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Human-Caused Mortality and Injury of NMFS-managed Alaska Marine Mammal Stocks, 2016-2020

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Abstract

Section 117 of the Marine Mammal Protection Act (MMPA) requires the National Marine Fisheries Service (NMFS) to estimate human-caused marine mammal mortality and serious injury. Data from documented interactions between human activities and pinnipeds or cetaceans belonging to stocks which appear in the Alaska Marine Mammal Stock Assessment Reports (SARs) were compiled for the 5-year period from 2016 through 2020. A total of 867 unique interactions with evidence of human-caused mortality or injury are summarized in this report. Details for all reported human-marine mammal interactions (approximately 3,500) were first assessed for evidence of human-caused injury or mortality of the marine mammal; injuries and mortalities that could not be attributed with high confidence to human causes were excluded from further analysis. Injury severity determinations were then made for those injuries considered with high confidence to be human-caused. Injury determination details, including the injury cause, type, severity (non-serious, serious, or prorated serious), and criteria supporting the determination are presented in Table 1. Records of human-caused mortality, assigned to cause, are also included in this report and presented in Table 1. Mortality or injury values were assigned to each interaction for comparison with the potential biological removal (PBR) levels, calculated under the MMPA, for each stock in the Alaska SARs. The mortality and injury values included in this report are derived solely from documented interactions. Not all human-caused mortality and injury of marine mammals is documented so this report represents a minimum count of human-caused mortality and injury of Alaska marine mammal stocks.

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Introduction

The Marine Mammal Protection Act (MMPA, 1972) requires the National Oceanic and Atmospheric Administration (NOAA), National Marine Fisheries Service (NMFS) to estimate the annual human-caused mortality and serious injury of marine mammal stocks by cause (MMPA, section 117) and to classify commercial fisheries based on each fishery's rate of incidental mortality and serious injury of marine mammals (MMPA, section 118). NMFS evaluates the annual level of known or estimated human-caused mortality and serious injury for each stock from all human causes, including specific commercial fishing operations, relative to the potential biological removal (PBR) levels calculated under the MMPA (Wade 1998). Mortality and serious injury events are assigned to cause and estimates of annual mortality and serious injury are calculated by cause. Assessing the severity of an injury and likelihood that an injury will result in mortality requires information about the biology of the animal, the type and severity of the injury, and the injury cause. Thorough examination of human-caused injuries of marine mammals is often not possible because these events often occur in extremely remote areas of Alaska and observed injuries are often not documented in sufficient detail to understand the level of injury severity.

A serious injury is defined in regulations as "any injury that will likely result in mortality" (50 CFR 229.2). To accurately and consistently estimate the number of serious injuries occurring in each stock, NMFS clarified its definition of "serious injury" (SI) in 2012 and stated its interpretation of the regulatory definition of serious injury as any injury that is "more likely than not" to result in mortality or any injury that presents a greater than 50% chance of death to the marine mammal (77 Federal Register 3233, 23 January 2012; NMFS 2012a). NMFS also established a consistent and transparent process for distinguishing non-serious injuries (NSI) from SI and for documenting pertinent information considered in making injury determinations (NMFS 2012a, b). Substantial information is known about the likely outcomes of particular injuries of large whales due to the analysis of historical large whale injuries with known outcomes. This allows NMFS to better estimate, or prorate, the chance that a particular injury is likely to result in mortality. For example, at the time NMFS established its injury determination criteria, there were 25 records with known outcomes involving large whales that sustained ship-strike lacerations of unknown severity, and in 13 of these instances (52%) the result was a decline in health status or death of the animal. These data are then used to inform decision-making in situations where the severity of the laceration (superficial vs. deep) is unknown. The rate of serious injury for this category is prorated by multiplying the number of events assigned to this criterion by 0.52 (NMFS 2012b).

This report consists of records from 2016 through 2020 that were assessed for human-caused mortality or injury of cetaceans and pinnipeds occurring in Alaska and U.S. West Coast waters and assessed within the Alaska Marine Mammal Stock Assessment Reports (SARs). For marine mammal stocks that are found injured or dead in Alaska water but assessed in the U.S. Pacific Marine Mammal SARs, the records are sent to the NMFS Southwest Fisheries Science Center (SWFSC) for inclusion in the report summarizing mortality and injury for U.S. Pacific West Coast marine mammal stocks (e.g., Carretta et al. 2021). Examples of stocks assessed in the U.S. Pacific SARs that range into Alaska waters include the Eastern North Pacific gray whale and the California breeding stock of northern elephant seals, whereas some stocks which range as far south as California, such as Eastern U.S. Steller sea lions and Eastern Pacific northern fur seals, are reported in the Alaska SARs. Similarly, for marine mammals under the jurisdiction of the U.S. Fish and Wildlife Service (USFWS) that are found injured or dead in Alaska waters, such as Pacific walruses and northern sea otters, records and any resulting bycatch estimates are sent to the USFWS for inclusion in those stocks' assessment reports. Mortality and injury data may be reported by marine mammal stranding networks, research programs, fisheries observer programs, fishermen, and disentanglement networks. Mortality and injury of marine mammals resulting from the Alaska Native subsistence harvest are not reported in this document, except in rare circumstances, but these data are reported in the Alaska SARs. Mortality and serious injury data from 2016 through 2020 were summarized by stock, cause, and year and used for estimates reported in the 2022 Alaska SARs (Young et al. in review); in most cases, non-serious injuries are not reported in the SARs. All information pertinent to decisions of NSI, SI, or prorated SI is presented in this report.

Methods

Data were acquired primarily from databases and archives maintained by the NMFS Alaska Regional Office (AKRO) marine mammal stranding network, the NMFS Alaska Fisheries Science Center (AFSC) Fisheries Monitoring and Analysis Division's North Pacific Observer Program, the NMFS West Coast Regional Office (WCRO) marine mammal stranding network, the NMFS Northwest Fisheries Science Center (NWFSC) Fishery Resource Analysis and Monitoring Division, Fisheries Observation Science Program (which encompasses both the West Coast Groundfish Observer Program (WCGOP) and the At-Sea Hake Observer Program (A-SHOP)), the NMFS SWFSC, the Marine Mammal Authorization Program (MMAP), the NMFS Office of Protected Resources (OPR), the Northwest Indian Fisheries Commission (NWIFC), and the Alaska Department of Fish and Game (ADF&G). While reviewing 5 years of human-marine mammal interaction data, an injury determination team at the AFSC's Marine Mammal Laboratory (MML) reviewed approximately 3,500 records for evidence of human-caused mortality or injury of the marine mammal(s) involved in the interaction. All available documentation (reports,

emails, images, resight information, and necropsy results) was considered to assess interactions, make injury determinations, and attribute mortality and injury to a cause. If more information was necessary for a determination, the primary source of information was contacted.

Any interaction which met an injury category criterion in NMFS Instruction 02-038-01 (NMFS 2012b; e.g., ingested gear or hook(s), entanglements, ship strikes, lacerations, etc.) was considered to potentially document a human-caused injury, and a summary of all relevant information was recorded as a unique entry in a Microsoft Access database. Any mortality which the MML injury determination team was able to assign with high confidence to a human cause was also summarized and recorded as a unique entry in the database. When multiple records documenting a single instance of human-caused mortality or injury were identified, the relevant information from each record was consolidated into a single entry within the database. The database allowed MML staff to quickly sort and summarize many entries. Primary records, such as Level-A forms, necropsy reports, and imagery, were retained for reference. Follow-up information for a previously documented event, such as additional sightings or reports of a decline in health condition, was added to the existing database entry. When a dependent calf or pup of an injured or dead animal was observed, a separate database entry was added and the offspring was assessed as a unique, but associated, event. Interaction records in which there was no potential for human-caused injury of the marine mammal, such as reports of animals feeding on fishery discards or interactions that lacked sufficient information to assign an injury to a human cause, were retained for reference but excluded from the database and report.

Following the initial review of approximately 3,500 primary records of human-marine mammal interactions, 867 unique cases of human-caused mortality or injury of marine mammals were identified. Each of these was evaluated using NMFS' injury determination criteria (NMFS 2012b). Different sets of criteria, specific to large whales (mysticetes and sperm whales), small cetaceans (all odontocetes except sperm whales), and pinnipeds, were used to evaluate each injury event and assign it to the most appropriate injury category (NMFS 2012b; Appendix Tables 1 to 3). Some interactions fit more than one injury category. In these cases, the most severe injury category was used to determine whether an injury should be considered serious, non-serious, or prorated.

An initial and final injury determination was made for each record included in this report. The initial and final determinations were the same for events in which the animal was dead when first observed or was observed for a brief period. Initial and final determinations could differ if an animal was determined to be seriously injured but, over time and through human intervention, its condition improved. Examples of situations where initial and final determinations could differ include events where disentanglement teams successfully

removed gear from a seriously injured entangled whale (assuming there was no evidence of health decline or other injury) and events where stranded pinniped pups were rehabilitated and released. In these cases, the final injury determination would be reported in the SAR for comparison to PBR, while the initial injury determination would be used for commercial fisheries-related interactions to classify fisheries in the MMPA List of Fisheries (LOF).

Initial and final injury determinations do not differ in situations where commercial fishermen, or others, release animals from gear in real-time (i.e., at the time of the interaction). In these situations, the injury determination is made after the animal is released from the gear and this determination is used when classifying fisheries for the MMPA LOF and for comparison to PBR (NMFS 2012a). For example, if a humpback whale became entangled in an active commercial gillnet, was released by fishermen at the time of the interaction and swam away free of gear without any sign of injury, the initial and final determinations would be NSI and the same injury determination would be compared to PBR and used in the MMPA LOF. In contrast, if a humpback whale became entangled in an active commercial gillnet and broke free with a portion of gillnet forming a constricting entanglement, it would initially be considered a serious injury. However, if an experienced disentanglement team removed all gear from the animal, and there was no other sign of serious injury, the final determination compared to PBR would be NSI. This injury would not be counted in the mortality and serious injury estimates reported in the SARs since the human intervention activities mitigated the serious injury of the animal. However, for the purposes of classifying commercial fisheries for the MMPA LOF, the whale would be considered SI and included in the tier analysis for classifying that specific commercial fishery.

Serious injury determinations and assignments to cause were discussed and agreed upon by an injury determination team at MML. When necessary, other experts at MML were consulted when making determinations. All determinations and assignments were then reviewed by experienced staff at other NMFS Science Centers to ensure determinations were consistent across the Science Centers. The determinations were also reviewed by the AKRO and the Alaska Scientific Review Group, an independent group established under section 117(d) of the MMPA to advise NMFS on a range of marine mammal science and management issues. The AKRO provided fishery assignments for records of fisheries-related injuries and mortalities that were not obtained from a fisheries observer program.

Occasionally, fisheries observers opportunistically report marine mammals that were incidentally killed or injured in unsampled hauls. In previous iterations of this report, these mortalities and injuries were included and added to the bycatch estimate for the fishery in the SARs. Beginning with Freed et al. (2021), these interactions will continue to be included

in this report but generally will not be reported in the Alaska SARs or used to estimate bycatch, because the bycatch estimation process accounts for interactions in unsampled hauls. The exception is if no mortality or serious injury (M/SI) of a stock was observed in sampled hauls in a particular fishery in a particular year, in which case, M/SI in unsampled hauls is provided in the SAR as a minimum estimate of bycatch of that stock for that fishery for that year. To assist the reader in comparing interaction data between this report and the SAR, interactions in unsampled hauls are specifically noted in the Determination Details column of Table 1.

Alaska Native subsistence harvest information is generally not included in this report but is reported in the Alaska SARs. However, during the time period covered by this report, 4 beluga whales and 3 bowhead whales discovered entangled in fishing gear were subsequently harvested for Alaska Native subsistence use. These animals were included in the table of human-marine mammal interaction records reviewed for injury and mortality (Table 1). In iterations of this report prior to Freed et al. (2021), these types of interactions were counted as Alaska Native subsistence takes and were not assigned M/SI values for comparison against PBR or for use in classifying fisheries on the MMPA LOF (i.e., “N/A” was entered in the M/SI Value and LOF Value fields). In contrast, beginning with Freed et al. (2021), these interactions will be assigned M/SI values for comparison against PBR and for use in classifying fisheries on the MMPA LOF, if applicable, to reflect the true impact of commercial fisheries on marine mammal stocks.

