790509
1979	0492	REGION	S APRON	3	0540	66	0311	257	RTM	790208	790425
1979	0493	REGION	S APRON	3	1400	71	0306	250	RCC	790214	790224
1979	0494	REGION	S APRON	3	0540	65	0161	265	DJT	790227	790418
1979	0495	REGION	S APRON	3	1200	76	0447	232	JEJ	790308	790602
1979	0496	IATTC		3	1200	75	0443	199	RMB	90312	790503
1979	0497	REGION	S APRON	3	0540	69	0198	262	WJS	790321	790525
1979	0498	REGION	S APRON	3	0540	69	0327	260	SER	790326	790521
1979	0499	REGION	S APRON	3	1400	71	0315	254	BDJ	790328	790620
1979	0500	REGION	S APRON	3	1400	71	0314	244	MRB	790404	790610
1979	0501	REGION	S APRON	3	0650	69	0312	249	VFC	790405	790518
1979	0502	REGION	S APRON	3	1000	72	0372	252	MRD	790408	790602
1979	0503	IATTC		3	1100	71	0362	237	RDP	790408	790709
1979	0504	IATTC		2	0600	44	0308	238	GAS	790410	790612
1979	0505	IATTC		3	1200	75	0445	131	DJF	790411	790522
1979	0506	REGION	S APRON	3	1200	77	0451	266	TJT	790417	790716
1979	0507	IATTC		3	0850	71	0387	217	RGS	790418	790708
1979	0508	REGION	S APRON	3	1200	74	0435	258	RXM	790424	790702
1979	0509	REGION	S APRON	3	1200	74	0408	214	AXP	790425	790702
1979	0510	REGION	S APRON	3	0780	70	0310	276	JWS	790503	790729
1979	0511	REGION	S APRON	3	1000	72	0343	272	RMP	790505	790716
1979	0512	REGION	S APRON	3	1200	78	0454	274	PCS	790507	790716
1979	0513	REGION	S APRON	3	1100	73	0414	268	JXB	790510	790716
1979	0514	IATTC		3	1200	72	0398	198	JSB	790521	790716
1979	0515	IATTC		3	0780	69	0361	196	JLB	790514	790713
1979	0516	IATTC		3	1100	71	0304	122	DNA	790515	790920
1979	0517	REGION	S APRON	3	1100	74	0371	273	CER	790519	790719
1979	0518	GEAR	S APRON	3	0650	68	0351	195	GLA	790519	790718
1979	0519	IATTC		3	1700	76	0449	213	ASO	790520	790719
1979	0520	IATTC		2	0500	59	0150	161	AGR	790521	790818
1979	0521	REGION	DDSFNPL	2	0500	58	0145	267	AXB	790523	790718
1979	0522	REGION	S APRON	3	1000	71	0302	269	LCE	790523	790717
1979	0523	REGION	S APRON	3	1200	75	0379	235	JJN	790529	790718
1979	0524	IATTC		3	1000	72	0338	209	TAG	790530	790831
1979	0525	IATTC		3	1200	74	0434	253	SCG	790530	790923
1979	0526	REGION	S APRON	3	0650	69	0212	270	PGM	790604	790718
1979	0527	REGION	S APRON	3	0780	70	0301	278	JOZ	790618	790817
1979	0528	REGION	S APRON	3	1400	72	0305	210	WKI	790620	790807
1979	0529	REGION	S APRON	3	1200	75	0444	277	DLV	790623	791021
1979	0530	REGION	S APRON	3	1100	71	0335	275	MJS	790623	790921
1979	0531	REGION	DDSFNPL	3	0780	64	0320	231	JOH	790628	790828
1979	0532	REGION		3	1200	78	0457	247	RJB	790704	791001
1979	0533	IATTC		3	0650	70	0216	207	RLF	790705	790916
1979	0534	REGION	S APRON	3	0850	71	0307	263	BGT	790707	791003
1979	0535	IATTC		3	1700	76	0446	265	DJT	790712	791204
1979	0536	REGION	S APRON	3	0650	69	0355	226	JRE	790712	790828
1979	0537	IATTC		3	1200	73	0382	232	JEJ	790714	790923
1979	0538	IATTC		3	0780	69	0187	228	JOG	790714	791118
1979	0539	REGION	S APRON	3	0570	68	0341	252	MRD	790717	791008
1979	0540	REGION	S APRON	3	0540	69	0385	250	RCC	790717	791008
1979	0541	REGION	S APRON	3	0650	70	0331	166	LES	790718	791116
1979	0542	REGION	S APRON	3	1700	75	0439	204	CJD	790731	791107
1979	0543	IATTC		3	1200	75	0436	217	RGS	790805	791201
1979	0544	IATTC		3	1100	71	0328	225	JSC	790808	791123
1979	0545	REGION	S APRON	3	1200	78	0455	085	MSL	790808	791119
1979	0546	REGION	S APRON	3	1000	72	0400	268	JXB	790809	791106
1979	0547	REGION	S APRON	3	1100	72	0352	272	RMP	790816	791213



Appendix 4A. (Continued)

Cruise Year	Cruise	Observer Type	Gear Type	Vessel Class	Fish Capacity (ST)	Year Built	Vessel Code	Observer Number	Observer Initials	Date Depart	Date Return
1979	0548	IATTC		3	1150	74	0432	233	SJK	790816	791124
1979	0549	IATTC		3	1200	76	0448	131	DJF	790818	791121
1979	0550	REGION	S APRON	3	0750	68	0426	274	PCS	790818	791123
1979	0551	REGION	S APRON	3	1500	70	0368	269	LCE	790818	791120
1979	0552	GEAR	S APRON	3	0650	68	0351	097	MWD	790818	791007
1979	0553	IATTC		3	1200	75	0441	160	RCR	790819	791205
1979	0554	IATTC		3	1200	78	0453	142	RBR	790819	791124
1979	0555	REGION	S APRON	3	1200	75	0437	267	AXB	790819	791124
1979	0556	REGION	S APRON	3	1200	73	0367	225	JSC	790827	791201
1979	0557	IATTC		3	1100	73	0332	249	VFC	790909	791208
1979	0558	IATTC		3	1200	78	0453	203	JOC	790910	791206
1979	0559	REGION	S APRON	3	0850	71	0347	273	CER	790913	791205
1979	0560	IATTC		3	1100	73	0410	214	AXP	790913	791123
1979	0561	REGION	S APRON	3	1200	74	0433	276	JWS	790919	791222
1979	0562	REGION	S APRON	3	1200	79	0458	270	PGM	791001	800224
1979	0563	IATTC		3	0650	68	0186	254	BDJ	791004	791209
1979	0564	RES-CSTL	N/A				JRDN	040	TMD	790927	791024
1979	0565	GEAR	S APRON	3	1000	72	0372	137	DEL	791008	791122
1979	0566	REGION	S APRON	3	1050	74	0430	248	DJC	791101	791231
1979	0567	REGION	S APRON	3	1000	73	0407	278	JOZ	791106	800204
1979	0568	REGION	S APRON	3	1100	71	0339	246	MPB	791107	800112
1980	0569	IATTC	UNKNOWN	3	0650	67	0397	263	BGT	791206	800425
1980	0570	IATTC		3	1200	77	0451	305	RXR	800102	800404
1980	0571	REGION	S APRON	3	1400	71	0306	303	KDP	800102	800314
1980	0572	REGION	S APRON	3	1100	72	0398	034	SGA	800103	800407
1980	0573	REGION	S APRON	3	0650	69	0212	297	SAM	800102	800317
1980	0574	REGION	S APRON	3	1400	71	0314	298	SRM	800103	800307
1980	0575	IATTC		3	1200	74	0435	299	MJN	800102	800423
1980	0576	REGION	S APRON	3	1000	72	0338	288	MBH	800103	800409
1980	0577	IATTC		3	0780	69	0361	300	WHO	800105	800309
1980	0578	IATTC		3	0780	70	0310	280	BGB	800105	800407
1980	0579	IATTC		3	1200	73	0386	295	RJL	800106	800326
1980	0580	REGION	S APRON	3	0850	71	0387	209	TAG	800106	800401
1980	0581	IATTC		3	1000	72	0343	301	RCP	800107	800418
1980	0582	IATTC		3	1200	73	0382	280	BGB	800107	800330
1980	0583	IATTC		3	1200	78	0454	279	RTA	800109	800421
1980	0584	REGION	S APRON	3	1700	76	0449	285	WRC	800110	800505
1980	0585	REGION	S APRON	3	1100	71	0362	306	SJR	800112	800421
1980	0586	REGION	S APRON	3	1200	73	0414	207	RLF	800117	800502
1980	0587	IATTC		3	0780	70	0301	291	DSK	800112	800406
1980	0588	REGION	S APRON	3	1000	71	0302	308	EBT	800124	800510
1980	0589	REGION	S APRON	3	1150	70	0358	252	MRD	800130	800517
1980	0590	IATTC		3	0540	69	0327	161	AGR	800131	800417
1980	0591	REGION	S APRON	3	1400	71	0315	262	WJS	800210	800514
1980	0592	IATTC		3	1200	74	0434	131	DJF	800217	800414
1980	0593	REGION	S APRON	3	1400	71	0322	290	MAJ	800220	800523
1980	0594	IATTC		3	0650	69	0312	294	FCL	800221	800414
1980	0595	REGION	S APRON	3	0540	69	0198	232	JEJ	800223	800412
1980	0596	IATTC		3	1100	71	0391	253	SCG	800223	800607
1980	0597	REGION	S APRON	3	1200	75	0445	171	DAA	800227	800505
1980	0598	RES-ETP	N/A				JRDN	146		800103	800305
1980	0599	RES-ETP	N/A			63	CROM	195	GLA	800103	800306
1980	0600	IATTC		3	1100	73	0402	268	JXB	800328	800526
1980	0601	IATTC		3	1100	71	0304	301	RCP	800405	800626
1980	0602	IATTC		3	1150	74	0432	213	ASO	800405	800523
1980	0603	IATTC		3	0650	70	0331	248	DJC	800407	
1980	0604	IATTC		3	1000	71	0323	224	JGB	800408	
1980	0605	REGION	S APRON	3	1087	73	0410	309	STW	800409	800620
1980	0606	IATTC		3	1100	71	0335	283	DLB	800410	800626
1980	0607	IATTC		3	0850	71	0307	286	DHD	800410	800612
1980	0608	IATTC		3	1400	71	0368	311	PSH	800412	

Appendix 4A. (Continued)

Cruise Year	Cruise	Observer Type	Gear Type	Vessel Class	Fish Capacity (ST)	Year Built	Vessel Code	Observer Number	Observer Initials	Date Depart	Date Return
1980	0609	REGION	S APRON	3	1200	75	0440	293	RBL	800417	800601
1980	0610	REGION	S APRON	3	0650	68	0186	307	KLS	800419	800629
1980	0611	IATTC		3	1200	76	0448	281	CRB	800424	800714
1980	0612	IATTC		3	1000	72	0400	266	TJT	800424	800728
1980	0613	IATTC		3	0570	68	0341	267	AXB	800426	800702
1980	0614	REGION	S APRON	3	1200	78	0452	260	SER	800426	800728
1980	0615	IATTC		3	1200	75	0437	292	LSL	800420	
1980	0616	REGION	S APRON	3	1200	75	0444	274	PCS	800428	800615
1980	0617	REGION	S APRON	3	1000	72	0372	254	BDJ	800428	800609
1980	0618	IATTC		3	1100	74	0371	210	WKI	800426	800703
1980	0619	REGION	S APRON	3	0750	68	0426	304	JXR	800429	800620
1980	0620	IATTC		3	0650	70	0216	204	CJD	800501	800622
1980	0621	REGION	S APRON	3	1200	73	0367	160	RCR	800503	800710
1980	0622	REGION	SDSFPNL	2	0930	44	0067	297	SAM	800506	800708
1980	0623	REGION	S APRON	3	1200	74	0433	300	WHO	800507	800822
1980	0624	IATTC		3	0650	68	0351	288	MBH	800514	800623
1980	0625	IATTC		3	1200	78	0458	295	RJL	800514	800709
1980	0626	REGION	S APRON	3	1700	76	0446	289	ARJ	800525	800908
1980	0627	IATTC		3	1200	75	0441	280	BGB	800526	
1980	0628	IATTC		3	1200	76	0447	294	FCL	800527	
1980	0629	REGION	S APRON	3	1038	73	0332	305	RXR	800602	800812
1980	0630	IATTC		3	1000	73	0407	231	JOH	800607	
1980	0631	REGION	S APRON	3	1200	79	0457	282	CXB	800619	800925
1980	0632	REGION	S APRON	3	0550	69	0385	299	MJN	800623	800825
1980	0633	IATTC		3	1200	78	0455	284	DRC	800626	800927
1980	0634	IATTC		3	1100	71	0339	279	RTA	800701	
1980	0635	REGION	S APRON	3	1080	72	0352	301	RCP	800707	800822
1980	0636	IATTC		3	0850	71	0387	271	WRL	800713	
1980	0637	IATTC		3	1000	72	0312	272	RMP	800716	
1980	0638	IATTC		3	0540	69	0198	306	SJR	800723	
1980	0639	IATTC		3	1400	71	0306	225	JSC	800726	
1980	0640	IATTC		3	1200	74	0434	034	SGA	800730	
1980	0641	REGION	S APRON	3	0750	70	0310	286	DHD	800814	801019
1980	0642	RES-ETP	N/A				OCNR	094	MSS	800321	800420
1980	0643	REGION	S APRON	3	1200	80	0462	253	SCG	800816	801005
1980	0644	REGION	S APRON	3	0650	69	0212	291	DSK	800818	800927
1980	0645	IATTC		3	1500	79	0460	297	SAM	800824	801020
1980	0646	RES-CSTL	N/A				JRDN	094	MSS	800617	800711
1980	0647	REGION	S APRON	3	1200	73	0386	285	WRC	800827	801202
1980	0648	RES-ETP	N/A				RESH	146		800721	800925
1980	0649	IATTC		3	1200	77	0451	319	WRW	800903	801207
1980	0650	IATTC		3	1400	71	0314	293	RBL	800904	801209
1980	0651	REGION	S APRON	3	0540	69	0327	309	STW	800904	801126
1980	0652	REGION	S APRON	3	1100	72	0398	313	MXH	800909	801217
1980	0653	REGION	S APRON	3	1000	72	0338	263	BGT	800909	801205
1980	0654	REGION	S APRON	3	1200	75	0445	268	JXB	800911	801208
1980	0655	IATTC		3	0780	64	0320	283	DLB	800908	801219
1980	0656	IATTC		3	1100	71	0362	283	DLB	800917	801218
1980	0657	IATTC		2	0600	44	0308	288	MBH	800918	801124
1980	0658	GEAR	S APRON	3	1100	71	0372	130	TCF	800922	801228
1980	0659	IATTC		3	1200	78	0453	160	RCR	800924	801211
1980	0660	IATTC		3	0850	71	0347	304	JXR	800921	801218
1980	0661	IATTC		3	1400	71	0315	281	CRB	800922	801218
1980	0662	REGION	S APRON	3	1700	75	0439	316	SWL	800927	801229
1980	0663	REGION	S APRON	3	1100	73	0414	299	MJN	800928	801206
1980	0664	REGION	S APRON	3	1200	78	0454	315	JEK	800930	801220
1980	0665	IATTC		3	0650	69	0355	254	BDJ	801002	801219
1980	0666	IATTC		3	0780	70	0301	314	JGH	801007	801126
1980	0667	IATTC		2	0500	58	0145	295	RJL	801009	810107
1980	0668	REGION	S APRON	3	1400	71	0322	317	RGR	801011	810120
1980	0669	REGION	S APRON	3	1200	72	0343	312	DJE	801017	801124

Appendix 4A. (Continued)

Cruise Year	Cruise	Observer Type	Gear Type	Vessel Class	Fish Capacity (ST)	Year Built	Vessel Code	Observer Number	Observer Initials	Date Depart	Date Return
1980	0670	IATTC		2	0900	40	0349	318	MXS	801031	810521
1980	0671	IATTC		3	0780	69	0187	320	GYG	801106	810211
1980	0672	REGION	S APRON	3	1200	73	0382	307	KLS	801108	810212
1980	0673	IATTC		3	1100	74	0371	260	SER	801115	810221
1980	0674	IATTC		3	1000	71	0302	204	CJD	801123	810408
1981	0675	REGION	S APRON	3	1100	70	0358	210	WKI	801208	810216
1981	0676	IATTC		3	0650	68	0186	337	JSW	810103	810320
1981	0677	IATTC		3	0650	70	0216	334	BXR	810103	810326
1981	0678	IATTC		3	0780	69	0361	322	MXB	810107	810325
1981	0679	REGION	S APRON	3	1200	80	0464	289	ARJ	810111	810317
1981	0680	IATTC		3	1100	73	0410	338	KPW	810111	810420
1981	0681	IATTC		3	1100	71	0304	301	RCP	810111	810404
1981	0682	REGION	S APRON	3	1200	73	0367	208	SFG	810112	810425
1981	0683	IATTC		3	1000	71	0323	335	RDS	810114	810504
1981	0684	IATTC		3	0850	71	0307	217	RGS	810119	810402
1981	0685	REGION	S APRON	3	1100	71	0328	329	DWG	810121	810417
1981	0686	IATTC		3	0650	70	0331	225	JSC	810121	810321
1981	0687	RES-ETP	N/A				OCNR	339		810120	810401
1981	0688	IATTC		3	1200	80	0465	332	TAL	810125	810410
1981	0689	IATTC		3	1400	71	0368	284	DRC	810126	810425
1981	0690	IATTC		3	0540	69	0385	326	GSD	810129	810422
1981	0691	IATTC		3	0650	69	0312	297	SAM	810204	810415
1981	0692	IATTC		3	1200	78	0458	237	RDP	810205	810510
1981	0693	IATTC		3	1150	74	0432	300	WHO	810209	810426
1981	0694	IATTC		3	0650	68	0351	312	DJE	810212	810414
1981	0695	IATTC		3	1200	75	0442	283	DLB	810212	810411
1981	0696	IATTC		3	4120	07	0433	336	JOT	810214	810610
1981	0697	REGION	S APRON	3	1000	73	0407	280	BGB	810221	810422
1981	0698	REGION	S APRON	3	0750	69	0303	309	STW	810221	810522
1981	0699	REGION	S APRON	3	1200	74	0435	226	JRE	810225	810305
1981	0700	REGION	S APRON	3	1000	72	0400	279	RTA	810228	810604
1981	0701	REGION	DDSPNL	2	0930	44	0067	305	RXR	810321	810612
1981	0702	IATTC		3	1100	73	0332	327	JWG	810412	810721
1981	0703	REGION	DDSPNL	3	1085	73	0330	314	JGH	810412	810730
1981	0704	REGION	S APRON	3	0540	69	0198	331	KEK	810420	810708
1981	0705	REGION	S APRON	3	1200	75	0441	253	SCG	810420	810716
1981	0706	IATTC		3	1700	75	0439	171	DAA	810423	810702
1981	0707	IATTC		3	1200	74	0434	292	LSL	810423	810720
1981	0708	REGION	S APRON	3	0580	68	0341	333	SWM	810423	810630
1981	0709	IATTC		2	0600	44	0308	299	MJN	810423	810709
1981	0710	REGION	S APRON	3	1100	74	0431	281	CRB	810423	810730
1981	0711	IATTC		3	1100	72	0398	210	WKI	810425	810705
1981	0712	IATTC		3	0650	69	0212	315	JEK	810429	810617
1981	0713	REGION	S APRON	3	1250	80	0461	294	FCL	810430	810618
1981	0714	REGION	S APRON	3	1000	73	0415	316	SWL	810509	810819
1981	0715	IATTC		3	0540	69	0327	330	WEH	810514	810814
1981	0716	RES-ETP	N/A				OCNR	339		810519	810728
1981	0717	IATTC		3	1700	76	0446	324	RAB	810522	810914
1981	0718	IATTC		3	0850	71	0347	317	RGR	810523	810721
1981	0719	IATTC		3	1200	80	0462	323	CCB	810525	810820
1981	0720	REGION	S APRON	3	1200	80	0466	295	RJL	810528	810831
1981	0721	REGION	S APRON	3	0850	71	0387	289	ARJ	810528	810824
1981	0722	REGION	S APRON	3	0780	68	0426	335	RDS	810604	810719
1981	0723	IATTC		3	1200	75	0436	304	JXR	810608	810914
1981	0724	REGION	S APRON	3	1200	73	0414	313	MXH	810613	810722
1981	0725	IATTC		3	1200	78	0453	293	RBL	810616	810926
1981	0726	REGION	S APRON	3	1250	73	0386	301	RCP	810618	810925
1981	0727	REGION	S APRON	3	1200	73	0382	337	JSW	810625	810915
1981	0728	IATTC		3	0780	69	0187	266	TJT	810625	810718
1981	0729	IATTC		3	0780	64	0320	305	RXR	810626	810925
1981	0730	REGION	S APRON	3	0650	70	0216	322	MXB	810630	810725

Appendix 4A. (Continued)

Cruise Year	Cruise	Observer Type	Gear Type	Vessel Class	Fish Capacity (ST)	Year Built	Vessel Code	Observer Number	Observer Initials	Date Depart	Date Return
1981	0731	REGION	S APRON	3	1200	81	0467	326	GSD	810705	810817
1981	0732	IATTC		3	1000	72	0372	332	TAL	810702	810919
1981	0733	REGION	S APRON	3	0650	68	0186	283	DLB	810716	810928
1981	0734	IATTC		3	1100	74	0389	338	KPW	810723	811126
1981	0735	IATTC		3	1200	73	0405	160	RCR	810723	811212
1981	0736	REGION	S APRON	3	0650	70	0331	334	BXR	810726	811030
1981	0737	IATTC		3	1100	70	0358	335	RDS	810730	811210
1981	0738	IATTC		3	1200	80	0465	284	DRC	810802	811025
1981	0739	IATTC		3	0850	71	0307	266	TJT	810811	811120
1981	0740	IATTC		3	0780	69	0361	312	DJE	810818	811127
1981	0741	IATTC		3	0650	69	0355	320	GYG	810826	811208
1981	0742	IATTC		3	1100	74	0371	279	RTA	810903	820213
1981	0743	REGION	S APRON	3	1200	75	0445	262	WJS	810905	811211
1981	0744	IATTC		3	1200	75	0442	208	SFG	810906	811216
1981	0745	IATTC		3	1100	71	0339	341	MSB	810911	811208
1981	0746	REGION	S APRON	3	0650	68	0351	342	RXB	810922	811211
1981	0747	REGION	S APRON	3	0950	71	0302	335	RDS	810923	811127
1981	0748	IATTC		3	1150	74	0432	309	STW	810926	811205
1981	0749	IATTC		3	0540	69	0385	346	JEL	810928	811207
1981	0750	IATTC		3	1100	73	0410	322	MXB	811001	820107
1981	0751	IATTC		3	1000	73	0407	349	MKF	811003	811210
1981	0752	IATTC		3	1100	71	0304	300	WHO	811005	811216
1981	0753	IATTC		3	1200	78	0458	318	MXS	811008	811228
1981	0754	IATTC		3	0780	70	0303	329	DWG	811008	811210
1981	0755	IATTC		3	0570	68	0341	345	CAK	811017	811208
1981	0756	REGION	S APRON	3	0760	70	0310	347	MXM	811021	811209
1981	0757	REGION	S APRON	3	1450	71	0306	281	CRB	811024	820206
1981	0758	IATTC		3	1200	78	0454	210	WKI	811027	820127
1981	0759	IATTC		3	1000	71	0323	344	TPH	811027	811217
1981	0760	REGION	UNKNOWN	2	0500	55	0393	340	FAA	811028	820209
1981	0761	IATTC		3	1400	71	0368	333	SWM	811029	820113
1981	0762	IATTC		3	1000	72	0400	253	SCG	811105	820126
1981	0763	IATTC		3	1200	80	0464	336	JOT	811107	820111
1981	0764	REGION	S APRON	3	1200	75	0440	323	CCB	811108	820219
1981	0765	REGION	S APRON	3	1100	72	0352	317	RGR	811108	820316
1981	0766	REGION	S APRON	3	1200	77	0451	315	JEK	811110	820126
1981	0767	REGION	S APRON	3	1200	80	0470	327	JWG	811112	820410
1981	0768	REGION	S APRON	3	1230	72	0343	260	SER	811204	820203
1982	0769	REGION	S APRON	3	1100	73	0330	283	DLB	820107	820609
1982	0770	REGION	S APRON	3	1800	76	0439	299	MJN	820109	820404
1982	0771	REGION	S APRON	3	1100	73	0332	326	GSD	820109	820414
1982	0772	REGION	S APRON	3	1200	75	0444	316	SWL	820112	820524
1982	0773	IATTC		3	1100	72	0388	295	RJL	820112	820705
1982	0774	IATTC		3	0650	68	0186	341	MSB	820113	820412
1982	0775	REGION	S APRON	3	1200	73	0414	337	JSW	820114	820418
1982	0776	REGION	S APRON	3	0750	70	0301	304	JXR	820114	820307
1982	0777	IATTC		3	0540	69	0198	204	CJD	820116	820415
1982	0778	IATTC		3	0650	69	0312	171	DAA	820116	820406
1982	0779	IATTC		3	1100	71	0328	334	BXR	820116	820414
1982	0780	IATTC		3	1200	80	0461	346	JEL	820123	820406
1982	0781	IATTC		3	1200	75	0441	312	DJE	820123	820510
1982	0782	IATTC		3	1200	78	0453	359	JWH	820125	820422
1982	0783	REGION	S APRON	3	0780	69	0187	356	JHG	820125	820425
1982	0784	IATTC		3	0540	69	0327	360	CXK	820126	820610
1982	0785	IATTC		3	1200	80	0466	208	SFG	820128	820512
1982	0786	REGION	S APRON	3	0850	71	0387	301	RCP	820202	820512
1982	0787	REGION	DDSFNPL	2	0930	44	0067	309	STW	820220	820516
1982	0788	IATTC		3	1100	74	0431	342	RXB	820222	820606
1982	0789	IATTC		3	1000	72	0338	367	WMO	820225	820621
1982	0790	REGION	S APRON	3	1200	74	0434	335	RDS	820227	820624
1982	0791	IATTC		3	1000	72	0372	369	MES	820302	820607

Appendix 4A. (Continued)

Cruise Year	Cruise	Observer Type	Gear Type	Vessel Class	Fish Capacity (ST)	Year Built	Vessel Code	Observer Number	Observer Initials	Date Depart	Date Return
1982	0792	REGION	S APRON	3	1100	73	0415	366	JMO	820303	820723
1982	0793	IATTC		3	1200	80	0462	362	GLL	820306	820523
1982	0794	REGION	S APRON	3	1200	81	0469	284	DRC	820313	820520
1982	0795	REGION	S APRON	3	1100	72	0360	364	KLM	820314	820627
1982	0796	IATTC		3	1100	71	0335	350	MWB	820313	820804
1982	0797	IATTC		3	1100	73	0402	344	TPH	820331	820820
1982	0798	RES-CSTL	N/A				JRDN	371	RSH	820405	820425
1982	0799	IATTC		3	0650	70	0331	318	MXS	820415	820601
1982	0800	REGION	S APRON	3	0780	70	0310	354	SMF	820508	820730
1982	0801	RES-ETP	N/A				JRDN	371	RSH	820513	820803
1982	0802	REGION	S APRON	3	1700	76	0446	260	SER	820516	820911
1982	0803	REGION	S APRON	3	1200	78	0471	353	RCF	820517	820821
1982	0804	IATTC		3	1200	81	0472	160	RCR	820528	820912
1982	0805	IATTC		3	1200	81	0467	210	WKI	820531	820907
1982	0806	IATTC		3	0650	70	0216	368	DDR	820603	820906
1982	0807	IATTC		3	1100	72	0398	365	RAM	820606	820831
1982	0808	IATTC		3	0750	71	0347	351	WDB	820608	820927
1982	0809	REGION	DDSFNPL	2	0600	44	0308	352	KAB	820610	820809
1982	0810	REGION	S APRON	3	1200	77	0451	340	FAA	820705	820917
1982	0811	IATTC		3	0650	68	0351	358	MDH	820707	821013
1982	0812	REGION	S APRON	3	1100	74	0447	361	PEL	820709	830116
1982	0813	REGION	S APRON	3	1200	74	0432	323	CCB	820721	821001
1982	0814	IATTC		3	1200	75	0445	343	RJD	820721	820813
1982	0815	IATTC		3	0540	69	0385	363	HPM	820802	821126
1982	0816	REGION	S APRON	3	1100	71	0339	346	JEL	820802	821128
1982	0817	IATTC		3	0780	69	0361	281	CRB	820807	821111
1982	0818	IATTC		3	1200	72	0441	357	AFG	820809	821213
1982	0819	IATTC		3	0780	68	0426	334	BXR	820821	821029
1982	0820	IATTC		3	1200	81	0468	341	MSB	820821	821027
1982	0821	IATTC		3	1200	78	0454	317	RGR	820828	821206
1982	0822	IATTC		3	0780	70	0301	362	GLL	820921	821217
1982	0823	REGION	S APRON	3	1200	81	0474	369	MES	820921	821026
1982	0824	IATTC		3	1200	80	0464	299	MJN	820922	830120
1982	0825	REGION	S APRON	3	1200	78	0453	266	TJT	820923	830114
1982	0826	REGION	S APRON	3	1100	71	0304	336	JOT	820924	830102
1982	0827	IATTC		3	1100	73	0332	343	RJD	820929	830103
1982	0828	IATTC		3	1400	71	0368	337	JSW	821004	830208
1982	0829	IATTC		3	0650	69	0212	359	JWH	821006	821220
1982	0830	REGION	S APRON	3	0650	68	0186	327	JWG	821010	821219
1982	0831	IATTC		3	1700	75	0439	208	SFG	821016	830128
1982	0832	REGION	S APRON	3	1100	74	0389	318	MXS	821019	830219
1982	0833	IATTC		3	0780	70	0303	367	WMO	821025	821231
1982	0834	IATTC		3	1200	73	0386	335	RDS	821102	830119
1982	0835	REGION	S APRON	3	1000	71	0323	342	RXB	821109	830309
1982	0836	REGION	DDSFNPL	3	1230	75	0436	378	LLR	821110	830302
1982	0837	IATTC		3	1100	74	0371	377	BDP	821111	830406
1982	0838	REGION	S APRON	3	1100	71	0328	309	STW	821116	830206
1982	0839	REGION	S APRON	3	0850	71	0307	253	SCG	821116	830220
1982	0840	REGION	S APRON	3	1200	73	0407	375	SLG	821202	830227
1982	0841	REGION	S APRON	3	1200	80	0462	295	RJL	821207	830427
1982	0842	IATTC		3	0650	69	0355	234	BSM	821211	830221
1983	0843	RES-ETP	N/A				JRDN	204	CJD	830112	830413
1983	0844	IATTC		3	1200	75	0442	305	RXR	830205	830620
1983	0845	IATTC		3	1200	75	0441	160	RCR	830208	830528
1983	0846	IATTC		3	1000	72	0372	354	SMF	830224	830628
1983	0847	IATTC		3	1200	80	0471	260	SER	830227	830501
1983	0848	IATTC		3	1100	73	0414	376	RJM	830307	830610
1983	0849	IATTC		3	1200	75	0443	316	SWL	830310	830518
1983	0850	IATTC		3	1100	72	0398	334	BXR	830319	830520
1983	0851	IATTC		3	1200	77	0451	373	DMC	830414	830802
1983	0852	RES-ETP	N/A				SRVY	289	ARJ	830307	830411

## Appendix 4A. (Continued)

Cruise Year	Cruise	Observer Type	Gear Type	Vessel Class	Fish Capacity (ST)	Year Built	Vessel Code	Observer Number	Observer Initials	Date Depart	Date Return
1983	0853	IATTC		3	0650	68	0351	351	WDB	830423	830714
1983	0854	IATTC		3	1150	74	0432	368	DDR	830430	830730
1983	0855	IATTC		3	0650	69	0212	350	MWB	830503	830730
1983	0856	IATTC		3	1100	71	0339	365	RAM	830510	830819
1983	0857	IATTC		3	0650	68	0186	323	CCB	830512	830808
1983	0858	IATTC		3	0650	69	0355	304	JXR	830514	830806
1983	0859	IATTC		3	1200	75	0444	358	MDH	830522	830719
1983	0860	IATTC		3	0540	69	0198	359	JWH	830530	830820
1983	0861	IATTC		3	0780	70	0301	335	RDS	830602	830911
1983	0862	IATTC		3	0650	70	0216	367	WMO	830602	830806
1983	0863	IATTC		3	0780	70	0310	363	HPM	830606	830902
1983	0864	IATTC		3	1100	73	0332	283	DLB	830612	830924
1983	0865	IATTC		3	1200	78	0453	253	SCG	830629	830923
1983	0866	IATTC		3	0850	71	0307	352	KAB	830712	830917
1983	0867	IATTC		3	1200	73	0386	210	WKI	830723	831206
1983	0868	IATTC		3	0780	69	0361	362	GLL	830726	830910
1983	0869	IATTC		3	1200	73	0405	377	BDP	830816	831109
1983	0870	IATTC		3	1200	80	0464	361	PEL	830919	831030
1983	0871	IATTC		3	0850	71	0347	376	RJM	831001	831224
1983	0872	IATTC		3	1100	73	0414	208	SFG	831027	840117
1983	0873	IATTC		3	1000	72	0372	378	LLR	831127	840122
1983	0874	RES-CSTL	N/A				JRDN	379	AAH	831205	831211
1983	0875	IATTC		3	1200	75	0444	337	JSW	831220	840226
1984	0876	IATTC		3	0780	69	0361	334	BXR	840104	840215
1984	0877	IATTC		3	0780	70	0310	318	MXS	840112	840305
1984	0878	IATTC		3	0650	68	0351	260	SER	840122	840402
1984	0879	IATTC		3	1000	72	0338	295	RJL	840207	840410
1984	0880	IATTC		3	0650	70	0216	363	HPM	840318	840510
1984	0881	IATTC		3	1200	78	0453	368	DDR	840329	840629
1984	0882	IATTC		3	1100	69	0344	373	DMC	840411	840628
1984	0883	IATTC		3	1100	73	0414	352	KAB	840422	840711
1984	0884	REGION	S APRON	3	1000	72	0372	376	RJM	840429	840613
1984	0885	IATTC		3	0850	71	0307	334	BXR	840430	840703
1984	0886	IATTC		3	0540	69	0198	351	WDB	840503	840711
1984	0887	REGION	S APRON	3	0850	71	0347	378	LLR	840509	840728
1984	0888	REGION	S APRON	3	1200	73	0405	210	WKI	840510	840723
1984	0889	REGION	S APRON	3	1000	75	0377	361	PEL	840510	840625
1984	0890	REGION	S APRON	3	1200	80	0466	367	WMO	840604	840822
1984	0891	REGION	S APRON	3	1200	80	0462	316	SWL	840626	841005
1984	0892	REGION	S APRON	3	1150	74	0432	295	RJL	840802	840919
1984	0893	RES-CSTL	N/A				JRDN	266	TJT	840808	840827
1984	0894	IATTC		3	1200	80	0464	300	WHO	840821	841110
1984	0895	RES-CSTL	N/A				JRDN	379	AAH	840904	840915
1984	0896	IATTC		3	1200	81	0472	260	SER	840909	841103
1984	0897	IATTC		3	0650	68	0186	344	TPH	840917	841031
1984	0898	IATTC		3	0780	70	0301	318	MXS	840917	841026
1984	0899	REGION	S APRON	3	1000	72	0338	334	BXR	840922	841119
1984	0900	REGION	S APRON	3	1128	81	0467	368	DDR	841017	841202
1984	0901	REGION	S APRON	3	0650	69	0355	210	WKI	841023	841220
1984	0902	REGION	S APRON	3	1200	80	0461	352	KAB	841025	841210
1984	0903	IATTC		3	0540	69	0385	351	WDB	841028	850206
1984	0904	IATTC		3	1200	75	0440	375	SLG	841124	850210
1984	0905	RES-CSTL	N/A				JRDN	379	AAH	841206	841219
1985	0906	IATTC	UNKNOWN	3	0540	69	0198	334	BXR	850106	850326
1985	0907	REGION	S APRON	3	1200	80	0466	295	RJL	850106	850210
1985	0908	REGION	S APRON	3	1100	71	0339	367	WMO	850108	850424
1985	0909	REGION	S APRON	3	1200	73	0405	344	TPH	850113	850329
1985	0910	RES-CSTL	N/A				JRDN	379	AAH	850124	850209
1985	0911	IATTC	UNKNOWN	3	0650	68	0351	391	MRJ	850126	850420
1985	0912	IATTC	UNKNOWN	3	1100	73	0414	380	AGB	850120	850412
1985	0913	IATTC	UNKNOWN	3	0850	71	0307	381	AAA	850130	850406

Appendix 4A. (Continued)

Cruise Year	Cruise	Observer Type	Gear Type	Vessel Class	Fish Capacity (ST)	Year Built	Vessel Code	Observer Number	Observer Initials	Date Depart	Date Return
1985	0914	IATTC	UNKNOWN	3	0650	69	0212	389	GRH	850131	850406
1985	0915	REGION	S APRON	3	1100	69	0344	349	MKF	850211	850414
1985	0916	REGION	S APRON	3	1100	73	0332	382	SRB	850213	850326
1985	0917	REGION	S APRON	3	0914	71	0372	361	PEL	850219	850402
1985	0918	IATTC	UNKNOWN	3	0780	69	0361	373	DMC	850223	850520
1985	0919	REGION	S APRON	3	1200	78	0453	378	LLR	850223	850422
1985	0920	IATTC	UNKNOWN	3	0650	70	0216	318	MXS	850301	850502
1985	0921	REGION	S APRON	3	1200	73	0386	376	RJM	850314	850515
1985	0922	REGION	S APRON	3	1180	74	0477	260	SER	850320	850516
1985	0923	IATTC	UNKNOWN	3	1200	75	0379	383	STB	850321	850508
1985	0924	IATTC	UNKNOWN	3	1200	80	0463			850325	850517
1985	0925	IATTC	UNKNOWN	3	1200	82	0478			850329	850419
1985	0926	IATTC	UNKNOWN	3	0780	70	0310	388	CNF	850330	850517
1985	0927	REGION	S APRON	3	1150	75	0443	384	MGB	850406	850525
1985	0928	REGION	S APRON	3	1200	80	0464	386	CCC	850424	850520
1985	0929	IATTC	UNKNOWN	3	1200	80	0462	385	JGC	850506	850601
1985	0930	IATTC	UNKNOWN	3	0650	68	0186	387	SFC	850520	850708
1985	0931	IATTC	UNKNOWN	3	1200	81	0472	393	ROM	850530	850625
1985	0932	REGION	S APRON	3	1000	75	0440	349	MKF	850612	850826
1985	0933	IATTC	UNKNOWN	3	0650	69	0355	361	PEL	850615	850720
1985	0934	REGION	S APRON	3	1000	72	0338	375	SLG	850701	850916
1985	0935	REGION	S APRON	3	0780	70	0301	383	STB	850703	850921
1985	0936	IATTC	UNKNOWN	3	1200	81	0467	351	WDB	850706	850901
1985	0937	REGION	S APRON	3	1200	80	0461	334	BXR	850709	850911
1985	0938	IATTC	UNKNOWN	3	1150	74	0432	260	SER	850718	850911
1985	0939	REGION	S APRON	3	0850	71	0347	389	GRH	850812	851106
1985	0940	IATTC	UNKNOWN	3	1200	73	0405	385	JGC	850824	851127
1985	0941	IATTC	UNKNOWN	3	1200	74	0477	386	CCC	850901	860109
1985	0942	RES-CSTL	N/A				JRDN	411	JPB	850903	850917
1985	0943	REGION	UNKNOWN	3	1200	79	0463	393	ROM	850907	851216
1985	0944	REGION	S APRON	3	1200	75	0379	388	CNF	850915	851111
1985	0945	REGION	S APRON	3	0650	70	0216	378	LLR	850919	851110
1985	0946	REGION	S APRON	3	0750	70	0310	367	WMO	850921	851201
1985	0947	IATTC	UNKNOWN	3	1200	80	0466	352	KAB	850922	851129
1985	0948	REGION	S APRON	3	0850	71	0307	382	SRB	850928	851220
1985	0949	REGION	DDSFNPL	3	1000	71	0339	361	PEL	850930	851221
1985	0950	IATTC	UNKNOWN	3	1000	72	0372	383	STB	851010	851223
1985	0951	REGION	S APRON	3	0650	69	0212	334	BXR	851018	860102
1985	0952	IATTC	UNKNOWN	3	0540	69	0385	387	SFC	851114	860202
1985	0953	IATTC	UNKNOWN	3	1100	73	0332	351	WDB	851116	860108
1986	0954	REGION	S APRON	3	1200	82	0478	260	SER	851231	860219
1986	0955	IATTC	UNKNOWN	3	1200	80	0461	352	KAB	860104	860208
1986	0956	IATTC	UNKNOWN	3	1200	80	0464	410	BWT	860106	860220
1986	0957	REGION	S APRON	3	0750	69	0361	385	JGC	860115	860303
1986	0958	REGION	S APRON	3	1150	74	0432	396	DLD	860125	860225
1986	0959	REGION	S APRON	3	1200	81	0468	397	DHK	860204	860313
1986	0960	REGION	DDSFNPL	3	1200	81	0472	402	JJB	860210	860313
1986	0961	REGION	S APRON	3	1200	81	0467	401	MST	860217	860325
1986	0962	REGION	S APRON	3	0650	68	0186	407	SUM	860226	860425
1986	0963	IATTC	UNKNOWN	3	1100	71	0391	399	DMM	860305	860608
1986	0964	IATTC	UNKNOWN	3	0780	70	0301	404	MDM	860311	860502
1986	0965	IATTC	UNKNOWN	3	1200	75	0440	388	CNF	860311	860608
1986	0966	IATTC	UNKNOWN	3	0780	70	0310	383	STB	860318	860527
1986	0967	IATTC	UNKNOWN	3	0650	70	0216	408	RJH	860328	860515
1986	0968	IATTC	UNKNOWN	3	1200	75	0443	389	GRH	860402	860611
1986	0969	REGION	S APRON	3	1200	80	0466	334	BXR	860416	860606
1986	0970	RES-CSTL	N/A				JRDN	411	JPB	860424	860505
1986	0971	REGION	S APRON	3	1200	75	0445	398	ADO	860609	860904
1986	0972	IATTC	UNKNOWN	3	1200	81	0468	260	SER	860614	860802
1986	0973	IATTC	UNKNOWN	3	1100	71	0339	393	ROM	860614	860803
1986	0974	IATTC	UNKNOWN	3	1200	82	0478	385	JGC	860616	860730

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Cruise Year	Cruise	Observer Type	Gear Type	Vessel Class	Fish Capacity (ST)	Year Built	Vessel Code	Observer Number	Observer Initials	Date Depart	Date Return
1986	0975	IATTC	UNKNOWN	3	0850	71	0307	396	DLD	860628	860919
1986	0976	REGION	S APRON	3	1150	74	0477	402	JJB	860628	860825
1986	0977	REGION	S APRON	3	1000	71	0372	386	CCC	860704	860906
1986	0978	REGION	S APRON	3	0650	68	0212	401	MST	860703	860905
1986	0979	REGION	S APRON	3	1200	75	0440	407	SUM	860709	860920
1986	0980	IATTC	UNKNOWN	3	1200	80	0466	399	DMM	860710	860903
1986	0981	REGION	DDSFNPL	3	1160	80	0461	388	CNF	860712	860902
1986	0982	IATTC	UNKNOWN	3	1200	81	0472	387	SFC	860717	860906
1986	0983	REGION	DDSFNPL	3	1100	75	0443	404	MDM	860721	860906
1986	0984	IATTC	UNKNOWN	3	0850	71	0347	397	DHK	860802	860930
1986	0985	IATTC	UNKNOWN	3	1200	80	0463	351	WDB	860728	861001
1986	0986	REGION	S APRON	3	1100	73	0332	383	STB	860805	861008
1986	0987	IATTC	UNKNOWN	3	1200	75	0379	389	GRH	860802	860923
1986	0988	REGION	S APRON	3	1200	80	0464	334	BXR	860806	860924
1986	0989	RES-ETP	N/A				JRDN	371	RSH	860730	861205
1986	0990	RES-ETP	N/A				MCAR	371	RSH	860730	861206
1986	0991	REGION	S APRON	3	0650	71	0216	385	JGC	860820	861007
1986	0992	IATTC	UNKNOWN	3	0780	69	0361	393	ROM	860906	861109
1986	0993	REGION	S APRON	3	1200	77	0451	402	JJB	860911	861112
1986	0994	IATTC	UNKNOWN	3	1200	80	0461	404	MDM	860925	861110
1986	0995	IATTC	UNKNOWN	3	1200	81	0467	398	ADO	861001	861205
1986	0996	REGION	S APRON	3	1050	75	0443	396	DLD	861011	861115
1987	0997	REGION	DDSFNPL	3	1100	71	0339	432	PMS	861227	870306
1987	0998	REGION	S APRON	3	0650	69	0212	428	TKM	861229	870212
1987	0999	REGION	S APRON	3	0650	68	0186	426	MAK	861229	870225
1987	1000	REGION	S APRON	3	1100	76	0443	388	CNF	861231	870210
1987	1001	REGION	DDSFNPL	3	1100	80	0461	412	MKA	870101	870207
1987	1002	REGION	S APRON	3	1200	81	0467	334	BXR	870104	870306
1987	1003	REGION	S APRON	3	1100	81	0468	421	RDF	870104	870222
1987	1004	REGION	UNKNOWN	3	1200	80	0463	397	DHK	870107	870228
1987	1005	REGION	S APRON	3	0650	71	0216	399	DMM	870103	870315
1987	1006	REGION	S APRON	3	1200	74	0432	413	LBA	870103	870128
1987	1007	REGION	S APRON	3	0700	70	0310	433	SMT	870105	870328
1987	1008	REGION	S APRON	3	0750	69	0361	352	KAB	870117	870404
1987	1009	REGION	S APRON	3	1200	80	0464	260	SER	870111	870219
1987	1010	REGION	S APRON	3	0950	71	0391	396	DLD	870117	870419
1987	1011	REGION	S APRON	3	1000	71	0372	435	WRT	870116	870305
1987	1012	REGION	S APRON	3	0700	70	0301	416	MSC	870122	870307
1987	1013	REGION	S APRON	3	1200	74	0477	402	JJB	870120	870302
1987	1014	REGION	DDSFNPL	3	0500	66	0311	387	SFC	870127	870219
1987	1015	REGION	DDSFNPL	3	1200	77	0451	420	ETF	870119	870331
1987	1016	REGION	S APRON	3	0850	71	0347	424	RXH	870202	870405
1987	1017	REGION	S APRON	3	1100	73	0332	389	GRH	870129	870301
1987	1018	REGION	DDSFNPL	3	1200	78	0453	423	BAH	870202	870321
1987	1019	REGION	S APRON	3	0960	69	0344	401	MST	870206	870420
1987	1020	REGION	S APRON	3	0850	71	0307	417	BCC	870205	870424
1987	1021	REGION	DDSFNPL	3	1200	80	0466	351	WDB	870214	870417
1987	1022	REGION	DDSFNPL	3	1200	81	0472	434	JRT	870215	870401
1987	1023	REGION	DDSFNPL	3	1200	80	0461	210	WKI	870225	870405
1987	1024	REGION	S APRON	3	1200	82	0478	414	SMB	870304	870512
1987	1025	REGION	S APRON	3	1100	75	0379	427	ZSM	870306	870427
1987	1026	IATTC	UNKNOWN	3	0650	68	0186	429	JGN	870309	870506
1987	1027	REGION	DDSFNPL	3	0550	66	0311	419	JBE	870309	870415
1987	1028	REGION	S APRON	3	1145	80	0464	378	LLR	870314	870511
1987	1029	REGION	UNKNOWN	3	1200	75	0440	382	SRB	870314	870524
1987	1030	REGION	DDSFNPL	3	1200	78	0470	426	MAK	870323	870616
1987	1031	REGION	DDSFNPL	3	1200	81	0468	386	CCC	870316	870526
1987	1032	IATTC	UNKNOWN	3	1200	80	0463	428	TKM	870318	870420
1987	1033	IATTC	UNKNOWN	3	1150	74	0432	412	MKA	870318	870423
1987	1034	IATTC	UNKNOWN	3	1200	74	0477	389	GRH	870324	870419
1987	1035	IATTC	UNKNOWN	3	1200	81	0467	402	JJB	870329	870613



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Cruise Year	Cruise	Observer Type	Gear Type	Vessel Class	Fish Capacity (ST)	Year Built	Vessel Code	Observer Number	Observer Initials	Date Depart	Date Return
1987	1036	IATTC	UNKNOWN	3	1000	71	0372	440	DOT	870329	870514
1987	1037	REGION	DDSFNPL	3	1000	71	0339	441	EAK	870328	870604
1987	1038	REGION	S APRON	3	1000	73	0332	385	JGC	870408	870423
1987	1039	REGION	S APRON	3	0600	70	0216	439	KDM	870403	870604
1987	1040	IATTC	UNKNOWN	3	0780	70	0301	442	DTC	870402	870620
1987	1041	IATTC	UNKNOWN	3	1200	78	0453	436	WGJ	870407	870513
1987	1042	IATTC	UNKNOWN	3	1200	77	0451	421	RDF	870414	870620
1987	1043	REGION	DDSFNPL	3	1200	81	0472	443	GRP	870417	870619
1987	1044	REGION	S APRON	3	1150	75	0443	260	SER	870422	870616
1987	1045	IATTC	UNKNOWN	3	1200	80	0461	420	ETF	870423	870623
1987	1046	REGION	S APRON	3	0700	70	0310	437	DXD	870420	870525
1987	1047	IATTC	UNKNOWN	3	0850	71	0347	416	MSC	870429	870821
1987	1048	IATTC	UNKNOWN	3	1200	80	0466	423	BAH	870430	870709
1987	1049	REGION	S APRON	3	0750	69	0361	399	DMM	870505	870729
1987	1050	REGION	DDSFNPL	3	0989	74	0432	424	RXH	870507	870609
1987	1051	IATTC	UNKNOWN	3	0650	68	0212	397	DHK	870511	870712
1987	1052	IATTC	UNKNOWN	3	1100	73	0332	412	MKA	870516	870618
1987	1053	IATTC	UNKNOWN	3	0850	71	0307	432	PMS	870514	870815
1987	1054	REGION	UNKNOWN	3	0650	69	0312	434	JRT	870523	871004
1987	1055	REGION	S APRON	3	1050	75	0379	385	JGC	870521	870718
1987	1056	REGION	DDSFNPL	3	1400	71	0368	427	ZSM	870528	870918
1987	1057	REGION	S APRON	3	0600	68	0186	419	JBE	870528	870830
1987	1058	REGION	DDSFNPL	3	1200	78	0453	417	BCC	870531	870731
1987	1059	REGION	S APRON	3	1050	82	0478	396	DLD	870531	870816
1987	1060	REGION	DDSFNPL	3	1100	69	0344	451	GXD	870606	870831
1987	1061	IATTC	UNKNOWN	3	1200	80	0464	414	SMB	870604	870821
1987	1062	REGION	S APRON	3	1000	72	0372	448	MGT	870604	870817
1987	1063	IATTC	UNKNOWN	3	1100	71	0391	351	WDB	870613	870812
1987	1064	IATTC	UNKNOWN	3	1200	74	0477	450	TXB	870607	870827
1987	1065	REGION	S APRON	3	1100	80	0463	447	MTX	870613	870902
1987	1066	REGION	DDSFNPL	3	1200	75	0440	443	GRP	870609	870920
1987	1067	IATTC	UNKNOWN	3	0780	70	0310	446	KVL	870611	870919
1987	1068	IATTC	UNKNOWN	3	0650	70	0216	436	WGJ	870620	870928
1987	1069	REGION	DDSFNPL	3	1100	71	0339	440	DOT	870622	870922
1987	1070	IATTC	UNKNOWN	3	1200	81	0467	441	EAK	870702	870918
1987	1071	REGION	S APRON	3	1000	73	0332	378	LLR	870701	870905
1987	1072	REGION	DDSFNPL	3	1200	78	0470	445	GRE	870704	870912
1987	1073	IATTC	UNKNOWN	3	1200	81	0472	386	CCC	870706	870905
1987	1074	IATTC	UNKNOWN	3	1200	81	0468	420	ETF	870713	870917
1987	1075	IATTC	UNKNOWN	3	1200	80	0461	442	DTC	870715	870928
1987	1076	REGION	DDSFNPL	3	1200	77	0451	389	GRH	870709	870918
1987	1077	REGION	S APRON	3	0650	69	0212	434	JRT	870728	870909
1987	1078	IATTC	UNKNOWN	3	1200	80	0466	421	RDF	870805	870919
1987	1079	IATTC	UNKNOWN	3	0780	70	0301	402	JJB	870814	870930
1987	1080	RES-ETP	N/A				MCAR	371	RSH	870730	871210
1987	1081	RES-ETP	N/A				JRDN	371	RSH	870808	871210
1987	1082	REGION	DDSFNPL	3	1150	74	0432	334	BXR	870921	871116
1987	1083	REGION	DDSFNPL	3	1200	78	0453	424	RXH	870817	871009
1987	1084	REGION	DDSFNPL	3	0650	69	0355	426	MAK	870822	871014
1987	1085	IATTC	UNKNOWN	3	1100	71	0391	463	DNL	870825	871001
1987	1086	IATTC	UNKNOWN	3	0780	69	0361	458	GMH	870830	871208
1987	1087	REGION	DDSFNPL	3	1200	75	0379	456	DJG	870901	871220
1987	1088	REGION	S APRON	3	0800	71	0307	459	TAJ	870910	871209
1987	1089	REGION	S APRON	3	1200	82	0478	462	CRK	870903	871102
1987	1090	IATTC	UNKNOWN	3	1200	80	0464	457	WBH	870912	871027
1987	1091	IATTC	UNKNOWN	3	1200	81	0472	469	MCV	870923	871206
1987	1092	REGION	S APRON	3	0650	68	0186	464	DFM	870926	880222
1987	1093	REGION	S APRON	3	1200	81	0467	468	BOT	870927	871211
1987	1094	IATTC	UNKNOWN	3	1200	78	0470	453	JFC	871001	880119
1987	1095	REGION	S APRON	3	1100	73	0332	451	GXD	870930	871127
1987	1096	REGION	S APRON	3	1000	69	0344	447	MTX	871002	871209