Pinnipeds with gunshot wounds reported to the NMFS AKRO marine mammal stranding network were assumed to be struck and lost animals associated with the Alaska Native subsistence hunt unless there was information which indicated the animals were illegally shot. These struck and lost animals were not included in this report or in the SARs to avoid double-counting animals that were already included (as struck and lost) in the Alaska Native subsistence harvest data. In contrast, pinnipeds with gunshot wounds reported to the NMFS WCRO marine mammal stranding network, such as Eastern U.S. Steller sea lions in Washington, Oregon, or California, were included in this report.

Takes reported by the NWIFC lack details on animal condition. However, the interactions reported here occurred primarily in drift and set gillnet fisheries, where survival of pinnipeds and cetaceans is rarely observed (Carretta 2021). In this report, we assume that reported NWIFC interactions represent serious injuries or deaths and coded them as dead (i.e., in Table 1, “DEAD” was entered in the Initial Assessment and Final Determination fields and the Determination Details field describes the animals as being “incidentally killed”). Serious injuries and deaths both represent a M/SI value = 1 that is counted against PBR in marine mammal stock assessments; therefore, the coding of these cases as either “SI” or “DEAD” results in the same level of removals that is compared to PBR. Additionally,

takes reported by the NWIFC lack details on whether each interaction involved bycatch or lethal removal to prevent interference with fishing gear and/or catch. In Table 1 of this report, the mechanism and source of injury fields for these records are coded as “unknown.”

From 2016 to 2020, NMFS received 218 MMAP fishermen self-reports documenting mortality and injury of 230 marine mammals in Alaska waters. In addition, NMFS received 27 MMAP fishermen self-reports documenting mortality and injury of 36 marine mammals in waters off the U.S. West Coast from stocks that are assessed in the Alaska SARs (i.e., Eastern Pacific northern fur seals in December-May and Eastern U.S. Steller sea lions). Approximately 95% of the self-reports are not included in this report for one or more of the following reasons: (a) the reported species is under the jurisdiction of the USFWS (so data were sent to the USFWS); (b) the reported species is included in the Pacific SARs, not the Alaska SARs (so data were sent to the NMFS SWFSC); (c) the animal was previously dead, e.g., had signs of decomposition; (d) the animal was taken in a currently observed fishery and that species/stock is already accounted for in the observer data;¹ or (e) the interaction was also reported to the NMFS AKRO stranding network, usually with more details and, thus, is already accounted for in this report. In a change from previous iterations of this report (e.g., Freed et al. 2021), this report includes MMAP reports of animals that were taken in fisheries for which other sources of data (e.g., previous observer data) are used to estimate bycatch for the SARs. While these MMAP reports are informative because they indicate ongoing bycatch, NMFS is not relying on the MMAP data to quantify bycatch and, thus, the records were not assigned M/SI values for comparison against PBR or for use in classifying fisheries on the MMPA LOF (i.e., “N/A” was entered in the M/SI Value and LOF Value fields) and are not reported in the SARs.

Results

Overall

Of the 867 human-marine mammal interactions summarized in this report, 742 interactions were determined to have caused a mortality, SI, removal from the population, or were prorated to reflect the likelihood of serious injury of the marine mammal involved

¹ Similar to the procedure described for documenting interactions in unsampled hauls, MMAP reports from currently observed fisheries were included in this report if there were no observed mortalities or injuries of that species and stock in the fishery that year (i.e., the MMAP report represented the only source of information on mortalities or injuries of that species and stock in that fishery in that year).

in the interaction. The remaining 125 interactions were found to have resulted in an NSI of the marine mammal.

Across all 867 interactions, entanglement/entrapment was the most common mechanism of injury (n = 635), which resulted in 508 SI, prorated SI, or mortalities (collectively referred to as mortality and serious injury, or M/SI). The majority of entanglement/entrapment-related interactions occurred in fishing gear (n = 420, resulting in 331.5 M/SI) and marine debris (n = 208, resulting in 174 M/SI); other causes of entanglement/entrapment (n = 7 interactions, resulting in 2.5 M/SI) included an outhaul mooring, loose webbing at a remote ADF&G king salmon release site, vessel ground tackle, anchored line used for mooring docks, and MMPA-authorized research and management activities at Bonneville Dam. An additional 232 confirmed interactions included animals that were hooked by fishing gear (n = 126 interactions, resulting in 118 M/SI), shot (n = 53, resulting in 53 M/SI), or struck by vessels (n = 28, resulting in 53 M/SI); the remaining 25 interactions were due to other assorted causes, resulting in 25 M/SI.

Of the 317 interaction records that were provided by the AKRO and WCRO stranding networks, 253 documented M/SI of the animal involved in the interaction, resulting in 238.68 M/SI. The M/SI in these records was due to entanglement in marine debris (n = 95 interactions, resulting in 66 M/SI), entanglement in fishing gear (n = 91 interactions, resulting in 59 M/SI), shooting (n = 53 interactions, resulting in 53 M/SI), hooking in fishing gear (n = 40 interactions, resulting in 36 M/SI), vessel strike (n = 26 interactions, resulting in 17.18 M/SI), and other assorted causes (n = 12, resulting in 7.5 M/SI).

Fisheries observers in the North Pacific Groundfish Observer Program, West Coast Groundfish Observer Program, and At-Sea Hake Observer Program reported 327 interaction events in federal groundfish fisheries. The majority of these events resulted in mortality² (n = 268 interactions, resulting in 267 M/SI), with 51 NSI and a relatively small number of SI and prorated SI (n = 8, resulting in 7.02 M/SI), resulting in a total of 274.02 M/SI.

Approximately 600 observations of Steller sea lion entanglements and fishing gear interactions, many of which were repeat sightings of individual animals, were documented and reviewed by ADF&G based on standardized annual summer surveys conducted at most Steller sea lion haulouts and rookeries in Southeast Alaska, Prince William Sound, the

² As noted in the Introduction, mortalities and injuries in unsampled hauls were included in this report but not used to estimate bycatch or reported in the Alaska SARs unless there were no reported mortalities or injuries of that stock in observed hauls in that fishery in that year. Mortalities and injuries in unsampled hauls that were not used to estimate bycatch or reported in the Alaska SARs were not assigned M/SI values for comparison against PBR or for use in classifying fisheries on the MMPA LOF (i.e., “N/A” was entered in the M/SI Value and LOF Value fields). As such, the sum of M/SI values may be less than the total number of mortality records.

Barren Islands, and Bristol Bay. From these observations, 187 injured Steller sea lions were determined to be unique animals, resulting in 178 M/SI. Among these records, entanglement/entrapment in marine debris (n = 109 interactions, resulting in 104 M/SI), hooking and/or ingestion in fishery gear (n = 74 interactions, resulting in 70 M/SI), and entanglement/entrapment in fishery gear (n = 3 interactions, resulting in 3 M/SI) were most prevalent; the remaining interaction was a dependent animal with a seriously injured mother, resulting in 1 M/SI.

Pinnipeds

Steller sea lions were the most common species in reports of human-caused mortality and injury between 2016 and 2020 (n = 532 interactions, resulting in 479 M/SI). The most common cause of mortality and injury for the Eastern U.S. stock of Steller sea lions (n = 384, resulting in 333 M/SI) was entanglement (n = 222, resulting in 179 M/SI), followed by hooking in fishing gear (n = 113, resulting in 105 M/SI).

Hookings of Eastern U.S. Steller sea lions primarily occurred during salmon fishing in which a line with gear was towed behind a vessel (n = 91, resulting in 89 M/SI). Depending on salmon species, location, and fishermen preference, different types of lures are used to attract fish including spinners, spoons, and flashers. Steller sea lions that have ingested gear are found with flashers hanging from the edge of their mouth connected to monofilament line that is attached to a swallowed hook. Recreational fishermen, charter operators, and commercial trollers all tow lines with gear behind their vessel and all sometimes use flashers when fishing for salmon; Steller sea lions are known to interact with gear used by all three of these fishing groups. Beginning with Young et al. (2020), we have replaced the terminology “trollers” and “troll” used in previous M/SI reports with “salmon hook and line” to more accurately describe this type of salmon fishery in Alaska. We also now use the term “unknown hook and line” for interactions with similar gear (fisheries in which a line with gear is towed behind a vessel) off the West Coast when the target species is unknown, and for other instances of interactions with hooks and/or monofilament lines that cannot be identified to a fishery.

Entanglements of Eastern U.S. Steller sea lions occurred in marine debris (n = 111, resulting in 105 M/SI), in fishing gear (n = 110, resulting in 73 M/SI), and in other material (n = 1, resulting in 1 M/SI). Of the entanglements in fishing gear, 97 (resulting in 62 M/SI) were in commercial trawl gear. Other causes of mortality and injury for Eastern U.S. Steller sea lions include shooting (n = 32, resulting in 32 M/SI), unknown causes (n = 7, resulting in 7 M/SI), removal from the population (n = 6, resulting in 6 M/SI), and dependent animals with seriously injured mothers (n = 2, resulting in 2 M/SI).

Based on 15 years of annual summer surveys of Steller sea lions, ADF&G documented 15 marked individual Steller sea lions that interacted with salmon hook-and-line fishing gear as evidenced by a flasher at the edge of the mouth. ADF&G has gained information on the fate of some of these animals. Seven were able to free themselves from the flasher (presumably by biting through the monofilament line that connected the swallowed hook to the flasher) and survived at least 1 year beyond the initial observation date. The flasher was not present when these seven animals were re-sighted in subsequent years. Of the eight remaining animals, one was found dead due to the flasher and swallowed hook combination, one was taken in an Alaska Native subsistence hunt (rumored to be, in part, a “mercy killing” because the animal appeared emaciated and sickly), and six were never sighted again following the initial report (ADF&G Steller Sea Lion Research Program, unpubl. data).

ADF&G analyzed data from 1,439 individually marked Steller sea lions that were re-sighted from 2001 through 2015. The analyses indicated that Steller sea lions that had ingested salmon hook and line fishing gear had lower survival than comparable animals that had not ingested fishing gear (ADF&G Steller Sea Lion Research Program, unpubl. data). Post-mortem exams of Steller sea lions with flasher entanglements typically revealed a hook lodged in the esophagus or penetrating the pleural cavity or pericardium.

Human-caused mortality and injury of the Western U.S. stock of Steller sea lions (n = 148, resulting in 146 M/SI) was primarily caused by entanglement in fishing gear (n = 117, resulting in 115 M/SI), followed by entanglement in marine debris (n = 19, resulting in 19 M/SI), hooking in fishing gear (n = 5, resulting in 5 M/SI), shooting (n = 5, resulting in 5 M/SI), and injury related to MMPA authorized research (n = 2, resulting in 2 M/SI). Fishery interactions occurred most commonly in commercial trawl gear (n = 113, resulting in 111 M/SI). Interactions in the federal trawl fisheries typically resulted in mortality (the animal was already dead by the time it was observed); injuries are rare (Breiwick 2013).

Differences in the leading causes of M/SI for the Eastern U.S. and Western U.S. stocks of Steller sea lions are likely due to the geographical distribution of commercial and charter/recreational salmon hook and line fishing effort, which occurs more in Southeast Alaska than in any other part of the state. It is unknown whether differences in reported entanglement numbers for each stock are due to lower entanglement rates in the Western U.S. stock of Steller sea lions or the result of other factors, such as fewer people to notice entanglements in some of these areas, which result in fewer reports of entanglement.

The majority of human-caused mortality and injury of northern fur seals (n = 110, resulting in 72 M/SI) was due to constricting entanglements, mainly circumferential neck entanglements in marine debris and various components of fishing gear (n = 86, resulting in 54 M/SI). Because Eastern Pacific northern fur seals are known to occur off the U.S. West

Coast in winter/spring, any mortality or injury reported off the coasts of Washington, Oregon, or California during December through May was assigned to both the Eastern Pacific and California stocks of northern fur seals.

Most human-caused mortality and injury of phocids involved harbor ($n = 38$, resulting in 37 M/SI) and ringed ($n = 30$, resulting in 30 M/SI) seals, with some additional records of spotted ($n = 7$, resulting in 7 M/SI), bearded ($n = 6$, resulting in 6 M/SI), and ribbon ($n = 1$, resulting in 1 M/SI) seals. Unidentified phocid mortalities and injuries ($n = 5$, resulting in 5 M/SI) were also reported. Of all records of phocid mortalities and injuries ($n = 87$, resulting in 86 M/SI), entanglement in fishing gear ($n = 61$, resulting in 60 M/SI) was the leading cause, affecting 28 ringed seals (resulting in 28 M/SI), 18 harbor seals (resulting in 17 M/SI), 6 bearded seals (resulting in 6 M/SI), 6 spotted seals (resulting in 6 M/SI), 2 unidentified phocids (resulting in 2 M/SI), and 1 ribbon seal (resulting in 1 M/SI).

Of the human-caused mortality and injury of unidentified otariids ($n = 10$, resulting in 4 M/SI), entanglement in trawl fishing gear was the main cause ($n = 10$, resulting in 4 M/SI). For unidentified pinnipeds ($n = 10$, resulting in 2 M/SI), entanglement in trawl fishing gear was also the main cause of human-caused mortality and injury ($n = 8$, resulting in 0 M/SI).

Large Cetaceans

Human-caused mortality and injury of large whales ($n = 85$ interactions, resulting in 53.2 M/SI³) was reported for humpback ($n = 65$, resulting in 35.66 M/SI), unidentified ($n = 8$, resulting in 6.04 M/SI), sperm ($n = 5$, resulting in 4.5 M/SI), fin ($n = 4$, resulting in 4 M/SI), and bowhead ($n = 3$, resulting in 3 M/SI) whales. Entanglements of humpback whales ($n = 47$, resulting in 26 M/SI) were the most frequent interactions, followed by ship strikes of humpback whales ($n = 18$, resulting in 9.66 M/SI). Humpback whale interactions where the animal could not be assigned to a stock (i.e., based on photo-identification or information identifying both wintering and summering areas) were prorated among all stocks present in the area using area-specific proration factors. Sperm whale entanglements in federal longline fishing gear ($n = 2$) resulted in 1.5 M/SI. Sperm whales (and killer whales) are known to depredate (remove or damage) fish on longline gear during haul back, increasing their susceptibility for interaction with these fisheries (Sigler et al. 2008, Peterson and Hanselman 2017).

³ As noted in the Methods section, animals discovered hooked or entangled in fishing gear that were subsequently harvested for Alaska Native subsistence use were included in this report's summaries of numbers of interactions and counted in the M/SI estimates. This includes 3 large whales.

Many of the large whale entanglements were assigned to injury category L10 “evidence of entanglement” (Appendix Table 1), in which an entanglement was known to have occurred but there was insufficient information available on the configuration of the entanglement to determine whether the gear was wrapped in a constricting manner (category L2) or loosely wrapped, bridled, or draped (category L3). More details on the configuration of entanglements (such as written descriptions from observations; aerial, underwater, and surface images; or follow-up information from resights of entangled whales) are needed to improve the accuracy of injury determinations.

Small Cetaceans

There were relatively few reports of human-caused mortality or injury of Alaska stocks of small cetaceans from 2016 to 2020 (n = 30 interactions, resulting in 24 M/SI⁴). Harbor porpoise interactions occurred incidental to Alaska subsistence gillnet (n = 7, resulting in 6 M/SI) and commercial gillnet (n = 4, resulting in 1 M/SI) fisheries. Beluga whale interactions occurred because of entanglement in fishing gear (n = 4, resulting in 4 M/SI) and injury during MMPA authorized research (n = 1, resulting in 1 M/SI). The beluga whale fishery interactions involved commercial gillnet (n = 2), Alaska subsistence gillnet (n = 1), and unknown (n = 1) fisheries; 4 animals were subsequently harvested for Alaska Native subsistence use.

Dall’s porpoise interactions (n = 3, resulting in 2 M/SI) occurred as a result of entanglement in commercial gillnet fishery gear (n = 2, resulting in 1 M/SI) and unknown pot fishery gear (n = 1, resulting in 1 M/SI). Pacific white-sided dolphins were entangled in commercial trawl fishery gear (n = 2, resulting in 2 M/SI).

Interactions causing mortality and injury (n = 7 interactions, resulting in 6 M/SI) of killer whales occurred in the commercial BSAI flatfish trawl fishery (n = 4, resulting in 4 M/SI), an unknown pot fishery (n = 1, resulting in 1 M/SI), the California Dungeness crab pot fishery (n = 1, resulting in 0 M/SI), and the commercial BSAI Pacific cod longline fishery (n = 1, resulting in 1 M/SI). When ecotype and/or stock was unknown, the injury or mortality was assigned to killer whale stocks that could occur in the area. One of the killer whales entangled in California Dungeness crab pot gear, was found stranded in northern California and was included in this report because genetic analysis indicated it was a transient killer whale. However, because the stock could not be identified, this mortality was assigned to the Eastern North Pacific (ENP) Gulf of Alaska, Aleutian Islands, Bering Sea

⁴ As noted in the Methods section, animals discovered hooked or entangled in fishing gear that were subsequently harvested for Alaska Native subsistence use were included in this report’s summaries of numbers of interactions and counted in the M/SI estimates. This includes 4 small cetaceans.

Transient, and West Coast Transient killer whale stocks; it was not assigned to the AT1 Transient killer whale stock because none of the whales in that population are missing.

Finally, unidentified small cetacean interactions (n = 2, resulting in 2 M/SI) in the commercial Alaska Cook Inlet salmon set gillnet fishery were self-reported by fishermen through the MMAP.

Discussion

All records of human-caused mortality and injury of marine mammal stocks that are assessed in the Alaska SARs were obtained through dedicated efforts, such as commercial fisheries observer programs and ongoing agency research and monitoring programs, or by opportunistic reports from stranding networks, researchers, or at-sea sightings from vessel and aircraft operators. Because of the vastness and remoteness of Alaska's coastlines and the fact that not all dead or injured marine mammals wash ashore, the detection and reporting of stranded marine mammals is particularly limited in Alaska compared with other Regions. Consequently, the opportunistic reports represent minimum values for human-caused injury and mortality of marine mammals in Alaska. Actual levels of human-caused injury and mortality of Alaska pinniped and cetacean stocks are most likely greater than the values in this report.

The quality and quantity of information available for each mortality or injury record was highly variable. Some records contained a very limited amount of information, while others consisted of multiple images or videos which depicted the full nature of the injury or entanglement (e.g., underwater, aerial, and surface images). Imagery of entanglements captured from varying perspectives can confirm or rule out the presence of constricting wraps of line or fishing gear, reducing the number of L10 (evidence of entanglement) classifications, used when not enough information is known about the configuration of the entanglement to differentiate between L2 (SI) and L3 (NSI) entanglement injury categories. Even in the absence of imagery, records with detailed information about an incident can increase the chance of appropriately classifying the injury and properly assigning the interaction to the specific fishery involved. Without sufficient information, injuries must be classified in categories such as "evidence of entanglement" instead of more accurate injury categories. When documenting marine mammal mortality or injury, stranding responders, disentanglement teams, and fisheries observers should be encouraged to provide as many details as possible regarding entanglement configurations and to document the event with pictures and video. NMFS should also ensure that people responding to or reporting on injured marine mammals are informed of key information that needs to be recorded for NMFS to distinguish serious from non-serious injuries. For management purposes, fisheries

observers and stranding network participants reporting fishery interactions should also be encouraged to include details that can aid in determining and documenting mortality and injury in specific fisheries. It is also helpful for reporters to differentiate between commercial, recreational, and Alaska subsistence fishing gear or fishery interactions, when possible. In some situations, the same type of fishing gear can be used by commercial, charter, and recreational salmon hook-and-line fishing groups (e.g., in Southeast Alaska), thus, making it difficult to definitively assign fishery gear to a user group ad hoc.

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Guide to Acronyms and Abbreviations Found in Table 1

The following acronyms and abbreviations are used in Table 1.

Areas (also used in some Fishery Names):

AK: Alaska

BS: Bering Sea

CA: California

GOA: Gulf of Alaska

OR: Oregon

PWS: Prince William Sound

SCAK: Southcentral Alaska

SEAK: Southeast Alaska

WA: Washington

WAK: Western Alaska

WC: U.S. West Coast

Sources of Records:

ADFG: Alaska Department of Fish and Game

AKRO: National Marine Fisheries Service, Alaska Regional Office

A-SHOP: National Marine Fisheries Service, At-Sea Hake Observer Program

MMAP: Marine Mammal Authorization Program

NMFS OPR/HQ: National Marine Fisheries Service, Office of Protected
Resources/Headquarters

NPGOP: National Marine Fisheries Service, North Pacific Groundfish Observer Program

NWFSC: National Marine Fisheries Service, Northwest Fisheries Science Center

NWIFC: Northwest Indian Fisheries Commission

ODFW: Oregon Department of Fish and Wildlife

Rolland et al. 2019: Rolland, R. M., K. M. Graham, R. Stimmelmayer, R. S. Suydam, and
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SWFSC: National Marine Fisheries Service, Southwest Fisheries Science Center

WCGOP: National Marine Fisheries Service, West Coast Groundfish Observer Program

WCRO: National Marine Fisheries Service, West Coast Regional Office

Initial Assessment and Final Determinations:

NSI: Non-Serious Injury

SI: Serious Injury

Other:

ASLC: Alaska SeaLife Center

BSAI: Bering Sea/Aleutian Islands

COD: Cause of Death

EM: Electronic Monitoring

ID: Species Identity

LOF: List of Fisheries

MMPA: Marine Mammal Protection Act

OA: Open Access

OLE: NOAA's Office of Law Enforcement

USCG: United States Coast Guard

Tables and Figures

Human-caused injury and mortality records reported for NMFS-managed Alaska marine mammal stocks between 2016 and 2020 and summary figures. A guide to the acronyms and abbreviations found in Table 1 is included in the previous pages. Note: many comments were entered verbatim from observer reports. Some terminology may be specific to a particular industry or practice (e.g., “flasher” and “hoochie” are types of lures used in salmon hook-and-line recreational/charter and commercial fisheries; “cod-end” is the narrow end of a tapered trawl net; etc.). For any questions regarding specific terminology, contact the authors for clarification.

Table 1: Human-marine mammal interaction records reviewed for injury and mortality, 2016-2020.

Figure 1: Total human-caused serious injury and mortality of Alaska marine mammal species appearing in the Alaska Stock Assessment Reports, 2016-2020. Some large whale injury categories are prorated (i.e., assigned a serious injury value less than one), so the sum of mortality, SI, and SI prorate values may not be a whole number. See the text of the report for more information.

Figure 2: Human-caused serious injury and mortality of Alaska pinniped species by mechanism of injury, 2016-2020. Dependent animals with seriously injured mothers are included in the “other” category, regardless of the mechanism of injury of their mothers.

Figure 3: Human-caused serious injury and mortality of Alaska pinniped species by general cause of injury, 2016-2020. Dependent animals with seriously injured mothers are assigned the same cause of injury as their mothers.

Figure 4: Fishery-related serious injury and mortality of Alaska pinniped species (fishery gear as the cause of injury) by fishery gear type, 2016-2020.

Figure 5: Human-caused serious injury and mortality of Alaska large whale species by mechanism of injury, 2016-2020. Some large whale injury categories are prorated (i.e., assigned a serious injury value less than one), so the sum of mortality, SI, and SI prorate values may not be a whole number. See the text of the report for more information.

Figure 6: Human-caused serious injury and mortality of Alaska large whale species by general cause of injury, 2016-2020. Dependent animals with seriously injured mothers are assigned the same cause of injury as their mothers. Some large whale injury categories are prorated (i.e., assigned a serious injury value less than one), so the sum of mortality, SI, and SI prorate values may not be a whole number. See the text of the report for more information.

Figure 7: Fishery-related serious injury and mortality (fishery gear as the cause of injury) of Alaska large whale species by fishery gear type, 2016-2020. Some large whale injury categories are prorated (i.e., assigned a serious injury value less than one), so the sum of mortality, SI, and SI prorate values may not be a whole number. See the text of the report for more information.