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Cruise Year	Cruise	Observer Type	Gear Type	Vessel Class	Fish Capacity (ST)	Year Built	Vessel Code	Observer Number	Observer Initials	Date Depart	Date Return
1987	1097	IATTC	UNKNOWN	3	1200	75	0443	460	SRJ	871004	871130
1987	1098	REGION	S APRON	3	0650	69	0212	461	JVK	870926	871208
1987	1099	IATTC	UNKNOWN	3	1200	81	0468	467	BDS	871010	871223
1987	1100	REGION	DDSFNPL	3	1200	77	0451	467	BDS	871010	880117
1987	1101	REGION	S APRON	3	1200	74	0477	417	BCC	871010	880101
1987	1102	REGION	DDSFNPL	3	1200	80	0463	450	TXB	871011	880120
1987	1103	IATTC	UNKNOWN	3	1100	71	0339	454	JXD	871007	880115
1987	1104	REGION	DDSFNPL	3	1400	71	0368	385	JGC	871015	880112
1987	1105	REGION	DDSFNPL	3	1150	80	0466	448	MGT	871014	871224
1987	1106	IATTC	UNKNOWN	3	0780	70	0310	442	DTC	871018	880205
1987	1107	REGION	S APRON	3	0650	70	0216	396	DLD	871012	871213
1987	1108	REGION	DDSFNPL	3	1200	75	0440	465	JAS	871017	880216
1987	1109	IATTC	UNKNOWN	3	1200	78	0453	440	DOT	871029	880119
1987	1110	IATTC	UNKNOWN	3	1200	80	0461	416	MSC	871028	871218
1987	1111	REGION	DDSFNPL	3	1100	71	0391	443	GRP	871027	880128
1987	1112	REGION	UNKNOWN	3	0650	69	0312	432	PMS	871031	880126
1987	1113	IATTC	UNKNOWN	3	0650	69	0355	445	GRE	871117	880111
1987	1114	IATTC	UNKNOWN	3	1000	71	0372	419	JBE	871219	880227
1987	1115	IATTC	UNKNOWN	3	0780	70	0301	463	DNL	871107	880222
1987	1116	IATTC	UNKNOWN	3	0540	66	0311	436	WGJ	871216	880120
1987	1117	IATTC	UNKNOWN	3	1150	74	0432	427	ZSM	871209	880206
1987	1118	REGION	S APRON	3	1200	80	0464	412	MKA	871128	880203
1987	1119	IATTC	UNKNOWN	3	1200	82	0478	351	WDB	871128	880309
1987	1120	REGION	S APRON	3	0850	71	0307	334	BXR	871216	880429
1987	1121	REGION	S APRON	3	0650	70	0216	396	DLD	871218	880330
1988	1122	REGION	DDSFNPL	3	1200	80	0461	402	JJB	880109	880316
1988	1123	IATTC	UNKNOWN	3	1200	75	0443	334	BXR	880124	880316
1988	1124	REGION	DDSFNPL	3	1200	81	0467	434	JRT	880203	880409
1988	1125	IATTC	UNKNOWN	3	0650	69	0355	457	WBH	880214	880416
1988	1126	REGION	DDSFNPL	3	1200	87	0486	426	MAK	880216	880413
1988	1127	REGION	DDSFNPL	3	1200	80	0465	386	CCC	880215	880415
1988	1128	REGION	S APRON	3	1200	80	0464	462	CRK	880225	880406
1988	1129	REGION	DDSFNPL	3	0550	66	0311	448	MGT	880226	880402
1988	1130	IATTC	UNKNOWN	3	0780	69	0361	420	ETF	880307	880426
1988	1131	REGION	DDSFNPL	3	1200	81	0472	260	SER	880313	880423
1988	1132	IATTC	UNKNOWN	3	1000	71	0372	416	MSC	880326	880512
1988	1133	IATTC	UNKNOWN	3	0650	69	0312	460	SRJ	880323	880602
1988	1134	IATTC	UNKNOWN	3	1100	71	0339	458	GMH	880430	880729
1988	1135	IATTC	UNKNOWN	3	1150	74	0432	442	DTC	880404	880428
1988	1136	IATTC	UNKNOWN	3	1200	74	0477	453	JFC	880411	880529
1988	1137	IATTC	UNKNOWN	3	1100	73	0332	470	WAA	880410	880514
1988	1138	IATTC	UNKNOWN	3	0650	68	0212	436	WGJ	880414	880608
1988	1139	IATTC	UNKNOWN	3	1200	80	0466	447	MTX	880423	880528
1988	1140	IATTC	UNKNOWN	3	1200	75	0379	478	TDP	880505	880801
1988	1141	REGION	S APRON	3	0780	70	0301	475	RTL	880507	880710
1988	1142	REGION	DDSFNPL	3	1200	78	0453	461	JVK	880503	880613
1988	1143	IATTC	UNKNOWN	3	1200	80	0463	468	BOT	880511	880726
1988	1144	REGION	DDSFNPL	3	1200	81	0468	479	GMR	880512	880714
1988	1145	REGION	DDSFNPL	3	1200	78	0470	385	JGC	880524	880801
1988	1146	REGION	S APRON	3	1200	82	0478	469	ASH	880521	880802
1988	1147	IATTC	UNKNOWN	3	0650	68	0186	442	DTC	880528	880720
1988	1148	IATTC	UNKNOWN	3	1200	80	0461	471	GLD	880530	880730
1988	1149	REGION	S APRON	3	1200	75	0443	427	ZSM	880606	880711
1988	1150	REGION	DDSFNPL	3	0780	70	0310	480	PMT	880627	880727
1988	1151	IATTC	UNKNOWN	3	1200	75	0440	463	DNL	880611	880814
1988	1152	IATTC	UNKNOWN	3	1200	77	0451	472	ASH	880615	880908
1988	1153	REGION	DDSFNPL	3	1200	76	0452	476	GAM	880712	880917
1988	1154	REGION	DDSFNPL	3	0650	70	0216	447	MTX	880625	880822
1988	1155	REGION	DDSFNPL	3	1200	78	0456	334	BXR	880705	880920
1988	1156	IATTC	UNKNOWN	3	1200	87	0486	440	DOT	880702	880802
1988	1157	IATTC	UNKNOWN	3	1200	81	0467	260	SER	880703	880826

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Cruise Year	Cruise	Observer Type	Gear Type	Vessel Class	Fish Capacity (ST)	Year Built	Vessel Code	Observer Number	Observer Initials	Date Depart	Date Return
1988	1158	REGION	DDSFNPL	3	1150	74	0432	402	JJB	880719	880828
1988	1159	IATTC	UNKNOWN	3	1100	69	0344	473	DJH	880730	880920
1988	1160	IATTC	UNKNOWN	3	1200	80	0464	421	RDF	880802	880920
1988	1161	IATTC	UNKNOWN	3	1200	80	0465	457	WBH	880802	880920
1988	1162	REGION	DDSFNPL	3	0650	69	0355	462	CRK	880801	880921
1988	1163	REGION	DDSFNPL	3	1100	73	0332	465	JAS	880905	881022
1988	1164	RES-ETP	N/A				JRDN	371	RSH	880728	881206
1988	1165	RES-ETP	N/A				MCAR	371	RSH	880728	881206
1988	1166	IATTC	S APRON	3	1200	81	0472	436	WGJ	880906	881031
1988	1167	IATTC	UNKNOWN	3	1200	78	0453	470	WAA	880907	881101
1988	1168	REGION	DDSFNPL	3	1200	80	0466	417	BCC	880914	881017
1988	1169	REGION	DDSFNPL	3	0650	69	0312	453	JFC	880917	881210
1988	1170	REGION	S APRON	3	0780	69	0361	445	GRE	880915	881211
1988	1171	REGION	S APRON	3	1200	74	0477	447	MTX	880924	881122
1988	1172	REGION	DDSFNPL	3	0650	68	0212	443	GRP	880922	881119
1988	1173	IATTC	UNKNOWN	3	0850	71	0307	442	DTC	880920	881129
1988	1174	REGION	S APRON	3	1200	72	0372	451	GXD	881005	881215
1988	1175	IATTC	UNKNOWN	3	1200	75	0443	402	JJB	881015	881202
1988	1176	REGION	DDSFNPL	3	1200	80	0461	479	GMR	881015	881211
1988	1177	IATTC	UNKNOWN	3	0780	70	0301	477	CTP	881023	881226
1988	1178	REGION	DDSFNPL	3	1200	87	0486	427	ZSM	881026	881218
1988	1179	IATTC	UNKNOWN	3	0540	66	0311	420	ETF	881117	881224
1988	1180	REGION	S APRON	3	1200	80	0463	480	PMT	881107	890115
1988	1181	IATTC	UNKNOWN	3	1200	81	0468	351	WDB	881108	890112
1988	1182	REGION	S APRON	3	1200	81	0467	472	ASH	881117	890108
1988	1183	REGION	DDSFNPL	3	1000	71	0339	334	BXR	881203	890322
1989	1184	IATTC	UNKNOWN	3	0780	70	0310	463	DNL	890103	890401
1989	1185	REGION	S APRON	3	0650	68	0186	470	WAA	890114	890324
1989	1186	REGION	DDSFNPL	3	1200	80	0464	458	GMH	890104	890327
1989	1187	IATTC	UNKNOWN	3	0650	69	0355	478	TDP	890119	890328
1989	1188	IATTC	UNKNOWN	3	0650	70	0216	402	JJB	890129	890324
1989	1189	REGION	DDSFNPL	3	1200	80	0465	260	SER	890103	890401
1989	1190	REGION	S APRON	3	1200	75	0443	465	JAS	890103	890309
1989	1191	IATTC	UNKNOWN	3	1200	87	0486	421	RDF	890104	890228
1989	1192	REGION	DDSFNPL	3	0540	66	0311	443	GRP	890108	890116
1989	1193	IATTC	UNKNOWN	3	1100	73	0332	469	MCV	890116	890316
1989	1194	IATTC	UNKNOWN	3	1000	71	0372	471	GLD	890115	890324
1989	1195	IATTC	UNKNOWN	3	0650	68	0212	447	MTX	890111	890412
1989	1196	REGION	DDSFNPL	3	1200	81	0472	453	JFC	890107	890223
1989	1197	REGION	DDSFNPL	3	1200	88	0488	451	GXD	890112	890316
1989	1198	IATTC	UNKNOWN	3	0650	69	0312	427	ZSM	890122	890414
1989	1199	REGION	DDSFNPL	3	0780	70	0301	457	WBH	890122	890310
1989	1200	REGION	S APRON	3	1000	69	0344	420	ETF	890204	890411
1989	1201	REGION	S APRON	3	0850	71	0307	479	GMR	890202	890413
1989	1202	IATTC	UNKNOWN	3	1200	74	0477	440	DOT	890121	890228
1989	1203	REGION	DDSFNPL	3	1200	77	0452	472	ASH	890120	890124
1989	1204	IATTC	UNKNOWN	3	1200	78	0456	426	MAK	890125	890402
1989	1205	IATTC	UNKNOWN	3	1200	81	0467	477	CTP	890128	890408
1989	1206	IATTC	UNKNOWN	3	1200	80	0463	436	WGJ	890204	890324
1989	1207	REGION	DDSFNPL	3	1200	80	0468	443	GRP	890210	890405
1989	1208	IATTC	UNKNOWN	3	1200	78	0452	472	ASH	890209	890328
1989	1209	IATTC	UNKNOWN	3	1200	82	0478	404	MDM	890214	890407
1989	1210	REGION	DDSFNPL	3	0540	66	0311	480	PMT	890216	890226
1989	1211	IATTC	UNKNOWN	3	1200	80	0461	351	WDB	890309	890415
1989	1212	IATTC	UNKNOWN	3	1150	74	0432	421	RDF	890319	890509
1989	1213	REGION	DDSFNPL	3	0540	66	0311	480	PMT	890306	890326
1989	1214	IATTC	UNKNOWN	3	0780	69	0361	416	MSC	890309	890509
1989	1215	IATTC	UNKNOWN	3	1200	81	0472	453	JFC	890315	890409
1989	1216	REGION	DDSFNPL	3	1200	87	0486	440	DOT	890322	890508
1989	1217	REGION	DDSFNPL	3	1200	74	0477	469	MCV	890325	890511
1989	1218	IATTC	UNKNOWN	3	1200	88	0488	465	JAS	890329	890502

Appendix 4A. (Continued)

Cruise Year	Cruise	Observer Type	Gear Type	Vessel Class	Fish Capacity (ST)	Year Built	Vessel Code	Observer Number	Observer Initials	Date Depart	Date Return
1989	1219	IATTC	UNKNOWN	3	0540	66	0311	491	MDV	890401	890516
1989	1220	REGION	S APRON	3	1100	73	0332	487	JPG	890408	890515
1989	1221	IATTC	UNKNOWN	3	0780	70	0301	484	CSC	890411	890610
1989	1222	IATTC	UNKNOWN	3	1200	75	0443	493	GRW	890415	890520
1989	1223	REGION	DDSFNPL	3	0650	69	0216	486	TDF	890413	890522
1989	1224	REGION	S APRON	3	1000	71	0372	485	MGC	890419	890616
1989	1225	IATTC	UNKNOWN	3	1100	71	0339	402	JJB	890410	890520
1989	1226	IATTC	UNKNOWN	3	0650	68	0186	488	DCM	890415	890522
1989	1227	REGION	DDSFNPL	3	0640	69	0355	492	NWV	890411	890614
1989	1228	IATTC	UNKNOWN	3	1200	80	0465	471	GLD	890420	890613
1989	1229	REGION	S APRON	3	1200	80	0463	482	TVB	890416	890603
1989	1230	IATTC	UNKNOWN	3	1200	80	0464	436	WGJ	890423	890602
1989	1231	REGION	DDSFNPL	3	1200	78	0452	483	DXB	890429	890617
1989	1232	REGION	DDSFNPL	3	1200	81	0472	463	DNL	890423	890620
1989	1233	REGION	S APRON	3	1200	81	0467	481	JRA	890503	890621
1989	1234	REGION	DDSFNPL	3	1200	82	0478	334	BXR	890501	890615
1989	1235	REGION	DDSFNPL	3	1200	78	0456	470	WAA	890430	890704
1989	1236	IATTC	UNKNOWN	3	1200	81	0468	490	BVB	890502	890711
1989	1237	REGION	DDSFNPL	3	0650	68	0212	474		890504	890623
1989	1238	REGION	DDSFNPL	3	0650	68	0312	443	GRP	890510	890625
1989	1239	REGION	DDSFNPL	3	1200	80	0461	453	JFC	890510	890704
1989	1240	IATTC	UNKNOWN	3	0850	71	0307	458	GMH	890510	890713
1989	1241	IATTC	UNKNOWN	3	1100	69	0344	480	PMT	890523	890824
1989	1242	REGION	DDSFNPL	3	1200	88	0488	404	MDM	890521	890705
1989	1243	REGION	DDSFNPL	3	0540	66	0311	469	MCV	890527	890604
1989	1244	IATTC	UNKNOWN	3	1200	87	0486	260	SER	890531	890728
1989	1245	REGION	S APRON	3	0780	69	0361	451	GXD	890605	890929
1989	1246	IATTC	UNKNOWN	3	1200	74	0477	420	ETF	890608	890810
1989	1247	REGION	S APRON	3	0650	68	0186	472	ASH	890605	890721
1989	1248	REGION	DDSFNPL	3	1150	74	0432	426	MAK	890608	890703
1989	1249	REGION	DDSFNPL	3	0650	70	0216	493	GRW	890618	890805
1989	1250	REGION	DDSFNPL	3	1100	71	0339	402	JJB	890624	890918
1989	1251	REGION	S APRON	3	1092	80	0463	447	MTX	890624	890901
1989	1252	REGION	DDSFNPL	3	1200	80	0464	488	DCM	890702	890831
1989	1253	REGION	S APRON	3	1000	73	0332	486	TDF	890705	891019
1989	1254	REGION	S APRON	3	0780	70	0301	487	JPG	890702	890905
1989	1255	REGION	DDSFNPL	3	1200	82	0478	491	MDV	890710	890904
1989	1256	REGION	DDSFNPL	3	0650	69	0355	479	GMR	890701	890922
1989	1257	REGION	DDSFNPL	3	1200	80	0465	436	WGJ	890709	890907
1989	1258	REGION	S APRON	3	1000	71	0372	351	WDB	890719	891020
1989	1259	REGION	S APRON	3	1100	75	0443	485	MGC	890719	890831
1989	1260	REGION	DDSFNPL	3	1200	88	0488	502	MWO	890814	890926
1989	1261	REGION	DDSFNPL	3	1159	77	0452	503	RSR	890726	890919
1989	1262	REGION	DDSFNPL	3	0580	69	0312	497	DXC	890717	890922
1989	1263	REGION	DDSFNPL	3	0650	68	0212	500	PNH	890713	890914
1989	1264	REGION	DDSFNPL	3	1150	74	0432	504	RXS	890804	890913
1989	1265	REGION	DDSFNPL	3	1100	78	0456	427	ZSM	890805	891009
1989	1266	REGION	DDSFNPL	3	1200	81	0468	498	SEC	890809	891027
1989	1267	RES-ETP	N/A				JRDN			890729	891207
1989	1268	RES-ETP	N/A				MCAR			890729	891207
1989	1269	REGION	S APRON	3	0850	71	0307	499	MEF	890813	900115
1989	1270	IATTC	UNKNOWN	3	0650	68	0186	501	EFJ	890808	891014
1989	1271	IATTC	UNKNOWN	3	1200	80	0461	492	NWV	890819	890913
1989	1272	REGION	DDSFNPL	3	1200	87	0486	334	BXR	890822	891030
1989	1273	REGION	DDSFNPL	3	1200	74	0477	471	GLD	890902	891104
1989	1274	REGION	DDSFNPL	3	0650	70	0216	481	JRA	890829	891005
1989	1275	REGION	S APRON	3	1100	69	0344	443	GRP	890916	900106
1989	1276	REGION	DDSFNPL	3	1200	80	0463	478	TDP	890921	891105
1989	1277	IATTC	UNKNOWN	3	1200	80	0464	417	BCC	890918	891113
1989	1278	IATTC	UNKNOWN	3	1200	75	0443	483	DXB	890920	891113
1989	1279	REGION	DDSFNPL	3	1200	82	0478	493	GRW	890923	891120

Appendix 4A. (Continued)

Cruise Year	Cruise	Observer Type	Gear Type	Vessel Class	Fish Capacity (ST)	Year Built	Vessel Code	Observer Number	Observer Initials	Date Depart	Date Return
1989	1280	IATTC	UNKNOWN	3	0780	70	0301	453	JFC	890923	900115
1989	1281	IATTC	UNKNOWN	3	1200	80	0465	214	AXP	891003	891211
1989	1282	REGION	DDSFNPL	3	1200	80	0461	470	WAA	891002	891130
1989	1283	REGION	DDSFNPL	3	1200	78	0452	490	BVB	890930	891116
1989	1284	REGION	DDSFNPL	3	0650	68	0212	472	ASH	891002	891204
1989	1285	REGION	DDSFNPL	3	1200	88	0488	404	MDM	891011	891227
1989	1286	IATTC	UNKNOWN	3	1100	71	0339	503	RSR	891011	891231
1989	1287	REGION	DDSFNPL	3	1150	74	0432	458	GMH	891015	891118
1989	1288	REGION	DDSFNPL	3	0650	69	0355	492	NWV	891010	891223
1989	1289	REGION	DDSFNPL	3	0650	69	0312	487	JPG	891015	891221
1989	1290	IATTC	UNKNOWN	3	0650	70	0216	500	PNH	891015	891209
1989	1291	REGION	DDSFNPL	3	1200	78	0456	511	DNM	891105	900117
1989	1292	REGION	S APRON	3	0650	68	0186	512	ECS	891101	891217
1989	1293	REGION	S APRON	3	1000	71	0372	513	BAS	891110	900116
1989	1294	IATTC	UNKNOWN	3	1200	87	0486	505	MJB	891114	900128
1989	1295	IATTC	UNKNOWN	3	1200	81	0468	510	MLM	891122	900130
1989	1296	IATTC	UNKNOWN	3	1200	74	0477	507	VLD	891123	900315
1989	1297	REGION	UNKNOWN	3	1200	75	0443	508	DWD	891125	900218
1989	1298	IATTC	UNKNOWN	3	1200	80	0463	509	RLJ	891205	900115
1989	1299	REGION	UNKNOWN	3	1200	80	0464	478	TDP	891127	891211
1989	1300	REGION	S APRON	3	1100	73	0332	489	LAM	891202	900125
1989	1301	IATTC	UNKNOWN	3	1150	74	0432	506	RMC	891207	900117
1989	1302	IATTC	UNKNOWN	3	1200	82	0478	501	EFJ	891212	900125
1989	1303	IATTC	UNKNOWN	3	1200	78	0452	504	RXS	891230	901010
1989	1304	IATTC	UNKNOWN	3	0540	60	0311	421	RDF	891218	900117
1989	1305	IATTC	UNKNOWN	3	1200	80	0461	485	MGC	891228	900205
1990	1306	REGION	DDSFNPL	3	1200	80	0465	497	DXC	900108	900324
1990	1307	IATTC	DDSFNPL	3	1200	88	0488	334	BXR	900114	900307
1990	1308	IATTC	DDSFNPL	3	0650	69	0355	351	WDB	900114	900228
1990	1309	IATTC	DDSFNPL	3	0650	68	0212	481	JRA	900120	900301
1990	1310	IATTC	S APRON	3	0650	68	0186	502	MWO	900127	900403
1990	1311	IATTC	S APRON	3	1100	69	0344	483	DXB	900126	900325
1990	1312	REGION	DDSFNPL	3	0540	66	0311	402	JJB	900120	900225
1990	1313	IATTC	DDSFNPL	3	0780	69	0361	486	TDF	900123	900512
1990	1314	REGION	UNKNOWN	3	1200	80	0463	509	RLJ	900129	900207
1990	1315	IATTC	DDSFNPL	3	0650	69	0312	436	WGJ	900204	900419
1990	1316	IATTC	DDSFNPL	3	1200	78	0456	500	PNH	900206	900322
1990	1317	IATTC	DDSFNPL	3	1000	71	0372	491	MDV	900211	900325
1990	1318	REGION	S APRON	3	0650	70	0301	451	GXD	900215	900508
1990	1319	REGION	EXP	3	1100	71	0339	427	ZSM	900203	900430
1990	1320	REGION	UNKNOWN	3	1200	87	0486	498	SEC	900211	900220
1990	1321	REGION	DDSFNPL	3	0650	70	0216	420	ETF	900213	900324
1990	1322	REGION	DDSFNPL	3	1200	81	0468	458	GMH	900314	900419
1990	1323	IATTC	UNKNOWN	3	0850	71	0307	490	BVB	900217	900515
1990	1324	REGION	DDSFNPL	3	1150	74	0432	417	BCC	900215	900318
1990	1325	REGION	DDSFNPL	3	1200	80	0461	465	JAS	900306	900405
1990	1326	IATTC	S APRON	3	1100	73	0332	493	GRW	900308	900417
1990	1327	REGION	DDSFNPL	3	1200	82	0478	487	JPG	900310	900502
1990	1328	IATTC	S APRON	3	1200	75	0443	498	SEC	900310	900404
1990	1329	IATTC	DDSFNPL	3	0540	66	0311	472	ASH	900310	900401
1990	1330	REGION	DDSFNPL	3	0650	69	0355	485	MGC	900318	900511
1990	1331	REGION	DDSFNPL	3	0650	69	0212	513	BAS	900319	900606
1990	1332	REGION	DDSFNPL	3	1600	89	0490	470	WAA	900317	900502
1990	1333	REGION	DDSFNPL	3	1200	87	0486	443	GRP	900319	900507
1990	1334	REGION	DDSFNPL	3	1200	88	0488	512	ECS	900322	900602
1990	1335	IATTC	DDSFNPL	3	1200	80	0464	492	NWV	900318	900510
1990	1336	REGION	DDSFNPL	3	1200	74	0477	503	RSR	900331	900515
1990	1337	IATTC	EXP	3	1200	78	0452	334	BXR	900325	900624
1990	1338	IATTC	DDSFNPL	3	1150	74	0432	499	MEF	900403	900518
1990	1339	REGION	DDSFNPL	3	0540	66	0311	488	DCM	900405	900604
1990	1340	REGION	DDSFNPL	3	1000	71	0372	511	DNM	900425	900704

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Cruise Year	Cruise	Observer Type	Gear Type	Vessel Class	Fish Capacity (ST)	Year Built	Vessel Code	Observer Number	Observer Initials	Date Depart	Date Return
1990	1341	IATTC	S APRON	3	1200	80	0465	506	RMC	900411	900519
1990	1342	IATTC	DDSFNPL	3	0650	70	0216	518	RAR	900418	900514
1990	1343	REGION	S APRON	3	1100	69	0344	501	EFJ	900428	900615
1990	1344	IATTC	DDSFNPL	3	1200	80	0461	481	JRA	900422	900624
1990	1345	REGION	DDSFNPL	3	1200	80	0463	517	DAM	900417	900613
1990	1346	REGION	S APRON	3	1200	75	0443	515	KMK	900426	900528
1990	1347	REGION	DDSFNPL	3	0650	69	0312	509	RLJ	900513	900727
1990	1348	IATTC	DDSFNPL	3	1200	81	0468	520	JMW	900509	900726
1990	1349	REGION	S APRON	3	1100	73	0332	516	CJL	900521	900714
1990	1350	IATTC	DDSFNPL	3	1200	87	0486	500	PNH	900524	900701
1990	1351	IATTC	DDSFNPL	3	1500	90	0490	469	MCV	900522	900717
1990	1352	IATTC	DDSFNPL	3	0650	69	0355	514	JCG	900524	900718
1990	1353	REGION	DDSFNPL	3	1200	80	0464	472	ASH	900529	900729
1990	1354	REGION	UNKNOWN	3	1200	82	0478	518	RAR	900517	900525
1990	1355	REGION	UNKNOWN	3	0780	70	0301	421	RDF	900605	900614
1990	1356	IATTC	DDSFNPL	3	1200	74	0477	402	JJB	900603	900627
1990	1357	IATTC	EXP	3	1100	71	0399	465	JAS	900606	900901
1990	1358	REGION	DDSFNPL	3	0780	69	0361	508	DWD	900624	901003
1990	1359	REGION	NO PANL	3	0650	70	0216	510	MLM	900606	900812
1990	1360	IATTC	S APRON	3	1200	75	0443	507	VLD	900614	900727
1990	1361	REGION	S APRON	3	0850	71	0307	483	DXB	900612	901022
1990	1362	IATTC	DDSFNPL	3	1200	88	0488	518	RAR	900618	900821
1990	1363	REGION	DDSFNPL	3	1150	74	0432	493	GRW	900623	900805
1990	1364	REGION	NO PANL	3	1200	79	0465	427	ZSM	900630	900717
1990	1365	REGION	UNKNOWN	3	1100	69	0344	443	GRP	900710	900721
1990	1366	REGION	UNKNOWN	3	1200	80	0463	351	WDB	900710	900718
1990	1367	REGION	DDSFNPL	3	1200	87	0486	497	DXC	900719	900916
1990	1368	IATTC	DDSFNPL	3	1000	71	0372	402	JJB	900807	900925
1990	1369	RES-ETP	N/A			65	JRDN			900729	901206
1990	1370	RES-ETP	N/A				MCAR			900728	901206
1990	1371	REGION	DDSFNPL	3	1600	89	0490	522	WLE	900730	900916
1990	1372	IATTC	S APRON	3	1100	73	0332	518	RAR	900815	901021
1990	1373	REGION	UNKNOWN	3	0650	69	0355	458	GMH	900805	900814
1990	1374	REGION	S APRON	3	1200	75	0443	507	VLD	900806	900815
1990	1375	REGION	DDSFNPL	3	0650	69	0312	509	RLJ	900808	900817
1990	1376	REGION	DDSFNPL	3	1200	81	0468	506	RMC	900818	900925
1990	1377	REGION	NO PANL	3	1200	74	0432	487	JPG	900807	900821
1990	1378	IATTC	DDSFNPL	3	0650	70	0216	499	MEF	900817	901011
1990	1379	REGION	DDSFNPL	3	1200	80	0461	486	TDF	900822	901104
1990	1380	REGION	DDSFNPL	3	1200	88	0488	513	BAS	900830	900925
1990	1381	REGION	UNKNOWN	3	1500	90	0491	501	EFJ	900906	900915
1990	1382	IATTC	S APRON	3	1100	69	0344	485	MGC	900918	901212
1990	1383	REGION	EXP	3	1100	71	0339	487	JPG	900920	901229
1990	1384	REGION	DDSFNPL	3	0650	69	0355	500	PNH	901001	901214
1990	1385	IATTC	DDSFNPL	3	1200	81	0468	501	EFJ	901011	901220
1990	1386	IATTC	DDSFNPL	3	0780	69	0361	509	RLJ	901018	901220
1990	1387	REGION	DDSFNPL	3	0650	70	0216	515	KMK	901023	910211
1990	1388	REGION	DDSFNPL	3	1000	71	0372	517	DAM	901105	901220
1990	1389	REGION	S APRON	3	0850	71	0307	483	DXB	901030	901106
1990	1390	REGION	NO PANL	3	1500	90	0491	472	ASH	901104	901224
1990	1391	IATTC	NO PANL	3	1200	88	0488	402	JJB	901106	901212
1990	1392	IATTC	NO PANL	3	1200	87	0486	521	SEB	901110	901206
1990	1393	REGION	UNKNOWN	3	1100	73	0332	525	LJS	901114	901122
1990	1394	IATTC	NO PANL	3	1500	90	0490	458	GMH	901110	901215
1990	1395	IATTC	DDSFNPL	3	0540	66	0311	427	ZSM	901117	910105
1990	1396	IATTC	UNKNOWN	3	1200	80	0461	511	DNM	901117	901204
1990	1397	IATTC	DDSFNPL	3	0650	69	0355	525	LJS	901227	910210
1990	1398	REGION	NO PANL	3	1200	87	0486	513	BAS	901223	910309
1990	1399	REGION	NO PANL	3	1200	88	0488	469	MCV	901227	910330
1991	1400	REGION	UNKNOWN	3	1500	90	0490	351	WDB	910106	910322
1991	1401	REGION	S APRON	3	1100	69	0344	481	JRA	910105	910301

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Cruise Year	Cruise	Observer Type	Gear Type	Vessel Class	Fish Capacity (ST)	Year Built	Vessel Code	Observer Number	Observer Initials	Date Depart	Date Return
1991	1402	IATTC	DDSFNPL	3	1000	71	0372	506	RMC	910119	910301
1991	1403	REGION	UNKNOWN	3	0780	69	0361	465	JAS	910109	910122
1991	1404	REGION	DDSFNPL	3	0540	66	0311	497	DXC	910113	910210
1991	1405	IATTC	NO PANL	3	1500	90	0491	517	DAM	910123	910516
1991	1406	IATTC	DDSFNPL	3	1100	71	0339	521	SEB	910216	910421
1991	1407	IATTC	DDSFNPL	3	0650	70	0216	472	ASH	910222	910328
1991	1408	REGION	DDSFNPL	3	0650	69	0355	334	BXR	910225	910430
1991	1409	REGION	DDSFNPL	3	0540	66	0311	507	VLD	910304	910426
1991	1410	IATTC	S APRON	3	1100	69	0344	486	TDF	910307	910424
1991	1411	REGION	DDSFNPL	3	1000	71	0372	508	DWD	910319	910609
1991	1412	IATTC	NO PANL	3	1200	87	0486	485	MGC	910326	910603
1991	1413	IATTC	NO PANL	3	1500	90	0490	402	JJB	910406	910708
1991	1414	IATTC	NO PANL	3	1200	88	0488	500	PNH	910418	910603
1991	1415	REGION	DDSFNPL	3	0650	70	0216	483	DXB	910410	910720
1991	1416	REGION	S APRON	3	0850	71	0307	487	JPG	910424	910606
1991	1417	REGION	S APRON	3	1100	69	0344	458	GMH	910515	910605
1991	1418	REGION	EXP	3	1200	75	0443	522	WLE	910527	910712
1991	1419	REGION	NO PANL	3	1500	90	0491	427	ZSM	910528	910724
1991	1420	REGION	NO PANL	3	1200	87	0486	515	KMK	910613	910831
1991	1421	REGION	NO PANL	3	1200	88	0488	521	SEB	910615	910923
1991	1422	IATTC	DDSFNPL	3	0650	69	0355	486	TDF	910630	910822
1991	1423	IATTC	S APRON	3	1100	69	0344	334	BXR	910803	910929
1991	1424	REGION	UNKNOWN	3	1200	81	0468	525	LJS	910713	910726
1991	1425	IATTC	DDSFNPL	3	0650	70	0216	485	MGC	910803	910918
1991	1426	RES-CSTL	N/A				MCAR			910828	911105
1991	1427	IATTC	NO PANL	3	1500	90	0491	465	JAS	910806	911007
1991	1428	REGION	NO PANL	3	1200	75	0443	469	MCV	910824	910907
1991	1429	REGION	DDSFNPL	3	0650	69	0355	517	DAM	910912	911124
1991	1430	REGION	DDSFNPL	3	0650	70	0216	500	PNH	910928	911108
1991	1431	REGION	NO PANL	3	1500	90	0490	487	JPG	910928	911203
1991	1432	IATTC	NO PANL	3	1200	88	0488	351	WDB	910930	911226
1991	1433	REGION	S APRON	3	1100	69	0344	427	ZSM	911010	920127
1991	1434	IATTC	NO PANL	3	1200	87	0486	402	JJB	911005	911205
1991	1435	REGION	NO PANL	3	1500	90	0491	486	TDF	911026	920204
1991	1436	IATTC	DDSFNPL	3	1000	71	0372	483	DXB	911119	920212
1991	1437	REGION	DDSFNPL	3	0650	70	0216	500	PNH	911118	911127
1991	1438	REGION	NO PANL	3			0492	521	SEB	911121	911207
1991	1439	IATTC	DDSFNPL	3	0650	69	0355	458	GMH	911205	920124
1991	1440	REGION	NO PANL	3	1500	90	0490	487	JPG	911210	911212
1991	1441	IATTC	DDSFNPL	3	1500	90	0490	515	KMK	911214	920203
1991	1442	REGION	NO PANL	3	1200	87	0486	485	MGC	911221	920130
1992	1443	REGION	DDSFNPL	3	1200	88	0488	517	DAM	920112	920307
1992	1444	TRANSIT	UNKNOWN	3	0650	69	0355	458	GMH	920129	920131
1992	1445	REGION	DDSFNPL	3	0650	69	0355	521	SEB	920203	920325
1992	1446	IATTC	S APRON	3	1100	69	0344	522	WLE	920201	920321
1992	1447	IATTC	NO PANL	3	1200	87	0486	402	JJB	920204	920317
1992	1448	REGION	DDSFNPL	3	1500	90	0490	500	PNH	920207	920329
1992	1449	IATTC	DDSFNPL	3	1500	90	0491	485	MGC	920210	920507
1992	1450	REGION	DDSFNPL	3	1000	71	0372	469	MCV	920225	920419
1992	1451	IATTC	DDSFNPL	3	1200	88	0488	334	BXR	920322	920423
1992	1452	REGION	S APRON	3	1100	69	0344	515	KMK	920401	920524
1992	1453	REGION	NO PANL	3	1200	87	0486	517	DAM	920402	920703
1992	1454	IATTC	DDSFNPL	3	0650	69	0355	351	WDB	920408	920522
1992	1455	IATTC	NO PANL	3	1500	90	0490	483	DXB	920415	920609
1992	1456	IATTC	UNKNOWN	3	1000	71	0372	522	WLE	920511	920615
1992	1457	REGION	DDSFNPL	3	1200	88	0488	458	GMH	920509	920714
1992	1458	REGION	NO PANL	3	1500	90	0491	586	MOS	920514	920822
1992	1459	REGION	DDSFNPL	3	0650	69	0355	583	TXJ	920530	920831
1992	1460	IATTC	S APRON	3	1100	69	0344	587	MJT	920531	920716
1992	1461	REGION	NO PANL	3	1500	90	0490	582	JMD	920622	920902
1992	1462	REGION	DDSFNPL	3	1000	71	0372	402	JJB	920705	920814

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Cruise Year	Cruise	Observer Type	Gear Type	Vessel Class	Fish Capacity (ST)	Year Built	Vessel Code	Observer Number	Observer Initials	Date Depart	Date Return
1992	1463	IATTC	NO PANL	3	1200	87	0486	579	NRM	920708	920806
1992	1464	TRANSIT	UNKNOWN	3	1200	88	0488	584	LSO	920725	920727
1992	1465	IATTC	DDSFNPL	3	1200	88	0488	584	LSO	920729	920901
1992	1466	REGION	S APRON	3	1100	69	0344	521	SEB	920806	920922
1992	1467	RES-ETP	N/A				MCAR			920728	921102
1992	1468	RES-ETP	N/A				JRDN			920728	921102
1992	1469	REGION	NO PANL	3	1200	87	0486	581	SXB	920810	921126
1992	1470	IATTC	DDSFNPL	3	1000	71	0372	500	PNH	920903	921014
1992	1471	IATTC	DDSFNPL	3	1500	90	0491	588	MMW	920910	921030
1992	1472	IATTC	DDSFNPL	3	0650	69	0355	427	ZSM	920916	921110
1992	1473	REGION	DDSFNPL	3	1200	88	0488	485	MGC	920926	921213
1992	1474	IATTC	DDSFNPL	3	1500	90	0490	334	BXR	920923	930102
1992	1475	IATTC	S APRON	3	1100	69	0344	579	NRM	921015	921105
1992	1476	REGION	DDSFNPL	3	1500	90	0491	588	MMW	921103	930110
1992	1477	CHARTER	UNKNOWN	3	1100	69	0344	470	WAA	921106	921206
1992	1478	REGION	DDSFNPL	3	1000	71	0372	515	KMK	921111	921205
1992	1479	REGION	UNKNOWN	3	0650	69	0355	587	MJT	921119	930109
1992	1480	IATTC	DDSFNPL	3	1000	71	0372	458	GMH	921220	930113
1992	1481	TRANSIT	UNKNOWN	3	1100	69	0344	470	WAA	921206	921207
1992	1482	IATTC	DDSFNPL	3	1200	88	0488	583	TXJ	921230	930208
1993	1483	REGION	S APRON	3	1100	69	0344	517	DAM	930131	930313
1993	1484	REGION	DDSFNPL	3	1500	90	0490	584	LSO	930124	930302
1993	1485	IATTC	DDSFNPL	3	1200	87	0486	582	JMD	930117	930225
1993	1486	IATTC	DDSFNPL	3	0650	69	0355	522	WLE	930123	930304
1993	1487	REGION	DDSFNPL	3	0540	66	0311	515	KMK	930122	930408
1993	1488	IATTC	DDSFNPL	3	1500	90	0491	521	SEB	930203	930307
1993	1489	REGION	DDSFNPL	3	1000	71	0372	579	NRM	930218	930303
1993	1490	REGION	DDSFNPL	3	1200	88	0488	402	JJB	930224	930330
1993	1491	REGION	DDSFNPL	3	1200	87	0486	586	MOS	930310	930331
1993	1492	IATTC	DDSFNPL	3	1000	71	0372	351	WDB	930313	930423
1993	1493	IATTC	DDSFNPL	3	1500	90	0490	485	MGC	930323	930507
1993	1494	REGION	DDSFNPL	3	0650	69	0355	581	SXB	930324	930424
1993	1495	REGION	DDSFNPL	3	1500	90	0491	500	PNH	930404	930826
1993	1496	IATTC	DDSFNPL	3	1200	88	0488	579	NRM	930413	930923
1993	1497	IATTC	DDSFNPL	3	0540	66	0311	521	SEB	930414	930612
1993	1498	IATTC	S APRON	3	1100	69	0344	427	ZSM	930424	930629
1993	1499	IATTC	DDSFNPL	3	1200	87	0486	334	BXR	930426	930726
1993	1500	IATTC	DDSFNPL	3	0650	69	0355	458	GMH	930501	930621
1993	1501	REGION	DDSFNPL	3	1000	71	0372	586	MOS	930515	930627
1993	1502	REGION	DDSFNPL	3	1500	90	0490	583	TXJ	930602	930908
1993	1503	REGION	DDSFNPL	3	0540	66	0311	584	LSO	930617	930629
1993	1504	TRANSIT	UNKNOWN	3	0650	69	0355	458	GMH	930625	930627
1993	1505	REGION	DDSFNPL	3	0650	69	0355	402	JJB	930630	930910
1993	1506	IATTC	DDSFNPL	3	1000	71	0372	582	JMD	930703	930918
1993	1507	REGION	S APRON	3	1100	69	0344	581	SXB	930717	930902
1993	1508	RES-ETP	N/A				MCAR			930728	931102
1993	1509	RES-ETP	N/A				JRDN			930728	931106
1993	1510	REGION	DDSFNPL	3	1200	87	0486	517	DAM	930815	931031
1993	1511	IATTC	DDSFNPL	3	1500	90	0491	515	KMK	930911	931128
1993	1512	IATTC	S APRON	3	1100	69	0344	588	MMW	930904	931117
1993	1513	IATTC	DDSFNPL	3	1500	90	0490	586	MOS	930911	931027
1993	1514	IATTC	DDSFNPL	3	0650	69	0355	521	SEB	930925	931124
1993	1515	REGION	DDSFNPL	3	1000	71	0372	522	WLE	931006	931031
1993	1516	REGION	DDSFNPL	3	1200	88	0488	458	GMH	931009	931116
1993	1517	REGION	DDSFNPL	3	1500	90	0490	581	SXB	931111	931217
1993	1518	IATTC	DDSFNPL	3	1000	71	0372	427	ZSM	931118	931220
1993	1519	IATTC	DDSFNPL	3	1200	87	0486	522	WLE	931118	931217
1993	1520	REGION	DDSFNPL	3	0540	66	0311	334	BXR	931201	940111
1993	1521	IATTC	DDSFNPL	3	1200	88	0488	583	TXJ	931201	931231
1993	1522	REGION	S APRON	3	1100	69	0344	582	JMD	931204	940124
1993	1523	REGION	DDSFNPL	3	0650	69	0355	500	PNH	931209	940226



Appendix 4A. (Continued)

Cruise Year	Cruise	Observer Type	Gear Type	Vessel Class	Fish Capacity (ST)	Year Built	Vessel Code	Observer Number	Observer Initials	Date Depart	Date Return
1993	1524	REGION	DDSPNL	3	1500	90	0491	402	JJB	931215	940318
1994	1525	REGION		3	1200	87	0486	586	MOS	940101	940210
1994	1526	REGION		3	1000	71	0372	517	DAM	940109	940207
1994	1527	REGION		3			VALE	577	577	940115	940429
1994	1528	IATTC		3	1500	90	0490	522	WLE	940102	940224
1994	1529	REGION		3	1200	88	0488	521	SEB	940118	940302
1994	1530	REGION		3	0540	66	0311	588	MMW	940130	940222
1994	1531	IATTC		3	1200	87	0486	582	JMD	940326	940511
1994	1532	IATTC		3	0540	66	0311	579	NRM	940304	940329
1994	1533	REGION		3			JENN	608	SLH	940304	940326
1994	1534	IATTC		3	1200	88	0488	427	ZSM	940321	940502
1994	1535	IATTC		3	0650	69	0355	583	TXJ	940323	940607
1994	1536	REGION		3	1500	90	0490	517	DAM	940330	940519
1994	1537	REGION		3	0540	66	0311	586	MOS	940415	940608
1994	1538	IATTC		3	1500	90	0491	522	WLE	940420	940611
1994	1539	REGION		3			BONN	561	RXJ	940421	940608
1994	1540	REGION		3	1200	88	0488	500	PNH	940517	940726
1994	1541	REGION		3	1200	87	0486	402	JJB	940526	940810
1994	1542	IATTC		3	1500	90	0490	458	GMH	940605	940709
1994	1543	REGION		3	0650	69	0355	588	MMW	940619	940907
1994	1544	REGION		3	1500	90	0491	521	SEB	940629	940827
1994	1545	REGION		3	1500	90	0490	582	JMD	940720	940821
1994	1546	RES		3			SRVY			940721	940831
1994	1547	IATTC		3	1500	90	0490	582	JMD	940831	940920
1994	1548	IATTC		3	1200	87	0486	583	TXJ	940826	940926
1994	1549	IATTC		3	1200	88	0488	517	DAM	940903	941006
1994	1550	IATTC		3	1500	90	0491	586	MOS	940916	941203
1994	1551	REGION		3	1500	90	0490	522	WLE	941007	941122
1994	1552	REGION		3	1200	87	0486	458	GMH	941021	941123
1994	1553	REGION		3	1200	88	0488	500	PNH	941017	941126
1994	1554	IATTC		3	0540	66	0311	402	JJB	941207	950118
1994	1555	IATTC		3	1500	90	0490	427	ZSM	941219	950413
1994	1556	IATTC		3	1200	88	0488	582	JMD	941209	950206
1994	1557	IATTC		3	1200	87	0486	521	SEB	941218	950321
1994	1558	REGION		3	1500	90	0491	583	TXJ	941222	950124
1995	1559	REGION		3	0540	66	0311	522	WLE	950126	950308

Appendix 4B. "Code Table 2" lists observers participating in the NMFS Tuna-Porpoise Observer Program from 1966-1995. Also included are those hired as observers who did not actually make a trip. The Observer Initials were used in giving field numbers to specimens collected.

Observer Number	Observer Initials	Observer Name
001	WFP	W.F. PERRIN
002	JSL	J.S. LEATHERWOOD
003	RSG	R.S. GARVIE
004	LR	J.R. LAGRANGE
005	JMC	J.M. COE
006	DBH	D.B. HOLTS
007	MT	G.M. TREINEN
008	AP	A. POSHKUS
009	JMG	J.M. GREENE
010	CWO	C.W. OLIVER
011	RWW	R.W. WARNER
012	WH	W. HIGH
013	RJO	R.J. OLSON
014	CRR	C.R. RYAN
015	KDS	K.D. SEXTON
016	CEB	C.E. BOWLBY
017	JAY	J.A. YOUNG
018	DBZ	S.B. ZANTINY
019	JMR	J.M. ROSEN
020	DJO	D.J. OTIS
021	JWP	J.W. PLOEGER
022	FMR	F.M. RALSTON
023	REL	R.E. LAGHRY
024	RWC	R.W. CUNNINGHAM
025	SBR	S.R. REILLY
026	WEE	W.E. EVANS
027	EGB	E.G. BARHAM
028	TDS	T.D. SMITH
029	JDM	J.D. METOYER
030	JDD	J.D. DOHRMANN
031	PAT	P.A. THOMPSON
032	RCD	R.C. DOTSON
033	REA	R.E. AMICH
034	SGA	S.G. AHERN
035	GMA	G.M. ARMSTRONG
036	REB	R.E. BOURKE
037	CMF	C.M. FEDDE
038	TJF	T.J. FOREMAN
039	WCF	W.C. FLERX
040	TMD	T.M. DUFFY
041	JAH	J.A. HALAS
042	DPH	D.P. HOFFMAN
043	RWH	R.W. HOFFMASTER
044	REH	R.E. HUNDT
045	DHP	D.H. POWERS

Appendix 4B. (Continued)

Observer Number	Observer Initials	Observer Name
046	(initials not assigned)	R.C. STRASSEL
047	WWS	W.W. STEEL
048	GLU	G.L. ULRICH
049	JHT	J.H. THOMPSON
050	JAZ	J.A. ZWACK
051	(initials not assigned)	J. O'CONNOR
052	(initials not assigned)	K.D. SEXTON,REILLY,METOYER
053	(initials not assigned)	D.J. TWOHIG
054	(initials not assigned)	J.E. JURKOVICH
055	(initials not assigned)	K.P. LEVEILLE
056	OS	O. SETH
057	DAB	D.A. BRATTEN
058	LSW	L.S. WADE
059	RKF	R.K. FOUNTAIN
060	RWM	R.W. MCLAIN
061	TBS	T.B. SHAY
062	RLC	R.L. CHARTER
063	MJJ	M.J. JACOBSEN
064	GLF	G.L. FRIEDRICHSEN
065	CWP	C.W. POTTER
066	CBP	C.B. PETERS
067	WAW	W.A. WALKER
068	JFL	J.F. LAMBERT
069	WHT	W.H. TYNDALL
070	ADB	A.D. BATES
071	KEW	K.E. WALLACE
072	SFB	S.F. BARIL
073	MLF	M.L. FITZSIMMONS
074	PLA	P.L. ANES
075	SOB	S. BIRK
076	RWB	R.W. BUTLER
077	DTA	D.T. ANDERSON
078	CAC	C.A. CLARK
079	VCC	V.C. CULINA
080	WES	W.E. STUNTZ
081	WDK	W.D. KEY
082	(initials not assigned)	M.S. KOIDE
083	BL	B. LEE
084	JRG	J.R. GLABE
085	MSL	M.S. LOWRY
086	HDM	H.D. MEYER
087	CCM	C.C. MITCHELL
088	JLN	J.L. NELSON
089	SRN	S.R. NICHOLS
090	LGP	L.G. PRESTON
091	REI	R.E. IRVIN
092	(initials not assigned)	R.B. SCHLEXER
093	JS	J. SCORDINO
094	MSS	M.S. SINCLAIR
095	PGS	P.G. STANGL

Appendix 4B. (Continued)

Observer Number	Observer Initials	Observer Name
096	DAT	D.A. TERPENING
097	MWD	M.W. DEERMAN
098	SRL	S.R. LOMBARDI
099	DR	R.J. REINER
100	DCC	D.C. CLEVINGER
101	JMS	J.M. SANDS
102	(initials not assigned)	J.S. MYSZKA
103	SES	S.E. STANGL
104	JRH	J.R. HENDERSON
105	MSM	M.S. MALLINCKRODT
106	ECJ	E.C. JAMEYSON
107	GJA	G.J. ALISIO
108	(initials not assigned)	R.E. ALLEN
109	BJB	B.J. BROWN
110	DOB	D.A. BRUGGMAN
111	DBF	D.B. FELLBAUM
112	DLF	D.L. FERRELL
113	(initials not assigned)	J.A. FREDERICK
114		(number not assigned)
115	TRK	T.R. KANE
116	(initials not assigned)	J.H. LECKY
117	PPL	P.P. LEIPZIG
118	PLR	P.L. ROBARDS
119	WLS	W.L. SOMES
120	(initials not assigned)	R.P. WHITMAN
121	PCW	P.C. WUSSOW
122	DNA	D.N. ABRAMENKOFF
123	MAB	M.A. BAIRSTOW
124	MIB	M.I. BECKER
125	JCB	J.C. BIRD
126		(number not assigned)
127		(number not assigned)
128		(number not assigned)
129	DRD	D.R. DINKLER
130	TCF	T.C. FOSTER
131	DJF	D.J. FUNK
132	(initials not assigned)	A.D. HANSEN
133	(initials not assigned)	S.A. HARRIS
134	MEH	M.E. HEARNE
135	WOK	W. KAJIMURA
136	(initials not assigned)	J.S. KRIEGSMAN
137	DEL	D.E. LEE
138	RDL	R.D. LEE
139		(number not assigned)
140	JBN	J.B. NORBERG
141	JKO	J.K. OLEARY
142	RBR	R.B. READ
143	PLT	P.L. TRABA JR
144	RLW	R.L. WONG
145	WLP	W. PERRYMAN

Appendix 4B. (Continued)

Observer Number	Observer Initials	Observer Name
146	(initials not assigned)	D. AU
147	TEB	T.E. BEEDE
148	CLB	C.L. BEEHLER
149	JMB	J.M. BENSON
150	JTB	J.T. BOAZ
151	GWB	G.W. BUCKLEY
152	DLC	D.L. CHESSMORE
153	DRF	D.R. FRANKEL
154	SWJ	S.W. JOHNSON
155	DMK	D.M. KELLEY
156	MJL	M.J. LYNCH
157	TJM	T.J. MICKEL
158	JOP	J.W. PENFIELD
159	(initials not assigned)	H.P. PLEIMAN
160	RCR	R.C. RASMUSSEN
161	AGR	A.G. ROBERGE
162	JER	J.E. ROGERS
163	RYS	R.Y. SALOMONS
164		(number not assigned)
165	LWS	L.W. SHIPLEY
166	LES	L.E. SHOUSE
167	JOS	J.M. STEMPEL
168	PRT	P.R. TURNER
169	DAV	D.A. VOGEL
170		(number not assigned)
171	DAA	D.A. AMBROSE
172	WCB	W.C. BEMIS
173	MTB	M.T. BUR
174	WMC	W.M. CRAYTON
175	MTC	M.T. CUNNINGHAM
176	FBG	F.B. GRAY
177	RRJ	R.R. JOHNSON
178	WKK	W.K. KEWLEY
179	BKL	B.K. LONG
180	CEM	C.E. MCLEMORE
181	JPP	J.P. PETERSON
182		(number not assigned)
183	JVR	J.V. ROSAPEPE
184	WTS	W.T. SHAFFER
185	KLW	K.L. WEINBURG
186	TCB	T.C. BENTON
187	WHB	W.H. BRINKERHOFF
188		(number not assigned)
189	JVG	J.V. GRAVNING
190	LJH	L.J. HANSEN
191	PFM	P.F. MELOGRANO
192	POR	P.L. RITCHIE
193	RWS	R.W. SCANLON
194	ACM	A.C. MYRICK
195	GLA	G.L. ANDERSON

Appendix 4B. (Continued)

Observer Number	Observer Initials	Observer Name
196	JLB	J.L. BODKIN
197	COB	C. BOONE
198	JSB	J.S. BRAR
199	RMB	R.M. BRUESEWITZ
200	PAC	P.A. CALIMERIS
201	GEC	G.E. COLLINS
202	GLC	G.L. CURTIS
203	JOC	J.M. CRUMP
204	CJD	C.J. DOXEY
205	EHE	E.H. EVERETT
206	GCF	G.C. FELDMAN
207	RLF	R.L. FRANCO
208	SFG	S.F. GLEASON
209	TAG	T.A. GRONHOLT
210	WKI	W.K. IRWIN
211	WSL	W.S. LAWTON
212	ESM	E.S. MENASHE
213	ASO	A.S. ONWEILER
214	AXP	A. PURMALIS
215	(initials not assigned)	D.E. RINCK
216	COS	C. SHEATS
217	RGS	R.G. SMITH
218		(number not assigned)
219	RKS	R.K. STIVES
220	RAT	R.A. TAYLOR
221		(number not assigned)
222	JRW	J.R. WIITALA
223	RBB	R.B. BERNARD
224	JGB	J.G. BRUCE
225	JSC	J.S. COLLIER
226	JRE	J.R. ECKLES
227	IEG	I.E. GREER
228	JOG	J.M. GREGORY
229		(number not assigned)
230	JMH	J.M. HERKELRATH
231	JOH	J.A. HUSTED
232	JEJ	J.E. JOSE
233	SJK	S.J. KOPLIN
234	BSM	B.S. MEYER
235	JJN	J.J. NIEHAUS
236	KXO	K. O'SULLIVAN
237	RDP	R.D. PHILLIPS
238	GAS	G.A. SANFORD
239	PGT	P.G. THOMAS
240	JLT	J.L. TRUDEAU
241	LEZ	L.E. ZALESKI
242	(initials not assigned)	C.J. ORANGE
243	(initials not assigned)	V.M. SILVA
244	MRB	M.R. BERGEY
245	DKB	D.K. BICKFORD