Figure 8: Human-caused serious injury and mortality of Alaska small cetacean species by mechanism of injury, 2016-2020.

Figure 9: Human-caused serious injury and mortality of Alaska small cetacean species by general cause of injury, 2016-2020.

Figure 10: Fishery-related serious injury and mortality (fishery gear as the cause of injury) of Alaska small cetacean species by fishery gear type, 2016-2020.

Table 1 -- Human-marine mammal interaction records reviewed for injury and mortality, 2016-2020.

Source of Record	Date	Area	Common Name	Stock	Initial Assessment	Determination Details	Final Determination	Mechanism of Injury	Source of Injury	Fishery Name	Fishery Type	Fishery Method	SI Criteria	M/SI Value	LOF Value
NPGOP	5/11/2016	BS	Bearded Seal	Beringia	DEAD	A bearded seal was caught and killed in trawl gear.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI flatfish trawl	Commercial	Trawl	N/A	1	1
NPGOP	8/26/2016	AK	Bearded Seal	Beringia	DEAD	A bearded seal was caught and killed in BSAI pollock trawl gear.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI pollock trawl	Commercial	Trawl	N/A	1	1
NPGOP	6/2/2017	BS	Bearded Seal	Beringia	DEAD	A male bearded seal was caught and killed by AK BSAI flatfish trawl gear.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI flatfish trawl	Commercial	Trawl	N/A	1	1
NPGOP	8/8/2017	BS	Bearded Seal	Beringia	DEAD	A bearded seal was caught and killed by trawl gear.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI pollock trawl	Commercial	Trawl	N/A	1	1
NPGOP	5/27/2018	BS	Bearded Seal	Beringia	DEAD	A female bearded seal was caught and killed by BSAI flatfish trawl gear.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI flatfish trawl	Commercial	Trawl	N/A	1	1
NPGOP	7/30/2020	BS	Bearded Seal	Beringia	DEAD	A bearded seal was caught and killed in AK BSAI pollock trawl gear.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI pollock trawl	Commercial	Trawl	N/A	1	1
NMFS OPR/HQ	9/17/2016	BS	Beluga Whale	Bristol Bay	DEAD	A beluga whale died as a result of marine mammal research activities in Bristol Bay, AK.	DEAD	Research related injury	MMPA authorized research	N/A	N/A	N/A	N/A	1	0
AKRO	6/1/2018	WAK	Beluga Whale	Eastern Bering Sea	DEAD	A subadult female beluga whale was caught and killed in Alaska subsistence salmon net, and then harvested for Alaska Native subsistence purposes.	DEAD	Entangled / entrapped	Fishery gear	Salmon gillnet	Alaska Subsistence	Gillnet	N/A	1	0
AKRO	8/27/2018	WAK	Beluga Whale	Eastern Bering Sea	DEAD	A subadult beluga whale was caught and killed in commercial gillnet, and then harvested for Alaska Native subsistence purposes.	DEAD	Entangled / entrapped	Fishery gear	AK Kuskokwim, Yukon, Norton Sound, Kotzebue salmon gillnet	Commercial	Gillnet	N/A	1	0
AKRO	8/28/2018	WAK	Beluga Whale	Eastern Bering Sea	DEAD	A male calf beluga whale was caught and killed in commercial gillnet, and then harvested for Alaska Native subsistence purposes.	DEAD	Entangled / entrapped	Fishery gear	AK Kuskokwim, Yukon, Norton Sound, Kotzebue salmon gillnet	Commercial	Gillnet	N/A	1	0
AKRO	5/30/2019	BS	Beluga Whale	Eastern Bering Sea	DEAD	A male beluga whale calf was found entangled in an unknown net. The animal was presumed to have drowned after becoming entangled and it was harvested for Alaska Native subsistence use.	DEAD	Entangled / entrapped	Fishery gear	Unknown net	Unknown	Unknown	N/A	1	0

Table 1 -- Human-marine mammal interaction records reviewed for injury and mortality, 2016-2020.

Source of Record	Date	Area	Common Name	Stock	Initial Assessment	Determination Details	Final Determination	Mechanism of Injury	Source of Injury	Fishery Name	Fishery Type	Fishery Method	SI Criteria	M/SI Value	LOF Value
Roland et al. 2019	5/5/2017	Arctic	Bowhead Whale	Western Arctic	SI	An entangled bowhead whale was harvested for Alaska Native subsistence use. The hunters described the whale as lethargic and trailing rope, and assumed it had been previously struck and lost. Once the whale was killed and landed, the hunters discovered the whale had severe rope entanglement wounds, with 100-200 m of 19-mm diameter rope attached to the whale. The rope was tightly anchored to the baleen, wrapped once around the left pectoral flipper, and wrapped tightly six times around the peduncle, where it penetrated approximately 10 cm through the skin into the blubber. The gear was not marked so could not be assigned to a specific fishery, but the rope characteristics were consistent with those used in Bering Sea pot fisheries.	SI	Entangled / entrapped	Fishery gear	Unconfirmed	Unknown	Pot	L2	1	0
AKRO	5/6/2017	Arctic	Bowhead Whale	Western Arctic	SI	A subadult bowhead whale was observed to be entangled in 100 - 200 meters of 3/4 inch synthetic line. The line went laterally through the mouth of the whale and was tightly fixed through the baleen rack, went caudally with a single wrap to the left pectoral fin, and then made six tight wraps around the peduncle. Hundreds of feet of line trailed behind the whale's flukes/peduncle. The line had cut 10 cm into the peduncle. There was white scar tissue associated with the peduncle injury. The whale's tongue was severely injured. The whale was harvested for Alaska Native subsistence use immediately following its discovery. Based on the hunter's observations and an evaluation by the onsite veterinarian, this whale was in the process of dying prior to the harvest. The entanglement gear is suggested to be from the commercial Bering Sea pot fishery, but this is unconfirmed.	SI	Constricting entanglement	Fishery gear	unconfirmed	Unknown	Pot	L2	1	0
AKRO	5/15/2017	Arctic	Bowhead Whale	Western Arctic	SI	A bowhead whale was observed to be entangled in 3/4 inch synthetic line. The entanglement involved considerable wraps through the mouth and around the neck and left pectoral fin. The tongue was badly injured with scar tissue and puffy white patches. Following its discovery, the whale was immediately harvested for Alaska Native subsistence use by Inupiat hunters in part because the whale was clearly "injured and suffering." The entanglement gear is suggested to be from the commercial Bering Sea pot fishery, but this is unconfirmed.	SI	Constricting entanglement	Fishery gear	unconfirmed	Unknown	Pot	L2	1	0
MMAP	7/4/2018	SEAK	Dall's Porpoise	Alaska	DEAD	Dall's porpoise was caught and killed in gillnet inside of the ADF&G Management Districts 6, 7, and 8. Mortality and serious injury estimates for this stock in this previously observed fishery are obtained from older observer data and not 2016-2020 stranding data or fishermen self-reported (MMAP) data; therefore, this record will not be assigned an M/SI or LOF value and is not reported in the SAR.	DEAD	Entangled / entrapped	Fishery gear	AK Southeast Alaska drift gillnet	Commercial	Gillnet	N/A	N/A	N/A
MMAP	3/29/2019	WAK	Dall's Porpoise	Alaska	DEAD	A Dall's porpoise was found caught and killed in unknown pot gear that was brought to the surface by a bottom trawl. This case is attributed to an unknown pot fishery and not the bottom trawl fishery.	DEAD	Entangled / entrapped	Fishery gear	Unknown pot	Unknown	Pot	N/A	1	0

Table 1 -- Human-marine mammal interaction records reviewed for injury and mortality, 2016-2020.

Source of Record	Date	Area	Common Name	Stock	Initial Assessment	Determination Details	Final Determination	Mechanism of Injury	Source of Injury	Fishery Name	Fishery Type	Fishery Method	SI Criteria	M/SI Value	LOF Value
MMAP	7/20/2020	GOA	Dall's Porpoise	Alaska	DEAD	A Dall's porpoise was caught and killed in an AK Prince William Sound salmon drift gillnet.	DEAD	Entangled / entrapped	Fishery gear	AK Prince William Sound salmon drift gillnet	Commercial	Gillnet	N/A	1	1
AKRO	5/29/2016	SEAK	Fin Whale	Northeast Pacific	DEAD	A freshly dead fin whale carcass was discovered on the bulbous bow of a cruise ship. The carcass was removed, a necropsy was conducted, and it was confirmed that the whale was killed by ship strike.	DEAD	Ship strike	Vessel (commercial)	N/A	N/A	N/A	N/A	1	0
AKRO	6/20/2018	Kodiak	Fin Whale	Northeast Pacific	SI	A fin whale was struck and killed by a state ferry. A video and self-report show the whale breaching, landing on the starboard stabilizer of the ship, and rolling off with bloating and mortal injuries.	DEAD	Ship strike	Vessel (commercial)	N/A	N/A	N/A	N/A	1	0
MMAP	9/27/2019	BS	Fin Whale	Northeast Pacific	DEAD	A fin whale was caught and killed in an AK BSAI pollock trawl net.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI pollock trawl	Commercial	Trawl	N/A	1	1
AKRO	8/21/2020	BS	Fin Whale	Northeast Pacific	DEAD	A fresh dead adult female fin whale was observed floating in the water. Bruising along the lateral thorax was observed upon close inspection and evidence of significant blunt trauma indicated that a vessel strike was the most probable cause of death.	DEAD	Ship strike	Vessel (unknown)	N/A	N/A	N/A	N/A	1	0
AKRO	8/5/2018	WAK	Harbor Porpoise	Bering Sea	DEAD	An adult harbor porpoise was caught and killed in Alaska subsistence salmon gillnet.	DEAD	Entangled / entrapped	Fishery gear	Salmon gillnet	Alaska Subsistence	Gillnet	N/A	1	0
AKRO	8/20/2018	WAK	Harbor Porpoise	Bering Sea	DEAD	An adult harbor porpoise was caught and killed in Alaska subsistence salmon gillnet.	DEAD	Entangled / entrapped	Fishery gear	Salmon gillnet	Alaska Subsistence	Gillnet	N/A	1	0
AKRO	7/1/2020	BS	Harbor Porpoise	Bering Sea	NSI	An adult harbor porpoise was caught in Alaska subsistence salmon gillnet before it was released alive, with no reported injuries, by the fisherman.	NSI	Entangled / entrapped	Fishery gear	Salmon gillnet	Alaska Subsistence	Gillnet	S7b	0	0
AKRO	7/3/2020	Arctic	Harbor Porpoise	Bering Sea	DEAD	An adult male harbor porpoise was caught and killed in Alaska subsistence salmon gillnet.	DEAD	Entangled / entrapped	Fishery gear	Salmon gillnet	Alaska Subsistence	Gillnet	N/A	1	0
AKRO	8/6/2020	Arctic	Harbor Porpoise	Bering Sea	DEAD	Three adult harbor porpoise were caught and killed in Alaska subsistence salmon gillnet. This record (female porpoise) represents 1 of 3 porpoise.	DEAD	Entangled / entrapped	Fishery gear	Salmon gillnet	Alaska Subsistence	Gillnet	N/A	1	0
AKRO	8/8/2020	Arctic	Harbor Porpoise	Bering Sea	DEAD	Three adult harbor porpoise were caught and killed in Alaska subsistence salmon gillnet. This record (female porpoise) represents 2 of 3 porpoise.	DEAD	Entangled / entrapped	Fishery gear	Salmon gillnet	Alaska Subsistence	Gillnet	N/A	1	0
AKRO	8/13/2020	Arctic	Harbor Porpoise	Bering Sea	DEAD	Three adult harbor porpoise were caught and killed in Alaska subsistence salmon gillnet. This record (male porpoise) represents 3 of 3 porpoise.	DEAD	Entangled / entrapped	Fishery gear	Salmon gillnet	Alaska Subsistence	Gillnet	N/A	1	0
AKRO	6/28/2016	SCAK	Harbor Porpoise	Gulf of Alaska	DEAD	A harbor porpoise was caught and killed in salmon drift gillnet gear. Mortality and serious injury estimates for this stock in this fishery are obtained from observer data and not stranding data or fishermen self-reported (MMAP) data; therefore, this record will not be assigned an M/SI or LOF value.	DEAD	Entangled / entrapped	Fishery gear	AK PWS salmon drift gillnet	Commercial	Gillnet	N/A	N/A	N/A

Table 1 -- Human-marine mammal interaction records reviewed for injury and mortality, 2016-2020.

Source of Record	Date	Area	Common Name	Stock	Initial Assessment	Determination Details	Final Determination	Mechanism of Injury	Source of Injury	Fishery Name	Fishery Type	Fishery Method	SI Criteria	M/SI Value	LOF Value
MMAP	6/19/2020	SCAK	Harbor Porpoise	Gulf of Alaska	DEAD	A harbor porpoise was caught and killed in an AK Cook Inlet salmon drift gillnet. This mortality will not be counted against the AK Cook Inlet salmon drift gillnet fishery because bycatch estimates from 1999-2000 AMMOP observer data are used in the SAR.	DEAD	Entangled / entrapped	Fishery gear	AK Cook Inlet salmon drift gillnet	Commercial	Gillnet	N/A	N/A	N/A
MMAP	6/28/2020	SCAK	Harbor Porpoise	Gulf of Alaska	DEAD	A harbor porpoise was caught and killed in an AK Cook Inlet salmon drift gillnet. This mortality will not be counted against the AK Cook Inlet salmon drift gillnet fishery because bycatch estimates from 1999-2000 AMMOP observer data are used in the SAR.	DEAD	Entangled / entrapped	Fishery gear	AK Cook Inlet salmon drift gillnet	Commercial	Gillnet	N/A	N/A	N/A
MMAP	5/28/2019	SEAK	Harbor Porpoise	Yakutat/SEAK Offshore Waters	DEAD	A harbor porpoise was caught and killed in a SEAK salmon cost recovery drift gillnet outside of the ADF&G Management Districts 6, 7, and 8.	DEAD	Entangled / entrapped	Fishery gear	SEAK salmon cost recovery drift gillnet	Commercial	Gillnet	N/A	1	0
NPGOP	8/5/2020	Kodiak	Harbor Seal	Alaska	DEAD	A harbor seal was caught and killed in AK GOA flatfish trawl gear.	DEAD	Entangled / entrapped	Fishery gear	AK GOA flatfish trawl	Commercial	Trawl	N/A	1	1
NPGOP	9/7/2016	BS	Harbor Seal	Aleutian Islands	DEAD	A harbor seal was caught and killed in trawl gear.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI Atka mackerel trawl	Commercial	Trawl	N/A	1	1
NPGOP	9/9/2018	SCAK	Harbor Seal	Aleutian Islands	DEAD	A male harbor seal was caught and killed by AK BSAI Atka mackerel trawl gear.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI Atka mackerel trawl	Commercial	Trawl	N/A	1	1
NPGOP	8/26/2020	GOA	Harbor Seal	Aleutian Islands	DEAD	A harbor seal was caught and killed by AK GOA halibut longline gear.	DEAD	Hooked	Fishery gear	AK GOA halibut longline	Commercial	Longline	N/A	1	1
AKRO	6/28/2016	BS	Harbor Seal	Bristol Bay	DEAD	Six harbor seals were reported dead by Alaska State Troopers on the northern shore of Egegik Bay. All animals were reported to be shot in the head. This record represents animal 1 of 6.	DEAD	Shot	Projectile weapon	N/A	N/A	N/A	N/A	1	0
AKRO	6/28/2016	BS	Harbor Seal	Bristol Bay	DEAD	Six harbor seals were reported dead by Alaska State Troopers on the northern shore of Egegik Bay. All animals were reported to be shot in the head. This record represents animal 2 of 6.	DEAD	Shot	Projectile weapon	N/A	N/A	N/A	N/A	1	0
AKRO	6/28/2016	BS	Harbor Seal	Bristol Bay	DEAD	Six harbor seals were reported dead by Alaska State Troopers on the northern shore of Egegik Bay. All animals were reported to be shot in the head. This record represents animal 3 of 6.	DEAD	Shot	Projectile weapon	N/A	N/A	N/A	N/A	1	0
AKRO	6/28/2016	BS	Harbor Seal	Bristol Bay	DEAD	Six harbor seals were reported dead by Alaska State Troopers on the northern shore of Egegik Bay. All animals were reported to be shot in the head. This record represents animal 4 of 6.	DEAD	Shot	Projectile weapon	N/A	N/A	N/A	N/A	1	0
AKRO	6/28/2016	BS	Harbor Seal	Bristol Bay	DEAD	Six harbor seals were reported dead by Alaska State Troopers on the northern shore of Egegik Bay. All animals were reported to be shot in the head. This record represents animal 5 of 6.	DEAD	Shot	Projectile weapon	N/A	N/A	N/A	N/A	1	0
AKRO	6/28/2016	BS	Harbor Seal	Bristol Bay	DEAD	Six harbor seals were reported dead by Alaska State Troopers on the northern shore of Egegik Bay. All animals were reported to be shot in the head. This record represents animal 6 of 6.	DEAD	Shot	Projectile weapon	N/A	N/A	N/A	N/A	1	0

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Source of Record	Date	Area	Common Name	Stock	Initial Assessment	Determination Details	Final Determination	Mechanism of Injury	Source of Injury	Fishery Name	Fishery Type	Fishery Method	SI Criteria	M/SI Value	LOF Value
NPGOP	2/25/2017	BS	Harbor Seal	Bristol Bay	DEAD	A harbor seal was caught and killed by AK BSAI flatfish trawl gear.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI flatfish trawl	Commercial	Trawl	N/A	1	1
NPGOP	9/26/2017	BS	Harbor Seal	Bristol Bay	DEAD	A female harbor seal was caught and killed by AK BSAI flatfish trawl gear.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI flatfish trawl	Commercial	Trawl	N/A	1	1
NPGOP	10/13/2017	BS	Harbor Seal	Bristol Bay	DEAD	A female harbor seal was caught and killed by AK BSAI flatfish trawl gear.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI flatfish trawl	Commercial	Trawl	N/A	1	1
MMAP	6/28/2019	WAK	Harbor Seal	Bristol Bay	DEAD	A harbor seal was caught and killed in an AK Bristol Bay salmon set gillnet.	DEAD	Entangled / entrapped	Fishery gear	AK Bristol Bay salmon set gillnet	Commercial	Gillnet	N/A	1	1
NPGOP	9/2/2019	BS	Harbor Seal	Bristol Bay	DEAD	A male harbor seal was caught and killed by AK BSAI flatfish trawl gear.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI flatfish trawl	Commercial	Trawl	N/A	1	1
NPGOP	9/14/2019	BS	Harbor Seal	Bristol Bay	DEAD	A male harbor seal was caught and killed by AK BSAI flatfish trawl gear.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI flatfish trawl	Commercial	Trawl	N/A	1	1
MMAP	6/5/2020	BS	Harbor Seal	Bristol Bay	DEAD	A harbor seal was caught and killed in an AK Bristol Bay salmon set gillnet.	DEAD	Entangled / entrapped	Fishery gear	AK Bristol Bay salmon set gillnet	Commercial	Gillnet	N/A	1	1
NPGOP	5/6/2018	SEAK	Harbor Seal	Clarence Strait	DEAD	A harbor seal was caught and killed by AK GOA halibut longline gear.	DEAD	Hooked	Fishery gear	AK GOA halibut longline	Commercial	Longline	N/A	1	1
AKRO	7/5/2017	SCAK	Harbor Seal	Cook Inlet/Shelikof	SI	An adult seal was observed hauled out with fishing net wrapped around its rear flippers. The seal was also observed to have something around its head and neck.	SI	Constricting entanglement	Fishery gear	Unknown net	Unknown	Net	P6	1	0
NPGOP	10/12/2017	Kodiak	Harbor Seal	Cook Inlet/Shelikof	DEAD	An adult female harbor seal was caught and killed by AK GOA flatfish trawl gear.	DEAD	Entangled / entrapped	Fishery gear	AK GOA flatfish trawl	Commercial	Trawl	N/A	1	1
NPGOP	11/6/2017	Kodiak	Harbor Seal	Cook Inlet/Shelikof	DEAD	A female harbor seal was caught and killed by AK GOA flatfish trawl gear.	DEAD	Entangled / entrapped	Fishery gear	AK GOA flatfish trawl	Commercial	Trawl	N/A	1	1
AKRO	6/6/2018	SCAK	Harbor Seal	Cook Inlet/Shelikof	DEAD	A harbor seal pup was found dead of a gunshot wound. An OLE investigation concluded that the shooting was intentional and non-subsistence.	DEAD	Shot	Projectile weapon	N/A	N/A	N/A	N/A	1	0
NPGOP	6/9/2018	SCAK	Harbor Seal	Cook Inlet/Shelikof	DEAD	A harbor seal was caught and killed by AK GOA Pacific cod longline gear.	DEAD	Hooked	Fishery gear	AK GOA Pacific cod longline	Commercial	Longline	N/A	1	1
AKRO	6/23/2018	SCAK	Harbor Seal	Cook Inlet/Shelikof	DEAD	A harbor seal was found dead of a gunshot wound. An OLE investigation concluded that the shooting was intentional and non-subsistence.	DEAD	Shot	Projectile weapon	N/A	N/A	N/A	N/A	1	0
MMAP	5/4/2020	SCAK	Harbor Seal	Cook Inlet/Shelikof	DEAD	A harbor seal was caught and killed by AK GOA halibut longline gear. This mortality will be counted against the AK GOA halibut longline fishery because mortality or serious injury of this stock was not observed by NPGOP observers in this fishery in this year.	DEAD	Hooked	Fishery gear	AK GOA halibut longline	Commercial	Longline	N/A	1	1

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AKRO	6/15/2020	SCAK	Harbor Seal	Cook Inlet/Sheikof	DEAD	A male subadult harbor seal was found fresh dead with lesions consistent with a gunshot injury. A necropsy was conducted and concluded the animal died from a gunshot that entered from behind the right ear, traveled through the brain, and exited partially out of the left eye. Bullet and skull fragments were found.	DEAD	Shot	Projectile weapon	N/A	N/A	N/A	N/A	1	0
AKRO	7/4/2017	SEAK	Harbor Seal	Lynn Canal/Stephens	NSI	An adult harbor seal entangled in gillnet for approximately one hour was brought aboard, disentangled, and released to the water without any apparent injuries.	NSI	Entangled / entrapped	Fishery gear	AK SEAK salmon drift gillnet	Commercial	Gillnet	P4	0	0
NPGOP	10/30/2017	Kodiak	Harbor Seal	North Kodiak	DEAD	A male harbor seal was caught and killed by AK GOA flatfish trawl gear.	DEAD	Entangled / entrapped	Fishery gear	AK GOA flatfish trawl	Commercial	Trawl	N/A	1	1
AKRO	6/26/2018	Kodiak	Harbor Seal	North Kodiak	DEAD	A harbor seal was found dead in a barrier net of a salmon hatchery cost recovery seine.	DEAD	Entangled / entrapped	Fishery gear	Salmon hatchery cost recovery seine	Commercial	Seine	N/A	1	0
NPGOP	4/1/2020	BS	Harbor Seal	Pribilof Islands	DEAD	A harbor seal was caught and killed in AK BSAI flatfish trawl gear.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI flatfish trawl	Commercial	Trawl	N/A	1	1
AKRO	7/19/2016	SCAK	Harbor Seal	Prince William Sound	DEAD	A harbor seal carcass was discovered during Copper River Delta carcass surveys. Multiple round full-thickness lesions ranging from 1 cm to 2 cm in size were located throughout the head and body.	DEAD	Shot	Projectile weapon	N/A	N/A	N/A	N/A	1	0
AKRO	7/19/2016	SCAK	Harbor Seal	Prince William Sound	DEAD	A harbor seal carcass was discovered during Copper River Delta carcass surveys. A fractured skull indicated the animal had been shot.	DEAD	Shot	Projectile weapon	N/A	N/A	N/A	N/A	1	0
AKRO	7/19/2016	SCAK	Harbor Seal	Prince William Sound	DEAD	A harbor seal carcass was discovered during Copper River Delta carcass surveys. The bones of the head and neck were disorganized and there were several dorsal openings into the body cavity.	DEAD	Shot	Projectile weapon	N/A	N/A	N/A	N/A	1	0
AKRO	7/12/2017	SCAK	Harbor Seal	Prince William Sound	DEAD	An adult male harbor seal was found dead with lesions consistent with a firearm injury. A necropsy was conducted and concluded a likely gunshot to the head. Besides the trauma to the head, the rest of the hide and body appeared uninjured. Expert opinion was used to determine gunshot source.	DEAD	Shot	Projectile weapon	N/A	N/A	N/A	N/A	1	0
AKRO	7/26/2017	SCAK	Harbor Seal	Prince William Sound	DEAD	A subadult male harbor seal was found dead with lesions consistent with a firearm injury. The left dorsal skull had a full thickness wound. Metal detector - negative. The head was taken for radiographs plus esophageal contents. Radiographs - top of skull with displaced fracture and possibly bullet fragments.	DEAD	Shot	Projectile weapon	N/A	N/A	N/A	N/A	1	0
AKRO	7/26/2017	SCAK	Harbor Seal	Prince William Sound	DEAD	A subadult male harbor seal was found dead with lesions consistent with a firearm injury. There was a full thickness lesion on the right dorsal neck with subcutaneous bruising/hemorrhage. The head was removed for radiographs which showed a bullet and fragments in/near the atlas.	DEAD	Shot	Projectile weapon	N/A	N/A	N/A	N/A	1	0