Appendix 4B. (Continued)

Observer Number	Observer Initials	Observer Name
246	MPB	M.P. BIERCEVICZ
247	RJB	R.J. BOWERMAN
248	DJC	D.J. CARLSON
249	VFC	V.F. CARR
250	RCC	R.C. CEDERSTROM
251		(number not assigned)
252	MRD	M.R. DELARM
253	SCG	S.C. GRIESER
254	BDJ	B.D. JULSON
255		(number not assigned)
256	DJM	D.J. MARTEL
257	RTM	R.T. MAYO
258	RXM	R.W. MEREDITH
259		(number not assigned)
260	SER	S.E. ROSS
261	GSS	G.S. SHUSTA
262	WJS	W.J. SOOTER
263	BGT	B.G. TALBOT
264		(number not assigned)
265	DJT	D.J. TRUDEAU
266	TJT	T.J. TUMOSA
267	AXB	A.D. BETTGE
268	JXB	J.L. BURTON
269	LCE	L.C. EVANS
270	PGM	P.G. MARQUEZ
271	WRL	W.R. LESCHYN
272	RMP	R.M. PETTY
273	CER	C.E. ROBBINS
274	PCS	P.C. SCHMIDT
275	MJS	M.J. STADLER
276	JWS	J.W. STICKEL
277	DLV	D.L. VAUGHAN
278	JOZ	J. ZUSTAK
279	RTA	R.T. ASPRAY
280	BGB	B.G. BARGO
281	CRB	C.R. BEPLER
282	CXB	C.L. BLOOD
283	DLB	D.L. BURLESON
284	DRC	D.R. CORMANY
285	WRC	W.R. COX
286	DHD	D.H. DOUD
287	(initials not assigned)	R.H. FLECKER
288	MBH	M.B. HOOVER
289	ARJ	A.R. JACKSON
290	MAJ	M.A. JONES
291	DSK	D.S. KREMER
292	LSL	L.S. LELOUP
293	RBL	R.B. LESTINA
294	FCL	F.C. LEUTHEUSER
295	RJL	R.J. LINDSAY

Appendix 4B. (Continued)

Observer Number	Observer Initials	Observer Name
296	(initials not assigned)	M.J. MASCHMEIER
297	SAM	S.A. MEYER
298	SRM	S.R. MILNES
299	MJN	M.J. NOEL
300	WHO	W.H. OWEN
301	RCP	R.C. PEKAREK
302	JMP	J.M. PHILLIPS
303	KDP	K.D. PIAZZA
304	JXR	J. RAFFETTO
305	RXR	R.C. REEDER
306	SJR	S.J. RESHKIN
307	KLS	K.L. SMITH
308	EBT	E.B. THOM
309	STW	S.T. WILSON
310	JXC	J. COLE
311	PSH	P.S. HAMMOND
312	DJE	D.J. EOFF
313	MXH	M.E. HENRY
314	JGH	J.G. HERPOLSHEIMER
315	JEK	J.E. KURTENBACH
316	SWL	S.W. LANDINO
317	RGR	R.G. REID
318	MXS	M. SULLIVAN
319	WRW	W.R. WEBER
320	GYE	G.Y. YEE
321	(initials not assigned)	J.F. BALLANTINE
322	MXB	M.A. BELL
323	CCB	C.C. BOLTON JR.
324	RAB	R.A. BRANTLEY
325	(initials not assigned)	L.A. CRAIG
326	GSD	G.S. DAVENPORT
327	JWG	J.W. GILPATRICK
328	(initials not assigned)	M.D. GOTTFREID
329	DWG	D.W. GRUNDEN
330	WEH	W.E. HENRY
331	KEK	K.E. KNOBLOK
332	TAL	T.A. LAMBERT
333	SWM	S.W. MCENTIRE
334	BXR	B. RAVITCH
335	RDS	R.D. STEPHENS
336	JOT	J.O. TOLLEY
337	JSW	J.C. WIRBICKI JR.
338	KPW	K.P. WOJAK
339	(initials not assigned)	R.L. PITMAN
340	FAA	F.A. ALTOMONTE
341	MSB	M.S. BILECKI
342	RXB	R.A. BROOKS
343	RJD	R.J. DOWNEY
344	TPH	T.P. HANSEN
345	CAK	C.A. KUHLKEN



Appendix 4B. (Continued)

Observer Number	Observer Initials	Observer Name
346	JEL	J.E. LOVE
347	MXM	M.J. MCGREGOR
348	(initials not assigned)	R.L. SCHRECKENGOST
349	MKF	M.K. FIEGER
350	MWB	M.W. BERBACH
351	WDB	W.D. BOYCE
352	KAB	K.A. BROWNELL
353	RCF	R.C. FERRERO
354	SMF	S.M. FITZGERALD
355	(initials not assigned)	W.J. FLOERING
356	JHG	J.H. GENOVESE
357	AFG	A.F. GONZALEZ
358	MDH	M.D. HARRIS
359	JWH	J.W. HARTRIM
360	CXK	C.A. KOKES
361	PEL	P.E. LA CIVITA
362	GLL	G.L. LICHTY
363	HPM	H.P. MADIGAN
364	KLM	K.L. MARTEN
365	RAM	R.A. MUELLER
366	JMO	J.M. OAKDEN
367	WMO	W.M. OSBORN
368	DDR	D.D. RADLOFF
369	MES	M.E. SIXTUS
370	(initials not assigned)	S.L. SHAY
371	RSH	R.S. HOLT
372	(initials not assigned)	R.P. CARLSON
373	DMC	D.M. COX
374	(initials not assigned)	D.A. DENNENO
375	SLG	S.L. GENSEAL
376	RJM	R.J. MAZZONE
377	BDP	B.D. PRESTON
378	LLR	L.L. ROBERTSON
379	AAH	A.A. HOHN
380	AGA	A.G. ABEND
381	AAA	A.A. ANGANUZZI
382	SRB	S.R. BENSON
383	STB	S.T. BROWN
384	MGB	M.G. BUDKA
385	JGC	J.G. CORDARO
386	CCC	C.C. CROFT
387	SFC	S.F. CROSS
388	CNF	C.N. FROST
389	GRH	G.R. HOUGHABOOM
390	(initials not assigned)	D.F. HOWARD
391	MRJ	M.R. JOHNSON
392	(initials not assigned)	S.H. KRAMER
393	ROM	R. MORAGA
394	SAW	S.A. WILSON
395	HJB	H.J. BERNARD

Appendix 4B. (Continued)

Observer Number	Observer Initials	Observer Name
396	DLD	D.L. DRISCOLL
397	DHK	D.H. KINZEY
398	ADO	A.D. OLSON
399	DMM	D.M. MAGNESON
400	(initials not assigned)	T.J. FINGER
401	MST	M.S. TRIANNI
402	JJB	J.J. BONTURI JR
403	(initials not assigned)	M.A. ARDAGNA
404	MDM	M.D. MEYER
405	(initials not assigned)	L.T. KOWALSKI
406	(initials not assigned)	S.P. VIRK
407	SUM	S.U. MURPHY
408	RJH	R.J. HOLM
409	(initials not assigned)	R.J. LAWRENCE
410	BWT	B.W. THOMPSON
411	JPB	J.P. BARLOW
412	MKA	M.K. ALBERS
413	LBA	L.B. ALBRIGHT
414	SMB	S.M. BRAINERD
415	(initials not assigned)	M.K. CHUMBLEY
416	MSC	M.S. CLINE
417	BCC	B.C. COPELAND
418	(initials not assigned)	S.K. DEBLOIS
419	JBE	J.B. EBERL
420	ETF	E.T. FISHER
421	RDF	R.D. FREDRICKSON
422	(initials not assigned)	R.K. GISH
423	BAH	B.A. HERCZEG
424	RXH	R.S. HICKS
425	(initials not assigned)	E.A. JOZWIAK
426	MAK	M.A. KOEPEL
427	ZSM	Z.S. MATICA
428	TKM	T.K. MENDENHALL
429	JGN	J.G. NELSON
430	(initials not assigned)	W.F. NORLING
431	GAO	G.A. OWEN
432	PMS	P.M. SAWYER
433	SMT	S.M. TAVERAS
434	JRT	J.R. THOMASON
435	WRT	W.R. TOWNSEND
436	WGJ	W.G. JACOBSON
437	DXD	D.A. DUNN
438	(initials not assigned)	S.G. SPECKMAN
439	KDM	K.D. MCBRIDE
440	DOT	D.J. THEISEN
441	EAK	E.A. KUDERA
442	DTC	D.T. COSTA
443	GRP	G.R. PACKARD
444	(initials not assigned)	K.M. PETER
445	GRE	G.R. EMORY

Appendix 4B. (Continued)

Observer Number	Observer Initials	Observer Name
446	KVL	K.V. LARSON
447	MTX	M.T. BARTON
448	MGT	M.G. THABAULT
449	(initials not assigned)	T.E. MYERS
450	TXB	T.E. BROADMAN
451	GXD	G.S. DOWLER
452	(initials not assigned)	S.E. ADKINS
453	JFC	J.F. CHILDERS
454	JXD	J.D. DRUMM
455	(initials not assigned)	G.M. GALOVICH
456	DJG	D.J. GRETZ
457	WBH	W.B. HARPER
458	GMH	G.M. HINTZ
459	TAJ	T.A. JEFFERSON
460	SRJ	S.R. JOHNDREW
461	JVK	J.V. KASHIWADA
462	CRK	C.R. KLINE
463	DNL	D.N. LOGAN
464	DFM	D.F. MASON
465	JAS	J.A. SALAZAR
466	DWS	D.W. SCOTT
467	BDS	B.D. SMITH
468	BOT	B.G. TROTTER
469	MCV	M.C. VAN NOSTRAND
470	WAA	W.A. ARMSTRONG
471	GLD	G.L. DEAN
472	ASH	A.S. HAMILTON
473	DJH	D.J. HOOD
474	(initials not assigned)	G.A. KEITH
475	RTL	R.T. LIGHT
476	GAM	G.A. MILLER
477	CTP	C.T. PRATT
478	TDP	T.D. PRICE
479	GMR	G.M. RENSINK
480	PMT	P.M. TRETTEVIK
481	JRA	J.R. AUSTIN
482	TVB	T.V. BAYER
483	DXB	D.A. BURCH
484	CSC	C.S. CALLESON
485	MGC	M.G. COLE
486	TDF	T.D. FARLEY
487	JPG	J.P. GAKLE
488	DCM	D.C. MCNEILL
489	LAM	L.A. MCVICKER
490	BVB	B.D. VAN BUSKIRK
491	MDV	M.D. VANDENBERG
492	NWV	N.W. VOGEL
493	GRW	G.R. WRIGHT
494	AEC	A.E. CARRASCO
495	GRG	G.R. GOMEZ

Appendix 4B. (Continued)

Observer Number	Observer Initials	Observer Name
496	KZP	K.M. PELTIER
497	DXC	D. CAMPBELL
498	SEC	S.E. CHANDLER
499	MEF	M.E. FREITAS
500	PNH	P.N. HOWARD
501	EFJ	E.F. JOLLIFFE
502	MWO	M.W. ORR
503	RSR	R.S. RAEDER
504	RXS	R. STIVERS
505	MJB	M.J. BOCK
506	RMC	R.M. CARPENTER
507	VLD	V.L. DOLLARHIDE
508	DWD	D.W. DUGAS
509	RLJ	R.L. JONES
510	MLM	M.L. MCLEAN
511	DNM	D.N. MOSTAD
512	ECS	E.C. SANDBERG
513	BAS	B.A. SAUVE
514	JCG	J.C. GARRICK
515	KMK	K.M. KAPPENMAN
516	CJL	C.J. LARSON
517	DAM	D.A. MARTIN
518	RAR	R.A. ROWLETT
519	KAT	K.A. TILLOTSON
520	JMW	J.M. WILLIAMS
521	SEB	S.E. BURKS
522	WLE	W.L. EMERSON
523	LAH	L.A. HALKO
524	JCL	J.C. LACELLE
525	LJS	L.J. SANDKER
526	CEC	C.E. CLAUGHTON
527	IBH	I.B. HENNIG
528	JJH	J.J. HERNANDEZ
529	RMM	R.M. MELLON
530	FHM	F.H. MINSHALL
531	DAP	D.A. PETERSEN
532	DXP	D.H. PRATT
533	CXS	C. SETTEVENDEMIE
534	DDW	D.D. WOODARD
535	PSD	P.S. DOLPHIN
536	DFB	D.F. BROWNE
537	LGB	L.G. BURKLUND
538	NDM	N.D. MONROE
539	TJS	T.J. SIKMA
540	PBB	P.B. B (UNKNOWN)
541	RLB	R.L. BROWNELL
542	CV	M.V. CAROL VIRGINIA (WFP)
543	GDF	G.D. F (UNKNOWN)
544	EDM	E.D. MITCHELL
545	NUC	U.S. NAVEL UNDERSEA CENTER

Appendix 4B. (Continued)

Observer Number	Observer Initials	Observer Name
546	USN	U.S. NAVY
547	NIS	NISHIWAKI
548	MLP	M.L. P (UNKNOWN)
549	PQ	M.V. PACIFIC QUEEN (WFP)
550	WPF	W.F. PERRIN (WFP)
551	WPS	W.F. PERRIN (WFP)
552	MT	M. TREINEN (GMT)
553	MCZ	M.C. Z (UNKNOWN)
554	025	(UNKNOWN)
555	L27	(UNKNOWN)
556	MV6	(UNKNOWN)
557	MAH	M.A. HENK
558	DWJ	D.W. JAMES
559	SJM	S.J. MATLOCK
560	WXC	W.R. CHANEY
561	RXJ	R.R. JONES
562	EKL	E.K. LAWSON
563	RPM	R.M. MEYERS
564	JXS	J.M. SKINNER
565	CMS	C.M. STEIGERWALD
566	TGS	T.G. SWANSON
567	KTB	K.T. BENTLER
568	BAB	B.A. BLEASE
569	JHC	J.H. CARTER
570	WMF	W.M. FARMER
571	RMI	R.M. ISING
572	MJP	M.J. PARKER
573	SGR	S.G. REECE
574	CMW	C.M. WEIR
575	SCB	S.C. BRISCOE
576	ASC	A.S. COLE
577	MSK	M.S. KASIC
578	JGK	J.G. KISTLER
579	NRM	N.R. MATARANGAS
580	AMN	A.M. NAROTSKI
581	SXB	S.E. BLAIR
582	JMD	J.M. DULANEY
583	TXJ	T. JOHNSTON
584	LSO	L.S. OSBORN
585	PAM	P.A. MATARANGAS
586	MOS	M. SETTEVENDEMIE
587	MJT	M.J. TONNER
588	MMW	M.M. WALKER
589	GCB	G.C. BAADE
590	JFB	J.F. BIERMAN
591	JDC	J.D. COSTELLO
592	ASP	A.S. PRINGLE
593	SHS	S.H. STRONG
594	MXT	M.S. TORK
595	JDZ	J.D. ZINN

Appendix 4B. (Continued)

Observer Number	Observer Initials	Observer Name
596	LAB	L.A. BUTLER
597	RDH	R.D. HARPER
598	AMR	A.M. RAJAB
599	LAS	L.A. STAINS
600	WTN	W.T. NORMAN
601	DJS	D.J. SMITH
602	KMP	K.M. PHILLIPS
603	SLB	S.L. BLACK
604	GMC	G.M. CHERNACK
605	BJD	B.J. DATZMAN
606	LMH	L.M. HANSEN
607	PAH	P.A. HAYDUK
608	SLH	S.L. HUNT
609	MGK	M.G. KEELER
610	SXM	S.J. MODUGNO
611	DFP	D.F. PORTMAN
612	DHW	D.H. WILSON
613	PAZ	P.A. ZIELINSKI

Appendix 4C. "Code Table 3" lists U.S. tuna purse seiners active in the ETP fleet from 1966-1995, as well as charter and research vessels used by the NMFS Tuna-Porpoise Observer Program.

Vessel Code	Vessel Name	Class	Capacity	Year Built	Flag	Activity	Status Date	Historical Information				
								Vessel Name	Class	Capacity	Flag	Activity
0029	CONTE BIANCO	1	0380	51	US	SUNK	07/83	CONTE BIANCO	1	0380	US	ACTIVE
0067	VIRGINIA KATHERINE	2	0930	44	US	INACTIVE	10/85	NAUTILUS	2	0930	US	ACTIVE
0092	SEA PREME	1	0377	51	US	SUNK	04/75					
0134	WESTPORT	1	0385	56	FOREIGN	ACTIVE	02/85	WESTPORT	1	0385	US	ACTIVE
0136	LOA 9	1	0400	55	FOREIGN	ACTIVE	02/85 06/78	CONCHO CONCHO	1 1	0400 0500	US US	ACTIVE ACTIVE
0141	SANTA ELENA	1	0400	57	US	SUNK	06/82 10/77 06/76	SANTA ELENA SANTA ELENA SAN JUAN (WG)	1 2 2	0400 0500 0500	US US US	ACTIVE ACTIVE ACTIVE
0145	CAROL S	2	0500	58	FOREIGN	ACTIVE	02/85 03/72	CAROL S CAROL VIRGINIA	2 2	0500 0500	US US	ACTIVE ACTIVE
0146	MARY JO	1	0385	59	FOREIGN	ACTIVE	05/84 01/76	MARY JO ELSIE A	1 1	0385 0385	US US	ACTIVE ACTIVE
0148	MARY LUCILLE	2	0500	58	US	SUNK	08/77 01/76	MARY LUCILLE LOIS SEAVER	2 2	0500 0500	US US	ACTIVE ACTIVE
0150	MARLA MARIE	1	0400	59	FOREIGN	ACTIVE	05/84 09/79 01/76	MARLA MARIE MARLA MARIE LARRY ROE	1 2 2	0400 0500 0500	US US US	ACTIVE ACTIVE ACTIVE
0161	EASTERN PACIFIC	3	0540	65	FOREIGN	ACTIVE	03/80	EASTERN PACIFIC	3	0540	US	ACTIVE
0174	GEMINIS	3	0540	67	FOREIGN	ACTIVE	06/81 03/79	CAPT ANTON MIESETICH J M MARTINAC	3 3	0540 0540	US US	ACTIVE ACTIVE
0186	MATHAWMAL	3	0650	68	FOREIGN	ACTIVE	01/91 09/90	MARIETTA MARIETTA	3 3	0650 0650	FOREIGN US	INACTIVE ACTIVE
0187	GUANIPA	3	0780	69	FOREIGN	SUNK	01/87 09/86 /84	GUANIPA GUANIPA KERRI M	3 3 3	0780 0780 0780	FOREIGN US US	ACTIVE ACTIVE ACTIVE

Appendix 4C. (Continued)

Vessel Code	Vessel Name	Class	Capacity	Year Built	Flag	Activity	Status Date	Historical Information				
								Vessel Name	Class	Capacity	Flag	Activity
0198	QUEEN MARY	3	0540	69	FOREIGN	INACTIVE	01/88 10/85	QUEEN MARY QUEEN MARY	3 3	0540 0540	US US	INACTIVE ACTIVE
0212	GAPILMOGOL	3	0650	68	FOREIGN	ACTIVE	01/91 09/90	MARY ANTOINETTE MARY ANTOINETTE	3 3	0650 0650	FOREIGN US	INACTIVE ACTIVE
0216	PISCES	3	0650	70	FOREIGN	ACTIVE	02/92 01/78	PISCES JOHN F. KENNEDY	3 3	0650 0650	US US	ACTIVE ACTIVE
0300	INDEPENDENCE	2	0500	55	FOREIGN	ACTIVE	05/84	INDEPENDENCE	2	0500	US	ACTIVE
0301	MATHAWWOLWOL	3	0780	70	FOREIGN	ACTIVE	01/91 09/90	SEA QUEST SEA QUEST	3 3	0780 0780	FOREIGN US	INACTIVE ACTIVE
0302	BOLD CONTENDER	3	1000	71	FOREIGN	ACTIVE	06/87	BOLD CONTENDER	3	1000	US	ACTIVE
0303	MADELYN G	3	0780	70	US	SUNK	01/84 12/80 11/77	MADELYN G BORUCA JACQUELINE A	3 3 3	0780 0780 0780	US FOREIGN US	ACTIVE ACTIVE ACTIVE
0304	MANZANARES	3	1100	71	FOREIGN	INACTIVE	07/87 11/85 /84 06/80	MANZANARES MANZANARES SEA WOLF FRANCES ANN	3 3 3 3	1100 1100 1100 1100	US US US US	INACTIVE ACTIVE ACTIVE ACTIVE
0305	SEA ROYAL	3	1400	72	FOREIGN	ACTIVE	03/80	SEA ROYAL	3	1400	US	ACTIVE
0306	KALI	3	1400	71	US	ACTIVE	01/76	JACQUELINE MARIE	3	1400	US	ACTIVE
0307	CLAUDIA B	3	0850	71	FOREIGN	INACTIVE	05/92 10/91 01/78	CLAUDIA B CLAUDIA B TRINIDAD	3 3 3	0850 0850 0850	US US US	INACTIVE ACTIVE ACTIVE
0308	MERMAID	2	0600	44	US	SUNK	08/82	MERMAID	2	0600	US	ACTIVE
0309	BETTIE M	3	1000	72	US	SUNK	03/76					
0310	VERONIKA	3	0780	70	FOREIGN	ACTIVE	12/88	ANTONINA C	3	0780	US	ACTIVE



Appendix 4C. (Continued)

Vessel Code	Vessel Name	Class	Capacity	Year Built	Flag	Activity	Status Date	Historical Information				
								Vessel Name	Class	Capacity	Flag	Activity
0311	CONNIE JEAN	3	0540	66	US	ACTIVE	12/87 07/85	CONNIE JEAN CONNIE JEAN	3 3	0540 0540	US US	INACTIVE ACTIVE
0312	YELISAVA	3	0650	69	FOREIGN	ACTIVE	10/90 04/87 02/85	SEA HUNTER SANTA ANITA ANNE M	3 3 3	0650 0650 0650	US US US	ACTIVE INACTIVE ACTIVE
0313	DAY ISLAND	2	1100	43	US	SUNK	12/77					
0314	DANICA	3	1400	71	US	ACTIVE	01/76	DENISE MARIE	3	1400	US	ACTIVE
0315	PRISCILLA M	3	1400	71	US	SUNK	07/87 06/77 11/75	PRISCILLA M DIANA YSABELL A K STROM	3 3 3	1400 1400 1400	US US US	ACTIVE ACTIVE ACTIVE
0316	BERNADETTE	1	0300	46	US	SUNK	02/82	BERNADETTE	1	0300	US	ACTIVE
0317	MARY LYNN	3	0930	67	US	INACTIVE	05/86 06/82 01/81 03/78	MARY LYNN MARY LYNN TALAMANCA BLUE PACIFIC	3 3 3 3	0930 0930 0930 0930	US FOREIGN FOREIGN US	ACTIVE ACTIVE ACTIVE ACTIVE
0318	BOLD VENTURE	3	1038	68	FOREIGN	ACTIVE	04/82	BOLD VENTURE	3	1038	US	ACTIVE
0320	SEA LEGEND	3	0780	64	US	INACTIVE	02/85 05/70	CITY OF SAN DIEGO CITY OF TACOMA	3 3	0780 0780	US US	ACTIVE ACTIVE
0322	ELIZA M	3	1400	71	US	ACTIVE	01/76	EILEEN M	3	1400	US	ACTIVE
0323	ENTERPRISE	3	1000	71	FOREIGN	ACTIVE	04/87	ENTERPRISE	3	1000	US	ACTIVE
0324	WORLD KIM	3	1100	72	FOREIGN	ACTIVE	12/83 10/76	FINISTERRE	3	1100	FOREIGN	ACTIVE
0325	ISLAND PRINCESS	3	1400	71	US	INACTIVE	10/85 01/79	ISLAND PRINCESS GEMINI	3 3	1400 1400	US US	ACTIVE ACTIVE
0326	BRACERO DEL MAR 1	3	0540	69	FOREIGN	ACTIVE	05/82 04/82	GINA KAREN GINA KAREN	3 3	0540 0540	FOREIGN US	ACTIVE ACTIVE
0327	SANTINA C	3	0540	69	US	INACTIVE	01/86 03/79	SANTINA C KATHLEEN	3 3	0540 0540	US US	ACTIVE ACTIVE

Appendix 4C. (Continued)

Vessel Code	Vessel Name	Class	Capacity	Year Built	Flag	Activity	Status Date	Historical Information				
								Vessel Name	Class	Capacity	Flag	Activity
0328	FREEDOM	3	1100	71	FOREIGN	INACTIVE	06/85 05/84 10/78	FREEDOM ROSEANN MARIE MARY ELIZABETH	3 3 3	1100 1100 1100	US US US	ACTIVE ACTIVE ACTIVE
0329	NEPTUNE	2	0900	42	US	SUNK	11/75					
0330	CARIRUBANA	3	1100	73	FOREIGN	ACTIVE	09/84 07/84 11/79	CONSTELLATION CONSTELLATION PATRICIA LEE	3 3 3	1100 1100 1100	FOREIGN US US	ACTIVE ACTIVE ACTIVE
0331	GINA MARIE	3	0650	70	US	SUNK	06/82 06/79	GINA MARIE POLARIS	3 3	0650 0650	US US	ACTIVE ACTIVE
0332	PROUD HERITAGE	3	1100	73	US	ACTIVE						
0333	QUO VADIS	3	1000	70	FOREIGN	ACTIVE	03/74					
0335	ALASKA II	3	1100	71	US	INACTIVE	10/84 11/81 07/80	ROSA OLIVIA ROSA OLIVIA ROSA OLIVIA	3 3 3	1100 1100 1100	US FOREIGN US	ACTIVE ACTIVE ACTIVE
0337	SANTA ROSA	2	0500	45	US	INACTIVE	07/85	SANTA ROSA	2	0500	US	ACTIVE
0338	SARATOGA	3	1000	72	US	SUNK	01/86	SARATOGA	3	1000	US	ACTIVE
0339	VENTUROUS	3	1100	71	US	SUNK	05/91	VENTUROUS	3	1100	US	ACTIVE
0340	VOYAGER	3	1625	72	US	ACTIVE						
0341	JOSE GERARDO	3	0570	68	FOREIGN	ACTIVE	05/82 04/82	WILLA G WILLA G VIVIAN ANN	3 3 3	0570 0570 0570	FOREIGN US US	ACTIVE ACTIVE ACTIVE
0342	MARGARET L	3	2175	72	US	SUNK	03/78					
0343	AMERICAN QUEEN	3	1000	72	US	SUNK	05/86	AMERICAN QUEEN	3	1000	US	ACTIVE
0344	NICOLE K	3	1100	69	US	ACTIVE	10/83 12/80 03/80  11/77	NICOLE K CAYMAN CAVALIER CARRIARI ANNA MARIA	3 3 3 3 3	1100 1100 1100 1100 1100	FOREIGN FOREIGN FOREIGN FOREIGN US	ACTIVE ACTIVE ACTIVE ACTIVE ACTIVE
0345	ANTHONY M	1	0260	51	US	SUNK	12/85 01/72	ANTHONY M DETERMINED	1 1	0260 0260	US US	ACTIVE ACTIVE

Appendix 4C. (Continued)

Vessel Code	Vessel Name	Class	Capacity	Year Built	Flag	Activity	Status Date	Historical Information				
								Vessel Name	Class	Capacity	Flag	Activity
0346	ADRIATIC SEA	3	2000	70	US	ACTIVE	04/88 01/82 12/79	ADRIATIC SEA ADRIATIC SEA APOLLO	3 3 3	2000 2000 2000	FOREIGN US US	ACTIVE ACTIVE ACTIVE
0347	AQUARIUS	3	0850	71	FOREIGN	ACTIVE	06/90	AQUARIUS	3	0850	US	ACTIVE
0348	ARIES	1	0185	71	US	INACTIVE	08/71					
0349	NEW ERA	2	0900	40	US	ACTIVE	08/87 /81 01/78	EL CID EL CID SEA FOX BALBOA	2 2 2 2	0900 0900 0900 0900	US US US US	INACTIVE ACTIVE ACTIVE ACTIVE
0350	BLUE MERIDIAN	2	0480	44	US	SUNK	10/76	REEFER QUEEN	2	0480	US	ACTIVE
0351	CABRILLO	3	0650	68	FOREIGN	ACTIVE	02/87 04/85	CABRILLO CABRILLO	3 3	0650 0650	US US	INACTIVE ACTIVE
0352	CALYPSO	3	1100	72	FOREIGN	ACTIVE	04/84 11/81 10/80	CALYPSO CALYPSO CALYPSO	3 3 3	1100 1100 1100	US FOREIGN US	ACTIVE ACTIVE ACTIVE
0353	CAPE BEVERLY	1	0275	50	US	SUNK	11/74					
0354	CAPE COD	2	0900	44	FOREIGN	ACTIVE	10/78					
0355	CAPE SAN VINCENT	3	0650	69	US	ACTIVE						
0356	GOLD COAST	3	1100	73	FOREIGN	ACTIVE	10/78	GOLD COAST CAPTAIN JOE MEDINA	3 3	1100 1100	US US	ACTIVE ACTIVE
0357	CARIBE	3	1100	73	FOREIGN	SUNK	03/88 09/83 11/81 03/78	CARIBE CARIBE CARIBE CARIBE CAPTAIN STEVEN SCOTT	3 3 3 3 3	1100 1100 1100 1100 1100	FOREIGN US FOREIGN US US	ACTIVE ACTIVE ACTIVE ACTIVE ACTIVE
0358	WOO JIN 9	3	1100	70	FOREIGN	ACTIVE	09/82 08/82 01/82	POLARIS II POLARIS II CAPTAIN VINCENT GANN	3 3 3	1100 1100 1100	FOREIGN US US	ACTIVE ACTIVE ACTIVE
0359	CARIBBEAN	3	0780	63	FOREIGN	ACTIVE	10/77					

Appendix 4C. (Continued)

Vessel Code	Vessel Name	Class	Capacity	Year Built	Flag	Activity	Status Date	Historical Information				
								Vessel Name	Class	Capacity	Flag	Activity
0360	INTREPIDO	3	1100	72	FOREIGN	ACTIVE	10/84 11/81 10/80 08/80 11/77	INTREPIDO INTREPIDO FLOTA AUDAZ BOLD FLEET CAROL VIRGINIA	3 3 3 3 3	1100 1100 1100 1100 1100	US FOREIGN FOREIGN FOREIGN US	ACTIVE ACTIVE ACTIVE ACTIVE ACTIVE
0361	CHERYL MARIE	3	0780	69	FOREIGN	ACTIVE	02/92 01/91	CHERYL MARIE CHERYL MARIE	3 3	0780 0780	US US	INACTIVE ACTIVE
0362	WOO JIN 7	3	1100	71	FOREIGN	ACTIVE	07/82 07/82 10/78	MARY LUCILLE MARY LUCILLE CITY OF LISBON	3 3 3	1100 1100 1100	FOREIGN US US	ACTIVE ACTIVE ACTIVE
0363	CITY OF LOS ANGELES	1	0140	45	US	ACTIVE						
0364	MARIA AMALIA	3	0930	68	FOREIGN	ACTIVE	07/76	MARIA AMALIA CITY OF PANAMA	3 3	0930 0930	US US	ACTIVE ACTIVE
0365	CLIPPERTON	2	0480	45	US	INACTIVE	09/73					
0366	COMMODORE	1	0230	42	US	SUNK	06/82	COMMODORE	1	0230	US	ACTIVE
0367	AMAZONAS	3	1200	73	FOREIGN	ACTIVE	12/86 /84	AMAZONAS CONQUEST	3 3	1200 1200	US US	INACTIVE ACTIVE
0368	DIANA LYNN	3	1400	71	US	ACTIVE	05/92 03/90	CONQUISTADOR CONQUISTADOR	3 3	1400 1400	US US	INACTIVE ACTIVE
0369	CONSTITUTION	1	0370	52	US	INACTIVE	03/76					
0371	JUBIDANA	3	1100	74	FOREIGN	ACTIVE	09/84 08/81 01/78	NAZARE' MARY CHARGER DOMINATOR	3 3 3	1100 1100 1100	US US US	ACTIVE ACTIVE ACTIVE
0372	PAMELA ANN	3	1000	71	US	ACTIVE	11/87	MARIA C.J. ELIZABETH C.J.	3 3	1000 1000	US US	ACTIVE ACTIVE
0373	ELSINORE	1	0298	56	US	SUNK	11/83	ELSINORE	1	0298	US	ACTIVE
0374	FREEDOM	1	0351		US	SUNK	06/74					
0375	GOLDEN PACIFIC	2	0450	49	FOREIGN	ACTIVE	10/73					
0376	HISTORIC	1	0220	51	US	SUNK	01/79					
0377	HORNET	3	0780	62	FOREIGN	ACTIVE	10/77					

Appendix 4C. (Continued)

Vessel Code	Vessel Name	Class	Capacity	Year Built	Flag	Activity	Status Date	Historical Information				
								Vessel Name	Class	Capacity	Flag	Activity
0378	WOO JIN 1	3	0930	67	FOREIGN	ACTIVE	06/80 06/80	JEANETTE C JEANETTE C	3 3	0930 0930	FOREIGN US	ACTIVE ACTIVE
0379	JEANNE LOU	3	1200	75	FOREIGN	ACTIVE	12/88	JEANNE LOU	3	1200	US	ACTIVE
0380	JO LINDA	1	0300	46		INACTIVE	??/79	JO LINDA	1	0300	US	ACTIVE
0381	JO ANN	1	0270	40	US	INACTIVE	07/88	JO ANN ALPHECCA	1 1	0270 0270	US US	ACTIVE ACTIVE
0382	EL REY	3	1200	73	FOREIGN	ACTIVE	12/83	EL REY KING OSCAR	3 3	1200 1200	US US	ACTIVE ACTIVE
0383	PIONEER	1	0157	44	US	INACTIVE	11/89 01/86	PIONEER PIONEER LIBERATOR	1 1 1	0157 0157 0157	US US US	ACTIVE ACTIVE ACTIVE
0384	LIBERTY BELL	1	0195	44	US	SUNK	06/78					
0385	TRINIDAD	3	0540	69	FOREIGN	INACTIVE	01/88 02/86 07/85	TRINIDAD TRINIDAD CHRISTINA C LOU JEAN II	3 3 3 3	0540 0540 0540 0540	US US US US	INACTIVE ACTIVE ACTIVE ACTIVE
0386	LUCKY STRIKE	3	1200	73	FOREIGN	ACTIVE	09/86	LUCKY STRIKE	3	1200	US	ACTIVE
0387	YIH CHYUN 608	3	0850	71	FOREIGN	ACTIVE	09/83 01/79	SCORPIO I MARCO POLO	3 3	0850 0850	US US	ACTIVE ACTIVE
0388	ALASKA I	3	1100	72	US	INACTIVE	08/84 11/81 12/80 08/77	FENICIO FENICIO BOLD PHOENICIAN BOLD PHOENICIAN MARIA ELENA	3 3 3 3 3	1100 1100 1100 1100 1100	US FOREIGN FOREIGN US US	ACTIVE ACTIVE ACTIVE ACTIVE ACTIVE
0389	LARRY Z	3	1100	74	US	ACTIVE	11/86	MARJORIE R	3	1100	US	ACTIVE
0390	LAURIE ANN	1	0400	57	US	ACTIVE	10/77	LAURIE ANN MARY BARBARA	1 1	0500 0500	US US	ACTIVE ACTIVE
0391	FLAMARCA VIII	3	1100	71	FOREIGN	ACTIVE	04/88 09/85	SOUTH SEAS (MS) MARY S	3 3	1100 1100	US US	ACTIVE ACTIVE

Appendix 4C. (Continued)

Vessel Code	Vessel Name	Class	Capacity	Year Built	Flag	Activity	Status Date	Historical Information				
								Vessel Name	Class	Capacity	Flag	Activity
0392	MAURITANIA	1	0350	46	US	ACTIVE	06/91 12/90	MAURITANIA MAURITANIA	1 1	0345 0345	US US	INACTIVE ACTIVE
0393	ROSALIE MARIE	2	0500	55		SUNK	12/82 02/78	ROSALIE MARIE MISSOURI	2 2	0500 0500	US US	ACTIVE ACTIVE
0394	NEW ERA	1	0281		US	SUNK	04/74					
0395	MICHELANGELO	3	1300	70	US	SUNK	01/79	MICHELANGELO OCEAN QUEEN	3 3	1300 1300	US US	ACTIVE ACTIVE
0396	PACIFIC KNIGHT	1	0187	47	US	SUNK	08/76					
0397	CIUDAD DEL CARMEN	3	0650	67	FOREIGN	SUNK	12/85  06/80	CIUDAD DEL CARMEN CIUDAD DEL CARMEN PACIFIC QUEEN	3 3 3	0650 0650 0650	FOREIGN US US	ACTIVE ACTIVE ACTIVE
0398	PAN PACIFIC	3	1100	72	FOREIGN	ACTIVE	10/86	PAN PACIFIC	3	1100	US	ACTIVE
0399	PARAMOUNT	1	0393	46	US	SUNK	05/82	PARAMOUNT	1	0393	US	ACTIVE
0400	RAFFAELLO	3	1000	72	US	ACTIVE						
0401	RENOWN	1	0240	47	US	SUNK	02/72					
0402	KOORALE	3	1100	73	US	ACTIVE	11/88 08/85	ROYAL PACIFIC ROYAL PACIFIC	3 3	1100 1100	US US	INACTIVE ACTIVE
0403	RUTHIE B	1	0220	47	US	SUNK	09/74					
0404	SAN JUAN	2	1000	43	FOREIGN	ACTIVE	/79	SAN JUAN	2	1000	US	ACTIVE
0405	SANDRA C	3	1200	73	FOREIGN	ACTIVE	04/86	SANDRA C	3	1200	US	ACTIVE
0406	SEA SCOUT	1	0159		US	INACTIVE	10/88	SEA SCOUT	1	0159	US	ACTIVE
0407	BOLD ADVENTURER	3	1000	73	FOREIGN	ACTIVE	06/87 10/83	BOLD ADVENTURER SEA TREASURE	3 3	1000 1000	US US	ACTIVE ACTIVE

Appendix 4C. (Continued)

Vessel Code	Vessel Name	Class	Capacity	Year Built	Flag	Activity	Status Date	Historical Information				
								Vessel Name	Class	Capacity	Flag	Activity
0408	DON JUAN ZEE	3	1200	74	US	ACTIVE	04/88 03/80 11/77	DON JUAN ZEE DON JUAN DON JUAN SOUTH PACIFIC	3 3 3 3	1200 1200 1200 1200	FOREIGN FOREIGN US US	ACTIVE ACTIVE ACTIVE ACTIVE
0409	SOUTHERN EXPLORER	1	0188	44	US	INACTIVE	12/76					
0410	JEANETTE DIANA	3	1100	73	US	ACTIVE	01/79	SOUTHERN PACIFIC	3	1100	US	ACTIVE
0411	SANBROS 1	1	0189	47	FOREIGN	ACTIVE	03/84	SOUTHERN QUEEN	1	0189	US	ACTIVE
0412	STARCREST	1	0192	49	US	INACTIVE	12/80	STARCREST	1	0192	US	ACTIVE
0413	SUN KING	1	0252	47	FOREIGN	ACTIVE	02/74					
0414	OMAIRA	3	1100	73	FOREIGN	ACTIVE	12/86 04/85	TOP WAVE TOP WAVE	3 3	1100 1100	US US	INACTIVE ACTIVE
0415	OSPREY	3	1100	73	US	INACTIVE	11/84 08/79	OSPREY THERESA ANN	3 3	1100 1100	US US	ACTIVE ACTIVE
0416	LOA 11	1	0400	57	FOREIGN	ACTIVE	02/85 08/82 07/78	SEA BOY UNITED STATES UNITED STATES	1 1 1	0400 0400 0500	US US US	ACTIVE ACTIVE ACTIVE
0417	VAGABOND	1	0105	45	US	INACTIVE	12/76					
0418	VICTORIA	1	0384	46	US	INACTIVE	04/72					
0419	WESTERN FISHER	1	0153	42	US	SUNK	05/78					
0420	WESTERN KING	2	0650	44	US	SUNK	05/74					
0421	WEST POINT	1	0245	46	US	SUNK	10/75					
0422	WHITE STAR	2	1000	44		SUNK	02/84	WHITE STAR	2	1000	US	ACTIVE
0423	TUNA VENTURE	1	0220	46	FOREIGN	ACTIVE	02/74	TUNA VENTURE WILEY V A	1 1	0220 0220	US US	ACTIVE ACTIVE
0424	ALCOR	1	0155	63	US	SUNK	06/76					
0425	ATLANTIS	3	1600	73	FOREIGN	ACTIVE	07/85 04/82 01/73	ATLANTIS ATLANTIS	3 3	1600 1600	US FOREIGN	ACTIVE ACTIVE
0426	DIANA C	3	0780	68	US	SUNK	11/82	DIANA C PACIFIC TRADEWINDS	3 3	0780 0780	US US	ACTIVE ACTIVE

Appendix 4C. (Continued)

Vessel Code	Vessel Name	Class	Capacity	Year Built	Flag	Activity	Status Date	Historical Information					
								Vessel Name	Class	Capacity	Flag	Activity	
0427	MARY LOU	1	0198	47	FOREIGN	ACTIVE	08/73						
0428	SEA QUEEN	3	1100	72	FOREIGN	ACTIVE	12/80 05/73	MARINER	3	1100	FOREIGN	ACTIVE	
0429	RONNIE M	1	0176	41	US	SUNK	09/79	RONNIE M DEFENCE	1 1	0176 0176	US US	ACTIVE ACTIVE	
0430	CONNECTICUT YANKEE	3	1100	74	US	SUNK	12/80 11/79	CONNECTICUT YANKEE ELIZABETH ANNE	3 3	1100 1100	US US	ACTIVE ACTIVE	
0431	FALCON	3	1100	74	FOREIGN	ACTIVE	07/85 12/79	FALCON KATHERINE LISA	3 3	1100 1100	US US	ACTIVE ACTIVE	
0432	EVELYN DA ROSA	3	1150	74	US	ACTIVE							
0433	JEANNINE	3	1200	74	US	ACTIVE							
0434	YOLANDA Z	3	1200	74	US	ACTIVE	06/85	GINA ANNE	3	1200	US	ACTIVE	
0435	CAPT IZIDORO DUARTE	3	1200	74	FOREIGN	ACTIVE	04/82	THERESA JANENE	3	1200	US	ACTIVE	
0436	STACIE ANTONETTE	3	1200	75	FOREIGN	ACTIVE	02/87	STACIE ANTONETTE	3	1200	US	ACTIVE	
0437	WESTERN PACIFIC	3	1200	75	US	ACTIVE	09/80	MADRUGADOR	3	1200	US	ACTIVE	
0438	JEANNE LYNN	1	0335	47	US	SUNK	05/80	JEANNE LINN	1	0335	US	ACTIVE	
0439	BIG Z	3	1700	75	US	ACTIVE	06/86	ELIZABETH C J	3	1700	US	ACTIVE	
0440	SAJO COLOMBIA	3	1200	75	FOREIGN	ACTIVE	08/88 03/82 11/81 10/80	BOLD PRODUCER PRODUCTOR PRODUCTOR BOLD PRODUCER	3 3 3 3	1200 1200 1200 1200	US US FOREIGN US	ACTIVE ACTIVE ACTIVE ACTIVE	
0441	AMERICAN EAGLE	3	1200	75	FOREIGN	ACTIVE	09/85	AMERICAN EAGLE	3	1200	US	ACTIVE	
0442	GRENADIER	3	1200	75	FOREIGN	ACTIVE	09/85	GRENADIER	3	1200	US	ACTIVE	
0443	HORNET III	3	1200	75	US	ACTIVE							



Appendix 4C. (Continued)

Vessel Code	Vessel Name	Class	Capacity	Year Built	Flag	Activity	Status Date	Historical Information				
								Vessel Name	Class	Capacity	Flag	Activity
0444	BLUE SKY	3	1200	75	FOREIGN	ACTIVE	12/84 11/81 10/80	AVENTURERA AVENTURERA BOLD ADVENTURESS	3 3 3	1200 1200 1200	US FOREIGN US	ACTIVE ACTIVE ACTIVE
0445	SEA GEM	3	1200	75	US	ACTIVE						
0446	ROSA D	3	1700	76		SUNK	07/84 05/80	ROSA D ZAPATA PATHFINDER	3 3	1700 1700	US US	ACTIVE ACTIVE
0447	CAYUDE	3	1200	76	FOREIGN	ACTIVE	04/87 11/85	CINDY ANN CINDY ANN	3 3	1200 1200	US US	INACTIVE ACTIVE
0448	SEA HAWK	3	1200	76	FOREIGN	ACTIVE	09/86	SEA HAWK	3	1200	US	ACTIVE
0449	PACIFICO NORTE	3	1700	76	FOREIGN	ACTIVE	06/85 03/82 11/81 10/80 05/79	MARY PATRICIA DESCUBRIDOR DESCUBRIDOR GANN DISCOVERER ZAPATA DISCOVERER	3 3 3 3 3 3	1700 1700 1700 1700 1700 1700	US US FOREIGN US US	ACTIVE ACTIVE ACTIVE ACTIVE ACTIVE
0450	LIBERATOR	1	0200	75	US	SUNK	09/85	LIBERATOR	1	0200	US	ACTIVE
0451	LIM DISCOVERER	3	1200	77	FOREIGN	ACTIVE	11/88 08/86	GANN DISCOVERER CLAIRE P	3 3	1200 1200	US US	ACTIVE ACTIVE
0452	ENTERPRISE	3	1200	78	FOREIGN	ACTIVE	02/92 12/87 04/84	SAMOA STARR ARAUCA MONTANA	3 3 3	1200 1200 1200	US US US	ACTIVE ACTIVE ACTIVE
0453	SEA HAWK II	3	1200	78	FOREIGN	ACTIVE	12/88 08/86	MARINER CONSTITUTION	3 3	1200 1200	US US	ACTIVE ACTIVE
0454	UNCLE LOUIE	3	1200	78	US	ACTIVE						
0455	PACIFIC PRINCESS	3	1200	78	US	ACTIVE						
0456	ODETTE THERESE II	3	1200	78	US	ACTIVE	01/92 12/87 08/84	CARIBE STAR NEVERI FRONTIER	3 3 3	1200 1200 1200	US US US	ACTIVE ACTIVE ACTIVE

Appendix 4C. (Continued)

Vessel Code	Vessel Name	Class	Capacity	Year Built	Flag	Activity	Status Date	Historical Information						
								Vessel Name	Class	Capacity	Flag	Activity		
0457	CAPT M J SOUZA	3	1200	78	US	ACTIVE								
0458	SEA ENCOUNTER	3	1200	78	US	ACTIVE								
0459	TIFIAMOANA	3	1400	79	US	ACTIVE	11/88 12/84	TIFIAMOANA TIFIAMOANA	3 3	1400 1400	US US	INACTIVE ACTIVE		
0460	LAURA Z	3	1500	79	US	ACTIVE	11/89	LAURA ANN	3	1500	US	ACTIVE		
0461	ODETTE THERESE	3	1200	80	US	SUNK	12/90	ODETTE THERESE	3	1200	US	ACTIVE		
0462	TRADITION	3	1200	80	US	ACTIVE								
0463	CAPTAIN FRANK MEDINA	3	1200	80	US	ACTIVE	11/86  08/84	CARONI CAPTAIN FRANK MEDINA	3 3	1200 1200	US US	ACTIVE ACTIVE		
0464	NO.1 CHANCE	3	1200	80	FOREIGN	ACTIVE	09/90 09/90	BRENDA JOLENE BRENDA JOLENE	3 3	1200 1200	FOREIGN US	INACTIVE ACTIVE		
0465	CAROL LINDA	3	1200	80	US	ACTIVE								
0466	SAJO FAMILIA	3	1200	80	FOREIGN	ACTIVE	11/88 02/84	BOLD ADVENTURESS CONQUEROR	3 3	1200 1200	US US	ACTIVE ACTIVE		
0467	WESTERN KIM	3	1200	81	FOREIGN	ACTIVE	09/89	SOUTH SEAS	3	1200	US	ACTIVE		
0468	ANDREA C	3	1200	81	US	ACTIVE								
0469	SOLEIL Z	3	1200	81	US	ACTIVE	04/89 11/87	PATRICIAN PATRICIAN	3 3	1200 1200	FOREIGN US	ACTIVE ACTIVE		
0470	SEA HAWK III	3	1200	78	FOREIGN	ACTIVE	12/88 07/86 01/83 11/81 08/80 /78	SOUTH WIND LOUISE V VIENTO DEL SUR VIENTO DEL SUR SOUTHWIND	3 3 3 3 3	1200 1200 1200 1200 1200	US US US FOREIGN FOREIGN	ACTIVE ACTIVE ACTIVE ACTIVE ACTIVE		
0471	CAPTAIN A R VIRRISSIMO	3	1200	78	FOREIGN	ACTIVE	10/86  01/83  11/81 10/80 /78	CAPTAIN A R VIRRISSIMO MAR DEL SUR MAR DEL SUR SOUTHSEAS	3 3 3 3	1200 1200 1200 1200	US US FOREIGN FOREIGN	ACTIVE ACTIVE ACTIVE ACTIVE		

Appendix 4C. (Continued)

Vessel Code	Vessel Name	Class	Capacity	Year Built	Flag	Activity	Status Date	Historical Information				
								Vessel Name	Class	Capacity	Flag	Activity
0472	SAJO ACCORDIA	3	1200	81	FOREIGN	ACTIVE	09/89 12/81	CAPTAIN VINCENT GANN	3	1200	US	ACTIVE
0473	SAJO OLYMPIA	3	1200	81	FOREIGN	ACTIVE	03/88 01/82	OCEAN PEARL	3	1200	US	ACTIVE
0474	OLYMPIA	3	1200	82	FOREIGN	ACTIVE	11/88 08/85 01/82	OLYMPIA PAMELA ANN	3 3	1200 1200	US US	ACTIVE ACTIVE
0475	LEGACY	3	1200	82	US	ACTIVE	03/82					
0476	OASIS KIM	3	1200	82	FOREIGN	ACTIVE	05/90 04/82	DEOLINDA	3	1200	US	ACTIVE
0477	BOLD FLEET	3	1200	74	US	ACTIVE	08/83 06/82 /74	OLIVIA OLIVIA	3 3	1200 1200	US FOREIGN	ACTIVE ACTIVE
0478	CAROLYN M	3	1200	82	US	ACTIVE	05/87 07/84 10/82	APURE CAROLYN M	3 3	1200 1200	US US	ACTIVE ACTIVE
0479	LONE WOLF	3	1200	82	US	ACTIVE	11/82					
0480	OLYMPUS KIM	3	1200	82	FOREIGN	ACTIVE	05/90	ELSPETH	3	1200	US	ACTIVE
0481	ORIENTAL KIM	3	1200	82	FOREIGN	ACTIVE	05/90	LADY MARION	3	1200	US	ACTIVE
0483	JUDITH CAROL	3	1200	83	FOREIGN	ACTIVE	04/87 06/83	JUDITH CAROL	3	1200	US	ACTIVE
0484	AZTECA 3	3	1200	82	FOREIGN	ACTIVE	04/87	COINSEC0 ALPHA	3	1200	US	INACTIVE
0485	MILAGROS Z	3	1500		US	ACTIVE	09/87					
0486	SOUTH SEAS	3	1200	87	US	ACTIVE	10/91 11/87	CARIBE	3	1200	US	ACTIVE
0487	J M MARTINAC	3	1200		US	ACTIVE	11/86					
0488	ATLANTIS	3	1200	88	US	ACTIVE	11/88					
0489	DONNA B	1	0150	75	US	ACTIVE	06/82					
0490	CAPTAIN VINCENT GANN	3	1500	90	US	ACTIVE	02/90					
0491	BOLD ADVENTURESS	3	1500	90	US	ACTIVE	09/90					
0492	DEOLINDA	3	1200		FOREIGN	ACTIVE	05/90 /88	DEOLINDA	3	1200	US	ACTIVE
0493	ELSPETH	3	1200		FOREIGN	ACTIVE	05/90 /88	ELSPETH	3	1200	US	ACTIVE
0494	LADY MARION	3	1200		FOREIGN	ACTIVE	05/90 /88	LADY MARION	3	1200	US	ACTIVE
0495	GOLDEN GLOW	3	1000		US	ACTIVE	/89					

Appendix 4C. (Continued)

Vessel Code	Vessel Name	Class	Capacity	Year Built	Flag	Activity	Status Date	Historical Information				
								Vessel Name	Class	Capacity	Flag	Activity
0496	CHOLE Z	3	1200		US	ACTIVE	02/90					
0497	KASSANDRA Z	3	1200		US	ACTIVE	02/90					
0498	MARISA Z	3	1200		US	ACTIVE	02/90					
0499	PACIFIC FREEDOM	3	1500		US	ACTIVE	11/91					
0500	MARGARET Z	3	1500		US	ACTIVE	12/91					
CROM	TOWNSEND CROMWELL					RESEARCH						
JRDN	DAVID STARR JORDAN					RESEARCH						
MCAR	MCARTHUR					RESEARCH						
OCNR	OCEANOGRAPHER					RESEARCH						
REGM	REGINA MARIS					RESEARCH						
RESH	RESEARCHER					RESEARCH						
SRVY	SURVEYOR					RESEARCH						
WHIT	WHITING					RESEARCH						

Appendix 4D. "Code Table 4" lists cetacean species/stock codes used by the NMFS Tuna-Porpoise Observer Program from 1966-1990.