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AKRO	5/22/2019	SCAK	Harbor Seal	Prince William Sound	DEAD	An adult male harbor seal was found fresh dead with lesions consistent with a firearm injury. Two holes were found in the back of the skull and the metal detector signaled on the left side of the animal between the skull and the shoulder.	DEAD	Shot	Projectile weapon	N/A	N/A	N/A	N/A	1	0
NPGOP	4/5/2018	Kodiak	Harbor Seal	South Kodiak	DEAD	A harbor seal was caught and killed by AK GOA flatfish trawl gear.	DEAD	Entangled / entrapped	Fishery gear	AK GOA flatfish trawl	Commercial	Trawl	N/A	1	1
AKRO	12/23/2020	BS	Humpback Whale	Mex-Npac	SI	A humpback whale was observed in Los Cabos, Mexico, entangled in AK BSAI Pacific cod pot gear from Dutch Harbor, AK, in an unknown configuration. The animal was observed towing one large orange buoy and one large green buoy, which identified the gear. The owner of the gear stated the buoys were attached to 198 feet of nylon sinking line that was attached to 198 feet of poly floating line, which was usually attached to a 500-pound cod pot that is 6 feet long, 6 feet wide, and 3 feet high. It is unknown if the pot was still attached, but it is assumed that the animal is still entangled.	SI	Entangled / entrapped	Fishery gear	AK BSAI Pacific cod pot	Commercial	Pot	L10	0.75	0.75
AKRO	4/4/2016	SEAK	Humpback Whale	Mex-Npac, Hawai'i-SEA/NBC DIP	PRORATE	A humpback whale reportedly became entangled in Alaska subsistence gillnet and broke free trailing a 5 fathom section of webbing and a basketball-sized buoy. The whale was not resighted. This entanglement will be considered a prorated serious injury under criterion L10 due to the unknown configuration of the entanglement.	PRORATE	Entangled / entrapped	Fishery gear	Unknown gillnet	Alaska Subsistence	Gillnet	L10	0.75	0
AKRO	5/15/2016	SEAK	Humpback Whale	Mex-Npac, Hawai'i-SEA/NBC DIP	PRORATE	A humpback whale was observed entangled in line and trailing a green bullet buoy about 10-15 ft behind it. The nature of the configuration could not be determined, since the observation was from a distance of more than 100 yards. This entanglement will be considered a prorated serious injury under criterion L10 due to the unknown configuration of the entanglement.	PRORATE	Entangled / entrapped	Marine debris (unidentified)	N/A	N/A	N/A	L10	0.75	0
AKRO	6/1/2016	SEAK	Humpback Whale	Mex-Npac, Hawai'i-SEA/NBC DIP	SI	A humpback whale became entangled in an outhaul mooring. Some gear was cut free initially, but the animal remained entangled in 150 ft of line that trailed a polyball and 60 ft of line that possibly terminated in a 100 lb anchor. Initially the entanglement appeared to originate in the mouth, and the tail and peduncle were free of gear. The whale was tracked over the next 20 days, and eventually lost the trailing polyball buoy, however, the final configuration is unclear; therefore, this entanglement is prorated under criterion L10.	PRORATE	Entangled / entrapped	Other	N/A	N/A	N/A	L10	0.75	0
AKRO	6/26/2016	SEAK	Humpback Whale	Mex-Npac, Hawai'i-SEA/NBC DIP	PRORATE	A humpback whale reportedly became entangled in loose webbing that hung from a remote ADF&G king salmon release site. The whale managed to free itself by the time responders arrived at the site. The whale was not resighted, and it is unknown whether any gear remained attached to the whale, therefore this entanglement is prorated under criterion L10.	PRORATE	Entangled / entrapped	Other	N/A	N/A	N/A	L10	0.75	0

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AKRO	6/30/2016	SEAK	Humpback Whale	Mex-Npac, Hawai'i-SEA/NBC DIP	PRORATE	A humpback whale calf was reported entangled in red-colored line. The line was trailing, and reported to possibly terminate with a buoy. The origin and configuration of the entanglement could not be determined, therefore this interaction is considered a prorated serious injury under criterion L10.	PRORATE	Entangled / entrapped	Marine debris (rope and buoy)	N/A	N/A	N/A	L10	0.75	0
AKRO	7/4/2016	SEAK	Humpback Whale	Mex-Npac, Hawai'i-SEA/NBC DIP	PRORATE	A humpback whale was reported to be trailing a small amount of green line from its tail. The reporting party stated that the entanglement did not appear to be life-threatening, but no pictures were obtained and the nature and configuration of the entanglement was not determined. Therefore this interaction is considered a prorated serious injury under criterion L10.	PRORATE	Entangled / entrapped	Marine debris (rope)	N/A	N/A	N/A	L10	0.75	0
AKRO	7/7/2016	SEAK	Humpback Whale	Mex-Npac, Hawai'i-SEA/NBC DIP	PRORATE	A humpback whale became entangled in actively fished salmon drift gillnet. After the whale began towing the vessel, the fisherman began to cut the vessel free from the entangling gear. While the gear was being cut free, the whale dove and when it resurfaced it appeared to be free from gear; however, there is not confirmation from the fisherman that all gear was recovered, and some may have remained on the animal.	PRORATE	Entangled / entrapped	Fishery gear	AK SEAK salmon drift gillnet	Commercial	Gillnet	L10	0.75	0.75
AKRO	7/8/2016	SEAK	Humpback Whale	Mex-Npac, Hawai'i-SEA/NBC DIP	PRORATE	A subadult humpback whale was observed entangled in gillnet gear by a whale watch vessel. The whale was observed shedding some of the gear, which was then recovered by the whale watch vessel, but when the whale was last observed it still had webbing around the tailstock and 25 ft of trailing gear. This entanglement will be considered a prorated serious injury under criterion L10 due to the unknown configuration of the entanglement.	PRORATE	Entangled / entrapped	Fishery gear	AK SEAK salmon drift gillnet	Commercial	Gillnet	L10	0.75	0.75
AKRO	7/11/2016	SEAK	Humpback Whale	Mex-Npac, Hawai'i-SEA/NBC DIP	NSI	A humpback whale calf was observed entangled in 3/8 inch line. The line passed through the whale's mouth, forming a bridle, and then trailed further back on either side. The whale was observed entangled for over a week before a disentanglement team responded and cut gear free. A short time later, the whale dropped the gear and multiple parties reported the calf was gear free.	NSI	Entangled / entrapped	Marine debris (unidentified)	N/A	N/A	N/A	L3	0	0
AKRO	7/15/2016	SEAK	Humpback Whale	Mex-Npac, Hawai'i-SEA/NBC DIP	PRORATE	A humpback whale was observed entangled in gillnet. The netting was wrapped around the animal's head and the animal was swimming continuously at the surface without diving. The whale was not seen again. Although the gear wrapped around the whale's body, it was not confirmed to be constricting, therefore this entanglement is prorated under criterion L10.	PRORATE	Entangled / entrapped	Fishery gear	AK SEAK salmon drift gillnet	Commercial	Gillnet	L10	0.75	0.75
AKRO	7/31/2016	SEAK	Humpback Whale	Mex-Npac, Hawai'i-SEA/NBC DIP	NSI	A humpback whale became entangled in a purse seine, and was reported to swim away uninjured after being completely disentangled by the crew.	NSI	Entangled / entrapped	Fishery gear	AK SEAK salmon purse seine	Commercial	Seine	L10	0	0

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AKRO	7/31/2016	SEAK	Humpback Whale	Mex-Npac, Hawai'i-SEA/NBC DIP	NSI	A humpback whale became entangled in an anchor line of a small skiff. The whale began pulling the boat, so the operator cut the line, leaving the whale entangled with ~100 ft of line and an 8 lb anchor. There was originally one confirmed wrap around the whale's peduncle, and possibly another further forward. The reporting party thought it likely that the whale would shed the gear, and multiple on-the-water observers reported that the whale then shed the gear. Additional on-the-water surveys over the next week of the same group of whales did not identify any entangled whales, further confirming the belief that the whale shed the gear shortly after entanglement.	NSI	Entangled / entrapped	Ship's ground tackle	Unknown hook and line	Recreational	Hook and line	L10	0	0
AKRO	9/11/2016	SEAK	Humpback Whale	Mex-Npac, Hawai'i-SEA/NBC DIP	DEAD	A humpback whale carcass was discovered stranded and in a state of moderate decomposition. A necropsy was conducted and blunt trauma and hemorrhage along the right jaw, cervical region, and thorax was noted. The examiner noted that the injuries were probably caused by a ship strike.	DEAD	Ship strike	Vessel (unknown)	N/A	N/A	N/A	N/A	1	0
AKRO	1/3/2017	SEAK	Humpback Whale	Mex-Npac, Hawai'i-SEA/NBC DIP	SI	A subadult humpback whale was observed to be entangled in a 1-inch cable running from a barge to a 6-ton anchor in ~ 30 ft of water. The cable was through the whale's mouth and around its body posterior to the blow hole. The whale was successfully disentangled and all gear was recovered. Following the disentanglement, the whale remained on the surface briefly and then slowly swam away. The entanglement caused some lacerations and a cut about 1-1.5 inches deep into the whale's soft tissue.	NSI	Constricting entanglement	Ship's ground tackle	N/A	N/A	N/A	L2	0	0
AKRO	1/21/2017	SEAK	Humpback Whale	Mex-Npac, Hawai'i-SEA/NBC DIP	PRORATE	A humpback whale was observed with a 1.5 ft diameter bright orange-red buoy trailing 40-60 ft behind it. The whale's movements did not appear compromised, and when it dove the buoy submerged along with it. The extent of the entanglement could not be confirmed; thus, this event is prorated at L10.	PRORATE	Entangled / entrapped	Marine debris (rope and buoy)	N/A	N/A	N/A	L10	0.75	0
AKRO	6/9/2017	SEAK	Humpback Whale	Mex-Npac, Hawai'i-SEA/NBC DIP	PRORATE	A 40 ft recreational vessel traveling at an unknown speed was observed to strike a humpback whale. The whale appeared to be bubble feeding when the vessel drove over the bubbles and struck the animal. The boat was nudged and rocked as a result of the interaction, but the observer did not notice any blood in the water and saw the whale swimming away after the incident. There is no additional information available on the health of the whale following the strike.	PRORATE	Ship strike	Vessel (recreational)	N/A	N/A	N/A	L7b	0.14	0
AKRO	7/8/2017	SEAK	Humpback Whale	Mex-Npac, Hawai'i-SEA/NBC DIP	NSI	An anchored 47 ft sailboat was struck by a humpback whale causing the vessel to rise and fall hard. The whale was in a group of 3 or 4 animals and kept swimming following the impact. There was no sign of injury to the whale, but the boat was damaged.	NSI	Ship strike	Vessel (recreational)	N/A	N/A	N/A	L6c	0	0

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AKRO	7/20/2017	SEAK	Humpback Whale	Mex-Npac, Hawai'i-SEA/NBC DIP	PRORATE	A 40 ft rigid hull inflatable whale watching vessel traveling at 13 knots struck a humpback whale. The vessel was powering up, saw the spout off the bow, and tried to power down but felt a bump. The whale surfaced behind the boat following the collision. Nothing abnormal about the whale was noticed, and no blood was seen in the water. There is no additional information on the health of the whale following the impact.	PRORATE	Ship strike	Vessel (commercial)	N/A	N/A	N/A	L6b	0.2	0
AKRO	7/21/2017	SEAK	Humpback Whale	Mex-Npac, Hawai'i-SEA/NBC DIP	SI	A subadult humpback whale was observed entangled in multiple wraps of heavy (~5/8 inch) line around its head and body. The material appeared to be heavier than gillnet (no mesh observed). Floats and line were also reported to be trailing the animal. The whale was described as bobbing up and down to breathe, barely making forward progress.	SI	Constricting entanglement	Fishery gear	Unknown	Unknown	Unknown	L2	1	0
AKRO	8/9/2017	SEAK	Humpback Whale	Mex-Npac, Hawai'i-SEA/NBC DIP	DEAD	A subadult male humpback whale was observed dead on the bulbous bow of a 950 ft cruise ship. The speed and specific timing of the ship strike are unknown. External and internal findings of the necropsy indicate that the cause of death is from significant trauma consistent with a vessel strike. The most likely scenario is that the animal was struck around the head/neck, then quickly wrapped around the bulbous bow.	DEAD	Ship strike	Vessel (commercial)	N/A	N/A	N/A	N/A	1	0
AKRO	8/21/2017	SEAK	Humpback Whale	Mex-Npac, Hawai'i-SEA/NBC DIP	PRORATE	A commercial fiberglass charter fishing boat of unknown length traveling at 25 knots was observed striking a humpback whale. The boat struck the whale with its bow pitched upward nearly 45 degrees until the stern/engine hit, which pitched the boat back down. The strike was described as a "hard strike." The observers were unable to provide any additional information about the health of the whale following the impact.	PRORATE	Ship strike	Vessel (commercial)	AK/WA/OR/CA commercial passenger fishing vessel	Commercial	Unknown	L6b	0.2	0.2
AKRO	8/27/2017	SEAK	Humpback Whale	Mex-Npac, Hawai'i-SEA/NBC DIP	SI	A subadult humpback whale was observed entangled in the ground tackle of a tour vessel at anchor in SE AK. The whale was entangled in the vessel's 7/8 inch anchor chain which was wrapped around the lower jaw with a half twist. The animal was entangled only 50 ft from the vessel, while over 400 ft of chain remained below in just over 100 ft of water. The whale was in good condition and did not appear to be fighting the weight of the chain too much. In order to disentangle the whale, the anchor chain was cut at the vessel's winch in hopes that it would allow the animal to free itself of the simple wrap and short tail of chain. After the chain was cut, the whale remained at the surface for some time before submerging. A whale thought to be the freed animal was seen about 1/4 nm away and on the next surfacing about 1/2 nm away. The team remained in the area looking for the whale, but it was not re-located. It is highly likely that the whale was free of the gear and had moved off.	NSI	Constricting entanglement	Ship's ground tackle	N/A	N/A	N/A	L2	0	0
AKRO	5/27/2018	SEAK	Humpback Whale	Mex-Npac, Hawai'i-SEA/NBC DIP	DEAD	A dead moderately decomposed humpback whale was first observed floating in the water, and then washed up on the beach. A necropsy was conducted and ultimately concluded that the evidence of significant blunt trauma indicates a vessel strike as the most probable cause of death.	DEAD	Ship strike	Vessel (unknown)	N/A	N/A	N/A	N/A	1	0

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AKRO	6/25/2018	SEAK	Humpback Whale	Mex-Npac, Hawai'i-SEA/NBC DIP	PRORATE	A humpback whale became entangled in gillnet fishing gear. The fisherman spent an hour attempting to free the whale after it hit his net, but eventually cut the gear free for the safety of his vessel. The fisherman reported that the whale took 30-40 ft of webbing and corkline, and possibly some leadline as well. During the entanglement (after putting tension on his gear) the fisherman observed some blood in the water due to the whale's resulting surface wounds. Once freed, the whale was surfacing and diving normally, with the gear wrapped around its midsection. It is not believed to be tightly wrapped, and the tail is thought to be clear of gear. The same animal was thought to be re-sighted later in the day with 10-20 corks of white gillnet cork on the whale. No additional information is available on the outcome of the entanglement; however, this animal is believed to have been re-sighted on July 8th and again on July 23rd with a very similar description of the entanglement and associated fishing gear. The July 8th observer stated that he did not think that the animal appeared compromised by the entanglement, but did say that it appeared "really tired." The July 23rd observers indicated that they watched the whale for about 2 hours, during which time it would sound (but with no fluking) for about 7 minutes, then come up for a breath and go back down. The observers did not think that it appeared to be in distress nor in bad condition. This case has been assigned an L10 with a prorated value of 0.75 because the constricting nature of the midsection wrap cannot be verified.	PRORATE	Entangled / entrapped	Fishery gear	AK Southeast salmon drift gillnet	Commercial	Gillnet	L10	0.75	0.75
AKRO	6/28/2018	SEAK	Humpback Whale	Mex-Npac, Hawai'i-SEA/NBC DIP	SI	A 65 ft jet drive whale watching catamaran vessel traveling 20 - 21 knots struck a humpback whale and rode up over top of the animal on the port side. The vessel stopped as soon as possible after the collision. The whale was then seen surfacing off the port stern of the vessel, at which time it took one breath and then fluked. No visible wounds, blood, or debris from the incident were observed following the strike. No damaged was reported by the vessel, and there is no additional information about the condition of the whale following the strike.	SI	Ship strike	Vessel (commercial)	N/A	N/A	N/A	L6a	1	0
AKRO	8/13/2018	SEAK	Humpback Whale	Mex-Npac, Hawai'i-SEA/NBC DIP	SI	An adult humpback whale was struck by a 375 ft transportation ferry traveling 20.5 knots. The whale was not observed after the incident, and no damage to the vessel was reported.	SI	Ship strike	Vessel (commercial)	N/A	N/A	N/A	L6a	1	0
AKRO	9/16/2018	SEAK	Humpback Whale	Mex-Npac, Hawai'i-SEA/NBC DIP	PRORATE	A subadult humpback whale was observed to be entangled in 100 ft of longline with 1 buoy attached. The initial observation reported that the whale had line coming out of both sides of its mouth, and that it was unable to dive. This animal was successfully disentangled, the gear was removed, and the whale swam away. There are no other reports of injury to the whale.	NSI	Entangled / entrapped	Fishery gear	Unknown	Unknown	Unknown	L10	0	0

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Source of Record	Date	Area	Common Name	Stock	Initial Assessment	Determination Details	Final Determination	Mechanism of Injury	Source of Injury	Fishery Name	Fishery Type	Fishery Method	SI Criteria	M/SI Value	LOF Value
AKRO	11/11/2018	SEAK	Humpback Whale	Mex-Npac, Hawai'i-SEA/NBC DIP	SI	A subadult humpback whale was observed to be entangled around the upper jaw in heavy gauge lines, which were anchored to the bottom and used for mooring docks. The entanglement configuration included two buoys and a dense snarl of lines, several of which were covering the leading edge of the blowhole. The whale was reported to appear healthy and breathing normally despite being anchored / entangled. This animal was successfully disentangled, all gear was removed, and there is no report of serious injury to the whale as a result of the incident.	NSI	Entangled / entrapped	Other	N/A	N/A	N/A	L2	0	0
AKRO	12/7/2018	SEAK	Humpback Whale	Mex-Npac, Hawai'i-SEA/NBC DIP	PRORATE	A humpback whale was observed to be entangled in gillnet fishing gear. The animal was reported to have 4-5 gillnet corks coming from the corner of its mouth. The remainder of the animal did not appear to be entangled. It was unknown whether the gear was wrapped around the whale's mouth. No trailing gear was observed and the whale appeared to be in good condition and was diving upon observation. No other information about this case was reported.	PRORATE	Entangled / entrapped	Fishery gear	AK Southeast salmon drift gillnet	Commercial	Gillnet	L10	0.75	0.75
AKRO	6/25/2019	SEAK	Humpback Whale	Mex-Npac, Hawai'i-SEA/NBC DIP	PRORATE	A humpback whale was reported to be entangled on the right pectoral flipper by a 5-foot wide snarl of unidentified green line or webbing that trailed down the body but was not wrapped around the body. The animal appeared lethargic, taking only two breaths during the 20-minute observation. Two other whales were observed pushing laterally and diagonally on the animal. The gear was never seen above the surface of the water but the reported asymmetry between left and right sides of the animal and the animal's behavior and interaction with other nearby humpback whales indicated an entanglement.	PRORATE	Entangled / entrapped	Marine debris (unidentified)	N/A	N/A	N/A	L10	0.75	0
AKRO	6/27/2019	SEAK	Humpback Whale	Mex-Npac, Hawai'i-SEA/NBC DIP	NSI	A humpback whale was observed with heavy line draped on the barnacles on one of the fluke tips. Additional sightings of the whale without gear indicate the animal self-released from the entanglement.	NSI	Entangled / entrapped	Marine debris (rope)	N/A	N/A	N/A	L3	0	0
AKRO	7/10/2019	SEAK	Humpback Whale	Mex-Npac, Hawai'i-SEA/NBC DIP	SI	An adult female humpback whale was struck by a 78-foot whale watching jet drive catamaran traveling at 22 knots. The captain reported hearing and feeling a thud on the port side and then saw a humpback whale in the boat's wake. The whale was observed breathing twice and then slowly moving out of the area. The next day a humpback whale was observed feeding in the same location with superficial injuries on its head consistent with a ship strike. The same whale had been photographed a week prior to the strike without the injuries. The whale appeared to be behaving normally with strong blows and was actively feeding. However, given the size and speed of the vessel involved in the strike, this case is being assigned as a SI.	SI	Ship strike	Vessel (commercial)	N/A	N/A	N/A	L6a	1	0