Code	Years in Use	Common Name	Scientific Name
01	(1966-1977)	Any porp sighting (IATTC logbook)	
02	(1966-1990)	Offshore pantropical spotted dolphin	<i>Stenella attenuata</i> subsp. A
03	(1966-1990)	Unid. spinner dolphin	<i>Stenella longirostris</i> subsp. ?
04	(1966-1990)	Spotted & spinner dolphin	
05	(1966-1990)	Unid. common dolphin	<i>Delphinus delphis</i> subsp. ?
06	(1966-1990)	Coastal spotted dolphin	<i>Stenella attenuata</i> <i>Graffmani</i>
07	(1966-1977)	"Whitebellies & spinners"	
08	(1966-1977)	"Whitebellies & spotters"	
09	(1966-1977)	Unid. <i>Delph.</i> , W.B. & unid spinners	
10	(1966-1990)	Eastern spinner dolphin	<i>S. longirostris orientalis</i>
11	(1966-1990)	Whitebelly spinner dolphin	<i>Stenella longirostris</i> hybrid
12	(1966-1990)	Hawaiian spinner dolphin	<i>Stenella longirostris</i> hybrid
13	(1966-1990)	Unid. striped dolphin	<i>Stenella coeruleoalba</i>
14	(1966-1990)	Hawaiian spotted dolphin	<i>Stenella attenuata</i> subsp.B
15	(1966-1990)	Rough-toothed dolphin	<i>Steno bredanensis</i>
16	(1966-1977, 1988-1990)	Baja neritic Common dolphin	<i>Delphinus delphis</i> subsp. _
17	(1966-1977, 1988-1990)	Offshore common dolphin	<i>Delphinus delphis</i> subsp. _
18	(1966-1990)	Unid. bottlenose dolphins	<i>Tursiops truncatus</i>
19	(1966-1977)	Offshore bottlenose dolphins	<i>Tursiops truncatus</i> subsp. ?
20	(1966-1977)	Inshore bottlenose dolphins	<i>Tursiops truncatus</i> subsp. ?
21	(1966-1990)	Risso's dolphin	<i>Grampus griseus</i>
22	(1966-1990)	Pacific white-sided dolphin	<i>Lagenorhynchus obliquidens</i>
23	(1966-1990)	Peale's dolphin	<i>Lagenorhynchus australis</i>
24	(1966-1977)	Hourglass dolphin	<i>Lagenorhynchus cruciger</i>
25	(1966-1990)	Dusky dolphin	<i>Lagenorhynchus obscurus</i>
26	(1966-1990)	Fraser's dolphin	<i>Lagenodelphis hosei</i>
27	(1966-1990)	Northern right whale dolphin	<i>Lissodelphis borealis</i>
28	(1966-1977)	Southern right-whale dolphin	<i>Lissodelphis peronii</i>
29	(1966-1977)	Black dolphin	<i>Cephalorhynchus eutropia</i>
30	(1966-1977)	Commerson's dolphin	<i>Cephalorhynchus commersonii</i>
31	(1966-1990)	Melon-headed whale	<i>Peponocephala electra</i>
32	(1966-1990)	Pygmy killer whale	<i>Feresa attenuata</i>
33	(1966-1990)	False killer whale	<i>Pseudorca crassidens</i>
34	(1966-1990)	Unid. pilot whale	<i>Globicephala</i> Sp.
35	(1966-1990)	long-finned pilot whale	<i>Globicephala melas</i>
36	(1966-1990)	Short-finned pilot whale	<i>Globicephala macrorhynchus</i>
37	(1966-1990)	Killer whale	<i>Orcinus orca</i>
38	(1966-1977)	Indopacific hump-backed dolphin	<i>Sousa chinensis</i>
39	(1966-1977)	Stejneger's beaked whale	<i>Mesoplodon stejnegeri</i>
40	(1966-1990)	Harbor porpoise	<i>Phocoena phocoena</i>
41	(1966-1990)	Vaquita	<i>Phocoena sinus</i>
42	(1966-1990)	Burmeister's porpoise	<i>Phocoena spinipinnis</i>
43	(1966-1977)	Black finless dolphin	<i>Neophocaena phocaenoides</i>
44	(1966-1990)	Dall's porpoise	<i>Phocoenoides Dalli</i>
45	(1966-1977)	Beluga or white whale	<i>Delphinapterus Leucas</i>
46	(1966-1990)	Sperm whale	<i>Physeter Macrocephalus</i>
47	(1966-1990)	Pygmy sperm whale	<i>Kogia Breviceps</i>
48	(1966-1990)	Dwarf sperm whale	<i>Kogia Simus</i>
49	(1966-1990)	Unid. beaked whale	Ziphiid
50	(1966-1990)	Southern bottlenose whale	<i>Hyperoodon Planifrons</i>
51	(1966-1990)	Unid. Mesoplodon	<i>Mesoplodon</i> Sp.
52	(1966-1977)	Hubb's beaked whale	<i>Mesoplodon carlhubbsi</i>
53	(1966-1977)	Hector's beaked whale	<i>Mesoplodon hectori</i>
54	(1966-1977)	Andrew's beaked whale	<i>Mesoplodon bowdoini</i>
55	(1966-1977)	Gervais' beaked whale	<i>Mesoplodon europaeus</i>

Appendix 4D. (Continued)

Code	Years in Use	Common Name	Scientific Name
56	(1966-1977)	Sowerby's beaked whale	<i>Mesoplodon bidens</i>
57	(1966-1977)	Ginkgo-toothed whale	<i>Mesoplodon ginkgodens</i>
58	(1966-1977)	Gray's beaked whale	<i>Mesoplodon grayi</i>
59	(1966-1977)	Blaineville's beaked whale	<i>Mesoplodon densirostris</i>
60	(1966-1977)	Strap-toothed whale	<i>Mesoplodon layardii</i>
61	(1966-1990)	Cuvier's beaked whale	<i>Ziphius cavirostris</i>
62	(1966-1990)	Arnoux's beaked whale	<i>Berardius arnouxii</i>
63	(1966-1990)	Baird's beaked whale	<i>Berardius bairdii</i>
64	(1966-1990)	Shepherd's beaked whale	<i>Tasmacetus shepherdi</i>
65	(1966-1977)	Indo-pacific beaked whale	<i>Mesoplodon pacificus</i>
66	(1966-1990)	Northern right whale	<i>Eubalaena glacialis</i>
67	(1966-1990)	Bowhead whale	<i>Balaena mysticetus</i>
68	(1966-1990)	Pygmy right whale	<i>Caperea marginata</i>
69	(1966-1990)	Gray whale	<i>Eschrichtius robustus</i>
70	(1966-1990)	Unid.rorqual	<i>Balaenoptera</i> sp.
71	(1966-1990)	Minke whale	<i>Balaenoptera acutorostrata</i>
72	(1966-1990)	Bryde's whale	<i>Balaenoptera edeni</i>
73	(1966-1990)	Sei whale	<i>Balaenoptera borealis</i>
74	(1966-1990)	Fin whale	<i>Balaenoptera physalus</i>
75	(1966-1990)	Blue whale	<i>Balaenoptera musculus</i>
76	(1966-1990)	Humpback whale	<i>Megaptera novaeangliae</i>
77	(1966-1990)	Unidentified dolphin or porpoise	
78	(1966-1990)	Unidentified small whale	
79	(1966-1990)	Unidentified large whale	
80	(1974 Aerial Survey)	Tunaboat/purse seiner	
81	(1974 Aerial Survey)	Bait boat	
82	(1974 Aerial Survey)	Unidentified Schoolfish	
83	(1974 Aerial Survey)	Schoolfish/yellowfin tuna	
84	(1974 Aerial Survey)	Schoolfish/skipjack tuna	
85	(1974 Aerial Survey)	Baitfish	
86	(1974 Aerial Survey)	Floating object/flotsam	
87	(1974 Aerial Survey)	Bird flock w/o apparent assoc. obj.	
88	(1966-1990)	Costa Rican spinner dolphin	<i>S. longirostris centroamericana</i>
89	(1974-1977)	Fraser's dolphin & striped dolphin	<i>L. hosei</i> & <i>S. coeruleoalba</i>
90	(1977-1990)	Unid. pantropical spotted dolphin	<i>Stenella attenuata</i> subsp. ?
91	(1966-1990)	Atlantic spotted dolphin	<i>Stenella frontalis</i>
96	(1977-1990)	Unidentified cetacean	
97	(1977-1990)	Unid. obj., possible marine mammal	
98	(1977-1990)	Unidentified whale	

Appendix 4E. "Code Table 6" lists Fishing Mode data "Inactive" and "Running" codes used by the NMFS Tuna-Porpoise Observer Program from 1975-1990.

Code	Years in Use	Definition
01	1975-1990	Drifting to rest, usually at night.
02	1975-1978	Drifting because of bad weather, during day; not at night (use 01).
03	1975-1978	Drifting for repairs.
04	1975-1978 1979-1990	Drifting or circling to watch school fish. Drifting and/or circling to watch flotsam or school fish (i.e., a potential target for a non-porpoise set).
05	1975-1978	Drifting or circling to watch log, dead whale or any other floating object during the day (not at night).
06	1975-1978	Drifting while visiting another boat, fuel transfer, medical, etc.
07	1975-1990	In port, tied up or anchored.
08	1976-1978 1975, 1979-1990	End of cruise (completed trip). End of cruise.
09	1975-1978	Drifting for other than above reasons.
10	1975-1978	Running to first grounds, not searching.
11	1975-1978 1979-1990	Running to new grounds, not searching. Running not searching.
12	1975-1976	Running to port, not searching.
13	1975-1976	Running from bad weather, not searching.
14	1975-1976	Running and not searching for reasons other than described above.
15	1976-1978	End of cruise (incomplete trip).
16	1981-1981	Drifting and/or circling to investigate flotsam of natural wood (i.e., trees, roots, fronds, bushes, etc.)
17	1981-1981	Drifting and/or circling to investigate flotsam of man-made wood products (i.e., lumber, pallets, plywood, boxes, etc.)
18	1981-1981	Drifting and/or circling to investigate flotsam with a radio transmitter attached.
19	1981-1981	Drifting and/or circling to investigate metal flotsam (i.e., oil drums, cans, buoys, etc.)
20	1981-1981	Drifting and/or circling to investigate rope flotsam.
21	1981-1981	Drifting and/or circling to investigate flotsam of lost or abandoned fishing gear (i.e., floats, corkline, glass balls, etc.)

Appendix 4E. (Continued)

Code	Years in Use	Definition
22	1981-1981	Drifting and/or circling to investigate dead animals (i.e., whales, sharks, etc.)
23	1981-1981	Drifting and/or circling to investigate kelp.
24	1981-1981	Drifting and/or circling to investigate other flotsam.
25	1981-1981	Drifting and/or circling to investigate unknown type of flotsam.



Appendix 4F. “Code Table 7” lists Marine Mammal Watch Effort data “End Leg” codes used by the NMFS Tuna-Porpoise Observer Program from 1971-1990.

Code	Years in Use	Definition
1	1971-1990	End of a leg due to a change in the course of the vessel.
2	1971-1990	End of a leg due to change in the speed of the vessel.
3	1974-1976  1971-1973, 1977-1990	End of a leg because the vessel stops the searching activity (should be reflected in the daily vessel activities record).  End of a leg because the vessel begins a chase or circling mode leading to a set (should also be reflected in the fishing mode record).
4	1971-1990	End of the leg for other reasons, e.g., meals, coffee, etc.
5	1971-1990	End of the leg for recording a position.
6	1979-1990	End of a leg due to the helicopter landing or taking off, regardless of course and/or speed change (only used on vessels that have a helicopter on board).
7	1980-1982	End of a leg due to a change in sea state.
8	1984-1990	End of a leg due to a change in environmental conditions which affect the observer's ability to see marine mammals, e.g., beaufort stage, fog/rain, or sun position.
9	1982-1990	End of a leg due to a change in observer position. Used exclusively with research vessel (RV) effort format.

Appendix 4G. “Code Table 8” lists Set Log “Set Type” codes used by the NMFS Tuna-Porpoise-Observer Program from 1971-1990.

Code	Years in Use	Definition
01	1971-1990	School fish set.
02	1971-1990	Porpoise set.
03	1974-1990	Night set (not for porpoise sets that extend into the night).
04	1974-1976 1971-1973, 1977-1990	Log, whale, or floating object is set on. Log, dead whale, or floating object is set on.
05	1971-1990	Unknown.
06	1971-1973, 1975-1990	Wash net.
07	1975-1990	Sets with accidental porpoise involvement.
08	1971-1973,1977-1990	Set on a live whale.

Appendix 4H. “Code Table 9” lists Set Log “Fish Type” codes used by the NMFS Tuna-Porpoise Observer Program from 1974-1976.

Code	Years in Use	Definition
1	1976-1976	Bigeye and skipjack.
2	1974-1976	Yellowfin tuna.
3	1974-1976	Skipjack tuna.
4	1974-1976	Yellowfin and skipjack.
5	1974-1976	Unknown.
6	1974-1976	Bluefin tuna.
7	1974-1976	Bonito.
8	1975-1976	Bigeye tuna.
9	1976-1976	Bigeye and yellowfin tuna.

Appendix 4I. “Code Table 10” lists Set Log “Other Fish” codes used by the NMFS Tuna-Porpoise Observer Program from 1971-1990.

Code	Years in Use	Definition
1	1971-1990	Albacore
2	1971-1990	Black skipjack
3	1971-1990	Bullet mackerel
4	1971-1990	Mixed black skipjack and bullet mackerel
5	1971-1990	Unknown
6	1971-1990	Bluefin
7	1971-1990	Bonito
8	1971-1990	Bigeye tuna

Appendix 4J. “Code Table 13” lists Marine Mammal Sighting data “Sighting Cue” and “Initial Sighting” codes used by the NMFS Tuna-Porpoise Observer Program from 1977-1990.

Part A: Sighting Cues		
Code	Years in Use	Definition
1	1977-1990	Birds
2	1977-1990	Splashes
3	1977-1990	Mammals
4	1977-1990	Ships
5	1977-1990	Other or unknown
6	1977-1990	Whale blow
7	1988-1990	Helicopter

Part B: Initial Sighting		
Code	Years in Use	Definition
1	1977-1990	Crewman on 20x binoculars
2	1977-1990	Crewman in mast (not on 20x)
3	1977-1990	Other crewman
4	1977-1990	Observer on 20x
5	1977-1990	Observer not on 20x
6	1977-1990	Other or unknown
7	1978-1990	Helicopter
8	1989-1990	Electronic device

Appendix 4K. “Code Table 14” lists Cruise Specifications data “Vessel Class”, “Observer Type”, “Cruise Type” and “Gear Type” codes used by the NMFS Tuna-Porpoise-Observer Program from 1966-1993.

Part A: Vessel Class		
Code	Years in Use	Definition
1	1966-1993	Vessels less than or equal to 400 short tons of fish carrying capacity.
2	1966-1993	Vessels greater than 400 short tons fish carrying capacity and built before 1961.
3	1966-1993	Vessels greater than 400 short tons carrying capacity and built after 1960.
9	1966-1993	Unknown.

Part B: Type of Observer		
Code	Years in Use	Definition
01	1966-1993	Regional observer.
02	1966-1993	Gear technician (one scientist aboard a seiner).
03	1966-1993	Regional/gear.
04	1966-1993	Research- ETP survey (aboard a research vessel).
05	1966-1993	Charter (more than one scientist aboard a tuna seiner).
06	1966-1975	SWFC observer.
07	1966-1993	IATTC observer.
08	1966-1993	Research-costal survey (research vessel).
09	1966-1993	Research-ETP/coastal/other (non-research vessel).
10	1990-1993	Transit trip with no fishing operations.

Part C: Type of Cruise		
Code	Years in Use	Definition
01	1977-1993	Fishing inside CYRA.
02	1977-1993	Fishing outside CYRA.
03	1977-1993	Fishing inside and outside the CYRA.

Appendix 4K. (Continued)

Part D: Type of Gear		
Code	Years in Use	Definition
01	1966-1993	Conventional gear (2-inch medina panel).
02	1966-1993	Bold contender system.
03	1966-1993	Double depth safety panel (1.25-inch fine mesh).
04	1966-1993	Super apron.
05	1966-1993	Single depth safety panel (1.25-inch fine mesh - class 2).
06	1966-1993	Experimental.
07	1966-1993	Unknown.
08	1966-1993	Not applicable.
09	1990-1993	No safety panel.

Appendix 5A. Cruise Specifications Form (Version 1) used by the Tuna-Porpoise Observer Program, 1975.

### CRUISE SPECIFICATIONS RECORD

VESSEL ALBATROSS CRUISE NO. 1505  
 OBSERVER W. J. ...

CRUISE NO.	OBS. NO.	CARD	VESSEL CODE	DATE SAILED			DATE RETURNED			MAX. SPEED KNOTS & 10ths	NO. OF SPBTS. ABOARD
1	4	7	8	YR.	MO.	DAY	YR.	MO.	DAY	24	27
		1								15.5	5

SAILED FROM ... RETURNED TO ...

1st INIT. W. J. ... VESSEL CAPTAIN LAST NAME ... MANAGING OWNER ...

THE NET:		YR. BUILT	LENGTH (fm.)	DEPTH (fm.)	DEPTH (strips)	MESH SIZE IN. & 10ths
62	64	67	70	72		

PORPOISE PANEL?

Y	YEAR INSTALLED	LENGTH (FATHOMS)	CARD	DEPTH (fm.)	DEPTH (strips)	MESH SIZE IN. & 10ths
74	75	77	7	8	10	12
			2			

ANTI-TORQUE CABLE? Y/N  14

HELICOPTER ON BOARD? Y/N  16

EXPENDABLE BATHYTHERMOGRAPH (XBT) ABOARD? Y/N  18

TOTAL NO. OF CREW MEMBERS  20

CURRENT INDICATORS ABOARD? Y/N  22

NO. OF 20X BINOCULARS NORMALLY USED  15

FAX MACHINE ON BOARD? Y/N  17

BOWTHRUSTER? Y/N  19

CERTIFIED MAXIMUM CREW COMPLEMENT \_\_\_\_\_

PORPOISE BASKET ABOARD? Y/N  23

FISH WELL CAPACITIES (SHORT TONS):

1's \_\_\_\_\_ 2's \_\_\_\_\_ 3's \_\_\_\_\_ 4's \_\_\_\_\_ 5's \_\_\_\_\_ 6's \_\_\_\_\_ 7's \_\_\_\_\_

8's \_\_\_\_\_ 9's \_\_\_\_\_ 10's \_\_\_\_\_ 11's \_\_\_\_\_ 12's \_\_\_\_\_ 13's \_\_\_\_\_ 14's \_\_\_\_\_

BOX \_\_\_\_\_

NOTES: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Appendix 5B. Cruise Specifications Form (Version 2) used by the Tuna-Porpoise Observer Program, 1976.

### CRUISE SPECIFICATIONS RECORD

VESSEL \_\_\_\_\_ CRUISE NO. \_\_\_\_\_

OBSERVER \_\_\_\_\_

CRUISE NO.	OBS. NO.	CARD	VESSEL CODE	DATE SAILED			DATE RETURNED			NO. OF SPBTS. ABOARD
1	4	7	8	12	14	16	18	20	22	27
		1								5

SAILED FROM \_\_\_\_\_ RETURNED TO \_\_\_\_\_

1st VESSEL CAPTAIN \_\_\_\_\_ MANAGING OWNER \_\_\_\_\_  
INIT. LAST NAME

THE NET:		YR. BUILT	LENGTH (fm.)	DEPTH (fm.)	DEPTH (strips)	MESH SIZE IN. & 10ths
28	29	62	64	67	70	72

PORPOISE PANEL?

Y	YEAR INSTALLED	LENGTH (FATHOMS)	CARD	DEPTH (fm.)	DEPTH (strips)	MESH SIZE IN. & 10ths
74	75	77	7	8	10	12
			2			

ANTI-TORQUE CABLE? Y/N  14

BOWTHRUSTER? Y/N  19      CURRENT INDICATORS ABOARD? Y/N  22      PORPOISE BASKET ABOARD? Y/N  23

VESSEL NAME \_\_\_\_\_ TONS \_\_\_\_\_ YR. BUILT \_\_\_\_\_

24 50 54

CARD 1st NAME OF MARINE MAMMAL CERTIFICATE HOLDER ABOARD THIS CRUISE  
INIT. LAST NAME

3

7 8 9

CERTIFICATE NUMBER

33

Did you inform the CERTIFICATE HOLDER that it is his responsibility, and not yours, TO COMPLETE MARINE MAMMAL SET LOGS REQUIRED by the U.S. Marine Mammal Regulations and to submit them within 48 hours of the conclusion of the trip to the Regional Director of the National Marine Fisheries Service? Reference; U.S. Marine Mammal Regulations, page 5, Sec. 216.24 (d) (2) (iii).

42



Appendix 5C. Cruise Specifications Form (Version 3) used by the Tuna-Porpoise Observer Program, 1977-1978.

NMFS FSWJ-50  
1-77
**1977A CRUISE SPECIFICATIONS RECORD**
NOAA - U.S. DEPT. OF COM.

CRUISE #	CARD #	VESSEL CODE	YEAR BOAT BUILT	FISH CAPACITY (SHORT TONS)	VESSEL CLASS	DATE SAILED			DATE RETURNED			COMPLETED TRIP? Y N
						YR.	MO.	DAY	YR.	MO.	DAY	
1	4	6	10	12	16	18	20	22	24	26	28	30
	01											

SAILED FROM: \_\_\_\_\_ RETURNED TO: \_\_\_\_\_

OBSERVER DATA					TYPE CRUISE	TYPE GEAR
OBS. #	OBS. TYPE	# TRIPS	# PORPOISE SETS SEEN	HOW MANY OBS. THIS CRUISE?		
31	34	36	38	41	42	44

1ST INITIAL	VESSEL CAPTAIN LAST NAME	MANAGING OWNER
45	47	62
		80

THE NET					PORPOISE PANEL? Y N	YEAR INSTALLED	PANEL LENGTH (Fm)	PANEL DEPTH (Fm)	PANEL DEPTH (Strips)	MESH SIZE (In. & 100ths)	
CARD #	YEAR NET BUILT	NET LENGTH (Fm)	NET DEPTH (Fm)	NET DEPTH (Strips)							
4	6	8	11	14	16	19	20	22	25	27	29
0.2											

VESSEL NAME

NUMBER OF SPEEDBOATS ON BOARD	ANTI-TORQUE CABLE? Y N	BOWTHRUSTER? Y N	CURRENT INDICATORS ABOARD? Y N	PORPOISE BASKET ABOARD? Y N
58	59	60	61	62

1ST INITIAL	CERTIFICATE HOLDER LAST NAME	CERTIFICATE NUMBER
4	6	7
		31

Did you inform the CERTIFICATE HOLDER that it is his responsibility, and not yours, to complete the MARINE MAMMAL LOG SHEETS required by the U.S. Marine Mammal Regulations? Y  
N

40

Appendix 5D. Cruise Specifications Form (Version 4) used by the Tuna-Porpoise Observer Program, 1979-1985.

NOAA FORM 88-121  
FSW34 11-78

NOAA - U.S. DEPT. OF COMMERCE

### 1979 CRUISE SPECIFICATIONS RECORD

CRUISE #	CARD #	VESSEL CODE	YEAR BOAT BUILT	FISH CAPACITY (SHORT TONS)	JULY 1979	DATE SAILED			DATE RETURNED			COMPLETED TRIP? Y N
						YR.	MO.	DAY	YR.	MO.	DAY	
	01											
1	4	6	10	12	16	17	19	21	23	25	27	29

SAILED FROM: \_\_\_\_\_ RETURNED TO: \_\_\_\_\_

OBSERVER DATA					TYPE CRUISE	TYPE GEAR	#SPDBTS ABOARD	HELICOPTER? Y N	BOWTHRUSTER? Y N	ANTI-TORQUE CABLE? Y N
OBS #	OBS. TYPE	# TRIPS	# M.M. SETS SEEN	SEQ. #						
30	33	35	37	40	41	43	45	46	47	48

THE NET					SAFETY PANEL						
YEAR NET BUILT	NET LENGTH (FM)	NET DEPTH (FM)	NET DEPTH (Strips)	MESH SIZE (In. & 100ths)	Y N	YEAR INSTALLED	PANEL LENGTH (FM)	PANEL DEPTH (FM)	PANEL DEPTH (Strips)	MESH SIZE (In. & 100ths)	
49	51	54	57	59	62	63	65	68	70	72	74

CARD #	VESSEL NAME
02	
4	6
31	

OPERATOR CERTIFICATE HOLDER

CERTIFICATE NUMBER
32
61

VESSEL CERTIFICATE HOLDER

CERTIFICATE NUMBER
6
35

Appendix 5E. Cruise Specifications Form (Version 5, Page 1) used by the Tuna-Porpoise Observer Program, 1986-1990.

NOAA FORM 88-121  
FSW32 10-85

NOAA - U.S. DEPT. OF COMMERCE

### CRUISE SPECIFICATIONS RECORD

CRUISE #	CARD #	VESSEL CODE	YEAR BOAT BUILT	FISH CAPACITY (SHORT TONS)	VESSEL CLASS	DATE SAILED			DATE RETURNED			COMPLETED TRIP? Y N
						YR	MO	DAY	YR	MO	DAY	
	01											

SAILED FROM: \_\_\_\_\_ RETURNED TO: \_\_\_\_\_

OBSERVER DATA					TYPE GEAR	#SPDBTS ABOARD	HELICOPTER? Y N	BOWTHRUSTER? Y N
OBS #	OBS. TYPE	# TRIPS	# M.M. SETS SEEN	SEQ. #				

THE NET					SAFETY PANEL					
YEAR NET BUILT	NET LENGTH (FM)	NET DEPTH (FM)	NET DEPTH (Strips)	MESH SIZE (In. & 100ths)	SAFETY PANEL Y N	YEAR INSTALLED	PANEL LENGTH (FM)	PANEL DEPTH (FM)	PANEL DEPTH (Strips)	MESH SIZE (In. & 100ths)


CARD # **02** VESSEL NAME \_\_\_\_\_

OPERATOR CERTIFICATE HOLDER \_\_\_\_\_ CERTIFICATE NUMBER \_\_\_\_\_

VESSEL CERTIFICATE HOLDER \_\_\_\_\_ CERTIFICATE NUMBER \_\_\_\_\_

CARD # **03** \_\_\_\_\_

Appendix 5E. Cruise Specifications Form (Version 5, Page 2) used by the Tuna-Porpoise Observer Program, 1986-1990.

PORPOISE SAFETY GEAR INSPECTION	
	Yes=1    No=2
1. Net is equipped with porpoise safety panel . . . . .	_____
2. Safety panel is $\leq$ 1-1/4" stretched mesh webbing . . . . .	_____
3. Safety panel is $\geq$ 2. strips deep ( $\geq$ 200 meshes of 4-1/4" stretched mesh webbing) . . . . .	_____
4. Estimated length of porpoise safety panel (fathoms) . . . . .	_____
5. Porpoise safety panel protects the perimeter of the backdown area (the perimeter extends from the last bow bunch pulled to 2/3 the distance from the apex to the stern tiedown point) . . . . .	_____
6. Each end of the porpoise safety panel is identified by a distinguishable marker (markers are balloons or contrasting corks) . . . . .	_____
7. Throughout the safety panel, handhold openings are secured tightly so that the insertion of a 1-3/8" diameter cylindrical object meets resistance . . . . .	_____
8. Corkline hangings in the safety panel are secured as in #7 . . . . .	_____
9. All speedboats are rigged with towing bridles and towlines . . . . .	_____
10. Vessel is equipped with two facemasks and snorkels, or two viewboxes, and a raft suitable to be used as a porpoise observation and rescue platform . . . . .	_____
11. Vessel is equipped with lighting system capable of producing 140,000 lumens of output . . . . .	_____
12. Twenty fathoms at apex free of lines . . . . .	_____
13. Net is equipped with super apron . . . . .	_____
14. If super apron is present, apron is marked at both ends . . . . .	_____
15. Super apron performance problem (if no, disregard a, b, & c below) . . . . .	_____
a. Distance from bow ortza to beginning of safety panel . . . . .	_____
b. Distance to beginning of apron from end of last bowbunch pulled . . . . .	_____
c. Number of bowbunches pulled . . . . .	_____
<i>Use the schematic corkline below to draw in the location of safety panel, apron, half-net marker, panel and apron markers.</i>	
	

Appendix 6A. Fishing Mode Form (Version 1) used by the Tuna-Porpoise Observer Program, 1975.

**DAILY VESSEL ACTIVITIES RECORD**

VESSEL \_\_\_\_\_

OBSERVER \_\_\_\_\_

CR NO.	OBS. NO.	DATE	YR.	MO.	DAY
1	4	07	7	9	11

TIME OF ACTIVITY CHANGE	SEARCHING			CHASE/SET		INACTIVE OR RUNNING		POSITION			MORE POSITIONS?						
	Y/N	SPEED KTS & 10ths	NO. OF 10ths	SURFACE TEMP. °F & 10ths	BEAUFORT NO.	FOG/RAIN	Y/N	SET NO.	SET TYPE	Y/N		CODE	LATITUDE N/S	LONGITUDE E/W	TIME		
13																	
17																	
18																	
21																	
22																	
25																	
26																	
27																	
28																	
31																	
33																	
34																	
36																	
40																	
41																	
46																	
47																	
51																	

YES (Y) = 1  
NO (N) = 2

NORTH (N) = 1  
SOUTH (S) = 2

EAST (E) = 1  
WEST (W) = 2

NO FOG OR RAIN = 1  
FOG = 2  
RAIN = 3

Appendix 6B. Fishing Mode Form (Version 2) used by the Tuna-Porpoise Observer Program, 1976-1980.

NMFS FSW3-SD  
1-77

NOAA - U.S. DEPT. OF COMM.

CR NO.	OBS. NO.	DATE		
		YR.	MO.	DAY
1	4	7	9	11

### FISHING MODE RECORD

TIME OF ACTIVITY CHANGE	SEARCHING						CHASE/SET			INACTIVE OR RUNNING	
	Y N	SPEED KTS & 10ths	NO. 20s	SURFACE TEMP. °F & 10ths	BEAUFORT NO.	FOG/RAIN	Y N	SET NO.	SET TYPE	Y N	CODE
13											
17											
18											
21											
22											
25											
26											
27											
28											
31											
33											
34											

YES (Y) = 1  
NO (N) = 2

NO FOG OR RAIN = 1  
FOG = 2  
RAIN = 3  
FOG AND RAIN = 4









Appendix 7A. Marine Mammal Watch Effort/Marine Mammal Sighting Form (Version 1) used by the Tuna-Porpoise Observer Program, 1971-1973.

MARINE MAMMAL OBSERVATION LOG

Page \_\_\_\_\_ of \_\_\_\_\_

VESSEL \_\_\_\_\_ DATE \_\_\_\_\_

Observation Effort (even if nothing seen): Weather \_\_\_\_\_

Time: From \_\_\_\_\_ To \_\_\_\_\_ Sea State \_\_\_\_\_

Position: From \_\_\_\_\_ To \_\_\_\_\_ Water Temp. \_\_\_\_\_

Average Speed \_\_\_\_\_ Knots or mph (circle one) \_\_\_\_\_

Time	Location	Kind	No.	Notes *

\* Include the following when possible; sketch; photograph; size; direction of travel; behavior; associated animals (birds, fish) FEATURES USED FOR IDENTIFICATION, course changes of vessel.

Name: \_\_\_\_\_

Address: \_\_\_\_\_

Tel. No. \_\_\_\_\_

Appendix 7B. Marine Mammal Watch Effort/Marine Mammal Sighting Form (Version 2, Page 1) used by the Tuna-Porpoise Observer Program, 1974.

### MARINE MAMMAL LOG

Code   Code  

VESSEL \_\_\_\_\_ OBSERVER \_\_\_\_\_

Code   Code  

1-3 4-6

Cr. No.	mo.	Date: day	yr.	Period no. (for day)	Card	Time: from	to	Comments:
7-9	10-11	12-13	14-15	17-18	19	20-23	24-27	

From:				To:				Avg. speed
Latitude	N/S	Longitude	E/W	Latitude	N/S	Longitude	E/W	(kts, & 10ths)
28-31	32	33-37	38	39-42	43	44-48	49	50-52

True Course	Maximum sight. dist. (mi. & 10ths)	Chop ht. (ft. & 10ths)	Wind (kts)	Start new period if course, sighting distance, chop, or wind changes	Effort in period: hrs.	min.	Sightings in period (no.)
53-55	56-58	59-60	61-62		63-64	65-66	67-68

(69-80 blank)

SIGHTINGS (numbered serially for period; one for each species in mixed school):

Card	Time	Latitude	N/S	Longitude	E/W	Bearing from ship	Distance from ship (mi. & 10ths)	Direction of travel of school	Data code	Loc. code	Sight. code		
#1	2	19	20-23	24-27	28	29-33	34	35-37	38-40	41-43	44	45	46

SPECIES \_\_\_\_\_ Code   Main sp. in school \_\_\_\_\_ Code  

Code   Code  

47-48 49-50

No. in school (of this sp.)	+ error	Total in school (of all spp.)	+ error	Est. code	Other species in school:	Code
51-55	56-59	60-64	65-68	69	(1)	70-71
					(2)	72-73
					(3)	74-75

(76-80 blank)

Notes (size, shape, color, how identified, sketch):

Photos: roll \_\_\_\_\_ frames \_\_\_\_\_ (if more than one sighting in period, go to continuation sheet)

Appendix 7B. Marine Mammal Watch Effort/Marine Mammal Sighting Form (Version 2, Page 2) used by the Tuna-Porpoise Observer Program, 1974.

**MARINE MAMMAL LOG (Continuation Sheet)**

Vess \_\_\_\_\_ Obs. \_\_\_\_\_ Cr. \_\_\_\_\_ Date \_\_\_\_\_ Period \_\_\_\_\_

#	Card	Time	Latitude	N/S	Longitude	E/W	Bearing from ship	Dist. from ship (mi. & 10th)	Direction of travel	Data code	Loc. code	Sight. code
	19	20-23	24-27	28	29-33	34	35-37	38-40	41-43	44	45	46

Code  Main sp. in school  Code

No. in school (of this sp.)  ± error  Total in school (all in spp.)  ± error  Est. code

Notes: \_\_\_\_\_

Other species in school:

(1) \_\_\_\_\_ Code

(2) \_\_\_\_\_ Code

(3) \_\_\_\_\_ Code

(76-80 blank)

---

Photos: roll \_\_\_\_\_ frames \_\_\_\_\_

#	Card	Time	Latitude	N/S	Longitude	E/W	Bearing from ship	Dist. from ship (mi. & 10th)	Direction of travel	Data code	Loc. code	Sight. code
	19	20-23	24-27	28	29-33	34	35-37	38-40	41-43	44	45	46

Code  Main sp. in school  Code

No. in school (of this sp.)  ± error  Total in school (all in spp.)  ± error  Est. code

Notes: \_\_\_\_\_

Other species in school:

(1) \_\_\_\_\_ Code

(2) \_\_\_\_\_ Code

(3) \_\_\_\_\_ Code

(76-80 blank)

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Photos: roll \_\_\_\_\_ frames \_\_\_\_\_

Appendix 7C. Marine Mammal Watch Effort Form (Version 3) used by the Tuna-Porpoise Observer Program, 1975-1978.

NOAA - U.S. DEPT. OF COMM.

**SHIPBOARD MAMMAL WATCH  
DAILY EFFORT RECORD**

NOAA FORM 88-104  
FSW34 12-77

SERIES NO.	LEG NO.	START OF LEG		END OF LEG		COMPASS COURSE °T	VESSEL SPEED KTS & 10ths	POSITIONS: 1+ PER SERIES			SIGHTINGS?		SET NO.
		TIME	SURFACE TEMP. °F & 10ths	TIME	SURFACE TEMP. °F & 10ths			LATITUDE	LONGITUDE	E	N	Y	
13													
15													
17													
21													
24													
28													
31													
34													
37													
41													
42													
47													
48													
49													
51													
52													
53													

CRUISE NO. \_\_\_\_\_

DATE: YEAR \_\_\_\_\_ MONTH \_\_\_\_\_ DAY \_\_\_\_\_

START OF LEG TIME \_\_\_\_\_ SURFACE TEMP. °F & 10ths \_\_\_\_\_

END OF LEG TIME \_\_\_\_\_ SURFACE TEMP. °F & 10ths \_\_\_\_\_

DEFINITIONS: LEG: TIME PERIOD DURING M.M. WATCH DURING WHICH COURSE AND SPEED ARE CONSTANT. STARTS AT 01 EACH SERIES

SERIES: 1 OR MORE LEGS COMPRISING A SINGLE UNINTERRUPTED M.M. WATCH EFFORT. STARTS AT 01 EACH DAY. MUST BE AT LEAST ONE POSITION PER SERIES.

Appendix 7D. Marine Mammal Watch Effort Form (Version 4) used by the Tuna-Porpoise Observer Program, 1979-1980.

MARINE MAMMAL WATCH  
DAILY EFFORT RECORD

NOAA FORM 88-104  
FSW34 11/80

NOAA - U.S. DEPT OF COMMERCE

NO FOG OR RAIN = 1  
FOG = 2  
RAIN = 3  
FOG AND RAIN = 4  
BEAUFORT STAGE  
0 / 1, 2 / 3, 4 / 5 +

CRUISE:

DATE: YEAR  MONTH  DAY

SERIES	LEG	START OF LEG		END OF LEG			POSITION: ONE OR MORE PER SERIES		VESSEL SPEED KTS. & 10ths	COMPASS COURSE	SIGHTING	END LEG CODE	SET	
		TIME	SURFACE TEMP. °F & 10ths	BEAUFORT	FOG	RAIN	COMBINATION	LONGITUDE						LATITUDE
10														
11														
12														
13														
14														
15														
16														
17														
18														
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47														
48														
49														

Appendix 7E. Marine Mammal Watch Effort Form (Version 5) used by the Tuna-Porpoise Observer Program, 1981-1982.

**MARINE MAMMAL WATCH  
DAILY EFFORT RECORD**

NOAA FORM 88-104  
FSW34 11/80

NO FOG OR RAIN = 1  
FOG = 2  
RAIN = 3  
FOG AND RAIN = 4

BEAUFORT STAGE  
0 / 1, 2 / 3, 4 / 5 +

NOAA - U.S. DEPT. OF COMM.

CRUISE # \_\_\_\_\_

DATE

YEAR	MONTH	DAY

SERIES #	LEG #	START OF LEG		END OF LEG			COMPASS COURSE	VESSEL SPEED KTS. & 10ths	POSITION: ONE OR MORE PER SERIES			SIGHTING EN LEG CODE	SET	
		TIME	SURFACE TEMP. °F & 10ths	BEAUFORT	FOG	RAIN			COLLECT	TIME	LATITUDE			N
10														
11														
12														
13														
14														
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48														
49														

Appendix 7F. Marine Mammal Watch Effort Form (Version 6) used by the Tuna-Porpoise Observer Program, 1984-1990.

NOAA FORM 88-104  
FSW34 11/82

NO FOG OR RAIN = 1  
FOG = 2  
RAIN = 3  
FOG AND RAIN = 4

BEAUFORT STAGE  
0 / 1.2 / 3.4 / 5 +

NOAA - U.S. DEPT. OF COMMERCE

### MARINE MAMMAL WATCH DAILY EFFORT RECORD

CRUISE # \_\_\_\_\_

DATE

YEAR	MONTH	DAY
1	1	1

START OF LEG	END OF LEG	COMPASS COURSE	VESSEL SPEED	POSITION: ONE OR MORE PER SERIES	SIGHTING	END LEG CODE	SET																								
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 10%;">SERIES #</td> <td style="width: 10%;">LEG #</td> <td style="width: 10%;">TIME</td> <td style="width: 10%;">SURFACE TEMP °F &amp; 10ths</td> <td style="width: 10%;">BEAUFORT</td> <td style="width: 10%;">SUN</td> <td style="width: 10%;">FOG</td> <td style="width: 10%;">RAIN</td> <td style="width: 10%;">CORRECTED</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td>HORZ</td> <td>VERT</td> <td></td> <td></td> </tr> </table>	SERIES #	LEG #	TIME	SURFACE TEMP °F & 10ths	BEAUFORT	SUN	FOG	RAIN	CORRECTED						HORZ	VERT			<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 10%;">TIME</td> <td style="width: 10%;">DATE</td> </tr> <tr> <td></td> <td></td> </tr> </table>	TIME	DATE			T	KTS & 10ths	LATITUDE	LONGITUDE	N	S	E	W
SERIES #	LEG #	TIME	SURFACE TEMP °F & 10ths	BEAUFORT	SUN	FOG	RAIN	CORRECTED																							
					HORZ	VERT																									
TIME	DATE																														

10	12	14	18	21	22	24	26	27	28	32	35	36	42	43	46	48	50	51	53	



Appendix 7G. Marine Mammal Sighting Form (Version 3) used by the Tuna-Porpoise Observer Program, 1975-1976.

NOAA FORM 80-103  
2-76

NOAA-U.S. Dept. of Comm.

### SHIPBOARD MAMMAL WATCH SIGHTING RECORD

VESSEL \_\_\_\_\_  
OBSERVER \_\_\_\_\_

CRUISE NO.	OBS. NO.	DATE			SERIES NO.	LEG NO.	TIME OF SIGHTING	BEARING FROM SHIP	DISTANCE MI. & 10ths	DIRECTION OF TRAVEL	SET NO.	SURFACE TEMP. °F & 10ths
		YEAR	MO.	DAY								
1	4	7	9	11	13	15	17	21	24	27	30	33

SPECIES NAMES

Sp. (1) \_\_\_\_\_ Sp. (2) \_\_\_\_\_ Sp. (3) \_\_\_\_\_

ESTIMATE OF TOTAL SCHOOL SIZE ±	SPECIES (1)		SPECIES (2)		SPECIES (3)		POSITION OF SIGHTING					
	%	SP. CODE	%	SP. CODE	%	SP. CODE	LATITUDE	N S	LONGITUDE	E W		
36			44	47	49	52	54	57	59	63	64	69

NOTES (DESCRIBE AND ILLUSTRATE EVERYTHING YOU SAW):

PHOTOS: ROLL # \_\_\_\_\_ FRAME # \_\_\_\_\_

Appendix 7H. Marine Mammal Sighting Form (Version 4) used by the Tuna-Porpoise Observer Program, 1977-1978.

NMFS FSW3-SD  
1-77
NOAA - U.S. DEPT. OF COM

### 1977A SHIPBOARD MAMMAL WATCH SIGHTING RECORD

CRUISE #	OBSERVER #	DATE			SERIES #	LEG #	CARD #	TIME OF INITIAL SIGHTING OF TARGET	BEARING FROM SHIP	DISTANCE (nm & 10ths)	DIRECTION OF TRAVEL	SET #	SURFACE TEMP (°F & 10ths.)
		YEAR	MONTH	DAY									
1	4	7	9	11	13	15	17	19	23	26	29	32	35
							<b>01</b>						

POSITION

LATITUDE	N S	LONGITUDE	E W
38	42	43	48

SIGHTING CUE  
(CODE TABLE 13, PART A)

49

WHO MADE INITIAL SIGHTING?  
(CODE TABLE 13, PART B)

50

AVERAGED CREW ESTIMATE OF SCHOOL SIZE

MEAN	HIGHEST	LOWEST
51	55	59

OBSERVER ESTIMATE OF SCHOOL SIZE

BEST	HIGHEST	LOWEST
63	67	71

SPECIES (1)

%	CODE	NAME
75	78	79
_____		
(2)	24	27
_____		
(3)	34	37
_____		
(4)	44	47
_____		
(5)	54	57
_____		

SPECIES (1) **02**

%	CODE	NAME
17	19	22
_____		
(2)	29	32
_____		
(3)	39	42
_____		
(4)	49	52
_____		
(5)	59	62
_____		

DESCRIBE AND ILLUSTRATE EVERYTHING YOU SAW. CONTINUE ON BACK.

PHOTOS: ROLL # \_\_\_\_\_

FRAME(S) # \_\_\_\_\_

Appendix 7I. Marine Mammal Sighting Form (Version 5, Page 1) used by the Tuna-Porpoise Observer Program, 1979-1980.

NOAA FORM 88-105  
FSW34 11/80

NOAA — U.S. DEPT OF  
PA

CRUISE #	DATE	SIGHT #	SERIES #	LEG #	CARD #
	YEAR MONTH DAY				01

MARINE MAMMAL SIGHTING RECORD

SIGHTING CUE				ENVIR. COND. AT CUE		POSITION AT TIME OF CUE				TIME M M SIGHTED		SET #
TIME	WAVE	WIND	BEARING FROM SHIP	BEAU	SURF. TEMP °F & 10ths	LATITUDE	N S	LONGITUDE	W E	SOURCE CODE		

AVERAGE CREW ESTIMATE OF SCHOOL SIZE		
MEAN	HIGHEST	LOWEST

OBSERVER ESTIMATE OF SCHOOL SIZE				CARD #
BEST	HIGHEST	LOWEST		02

<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th>%</th> <th>CODE</th> <th>NAME</th> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> </table> <p>SPECIES (1) 18 21</p> <p>(2) 28 31</p> <p>(3) 38 41</p> <p>(4) 48 51</p>	%	CODE	NAME				<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th>%</th> <th>CODE</th> <th>NAME</th> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> </table> <p>SPECIES (1) 23 26</p> <p>(2) 33 36</p> <p>(3) 43 46 R.C.</p> <p>(4) 53 56 58</p>	%	CODE	NAME			
%	CODE	NAME											
%	CODE	NAME											

TOTAL TIME OF OBSERVATION _____	ENVIR. COND. (RAIN, OVERCAST, FOG, CHOPPY) _____	CLOSEST DISTANCE OF OBSERVATION _____
AMT. OF TIME AT CLOSEST DISTANCE _____	TAGS ASSOCIATED W/SIGHTING _____	METHOD OF OBSERVATION (EYE, 7x, 10x, 20x) _____

NARRATIVE: DISCUSS EVENTS DURING THIS SIGHTING

Appendix 7I. Marine Mammal Sighting Form (Version 5, Page 2) used by the Tuna-Porpoise Observer Program, 1979-1980.

NOAA FORM 88-105  
FSW34 11/80

NOAA — U.S. DEPT. OF COMM

**MARINE MAMMAL  
SIGHTING RECORD**

**SIGHTING SUMMARY**  
LIST ALL DIAGNOSTIC FEATURES OBSERVED  
(INCLUDE ESTIMATED BODY LENGTH)

**PAGE**

SKETCH FEATURES OF ANIMALS SIGHTED

BEHAVIOR — (DESCRIBE AGGREGATION, MOVEMENT, BOW AND STERN RIDING, BLOWS, ETC.)

ASSOCIATED ANIMALS — (INCLUDE NUMBER AND SPECIES OF BIRDS)

PHOTOS: ROLL# \_\_\_\_\_ FRAME(S):# \_\_\_\_\_

Appendix 7J. Marine Mammal Sighting Form (Version 6, Page 1) used by the Tuna-Porpoise Observer Program, 1981-1985.

NOAA FORM 88-105  
FSW34 11/80

NOAA — U.S. DEPT OF  
PA

CRUISE #	DATE	SIGHT #	SERIES #	LEG #	CARD #
	YEAR MONTH DAY				01

**MARINE MAMMAL SIGHTING RECORD**

SIGHTING CUE				ENVIR. COND. AT CUE		POSITION AT TIME OF CUE				TIME M M SIGHTED		SET #
TIME	WIND CO	WIND DIR	BEARING FROM SHIP	DISTANCE nm & 10ths	SEA	SURF. TEMP °F & 10ths	LATITUDE	N S	LONGITUDE	W E	SOURCE CODE	

AVERAGE CREW ESTIMATE OF SCHOOL SIZE		
MEAN	HIGHEST	LOWEST

OBSERVER ESTIMATE OF SCHOOL SIZE			CARD #
BEST	HIGHEST	LOWEST	02

%	CODE	NAME
18	21	
28	31	
38	41	
48	51	

%	CODE	NAME
23	26	
33	36	
43	46	R.C.
53	56	58

TOTAL TIME OF OBSERVATION \_\_\_\_\_ ENVIR. COND. (RAIN, OVERCAST, FOG, CHOPPY) \_\_\_\_\_ CLOSEST DISTANCE OF OBSERVATION \_\_\_\_\_

AMT. OF TIME AT CLOSEST DISTANCE \_\_\_\_\_ TAGS ASSOCIATED W/SIGHTING \_\_\_\_\_ METHOD OF OBSERVATION (EYE, 7x, 10x, 20x) \_\_\_\_\_

NARRATIVE: DISCUSS EVENTS DURING THIS SIGHTING

Appendix 7J. Marine Mammal Sighting Form (Version 6, Page 2) used by the Tuna-Porpoise Observer Program, 1981-1985.

NOAA FORM 88-105  
FSW34 11/80

NOAA — U.S. DEPT. OF COMM.

**MARINE MAMMAL  
SIGHTING RECORD**

**SIGHTING SUMMARY**  
LIST ALL DIAGNOSTIC FEATURES OBSERVED  
(INCLUDE ESTIMATED BODY LENGTH)

**PAGE**

**SKETCH FEATURES OF ANIMALS SIGHTED**

BEHAVIOR — (DESCRIBE AGGREGATION, MOVEMENT, BOW AND STERN RIDING, BLOWS, ETC.)

ASSOCIATED ANIMALS — (INCLUDE NUMBER AND SPECIES OF BIRDS)

PHOTOS: ROLL# \_\_\_\_\_ FRAME(S):# \_\_\_\_\_

Appendix 7K. Marine Mammal Sighting Form (Version 7, Page 1) used by the Tuna-Porpoise Observer Program, 1986-1990.

NOAA FORM 88-105  
5/83 10/85

NOAA - U.S. DEPT. OF COMMERCE  
PA

## MARINE MAMMAL SIGHTING RECORD

CRUISE #	DATE YEAR MONTH DAY	SIGHT #	SERIES #	LEG #	CARD #
					01

SIGHTING CUE				ENVIR. COND. AT CUE		POSITION AT TIME OF CUE				TIME MAM SIGHTED	SET #		
TIME	USE CODE	CLOSEST DISTANCE	BEARING FROM SHIP	BEAU	SURF. TEMP °F & 10ths	LATITUDE	N S	LONGITUDE	W E	SOURCE CODE			
18	22	23	24	27	30	31	34	38	39	44	45	46	50

AVERAGE CREW ESTIMATE OF SCHOOL SIZE		
MEAN	HIGHEST	LOWEST
54	58	62

OBSERVER ESTIMATE OF SCHOOL SIZE				CARD #
BEST	HIGHEST	LOWEST		02
66	70	74	77	16

SOURCE CODES  
1 = D.R.  
2 = Verbal  
3 = Satellite  
4 = Post Cruise

SPECIES (1)	%	CODE	NAME
18	21		
(2)	28	31	
(3)	38	41	
(4)	48	51	

SPECIES (1)	%	CODE	NAME
23	26		
(2)	33	36	
(3)	43	46	R.C.
(4)	53	56	58

<del>TOTAL TIME OF OBSERVATION</del>	<del>ENVIR. COND. (RAIN, OVERCAST, FOG, CHOPPY)</del>	<del>CLOSEST DISTANCE OF OBSERVATION</del>
<del>AMT. OF TIME AT CLOSEST DISTANCE</del>	<del>TAGS ASSOCIATED W/SIGHTING</del>	<del>METHOD OF OBSERVATION (EYE, 7x, 10x, 20x)</del>

TOTAL TIME OF OBSERVATION	ENVIR. COND.	CLOSEST DISTANCE OF OBSERVATION	AMT. OF TIME AT CLOSEST DISTANCE	TAGS ASSOCIATED
59	63	64	66	70

NARRATIVE: DISCUSS EVENTS DURING THIS SIGHTING

METHOD CODES

- 1 = Eye
- 2 = Low Power (7x, 10x)
- 3 = High Power (20x, 25x)
- 4 = Eye and Low
- 5 = Eye and High
- 6 = Low and High
- 7 = Eye, Low and High

Appendix 7K. Marine Mammal Sighting Form (Version 7, Page 2) used by the Tuna-Porpoise Observer Program, 1986-1990.

NOAA FORM 85-105  
FSW32 10/85

NOAA — U.S. DEPT. OF COMMERCE

**MARINE MAMMAL SIGHTING RECORD**

**SIGHTING SUMMARY**  
LIST ALL DIAGNOSTIC FEATURES OBSERVED  
(INCLUDE ESTIMATED BODY LENGTH)

**PAGE**

**SKETCH FEATURES OF ANIMALS SIGHTED**

BEHAVIOR — (DESCRIBE AGGREGATION, MOVEMENT, BOW AND STERN RIDING, BLOWS, ETC.)

SEE SET LOG, PAGE 1

ASSOCIATED ANIMALS — (INCLUDE NUMBER AND SPECIES OF BIRDS)

PHOTOS: ROLL# \_\_\_\_\_ FRAME(S):# \_\_\_\_\_



Appendix 8A. Marine Mammal Set Log/Tally Form (Version 1, Page 1) used by the Tuna-Porpoise Observer Program, 1971-1973.

PORPOISE DATA - SET LOG

Cruise \_\_\_\_\_ Surf. Temp. \_\_\_\_\_  
 Date: \_\_\_\_\_ Forel \_\_\_\_\_  
 Position: \_\_\_\_\_ Set # \_\_\_\_\_  
 Time of sighting \_\_\_\_\_

---

Before Net Let Go

Direction of travel of school \_\_\_\_\_  
 Speed of school \_\_\_\_\_  
 Behavior of school \_\_\_\_\_  
 Behavior of fish (following Scott '69) \_\_\_\_\_  
 Time when chaser skiffs dropped \_\_\_\_\_  
 Time when net let go \_\_\_\_\_  
 Notes on behavior of school during chase (continue on back): \_\_\_\_\_

---

Birds over school (spp. & no.): \_\_\_\_\_

Fill in before set			Fill in after set, before backdown			Fill in after brailing		
Crew estimate(s) of one est., total school enter and before set. compute av.)			Crew estimate(s) of number caught			Number caught (total of backing down counts tally) Count, not estimate		
Spotters	Spinners	Whitebell	Spotters	Spinners	Whitebell	Spotters	Spinners	Whitebell

---

After net Let Go

Get estimates of porpoise caught and enter above. Notes on behavior of porpoise in net (continue on back): \_\_\_\_\_

---

Number going over corks during backdown (get 2 counts and calculate average): \_\_\_\_\_

Number	Measured	After specimens processed				Heads Collected	Photo-graphed	Remarks
		Testes Collected	Ovaries Collected	Fetuses Collected	Memories Checked			
Spotters								
Spinners								
Whitebellies								
Tursiops								
Other								

---

Tuna loaded (tons): YF \_\_\_\_\_ SK \_\_\_\_\_



Appendix 8B. Marine Mammal Set Log/Tally Form (Version 2, Page 1) used by the Tuna-Porpoise Observer Program, 1974.

**PORPOISE SET LOG**  
(PAGE 1)

VESSEL \_\_\_\_\_ CRUISE NO. \_\_\_\_\_  
OBSERVER \_\_\_\_\_ SET NO. \_\_\_\_\_

**B** Bowthruster  
**E** Vessel code    Obs. code    Yes/No    HP    Net code    Fish capacity  
**F** \_\_\_\_\_  
**O** \_\_\_\_\_  
**R** \_\_\_\_\_  
**S** \_\_\_\_\_  
**E** \_\_\_\_\_  
**T** \_\_\_\_\_

Cr. No.    Set No.    Card No.    Date: Mo. Day Yr.    Time of sighting  
\_\_\_\_\_    \_\_\_\_\_    **1**    \_\_\_\_\_    \_\_\_\_\_    \_\_\_\_\_

Latitude    Position: N/S    Longitude    E/W    Beaufort No.    Time chase begins    Wind direction    Wind speed (knots)    Current direction    Current speed (knots)  
\_\_\_\_\_    \_\_\_\_\_    \_\_\_\_\_    \_\_\_\_\_    \_\_\_\_\_    \_\_\_\_\_    \_\_\_\_\_    \_\_\_\_\_    \_\_\_\_\_    \_\_\_\_\_

Swell direction    Swell ht (ft)    Chop ht (ft)    Surf temp (°F)    Forel No.  
\_\_\_\_\_    \_\_\_\_\_    \_\_\_\_\_    \_\_\_\_\_    \_\_\_\_\_

NOTES (I) \_\_\_\_\_

**NUMBER AND SPECIES OF BIRDS OVER SCHOOL:**

Frig.    Boobies    Terns    Card    Shearwaters    Jaegers    Petrels    Other spp.    Unidentified  
NO. \_\_\_\_\_    \_\_\_\_\_    \_\_\_\_\_    **2**    \_\_\_\_\_    \_\_\_\_\_    \_\_\_\_\_    \_\_\_\_\_    \_\_\_\_\_

SPP. Sp. 1: \_\_\_\_\_  
Sp. 2: \_\_\_\_\_

NOTES (II) \_\_\_\_\_

**CREW ESTIMATES OF SCHOOL SIZE BEFORE SET (3 IF POSSIBLE)**

(1)    + error    (2)    + error    (3)    + error  
\_\_\_\_\_    \_\_\_\_\_    \_\_\_\_\_    \_\_\_\_\_    \_\_\_\_\_

**CREW ESTIMATES OF SPECIES COMPOSITION OF SCHOOL BEFORE SET:**

(1)    % Spotters (2)    (3)    (1)    % Spinners (2)    (3)    Card    % Other species    Name    Code  
\_\_\_\_\_    \_\_\_\_\_    \_\_\_\_\_    \_\_\_\_\_    \_\_\_\_\_    \_\_\_\_\_    **3**    \_\_\_\_\_    \_\_\_\_\_    \_\_\_\_\_

NOTES (III) \_\_\_\_\_

**D** Porpoise escaping before rings up:  
**U** Time net let go    Fath. of towline    No.    Species    Where code    Spp. codes    Time    Time rings up    Time roll net    No. of bunches pulled  
**I** \_\_\_\_\_    \_\_\_\_\_    \_\_\_\_\_    \_\_\_\_\_    \_\_\_\_\_    \_\_\_\_\_    \_\_\_\_\_    \_\_\_\_\_    \_\_\_\_\_    \_\_\_\_\_  
**N** \_\_\_\_\_  
**G** \_\_\_\_\_

**S** CREW ESTIMATES OF NUMBERS OF PORPOISE CAPTURED:  
**E** Total captured    (1)    Spotters (2)    Card    (3)    Spinners (2)  
**T** \_\_\_\_\_    \_\_\_\_\_    \_\_\_\_\_    **4**    \_\_\_\_\_    \_\_\_\_\_

Spotters (cont)    OTHER SPECIES:    Code  
(3)    (1)    (2)    (3)    \_\_\_\_\_    \_\_\_\_\_

NOTES (IV) (Check for dorsal fin tags; note color and number) \_\_\_\_\_

Appendix 8B. Marine Mammal Set Log/Tally Form (Version 2, Page 2) used by the Tuna-Porpoise Observer Program, 1974.

**PORPOISE SET LOG**  
(PAGE 2)

VESSEL \_\_\_\_\_ CRUISE NO. \_\_\_\_\_

OBSERVER \_\_\_\_\_ SET NO. \_\_\_\_\_

**PORPOISE BEHAVIOR IN NET:**

First rafting time		Where code	Yes = 1 No = 0	Separation between Fish and Porpoise		Animals over corks before backing down			Mortality before backing down				
Time	Time		Time	Distance	No.	Time	Where code	~No.	No. floaters	Card	Time	Where code	
53-56		57	58	59-62	63-65	66-69	70-73	74	75-78	79-80	81	82-85	87

NOTES (V) \_\_\_\_\_

**MALFUNCTIONS:**

Time	Time Corrected	Time Aborted?	Estimated Total Time Lost (hrs)	CAUSE:	
26-31		32-35	36-39	40-41	

NOTES (VI) \_\_\_\_\_

**NET AND BOAT CONFIGURATION (NOTE TIME, WIND AND CURRENT DIRECTION, LOCATION OF PORPOISE (X), AREAS OF ENTANGLEMENT (E), LOCATION OF BACKDOWN AREA (B)).**


**BACKDOWN:**

Time start	Time finish	Observer count of animals released		No. floaters	Observer estimate of live porpoise in net after B, D.	
Time	Time	+	- error		+	- error
42-45	46-49	50-53	54-57	58-59	60-62	63-65

NOTES (VII) \_\_\_\_\_

GO TO TALLY SHEET (Page 3 of SET LOG form)

Appendix 8B. Marine Mammal Set Log/Tally Form (Version 2, Page 3) used by the Tuna-Porpoise Observer Program, 1974.

**PORPOISE SET LOG/TALLY SHEET**  
 (PAGE 3)

VESSEL \_\_\_\_\_ CRUISE NO. \_\_\_\_\_

OBSERVER: \_\_\_\_\_ SET NO. \_\_\_\_\_

SPOTTERS																	SPINNERS									DEL- PHINUS			OTHER SPP.			U N I D		
Neonate			2-tone			Speckled			Mottled			Adult			Age Unk.	Eastern			Whitebelly			Unid. Spn.												
m	f	?	m	f	?	m	f	?	m	f	?	m	f	?		m	f	?	m	f	?	m	f	?	m	f	?	m	f	?	m	f	?	
(GO TO 2ND TALLY SHEET IF NECESSARY)																																		
(GO TO 2ND TALLY SHEET IF NECESSARY)																																		
(GO TO 2ND TALLY SHEET IF NECESSARY)																																		
(GO TO 2ND TALLY SHEET IF NECESSARY)																																		
(GO TO 2ND TALLY SHEET IF NECESSARY)																																		
(GO TO 2ND TALLY SHEET IF NECESSARY)																																		
(GO TO 2ND TALLY SHEET IF NECESSARY)																																		
(GO TO 2ND TALLY SHEET IF NECESSARY)																																		

ANIMALS DUMPED

ANIMALS PROCESSED

SUBTOTALS

+ escaped alive      (?) status undetermined      ✓ dead  
 (Continue Set Log - page 4)

Appendix 8B. Marine Mammal Set Log/Tally Form (Version 2, Page 4) used by the Tuna-Porpoise Observer Program, 1974.

**PORPOISE SET LOG**  
(PAGE 4)

VESSEL \_\_\_\_\_ CRUISE NO. \_\_\_\_\_  
OBSERVER \_\_\_\_\_ SET NO. \_\_\_\_\_

AFTER SET	Time finish brailing	Time underway again	Total known porpoise kill (add ✓'s in tally)	Card	Tons YF loaded	Tons SK loaded
	66-69	70-73	74-77	78-80	22	23-25
				6		26-28

OTHER ANIMALS IN SET

Species	No.	Species	No.	Species	No.

**TALLY SUMMARY**

SPOTTERS:

NEONATES

Male			Female			?		
✓	+	?	✓	+	?	✓	+	?
29-31	32-34	35-37	38-40	41-43	44-46	47-49	50-52	53-55

2-TONES

Male			Female			?		
✓	+	?	✓	+	?	✓	+	?
56-58	59-61	62-64	65-67	68-70	71-73	74-76	77-80	22
								7

SPECKLED

Male			Female			?		
✓	+	?	✓	+	?	✓	+	?
26-28	29-31	32-34	35-37	38-40	41-43	44-45	47-49	50-52

MOTTLED

Male			Female			?		
✓	+	?	✓	+	?	✓	+	?
53-55	56-58	59-61	62-64	65-67	68-70	71-73	74-76	77-80
								22
								8

FUSED

Male			Female			?		
✓	+	?	✓	+	?	✓	+	?
23-25	26-28	29-31	32-34	35-37	38-40	41-43	44-45	47-49

TALLY SUMMARY CONTINUED - PAGE 5

Appendix 8B. Marine Mammal Set Log/Tally Form (Version 2, Page 5) used by the Tuna-Porpoise Observer Program, 1974.

**PORPOISE SET LOG**

(PAGE 5)

VESSEL \_\_\_\_\_ CRUISE NO. \_\_\_\_\_

OBSERVER \_\_\_\_\_ SET NO. \_\_\_\_\_

OTHER SPECIES IN NET:

	Eastern spinner	Whitebelly spinner	Unid. spinner	Delphinus	Other species	Unid. mixed spotted and spinner
♂	✓					
	50-52	53-55	56-58	59-61	62-64	65-67
	+					Card 9
	68-70	71-73	74-76	77-78	79-80	22 23-25
	?					
	26-28	29-31	32-34	35-37	38-40	41-43

♀	✓					
	44-46	47-49	50-52	53-55	56-58	59-61
	+					Card 10
	62-64	65-67	68-70	71-73	74-76	77-80
	?					
	23-25	26-28	29-31	32-34	35-37	38-40

?	✓					
	41-43	44-46	47-49	50-52	53-55	56-58
	+					
	59-61	62-64	65-67	68-70	71-73	74-76
	?					
	77-78	79-80	22	23-25	26-28	29-31

Other species code \_\_\_\_\_  
Species name \_\_\_\_\_  
35-36

See ✓ + 3

NOTES: (VIII) - What caused mortality? \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Appendix 8C. Marine Mammal Set Log/Tally Form (Version 3, Page 1) used by the Tuna-Porpoise Observer Program, 1975.

### SET LOG (Page 1)

VESSEL \_\_\_\_\_ CRUISE NO. \_\_\_\_\_  
 OBSERVER \_\_\_\_\_ SET NO. \_\_\_\_\_

BEFORE	CRUISE NO.	SET NO.	CARD	DATE			OBS. NO.	VESSEL CODE	SET TYPE	FISH TYPE	SUCCESS	POSITION OF SET				
			1	YR.	MO.	DAY					Y/N	LATITUDE	N/S	LONGITUDE	E/W	
			1													

CONDITIONS AT START OF SET: \_\_\_\_\_ NOTES (SET TYPE ETC.): \_\_\_\_\_

TIME OF SIGHTING	TIME CHASE BEGAN	WIND (KTS)	WIND DIR. CODE	SWELL (FT)	CHOP FT. & 10ths	SURFACE TEMP. °F & 10ths	STRONG CURRENT? Y/N

KIND AND NUMBERS OF BIRDS OVER SCHOOL:

FRIGATES NO.	BOOBIES NO.	TERNS NO.	SHEARWATERS NO.	JAEGARS NO.	PETRELS NO.	OTHER NO.	UNIDENTIFIED NO.
55	57	61	64	68	71	74	77

Species: \_\_\_\_\_

CREW ESTIMATES OF PORPOISE SCHOOL SIZE AND SPECIES COMPOSITION BEFORE SET:

Est. 1	CARD	TOTAL (all species) No. ± Error		% Spotters	% Spinners	% Other Sp.1	% Other Sp.2
	2	7	12	±	16	19	22
Estimate 2		28	±	36	39	42	45
Estimate 3		48	±	56	59	62	65

OTHER SP. (1) NAME \_\_\_\_\_ CODE 68 OTHER SP. (2) NAME \_\_\_\_\_ CODE 70

NOTES ON CHASE & BEHAVIOR BEFORE SET: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_



Appendix 8C. Marine Mammal Set Log/Tally Form (Version 3, Page 2) used by the Tuna-Porpoise Observer Program, 1975.

### SET LOG (Page 2)

CRUISE NO. \_\_\_\_\_  
SET NO. \_\_\_\_\_

U R I N G	NO. SPOTS USED	TIME NET LET GO	FATHOMS OF TOWLINE	CARD	Y N	EVADED SET? ~ NO.	MAJOR SPECIES: NAME	CODE	Y N	ESCAPED FROM NET BEFORE RINGS UP? ~ NO.	MAJOR SPECIES: NAME	CODE
	72	73	77	80	7	8	9	13	15	16	20	
			X	3								

S E T	TIME RINGS UP	TIME ROLL NET	NO. BUNCHES	Y N	WAS NET "DUMPED"?	TIME
	22	26	30	31	32	

CREW ESTIMATES OF PORPOISE CAPTURED:

	TOTAL CAUGHT	% SPOT	% SPIN	% OTHER Sp. (1)	% OTHER Sp. (2)
ESTIMATE 1	36	40	43	46	49
ESTIMATE 2	52	56	59	62	65
ESTIMATE 3	68	72	75	78	7

% OTHER Sp. (2) 4

OTHER Sp. (1) Name _____	CODE	OTHER Sp. (2) Name _____	CODE
	11		13

NET AND BOAT CONFIGURATION (NOTE TIME, WIND AND CURRENT DIRECTION, LOCATION OF PORPOISE (X), AREAS OF ENTANGLEMENT (E), LOCATION OF BACKDOWN AREA (B)).


NOTES (PORPOISE BEHAVIOR, TAGS SEEN, ETC.) \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Appendix 8C. Marine Mammal Set Log/Tally Form (Version 3, Page 3) used by the Tuna-Porpoise Observer Program, 1975.

### SET LOG (Page 3)

CRUISE NO. \_\_\_\_\_  
SET NO. \_\_\_\_\_

---

**PORPOISE BEHAVIOR IN NET:**

OVER THE CORKS BEFORE BACKDOWN? \* PORPOISE DEATHS PRIOR TO BACKDOWN?

Y N	~ NO.	MAJOR SPECIES: NAME	CODE	Y N	~ NO.	MAJOR SPECIES: NAME	CODE
15	16		20	22	23		27

**OPERATIONAL MALFUNCTIONS:**

DID EQUIPMENT MALFUNCTION(S) OCCUR? DID MALFUNCTION(S) RESULT IN DELAY OF SET?

WERE PORPOISE IN THE NET DURING MALFUNCTION(S)? WAS THE SET ABORTED?

Y/N
Y/N
Y/N
Time

29
31
32
33
30

**DESCRIPTIONS OF MALFUNCTIONS (IN ORDER OF OCCURRENCE):**

TIME OCCURRED	FIXED	EST. DELAY	NOTES (TYPE MALFUNCTION, HOW & WHY)
1			
3			

DID NET COLLAPSE PRIOR TO BACKDOWN? WAS NET HELD OPEN WITH SPEEDBOATS?

Y/N
Y/N

37
38

**BACKDOWN:** **AFTER BACKDOWN:**

Y N	TIME START	TIME FINISH	OBSERVER COUNT OF ANIMALS RELEASED*	~ NO. IN NET AFTER BACKDOWN	PORPOISE RESCUERS AT CORKS?	Y N	* NO. MEN RELEASED ALIVE	ENTER DEAD AS ✓ ON TALLY SHEET	
39	40	44	48	52	56	59	62	63	64

GO ON TO TALLY SHEET: \* REMEMBER THAT THE SUM OF THE PORP. OVER CORKS BEFORE B.D., THE OBSERVER COUNT OF PORP. RELEASED ALIVE, THE NUMBER OF PORP. RELEASED ALIVE BY RESCUERS AT CORKS AND THE TALLY SHEET MUST ACCOUNT FOR ALL PORPOISE CAPTURED!! AVOID DOUBLE COUNTING!

NOTES ON BACKDOWN: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Appendix 8C. Marine Mammal Set Log/Tally Form (Version 3, Page 4) used by the Tuna-Porpoise Observer Program, 1975.

CRUISE NO. \_\_\_\_\_  
SET NO. \_\_\_\_\_

**SE LOG TALLY SHEET (Page 4)**

MEONATE	SPOTTERS			SPINNERS		UNID.					
	2-TONE	SPECKLED	MOTTLED	ADULT	AGE		EASTERN	WHITEBELLY	UNID. SPIN.	DELPHINUS	OTHER SPP.
M F ?	M F ?	M F ?	M F ?	M F ?	UNK.	M F ?	M F ?	M F ?	M F ?	M F ?	
SUBTOTALS											
ANIMALS PROCESSED											
ANIMALS DUMPED											

SYMBOLS TO USE  
 + ESCAPED ALIVE  
 ⊕ ESCAPED ALIVE INJURED  
 ? = STATUS UNDETERMINED  
 ⊕ = STATUS UNDETERMINED INJURED  
 √ = DEAD

OTHER SPP. NAME \_\_\_\_\_  
 NOTE: "INJURED" MEANS: 1) BLEEDING, 2) HAVING OBVIOUSLY BROKEN BONES, OR 3) HAVING GONE THROUGH THE POWER BLOCK.

Appendix 8C. Marine Mammal Set Log/Tally Form (Version 3, Page 5) used by the Tuna-Porpoise Observer Program, 1975.

### SET LOG

(Page 5)

CRUISE NO. \_\_\_\_\_  
SET NO. \_\_\_\_\_

---

**SACKING UP?**

n	TIME START
67	68

**BRAILING?**

Y	TIME START	TIME FINISH
N	72 73	77

**WAS PORPOISE RESCUE BASKET USED?**

CARD	Y	N
5	7	8

---

TIME FINISHED SET	TOTAL KNOWN PORP. KILL (ADD ✓)	TONS YF LOADED	TONS SK LOADED	TONS OTHER SP.	OTHER Sp. CODE
9	13	17	20	23	26

OTHER SP. NAME \_\_\_\_\_

OTHER ANIMALS IN SET (SPP. & NO. COLLECTED, WHERE STORED, ETC.): \_\_\_\_\_

---

**MORTALITY:** RATE EACH OF THE FOLLOWING FACTORS CAUSING PORPOISE MORTALITY, USING CODES; 1 = NO EFFECT, 2 = SOME EFFECT, 3 = MAJOR EFFECT, 9 = DON'T KNOW

EQUIPMENT FAILURE

28

ENVIRONMENTAL CONDITIONS

29

OPERATIONS

30

ADVERSE PORPOISE BEHAVIOR

31

ADVERSE FISH BEHAVIOR

32

**PHYSICAL CAUSES OF PORPOISE DEATH:**

	% OF SPOTTERS KILLED	% OF SPINNERS KILLED	% OF OTHER SP. KILLED
1) INDIVIDUAL ENTANGLEMENT _____	33	36	39
2) MASS ENTRAPMENT IN FOLDS OR CANOPIES _____	42	45	48
3) "SACKED UP" _____	51	54	57
4) OTHER (describe) _____	60	63	66
5) UNKNOWN _____	69	72	75

OTHER Sp. NAME \_\_\_\_\_ 78

DESCRIBE AND DISCUSS HOW MORTALITY OCCURRED IN THIS SET: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Appendix 8D. Marine Mammal Set Log/Tally Form (Version 4, Page 1) used by the Tuna-Porpoise Observer Program, 1976.

### PORPOISE SET LOG

(Page 1)

VESSEL \_\_\_\_\_ CRUISE NO. \_\_\_\_\_

OBSERVER \_\_\_\_\_ SET NO. \_\_\_\_\_

BEFORE SET	CRUISE NO.	SET NO.	CARD	DATE	OBS. NO.	VESSEL CODE	SET TYPE	FISH TYPE SUCCESS-FULL? Y/N	POSITION OF SET						
			YR.	MO. DAY					LATITUDE	N S	LONGITUDE	E W			
	1	4	7	8	10	12	14	17	21	23	24	25	29	30	35

CONDITIONS AT START OF SET:

TIME OF SIGHTING	TIME CHASE BEGAN	WIND (KTS)	WIND DIR.	SWELL (FT)	CHOP FT. & 10ths	SURFACE TEMP. °F & 10ths	STRONG CURRENT? Y/N
36	40	44	46	47	49	51	54

NOTES (SET TYPE ETC.): \_\_\_\_\_

BIRDS:

Time of sighting	Distance (miles & 10ths)	Est. of total number
57	61	64
		68

CREW ESTIMATES OF PORPOISE SCHOOL SIZE AND SPECIES COMPOSITION BEFORE SET:

Est. 1	CARD	TOTAL (all species) No. ± Error		% Spotters	% Spinners	% Other Sp.1	% Other Sp.2	
1	2	7	8	12	16	19	22	25
Estimate 2		28	32	36	39	42	45	
Estimate 3		48	52	56	59	62	65	

OTHER SP.(1) NAME \_\_\_\_\_ CODE \_\_\_\_\_ OTHER SP.(2) NAME \_\_\_\_\_ CODE \_\_\_\_\_

NOTES ON CHASE & BEHAVIOR BEFORE SET: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Appendix 8D. Marine Mammal Set Log/Tally Form (Version 4, Page 2) used by the Tuna-Porpoise Observer Program, 1976.

### SET LOG (Page 2)

CRUISE NO. \_\_\_\_\_  
SET NO. \_\_\_\_\_

D U R I N G	TIME NET LET GO	FATHOMS OF TOWLINE	CARD	Y N	EVASDED SET? ~ NO.	MAJOR SPECIES: NAME	CODE	Y N	~ NO.	ESCAPED FROM NET BEFORE RINGS UP?	MAJOR SPECIES: NAME	CODE
	72 73 74 75 76 77 78 79 80		3									
S E T	TIME RINGS UP	TIME ROLL NET	AMOUNTS BURNED	Y N	TIME	WAS NET "DUMPED"?						
	22 23 24 25 26 27 28 29 30 31 32											

CREW ESTIMATES OF PORPOISE CAPTURED:

	TOTAL CAUGHT	% SPOT	% SPIN	% OTHER Sp.(1)	% OTHER Sp.(2)
ESTIMATE 1	36	40	43	46	49
ESTIMATE 2	52	56	59	62	65
ESTIMATE 3	68	72	75	78	7

4

OTHER Sp. (1) Name _____	OTHER Sp. (2) Name _____
CODE 11	CODE 13

NET AND BOAT CONFIGURATION (NOTE TIME, WIND AND CURRENT DIRECTION, LOCATION OF PORPOISE (X), AREAS OF ENTANGLEMENT (E), LOCATION OF BACKDOWN AREA (B).)


NOTES (PORPOISE BEHAVIOR, TAGS SEEN, ETC.) \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Appendix 8D. Marine Mammal Set Log/Tally Form (Version 4, Page 3) used by the Tuna-Porpoise Observer Program, 1976.

### SET LOG (Page 3)

CRUISE NO. \_\_\_\_\_  
SET NO. \_\_\_\_\_

---

**PORPOISE BEHAVIOR IN NET:**

OVER THE CORKS BEFORE BACKDOWN? \* PORPOISE DEATHS PRIOR TO BACKDOWN?

Y N	~ NO.	MAJOR SPECIES: NAME	CODE	Y N	~ NO.	MAJOR SPECIES: NAME	CODE
15	16		20	22	23		27

**OPERATIONAL MALFUNCTIONS:**

DID EQUIPMENT MALFUNCTION(S) OCCUR? DID MALFUNCTION(S) RESULT IN DELAY OF SET?

WERE PORPOISE IN THE NET DURING MALFUNCTION(S)? WAS THE SET ABORTED?

Y/N Y/N

Time Time

32 33 30

**DESCRIPTIONS OF MALFUNCTIONS (IN ORDER OF OCCURRENCE):**

	TIME OCCURRED	FIXED	EST. DELAY	NOTES (TYPE MALFUNCTION, HOW & WHY)
1				
2				
3				

DID NET COLLAPSE PRIOR TO BACKDOWN? WAS NET HELD OPEN WITH SPEEDBOATS?

Y/N Y/N

37 38

**BACKDOWN:** **AFTER BACKDOWN:**

Y N	TIME START	TIME FINISH	OBSERVER COUNT OF ANIMALS RELEASED*	~ NO. IN NET AFTER BACKDOWN	Y N	NO. MEN RELEASED	* NO. RELEASED ALIVE	ENTER DEAD AS ✓ ON TALLY SHEET	
39	40	44	48	52	56	59	62	63	64

GO ON TO TALLY SHEET: \* REMEMBER THAT THE SUM OF THE PORP. OVER CORKS BEFORE B.D., THE OBSERVER COUNT OF PORP. RELEASED ALIVE, THE NUMBER OF PORP. RELEASED ALIVE BY RESCUERS AT CORKS AND THE TALLY SHEET MUST ACCOUNT FOR ALL PORPOISE CAPTURED!! AVOID DOUBLE COUNTING!

NOTES ON BACKDOWN: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Appendix 8D. Marine Mammal Set Log/Tally Form (Version 4, Page 4) used by the Tuna-Porpoise Observer Program, 1976.

### SET LOG TALLY SHEET (Page 4)

CRUISE NO. \_\_\_\_\_
SET NO. \_\_\_\_\_

MORPH			SPOTTERS				SPINNERS			DELPHINUS			OTHER SPP.			U H I D.	
			2-TONE	SPECKLED	MOTTLED	ADULT	AGE	EASTERN	WHITBELLY								UNID. SPIN.
M	F	?	M	F	?	M	F	?	M	F	?	M	F	?	M	F	?
SUBTOTALS																	
ANIMALS PROCESSED																	
ANIMALS DUMPED																	

SYMBOLS

- + ESCAPED ALIVE
- (.) ESCAPED ALIVE INJURED
- (?) = STATUS UNDETERMINED
- (x) = STATUS UNDETERMINED

NOTE: "INJURED" MEANS:

- 1) BLEEDING.
- 2) HAVING OBVIOUSLY BROKEN



Appendix 8D. Marine Mammal Set Log/Tally Form (Version 4, Page 5) used by the Tuna-Porpoise Observer Program, 1976.

### SET LOG (Page 5)

CRUISE NO. \_\_\_\_\_

SET NO. \_\_\_\_\_

WAS PORPOISE RESCUE BASKET USED?

CARD 5 Y N

---

PACKING UP?

Y	N	TIME START

67 68

BRAILING?

Y	N	TIME START	TIME FINISH

72 73 77

---

TIME FINISHED SET	TOTAL KNOWN PORP. KILL (ADD ✓)	TONS YF LOADED	TONS SK LOADED	TONS OTHER SP.	OTHER Sp. CODE
9	13	17	20	23	26

PHYSICAL CAUSES OF PORPOISE DEATH:

	% OF SPOTTERS KILLED	% OF SPINNERS KILLED	% OF OTHER SP. KILLED
1) INDIVIDUAL ENTANGLEMENT _____	33	36	39
2) MASS ENTRAPMENT IN FOLDS OR CANOPIES _____	42	45	48
3) "SACKED UP" _____	51	54	57
4) OTHER (describe) _____	60	63	66
5) UNKNOWN _____	69	72	75

OTHER Sp. NAME \_\_\_\_\_ 78

DESCRIBE AND DISCUSS HOW MORTALITY OCCURRED IN THIS SET: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Appendix 8D. Marine Mammal Set Log/Tally Form (Version 4, Page 6) used by the Tuna-Porpoise Observer Program, 1976.

SET LOG (Page 6)	Cruise No. _____  Set No. _____
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SUPPLEMENTAL COMPLIANCE RECORD FOR REGULATION ASSESSMENT	CARD <div style="border: 1px solid black; padding: 2px; display: inline-block; font-weight: bold; font-size: 1.2em;">D</div> 7
<p><u>USE OF SPEEDBOATS PRIOR TO BACKDOWN</u>, data supplement to set log, card 4, code blocks 37 and 38:</p> <p>Number of manned speedboats in the water until the time backdown commenced.</p> <p>For vessels GREATER THAN 400 TONS CARRYING CAPACITY, if a minimum of TWO SPEEDBOATS were not manned and in the water prepared to hook onto bunchline towing points until backdown commenced, DID YOU ASCERTAIN whether the certificate holder understood the required procedure and that it is required for every set made on tuna associated with porpoise?</p> <p>For vessels of 400 TONS CARRYING CAPACITY OR LESS WHICH HAVE A GOVERNMENT OBSERVER ABOARD, if a minimum of ONE SPEEDBOAT was not manned and in the water prepared to hook onto bunchline towing points until backdown commenced, DID YOU ASCERTAIN where the certificate holder understood the required procedure and that it is required for every set made on tuna associated with porpoise?</p> <p>If manned speedboat(s) were not in the water prepared to hook onto bunchline towing points until backdown commenced on this set, were there any APPARENT REASONS or EXTENUATING CIRCUMSTANCES for not doing so?</p> <p>If so, what were they? _____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>If net COLLAPSE OCCURED on this set and SPEEDBOATS WERE NOT USED to hold the net open by towing on bunchlines, were there any APPARENT REASONS or EXTENUATING CIRCUMSTANCES for not doing so?</p> <p>If so, what were they? _____</p> <p>_____</p>	NO. <input type="checkbox"/> 8
	Y/N <input type="checkbox"/> 9
	Y/N <input type="checkbox"/> 10
	Y/N <input type="checkbox"/> 11
	Y/N <input type="checkbox"/> 12

Appendix 8D. Marine Mammal Set Log/Tally Form (Version 4, Page 7) used by the Tuna-Porpoise Observer Program, 1976.

SET LOG (Page 7)	Cruise No. _____  Set No. _____
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If SPEEDBOATS WERE USED to tow on bunchlines, but net COLLAPSE WAS NOT PREVENTED, were there any APPARENT REASONS or EXTENUATING CIRCUMSTANCES as to why the procedure was not effective?

Y/N  
  
 13

If so, what were they? \_\_\_\_\_

---



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NOTE: Actual towing on the net shall be performed when, in the opinion of the certificate holder, towing is necessary to prevent net collapse or the formation of pockets of loose webbing.

REFERENCE to required speedboat use prior to backdown; U.S. Marine Mammal Regulations, page 6, Sec. 216.24(d)(2)(iv)(E)(iii), and (E)(iv).

BACKDOWN AND POST BACKDOWN PROCEDURES, data supplement to set log, card 4, code blocks 39-66:

If the BACKDOWN PROCEDURE was not used on this set, DID YOU ASCERTAIN whether the certificate holder understood the required procedure and that it is required for every set made on tuna associated with porpoise?

Y/N  
  
 14  
 Y/N  
  
 15

If the BACKDOWN PROCEDURE was not used, were there any APPARENT REASONS or EXTENUATING CIRCUMSTANCES for not doing so?

If so, what were they? \_\_\_\_\_

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Appendix 8D. Marine Mammal Set Log/Tally Form (Version 4, Page 8) used by the Tuna-Porpoise Observer Program, 1976.

SET LOG (Page 8)	Cruise No. _____ Set No. _____
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Commencing with backdown and continuing through the "sacking up" operation, if a MINIMUM OF TWO MEN were not engaged in hand removal of porpoise from the net, DID YOU ASCERTAIN whether the certificate holder understood the required procedure and that it is required for every set made on tuna associated with porpoise?

Y/N  
  
16

Were HAND REMOVAL procedures continued on this set AFTER BACKDOWN until there were NO REMAINING LIVE PORPOISE IN THE NET prior to initiating brailing operations?

Y/N  
  
17

If HAND REMOVAL procedures were not continued on this set AFTER BACKDOWN until there were NO REMAINING LIVE PORPOISE IN THE NET prior to initiating brailing operations, DID YOU ASCERTAIN whether the certificate holder understood the required procedure and that it is required for every set made on tuna associated with porpoise?

Y/N  
  
18

If HAND REMOVAL procedures were not continued on this set AFTER BACKDOWN until there were NO REMAINING LIVE PORPOISE IN THE NET prior to initiating brailing operations, were there any APPARENT REASONS or EXTENUATING CIRCUMSTANCES for not doing so?

Y/N  
  
19

If so, what were they? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

REFERENCE to required backdown and post backdown procedures; U.S. Marine Mammal Regulations, page 6, Sec. 216.24(d)(2)(v).

Other than the backdown procedure and the use of two men removing porpoise by hand, what ADDITIONAL RELEASE procedures, if any, were used to rescue porpoise on this set? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Appendix 8D. Marine Mammal Set Log/Tally Form (Version 4, Page 9) used by the Tuna-Porpoise Observer Program, 1976.

SET LOG  
(Page 9)

Cruise No. \_\_\_\_\_  
Set No. \_\_\_\_\_

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PROHIBITION ON ENCIRCLING PURE SCHOOLS OF STRIPED DOLPHIN

IF a PURE SCHOOL OF STRIPED DOLPHIN, STENELLA COERULEOALBA, often referred to as streaker porpoise, was encircled, DID YOU ASCERTAIN whether the certificate holder understood that encircling pure schools of this species is prohibited by U.S. Marine Mammal Regulations? Y/N

IF a PURE SCHOOL of STRIPED DOLPHIN was encircled, were there any APPARENT REASONS or EXTENUATING CIRCUMSTANCES for doing so? 20  
Y/N

If so, what were they? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

REFERENCE to prohibition on encircling pure schools of striped dolphin; page 5, Sec. 216.24(d) (2) (i) (A).

ARE THERE CERTIFICATE HOLDER OR SKIPPER COMMENTS RECORDED ON THE REVERSE SIDE OF ANY DATA PAGES OF THIS PORPOISE SET LOG? Y/N

21  
22

CRUISE No. ....

SET No. ....

SET LOG  
(Page 10)

— SPECIFY KNOWN AREAS OF ENTANGLEMENT WITH AN "E".

— WAS ENTANGLEMENT CAUSED BY "GILLING OR FOLDING"?

NOTES:

The diagram shows a vertical rectangular section of a net. On the right side, there are labels with arrows pointing to specific parts: 'TOWING END' at the top, 'SACK' at the top right, 'ZIPPER' in the middle right, 'SAFETY PANEL' below the zipper, and 'SACK' at the bottom right. The net is represented by a grid of vertical lines, with a wavy line indicating a fold or zipper across the middle.

Appendix 8E. Marine Mammal Set Log/Tally Form (Version 5, Page 1) used by the Tuna-Porpoise Observer Program, 1977.

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**1977A PORPOISE SET LOG**

NOAA - U.S. DEPT. OF COM

Page

**CONDITIONS AT START OF SET**

CRUISE #			SET #			CARD #			DATE			OBSERVER #			POSITION			SET TYPE										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29
						0	1																					

BIRDS ?		TIME BIRDS SIGHTED	DISTANCE (nm & 10ths)	TOTAL # OF BIRDS	TIME PORPOISE SIGHTED	TIME CHASE BEGAN	# SPDBTS USED	WIND (Kts)	WIND DIR. CODE	SWELL (Ft.)	CHOP (Ft. & 10ths)	SURFACE TEMP. (*F & 10ths)	
Y	N	31	32	36	39	43	47	51	52	54	55	57	59

NOTES: (Conditions; chase and behavior before net let go, etc.)

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(Continue on pg. 17 & 18)

**CREW ESTIMATES OF NUMBER AND SPECIES COMPOSITION OF SCHOOL BEFORE SET**

INDICATE (TIME) AND BY WHOM		TOTAL NUMBER	% SPOTTED	% SPINNERS	% OTHER SPECIES (1)	% OTHER SPECIES (2)	OTHER SPECIES (1)	CODE		
ESTIMATE 1		62	66	69	72	75	NAME	78		
( )										
ESTIMATE 2		CARD #	7	9	13	16	19	22	OTHER SPECIES (2)	CODE
( )		0	2							25
ESTIMATE 3		27	31	34	37	40	NAME			
( )										

**OBSERVER ESTIMATE OF NUMBER AND SPECIES COMPOSITION OF SCHOOL BEFORE SET**

TIME	TOTAL NUMBERS (ALL SPECIES)			PERCENT SPECIES COMPOSITION					
	BEST ESTIMATE	HIGHEST ESTIMATE	LOWEST ESTIMATE	% SPOTTED	% EASTERN SPINNERS	% WHITEBELLY SPINNERS	% OTHER OR UNID. SPINNERS	% OTHER SPECIES (1)	% OTHER SPECIES (2)
( )	43	47	51	55	58	61	64	67	70

SPOTTED STOCK	CODE	OTHER SPINNER	CODE	OTHER SPECIES (1)	CODE	OTHER SPECIES (2)	CODE
NAME	73	NAME	75	NAME	77	NAME	79

Appendix 8E. Marine Mammal Set Log/Tally Form (Version 5, Page 2) used by the Tuna-Porpoise Observer Program, 1977.

**1977A PORPOISE SET LOG**

NMFS FSW3-5D 1-77 NOAA - U.S. DEPT. OF COMM. **Page 2**

CRUISE AND SET NUMBER \_\_\_\_\_

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**CONDITIONS AT TIME THE NET LET GO**

NOTES: \_\_\_\_\_

CARD #	TIME NET LET GO	Y N	EVADED SET? ~ #	MAJOR SPECIES EVADED SET	CODE
03					
7	9	13	14	NAME	18

---

**OBSERVER ESTIMATE OF NUMBER AND SPECIES COMPOSITION OF PORPOISE ENCIRCLED**

TIME	TOTAL NUMBER (ALL SPECIES)			PERCENT SPECIES COMPOSITION								
	BEST ESTIMATE	HIGHEST ESTIMATE	LOWEST ESTIMATE	% SPOTTED	% EASTERN SPINNERS	% WHITEBELLY SPINNERS	% OTHER OR UNID. SPINNERS	% OTHER SPECIES (1)	% OTHER SPECIES (2)			
	20	24	28	32	35	38	41	44	47			
	SPOTTED STOCK		CODE	OTHER SPINNER		CODE	OTHER SPECIES (1)		CODE	OTHER SPECIES (2)		CODE
	NAME		50	NAME		52	NAME		54	NAME		56

---

**CONDITIONS AT THE TIME THE RINGS BREAK WATER**

Y N	ESCAPED FROM NET BEFORE RINGS UP? ~ #	MAJOR SPECIES	CODE	TIME RINGS UP	TIME ROLL NET	BUNCHES	Y N	WAS NET DUMPED? TIME NET DUMPED	CARD #	WIND (Kts.)	WIND DIR	SWELL (Fr.)	CHOP (Fr. & 10ths.)	SURFACE TEMP. (*F & 10ths.)	STRONG CURRENT Y/N	
									04							
			63	65	69	73	74	75	78	7	9	11	12	14	16	19

---

**CREW ESTIMATES OF NUMBER AND SPECIES COMPOSITION OF PORPOISE CAPTURED**

INDICATE (TIME) AND BY WHOM ESTIMATE	TOTAL CAUGHT	% SPOTTED	% SPINNERS	% OTHER SPECIES (1)	% OTHER SPECIES (2)	OTHER SPECIES (1)	CODE
( )	20	24	27	30	33	NAME	36
( )	38	42	45	48	51	NAME	54
( )	56	60	63	66	69		

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**OBSERVER ESTIMATE OF NUMBER AND SPECIES COMPOSITION OF PORPOISE CAPTURED**

TIME	TOTAL CAUGHT (ALL SPECIES)				PERCENT SPECIES COMPOSITION							
	BEST ESTIMATE	HIGHEST ESTIMATE	CARD #	LOWEST ESTIMATE	% SPOTTED	% EASTERN SPINNERS	% WHITEBELLY SPINNERS	% OTHER OR UNID. SPINNERS	% OTHER SPECIES (1)	% OTHER SPECIES (2)		
	72	76	79	9	13	16	19	22	25	28		
	SPOTTED STOCK		CODE	OTHER SPINNER		CODE	OTHER SPECIES (1)		CODE	OTHER SPECIES (2)		CODE
	NAME		31	NAME		33	NAME		35	NAME		37



Appendix 8E. Marine Mammal Set Log/Tally Form (Version 5, Page 3) used by the Tuna-Porpoise Observer Program, 1977.

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**1977A PORPOISE SET LOG**
CRUISE AND SET NUMBER \_\_\_\_\_
NOAA - U.S. DEPT. OF COMMERCE  
**Page 3**

**LIVE PORPOISE RELEASED AND/OR ESCAPED PRIOR TO BACKDOWN.**  
IF NO BACKDOWN OCCURRED, SKIP THIS SECTION AND GO TO BACKDOWN SECTION.

RELEASED BY RAFT(S)?

Y N	#	NUMBER
39	40	41

RELEASED BY TENDER(S)  
OR SPEEDBOAT(S)?

Y N	#	NUMBER
44	45	46

RELEASED BY SWIMMER(S)?

Y N	#	NUMBER
49	50	51

RELEASED BY OTHER METHOD(S)?

Y N	#	NUMBER
54	55	56

RELEASED OVER DECK?

Y N	NUMBER
59	60

ESCAPED?

Y N	NUMBER
63	64

TOTAL NUMBER OF RESCUERS PRIOR TO BACKDOWN

NUMBER
67

NOTES ON RESCUE EFFORTS PRIOR TO BACKDOWN:

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**BACKDOWN - IF NO BACKDOWN, ANSWER Y/N BACKDOWN AND THEN GO TO TALLY SHEET**

BACKDOWN?		OBSERVERS COUNT OF ANIMALS RELEASED BECAUSE OF BACKING DOWN.					FISH LOSS DURING BACKDOWN?		KNOWN LIVE IN NET AFTER BACKDOWN			
Y N	TIME START BACKDOWN	TIME END BACKDOWN	CARD #	BEST ESTIMATE	HIGHEST ESTIMATE	LOWEST ESTIMATE	Y N	~ TONS	# SPOTTED	# SPINNERS	# ALL OTHER	
			<b>06</b>									
69	70	74	77	7	9	13	17	21	22	25	28	31

**LIVE PORPOISE RELEASED BY OTHER METHODS DURING BACKDOWN.**  
DOES NOT INCLUDE THOSE ANIMALS THAT WERE BACKED OUT.

RELEASED BY RAFT(S)?

Y N	#	NUMBER
34	35	36

RELEASED BY TENDER(S)  
OR SPEEDBOAT(S)?

Y N	#	NUMBER
39	40	41

RELEASED BY SWIMMER(S)?

Y N	#	NUMBER
44	45	46

RELEASED BY OTHER METHOD(S)?

Y N	#	NUMBER
49	50	51

TOTAL NUMBER OF RESCUERS DURING BACKDOWN

NUMBER
54

NOTES ON RESCUE DURING BACKDOWN:

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**TALLY SHEET**

RECORD ALL DEAD (✓) AND ALL UNDETERMINED STATUS (?) AND (?) DURING SET ON TALLY SHEET.  
RECORD ALL LIVE (+ AND ⊕) THAT OCCUR AFTER BACKDOWN ON TALLY SHEET, AND SUMMARIZE ON PAGE 4.  
IF NO BACKDOWN, RECORD ALL PORPOISE ON TALLY SHEET, AND SUMMARIZE LIVE (+ AND ⊕) ON PAGE 4.

Appendix 8E. Marine Mammal Set Log/Tally Form (Version 5, Page 4) used by the Tuna-Porpoise Observer Program, 1977.

NMFS F5W3-SD 1-77 **1977A PORPOISE SET LOG** CRUISE AND SET NUMBER \_\_\_\_\_ NOAA - U.S. DEPT. OF COMM. **Page 4**

**LIVE PORPOISE RELEASED AND/OR ESCAPED AFTER BACKDOWN.**  
 IF NO BACKDOWN OCCURRED, ACCOUNT FOR ALL LIVE ANIMALS RELEASED DURING THE SET IN THIS SECTION.  
 THIS IS A SUMMARY OF ALL LIVE ANIMALS ON THE TALLY SHEET (+ AND ⊙).

<p>RELEASED BY RAFT(S)?</p> <table border="1" style="width: 100%; text-align: center;"> <tr> <td>Y N</td> <td>U M</td> <td>NUMBER</td> </tr> <tr> <td>56</td> <td>57</td> <td>58</td> </tr> </table>	Y N	U M	NUMBER	56	57	58	<p>RELEASED BY TENDER(S) OR SPEEDBOAT(S)?</p> <table border="1" style="width: 100%; text-align: center;"> <tr> <td>Y N</td> <td>U M</td> <td>NUMBER</td> </tr> <tr> <td>61</td> <td>62</td> <td>63</td> </tr> </table>	Y N	U M	NUMBER	61	62	63	<p>RELEASED BY SWIMMER(S)?</p> <table border="1" style="width: 100%; text-align: center;"> <tr> <td>Y N</td> <td>U M</td> <td>NUMBER</td> </tr> <tr> <td>66</td> <td>67</td> <td>68</td> </tr> </table>	Y N	U M	NUMBER	66	67	68	<p>RELEASED BY OTHER METHOD(S)?</p> <table border="1" style="width: 100%; text-align: center;"> <tr> <td>Y N</td> <td>U M</td> <td>NUMBER</td> </tr> <tr> <td>71</td> <td>72</td> <td>73</td> </tr> </table>	Y N	U M	NUMBER	71	72	73				
Y N	U M	NUMBER																													
56	57	58																													
Y N	U M	NUMBER																													
61	62	63																													
Y N	U M	NUMBER																													
66	67	68																													
Y N	U M	NUMBER																													
71	72	73																													
<p>RELEASED FROM SACK?</p> <table border="1" style="width: 100%; text-align: center;"> <tr> <td>Y N</td> <td>U M</td> <td>NUMBER</td> </tr> <tr> <td>76</td> <td>77</td> <td>78</td> <td>80</td> </tr> </table>	Y N	U M	NUMBER	76	77	78	80	<p>PORPOISE BASKET USED?</p> <table border="1" style="width: 100%; text-align: center;"> <tr> <td>CARD #</td> <td>Y N</td> </tr> <tr> <td>07</td> <td>7</td> <td>9</td> </tr> </table>	CARD #	Y N	07	7	9	<p>RELEASED OVER DECK?</p> <table border="1" style="width: 100%; text-align: center;"> <tr> <td>Y N</td> <td>NUMBER</td> </tr> <tr> <td>10</td> <td>11</td> </tr> </table>	Y N	NUMBER	10	11	<p>ESCAPED?</p> <table border="1" style="width: 100%; text-align: center;"> <tr> <td>Y N</td> <td>NUMBER</td> </tr> <tr> <td>14</td> <td>15</td> </tr> </table>	Y N	NUMBER	14	15	<p>TOTAL NUMBER OF RESCUERS AFTER BACKDOWN</p> <table border="1" style="width: 100%; text-align: center;"> <tr> <td>18</td> </tr> </table>	18	<div style="border: 1px solid black; padding: 5px;"> <p>WAS A PORPOISE CROOK USED TO RESCUE PORPOISE DURING THE SET?</p> <table border="1" style="width: 100%; text-align: center;"> <tr> <td>Y N</td> <td>NUMBER RESCUED</td> </tr> <tr> <td></td> <td>20</td> <td>21</td> </tr> </table> </div>	Y N	NUMBER RESCUED		20	21
Y N	U M	NUMBER																													
76	77	78	80																												
CARD #	Y N																														
07	7	9																													
Y N	NUMBER																														
10	11																														
Y N	NUMBER																														
14	15																														
18																															
Y N	NUMBER RESCUED																														
	20	21																													

**END OF SET**

<p>SACKING UP?</p> <table border="1" style="width: 100%; text-align: center;"> <tr> <td>Y N</td> <td># LIVE IN NET AT START</td> <td>TIME START SACKING UP</td> </tr> <tr> <td>23</td> <td>24</td> <td>27</td> </tr> </table>	Y N	# LIVE IN NET AT START	TIME START SACKING UP	23	24	27	<p>BRAILING?</p> <table border="1" style="width: 100%; text-align: center;"> <tr> <td>Y N</td> <td># LIVE IN NET AT START</td> <td>TIME START BRAILING</td> <td>TIME END BRAILING</td> </tr> <tr> <td>31</td> <td>32</td> <td>35</td> <td>39</td> </tr> </table>	Y N	# LIVE IN NET AT START	TIME START BRAILING	TIME END BRAILING	31	32	35	39	<p>TIME FINISH SET</p> <table border="1" style="width: 100%; text-align: center;"> <tr> <td>43</td> </tr> </table>	43	<p>WAS A STRONG CURRENT RUNNING AT ANY TIME THIS SET?</p> <table border="1" style="width: 100%; text-align: center;"> <tr> <td>Y N</td> </tr> <tr> <td>47</td> </tr> </table>	Y N	47
Y N	# LIVE IN NET AT START	TIME START SACKING UP																		
23	24	27																		
Y N	# LIVE IN NET AT START	TIME START BRAILING	TIME END BRAILING																	
31	32	35	39																	
43																				
Y N																				
47																				
<p>TOTAL KNOWN PORPOISE KILL (ADD ✓)</p> <table border="1" style="width: 100%; text-align: center;"> <tr> <td>48</td> </tr> </table>	48	<p>TOTAL INJURED</p> <table border="1" style="width: 100%; text-align: center;"> <tr> <td>52</td> </tr> </table>	52	<p>SUCCESSFUL SET?</p> <table border="1" style="width: 100%; text-align: center;"> <tr> <td>Y N</td> </tr> <tr> <td>54</td> </tr> </table>	Y N	54	<p>TONS YF    TONS SK    TONS OTHER    OTHER FISH CODE</p> <table border="1" style="width: 100%; text-align: center;"> <tr> <td>55</td> <td>58</td> <td>61</td> <td>64</td> </tr> </table>	55	58	61	64									
48																				
52																				
Y N																				
54																				
55	58	61	64																	

**PHYSICAL CAUSES OF MORTALITY**

DESCRIBE ENTANGLEMENT AND ENTRAPMENT USING THE NET SCHEMATIC (PAGE 13). DESCRIBE AND DISCUSS CAUSES OF MORTALITY ON BACK OF NET SCHEMATIC (PAGE 14).

<p><b>NUMBER OF KNOWN PORPOISE KILLED:</b></p> <table border="1" style="width: 100%; text-align: center;"> <tr> <td># BEFORE BACKDOWN</td> <td>DURING BACKDOWN</td> <td>CARD #</td> <td># AFTER BACKDOWN</td> </tr> <tr> <td>75</td> <td>78</td> <td>08</td> <td>80</td> <td>7</td> <td>9</td> </tr> </table> <p>KNOWN ENTANGLEMENT</p> <table border="1" style="width: 100%; text-align: center;"> <tr> <td>21</td> <td>24</td> <td>27</td> </tr> </table> <p>KNOWN ENTRAPMENT IN FOLDS OR CANOPIES</p> <table border="1" style="width: 100%; text-align: center;"> <tr> <td>21</td> <td>24</td> <td>27</td> </tr> </table> <p><b>NUMBER OF PORPOISE ENTANGLED IN:</b></p> <table border="1" style="width: 100%; text-align: center;"> <tr> <td>1 1/2" MESH</td> <td>2" MESH</td> <td>4 1/4" MESH</td> <td>UNKNOWN MESH SIZE</td> </tr> <tr> <td>48</td> <td>50</td> <td>52</td> <td>54</td> </tr> </table>	# BEFORE BACKDOWN	DURING BACKDOWN	CARD #	# AFTER BACKDOWN	75	78	08	80	7	9	21	24	27	21	24	27	1 1/2" MESH	2" MESH	4 1/4" MESH	UNKNOWN MESH SIZE	48	50	52	54	<p><b>PERCENTAGE OF ALL PORPOISE KILLED:</b></p> <table border="1" style="width: 100%; text-align: center;"> <tr> <td>% SPOTTED KILLED</td> <td>% SPINNERS KILLED</td> <td>% ALL OTHER KILLED</td> </tr> <tr> <td>66</td> <td>69</td> <td>72</td> </tr> </table> <p>KNOWN ENTANGLEMENT</p> <table border="1" style="width: 100%; text-align: center;"> <tr> <td>12</td> <td>15</td> <td>18</td> </tr> </table> <p>KNOWN ENTRAPMENT</p> <table border="1" style="width: 100%; text-align: center;"> <tr> <td>30</td> <td>33</td> <td>36</td> </tr> </table> <p>KNOWN SACKED-UP</p> <table border="1" style="width: 100%; text-align: center;"> <tr> <td>39</td> <td>42</td> <td>45</td> </tr> </table> <p>KNOWN OTHER</p> <table border="1" style="width: 100%; text-align: center;"> <tr> <td>56</td> <td>59</td> <td>62</td> </tr> </table> <p>UNKNOWN</p> <table border="1" style="width: 100%; text-align: center;"> <tr> <td>56</td> <td>59</td> <td>62</td> </tr> </table> <p>OTHER SPECIES</p> <table border="1" style="width: 100%; text-align: center;"> <tr> <td>CODE</td> </tr> <tr> <td>65</td> </tr> </table>	% SPOTTED KILLED	% SPINNERS KILLED	% ALL OTHER KILLED	66	69	72	12	15	18	30	33	36	39	42	45	56	59	62	56	59	62	CODE	65
# BEFORE BACKDOWN	DURING BACKDOWN	CARD #	# AFTER BACKDOWN																																													
75	78	08	80	7	9																																											
21	24	27																																														
21	24	27																																														
1 1/2" MESH	2" MESH	4 1/4" MESH	UNKNOWN MESH SIZE																																													
48	50	52	54																																													
% SPOTTED KILLED	% SPINNERS KILLED	% ALL OTHER KILLED																																														
66	69	72																																														
12	15	18																																														
30	33	36																																														
39	42	45																																														
56	59	62																																														
56	59	62																																														
CODE																																																
65																																																

SHOW ENTANGLEMENT ON NET SCHEMATIC (PAGE 13).

NAME \_\_\_\_\_



Appendix 8E. Marine Mammal Set Log/Tally Form (Version 5, Page 6) used by the Tuna-Porpoise Observer Program, 1977.

NMF5 F5W3-SD 1-77 **1977A PORPOISE SET LOG TALLY SHEET** CRUISE AND SET NUMBER \_\_\_\_\_ NOAA - U.S. DEPT. OF COMM. Page 6

Spotted Stock Name \_\_\_\_\_ Other Spinner Name \_\_\_\_\_ Other Species (1) Name \_\_\_\_\_ Other Species (2) Name \_\_\_\_\_

NEONATE			TWO-TONE			SPECKLED			MOTTLED			ADULT			AGE UNK			SPINNERS						OTHER SPECIES (1)			OTHER SPECIES (2)			U N I D											
																		EASTERN		WHITEBELLY		OTHER OR UNID											M		F		?		M		F
M	F	?	M	F	?	M	F	?	M	F	?	M	F	?	M	F	?	M	F	?	M	F	?	M	F	?	M	F	?	M	F	?	M	F	?	M	F	?	M	F	?

SUBTOTALS ∘ ∠ ⊕ ⊖  
 ANIMALS PROCESSED  
 ANIMALS DUMPED

SYMBOLS TO USE:  
 ∠ = DEAD  
 ⊕ = ESCAPED ALIVE  
 ∘ = STATUS UNDETERMINED  
 ∠ = STATUS UNDETERMINED  
 ⊖ = HAVING OBVIOUSLY BROKEN BONES  
 ⊕ = "INJURED" MEANS

Appendix 8E. Marine Mammal Set Log/Tally Form (Version 5, Page 7) used by the Tuna-Porpoise Observer Program, 1977.

<p>NMFS F5W3-SD 1-77</p>	<h3 style="margin: 0;">1977A PORPOISE SET LOG</h3>	<p>CRUISE AND SET NUMBER _____</p>	<p>NOAA - U.S. DEPT. OF COMM. <b>Page 7</b></p>
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IF NO BACKDOWN OCCURRED, ENTER CODE 3 FOR QUESTIONS 2-9, AND SKIP TO ITEM 10.  
ANSWER EACH QUESTION BY ENTERING THE APPROPRIATE CODE:  
1 = YES    2 = NO    3 = NOT APPLICABLE

	Y/N/NA
<p>2. Were speedboat(s) used to tow on the net prior to backdown? . . . . .     Illustrate and describe towing on pages 15-18. Include attachment points,     net configurations, times, methods of towing, etc.</p>	<input style="width: 20px; height: 20px;" type="text"/> 68
<p>3. Did a net collapse occur prior to backdown? . . . . .     Illustrate and describe net collapse on pages 15-18.</p>	<input style="width: 20px; height: 20px;" type="text"/> 69
<p>    3a. Were porpoise killed as a result of a net collapse prior to backdown? . . . . .</p>	<input style="width: 20px; height: 20px;" type="text"/> 70
<p>4. Did the backdown area corks come together prior to the initiation of backdown? . . . . .</p>	<input style="width: 20px; height: 20px;" type="text"/> 71
<p>5. Were speedboat(s) used to open or adjust the backdown area prior to backdown? . . . . .</p>	<input style="width: 20px; height: 20px;" type="text"/> 72
<p>6. Was the net tied down at the corkline and bunchline marks (apron systems only)? . . . . .</p>	<input style="width: 20px; height: 20px;" type="text"/> 73
<p>7. Did the safety panel cover the perimeter of the backdown area? . . . . .</p>	<input style="width: 20px; height: 20px;" type="text"/> 74
<p>8. Were canopies evident during backdown? . . . . .     Illustrate and describe any canopies and porpoise involvement on pages 15-18.</p>	<input style="width: 20px; height: 20px;" type="text"/> 75
<p>    8a. Were porpoise killed as a result of canopies during backdown? . . . . .</p>	<input style="width: 20px; height: 20px;" type="text"/> 76
<p>9. After backdown, did the corkline come together at any point along the backdown channel? . . . . .</p>	<input style="width: 20px; height: 20px;" type="text"/> 77
<p>10. Did a net collapse occur after backdown, or if no backdown, at any time during the set? . . . . .</p>	<input style="width: 20px; height: 20px;" type="text"/> 78
<p>    10a. Were porpoise killed as a result of a net collapse after backdown, or, if no backdown,     at any time during the set? . . . . .</p>	<input style="width: 20px; height: 20px;" type="text"/> 79
<p>11. Were speedboat(s) used to tow on the net after backdown, or if no backdown, at any time during the set? . . . . .     Illustrate and describe towing on pages 15-18. Include attachment points,     net configurations, times, methods of towing, etc.</p>	<input style="width: 20px; height: 20px;" type="text"/> 80

Appendix 8E. Marine Mammal Set Log/Tally Form (Version 5, Page 8) used by the Tuna-Porpoise Observer Program, 1977.

NMFS F5W3-5D  
1-77

**1977A PORPOISE SET LOG**

CRUISE AND SET NUMBER \_\_\_\_\_ NOAA - U.S. DEPT. OF COMM.

**Page 8**

Answer each question by entering appropriate code: 1 = YES 2 = NO 3 = NOT APPLICABLE

12. Were concentrations of jellyfish encountered during this set? . . . . . Y/N  
**09**  
7 9

12a. Did the presence of concentrations of jellyfish result in any problems with the net? . . . . . Y/N/NA  
  
10  
Describe any problems resulting from jellyfish on page 17.

13. Was maintenance required on apron systems or small mesh strips this set? . . . . . Y/N/NA  
  
11

**OPERATIONAL MALFUNCTIONS**

14. Did equipment malfunction(s) occur this set? . . . . .   
12

14a. Did malfunction(s) result in a delay of set? . . . . .   
13

14b. Were porpoise in the net during malfunctions? . . . . .   
14

15. Was the set aborted? . . . . . Y/N TIME  
      
15 16

**DESCRIBE MALFUNCTION(S) IN ORDER OF OCCURRENCE**

	OCCURRED	TIME FIXED	ESTIMATED DELAY IN MINUTES	NOTES: (TYPE OF MALFUNCTION, HOW, WHY)
1				
2				
3				
4				

Appendix 8E. Marine Mammal Set Log/Tally Form (Version 5, Page 9) used by the Tuna-Porpoise Observer Program, 1977.

**1977A PORPOISE SET LOG**

NOAA - U.S. DEPT. OF COM. **Page 9**

HMFS PSW-10  
1-77

CRUISE AND SET NUMBER \_\_\_\_\_

**COMPLIANCE RECORD FOR REGULATION ASSESSMENT**

Answer each question by entering appropriate code: 1 = YES 2 = NO 3 = NOT APPLICABLE

**1. PROHIBITED SCHOOL**

a. If a prohibited school was encircled, DID YOU ASCERTAIN?  20

b. Did you OBSERVE any CIRCUMSTANCES as to why the procedure was not followed?  21

c. or RECEIVE any JUSTIFYING REASONS . . . from the SKIPPER or CERTIFICATE HOLDER?  22

If yes, (b. and/or c.), describe: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

d. Compliance Classification . . . . .  23

**2. MANNED SPEEDBOATS**

a. If porpoise were encircled and a minimum of two manned speed boats (One manned speedboat for Class I vessels) were not utilized, DID YOU ASCERTAIN?  24

b. Did you OBSERVE any CIRCUMSTANCES as to why the procedure was not followed?  25

c. or RECEIVE any JUSTIFYING REASONS . . . from the SKIPPER or CERTIFICATE HOLDER?  25

If yes, (b. and/or c.), describe: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

d. Compliance Classification . . . . .  27

**3. BOW BUNCHES**

a. If porpoise were captured and a minimum of two bow bunches were not pulled, DID YOU ASCERTAIN?  28

b. Did you OBSERVE any CIRCUMSTANCES as to why the procedure was not followed?  29

c. or RECEIVE any JUSTIFYING REASONS . . . from the SKIPPER or CERTIFICATE HOLDER?  30

If yes, (b. and/or c.), describe: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

d. Compliance Classification . . . . .  31

Appendix 8E. Marine Mammal Set Log/Tally Form (Version 5, Page 10) used by the Tuna-Porpoise Observer Program, 1977.

1977A PORPOISE SET LOG

NOAA - U.S. DEPT. OF COMM. Page 10

Answer each question by entering appropriate code: 1 = YES 2 = NO 3 = NOT APPLICABLE

4. BACKDOWN

a. If live porpoise were in the net and the backdown procedure was not used, DID YOU ASCERTAIN?  32

b. Did you OBSERVE any CIRCUMSTANCES as to why the procedure was not followed?  33

c. or RECEIVE any JUSTIFYING REASONS . . . from the SKIPPER or CERTIFICATE HOLDER?  34

If yes, (b. and/or c.), describe: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

d. Compliance Classification . . . . .  35

5. SAFETY PANEL COVERING PERIMETER

a. If the backdown procedure was used and the porpoise safety panel did not cover the entire perimeter of the backdown area, DID YOU ASCERTAIN?  36

b. Did you OBSERVE any CIRCUMSTANCES as to why the procedure was not followed?  37

c. or RECEIVE any JUSTIFYING REASONS . . . from the SKIPPER or CERTIFICATE HOLDER?  38

If yes, (b. and/or c.), describe: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

d. Compliance Classification . . . . .  39

6. TWO RESCUERS

a. If live porpoise were in the net and a minimum of two men were not actively engaged in hand removal, DID YOU ASCERTAIN?  40

b. Did you OBSERVE any CIRCUMSTANCES as to why the procedure was not followed?  41

c. or RECEIVE any JUSTIFYING REASONS . . . from the SKIPPER or CERTIFICATE HOLDER?  42

If yes, (b. and/or C.), describe: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

d. Compliance Classification | . . . . .  43



Appendix 8E. Marine Mammal Set Log/Tally Form (Version 5, Page 11) used by the Tuna-Porpoise Observer Program, 1977.

**1977A PORPOISE SET LOG**

MOAA - U.S. DEPT. OF COM. **Page 11**

Answer each question by entering appropriate code: 1 = YES 2 = NO 3 = NOT APPLICABLE

**7. CONTINUOUS HAND REMOVAL**

a. If live porpoise were in the net and hand removal was not continuous, DID YOU ASCERTAIN?  41

b. Did you OBSERVE any CIRCUMSTANCES as to why the procedure was not followed?  45

c. or RECEIVE any JUSTIFYING REASONS . . . from the SKIPPER or CERTIFICATE HOLDER?  46

If yes, (b. and/or c.), describe: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

d. Compliance Classification  47

**8. LIVE PORPOISE BRAILED**

a. If live porpoise were in the net when brailing operations were initiated, DID YOU ASCERTAIN?  48

b. Did you OBSERVE any CIRCUMSTANCES as to why the procedure was not followed?  49

c. or RECEIVE any JUSTIFYING REASONS . . . from the SKIPPER or CERTIFICATE HOLDER?  50

If yes, (b. and/or c.), describe: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

d. Compliance Classification  51

**9. POINTED INSTRUMENT**

a. If a sharp or pointed instrument was used on porpoise, DID YOU ASCERTAIN?  52

b. Did you OBSERVE any CIRCUMSTANCES as to why the procedure was not followed?  53

c. or RECEIVE any JUSTIFYING REASONS . . . from the SKIPPER or CERTIFICATE HOLDER?  54

If yes, (b. and/or c.), describe: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

d. Compliance Classification  55

**10. Are there any skipper or certificate holder comments recorded for this set?**  56

Appendix 8E. Marine Mammal Set Log/Tally Form (Version 5, Page 12) used by the Tuna-Porpoise Observer Program, 1977.

HWFS FS-2-50  
1-77

1977A PORPOISE SET LOG

CRUISE AND  
SET NUMBER \_\_\_\_\_

NOAA - U.S. DEPT. OF COMM.  
Page 12

SKIPPER COMMENTS

Appendix 8E. Marine Mammal Set Log/Tally Form (Version 5, Page 13) used by the Tuna-Porpoise Observer Program, 1977.

NMFS F5W3-SD  
1-77

**1977A PORPOISE SET LOG**

CRUISE AND  
SET NUMBER \_\_\_\_\_

NOAA - U.S. DEPT. OF COMM.  
**Page 13**

**NET SCHEMATIC**

**INSTRUCTIONS:**

Sketch in changes so this net describes the net on vessel.  
Note mesh sizes of strips.  
Specify known areas of entanglement.

- E = individual entanglement
- ⓔ = mass (>15) entanglement
- C = canopies or folds

**Entanglement** means stuck to the net by a part of the body, i.e., flukes, snout or flipper.

**Entrapment** means forced entanglement due to a configuration of the net which traps or poses unusual hazard to porpoise, not the size of the net per se, i.e., folds or canopies.

**DESCRIBE AND DISCUSS ENTANGLEMENT AND ENTRAPMENT:**




Appendix 8E. Marine Mammal Set Log/Tally Form (Version 5, Page 15) used by the Tuna-Porpoise Observer Program, 1977.

NMFS FSW3-SD  
1-77

## 1977A PORPOISE SET LOG

CRUISE AND SET NUMBER \_\_\_\_\_

NOAA - U.S. DEPT. OF COMM.  
**Page 15**

**INDICATE TIME AND EVENT**  
(Operations, Malfunction, Rescue, Net Collapse, Mortality, etc.)

TIME

NOTES: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**SYMBOLS**

- X PORPOISE
- E ENTANGLEMENT
- W ← WIND DIRECTION
- D → CURRENT DIRECTION
- C CANOPY
- N NET COLLAPSE
- S CORKLINE SINKAGE
- FL FISH LOSS
- R PORPOISE RESCUE OR RELEASE
- B BACKDOWN AREA
- Ⓢ SKIFF
- ▷ SPEEDBOAT OR TENDER
- ▷ R SPEEDBOAT OR TENDER INVOLVED IN HAND RELEASE
- Ⓢ SWIMMERS

- ▷ SPEEDBOAT ATTACHED BUT NOT TOWING
- ▷ TOWING FROM STERN
- ▷ TOWING FROM BOW
- ▷ TOWING ONE BUNCH
- ▷ TOWING TWO BUNCHES
- ▷ TOWING ON CORKLINE

ENTER ADDITIONAL SYMBOLS YOU USE:

<p>TIME</p> <div style="border: 1px solid black; height: 100px; width: 100%;"></div> <p>NOTES: _____ _____ _____</p>	<p>TIME</p> <div style="border: 1px solid black; height: 100px; width: 100%;"></div> <p>NOTES: _____ _____ _____</p>
--	--

<p>TIME</p> <div style="border: 1px solid black; height: 100px; width: 100%;"></div> <p>NOTES: _____ _____ _____</p>	<p>TIME</p> <div style="border: 1px solid black; height: 100px; width: 100%;"></div> <p>NOTES: _____ _____ _____</p>
--	--

Appendix 8E. Marine Mammal Set Log/Tally Form (Version 5, Page 16) used by the Tuna-Porpoise Observer Program, 1977.

<small>NMFS FSW3-SD 1-77</small>	<b>1977A PORPOISE SET LOG</b>	<small>CRUISE AND SET NUMBER _____</small>	<small>NOAA - U.S. DEPT. OF COMM.</small> <b>Page 16</b>
<small>TIME</small>		<small>TIME</small>	
<small>NOTES:</small> _____		<small>NOTES:</small> _____	
_____		_____	
_____		_____	
<small>TIME</small>		<small>TIME</small>	
<small>NOTES:</small> _____		<small>NOTES:</small> _____	
_____		_____	
_____		_____	
<small>TIME</small>		<small>TIME</small>	
<small>NOTES:</small> _____		<small>NOTES:</small> _____	
_____		_____	
_____		_____	

Appendix 8E. Marine Mammal Set Log/Tally Form (Version 5, Page 17) used by the Tuna-Porpoise Observer Program, 1977.

NMFS FSW3-SD 1-77	<b>1977A PORPOISE SET LOG</b>	CRUISE AND SET NUMBER _____	NOAA - U.S. DEPT. OF COMM.
			<b>Page 17</b>
NOTES AND COMMENTS ON THIS SET (NOTE TIMES):			
○ _____			
_____			
_____			
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Appendix 8E. Marine Mammal Set Log/Tally Form (Version 5, Page 19) used by the Tuna-Porpoise Observer Program, 1977.

NOAA - U.S. DEPT. OF COMM.

1977A PORPOISE SET LOG/TALLY SUMMARY  
(Page 19)

NMFS FSW3-SD  
1-77

SET NO. 1 4

CARD 10	NEONATE M F ?	2-TONE M F ?	SPECKLED M F ?	MOTTLED M F ?	ADULT M F ?	EASTERN M F ?
	7 9 12 15 18 21 24 27 30 33 36 39 42 45 48 51 54 57 60 63					
	UNID. SPIN. CARD 11	OTHER SP. 1 M F ?	OTHER SP. 2 M F ?			
	66 69 72 75 78	7 9 12 15 18 21 24 27 30				
+	NEONATE M F ?	2-TONE M F ?	SPECKLED M F ?	MOTTLED M F ?	ADULT M F ?	EASTERN M F ?
	33 36 39 42 45 48 51 54 57 60 63 66 69 72 75 78					
	UNID. SPIN. CARD 12	OTHER SP. 1 M F ?	OTHER SP. 2 M F ?			
	18 21 24 27 30 33 36 39 42 45 48 51 54	7 9 12 15 18 21 24 27 30				
+	NEONATE M F ?	2-TONE M F ?	SPECKLED M F ?	MOTTLED M F ?	ADULT M F ?	EASTERN M F ?
	57 60 63 66 69 72 75 78					
	UNID. SPIN. CARD 13	OTHER SP. 1 M F ?	OTHER SP. 2 M F ?			
	42 45 48 51 54 57 60 63 66 69 72 75 78	7 9 12 15 18 21 24 27 30				

RECORDED BY \_\_\_\_\_

NOAA - U.S. DEPT. OF COMM.

1977A PORPOISE SET LOG/TALLY SUMMARY  
(Page 20)

NMFS FSW3-SD  
1-77

CR. #	SET #
1	4

7	9	12	15	18	21	24	27	30	33	36	39	42	45	48	51	54	57	60	63	
?	M	F	?	M	F	?	M	F	?	M	F	?	M	F	?	M	F	?	M	F
	NEONATE		2-TONE		SPECKLED		MOTTLED		ADULT		AGE UNK.		EASTERN							

66	69	72	75	78	9	12	15	18	21	24	27	30	
M	F	?	M	F	?	M	F	?	M	F	?	M	F
	WHITEBELLY		UNID. SPIN.		OTHER SP. 1		OTHER SP. 2		UNID.				

CARD

15

33	36	39	42	45	48	51	54	57	60	63	66	69	72	75	78	81	84	87	90	93	96	99
M	F	?	M	F	?	M	F	?	M	F	?	M	F	?	M	F	?	M	F	?	M	F
	NEONATE		2-TONE		SPECKLED		MOTTLED		ADULT		AGE UNK.		EASTERN									

?

CARD

16

18	21	24	27	30	33	36	39	42	45	48	51	54	57	59	61	63
M	F	?	M	F	?	M	F	?	M	F	?	M	F	?	M	F
	WHITEBELLY		UNID. SPIN.		OTHER SP. 1		OTHER SP. 2		UNID.		OTHER OTHER SP. 1		OTHER OTHER SP. 2		SPINNER CODE	

RECORDED BY \_\_\_\_\_

Appendix 8F. Marine Mammal Set Log/Tally Form (Version 6, Page 1) used by the Tuna-Porpoise Observer Program, 1977.

NOAA FORM 88-124 PS-34 3-77	1977B PORPOISE SET LOG	NOAA - U.S. DEPT. OF COM. <b>Page 1</b>									
<b>CONDITIONS AT START OF SET</b>											
CRUISE #	SET #	CARD #	DATE	OBSERVER #	POSITION		SET TYPE				
1	4	7	YEAR MONTH DAY	15	18	22 23	28 29				
1	4	7	9 11 13	15	18	22 23	28 29				
0	1										
Y N	TIME BIRDS SIGHTED	DISTANCE (nm & 10ths)	TOTAL # OF BIRDS	TIME PORPOISE SIGHTED	TIME CHASE BEGAN	% SPOTTED STOCK	WIND (Kts)	WIND DIR. CODE	SWELL (Fr. & 10ths)	CHOP (Fr. & 10ths)	SURFACE TEMP. (F. & 10ths)
31	32	36	39	43	47	51	52	54	55	57	59
NOTES: (Conditions; chase and behavior before net let go, etc.)											
(Continue on pg. 17 & 18.)											
<b>CREW ESTIMATES OF NUMBER AND SPECIES COMPOSITION OF SCHOOL BEFORE SET</b>											
INDICATE (TIME) AND BY WHOM	TOTAL NUMBER	% SPOTTED	% SPINNERS	% OTHER SPECIES (1)	% OTHER SPECIES (2)	OTHER SPECIES (1)	CODE				
ESTIMATE 1	62	66	69	72	75	NAME	78 79				
( )											
ESTIMATE 2	CARD #	7	9	13	16	19	22	NAME	25		
( )	0	2									
ESTIMATE 3	27	31	34	37	40						
( )											
<b>OBSERVER ESTIMATE OF NUMBER AND SPECIES COMPOSITION OF SCHOOL BEFORE SET</b>											
TIME	TOTAL NUMBERS (ALL SPECIES)			PERCENT SPECIES COMPOSITION							
( )	BEST ESTIMATE	HIGHEST ESTIMATE	LOWEST ESTIMATE	% SPOTTED	% EASTERN SPINNERS	% WHITEBELLY SPINNERS	% OTHER OR UNID. SPINNERS	% OTHER SPECIES (1)	% OTHER SPECIES (2)		
43	47	51	55	58	61	64	67	70			
SPOTTED STOCK	CODE	OTHER SPINNER	CODE	OTHER SPECIES (1)	CODE	OTHER SPECIES (2)	CODE				
NAME	73	NAME	75	NAME	77	NAME	79 80				

Appendix 8F. Marine Mammal Set Log/Tally Form (Version 6, Page 2) used by the Tuna-Porpoise Observer Program, 1977.

NOAA FORM 88-124  
PSW34 3-77

### 1977B PORPOISE SET LOG

CRUISE NUMBER \_\_\_\_\_ NOAA - U.S. DEPT. OF CO  
SET NUMBER \_\_\_\_\_ Page \_\_\_\_\_

**CONDITIONS AT TIME THE NET LET GO**

CARD #	TIME NET LET GO	Y N	EVADED SET? ~ #	MAJOR SPECIES EVADED SET	CODE
03					
7	9	13	14	NAME	18

NOTES: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**OBSERVER ESTIMATE OF NUMBER AND SPECIES COMPOSITION OF PORPOISE ENCIRCLED**

TIME	TOTAL NUMBER (ALL SPECIES)			PERCENT SPECIES COMPOSITION					
	BEST ESTIMATE	HIGHEST ESTIMATE	LOWEST ESTIMATE	% SPOTTED	% EASTERN SPINNERS	% WHITEBELLY SPINNERS	% OTHER OR UNID. SPINNERS	% OTHER SPECIES (1)	% OTHER SPECIES (2)
( )									
	20	24	28	32	35	38	41	44	47

SPOTTED STOCK      CODE      OTHER SPINNER      CODE      OTHER SPECIES (1)      CODE      OTHER SPECIES (2)      CODE

NAME      50      NAME      52      NAME      54      NAME      56

**CONDITIONS AT THE TIME THE RINGS BREAK WATER**

Y N	ESCAPED FROM NET BEFORE RINGS UP? ~ #	MAJOR SPECIES	CODE	TIME RINGS UP	TIME ROLL NET	BUNCHES #	Y N	WAS NET DUMPED? TIME NET DUMPED	CARD #	WIND (Kts.)	WIND DIR.	WIND CODE	SWELL (Ft.)	CHOP (Ft. & 10ths.)	SURFACE TEMP. (°F & 10ths.)
									04						
58	59	NAME	63	65	69	73	74	75	78	7	9	11	12	14	16

**CREW ESTIMATES OF NUMBER AND SPECIES COMPOSITION OF PORPOISE CAPTURED**

INDICATE (TIME) AND BY WHOM ESTIMATE	TOTAL CAUGHT (ALL SPECIES)		PERCENT SPECIES COMPOSITION				OTHER SPECIES (1)	CODE
	BEST ESTIMATE	HIGHEST ESTIMATE	% SPOTTED	% EASTERN SPINNERS	% WHITEBELLY SPINNERS	% OTHER OR UNID. SPINNERS		
( )								
	20	24	27	30	33			
ESTIMATE 2								
( )	38	42	45	48	51			
ESTIMATE 3								
( )	56	60	63	66	69			

**OBSERVER ESTIMATE OF NUMBER AND SPECIES COMPOSITION OF PORPOISE CAPTURED**

TIME	TOTAL CAUGHT (ALL SPECIES)				PERCENT SPECIES COMPOSITION						
	BEST ESTIMATE	HIGHEST ESTIMATE	CARD #	LOWEST ESTIMATE	% SPOTTED	% EASTERN SPINNERS	% WHITEBELLY SPINNERS	% OTHER OR UNID. SPINNERS	% OTHER SPECIES (1)	% OTHER SPECIES (2)	
( )			05								
	72	76	79	7	9	13	16	19	22	25	28

SPOTTED STOCK      CODE      OTHER SPINNER      CODE      OTHER SPECIES (1)      CODE      OTHER SPECIES (2)      CODE

NAME      31      NAME      33      NAME      35      NAME      37

Appendix 8F. Marine Mammal Set Log/Tally Form (Version 6, Page 3) used by the Tuna-Porpoise Observer Program, 1977.

NOAA FORM 88-124  
PSW34 3-77

## 1977B PORPOISE SET LOG

NOAA - U.S. DEPT. OF COMMERCE  
Page \_\_\_\_\_

CRUISE NUMBER \_\_\_\_\_  
SET NUMBER \_\_\_\_\_

**LIVE PORPOISE RELEASED AND/OR ESCAPED PRIOR TO BACKDOWN.**  
IF NO BACKDOWN OCCURRED, SKIP THIS SECTION AND GO TO BACKDOWN SECTION.

<p>RELEASED BY RAFT(S)?</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center;">Y N</td> <td style="text-align: center;">Z M</td> <td style="text-align: center;">NUMBER</td> </tr> <tr> <td style="text-align: center;">39</td> <td style="text-align: center;">40</td> <td style="text-align: center;">41</td> </tr> </table>	Y N	Z M	NUMBER	39	40	41	<p>RELEASED BY TENDER(S) OR SPEEDBOAT(S)?</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center;">Y N</td> <td style="text-align: center;">Z M</td> <td style="text-align: center;">NUMBER</td> </tr> <tr> <td style="text-align: center;">44</td> <td style="text-align: center;">45</td> <td style="text-align: center;">46</td> </tr> </table>	Y N	Z M	NUMBER	44	45	46	<p>RELEASED BY SWIMMER(S)?</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center;">Y N</td> <td style="text-align: center;">Z M</td> <td style="text-align: center;">NUMBER</td> </tr> <tr> <td style="text-align: center;">49</td> <td style="text-align: center;">50</td> <td style="text-align: center;">51</td> </tr> </table>	Y N	Z M	NUMBER	49	50	51	<p>RELEASED BY OTHER METHOD(S)?</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center;">Y N</td> <td style="text-align: center;">Z M</td> <td style="text-align: center;">NUMBER</td> </tr> <tr> <td style="text-align: center;">54</td> <td style="text-align: center;">55</td> <td style="text-align: center;">56</td> </tr> </table>	Y N	Z M	NUMBER	54	55	56
Y N	Z M	NUMBER																									
39	40	41																									
Y N	Z M	NUMBER																									
44	45	46																									
Y N	Z M	NUMBER																									
49	50	51																									
Y N	Z M	NUMBER																									
54	55	56																									
<p>RELEASED OVER DECK?</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center;">Y N</td> <td style="text-align: center;">NUMBER</td> </tr> <tr> <td style="text-align: center;">59</td> <td style="text-align: center;">60</td> </tr> </table>	Y N	NUMBER	59	60	<p>ESCAPED?</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center;">Y N</td> <td style="text-align: center;">NUMBER</td> </tr> <tr> <td style="text-align: center;">63</td> <td style="text-align: center;">64</td> </tr> </table>	Y N	NUMBER	63	64	<p>TOTAL NUMBER OF RESCUERS PRIOR TO BACKDOWN</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center;">67</td> </tr> </table>	67	<p>NOTES ON RESCUE EFFORTS PRIOR TO BACKDOWN:</p> <hr/> <hr/> <hr/>															
Y N	NUMBER																										
59	60																										
Y N	NUMBER																										
63	64																										
67																											

**BACKDOWN - IF NO BACKDOWN, ANSWER Y/N BACKDOWN AND THEN GO TO TALLY SHEET**

<p>BACKDOWN?</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center;">Y N</td> </tr> </table>	Y N	<p>TIME START BACKDOWN</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center;">69</td> <td style="text-align: center;">70</td> </tr> </table>	69	70	<p>TIME END BACKDOWN</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center;">74</td> <td style="text-align: center;">77</td> </tr> </table>	74	77	<p>CARD #</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center;">06</td> </tr> </table>	06	<p>OBSERVERS COUNT OF ANIMALS RELEASED BECAUSE OF BACKDOWN.</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center;">BEST ESTIMATE</td> <td style="text-align: center;">HIGHEST ESTIMATE</td> <td style="text-align: center;">LOWEST ESTIMATE</td> </tr> <tr> <td style="text-align: center;">9</td> <td style="text-align: center;">13</td> <td style="text-align: center;">17</td> </tr> </table>	BEST ESTIMATE	HIGHEST ESTIMATE	LOWEST ESTIMATE	9	13	17	<p>FISH LOSS DURING BACKDOWN?</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center;">Y N</td> <td style="text-align: center;">~ TONS</td> </tr> <tr> <td style="text-align: center;">21</td> <td style="text-align: center;">22</td> </tr> </table>	Y N	~ TONS	21	22	<p>KNOWN LIVE IN NET AFTER BACKDOWN</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center;"># SPOTTED</td> <td style="text-align: center;"># SPINNERS</td> <td style="text-align: center;"># ALL OTHER</td> </tr> <tr> <td style="text-align: center;">25</td> <td style="text-align: center;">28</td> <td style="text-align: center;">31</td> </tr> </table>	# SPOTTED	# SPINNERS	# ALL OTHER	25	28	31
Y N																												
69	70																											
74	77																											
06																												
BEST ESTIMATE	HIGHEST ESTIMATE	LOWEST ESTIMATE																										
9	13	17																										
Y N	~ TONS																											
21	22																											
# SPOTTED	# SPINNERS	# ALL OTHER																										
25	28	31																										

**LIVE PORPOISE RELEASED BY OTHER METHODS DURING BACKDOWN. DOES NOT INCLUDE THOSE ANIMALS THAT WERE BACKED OUT.**

<p>RELEASED BY RAFT(S)?</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center;">Y N</td> <td style="text-align: center;">Z M</td> <td style="text-align: center;">NUMBER</td> </tr> <tr> <td style="text-align: center;">34</td> <td style="text-align: center;">35</td> <td style="text-align: center;">36</td> </tr> </table>	Y N	Z M	NUMBER	34	35	36	<p>RELEASED BY TENDER(S) OR SPEEDBOAT(S)?</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center;">Y N</td> <td style="text-align: center;">Z M</td> <td style="text-align: center;">NUMBER</td> </tr> <tr> <td style="text-align: center;">39</td> <td style="text-align: center;">40</td> <td style="text-align: center;">41</td> </tr> </table>	Y N	Z M	NUMBER	39	40	41	<p>RELEASED BY SWIMMER(S)?</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center;">Y N</td> <td style="text-align: center;">Z M</td> <td style="text-align: center;">NUMBER</td> </tr> <tr> <td style="text-align: center;">44</td> <td style="text-align: center;">45</td> <td style="text-align: center;">46</td> </tr> </table>	Y N	Z M	NUMBER	44	45	46	<p>RELEASED BY OTHER METHOD(S)?</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center;">Y N</td> <td style="text-align: center;">Z M</td> <td style="text-align: center;">NUMBER</td> </tr> <tr> <td style="text-align: center;">49</td> <td style="text-align: center;">50</td> <td style="text-align: center;">51</td> </tr> </table>	Y N	Z M	NUMBER	49	50	51
Y N	Z M	NUMBER																									
34	35	36																									
Y N	Z M	NUMBER																									
39	40	41																									
Y N	Z M	NUMBER																									
44	45	46																									
Y N	Z M	NUMBER																									
49	50	51																									
<p>TOTAL NUMBER OF RESCUERS DURING BACKDOWN</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center;">54</td> </tr> </table>	54	<p>NOTES ON RESCUE DURING BACKDOWN:</p> <hr/> <hr/> <hr/>																									
54																											

**TALLY SHEET**

RECORD ALL DEAD (1) AND ALL UNDETERMINED STATUS (?) AND (2) DURING SET ON TALLY SHEET.

RECORD ALL LIVE (1) AND (2) THAT OCCUR AFTER BACKDOWN ON TALLY SHEET, AND SUMMARIZE ON PAGE 4.

IF NO BACKDOWN, RECORD ALL PORPOISE ON TALLY SHEET, AND SUMMARIZE LIVE (1) AND (2) ON PAGE 4.

Appendix 8F. Marine Mammal Set Log/Tally Form (Version 6, Page 4) used by the Tuna-Porpoise Observer Program, 1977.

NOAA FORM 88-124  
FSW34 3-77

**1977B PORPOISE SET LOG**

Cruise Number \_\_\_\_\_ SET Number \_\_\_\_\_ NOAA - U.S. DEPT. OF COM. **Page 4**

**LIVE PORPOISE RELEASED AND/OR ESCAPED AFTER BACKDOWN.**  
 IF NO BACKDOWN OCCURRED, ACCOUNT FOR ALL LIVE ANIMALS RELEASED DURING THE SET IN THIS SECTION.  
 THIS IS A SUMMARY OF ALL LIVE ANIMALS ON THE TALLY SHEET (+ AND ⊙).

<p>RELEASED BY RAFT(S)?</p> <table border="1" style="width: 100%; text-align: center;"> <tr> <td>Y N</td> <td>Z L</td> <td>U S</td> <td>NUMBER</td> </tr> <tr> <td>56</td> <td>57</td> <td>58</td> <td></td> </tr> </table>	Y N	Z L	U S	NUMBER	56	57	58		<p>RELEASED BY TENDER(S) OR SPEEDBOAT(S)?</p> <table border="1" style="width: 100%; text-align: center;"> <tr> <td>Y N</td> <td>Z L</td> <td>U S</td> <td>NUMBER</td> </tr> <tr> <td>61</td> <td>62</td> <td>63</td> <td></td> </tr> </table>	Y N	Z L	U S	NUMBER	61	62	63		<p>RELEASED BY SWIMMER(S)?</p> <table border="1" style="width: 100%; text-align: center;"> <tr> <td>Y N</td> <td>Z L</td> <td>U S</td> <td>NUMBER</td> </tr> <tr> <td>66</td> <td>67</td> <td>68</td> <td></td> </tr> </table>	Y N	Z L	U S	NUMBER	66	67	68		<p>RELEASED BY OTHER METHOD(S)?</p> <table border="1" style="width: 100%; text-align: center;"> <tr> <td>Y N</td> <td>Z L</td> <td>U S</td> <td>NUMBER</td> </tr> <tr> <td>71</td> <td>72</td> <td>73</td> <td></td> </tr> </table>	Y N	Z L	U S	NUMBER	71	72	73	
Y N	Z L	U S	NUMBER																																
56	57	58																																	
Y N	Z L	U S	NUMBER																																
61	62	63																																	
Y N	Z L	U S	NUMBER																																
66	67	68																																	
Y N	Z L	U S	NUMBER																																
71	72	73																																	
<p>RELEASED FROM SACK?</p> <table border="1" style="width: 100%; text-align: center;"> <tr> <td>Y N</td> <td>Z L</td> <td>U S</td> <td>NUMBER</td> </tr> <tr> <td>76</td> <td>77</td> <td>78</td> <td>80</td> </tr> </table>	Y N	Z L	U S	NUMBER	76	77	78	80	<p>PORPOISE BASKET USED?</p> <table border="1" style="width: 100%; text-align: center;"> <tr> <td>CARD #</td> <td>Y N</td> </tr> <tr> <td>07</td> <td>9</td> </tr> </table>	CARD #	Y N	07	9	<p>RELEASED OVER DECK?</p> <table border="1" style="width: 100%; text-align: center;"> <tr> <td>Y N</td> <td>NUMBER</td> </tr> <tr> <td>10</td> <td>11</td> </tr> </table>	Y N	NUMBER	10	11	<p>ESCAPED?</p> <table border="1" style="width: 100%; text-align: center;"> <tr> <td>Y N</td> <td>NUMBER</td> </tr> <tr> <td>14</td> <td>15</td> </tr> </table>	Y N	NUMBER	14	15	<p>TOTAL NUMBER OF RESCUERS AFTER BACKDOWN</p> <table border="1" style="width: 100%; text-align: center;"> <tr> <td>18</td> </tr> </table>	18	<p>WAS A PORPOISE CROOK USED TO RESCUE PORPOISE DURING THE SET?</p> <table border="1" style="width: 100%; text-align: center;"> <tr> <td>Y N</td> <td>NUMBER RESCUED</td> </tr> <tr> <td>20</td> <td>21</td> </tr> </table>	Y N	NUMBER RESCUED	20	21					
Y N	Z L	U S	NUMBER																																
76	77	78	80																																
CARD #	Y N																																		
07	9																																		
Y N	NUMBER																																		
10	11																																		
Y N	NUMBER																																		
14	15																																		
18																																			
Y N	NUMBER RESCUED																																		
20	21																																		

**END OF SET**

<p>SACKING UP?</p> <table border="1" style="width: 100%; text-align: center;"> <tr> <td>Y N</td> <td># LIVE IN NET AT START</td> <td>TIME START SACKING UP</td> </tr> <tr> <td>23</td> <td>24</td> <td>27</td> </tr> </table>	Y N	# LIVE IN NET AT START	TIME START SACKING UP	23	24	27	<p>BRAILING?</p> <table border="1" style="width: 100%; text-align: center;"> <tr> <td>Y N</td> <td># LIVE IN NET AT START</td> <td>TIME START BRAILING</td> <td>TIME END BRAILING</td> <td>TIME FINISH SET</td> </tr> <tr> <td>31</td> <td>32</td> <td>35</td> <td>39</td> <td>43</td> </tr> </table>	Y N	# LIVE IN NET AT START	TIME START BRAILING	TIME END BRAILING	TIME FINISH SET	31	32	35	39	43	<p>WAS A STRONG CURRENT RUNNING AT ANY TIME THIS SET?</p> <table border="1" style="width: 100%; text-align: center;"> <tr> <td>Y N</td> </tr> <tr> <td>47</td> </tr> </table>	Y N	47
Y N	# LIVE IN NET AT START	TIME START SACKING UP																		
23	24	27																		
Y N	# LIVE IN NET AT START	TIME START BRAILING	TIME END BRAILING	TIME FINISH SET																
31	32	35	39	43																
Y N																				
47																				
<p>TOTAL KNOWN PORPOISE KILL (ADD ✓)</p> <table border="1" style="width: 100%; text-align: center;"> <tr> <td>48</td> </tr> </table>	48	<p>TOTAL INJURED</p> <table border="1" style="width: 100%; text-align: center;"> <tr> <td>52</td> </tr> </table>	52	<p>SUCCESSFUL SET?</p> <table border="1" style="width: 100%; text-align: center;"> <tr> <td>Y N</td> </tr> <tr> <td>54</td> </tr> </table>	Y N	54	<p>TONS YF</p> <table border="1" style="width: 100%; text-align: center;"> <tr> <td>55</td> </tr> </table>	55	<p>TONS SK</p> <table border="1" style="width: 100%; text-align: center;"> <tr> <td>58</td> </tr> </table>	58	<p>TONS OTHER</p> <table border="1" style="width: 100%; text-align: center;"> <tr> <td>61</td> </tr> </table>	61	<p>OTHER FISH CODE</p> <table border="1" style="width: 100%; text-align: center;"> <tr> <td>64</td> </tr> </table>	64						
48																				
52																				
Y N																				
54																				
55																				
58																				
61																				
64																				

**PHYSICAL CAUSES OF MORTALITY**

DESCRIBE ENTANGLEMENT AND ENTRAPMENT USING THE NET SCHEMATIC (PAGE 13). DESCRIBE AND DISCUSS CAUSES OF MORTALITY ON BACK OF NET SCHEMATIC (PAGE 14).

<p><b>NUMBER OF KNOWN PORPOISE KILLED:</b></p> <table border="1" style="width: 100%; text-align: center;"> <tr> <td># BEFORE BACKDOWN</td> <td># DURING BACKDOWN</td> <td>CARD #</td> <td># AFTER BACKDOWN</td> </tr> <tr> <td>75</td> <td>78</td> <td>08</td> <td>9</td> </tr> </table> <p>KNOWN ENTANGLEMENT</p> <table border="1" style="width: 100%; text-align: center;"> <tr> <td>21</td> <td>24</td> <td>27</td> </tr> </table> <p>KNOWN ENTRAPMENT IN FOLDS OR CANOPIES</p> <table border="1" style="width: 100%; text-align: center;"> <tr> <td>21</td> <td>24</td> <td>27</td> </tr> </table> <p><b>NUMBER OF PORPOISE ENTANGLED IN:</b></p> <table border="1" style="width: 100%; text-align: center;"> <tr> <td>1/4" MESH</td> <td>2" MESH</td> <td>4/4" MESH</td> <td>UNKNOWN MESH SIZE</td> </tr> <tr> <td>48</td> <td>50</td> <td>52</td> <td>54</td> </tr> </table> <p>SHOW ENTANGLEMENT ON NET SCHEMATIC (PAGE 13).</p>	# BEFORE BACKDOWN	# DURING BACKDOWN	CARD #	# AFTER BACKDOWN	75	78	08	9	21	24	27	21	24	27	1/4" MESH	2" MESH	4/4" MESH	UNKNOWN MESH SIZE	48	50	52	54	<p><b>PERCENTAGE OF ALL PORPOISE KILLED:</b></p> <table border="1" style="width: 100%; text-align: center;"> <tr> <td>% SPOTTED KILLED</td> <td>% SPINNERS KILLED</td> <td>% ALL OTHER KILLED</td> </tr> <tr> <td>KNOWN ENTANGLEMENT</td> <td>66</td> <td>69</td> </tr> <tr> <td>KNOWN ENTRAPMENT</td> <td>12</td> <td>15</td> </tr> <tr> <td>KNOWN SACKED-UP</td> <td>30</td> <td>33</td> </tr> <tr> <td>KNOWN OTHER</td> <td>39</td> <td>42</td> </tr> <tr> <td>UNKNOWN</td> <td>56</td> <td>59</td> </tr> </table> <p>OTHER SPECIES</p> <table border="1" style="width: 100%; text-align: center;"> <tr> <td>NAME</td> <td>CODE</td> </tr> <tr> <td></td> <td>65</td> </tr> </table>	% SPOTTED KILLED	% SPINNERS KILLED	% ALL OTHER KILLED	KNOWN ENTANGLEMENT	66	69	KNOWN ENTRAPMENT	12	15	KNOWN SACKED-UP	30	33	KNOWN OTHER	39	42	UNKNOWN	56	59	NAME	CODE		65
# BEFORE BACKDOWN	# DURING BACKDOWN	CARD #	# AFTER BACKDOWN																																										
75	78	08	9																																										
21	24	27																																											
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	65																																												

Appendix 8F. Marine Mammal Set Log/Tally Form (Version 6, Page 5) used by the Tuna-Porpoise Observer Program, 1977.

NOAA FORM 88-124  
FSW34 2.77

1977B PORPOISE SET LOG TALLY SHEET

CRUISE NUMBER \_\_\_\_\_ NOAA - U.S. DEPT. OF CO.  
 SET NUMBER \_\_\_\_\_

Page

**SYMBOLS TO USE:**

✓ = DEAD  
 + = ESCAPED ALIVE  
 ⊙ = ESCAPED ALIVE BUT INJURED

**NOTE: "INJURED" MEANS**

1) BLEEDING  
 2) HAVING OBVIOUSLY BROKEN BONES  
 3) HAVING GONE THROUGH THE POWER BLOCK

**SPOTTED**

NODULATE  
M F ?

TWO-TONE  
M F ?

SPECKLED  
M F ?

MOTTLED  
M F ?

ADULT  
M F ?

AGE  
UNK

**SPINNERS**

EASTERN  
M F ?

WHITEBELLY  
M F ?

OTHER OR UNID  
M F ?

OTHER SPECIES (1)  
M F ?

OTHER SPECIES (2)  
M F ?

U N I D

SUBTOTALS  
 ⊕ ⊖ ⊙ ⊚ ⊛ ⊜

ANIMALS  
 PROCESSED

ANIMALS  
 DUMPED

Appendix 8F. Marine Mammal Set Log/Tally Form (Version 6, Page 6) used by the Tuna-Porpoise Observer Program, 1977.

NOAA FORM 88-174  
PSW 34 3-77

## 1977B PORPOISE SET LOG TALLY SHEET

CRUISE NUMBER \_\_\_\_\_ NOAA - U.S. DEPT. OF COMM.  
SET NUMBER \_\_\_\_\_ **Page 6**

Species Name \_\_\_\_\_ Other Spinner Name \_\_\_\_\_ Other Species (1) Name \_\_\_\_\_ Other Species (2) Name \_\_\_\_\_

NEONATE		TWO-TONE		SPECKLED		MOTTLED		ADULT		AGE			SPINNERS						OTHER SPECIES (1)			OTHER SPECIES (2)			U N I D						
M	F	M	F	M	F	M	F	M	F	UNK	UNK	EASTERN	WHITEBELLY	OTHER OR UNID	M	F	?	M	F	?	M	F	?	M	F	?	M	F	?		
ANIMALS DUMPED		ANIMALS PROCESSED		SUBTOTALS		+		-		○		△		+		○		△		+		○		△		+		○		△	

NOTE: "INJURED" MEANS  
1) BLEEDING  
2) HAVING OBVIOUSLY BROKEN BONES  
3) HAVING GONE THROUGH THE POWER BLOCK

SYMBOLS TO USE:  
∞ = DEAD  
+ = ESCAPED ALIVE  
○ = ESCAPED ALIVE BUT INJURED

? = STATUS UNDETERMINED  
○ = STATUS UNDETERMINED BUT INJURED



Appendix 8F. Marine Mammal Set Log/Tally Form (Version 6, Page 7) used by the Tuna-Porpoise Observer Program, 1977.

<small>NOAA FORM 85-124 PSW34 3-77</small>	<h3 style="margin: 0;">1977B PORPOISE SET LOG</h3>	CRUISE NUMBER _____ SET NUMBER _____	NOAA - U.S. DEPT. OF CO Page _____ EN NUM Y/N
--	--	---	---

1. Number of manned speedboat(s) in the water continuously until backdown, or if no backdown, until the normal tie-down is reached. ....

IF NO BACKDOWN OCCURRED, ENTER CODE 3 FOR QUESTIONS 2-9, AND SKIP TO ITEM 10.  
 ANSWER EACH QUESTION BY ENTERING THE APPROPRIATE CODE:  
 1 = YES    2 = NO    3 = NOT APPLICABLE

2. Were speedboat(s) used to tow on the net prior to backdown? .....  
 Illustrate and describe towing on pages 15-18. Include attachment points, net configurations, times, methods of towing, etc.
3. Did a net collapse occur prior to backdown? .....  
 Illustrate and describe net collapse on pages 15-18.  
 3a. Were porpoise killed as a result of a net collapse prior to backdown? .....
4. Did the backdown area corks come together prior to the initiation of backdown? .....
5. Were speedboat(s) used to open or adjust the backdown area prior to backdown? .....
6. Was the net tied down at the corkline and bunchline marks (apron systems only)? .....
7. Did the safety panel cover the perimeter of the backdown area? .....
8. Were canopies evident during backdown? .....  
 Illustrate and describe any canopies and porpoise involvement on pages 15-18.  
 8a. Were porpoise killed as a result of canopies during backdown? .....
9. After backdown, did the corkline come together at any point along the backdown channel? .....

---

10. Did a net collapse occur after backdown, or if no backdown, at any time during the set? .....  
 10a. Were porpoise killed as a result of a net collapse after backdown, or, if no backdown, at any time during the set? .....
11. Were speedboat(s) used to tow on the net after backdown, or if no backdown, at any time during the set? .....  
 Illustrate and describe towing on pages 15-18. Include attachment points, net configurations, times, methods of towing, etc.

Appendix 8F. Marine Mammal Set Log/Tally Form (Version 6, Page 8) used by the Tuna-Porpoise Observer Program, 1977.

NOAA FORM 88-124  
PSM34 3-77

**- 1977B PORPOISE SET LOG**

CRUISE NUMBER \_\_\_\_\_ NOAA - U.S. DEPT. OF COMM.  
SET NUMBER \_\_\_\_\_

**Page 8**

Answer each question by entering appropriate code: 1 = YES 2 = NO 3 = NOT APPLICABLE

12. Were concentrations of jellyfish encountered during this set? Y/N

0 9 7 9

12a. Did the presence of concentrations of jellyfish result in any problems with the net? Y/N/NA

10

Describe any problems resulting from jellyfish on page 17.

13. Was maintenance required on apron systems or small mesh strips this set? Y/N/NA

11

**OPERATIONAL MALFUNCTIONS**

14. Did equipment malfunction(s) occur this set? Y/N/NA

12

14a. Did malfunction(s) result in a delay of set? Y/N/NA

13

14b. Were porpoise in the net during malfunctions? Y/N/NA

14

15. Was the set aborted? Y/N/ TIME

15 16

**DESCRIBE MALFUNCTION(S) IN ORDER OF OCCURRENCE**

	OCCURRED	TIME FIXED	ESTIMATED DELAY IN MINUTES	NOTES: (TYPE OF MALFUNCTION, HOW, WHY)
1				
2				
3				
4				

Appendix 8F. Marine Mammal Set Log/Tally Form (Version 6, Page 9) used by the Tuna-Porpoise Observer Program, 1977.

NOAA FORM 88-124  
PSW34 3-77

**1977B PORPOISE SET LOG**

CRUISE NUMBER \_\_\_\_\_ NOAA - U.S. DEPT. OF COMM.  
SET NUMBER \_\_\_\_\_ **Page 9**

**COMPLIANCE RECORD FOR REGULATION ASSESSMENT**

Answer each question by entering appropriate code: 1 = YES 2 = NO 3 = NOT APPLICABLE

**1. PROHIBITED SCHOOL**

a. If a prohibited school was encircled, DID YOU ASCERTAIN? .....  20

b. Did you OBSERVE any CIRCUMSTANCES as to why the procedure was not followed? .....  21

c. or RECEIVE any JUSTIFYING REASONS . . . from the SKIPPER or CERTIFICATE HOLDER? . . .  22

If yes, (b. and/or c.), describe: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

d. Compliance Classification . . . . .  23

**2. MANNED SPEEDBOATS**

a. If porpoise were encircled and a minimum of two manned speed boats (One manned speedboat for Class I vessels) were not utilized, DID YOU ASCERTAIN? .....  24

b. Did you OBSERVE any CIRCUMSTANCES as to why the procedure was not followed? .....  25

c. or RECEIVE any JUSTIFYING REASONS . . . from the SKIPPER or CERTIFICATE HOLDER? . . .  26

If yes, (b. and/or c.), describe: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

d. Compliance Classification . . . . .  27

**3. BOW BUNCHES**

a. If porpoise were captured and a minimum of two bow bunches were not pulled, DID YOU ASCERTAIN? .....  28

b. Did you OBSERVE any CIRCUMSTANCES as to why the procedure was not followed? .....  29

c. or RECEIVE any JUSTIFYING REASONS . . . from the SKIPPER or CERTIFICATE HOLDER? . . .  30

If yes, (b. and/or c.), describe: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

d. Compliance Classification . . . . .  31

Appendix 8F. Marine Mammal Set Log/Tally Form (Version 6, Page 10) used by the Tuna-Porpoise Observer Program, 1977.

<small>NOAA FORM 85-124 PSN34 3-77</small>	<b>1977B PORPOISE SET LOG</b>	CRUISE NUMBER _____ SET NUMBER _____	<small>NOAA - U.S. DEPT. OF COMMERCE</small> <b>Page 10</b>
--	-------------------------------	---	--

Answer each question by entering appropriate code: 1 = YES 2 = NO 3 = NOT APPLICABLE

**4. BACKDOWN**

a. If live porpoise were in the net and the backdown procedure was not used, DID YOU ASCERTAIN?  32

b. Did you OBSERVE any CIRCUMSTANCES as to why the procedure was not followed?  33

c. or RECEIVE any JUSTIFYING REASONS . . . from the SKIPPER or CERTIFICATE HOLDER?  34

If yes, (b. and/or c.), describe: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

d. Compliance Classification . . . . .  35

**5. SAFETY PANEL COVERING PERIMETER**

a. If the backdown procedure was used and the porpoise safety panel did not cover the perimeter of the backdown area, DID YOU ASCERTAIN?  36

b. Did you OBSERVE any CIRCUMSTANCES as to why the procedure was not followed?  37

c. or RECEIVE any JUSTIFYING REASONS . . . from the SKIPPER or CERTIFICATE HOLDER?  38

If yes, (b. and/or c.), describe: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

d. Compliance Classification . . . . .  39

**6. TWO RESCUERS**

a. If live porpoise were in the net and a minimum of two men were not actively engaged in hand removal, DID YOU ASCERTAIN?  40

b. Did you OBSERVE any CIRCUMSTANCES as to why the procedure was not followed?  41

c. or RECEIVE any JUSTIFYING REASONS . . . from the SKIPPER or CERTIFICATE HOLDER?  42

If yes, (b. and/or c.), describe: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

d. Compliance Classification . . . . .  43

Appendix 8F. Marine Mammal Set Log/Tally Form (Version 6, Page 11) used by the Tuna-Porpoise Observer Program, 1977.

<small>NOAA FORM 88-124 PSW-3 3-77</small>	<h3 style="margin: 0;">1977B PORPOISE SET LOG</h3>	<small>CRUISE NUMBER _____ NOAA - U.S. DEPT. OF COMM. SET NUMBER _____</small>	<b>Page 11</b>
--	--	--	----------------

**7. CONTINUOUS HAND REMOVAL**      Answer each question by entering appropriate code: 1 = YES 2 = NO 3 = NOT APPLICABLE

a. If live porpoise were in the net and hand removal was not continuous, DID YOU ASCERTAIN? .....  41

b. Did you OBSERVE any CIRCUMSTANCES as to why the procedure was not followed? .....  45

c. or RECEIVE any JUSTIFYING REASONS ... from the SKIPPER or CERTIFICATE HOLDER? ...  46

If yes, (b. and/or c.), describe: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

d. Compliance Classification .....  47

**8. LIVE PORPOISE BRAILED**

a. If live porpoise were in the net when brailing operations were initiated, DID YOU ASCERTAIN? .....  48

b. Did you OBSERVE any CIRCUMSTANCES as to why the procedure was not followed? .....  49

c. or RECEIVE any JUSTIFYING REASONS ... from the SKIPPER or CERTIFICATE HOLDER? ...  50

If yes, (b. and/or c.), describe: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

d. Compliance Classification .....  51

**9. POINTED INSTRUMENT**

a. If a sharp or pointed instrument was used on porpoise, DID YOU ASCERTAIN? .....  52

b. Did you OBSERVE any CIRCUMSTANCES as to why the procedure was not followed? .....  53

c. or RECEIVE any JUSTIFYING REASONS ... from the SKIPPER or CERTIFICATE HOLDER? ...  54

If yes, (b. and/or c.), describe: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

d. Compliance Classification .....  55

**10. Are there any skipper or certificate holder comments recorded for this set?** .....  56

Appendix 8F. Marine Mammal Set Log/Tally Form (Version 6, Page 12) used by the Tuna-Porpoise Observer Program, 1977.

<small>NOAA FORM 88-124 PSW 3-77</small>	<h3 style="margin: 0;">1977B PORPOISE SET LOG</h3>	CRUISE NUMBER _____ SET NUMBER _____	<small>NOAA - U.S. DEPT. OF COMM.</small> <b>Page 12</b>
--	--	---	---

Answer each question by entering appropriate code: 1 = YES 2 = NO 3 = NOT APPLICABLE

**11. RUBBER RAFT**

a. If live porpoise were in the net and a rescuer in a rubber raft did not assist in hand removal, DID YOU ASCERTAIN? .....  57

b. Did you OBSERVE and CIRCUMSTANCES as to why the procedure was not followed? .....  58

c. or RECEIVE any JUSTIFYING REASONS . . . from the SKIPPER or CERTIFICATE HOLDER?  59

If yes, (b. and/or c.), describe: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

d. Compliance Classification .....  60

**12. FACEMASK AND SNORKEL**

a. If the rescuer in the rubber raft did not use a face mask and snorkel to determine if all live marine mammals were out of the net, DID YOU ASCERTAIN? .....  61

b. Did you OBSERVE any CIRCUMSTANCES as to why the procedure was not followed? .....  62

c. or RECEIVE any JUSTIFYING REASONS . . . from the SKIPPER or CERTIFICATE HOLDER?  63

If yes, (b. and/or c.), describe: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

d. Compliance Classification .....  64

**13. USE OF LIGHTS DURING SUNDOWN SETS**

a. If the backdown maneuver was performed in darkness, WERE LIGHTS USED? .....  65

b. Describe use of lights . . . or the reason(s) lights were not used.

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Appendix 8F. Marine Mammal Set Log/Tally Form (Version 6, Page 13) used by the Tuna-Porpoise Observer Program, 1977.

**1977B PORPOISE SET LOG**

NOAA FORM 88-124  
FSW34 3-77

CRUISE NUMBER \_\_\_\_\_ NOAA - U.S. DEPT. OF COMM.  
SET NUMBER \_\_\_\_\_ **Page 13**

**NET SCHEMATIC**

**INSTRUCTIONS:**

Sketch in changes so this net describes the net on vessel.

Note mesh sizes of strips.

Specify known areas of entanglement.

- E** = individual entanglement
- ⓔ** = mass (>15) entanglement
- C** = canopies or folds

**Entanglement** means stuck to the net by a part of the body, i.e., flukes, snout or flipper.

**Entrapment** means forced entanglement due to a configuration of the net which traps or poses unusual hazard to porpoise, not the size of the net per se, i.e., folds or canopies.

**DESCRIBE AND DISCUSS ENTANGLEMENT AND ENTRAPMENT:**






Appendix 8F. Marine Mammal Set Log/Tally Form (Version 6, Page 15) used by the Tuna-Porpoise Observer Program, 1977.

**1977B PORPOISE SET LOG**

NOAA FORM 88-124  
FSW34 3-77

NOAA - U.S. DEPT. OF COMM.  
**Page 15**

CRUISE NUMBER \_\_\_\_\_  
SET NUMBER \_\_\_\_\_

SYMBOLS

INDICATE TIME AND EVENT  
(Operations, Malfunction, Rescue,  
Net Collapse, Mortality, etc.)

TIME

NOTES: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

TIME

NOTES: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

TIME

NOTES: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

TIME

NOTES: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

X PORPOISE  
 E ENTANGLEMENT  
 W WIND DIRECTION  
 D CURRENT DIRECTION  
 C CANOPY  
 N NET COLLAPSE  
 S CORKLINE SINKAGE  
 FL FISH LOSS  
 R PORPOISE RESCUE OR RELEASE  
 B BACKDOWN AREA  
 (S) SKIFF  
 ▷ SPEEDBOAT OR TENDER  
 ▷ SPEEDBOAT OR TENDER INVOLVED IN HAND RELEASE  
 (S) SWIMMERS

) SPEEDBOAT ATTACHED BUT NOT TOWING  
 ) TOWING FROM STERN  
 ) TOWING FROM BOW  
 ) TOWING ONE BUNCH  
 ) TOWING TWO BUNCHES  
 ) TOWING ON CORKLINE  
 ENTER ADDITIONAL SYMBOLS YOU USE:

Appendix 8F. Marine Mammal Set Log/Tally Form (Version 6, Page 16) used by the Tuna-Porpoise Observer Program, 1977.

<small>NOAA FORM 88-124 PS-934 3-77</small>	<b>1977B PORPOISE SET LOG</b>	<small>CRUISE NUMBER _____ SET NUMBER _____</small>	<small>NOAA - U.S. DEPT. OF COMM. SEA SURVEILLANCE</small>
			<b>Page 16</b>
TIME		TIME	
NOTES: _____ _____		NOTES: _____ _____	
TIME		TIME	
NOTES: _____ _____		NOTES: _____ _____	
TIME		TIME	
NOTES: _____ _____		NOTES: _____ _____	





Appendix 8G. Marine Mammal Set Log/Tally Form (Version 7, Page 1) used by the Tuna-Porpoise Observer Program, 1978.

1977C PORPOISE SET LOG

EXAMPLE 1 2/78

NOAA FORM 88-124  
FS934 12-77

NOAA - U.S. DEPT. OF COMMERCE  
Page

CONDITIONS AT START OF SET

CRUISE			SET			CARD			DATE			OBSERVER			POSITION			SET TYPE						
#	#	#	YEAR	MONTH	DAY	#	#	#	LATITUDE	N/S	LONGITUDE	E/W	#	#										
3	0	0	7	7	0	5	1	2	0	3	9	0	6	4	5	1	0	8	2	3	8	2	0	2

BIRDS?	TIME BIRDS SIGHTED	DISTANCE (nm & 10ths)	TOTAL # OF BIRDS	TIME PORPOISE SIGHTED	TIME CHASE BEGAN	# SPOTS USED	WIND (Kts)	WAVE DIR. CODE	SWELL (Fr. & 10ths)	CHOP (Fr. & 10ths)	SURFACE TEMP. (F & 10ths)
1	1	3	1	0	0	7	0	0	3	0	0

CREW ESTIMATES OF NUMBER AND SPECIES COMPOSITION OF ENTIRE SCHOOL BEFORE SET

INDICATE (TIME) AND BY WHOM	TOTAL NUMBER	% SPOTTED	% SPINNERS	% OTHER SPECIES (1)	% OTHER SPECIES (2)	OTHER SPECIES (1) NAME
ESTIMATE 1 (1320) MAN ON 20X	5	0	0	1	0	
ESTIMATE 2 (1325) COOK	3	0	0	1	0	
ESTIMATE 3 (1513) SKIPPER	5	0	0	1	0	

OBSERVER ESTIMATE OF NUMBER AND SPECIES COMPOSITION OF ENTIRE SCHOOL BEFORE SET

TIME OF ESTIMATE	TOTAL NUMBERS (ALL SPECIES)			PERCENT SPECIES COMPOSITION																		
	BEST ESTIMATE	HIGHEST ESTIMATE	LOWEST ESTIMATE	% SPOTTED	% EASTERN SPINNERS	% WHITEBELLY SPINNERS	% OTHER OR UNID. SPINNERS	% OTHER SPECIES (1)	% OTHER SPECIES (2)													
(1405)	2	0	0	0	5	0	0	0	0	1	5	0	0	0	0	0	0	0	0	0	0	0

SPOTTED STOCK	CODE	OTHER SPINNER	CODE	OTHER SPECIES/STOCK (1)	CODE	OTHER SPECIES/STOCK (2)
NAME Offshore						

NOTES: (Conditions, chase and behavior before net set, etc.)

School was spread out when first sighted, not running until first chase boat is about 1/2 mile out. School breaks into two distinct groups, the spinners all seem to be in one group. They are running harder than the other group, which is not moving fast. Skipper decides to let go with spinners go. We pursue the other group. As we get closer the O. Spotters are jumping more. Birds still with our group.

(Continue on pg. 17)

Appendix 8G. Marine Mammal Set Log/Tally Form (Version 7, Page 2) used by the Tuna-Porpoise Observer Program, 1978.

**EX 1**  
**1977C PORPOISE SET LOG**

NOAA FORM 88-124  
7/23/74 12-77

CRUISE NUMBER 300 NOAA - U.S. DEPT. OF COMM.  
SET NUMBER 002 Page 2

**CONDITIONS AT THE TIME THE NET LET GO**

CARD #	TIME NET LET GO	Y N	EVASDED SET? ~#	MAJOR SPECIES/STOCK EVASDED SET	CODE
03	1408	1	0100	NAME <u>O. Spotted</u>	
7	9	13	14	18	

NOTES: APP. 100 O. Spotters manage to get behind the group we're after. They slip between the seiner and the last chase boat. Once on starboard side, they run hard - much splash!

**OBSERVER ESTIMATE OF NUMBER AND SPECIES COMPOSITION OF PORPOISE AT TIME OF ENCIRCLEMENT**

TIME OF ESTIMATE	TOTAL NUMBER (ALL SPECIES)			PERCENT SPECIES COMPOSITION					
	BEST ESTIMATE	HIGHEST ESTIMATE	LOWEST ESTIMATE	% SPOTTED	% EASTERN SPINNERS	% WHITEBELLY SPINNERS	% OTHER OR UNID. SPINNERS	% OTHER SPECIES (1)	% OTHER SPECIES (2)
(1415)	0900	1500	0500	100	000	000	000	000	000
	20	24	28	32	35	38	41	44	47

SPOTTED STOCK: CODE \_\_\_\_\_ OTHER SPINNER: CODE \_\_\_\_\_ OTHER SPECIES/STOCK (1): CODE \_\_\_\_\_ OTHER SPECIES/STOCK (2): CODE \_\_\_\_\_

NAME Offshore 50 NAME \_\_\_\_\_ 52 NAME \_\_\_\_\_ 54 NAME \_\_\_\_\_ 56

**CONDITIONS AT THE TIME THE RINGS BREAK WATER**

Y N	ESCAPED FROM NET BEFORE RINGS UP?	MAJOR SPECIES/STOCK	CODE	TIME RINGS UP	TIME ROLL NET	WAS NET DUMPED?	CARD #	WIND (Kts.)	SWELL (Ft.)	CHOP (Ft. & 10ths.)	SURFACE TEMP. (°F & 10ths.)	STRONG CURRENT? Y/N				
2				1427	1434	32	04	06	70	30	58.0	51				
58	59	63		65	69	73	74	75	78	7	9	11	12	14	16	19

**CREW ESTIMATES OF NUMBER AND SPECIES COMPOSITION OF PORPOISE CAPTURED**

INDICATE (TIME) AND BY WHOM ESTIMATE 1	TOTAL CAUGHT	% SPOTTED	% SPINNERS	% OTHER SPECIES (1)	% OTHER SPECIES (2)	OTHER SPECIES (1)	CODE
(15:13) <u>SKIPPER</u>	2000	100	000	000	000		
	20	24	27	30	33		36
ESTIMATE 2	TOTAL CAUGHT	% SPOTTED	% SPINNERS	% OTHER SPECIES (1)	% OTHER SPECIES (2)	OTHER SPECIES (2)	CODE
(14:35) <u>COOK</u>	1000	100	000	000	000		
	38	42	45	48	51		54
ESTIMATE 3	TOTAL CAUGHT	% SPOTTED	% SPINNERS	% OTHER SPECIES (1)	% OTHER SPECIES (2)	SPINNER STOCK	CODE
( ) _____							
	56	60	63	66	69		

**OBSERVER ESTIMATE OF NUMBER AND SPECIES COMPOSITION OF PORPOISE CAPTURED**

TIME OF ESTIMATE	TOTAL CAUGHT (ALL SPECIES)				PERCENT SPECIES COMPOSITION						
	BEST ESTIMATE	HIGHEST ESTIMATE	CARD #	LOWEST ESTIMATE	% SPOTTED	% EASTERN SPINNERS	% WHITEBELLY SPINNERS	% OTHER OR UNID. SPINNERS	% OTHER SPECIES (1)	% OTHER SPECIES (2)	
(1430)	0800	1000	05	0500	099	001	000	000	000	000	
	72	76	79	7	9	13	16	19	22	25	28

SPOTTED STOCK: CODE \_\_\_\_\_ OTHER SPINNER: CODE \_\_\_\_\_ OTHER SPECIES/STOCK (1): CODE \_\_\_\_\_ OTHER SPECIES/STOCK (2): CODE \_\_\_\_\_

NAME Offshore 31 NAME \_\_\_\_\_ 33 NAME \_\_\_\_\_ 35 NAME \_\_\_\_\_ 37

Appendix 8G. Marine Mammal Set Log/Tally Form (Version 7, Page 3) used by the Tuna-Porpoise Observer Program, 1978.

**Ex. 1**

**1977C PORPOISE SET LOG**

NOAA FORM 38-124  
PS124 12-77

NOAA - U.S. DEPT. OF COM.  
Page 3

CRUISE NUMBER 300  
SET NUMBER 002

LIVE PORPOISE RELEASED AND/OR ESCAPED PRIOR TO BACKDOWN.  
IF NO BACKDOWN OCCURRED, SKIP THIS SECTION AND GO TO BACKDOWN SECTION.

<p>RAFT RESCUE EFFORT?</p> <table border="1" style="width: 100%; text-align: center;"> <tr> <td>Y N</td> <td>Z M</td> <td># LIVE RELEASED</td> </tr> <tr> <td>2</td> <td></td> <td></td> </tr> <tr> <td>39</td> <td>40</td> <td>41</td> </tr> </table>	Y N	Z M	# LIVE RELEASED	2			39	40	41	<p>SPEEDBOAT RESCUE EFFORT?</p> <table border="1" style="width: 100%; text-align: center;"> <tr> <td>Y N</td> <td>Z M</td> <td># LIVE RELEASED</td> </tr> <tr> <td>2</td> <td></td> <td></td> </tr> <tr> <td>44</td> <td>45</td> <td>46</td> </tr> </table>	Y N	Z M	# LIVE RELEASED	2			44	45	46	<p>SWIMMER RESCUE EFFORT?</p> <table border="1" style="width: 100%; text-align: center;"> <tr> <td>Y N</td> <td>Z M</td> <td># LIVE RELEASED</td> </tr> <tr> <td>2</td> <td></td> <td></td> </tr> <tr> <td>49</td> <td>50</td> <td>51</td> </tr> </table>	Y N	Z M	# LIVE RELEASED	2			49	50	51	<p>OTHER METHOD(S) OF RESCUE EFFORT?</p> <table border="1" style="width: 100%; text-align: center;"> <tr> <td>Y N</td> <td>Z M</td> <td># LIVE RELEASED</td> </tr> <tr> <td>2</td> <td></td> <td></td> </tr> <tr> <td>54</td> <td>55</td> <td>56</td> </tr> </table>	Y N	Z M	# LIVE RELEASED	2			54	55	56
Y N	Z M	# LIVE RELEASED																																					
2																																							
39	40	41																																					
Y N	Z M	# LIVE RELEASED																																					
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49	50	51																																					
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2																																							
54	55	56																																					

<p>RELEASED LIVE OVER DECK?</p> <table border="1" style="width: 100%; text-align: center;"> <tr> <td>Y N</td> <td>NUMBER</td> </tr> <tr> <td>2</td> <td></td> </tr> <tr> <td>59</td> <td>60</td> </tr> </table>	Y N	NUMBER	2		59	60	<p>ESCAPED?</p> <table border="1" style="width: 100%; text-align: center;"> <tr> <td>Y N</td> <td>NUMBER</td> </tr> <tr> <td>1</td> <td>0.5</td> </tr> <tr> <td>63</td> <td>64</td> </tr> </table>	Y N	NUMBER	1	0.5	63	64	<p>TOTAL NUMBER OF RESCUERS PRIOR TO BACKDOWN</p> <table border="1" style="width: 100%; text-align: center;"> <tr> <td>NUMBER</td> </tr> <tr> <td>00</td> </tr> <tr> <td>67</td> </tr> </table>	NUMBER	00	67	<p>NOTES ON RESCUE EFFORTS PRIOR TO BACKDOWN:</p> <p><u>About 50 O. Spotters escape over a section of sunken corkline at</u></p> <p><u>about 14:29 hrs. See sketch on Page 15.</u></p>
Y N	NUMBER																	
2																		
59	60																	
Y N	NUMBER																	
1	0.5																	
63	64																	
NUMBER																		
00																		
67																		

BACKDOWN - IF NO BACKDOWN, ANSWER Y/N BACKDOWN? AND THEN GO TO PAGE 4.

BACKDOWN?				OBSERVERS ESTIMATE OF ANIMALS RELEASED BECAUSE OF BACKDOWN.				FISH LOSS DURING BACKDOWN?		NUMBER LIVE IN NET AFTER BACKDOWN.		
Y N	TIME START BACKDOWN	TIME END BACKDOWN	CARD #	BEST ESTIMATE	HIGHEST ESTIMATE	LOWEST ESTIMATE	Y N	~ TONS	# SPOTTED	# SPINNERS	# ALL OTHER	
1	1505	1525	06	05500	07000	04000	2		006	000	000	
69	70	74	77	7	9	13	17	21	22	25	28	31

LIVE PORPOISE RELEASED BY OTHER METHODS DURING BACKDOWN.  
DOES NOT INCLUDE THOSE ANIMALS THAT WERE BACKED OUT.

<p>RAFT RESCUE EFFORT?</p> <table border="1" style="width: 100%; text-align: center;"> <tr> <td>Y N</td> <td>Z M</td> <td># LIVE HAND RELEASED</td> </tr> <tr> <td>1</td> <td>1</td> <td>0.2</td> </tr> <tr> <td>34</td> <td>35</td> <td>36</td> </tr> </table>	Y N	Z M	# LIVE HAND RELEASED	1	1	0.2	34	35	36	<p>SPEEDBOAT RESCUE EFFORT?</p> <table border="1" style="width: 100%; text-align: center;"> <tr> <td>Y N</td> <td>Z M</td> <td># LIVE HAND RELEASED</td> </tr> <tr> <td>1</td> <td>2</td> <td>0.5</td> </tr> <tr> <td>39</td> <td>40</td> <td>41</td> </tr> </table>	Y N	Z M	# LIVE HAND RELEASED	1	2	0.5	39	40	41	<p>SWIMMER RESCUE EFFORT?</p> <table border="1" style="width: 100%; text-align: center;"> <tr> <td>Y N</td> <td>Z M</td> <td># LIVE HAND RELEASED</td> </tr> <tr> <td>1</td> <td>1</td> <td>0.0</td> </tr> <tr> <td>44</td> <td>45</td> <td>46</td> </tr> </table>	Y N	Z M	# LIVE HAND RELEASED	1	1	0.0	44	45	46	<p>OTHER METHOD(S) OF RESCUE EFFORT?</p> <table border="1" style="width: 100%; text-align: center;"> <tr> <td>Y N</td> <td>Z M</td> <td># LIVE RELEASED</td> </tr> <tr> <td>2</td> <td></td> <td></td> </tr> <tr> <td>49</td> <td>50</td> <td>51</td> </tr> </table>	Y N	Z M	# LIVE RELEASED	2			49	50	51
Y N	Z M	# LIVE HAND RELEASED																																					
1	1	0.2																																					
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1	2	0.5																																					
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44	45	46																																					
Y N	Z M	# LIVE RELEASED																																					
2																																							
49	50	51																																					

<p>TOTAL NUMBER OF RESCUERS DURING BACKDOWN</p> <table border="1" style="width: 100%; text-align: center;"> <tr> <td>NUMBER</td> </tr> <tr> <td>03</td> </tr> <tr> <td>54</td> </tr> </table>	NUMBER	03	54	<p>NOTES ON RESCUE EFFORT DURING BACKDOWN: <u>Man in Raft and 2 speedboat rescuers release 7 during backdown. This happens late in backdown a net's corkline starts to come together. 6 O. Spotters slip underneath raftman and swim toward seiner. Man is jump from speedboat into water, but can't catch anything swimmer</u></p>
NUMBER				
03				
54				

TALLY SHEET

RECORD ALL DEAD (✓) AND ALL UNDETERMINED STATUS (?) AND (?) DURING SET ON TALLY SHEET.  
RECORD ALL LIVE (+ AND ⊕) THAT OCCUR AFTER BACKDOWN ON TALLY SHEET, AND SUMMARIZE ON PAGE 4.  
IF NO BACKDOWN, RECORD ALL PORPOISE ON TALLY SHEET, AND SUMMARIZE LIVE (+ AND ⊕) ON PAGE 4.

Appendix 8G. Marine Mammal Set Log/Tally Form (Version 7, Page 4) used by the Tuna-Porpoise Observer Program, 1978.

**EX. 1**  
**1977C PORPOISE SET LOG**

NOAA FORM 88-124 PSN 24 12-77 CRUISE NUMBER 300  
SET NUMBER 002 NOAA - U.S. DEPT. OF COM.   
Page 4

LIVE PORPOISE RELEASED AND/OR ESCAPED AFTER BACKDOWN.  
IF NO BACKDOWN OCCURRED, ACCOUNT FOR ALL LIVE ANIMALS RELEASED DURING THE SET IN THIS SECTION.  
THIS IS A SUMMARY OF ALL LIVE ANIMALS ON THE TALLY SHEET (+ AND ⊙). RECORD EXPLICIT NOTES.

<p><b>RAFT RESCUE EFFORT</b></p> <table border="1" style="width: 100%; text-align: center;"> <tr><th>Y</th><th>Z</th><th># LIVE</th></tr> <tr><td>N</td><td>L</td><td>RELEASED</td></tr> <tr><td>1</td><td>1</td><td>000</td></tr> <tr><td>56</td><td>57</td><td>58</td></tr> </table>	Y	Z	# LIVE	N	L	RELEASED	1	1	000	56	57	58	<p><b>SPEEDBOAT RESCUE EFFORT?</b></p> <table border="1" style="width: 100%; text-align: center;"> <tr><th>Y</th><th>Z</th><th># LIVE</th></tr> <tr><td>N</td><td>L</td><td>RELEASED</td></tr> <tr><td>2</td><td></td><td></td></tr> <tr><td>61</td><td>62</td><td>63</td></tr> </table>	Y	Z	# LIVE	N	L	RELEASED	2			61	62	63	<p><b>SWIMMER RESCUE EFFORT?</b></p> <table border="1" style="width: 100%; text-align: center;"> <tr><th>Y</th><th>Z</th><th># LIVE</th></tr> <tr><td>N</td><td>L</td><td>RELEASED</td></tr> <tr><td>2</td><td></td><td></td></tr> <tr><td>66</td><td>67</td><td>68</td></tr> </table>	Y	Z	# LIVE	N	L	RELEASED	2			66	67	68	<p><b>OTHER METHOD(S) OF RESCUE EFFORT?</b></p> <table border="1" style="width: 100%; text-align: center;"> <tr><th>Y</th><th>Z</th><th># LIVE</th></tr> <tr><td>N</td><td>L</td><td>RELEASED</td></tr> <tr><td>2</td><td></td><td></td></tr> <tr><td>71</td><td>72</td><td>73</td></tr> </table>	Y	Z	# LIVE	N	L	RELEASED	2			71	72	73
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<p><b>SACK RESCUE EFFORT?</b></p> <table border="1" style="width: 100%; text-align: center;"> <tr><th>Y</th><th>Z</th><th># LIVE</th></tr> <tr><td>N</td><td>L</td><td>RELEASED</td></tr> <tr><td>1</td><td>3</td><td>003</td></tr> <tr><td>76</td><td>77</td><td>78</td></tr> </table>	Y	Z	# LIVE	N	L	RELEASED	1	3	003	76	77	78	<p><b>PORPOISE BASKET USED?</b></p> <table border="1" style="width: 100%; text-align: center;"> <tr><th>Y</th><th>N</th></tr> <tr><td></td><td></td></tr> <tr><td>0</td><td>7</td></tr> <tr><td>7</td><td>9</td></tr> </table>	Y	N			0	7	7	9	<p><b>RELEASED LIVE OVER DECK?</b></p> <table border="1" style="width: 100%; text-align: center;"> <tr><th>Y</th><th>N</th></tr> <tr><td></td><td></td></tr> <tr><td>2</td><td></td></tr> <tr><td>10</td><td>11</td></tr> </table>	Y	N			2		10	11	<p><b>ESCAPED?</b></p> <table border="1" style="width: 100%; text-align: center;"> <tr><th>Y</th><th>N</th></tr> <tr><td></td><td></td></tr> <tr><td>2</td><td></td></tr> <tr><td>14</td><td>15</td></tr> </table>	Y	N			2		14	15	<p><b>TOTAL NUMBER OF RESCUERS AFTER BACKDOWN</b></p> <table border="1" style="width: 100%; text-align: center;"> <tr><td>01</td></tr> <tr><td>18</td></tr> </table>	01	18	<p><b>WAS A PORPOISE CROOK USED TO RESCUE PORPOISE DURING THE SET?</b></p> <table border="1" style="width: 100%; text-align: center;"> <tr><th>Y</th><th>N</th></tr> <tr><td></td><td></td></tr> <tr><td>2</td><td></td></tr> <tr><td>20</td><td>21</td></tr> </table>	Y	N			2		20	21
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**END OF SET**

<p><b>SACKING UP?</b></p> <table border="1" style="width: 100%; text-align: center;"> <tr><th>Y</th><th># LIVE IN NET AT START</th><th>TIME START SACKING UP</th></tr> <tr><td>N</td><td>0</td><td>1600</td></tr> <tr><td>23</td><td>24</td><td>27</td></tr> </table>	Y	# LIVE IN NET AT START	TIME START SACKING UP	N	0	1600	23	24	27	<p><b>BRAILING?</b></p> <table border="1" style="width: 100%; text-align: center;"> <tr><th>Y</th><th># LIVE IN NET AT START</th><th>TIME START BRAILING</th><th>TIME END BRAILING</th></tr> <tr><td>N</td><td>0</td><td>1620</td><td>1645</td></tr> <tr><td>31</td><td>32</td><td>35</td><td>39</td></tr> </table>	Y	# LIVE IN NET AT START	TIME START BRAILING	TIME END BRAILING	N	0	1620	1645	31	32	35	39
Y	# LIVE IN NET AT START	TIME START SACKING UP																				
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23	24	27																				
Y	# LIVE IN NET AT START	TIME START BRAILING	TIME END BRAILING																			
N	0	1620	1645																			
31	32	35	39																			

NOTES: 3 injured porpoise were bleeding while in the sack, they were released from sack.

<p><b>TIME FINISH SET</b></p> <table border="1" style="width: 100%; text-align: center;"> <tr><td>1703</td></tr> <tr><td>43</td></tr> </table>	1703	43	<p><b>STRONG CURRENT THIS SET?</b></p> <table border="1" style="width: 100%; text-align: center;"> <tr><td>1</td></tr> <tr><td>47</td></tr> </table>	1	47	<p><b>TOTAL KNOWN PORPOISE KILL (ADD ✓)</b></p> <table border="1" style="width: 100%; text-align: center;"> <tr><td>0005</td></tr> <tr><td>48</td></tr> </table>	0005	48	<p><b>TOTAL INJURED</b></p> <table border="1" style="width: 100%; text-align: center;"> <tr><td>03</td></tr> <tr><td>52</td></tr> </table>	03	52	<p><b>SUCCESSFUL SET?</b></p> <table border="1" style="width: 100%; text-align: center;"> <tr><td>1</td></tr> <tr><td>54</td></tr> </table>	1	54	<p><b>TONS YF</b></p> <table border="1" style="width: 100%; text-align: center;"> <tr><td>03000000</td></tr> <tr><td>55</td><td>58</td></tr> </table>	03000000	55	58	<p><b>TONS SK</b></p> <table border="1" style="width: 100%; text-align: center;"> <tr><td>000000</td></tr> <tr><td>61</td></tr> </table>	000000	61	<p><b>TONS OTHER</b></p> <table border="1" style="width: 100%; text-align: center;"> <tr><td>0000</td></tr> <tr><td>61</td></tr> </table>	0000	61	<p><b>OTHER FISH CODE</b></p> <table border="1" style="width: 100%; text-align: center;"> <tr><td>1</td></tr> <tr><td>64</td></tr> </table>	1	64
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**PHYSICAL CAUSES OF MORTALITY**

DESCRIBE ENTANGLEMENT AND ENTRAPMENT USING THE NET SCHEMATIC (PAGE 13). DESCRIBE AND DISCUSS CAUSES OF MORTALITY ON BACK OF NET SCHEMATIC (PAGE 14).

<p><b>BEST ESTIMATE OF PORPOISE KILLED:</b></p> <table border="1" style="width: 100%; text-align: center;"> <tr><th>BEFORE BACKDOWN</th><th>DURING BACKDOWN</th><th>CARD #</th><th>AFTER BACKDOWN</th></tr> <tr><td>002</td><td>000</td><td>08</td><td>002</td></tr> <tr><td>75</td><td>78</td><td>80</td><td>9</td></tr> </table>	BEFORE BACKDOWN	DURING BACKDOWN	CARD #	AFTER BACKDOWN	002	000	08	002	75	78	80	9	<p><b>PERCENTAGE OF ALL PORPOISE KILLED:</b></p> <table border="1" style="width: 100%; text-align: center;"> <tr><th>SPOTTED KILLED</th><th>SPINNERS KILLED</th><th>% ALL OTHER KILLED</th></tr> <tr><td>080</td><td>000</td><td>000</td></tr> <tr><td>66</td><td>69</td><td>72</td></tr> </table>	SPOTTED KILLED	SPINNERS KILLED	% ALL OTHER KILLED	080	000	000	66	69	72
BEFORE BACKDOWN	DURING BACKDOWN	CARD #	AFTER BACKDOWN																			
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75	78	80	9																			
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<p><b>BY ENTANGLEMENT</b></p> <table border="1" style="width: 100%; text-align: center;"> <tr><td>000</td><td>000</td><td>000</td></tr> <tr><td>12</td><td>15</td><td>18</td></tr> </table>	000	000	000	12	15	18	<p><b>KNOWN ENTANGLEMENT</b></p> <table border="1" style="width: 100%; text-align: center;"> <tr><td>000</td><td>000</td><td>000</td></tr> <tr><td>30</td><td>33</td><td>36</td></tr> </table>	000	000	000	30	33	36									
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30	33	36																				
<p><b>BY ENTRAPMENT IN FOLDS OR CANOPIES</b></p> <table border="1" style="width: 100%; text-align: center;"> <tr><td>000</td><td>000</td><td>000</td></tr> <tr><td>21</td><td>24</td><td>27</td></tr> </table>	000	000	000	21	24	27	<p><b>KNOWN ENTRAPMENT</b></p> <table border="1" style="width: 100%; text-align: center;"> <tr><td>000</td><td>000</td><td>000</td></tr> <tr><td>39</td><td>42</td><td>45</td></tr> </table>	000	000	000	39	42	45									
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21	24	27																				
000	000	000																				
39	42	45																				
<p><b>BEST ESTIMATE OF PORPOISE ENTANGLED IN:</b></p> <table border="1" style="width: 100%; text-align: center;"> <tr><th>1 1/4" MESH</th><th>2" MESH</th><th>4 1/2" MESH</th><th>UNKNOWN MESH SIZE</th></tr> <tr><td>00</td><td>00</td><td>04</td><td>00</td></tr> <tr><td>48</td><td>50</td><td>52</td><td>54</td></tr> </table>	1 1/4" MESH	2" MESH	4 1/2" MESH	UNKNOWN MESH SIZE	00	00	04	00	48	50	52	54	<p><b>KNOWN SACKED-UP</b></p> <table border="1" style="width: 100%; text-align: center;"> <tr><td>000</td><td>000</td><td>000</td></tr> <tr><td>56</td><td>59</td><td>62</td></tr> </table>	000	000	000	56	59	62			
1 1/4" MESH	2" MESH	4 1/2" MESH	UNKNOWN MESH SIZE																			
00	00	04	00																			
48	50	52	54																			
000	000	000																				
56	59	62																				
<p><b>KNOWN OTHER</b></p> <table border="1" style="width: 100%; text-align: center;"> <tr><td>000</td><td>000</td><td>000</td></tr> <tr><td>65</td><td>68</td><td>71</td></tr> </table>	000	000	000	65	68	71	<p><b>UNKNOWN</b></p> <table border="1" style="width: 100%; text-align: center;"> <tr><td>000</td><td>000</td><td>000</td></tr> <tr><td>76</td><td>79</td><td>82</td></tr> </table>	000	000	000	76	79	82									
000	000	000																				
65	68	71																				
000	000	000																				
76	79	82																				

OTHER SPECIES/STOCK CODE

NAME \_\_\_\_\_ 65

SHOW ENTANGLEMENT ON NET SCHEMATIC (PAGE 13).







Appendix 8G. Marine Mammal Set Log/Tally Form (Version 7, Page 7) used by the Tuna-Porpoise Observer Program, 1978.

**Ex 1**  
**1977C PORPOISE SET LOG**

NOAA FORM 88-124  
F3234 12-77

CRUISE NUMBER 300 NOAA - U.S. DEPT. OF COM  
SET NUMBER 002 Page

ENT  
NUMB

1. Number of manned speedboat(s) in the water continuously until backdown, or if no backdown, until the normal tie-down is reached. . . . .

IF NO BACKDOWN OCCURRED, ENTER CODE 3 FOR QUESTIONS 2-9, AND SKIP TO ITEM 10.  
ANSWER EACH QUESTION BY ENTERING THE APPROPRIATE CODE:  
1 = YES    2 = NO    3 = NOT APPLICABLE

2. Were speedboat(s) used to tow on the net prior to backdown? . . . . .  
Illustrate and describe towing on pages 15-18. Include attachment points,  
net configurations, times, methods of towing, etc.

3. Did a net collapse occur prior to backdown? . . . . .  
Illustrate and describe net collapse on pages 15-18.

3a. Were porpoise killed as a result of a net collapse prior to backdown? . . . . .

4. Did the backdown area corks come together prior to the initiation of backdown? . . . . .

5. Were speedboat(s) used to open or adjust the backdown area prior to backdown? . . . . .

6. Was the net tied down at the corkline and bunchline marks (apron systems only)? . . . . .

7. Did the safety panel cover the perimeter of the backdown area? . . . . .

8. Were canopies evident during backdown? . . . . .  
Illustrate and describe any canopies and porpoise involvement on pages 15-18.

8a. Were porpoise killed as a result of canopies during backdown? . . . . .

9. After backdown, did the corkline come together at any point along the backdown channel? . . . . .

---

10. Did a net collapse occur after backdown, or if no backdown, at any time during the set? . . . . .

10a. Were porpoise killed as a result of a net collapse after backdown, or, if no backdown,  
at any time during the set? . . . . .

11. Were speedboat(s) used to tow on the net after backdown, or if no backdown, at any  
time during the set? . . . . .  
Illustrate and describe towing on pages 15-18. Include attachment points,  
net configurations, times, methods of towing, etc.

Y/N/N

Appendix 8G. Marine Mammal Set Log/Tally Form (Version 7, Page 8) used by the Tuna-Porpoise Observer Program, 1978.

**EX-1**  
**1977C PORPOISE SET LOG**

NOAA FORM 88-124  
PSW34 12-77

NOAA - U.S. DEPT. OF COM.  
Page 8

CRUISE NUMBER 300  
SET NUMBER 002

Answer each question by entering appropriate code: 1 = YES 2 = NO 3 = NOT APPLICABLE

12. Were concentrations of jellyfish encountered during this set? Y/N  
0 9 2  
7 9

12a. Did the presence of concentrations of jellyfish result in any problems with the net? Y/N/NA  
3  
10  
Describe any problems resulting from jellyfish on page 17.

13. Was maintenance required on apron systems or small mesh strips this set? Y/N/NA  
2  
11

**OPERATIONAL MALFUNCTIONS**

14. Did equipment malfunction(s) occur this set? 1  
12

14a. Did malfunction(s) result in a delay of set? 2  
13

14b. Were porpoise in the net during malfunctions? 1  
14

15. Was the set aborted? Y/N TIME  
2  
15 16

**DESCRIBE MALFUNCTION(S) IN ORDER OF OCCURRENCE**

	TIME		ESTIMATED DELAY IN MINUTES	NOTES: (TYPE OF MALFUNCTION, HOW, WHY)
	OCCURRED	FIXED		
1	1440	1445	5	Third bunchline tangled in corks - can't pull bunch - Speedboat driver freed the tangle - buanching continued.
2				
3				
4				

Appendix 8G. Marine Mammal Set Log/Tally Form (Version 7, Page 9) used by the Tuna-Porpoise Observer Program, 1978.

**EX. 1**

NOAA FORM 88-124  
FSW34 12-77

**1977C PORPOISE SET LOG**

CRUISE NUMBER 300 NOAA - U.S. DEPT. OF COMM.  
SET NUMBER 002 Page 9

**COMPLIANCE RECORD FOR REGULATION ASSESSMENT**

Answer each question by entering appropriate code: 1 = YES 2 = NO 3 = NOT APPLICABLE

**1. PROHIBITED SCHOOL**

a. If a prohibited school was encircled, DID YOU ASCERTAIN? 1  
20

b. Did you OBSERVE any CIRCUMSTANCES as to why the procedure was not followed? 1  
21

c. or RECEIVE any JUSTIFYING REASONS. . .from the VESSEL OPERATOR? 1  
22

If yes, (b. and/or c.), describe: I saw about 6 Eastern Spinners at 1500 hours. I had not seen any in net prior to this time. Skipper said he did not see any Eastern Spinners in the group we captured.

d. Compliance Classification. 23

**2. MANNED SPEEDBOATS**

a. If porpoise were encircled and a minimum of two manned speedboats (One manned speedboat for Class I vessels) were not utilized, DID YOU ASCERTAIN? 3  
24

b. Did you OBSERVE any CIRCUMSTANCES as to why the procedure was not followed? 3  
25

c. or RECEIVE any JUSTIFYING REASONS. . .from the VESSEL OPERATOR? 3  
26

If yes, (b. and/or c.), describe: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

d. Compliance Classification. 27

**3. BOW BUNCHES**

a. If porpoise were captured and three bow bunches were not pulled, DID YOU ASCERTAIN? 3  
28

b. Did you OBSERVE any CIRCUMSTANCES as to why the procedure was not followed? 3  
29

c. or RECEIVE any JUSTIFYING REASONS. . .from the VESSEL OPERATOR? 3  
30

If yes, (b. and/or c.), describe: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

d. Compliance Classification. 31

Appendix 8G. Marine Mammal Set Log/Tally Form (Version 7, Page 10) used by the Tuna-Porpoise Observer Program, 1978.

**EX. 1**

NOAA FORM 88-124  
F3W34 12-77

**1977C PORPOISE SET LOG**

CRUISE NUMBER 300 NOAA - U.S. DEPT. OF COM. **Page 10**  
SET NUMBER 002

Answer each question by entering appropriate code: 1 = YES 2 = NO 3 = NOT APPLICABLE

**4. BACKDOWN**

a. If live porpoise were in the net and the backdown procedure was not used, DID YOU ASCERTAIN? 3  
32

b. Did you OBSERVE any CIRCUMSTANCES as to why the procedure was not followed? 3  
33

c. or RECEIVE any JUSTIFYING REASONS . . . from the VESSEL OPERATOR? 3  
34

If yes, (b. and/or c.), describe: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

d. Compliance Classification 35

**5. SAFETY PANEL COVERING PERIMETER**

a. If the backdown procedure was used and the porpoise safety panel did not cover the perimeter of the backdown area, DID YOU ASCERTAIN? 3  
36

b. Did you OBSERVE any CIRCUMSTANCES as to why the procedure was not followed? 3  
37

c. or RECEIVE any JUSTIFYING REASONS . . . from the VESSEL OPERATOR? 3  
38

If yes, (b. and/or c.), describe: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

d. Compliance Classification 39

**6. TWO RESCUERS**

a. If live porpoise were in the net and a minimum of two men were not actively engaged in hand removal, DID YOU ASCERTAIN? 1  
40

b. Did you OBSERVE any CIRCUMSTANCES as to why the procedure was not followed? 2  
41

c. or RECEIVE any JUSTIFYING REASONS . . . from the VESSEL OPERATOR? 1  
42

If yes, (b. and/or c.), describe: Raftman should be able to get  
out the remaining porpoise out, without help.  
\_\_\_\_\_  
\_\_\_\_\_

d. Compliance Classification 43

Appendix 8G. Marine Mammal Set Log/Tally Form (Version 7, Page 11) used by the Tuna-Porpoise Observer Program, 1978.

**EX-1**  
**1977C PORPOISE SET LOG**

NOAA FORM 88-124 PSN34 12-77 NOAA - U.S. DEPT. OF COMM. **Page 11**

CRUISE NUMBER 300  
SET NUMBER 002

7. CONTINUOUS HAND REMOVAL Answer each question by entering appropriate code: 1 = YES 2 = NO 3 = NOT APPLICABLE

a. If live porpoise were in the net and hand removal was not continuous, DID YOU ASCERTAIN?  1  
44

b. Did you OBSERVE any CIRCUMSTANCES as to why the procedure was not followed?  2  
45

c. or RECEIVE any JUSTIFYING REASONS. . .from the VESSEL OPERATOR?  1  
46

If yes, (b. and/or c.), describe: SKIPPER says these porpoise can be released from sack, besides if rgtman can't reach them, then the speedboat driver couldn't either.

d. Compliance Classification  47

8. LIVE PORPOISE BRAILED

a. If live porpoise were in the net when brailing operations were initiated, DID YOU ASCERTAIN?  3  
48

b. Did you OBSERVE any CIRCUMSTANCES as to why the procedure was not followed?  3  
49

c. or RECEIVE any JUSTIFYING REASONS. . .from the VESSEL OPERATOR?  3  
50

If yes, (b. and/or c.), describe: \_\_\_\_\_

d. Compliance Classification  51

9. POINTED INSTRUMENT

a. If a sharp or pointed instrument was used on porpoise, DID YOU ASCERTAIN?  3  
52

b. Did you OBSERVE any CIRCUMSTANCES as to why the procedure was not followed?  3  
53

c. or RECEIVE any JUSTIFYING REASONS. . .from the VESSEL OPERATOR?  3  
54

If yes, (b. and/or c.), describe: \_\_\_\_\_

d. Compliance Classification  55

10. Are there any skipper or certificate holder comments recorded for this set?  2  
56

Appendix 8G. Marine Mammal Set Log/Tally Form (Version 7, Page 12) used by the Tuna-Porpoise Observer Program, 1978.

**EX-1**

NOAA FORM 88-124  
FSW34 12-77

**1977C PORPOISE SET LOG**

CRUISE NUMBER 300 NOAA - U.S. DEPT. OF COMM.  
SET NUMBER 002 Page 12

Answer each question by entering appropriate code: 1 = YES 2 = NO 3 = NOT APPLICABLE

**11. RUBBER RAFT**

a. If live porpoise were in the net and a rescuer in a rubber raft did not assist in hand removal, DID YOU ASCERTAIN? 3  
57

b. Did you OBSERVE any CIRCUMSTANCES as to why the procedure was not followed? 3  
58

c. or RECEIVE any JUSTIFYING REASONS . . . from the VESSEL OPERATOR? 3  
59

If yes, (b. and/or c.), describe: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

d. Compliance Classification 60

**12. FACEMASK AND SNORKEL**

a. If the rescuer in the rubber raft did not use a face mask and snorkel to determine if all live marine mammals were out of the net, DID YOU ASCERTAIN? 3  
61

b. Did you OBSERVE any CIRCUMSTANCES as to why the procedure was not followed? 3  
62

c. or RECEIVE any JUSTIFYING REASONS . . . from the VESSEL OPERATOR? 3  
63

If yes, (b. and/or c.), describe: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

d. Compliance Classification 64

**13. USE OF LIGHTS DURING SUNDOWN SETS**

a. If the backdown maneuver was performed in darkness, WERE LIGHTS USED? 3  
65

b. Describe use of lights . . . or the reason(s) lights were not used.

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_



Appendix 8G. Marine Mammal Set Log/Tally Form (Version 7, Page 13) used by the Tuna-Porpoise Observer Program, 1978.

**EX-1**

NOAA FORM 88-124  
FSW34 12-77

**1977C PORPOISE SET LOG**

CRUISE NUMBER 300 NOAA - U.S. DEPT. OF COMMERCE  
SET NUMBER 002 Page 13

**NET SCHEMATIC**

**INSTRUCTIONS:**

Sketch in changes so this net describes the net on vessel.  
Note mesh sizes of strips.  
Specify known areas of entanglement.

E = individual entanglement  
 (E) = mass (>15) entanglement  
 C = canopies or folds

Entanglement means stuck to the net by a part of the body, i.e., flukes, snout or flipper.  
 Entrapment means forced entanglement due to a configuration of the net which traps or poses unusual hazard to porpoise, not the size of the net per se, i.e., folds or canopies.

DESCRIBE AND DISCUSS ENTANGLEMENT AND ENTRAPMENT:

2 PORPOISE ENTANGLED IN 4 1/4" MESHES WHEN APP. 50% ESCAPED OVER CORKLINE. THESE WERE ROLLED ABOARD PRIOR TO BACKDOWN AND THROWN OFF NET PILE INTO THE WATER.

2 PORPOISE OF THE 6 LINE O. SPOTTERS, LEFT IN NET AFTER BACKDOWN, BECAME ENTANGLED IN 4 1/4" MESH PRIOR TO TIME THAT SACK UP BEGAN. DIED PRIOR TO SACK-UP.

Appendix 8G. Marine Mammal Set Log/Tally Form (Version 7, Page 14) used by the Tuna-Porpoise Observer Program, 1978.

Ex. 1

NOAA FORM 88-124  
PSW34 12-77

**1977C PORPOISE SET LOG**

CRUISE NUMBER 300 NOAA - U.S. DEPT. OF COM.  
SET NUMBER 002 Page 14

USAGE NOTES FOR NET SCHEMATIC PAGE

1. This page is used to locate areas of the net where entanglement and/or canopies have occurred. Hazardous areas may be identified to particular depth by "strip" providing that these areas are known (i.e., seen, not surmised). Include all entanglement whether mortality resulted or not.
2. The schematic represents a twelve-strip conventional purse seine with a midnet zipper, two "sacks" and a single-strip safety panel. If this doesn't describe the purse seine being observed, you should modify the schematic by sketching in changes (i.e., if a double depth safety panel is being used, sketch the 2nd strip under the first; or add on an apron if appropriate).
3. Specify known "areas" of entanglement with an "E". Specify known "areas" of folds or canopies with a "C". Entanglement denotes being somehow stuck to the net by a part of the body such as snout, flukes, fin. Folds and canopies refer to collapsed areas of webbing where the porpoise have become trapped. Canopies frequently result in some of the "trapped" porpoise becoming entangled by the snouts, etc. Try to differentiate between porpoise that were entangled as a result of canopies and those that were entangled without being in canopies in the "notes" section on the page.
4. It is difficult in many instances to specify areas of entanglement to a specific depth by "strip". This may be due to the tendency of the net to shoal-up and "billow" at times or merely not having an adequate vantage point to see deep enough underwater. Don't guess when specifying areas on the schematic. If depth is unknown, fine. Erroneous data is far worse than no data.

DESCRIBE AND DISCUSS HOW MORTALITY OCCURRED:

4 PORPOISE WERE KILLED BY ENTANGLEMENT ALL IN 4 1/4"  
MESH - SEE PAGE 13.

1 PORPOISE WAS KILLED IN THE SACK - COULDN'T FIND IT  
IN TIME FOR LIVE RELEASE. IT WAS BURIED / SMASHED  
UNDER THE FISH.

THE 3 O. SPOTTERS RELEASED FROM THE SACK ALIVE  
WERE BLEEDING FROM FINS AND SNOUTS. INJURED  
BUT DEFINITELY ALIVE AT TIME OF RELEASE.

Appendix 8G. Marine Mammal Set Log/Tally Form (Version 7, Page 15) used by the Tuna-Porpoise Observer Program, 1978.

**EX. 1**

**1977C PORPOISE SET LOG**

NOAA FORM 88-124  
FSM34 12-77

CRUISE NUMBER 300 NOAA U.S. DEPT. OF COMMERCE  
SET NUMBER 002 Page 15

SYMBOLS

X PORPOISE		SPEEDBOAT ATTACHED BUT NOT TOWING
E ENTANGLEMENT		TOWING FROM STERN
W WIND DIRECTION		TOWING FROM BOW
D CURRENT DIRECTION		TOWING ONE BUNCH
C CANOPY		TOWING TWO BUNCHES
N NET COLLAPSE		TOWING ON CORKLINE
S CORKLINE SINKAGE		
PSP PORPOISE SAFETY PANEL		
R PORPOISE RESCUE OR RELEASE		
		RAFT
		MANNED SPEEDBOAT
		ENTER ADDITIONAL SYMBOLS YOU USE:

INDICATE TIME AND EVENT (Operations, Malfunction, Rescue, Net Collapse, Mortality, etc.)

TIME 15:03 LOCATION OF PSP AT B.D.

NOTES: BOW END OF PSP IN MIDDLE OF 2ND BUNCH. STERN END OF PSP 10 FATHOMS FROM BOAT. PORPOISE CALM.

TIME 1412

NOTES: ENCIRCLEMENT - PORPOISE RAFTING - REMAINING CALM - SOME LEAPING

TIME 1420

NOTES: PURSING - SLIGHT STERN AND BOW BENDS - SPD BT CIRCLING NEAR STERN BAND.

TIME 1429

NOTES: CORK SINK AFTER RINGS UP PORPOISE ESCAPING OVER CORKS - 1ST BUNCH PULLED

TIME 1434

NOTES: PORPOISE CALM - NET WIDE OPEN - NO PROBLEMS SO FAR. 2ND BUNCH BEING PULLED

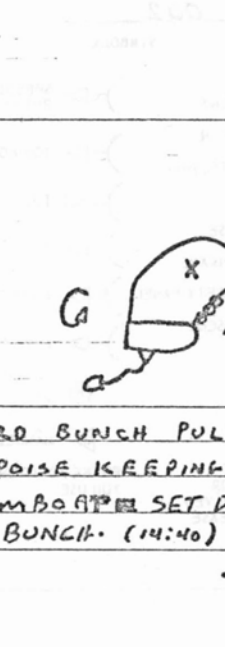
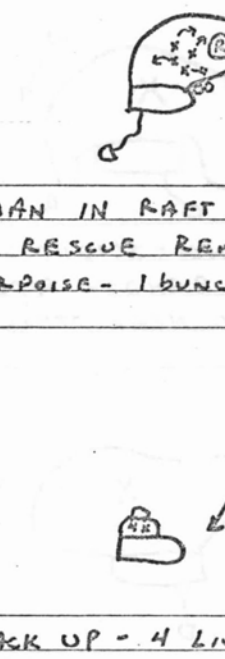
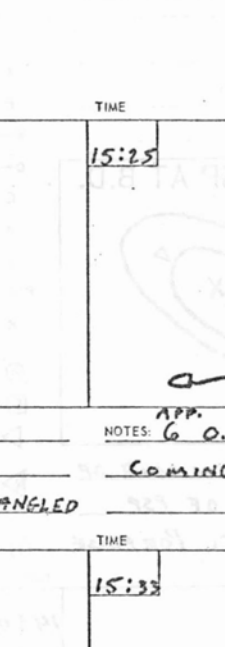
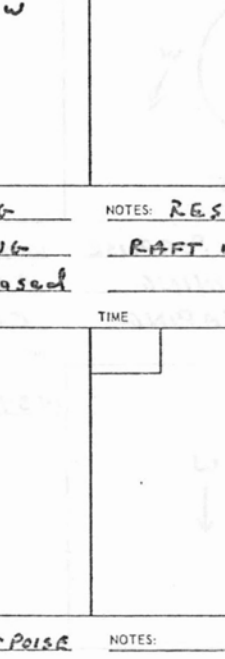
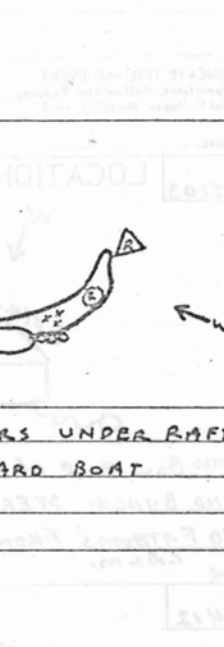
Appendix 8G. Marine Mammal Set Log/Tally Form (Version 7, Page 16) used by the Tuna-Porpoise Observer Program, 1978.

Ex.

NOAA FORM 88-124  
PS-74 12-77

**1977C PORPOISE SET LOG**

CRUISE NUMBER 300 NOAA - U.S. DEPT. OF COMM.  
SET NUMBER 002 Page 16

<p>TIME <u>14:50</u></p>  <p>NOTES: <u>3RD BUNCH PULLED -</u> <u>PORPOISE KEEPING AWAY</u> <u>FROM BOAT SET DELAY TANGLED</u> <u>BUNCH. (14:40)</u></p>	<p>TIME <u>15:25</u></p>  <p>NOTES: <u>APP.</u> <u>6 O.SPOTTERS UNDER RAFT,</u> <u>COMING TOWARD BOAT</u></p>
<p>TIME <u>15:30</u></p>  <p>NOTES: <u>MAN IN RAFT TRYING</u> <u>TO RESCUE REMAINING</u> <u>PORPOISE - 1 bunch released</u></p>	<p>TIME <u>15:35</u></p>  <p>NOTES: <u>RESCUE ATTEMPT STOPS -</u> <u>RAFT MAN BROUGHT ABOARD</u></p>
<p>TIME <u>16:00</u></p>  <p>NOTES: <u>SACK UP - 4 LIVE PORPOISE</u> <u>IN SACK</u></p>	<p>TIME</p> <p>NOTES:</p>

Appendix 8G. Marine Mammal Set Log/Tally Form (Version 7, Page 17) used by the Tuna-Porpoise Observer Program, 1978.

EX-1

NOAA FORM 88-124  
FS434 12-77

**1977C PORPOISE SET LOG**

CRUISE NUMBER 300 NOAA - U.S. DEPT. OF COM.  
SET NUMBER 002 Page 17

NOTES AND COMMENTS ON THIS SET (NOTE TIMES):

14:29 - CORKS SINK ON FAR SIDE OF THE NET AND PORPOISE START GOING OVER THE CORKLINE. NAVIGATOR SAYS CORK SINK CAUSED BY CURRENTS.

15:33 RAFTMAN CALLED BACK ON BOARD - HE COULD NOT CATCH THE REMAINING PORPOISE - SKIPPER SAID THEY COULD RELEASE THOSE PORPOISE FROM SACK.

Appendix 8G. Marine Mammal Set Log/Tally Form (Version 7, Page 18) used by the Tuna-Porpoise Observer Program, 1978.

**Ex. 1**

NOAA FORM 88-124  
PSW34 12-77

**1977C PORPOISE SET LOG**

CRUISE NUMBER 300 NOAA - U.S. DEPT. OF COMM.  
SET NUMBER 002 Page 18

CONTINUATION OF NOTES AND COMMENTS ON THIS SET (NOTE TIMES):

*[The following section contains ten horizontal lines, all of which are crossed out with a diagonal line from the bottom-left to the top-right.]*

**SKIPPER COMMENTS**

*[The following section contains ten horizontal lines, all of which are crossed out with a diagonal line from the bottom-left to the top-right.]*

Appendix 8H. Marine Mammal Set Log/Tally Form (Version 8, Page 1) used by the Tuna-Porpoise Observer Program, 1979.

NOAA FORM 88-124  
PSW34 11-78

**1979 MARINE MAMMAL SET LOG**

NOAA - U.S. DEPT. OF COM.  
Page 1

CRUISE #	SET #	CARD #	DATE			POSITION OF SET					SET TYPE	TIME CHASE BEGAN	NO. SETS USED	
			YEAR	MONTH	DAY	LATITUDE	N	S	LONGITUDE	E				W
		01												

**CREW ESTIMATES OF NUMBER AND SPECIES COMPOSITION OF ENTIRE SCHOOL BEFORE SET**

TOTAL NUMBER	% SPOTTED	% SPINNER	% OTHER SPECIES (1)	% OTHER SPECIES (2)	OTHER SPECIES/STOCK (1):	CODE
33	37	40	43	46		49
					OTHER SPECIES/STOCK (2):	CODE
						67 68

CARD # 02

TOTAL NUMBER	% SPOTTED	% SPINNER	% OTHER SPECIES (1)	% OTHER SPECIES (2)	NAME
7	9	13	16	19	22

**OBSERVER ESTIMATE OF NUMBER AND SPECIES COMPOSITION OF ENTIRE SCHOOL BEFORE SET**

TIME OF ESTIMATE	TOTAL NUMBER (ALL SPECIES)			PERCENT SPECIES COMPOSITION					
	BEST ESTIMATE	HIGHEST ESTIMATE	LOWEST ESTIMATE	% SPOTTED	% EASTERN SPINNER	% WHITEBELLY SPINNER	% OTHER OR UNID. SPINNER	% OTHER SPECIES (1)	% OTHER SPECIES (2)
	25	29	33	37	40	43	46	49	52

SPOTTED STOCK: CODE 55

OTHER SPINNER: CODE 57

OTHER SPECIES/STOCK (1): CODE 59

OTHER SPECIES/STOCK (2): CODE 61

NOTES: (Conditions; chase and behavior before net let go, etc.)

---

TIME NET LET GO: 63

EVADED SET? Y/N NUMBER: 67 68

MAJOR SPECIES/STOCK EVADED SET: CODE 72 73

(Cont. on pg. 11 & 12)

**OBSERVER ESTIMATE OF NUMBER AND SPECIES COMPOSITION OF MARINE MAMMALS AT TIME OF ENCIRCLEMENT**

TIME OF ESTIMATE	TOTAL NUMBER (ALL SPECIES)			PERCENT SPECIES COMPOSITION							
	CARD #	BEST ESTIMATE	HIGHEST ESTIMATE	LOWEST ESTIMATE	% SPOTTED	% EASTERN SPINNER	% WHITEBELLY SPINNER	% OTHER OR UNID. SPINNER	% OTHER SPECIES (1)	% OTHER SPECIES (2)	
	03	7	9	13	17	21	24	27	30	33	36

SPOTTED STOCK: CODE 39

OTHER SPINNER: CODE 41

OTHER SPECIES/STOCK (1): CODE 43

OTHER SPECIES/STOCK (2): CODE 45

Appendix 8H. Marine Mammal Set Log/Tally Form (Version 8, Page 2) used by the Tuna-Porpoise Observer Program, 1979.

NOAA FORM 88-124  
FSW34 11-78

### 1979 MARINE MAMMAL SET LOG

CRUISE # \_\_\_\_\_ NOAA - U.S. DEPT. OF COMM.  
SET # \_\_\_\_\_ **Page 2**

---

**CONDITIONS AT TIME TOWLINE IN**

WIND (KTS)	WIND BEARING	SWELL (FT)
47	49	52

**CONDITIONS AT TIME RINGS BREAK WATER**

TIME RINGS UP	Y/N	NUMBER	MAJOR SPECIES/STOCK:	CODE
54	Y	58		63

---

**CREW ESTIMATES OF NUMBER AND SPECIES COMPOSITION OF MARINE MAMMALS CAPTURED**

TOTAL CAUGHT	% SPOTTED	% SPINNER	% OTHER SPECIES (1)	% OTHER SPECIES (2)
65	69	72	75	78
11	15	18	21	24
29	33	36	39	42

OTHER SPECIES/STOCK (1):

NAME	CARD #	CODE
	04	
	7	9

OTHER SPECIES/STOCK (2):

NAME	CODE
	27

SPINNER STOCK:

NAME \_\_\_\_\_

---

**OBSERVER ESTIMATE OF NUMBER AND SPECIES COMPOSITION OF MARINE MAMMALS CAPTURED**

TIME OF ESTIMATE	TOTAL CAUGHT (ALL SPECIES)				PERCENT SPECIES COMPOSITION					
	BEST ESTIMATE	HIGHEST ESTIMATE	LOWEST ESTIMATE	% SPOTTED	% EASTERN SPINNER	% WHITEBELLY SPINNER	% OTHER OR UNID. SPINNER	% OTHER SPECIES (1)	% OTHER SPECIES (2)	
	45	49	53	57	60	63	66	69	72	

SPOTTED STOCK: 

CODE	
75	

OTHER SPINNER: 

CODE	
77	

OTHER SPECIES/STOCK (1): 

CODE	CARD #	CODE
	05	
	79	80

OTHER SPECIES/STOCK (2): 

CODE	
9	

---

**CONDITIONS PRIOR TO BACKDOWN**

MANNED SPDBTS #	SPDBTS TOW? Y/N/NA	NET COLLAPSE? Y/N/NA	KILL DUE TO NET COLLAPSE? Y/N/NA	SPDBTS INFLUENCE MARINE MAMMALS? Y/N/NA	SPDBTS ADJUST BD AREA? Y/N/NA
11	12	13	14	15	16

---

**LIVE MARINE MAMMALS RELEASED AND/OR ESCAPED PRIOR TO BACKDOWN**

RESCUE EFFORT?						# LIVE RELEASED BEFORE BACKDOWN	NOTES:	
Y/N	# RESCUERS	RAFT? Y/N	SPDBT? Y/N	SWIM? Y/N	OTHER? Y/N			
	17	18	20	21	22	23	24	

ESCAPED AFTER RINGS UP?

Y/N	NUMBER
27	28

(Continued on pg. 11 & 12)



Appendix 8H. Marine Mammal Set Log/Tally Form (Version 8, Page 3) used by the Tuna-Porpoise Observer Program, 1979.

NOAA FORM 88-124  
FS#34 11-78

### 1979 MARINE MAMMAL SET LOG

CRUISE # \_\_\_\_\_ NOAA - U.S. DEPT. OF COMM  
SET # \_\_\_\_\_ **Page 3**

**BACKDOWN - IF NO BACKDOWN, ANSWER Y/N BACKDOWN AND THEN GO TO RELEASED AND/OR ESCAPED AFTER BACKDOWN**

BACKDOWN?		OBSERVERS ESTIMATE OF MARINE MAMMALS RELEASED BECAUSE OF BACKING DOWN.										FISH LOSS DURING BACKDOWN?						
Y	N	TIME START	# BOW BUOYCHES	SUN/DOWN?	V/N	FACE COVER?	TIEDOWN?	TIME END B.D.	BEST ESTIMATE	HIGHEST ESTIMATE	LOWEST ESTIMATE	Y	N	~TONS	CANOPIES?	KILL DUE TO CANOPIES?		
Y	N		Y/N	Y/N	Y/N	Y/N	Y/N/NA					Y	N		Y/N	Y/N/NA		
		31	32					41						57	58		61	62

**LIVE MARINE MAMMALS RELEASED BY OTHER METHODS DURING BACKDOWN DOES NOT INCLUDE THOSE ANIMALS THAT WERE BACKED OUT.**

WEATHER DURING B.D.	CHOP HEIGHT	WIND SPEED	SWELL HEIGHT

**RESCUE EFFORT?**

Y	N	# RESCUERS	SPOTT?	RAFT?	FACE MASK?	SWIMMER?	OTHER?	# LIVE HAND RELEASED
Y	N		Y/N	Y/N	Y/N	Y/N	Y/N	
		63	64					71

NOTES: \_\_\_\_\_

**TALLY SHEET**

RECORD ALL DEAD (X) AND ALL UNDETERMINED STATUS (?) AND (O) DURING SET ON TALLY SHEET. RECORD ALL LIVE (+ AND (O)) THAT OCCUR AFTER BACKDOWN ON TALLY SHEET, AND SUMMARIZE BELOW. IF NO BACKDOWN, RECORD ALL ANIMALS ON TALLY SHEET, AND SUMMARIZE LIVE (+ AND (O)) BELOW.

# LIVE IN NET AFTER B.D.	CARD #	
	06	
74	76	7

**LIVE MARINE MAMMALS RELEASED AND/OR ESCAPED AFTER BACKDOWN**  
IF NO BACKDOWN OCCURRED, ACCOUNT FOR ALL LIVE ANIMALS RELEASED DURING THE SET IN THIS SECTION. THIS IS A SUMMARY OF ALL LIVE ANIMALS ON THE TALLY SHEET (+ AND (O)). RECORD EXPLICIT NOTES.

RAFT RESCUE EFFORT?	SPE_DBOAT RESCUE EFFORT?	SWIMMER RESCUE EFFORT?	OTHER METHOD(S) OF RESCUE EFFORT?	TOTAL NUMBER OF RESCUERS AFTER BACKDOWN								
Y	N	Y	N	Y	N	Z	# LIVE RELEASED	Y	N	Z	# LIVE RELEASED	
9	10	11	14	15	16	19	20	21	24	25	26	29

RELEASED LIVE OVER DECK? 

Y	N	NUMBER	
		31	32

ESCAPED? 

Y	N	NUMBER	
		35	36

NOTES: \_\_\_\_\_

(Cont. on pg. 11 & 12)

---

**SACKING UP?**

Y	N	TIME START	# LIVE IN NET AT START	SACK RESCUE EFFORT?	# LIVE RELEASED
Y	N		Y/N	Y/N	Y/N
		39	40		
		44	47	48	49

**BRAILING?**

Y	N	TIME START	# LIVE IN NET AT START	TIME END	FINISH SET TIME
Y	N		Y/N		
		52	53		
		57	60		64

**STRONG CURRENT THIS SET?**

Y	N
68	

**TOTAL KNOWN MARINE MAMMAL KILL (ADD X)**

Y	N
69	

**TOTAL INJURED**

Y	N
73	

**TONS YF**

Y	N
75	

**TONS SK**

Y	N
78	

**CARD #**

Y	N
7	

**TONS OTHER**

Y	N
9	

**OTHER FISH CODE**

Y	N
12	

Appendix 8H. Marine Mammal Set Log/Tally Form (Version 8, Page 4) used by the Tuna-Porpoise Observer Program, 1979.

NOAA FORM 88-124  
FSW34 11-78

### 1979 MARINE MAMMAL SET LOG

CRUISE # \_\_\_\_\_ NOAA - U.S. DEPT. OF COMM.  
SET # \_\_\_\_\_ **Page 4**

**PHYSICAL CAUSES OF MORTALITY**

DESCRIBE AND DISCUSS MORTALITY: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

(Cont. on pp. 11 & 12)

**PERCENTAGE OF ALL MARINE MAMMALS KILLED:**

	% SPOTTED KILLED	% SPINNER KILLED	% ALL OTHER KILLED
ENTANGLEMENT	14	17	20
ENTRAPMENT	23	26	29
SACKED-UP	32	35	38
OTHER	41	44	47
UNKNOWN	50	53	56

OTHER SPECIES/STOCK CODE

NAME \_\_\_\_\_ 59

**OPERATIONAL MALFUNCTIONS**

EQUIPMENT MALFUNCTIONS? MALFUNCTIONS DELAY SET? MARINE MAMMALS IN NET DURING MALFUNCTION? SET ABORTED? NET DUMP?

Y/N Y/N/NA ~MINUTES Y/N/NA Y/N TIME Y/N TIME

61 62 63 66 67 68 72 73 76

**DESCRIBE MALFUNCTION(S) IN ORDER OF OCCURRENCE**

	TIME		ESTIMATED DELAY IN MINUTES	NOTES: (TYPE OF MALFUNCTION, HOW, WHY)
	OCCURRED	FIXED		
1				
2				
3				
4				

Appendix 8H. Marine Mammal Set Log/Tally Form (Version 8, Page 5) used by the Tuna-Porpoise Observer Program, 1979.

1979 MARINE MAMMAL SET LOG  
TALLY SHEET

CRUISE # \_\_\_\_\_ NOAA - U.S. DEPT. OF  
SET # \_\_\_\_\_ Pa

FSW 34 11-78

NEONATE		TWO-TONE		SPECKLED		MOTTLED		ADULT		SPINNERS			OTHER SPECIES (1)			OTHER SPECIES (2)			U N - D						
										EASTERN	WHITEBELLY	OTHER OR UNID									M	F	?	M	F
													M	F	?	M	F	?	M	F					
M	F	?	M	F	?	M	F	?	M	F	?	M	F	?	M	F	?	M	F	?	M	F	?		

SYMBOLS TO USE:

√ = DEAD

+ = ESCAPED OR RELEASED ALIVE

⊕ = ESCAPED OR RELEASED ALIVE BUT INJURED

? = STATUS UNDETERMINED

⊖ = STATUS UNDETERMINED BUT INJURED

NOTE: "INJURED" MEANS

1) BLEEDING

2) HAVING OBVIOUSLY BROKEN BONES

3) HAVING GONE THROUGH THE POWER BLOCK

ANIMALS PROCESSED > + ⊕ ⊖

ANIMALS DUMPED

Appendix 8H. Marine Mammal Set Log/Tally Form (Version 8, Page 6) used by the Tuna-Porpoise Observer Program, 1979.

NOAA FORM 88-124 FS# 34 11-78	1979 MARINE MAMMAL SET LOG	NOAA - U.S. DEPT. OF COMM. CRUISE # _____ Page 6 SET # _____
<b>BEHAVIORAL SUMMARY</b>		
<u>OBSERVATIONS DURING CHASE</u> (i.e., free running, jumping, evasion, etc.)		
<u>OBSERVATIONS IN NET</u> (i.e., rafting, diving, jumping, cohesiveness, groups, etc.)		
<u>OBSERVATIONS DURING BACKDOWN</u> (i.e., sleeping, "swimming uphill," cohesiveness, etc.)		
<u>OBSERVATIONS AFTER BACKDOWN</u> (i.e., reaction to rescue effort, diving, cohesiveness, etc.)		

Appendix 8H. Marine Mammal Set Log/Tally Form (Version 8, Page 7) used by the Tuna-Porpoise Observer Program, 1979.

NOAA FORM 88-124  
FSW 34 11-78

1979 MARINE MAMMAL SET LOG

NOAA - U.S. DEPT. OF COMM.  
CRUISE # \_\_\_\_\_ Page 7  
SET # \_\_\_\_\_

1. SCHOOL COMPOSITION OBSERVATIONS

2. OBSERVATIONS ON USE OF SPEEDBOATS

3. BACKDOWN OBSERVATIONS

4. OBSERVATIONS ON SAFETY PANEL POSITION DURING BACKDOWN

Appendix 8H. Marine Mammal Set Log/Tally Form (Version 8, Page 8) used by the Tuna-Porpoise Observer Program, 1979.

NOAA FORM 88-124  
FSW 34 11-78

1979 MARINE MAMMAL SET LOG

NOAA - U.S. DEPT. OF COMM.  
CRUISE # \_\_\_\_\_ Page 8  
SET # \_\_\_\_\_

5. BOW BUNCH OBSERVATIONS

6. OBSERVATIONS ON USE OF LIGHTS DURING BACKDOWN

7. OBSERVATIONS ON TWO RESCUERS AND CONTINUOUS HAND REMOVAL

8. OBSERVATIONS ON USE OF RUBBER RAFT, FACEMASK, AND SNORKEL

9. BRAILING OBSERVATIONS

Appendix 8H. Marine Mammal Set Log/Tally Form (Version 8, Page 9) used by the Tuna-Porpoise Observer Program, 1979.

NOAA FORM 88-124 FSW 34 11-78	<h3 style="margin: 0;">1979 MARINE MAMMAL SET LOG</h3>	CRUISE # _____ NOAA - U.S. DEPT. OF COMM. SET # _____	Page 9
INDICATE TIME AND EVENT (Operations, Malfunction, Rescue, Net Collapse, Mortality, etc.)		SYMBOLS	
TIME <div style="border: 1px solid black; padding: 5px; margin: 5px 0;">                     LOCATION OF PSP AT B.D.                 </div>	X PORPOISE E ENTANGLEMENT W WIND DIRECTION D CURRENT DIRECTION C CANOPY N NET COLLAPSE S CORKLINE SINKAGE PSP PORPOISE SAFETY PANEL R PORPOISE RESCUE OR RELEASE ⌀ BOW BUNCH S SKIFF ▷ SPEEDBOAT Ⓡ SPEEDBOAT OR TENDER INVOLVED IN HAND RELEASE Ⓢ SWIMMERS	) SPEEDBOAT ATTACHED BUT NOT TOWING ) TOWING FROM STERN ) TOWING FROM BOW ) TOWING ONE BUNCH ) TOWING TWO BUNCHES ) TOWING ON CORKLINE Ⓡ RAFT Ⓜ MANNED SPEEDBOAT	ENTER ADDITIONAL SYMBOLS YOU USE:
NOTES: _____ _____ _____			
TIME <div style="border: 1px solid black; height: 100px;"></div>	TIME <div style="border: 1px solid black; height: 100px;"></div>		
NOTES: _____ _____ _____		NOTES: _____ _____ _____	
TIME <div style="border: 1px solid black; height: 100px;"></div>	TIME <div style="border: 1px solid black; height: 100px;"></div>		
NOTES: _____ _____ _____		NOTES: _____ _____ _____	

Appendix 8H. Marine Mammal Set Log/Tally Form (Version 8, Page 10) used by the Tuna-Porpoise Observer Program, 1979.

NOAA FORM 88-124 FSW 34 11-78		<b>1979 MARINE MAMMAL SET LOG</b>		CRUISE # _____ NOAA - U.S. DEPT. OF COMM	
				SET # _____ <b>Page 10</b>	
TIME		TIME			
NOTES:		NOTES:			
TIME		TIME			
NOTES:		NOTES:			
TIME		TIME			
NOTES:		NOTES:			







Appendix 8I. Marine Mammal Set Log/Tally Form (Version 9, Page 1) used by the Tuna-Porpoise Observer Program, 1980-1987.

NOAA FORM 88-124  
FSW34 11-80

**MARINE MAMMAL SET LOG**

NOAA - U.S. DEPT. OF COMMERCE  
**Page 1**

**1. BEGIN SET**

CRUISE #	SET #	CARD #	DATE			POSITION OF SET					SET TYPE	TIME CHASE BEGAN	% SPOTS USED	
			YEAR	MONTH	DAY	LATITUDE	N S	LONGITUDE	E W					
		01												

**2. CREW ESTIMATES OF NUMBER AND SPECIES COMPOSITION OF ENTIRE SCHOOL BEFORE SET**

TOTAL NUMBER	% SPOTTED	% SPINNER	% OTHER SPECIES (1)	% OTHER SPECIES (2)	OTHER SPECIES/STOCK (1):	CODE	
33	37	40	43	46	NAME	49	
51	55	58	61	64	OTHER SPECIES/STOCK (2):	CODE	
CARD #	SPINNER STOCK:					67	68
02	NAME						

**3. OBSERVER ESTIMATE OF NUMBER AND SPECIES COMPOSITION OF ENTIRE SCHOOL BEFORE SET**

TIME OF ESTIMATE	TOTAL NUMBER (ALL SPECIES)			PERCENT SPECIES COMPOSITION					
	BEST ESTIMATE	HIGHEST ESTIMATE	LOWEST ESTIMATE	% SPOTTED	% EASTERN SPINNER	% WHITEBELLY SPINNER	% OTHER OR UNID. SPINNER	% OTHER SPECIES (1)	% OTHER SPECIES (2)
	25	29	33	37	40	43	46	49	52
	SPOTTED STOCK: CODE	OTHER SPINNER: CODE	OTHER SPECIES/STOCK (1): CODE	OTHER SPECIES/STOCK (2): CODE					
	55		57		59				61

**4. NOTES: (CONDITIONS, CHASE AND BEHAVIOR BEFORE NET LET GO, i.e., FREE RUNNING, JUMPING, EVASION, ETC.)**

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**1. NET LET GO**

TIME NET LET GO	EVASIED SET?	MAJOR SPECIES/STOCK EVASIED SET:	CODE
63	Y N	NUMBER	72 73

(Cont. on pg. 8)

**2. OBSERVER ESTIMATE OF NUMBER AND SPECIES COMPOSITION OF MARINE MAMMALS AT TIME OF ENCIRCLEMENT**

TIME OF ESTIMATE	CARD #	TOTAL NUMBER (ALL SPECIES)			PERCENT SPECIES COMPOSITION					
		BEST ESTIMATE	HIGHEST ESTIMATE	LOWEST ESTIMATE	% SPOTTED	% EASTERN SPINNER	% WHITEBELLY SPINNER	% OTHER OR UNID. SPINNER	% OTHER SPECIES (1)	% OTHER SPECIES (2)
	03									
		SPOTTED STOCK: CODE	OTHER SPINNER: CODE	OTHER SPECIES/STOCK (1): CODE	OTHER SPECIES/STOCK (2): CODE					
		39		41		43				45

Appendix 8I. Marine Mammal Set Log/Tally Form (Version 9, Page 2) used by the Tuna-Porpoise Observer Program, 1980-1987.

NOAA FORM 88-124  
FSW34 11-80

## MARINE MAMMAL SET LOG

CRUISE # \_\_\_\_\_ NOAA - U.S. DEPT. OF COMM.  
SET # \_\_\_\_\_ **Page 2**

<p>TIME _____</p> <p><b>1. ENCIRCLEMENT</b></p>	<p>TIME _____</p> <p><b>2. RINGS UP</b></p>
---	---

NOTES: \_\_\_\_\_

NOTES: \_\_\_\_\_

**1. CONDITIONS AT TIME TOWLINE IN**

WIND (KTS)	RELATIVE WIND BEARING	SWELL (FT)
47	49	52

**2. CONDITIONS AT TIME RINGS BREAK WATER**

TIME RINGS UP	ESCAPED BEFORE RINGS UP ?	MAJOR SPECIES/STOCK:	CODE
54	Y N	NUMBER	63

**1. CREW ESTIMATES OF NUMBER AND SPECIES COMPOSITION OF MARINE MAMMALS CAPTURED**

TOTAL CAUGHT	% SPOTTED	% SPINNER	% OTHER SPECIES (1)	% OTHER SPECIES (2)
65	69	72	75	78
11	15	18	21	24
29	33	36	39	42

OTHER SPECIES/STOCK (1):

CARD #	CODE
04	7 9

NAME \_\_\_\_\_

OTHER SPECIES/STOCK (2):

CODE
27

NAME \_\_\_\_\_

SPINNER STOCK:

NAME \_\_\_\_\_

**2. OBSERVER ESTIMATE OF NUMBER AND SPECIES COMPOSITION OF MARINE MAMMALS CAPTURED**

TOTAL CAUGHT (ALL SPECIES)				PERCENT SPECIES COMPOSITION					
TIME OF ESTIMATE	BEST ESTIMATE	HIGHEST ESTIMATE	LOWEST ESTIMATE	% SPOTTED	% EASTERN SPINNER	% WHITEBELLY SPINNER	% OTHER OR UNID. SPINNER	% OTHER SPECIES (1)	% OTHER SPECIES (2)
45	49	53	57	60	63	66	69	72	

SPOTTED STOCK: CODE \_\_\_\_\_ OTHER SPINNER: CODE \_\_\_\_\_ OTHER SPECIES/STOCK (1): CODE \_\_\_\_\_ OTHER SPECIES/STOCK (2): CODE \_\_\_\_\_

CODE	CARD #
75	05

NAME \_\_\_\_\_

**3. OBSERVATIONS IN NET (i.e., RAFTING, DIVING, JUMPING, COHESIVENESS, SCHOOL COMPOSITION, GROUPS, ETC.)**

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Appendix 8I. Marine Mammal Set Log/Tally Form (Version 9, Page 3) used by the Tuna-Porpoise Observer Program, 1980-1987.

NOAA FORM 88-124  
FSW34 11-80

### MARINE MAMMAL SET LOG

CRUISE # \_\_\_\_\_ NOAA - U.S. DEPT. OF COM  
SET # \_\_\_\_\_ **Page** \_\_\_\_\_

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**1. CONDITIONS PRIOR TO BACKDOWN**

MANNED SPDBTS #	SPDBTS TOW? Y/N/NA	NET COLLAPSE? Y/N/NA	KILL DUE TO NET COLLAPSE? Y/N/NA	SPDBTS INFLUENCE MARINE MAMMALS? Y/N/NA	SPDBTS ADJUST BD AREA? Y/N/NA
[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
11	12	13	14	15	16

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**2. LIVE MARINE MAMMALS RELEASED AND/OR ESCAPED PRIOR TO BACKDOWN**

RESCUE EFFORT?						# LIVE RELEASED BEFORE BACKDOWN	ESCAPED AFTER RINGS UP?	
Y/N	#	RAFT?	SPDBT?	SWIM?	OTHER?		Y/N	NUMBER
[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
17	18	20	21	22	23	24	27	28

TIME \_\_\_\_\_ TIME \_\_\_\_\_

---

<b>1. TIEDOWN:</b> BOW BUNCHES, PANEL COVER, APRON POSITION	<b>2. BACKDOWN:</b> RESCUE EFFORT, MAMMAL INVOLVEMENT
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**3. BACKDOWN - IF NO BACKDOWN, ANSWER Y/N BACKDOWN AND THEN GO TO RELEASED AND/OR ESCAPED AFTER BACKDOWN**

BACKDOWN?	TIME START	# BOW BUNCHES	SUNDOWN?	LIGHTS?	PANEL COVER	TIEDOWN?	TIME END B.D.	BEST ESTIMATE	HIGHEST ESTIMATE	LOWEST ESTIMATE	FISH LOSS DURING BACKDOWN?	CANOPIES?	KILL DUE TO CANOPIES?	
Y/N	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	Y/N	[ ]	[ ]	
31	32	36	37	38	39	40	41	45	49	53	57	58	61	62

---

**4. LIVE MARINE MAMMALS RELEASED BY OTHER METHODS DURING BACKDOWN DOES NOT INCLUDE THOSE ANIMALS THAT WERE BACKED OUT.**

RESCUE EFFORT?	#	SPDBT?	RAFT?	FACE MASK?	SWIMMER?	OTHER?	# LIVE HAND RELEASED
Y/N	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
63	64	66	67	68	69	70	71

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**5. WEATHER DURING B.D.**      CHOP HEIGHT \_\_\_\_\_      WIND SPEED \_\_\_\_\_      SWELL HEIGHT \_\_\_\_\_

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**6. NOTES: LIGHTS, RAFT, FACE MASK SWIMMER**

\_\_\_\_\_

\_\_\_\_\_

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**6. MARINE MAMMAL BEHAVIOR DURING BACKDOWN SLEEPING, "SWIMMING UPHILL" COHESIVENESS, ETC.**

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Appendix 8I. Marine Mammal Set Log/Tally Form (Version 9, Page 4) used by the Tuna-Porpoise Observer Program, 1980-1987.

NOAA FORM 88-124  
FSW34 11-80

## MARINE MAMMAL SET LOG

CRUISE # \_\_\_\_\_  
SET # \_\_\_\_\_
NOAA - U.S. DEPT. OF COMM.  
**Page 4**

**1. LIVE MARINE MAMMALS RELEASED AND/OR ESCAPED AFTER BACKDOWN**  
 IF NO BACKDOWN OCCURRED, ACCOUNT FOR ALL LIVE ANIMALS RELEASED DURING THE SET IN THIS SECTION.  
 THIS IS A SUMMARY OF ALL LIVE ANIMALS ON THE TALLY SHEET (+ AND ⊕). RECORD EXPLICIT NOTES.

RAFT RESCUE EFFORT?

Y	N	# LIVE RELEASED
9	10	11

SPEEDBOAT RESCUE EFFORT?

Y	N	# LIVE RELEASED
14	15	16

SWIMMER RESCUE EFFORT?

Y	N	# LIVE RELEASED
19	20	21

OTHER METHOD(S) OF RESCUE EFFORT?

Y	N	# LIVE RELEASED
24	25	26

TOTAL NUMBER OF RESCUERS AFTER BACKDOWN

74	76	7
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2. NOTES: (INCLUDE RESCUER DEPLOYMENT AND HAND REMOVAL)


RELEASED LIVE OVER DECK?

Y	N	NUMBER
31	32	

ESCAPED?

Y	N	NUMBER
35	36	

TIMES:

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**3. TALLY SHEET**

RECORD ALL DEAD (✓) AND ALL UNDETERMINED STATUS (? AND ⊕) DURING SET ON TALLY SHEET.  
 RECORD ALL LIVE (+ AND ⊕) THAT OCCUR AFTER BACKDOWN ON TALLY SHEET, AND SUMMARIZE ABOVE.  
 IF NO BACKDOWN, RECORD ALL ANIMALS ON TALLY SHEET, AND SUMMARIZE LIVE (+ AND ⊕) ABOVE.

	SPOTTED									SPINNERS						OTHER SPECIES (1)			OTHER SPECIES (2)			UNID																	
	NEONATE			TWO-TONE			SPECKLED			MOTTLED			ADULT			AGE	EASTERN			WHITEBELLY			UNID																
	M	F	?	M	F	?	M	F	?	M	F	?	M	F	?	UNK	M	F	?	M	F		?	M	F	?	M	F	?	M	F	?							
DUMPED																																							
PROCESSED																																							
✓																																							
+																																							
⊕																																							
?																																							
⊕																																							

SPOTTER STOCK: \_\_\_\_\_ OTHER/UNID. SPINNER: \_\_\_\_\_ OTHER SPECIES 1: \_\_\_\_\_ OTHER SPECIES 2: \_\_\_\_\_

Appendix 8I. Marine Mammal Set Log/Tally Form (Version 9, Page 5) used by the Tuna-Porpoise Observer Program, 1980-1987.

NOAA FORM 88-124 **MARINE MAMMAL SET LOG** CRUISE # \_\_\_\_\_ NOAA - U.S. DEPT. OF COMM. Page 5  
 FSW34 11-80 SET # \_\_\_\_\_

TIME \_\_\_\_\_ TIME \_\_\_\_\_

**1. AFTER BACKDOWN**  
 NET CONFIGURATION AND RESCUE EFFORT

**2. SACK UP THROUGH TONS LOADED**

Y/N	TIME START	# LIVE IN NET AT START	SACK RESCUE EFFORT? Y/N	# LIVE RELEASED	Y/N	TIME START	# LIVE IN NET AT START	TIME END	FINISH SET TIME

STRONG CURRENT THIS SET?  Y  N

TOTAL KNOWN MARINE MAMMAL KILL (ADD  $\checkmark$ )

TOTAL INJURED

TONS YF	TONS SK	CARD #	TONS OTHER	OTHER FISH CODE
		07		

**3. NOTES: (INCLUDE SACK RELEASE AND BRAILING OBSERVATIONS)**

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

**PHYSICAL CAUSES OF MORTALITY**

**1. DISCUSS MORTALITY & NATURE/EXTENT OF INJURIES**

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

PERCENTAGE OF ALL MARINE MAMMALS KILLED:

	% SPOTTED KILLED	% SPINNER KILLED	% ALL OTHER KILLED
ENTANGLEMENT	14	17	20
ENTRAPMENT	23	26	29
SACKED-UP	32	35	38
OTHER	41	44	47
UNKNOWN	50	53	56

OTHER SPECIES/STOCK  CODE

NAME \_\_\_\_\_

(Cont. on pg. 8)

Appendix 8I. Marine Mammal Set Log/Tally Form (Version 9, Page 6) used by the Tuna-Porpoise Observer Program, 1980-1987.

NOAA FORM 88-124  
FSW34 11-80

**MARINE MAMMAL SET LOG**

CRUISE # \_\_\_\_\_ NOAA - U.S. DEPT. OF COMM.  
SET # \_\_\_\_\_ **Page 6**

**1. OPERATIONAL MALFUNCTIONS**

EQUIPMENT MALFUNCTIONS?	MALFUNCTIONS DELAY SET?	MARINE MAMMALS IN NET DURING MALFUNCTION?	SET ABORTED?	NET DUMP?
Y N	Y/N/NA ~MINUTES	Y/N/NA	Y N TIME	Y N TIME
61	62 63	66	67 68	72 73 76

**DESCRIBE MALFUNCTION(S) IN ORDER OF OCCURRENCE**

	OCCURRED	TIME	FIXED	ESTIMATED DELAY IN MINUTES	NOTES: (TYPE OF MALFUNCTION, HOW, WHY)
1					
2					
3					
4					

**SKIPPER COMMENTS**



Appendix 8I. Marine Mammal Set Log/Tally Form (Version 9, Page 7) used by the Tuna-Porpoise Observer Program, 1980-1987.

NOAA FORM 88-124  
FSW34 11-80

**MARINE MAMMAL SET LOG**

CRUISE # \_\_\_\_\_ NOAA - U.S. DEPT. OF COMM.  
SET # \_\_\_\_\_ **Page 7**

SYMBOLS

INDICATE TIME AND EVENT  
(Operations, Malfunction, Rescue,  
Net Collapse, Mortality, etc.)

TIME

NOTES: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

- X PORPOISE
- E ENTANGLEMENT
- W ← WIND DIRECTION
- D ← CURRENT DIRECTION
- C CANOPY
- N NET COLLAPSE
- S CORKLINE SINKAGE
- PSP PORPOISE SAFETY PANEL
- R PORPOISE RESCUE OR RELEASE
- ⊘ BOW BUNCH
- Ⓢ SKIFF
- ▷ SPEEDBOAT
- ▷ SPEEDBOAT OR TENDER INVOLVED IN HAND RELEASE
- Ⓢ SWIMMERS

- ⌋ SPEEDBOAT ATTACHED BUT NOT TOWING
- ⌋ TOWING FROM STERN
- ⌋ TOWING FROM BOW
- ⌋ TOWING ONE BUNCH
- ⌋ TOWING TWO BUNCHES
- ⌋ TOWING ON CORKLINE
- Ⓡ RAFT
- Ⓡ MANNED SPEEDBOAT

ENTER ADDITIONAL SYMBOLS YOU USE:

TIME

NOTES: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

TIME

NOTES: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

TIME

NOTES: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

TIME

NOTES: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Appendix 8I. Marine Mammal Set Log/Tally Form (Version 9, Page 8) used by the Tuna-Porpoise Observer Program, 1980-1987.

NOAA FORM 88-124 FSW34 11-80	<b>MARINE MAMMAL SET LOG</b>	CRUISE # _____ NOAA - U.S. DEPT. OF COMM. SET # _____	<b>Page 8</b>
NOTES ON THIS SET (NOTE TIMES): TIMES			

Appendix 8J. Marine Mammal Set Log/Tally Form (Version 10, Page 1) used by the Tuna-Porpoise Observer Program, 1988-1990.

NOAA FORM 88-124  
FSW12 11-88

### MARINE MAMMAL SET LOG

NOAA - U.S. DEPT. OF COM. Page

**1. BEGIN SET**

CRUISE #	SET #	CARD #	DATE			POSITION OF SET			SET TYPE	TIME CHASE BEGAN	F. SPDRBTS USED		
1	4	7	YEAR	MONTH	DAY	LATITUDE	N S	LONGITUDE	E W	25	26	28	32
		01											

**2. CREW ESTIMATES OF NUMBER AND SPECIES COMPOSITION OF ENTIRE SCHOOL BEFORE SET**

TOTAL NUMBER	% SPOTTED	% SPINNER	% OTHER SPECIES (1)	% OTHER SPECIES (2)	OTHER SPECIES/STOCK (1):	CODE
33	37	40	43	46	NAME	49
					OTHER SPECIES/STOCK (2):	CODE
					NAME	67 68
					SPINNER STOCK:	
					NAME	

CARD # **02**

FIS. CAPT. ES. ...MATE

**3. OBSERVER ESTIMATE OF NUMBER AND SPECIES COMPOSITION OF ENTIRE SCHOOL BEFORE SET**

(TIME OF ESTIMATE)	TOTAL NUMBER (ALL SPECIES)				PERCENT SPECIES COMPOSITION					
	BEST ESTIMATE	HIGHEST ESTIMATE	LOWEST ESTIMATE	% SPOTTED	% EASTERN SPINNER	% WHITEBELLY SPINNER	% OTHER OR UNID. SPINNER	% OTHER SPECIES (1)	% OTHER SPECIES (2)	
	25	29	33	37	40	43	46	49	52	
SPOTTED STOCK:	CODE	OTHER SPINNER:	CODE	OTHER SPECIES/STOCK (1):	CODE	OTHER SPECIES/STOCK (2):	CODE		CODE	
	55		57		59				61	

**4. NOTES: (CONDITIONS, CHASE AND BEHAVIOR BEFORE NET LET GO, i.e., FREE RUNNING, JUMPING, EVASION, ETC.)**

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**1. NET LET GO**

TIME NET LET GO	Y N	EVASION SET? NUMBER	MAJOR SPECIES/STOCK EVASION SET:	CODE	SB? Y N
63		67 68		72 73	74

(Cont. on pg. 8)

**2. OBSERVER ESTIMATE OF NUMBER AND SPECIES COMPOSITION OF MARINE MAMMALS AT TIME OF ENCIRCLEMENT**

(TIME OF ESTIMATE)	CARD #	TOTAL NUMBER (ALL SPECIES)				PERCENT SPECIES COMPOSITION					
		BEST ESTIMATE	HIGHEST ESTIMATE	LOWEST ESTIMATE	% SPOTTED	% EASTERN SPINNER	% WHITEBELLY SPINNER	% OTHER OR UNID. SPINNER	% OTHER SPECIES (1)	% OTHER SPECIES (2)	
	03										
SPOTTED STOCK:	CODE	OTHER SPINNER:	CODE	OTHER SPECIES STOCK (1):	CODE	OTHER SPECIES STOCK (2):	CODE		CODE		
	39		41		43				45		

Appendix 8J. Marine Mammal Set Log/Tally Form (Version 10, Page 2) used by the Tuna-Porpoise Observer Program, 1988-1990.

NOAA FORM 88-124  
FSW12 11-88

### MARINE MAMMAL SET LOG

CRUISE # \_\_\_\_\_ NOAA - U.S. DEPT. OF COMM.  
SET # \_\_\_\_\_ **Page 2**

<p>TIME _____</p> <p>1. ENCIRCLEMENT</p>	<p>TIME _____</p> <p>2. RINGS UP</p>
--	--------------------------------------

NOTES: \_\_\_\_\_

NOTES: \_\_\_\_\_

**1. CONDITIONS AT TIME TOWLINE IN**

WIND (KTS)	RELATIVE WIND BEARING	SWELL (FT)
47	49	52

**2. CONDITIONS AT TIME RINGS BREAK WATER**

ESCAPED BEFORE RINGS UP ?

Y	N	NUMBER	MAJOR SPECIES/STOCK:	CODE
		54		63

**1. CREW ESTIMATES OF NUMBER AND SPECIES COMPOSITION OF MARINE MAMMALS CAPTURED**

TOTAL CAUGHT	% SPOTTED	% SPINNER	% OTHER SPECIES (1)	% OTHER SPECIES (2)
65	69	72	75	78
11	15	18	21	24
<b>FISH CAPT ESTIMATE</b>				
29	33	36	39	42

OTHER SPECIES/STOCK (1):

CARD #	CODE
04	7 9

NAME \_\_\_\_\_

OTHER SPECIES/STOCK (2):

CODE
27

NAME \_\_\_\_\_

SPINNER STOCK:

NAME \_\_\_\_\_

**2. OBSERVER ESTIMATE OF NUMBER AND SPECIES COMPOSITION OF MARINE MAMMALS CAPTURED**

TIME OF ESTIMATE	TOTAL CAUGHT (ALL SPECIES)				PERCENT SPECIES COMPOSITION					
	BEST ESTIMATE	HIGHEST ESTIMATE	LOWEST ESTIMATE	SPOTTED	% EASTERN SPINNER	% WHITEBELLY SPINNER	% OTHER OR UNID. SPINNER	% OTHER SPECIES (1)	% OTHER SPECIES (2)	
	45	49	53	57	60	63	66	69	72	

SPOTTED STOCK: CODE \_\_\_\_\_ OTHER SPINNER: CODE \_\_\_\_\_ OTHER SPECIES STOCK (1): CODE \_\_\_\_\_ CARD # 05 OTHER SPECIES STOCK (2): CODE \_\_\_\_\_

**3. OBSERVATIONS IN NET (i.e., RAFTING, DIVING, JUMPING, COHESIVENESS, SCHOOL COMPOSITION, GROUPS, ETC.)**

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Appendix 8J. Marine Mammal Set Log/Tally Form (Version 10, Page 3) used by the Tuna-Porpoise Observer Program, 1988-1990.

**MARINE MAMMAL SET LOG**

NOAA FORM 88-124  
FSW12 11-88

CRUISE # \_\_\_\_\_ NOAA - U.S. DEPT. OF COM  
SET # \_\_\_\_\_ **Page 3**

---

**1. CONDITIONS PRIOR TO BACKDOWN**

MANNED SPDBTS #	SPDBTS TOW? Y/N/NA	NET COLLAPSE? Y/N/NA	KILL DUE TO NET COLLAPSE? Y/N/NA	SPDBTS INFLUENCE MARINE MAMMALS? Y/N/NA	SPDBTS ADJUST BD AREA? Y/N/NA
11	12	13	14	15	16

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**2. LIVE MARINE MAMMALS RELEASED AND/OR ESCAPED PRIOR TO BACKDOWN**

RESCUE EFFORT?						# LIVE RELEASED BEFORE BACKDOWN		ESCAPED AFTER RINGS UP?	
Y	N	#	RAFT?	SPDBT?	SWIM?	Y	N	Y	N
17	18	19	20	21	22	23	24	27	28

TIME \_\_\_\_\_

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**3. NOTES: USE OF SPEEDBOATS**

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<b>1. TIEDOWN:</b> BOW BUNCHES, PANEL COVER, APRON POSITION	<b>2. BACKDOWN:</b> RESCUE EFFORT, MAMMAL INVOLVEMENT
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**3. BACKDOWN - IF NO BACKDOWN, ANSWER Y/N BACKDOWN AND THEN GO TO RELEASED AND/OR ESCAPED AFTER BACKDOWN**

BACKDOWN?				OBSERVERS ESTIMATE OF MARINE MAMMALS RELEASED BECAUSE OF BACKING DOWN.			FISH LOSS DURING BACKDOWN?		KILL DUE TO CANOPIES?	
Y	N	TIME START	# BOW BUNCHES	BEST ESTIMATE	HIGHEST ESTIMATE	LOWEST ESTIMATE	Y	N	Y	N
31	32	33	34	35	36	37	38	39	40	41

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**4. LIVE MARINE MAMMALS RELEASED BY OTHER METHODS DURING BACKDOWN  
DOES NOT INCLUDE THOSE ANIMALS THAT WERE BACKED OUT.**

RESCUE EFFORT?						# LIVE HAND RELEASED		# LIVE IN NET AFTER B.D.	
Y	N	#	SPDBT?	RAFT?	FACE MASK?	Y	N	Y	N
63	64	65	66	67	68	69	70	71	72

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**5. WEATHER DURING B.D.**      CHOP HEIGHT \_\_\_\_\_      WIND SPEED \_\_\_\_\_      SWELL HEIGHT \_\_\_\_\_

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**6. NOTES: LIGHTS, RAFT, FACE MASK SWIMMER, ETC.**

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Appendix 8J. Marine Mammal Set Log/Tally Form (Version 10, Page 5) used by the Tuna-Porpoise Observer Program, 1988-1990.

NOAA FORM 88-124  
FSW12 11-88

**MARINE MAMMAL SET LOG**

CRUISE # \_\_\_\_\_ NOAA - U.S. DEPT. OF COMM.  
SET # \_\_\_\_\_ **Page 5**

TIME	TIME
1. AFTER BACKDOWN NET CONFIGURATION AND RESCUE EFFORT	

2. SACK UP THROUGH TONS LOADED					BRAILING?						
Y N	TIME START	# LIVE IN NET AT START	SACK Y N	RESCUE EFFORT? Y N	# LIVE RELEASED	Y N	TIME START	# LIVE IN NET AT START	TIME END	FINISH SET TIME	
	39 40	44	47	48 49			52 53	57 60		64	
		STRONG CURRENT THIS SET? Y N	TOTAL KNOWN MARINE MAMMAL KILL (ADD ✓)	TOTAL INJURED			TONS YF	TONS SK	CARD #	TONS OTHER	OTHER FISH CODE
		68	69	73			75	78	80 7 9	07	12

3. NOTES: (INCLUDE SACK RELEASE AND BRAILING OBSERVATIONS)

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**PHYSICAL CAUSES OF MORTALITY**

1. DISCUSS MORTALITY & NATURE/EXTENT OF INJURIES

	PERCENTAGE OF ALL MARINE MAMMALS KILLED:		
	% SPOTTED KILLED	% SPINNER KILLED	% ALL OTHER KILLED
ENTANGLEMENT	14	17	20
ENTRAPMENT	23	26	29
SACKED-UP	32	35	38
OTHER	41	44	47
UNKNOWN	50	53	56
OTHER SPECIES/STOCK			CODE
NAME			59

(Cont. on pg. 8)

Appendix 8J. Marine Mammal Set Log/Tally Form (Version 10, Page 6) used by the Tuna-Porpoise Observer Program, 1988-1990.

NOAA FORM 88-124  
FSW12 11-88

### MARINE MAMMAL SET LOG

CRUISE # \_\_\_\_\_ NOAA - U.S. DEPT. OF COMM.  
SET # \_\_\_\_\_ **Page 6**

**1. OPERATIONAL MALFUNCTIONS**

EQUIPMENT MALFUNCTIONS?	MALFUNCTIONS DELAY SET?	MARINE MAMMALS IN NET DURING MALFUNCTION?	SET ABORTED?	NET DUMP?	SUNDOWN TIME
Y/N	Y/N/NA ~MINUTES	Y/N/NA	Y/N TIME	Y/N TIME	TIME
61	62 63	66	67 68	72 73 76	77 80

**DESCRIBE MALFUNCTION(S) IN ORDER OF OCCURRENCE**

OCCURRED	TIME	FIXED	ESTIMATED DELAY IN MINUTES	NOTES: (TYPE OF MALFUNCTION, HOW, WHY)
1				
2				
3				
4				

**SKIPPER COMMENTS**



Appendix 8J. Marine Mammal Set Log/Tally Form (Version 10, Page 7) used by the Tuna-Porpoise Observer Program, 1988-1990.

NOAA FORM 88-124  
FSW12 11-88

## MARINE MAMMAL SET LOG

CRUISE # \_\_\_\_\_ NOAA U.S. DEPT OF COMM  
SET # \_\_\_\_\_

**Page 7**

INDICATE TIME AND EVENT  
(Operations, Malfunction, Rescue,  
Net Collapse, Mortality, etc.)

TIME

NOTES \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**SYMBOLS**

- X PORPOISE
- E ENTANGLEMENT
- W ← WIND DIRECTION
- D → CURRENT DIRECTION
- C CANOPY
- N NET COLLAPSE
- S CORKLINE SINKAGE
- PSP PORPOISE SAFETY PANEL
- R PORPOISE RESCUE OR RELEASE
- ⊘ BOW BUNCH
- Ⓢ SKIFF
- ▷ SPEEDBOAT
- Ⓜ SPEEDBOAT OR TENDER INVOLVED IN HAND RELEASE
- Ⓢ SWIMMERS

- SPEEDBOAT ATTACHED BUT NOT TOWING
- TOWING FROM STERN
- TOWING FROM BOW
- TOWING ONE BUNCH
- TOWING TWO BUNCHES
- TOWING ON CORKLINE
- Ⓡ RAFT
- MANNED SPEEDBOAT

ENTER ADDITIONAL SYMBOLS YOU USE:

TIME

NOTES \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

TIME

NOTES \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

TIME

NOTES \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

TIME

NOTES \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_



Appendix 9A. Non-Porpoise/Schoolfish and Flotsam Set Log Form (Version 1) used by the Tuna-Porpoise Observer Program, 1976.

## NON-PORPOISE SET LOG

VESSEL \_\_\_\_\_ CRUISE NO. \_\_\_\_\_

OBSERVER \_\_\_\_\_ SET NO. \_\_\_\_\_

CRUISE NO.	SET NO.	CARD	YR.	DATE			OBS. NO.	VESSEL CODE	SET TYPE	FISH TYPE	SUCCESS	FULL Y/N	POSITION OF SET		
				MO.	DAY								LATITUDE	N S	LONGITUDE
1	4	1	8	10	12	14	17	21	23	24	25	29	30	35	

**BIRDS:**

Time of sightings	Distance (miles & 10ths)	Est. of total number
57	61	64

CARD	TIME NET LET GO
2	73

CARD	WAS NET "DUMPED"?	
	Y	N
3	31	32

CARD	WAS THE SET ABORTED?	
	Y/N	Time
4	32	33

**BRAILING?**

Y	TIME START	TIME FINISH
72	73	77

CARD	TIME FINISHED SET	TONS-YF LOADED	TONS-SK LOADED	TONS-OTHER SP.	OTHER Sp. CODE
	5	9	17	20	23

Appendix 9B. Non-Porpoise/Schoolfish and Flotsam Set Log Form (Version 2) used by the Tuna-Porpoise Observer Program, 1977-1978.

MMP5 FSWS-50  
1-77
**1977A NON-PORPOISE SET LOG**
NOAA - U.S. DEPT. OF C

CRUISE			SET			CARD			DATE			OBSERVER			POSITION				SET TYPE
#	#	#	YEAR	MONTH	DAY	#	#	#	LATITUDE	N/S	LONGITUDE	E/W	#	#	#	#			
1	2	7	9	11	13	15	18	22	23				28	29					

BIRDS? Y/N		TIME BIRDS SIGHTED	DISTANCE (nm & 10ths.)	TOTAL NUMBER OF BIRDS	ENVIRONMENTAL CONDITIONS		WIND (KTS.)	WIND DIR. CODE	SWELL (FT.)	CHOP (Ft. & 10ths.)	SURFACE TEMP. (F. & 10ths.)
31	32		36	39			43	45	46	48	50

TIME NET LET GO	TIME RINGS UP	TIME ROLL NET	NUMBER BUNCHES	WAS THE NET DUMPED? Y/N	TIME NET DUMPED	WAS THE SET ABORTED? Y/N	TIME SET ABORTED
53	57	61	65	56	67	71	72

SACKING UP? Y/N	TIME START SACKING UP	BRAILING? Y/N	TIME START BRAILING	TIME END BRAILING	TIME SET FINISHED	SUCCESSFUL SET? Y/N	TONS YF	TONS SK	TONS OTHER	OTR FR CO		
76	77	80	7	9	10	14	18	22	23	26	29	32

Answer each question by entering appropriate code: 1 = YES 2 = NO 3 = NOT APPLICABLE

1. Were concentrations of jellyfish encountered during this set? .....  
 Describe any problems resulting from jellyfish below.
 

Y/N

  - 1a. Did the presence of concentrations of jellyfish result in any problems with the net? .....
2. Was maintenance required on apron systems or small mesh strips this set? .....
3. Was any gear modified for schoolfishing this set? .....
4. Was a strong current present at any time during this set? .....

Notes and Comments (continue on back) \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Appendix 9C. Non-Porpoise/Schoolfish and Flotsam Set Log Form (Version 3) used by the Tuna-Porpoise Observer Program, 1979-1990.

NOAA FORM 88-122  
FSW34 11/80

NOAA — U.S. DEPT. OF COMMERCE

### SCHOOLFISH AND FLOTSAM SET LOG

CRUISE #		SET #		CARD #		DATE			POSITION			SET TYPE		
1	4	7	9	11	13	15	19	20	25	26	N	S	E	W
		0	1											

ENVIRONMENTAL CONDITIONS AT TIME TOWLINE IN

BIRDS? CUE ASSOC.		RELATIVE			TIME NET		TIME RINGS UP		NUMBER BUNCHES
Y	N	WIND (KTS.)	WIND BEARING	SWELL (FT.)	LET GO	RINGS UP			
28	29	30	32	35	37	41			45

SACKING UP?		BRAILING?			TONS LOADED			OTHER FISH CODE					
Y	N	Y	N	TIME START	TIME END	TIME SET FINISHED	TONS YF	TONS SK	TONS OTHER				
46	47	50	0	2	7	9	10	14	18	22	25	28	31

Answer each question by entering appropriate code: 1 = YES    2 = NO

1. Fish loss over corks after rings up? If yes describe below ..... Y/N

33

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2. Was any gear modified for non-porpoise fishing? If yes describe below ..... Y/N

34

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3. Was a strong current present at any time during this set? ..... Y/N

35

Notes (continue on back) \_\_\_\_\_

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Appendix 10. Turtle Sighting Form used by the Tuna-Porpoise Observer Program, 1975.

TURTLE SIGHTING EXTENSION RECORD  
(Inset following Mammal Sighting Record if sighting is a turtle)

Activity Code	Size Code	Associated Organisms Y/N	Habitat	# Life History Forms Completed	Sighted Prior to Set ? Y/N	Photos ? Y/N
70	71	72	73	74	75	76

CODES

Activity

- 1 = still
- 2 = swimming
- 3 = copulating
- 4 = feeding
- 5 = other

Size

- 1 = small
- 2 = medium
- 3 = large
- 4 = unknown

Habitat

- 1 = open water
- 2 = floating object
- 3 = drift line
- 4 = other

Notes: Check for oriented group movements, sexual activity, feeding activity, orientation to other objects, animals, presence of attached organisms (barnacles, hydroids, algae) injuries, missing parts. Describe All observations in detail. Record roll and frame number of all photographs taken, make sketches. Turtles are poorly known.

Photo Roll \_\_\_\_\_

Frame # \_\_\_\_\_



# RECENT TECHNICAL MEMORANDUMS

SWFSC Technical Memorandums are accessible online at the SWFSC web site (<http://swfsc.noaa.gov>). Copies are also available from the National Technical Information Service, 5285 Port Royal Road, Springfield, VA 22161 (<http://www.ntis.gov>). Recent issues of NOAA Technical Memorandums from the NMFS Southwest Fisheries Science Center are listed below:

- NOAA-TM-NMFS-SWFSC-483 Photographic catalog of California marine fish otoliths: Prey of California sea lions (*Zalophus californianus*).  
M.S. LOWRY  
(November 2011)
- 484 Effective strip widths for ship-based line-transect surveys of cetaceans.  
J. BARLOW, L.T. BALLANCE, and K.A. FORNEY  
(November 2011)
- 485 Fin Whale acoustics as a tool to assess stock structure in the North Pacific.  
B. JONES, S. RANKIN, and E. ARCHER  
(November 2011)
- 486 Spawning biomass of Pacific Sardine (*Sardinops sagax*) off U.S. in 2011.  
N.C.H. LO, B.J. MACEWICZ, and D.A. GRIFFITH  
(November 2011)
- 487 Assessment of the Pacific sardine resource in 2011 for U.S. management in 2012.  
K.T. HILL, P.R. CRONE, N.C.H. LO, B.J. MACEWICZ, E. DORVAL  
J.D. McDANIEL, and Y. GU  
(January 2012)
- 488 U.S. Pacific marine mammal stock assessments: 2011  
J.V. CARRETTA, K.A. FORNEY, E. OLESON, K. MARTIEN, M.M. MOTO,  
M.S. LOWRY, J. BARLOW, J. BAKER, B. HANSON, D. LYNCH,  
L. CARSWELL, R.L. BROWNELL, JR., J. ROBBINS, D.K. MATTILA,  
K. RALLS, and M.C. HILL  
(April 2012)
- 489 The winter-run harvest model (WRHM)  
M.R. O'FARRELL, S.D. ALLEN, and M.S. MOHR  
(May 2012)
- 490 Density and spacial distribution patterns of cetaceans in the central North Pacific based on habitat models.  
E.A. BECKER, K.A. FORNEY, D.G. FOLEY, J. BARLOW  
(June 2012)
- 491 Sacramento River winter Chinook cohort reconstruct: analysis of ocean fishery impacts.  
M.R. O'FARRELL, M.S. MOHR, A.M. GROVER, W.H. SATTERWAITE  
(August 2012)
- 492 Ichthyoplankton and station data for surface (Manta) and oblique (Bongo) plankton tows for California Cooperative Oceanic Fisheries Investigations Cruises and California Current Ecosystem Survey in 2009.  
A.R. THOMPSON, W. WATSON and S.M. MANION  
(June 2012)