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AKRO	8/21/2019	SEAK	Humpback Whale	Mex-Npac, Hawai'i-SEA/NBC DIP	SI	A humpback whale was struck by a 154-foot USCG cutter travelling at 16 knots. The crew did not see any whales in the immediate area when the impact occurred, but CCTV footage showed a humpback whale surface 15 yards directly in front of the ship, submerge, and then strike the port bow of the ship. The impact caused the bow of the vessel to be pushed upward. The cutter turned around to return to the impact location and did not see any visible blood in the water, sheens, or any other indication of a strike. Approximately 30 minutes later a humpback whale surfaced 300 yards from the strike location but had no apparent injuries or indication of a strike, however we cannot confirm that this animal was the one that was struck, nor was the observation period long enough to determine if that whale was injured. Two humpback whale carcasses were reported in the area following the strike but a necropsy was not possible on either carcass.	SI	Ship strike	Vessel (government)	N/A	N/A	N/A	L6a	1	0
AKRO	8/25/2019	SEAK	Humpback Whale	Mex-Npac, Hawai'i-SEA/NBC DIP	PRORATE	A humpback whale was observed to have been struck by a recreational Boulton boat (<65 feet in length) travelling at an unknown but high rate of speed (>10 knots). The boat was travelling fast enough that the impact with the whale caused the boat to become airborne. A whale watching boat provided photographs of the whale after impact, showing superficial lacerations from the propeller on the dorsal fin. No information was available regarding the animal's behavior before the impact and no additional information was available regarding the condition of the whale immediately after the impact. Since the report this whale has been resighted several times, it is known to have recovered from any sustained injuries from the boat strike, and has made a full migration, returning with a healthy calf. The injury determination is therefore changed to NSI.	NSI	Ship strike	Vessel (recreational)	N/A	N/A	N/A	L6b	0	0
AKRO	8/30/2019	SEAK	Humpback Whale	Mex-Npac, Hawai'i-SEA/NBC DIP	SI	The port stabilizer of a 213-meter (699 feet) cruise ship traveling at 17.8 knots struck a humpback whale. The crew noticed two other humpback whales in the distance then suddenly saw a humpback whale surface 10 meters from the port side below the bridge wing. The animal dove and 2 seconds later the ship received an alarm on the port stabilizer. The crew discovered damage to the stabilizer. The whale was not seen again by the crew. CCTV shows a whale surfacing astern of the ship but the condition of the whale cannot be determined from the footage. The outcome of the impact is unknown.	SI	Ship strike	Vessel (commercial)	N/A	N/A	N/A	L6a	1	0
AKRO	9/6/2019	SEAK	Humpback Whale	Mex-Npac, Hawai'i-SEA/NBC DIP	PRORATE	A humpback whale was observed dragging a 14-inch round, orange buoy behind it on the surface. The configuration of the entanglement is unknown. The animal was traveling at a high rate of speed and its mobility did not appear to be impaired. The entanglement is believed to be recreational pot gear.	PRORATE	Entangled / entrapped	Fishery gear	Unknown pot	Recreational	Pot	L10	0.75	0
AKRO	9/11/2019	SEAK	Humpback Whale	Mex-Npac, Hawai'i-SEA/NBC DIP	PRORATE	A humpback whale was observed entangled with an orange A2 buoy attached in an unknown location and configuration. The whale was observed moving without any obvious distress.	PRORATE	Entangled / entrapped	Fishery gear	Unknown	Unknown	Unknown	L10	0.75	0

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AKRO	10/4/2019	SEAK	Humpback Whale	Mex-Npac, Hawai'i-SEA/NBC DIP	PRORATE	A humpback whale was reported to be entangled in the buoy line of a 5-string shrimp pot set. The entanglement was described as forward on the body since the tail and peduncle were clear of any entangling material, but it is unknown whether the entanglement involved any constricting wraps. The animal was reported trailing about 150 feet of line with an orange or faded red medium-sized polyball attached. The animal was mobile and appeared to be in good condition.	PRORATE	Entangled / entrapped	Fishery gear	Unknown shrimp pot	Unknown	Pot	L10	0.75	0
AKRO	6/27/2020	SEAK	Humpback Whale	Mex-Npac, Hawai'i-SEA/NBC DIP	PRORATE	A humpback whale was struck by a 21-foot aluminum recreational boat traveling at 25-27 knots. The captain reported that the whale surfaced about 20-40 feet in front of the vessel; the captain attempted to turn to starboard and slow down but was unable to prevent the vessel's port bow from striking the whale, denting the bow of the boat. The whale was not seen again after the collision and no additional information is available regarding the whale.	PRORATE	Ship strike	Vessel (recreational)	N/A	N/A	N/A	L6b	0.2	0
AKRO	6/28/2020	SEAK	Humpback Whale	Mex-Npac, Hawai'i-SEA/NBC DIP	PRORATE	A humpback whale was observed entangled in SEAK recreational shrimp pot gear attached in an unknown configuration. The gear involved in the entanglement included two 340-foot buoy lines and a 250-foot mid-line with five small shrimp pots attached with snap gear with no anchors or weights. Another reporting party spotted the entangled animal the day after the gear reportedly had been set and removed both buoys from the trailing line. The animal was observed taking frequent, shallow dives and keeping close to shore. The animal likely remains entangled.	PRORATE	Entangled / entrapped	Fishery gear	SEAK shrimp pot	Recreational	Pot	L10	0.75	0
AKRO	7/26/2020	SEAK	Humpback Whale	Mex-Npac, Hawai'i-SEA/NBC DIP	NSI	A humpback whale calf was observed entangled in a tended AK Southeast salmon drift gillnet around the head, fluke, and a pectoral fin. At the time of entanglement, a good Samaritan boat assisted the fishing vessel in pulling the gillnet over the animal's head, freeing it from the net. The animal was observed with some minor cuts and abrasions along its back but has since been resighted, with its mother with no additional wounds.	NSI	Entangled / entrapped	Fishery gear	AK Southeast salmon drift gillnet	Commercial	Gillnet	L2	0	0
AKRO	8/3/2020	SEAK	Humpback Whale	Mex-Npac, Hawai'i-SEA/NBC DIP	SI	A humpback whale was observed entangled in a tended AK Southeast salmon drift gillnet. The net then became entangled in the tending vessel's propeller resulting in a loss of propulsion. In order to reduce risk to the vessel and crew, another fishing vessel responded and cut the whale free of the attached gillnet set. The configuration of the remaining entanglement is unknown. The animal is believed to have parts of the net wrapped around the tailstock and the entanglement may also involve the mouth or pectoral flippers, resulting in the animal being hogtied. This is supported by the fact that the animal was observed sculling (using its pectoral flippers for mobility). Subsequent attempts to locate the animal were unsuccessful.	SI	Entangled / entrapped	Fishery gear	AK Southeast salmon drift gillnet	Commercial	Gillnet	L2	1	1

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AKRO	8/18/2020	SEAK	Humpback Whale	Mex-Npac, Hawai'i-SEA/NBC DIP	PRORATE	A humpback whale was observed entangled in an AK Southeast salmon drift gillnet in an unknown configuration, including approximately 12 feet of trailing line with 8 white corks attached. The animal was making 7-minute dives and was able to swim and breathe with no apparent impacts to its mobility. No major wounds were visible, other than some chafe marks, and the whale is believed to still be entangled.	PRORATE	Entangled / entrapped	Fishery gear	AK Southeast salmon drift gillnet	Commercial	Gillnet	L10	0.75	0.75
AKRO	8/24/2020	SEAK	Humpback Whale	Mex-Npac, Hawai'i-SEA/NBC DIP	PRORATE	A humpback whale was stuck by an 18-foot fiberglass recreational boat traveling at 22 miles per hour. The captain reported that as soon as the vessel got up on plane, a humpback whale came out of the water 20 feet in front of the vessel and he was unable to avoid it. The captain reported there could have been more than one whale but he was unable to confirm. The whale that was struck was not seen again after the collision and no additional information is available regarding this whale.	PRORATE	Ship strike	Vessel (recreational)	N/A	N/A	N/A	L6b	0.2	0
AKRO	8/26/2020	SEAK	Humpback Whale	Mex-Npac, Hawai'i-SEA/NBC DIP	PRORATE	An adult humpback whale was observed entangled in an AK Southeast salmon drift gillnet in an unknown configuration. The initial entanglement included an unknown amount of white cork line. Then the reporting party observed the animal become entangled in AK salmon troll gear, breaking off 200 feet of stainless steel wire that included a 50 pound lead weight and about 20 leaders, each with a flasher and hook attached. This interaction will be attributed to both fisheries involved in the entanglement.	PRORATE	Entangled / entrapped	Fishery gear	AK Southeast salmon drift gillnet, AK salmon troll	Commercial	Gillnet, Troll	L10	0.75	0.75
AKRO	9/14/2020	SEAK	Humpback Whale	Mex-Npac, Hawai'i-SEA/NBC DIP	PRORATE	A humpback whale was observed entangled in unknown longline gear in an unknown configuration. The animal was observed towing three longline buoys, swimming in circles, and showing signs of distress. A response was launched but the animal was not resighted is and believed to still be still entangled.	PRORATE	Entangled / entrapped	Fishery gear	Unknown longline	Commercial	Longline	L10	0.75	0
AKRO	10/21/2020	SEAK	Humpback Whale	Mex-Npac, Hawai'i-SEA/NBC DIP	SI	An adult humpback whale was observed entangled in AK Southeast shrimp pot gear with two body wraps on either side of the blowhole. The line may have been attached to up to five commercial shrimp pots and was possibly trailing a single 2.5 x 1-foot orange torpedo-shaped buoy. The animal was reported to be potentially anchored but was able to submerge in place and surface to breathe. The reporting party returned to the animal's location several hours later and the animal was not resighted but was assumed to still be entangled. Due to lack of information regarding whether the fisherman recovered his gear, we cannot determine whether the animal drowned or swam away with gear attached. SI criteria L10 is being assigned to this interaction because the configuration of the gear and the outcome are unknown.	SI	Entangled / entrapped	Fishery gear	AK Southeast shrimp pot	Commercial	Pot	L10	0.75	0.75

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AKRO	11/25/2020	SEAK	Humpback Whale	Mex-Npac, Hawai-SEA/NBC DIP	SI	An adult humpback whale was observed entangled in AK Southeast crab pot gear in an unknown configuration. The animal was not moving much, staying at the surface with a large orange buoy and a smaller yellow buoy very close to its body. A response team was dispatched and was able to cut the main line to a crab pot, freeing the animal from the pot, but the two buoys remained attached. The animal was able to swim and dive after being freed from the pot and the lines started moving on the whale. The response team noticed the buoy line traveling through the animal's mouth and wrapped twice around the tailstock. The response team was able to cut the remaining buoys off the animal to remove the strain on the wraps but had to terminate their effort due to the increasing sea state and the animal's increased mobility. Animal was resighted 7/18/21 and confirmed to be free of any entanglements.	NSI	Entangled / entrapped	Fishery gear	AK Southeast crab pot	Commercial	Pot	L10	0	1
AKRO	6/22/2016	GOA	Humpback Whale	Western North Pacific, Mex-Npac, Hawai-NorPac unit	SI	A humpback whale was entangled in approximately 600 ft of line that terminated in a buoy. The line wrapped around the whale and the pectoral fins, and abrasions from the line were visible. NOAA's Office of Law Enforcement responded and successfully disentangled the animal, freeing the animal of all gear.	NSI	Entangled / entrapped	Marine debris (rope and buoy)	N/A	N/A	N/A	L2	0	0
AKRO	7/4/2016	GOA	Humpback Whale	Western North Pacific, Mex-Npac, Hawai-NorPac unit	PRORATE	A 20 ft vessel struck a whale at 20 knots. The whale was observed 3-5 minutes later at a distance of 200 yards. The whale did not appear injured while it was observed during subsequent dive cycles. This interaction qualifies as a prorated serious injury under criterion L6b due to the vessel's size and speed.	PRORATE	Ship strike	Vessel (recreational)	N/A	N/A	N/A	L6b	0.2	0
AKRO	7/24/2016	WAK	Humpback Whale	Western North Pacific, Mex-Npac, Hawai-NorPac unit	DEAD	A humpback whale was found stranded in a state of moderate decomposition. The whale was entangled in a 7/8" poly line that was wrapped around its tailstock and upper jaw. There was significant scarring and abrasion at the areas of entanglement. The end of the line trailed into deep water and could not be pulled in.	DEAD	Entangled / entrapped	Marine debris (unidentified)	N/A	N/A	N/A	N/A	1	0
AKRO	7/28/2016	GOA	Humpback Whale	Western North Pacific, Mex-Npac, Hawai-NorPac unit	SI	An entangled humpback whale was observed from a tour vessel. The whale was trailing small gauge neon line from its fluke and another larger gauge line was wrapped around the base of the tailstock and was cutting into the animal. This is considered a serious injury under criterion L2 due to the constricting wrap around the whale's tailstock.	SI	Entangled / entrapped	Marine debris (unidentified)	N/A	N/A	N/A	L2	1	0
AKRO	7/28/2016	GOA	Humpback Whale	Western North Pacific, Mex-Npac, Hawai-NorPac unit	NSI	An adrift 22 ft boat was struck by a humpback whale. A passenger was ejected into the water and the boat began taking on water. The whale was reported to appear uninjured. This interaction qualifies as a non-serious injury under criterion L6c due to the vessel's size and speed.	NSI	Ship strike	Vessel (recreational)	N/A	N/A	N/A	L6c	0	0
AKRO	8/24/2016	GOA	Humpback Whale	Western North Pacific, Mex-Npac, Hawai-NorPac unit	NSI	A humpback whale was observed by a USCG vessel's crew to be entangled in, and trailing 60 ft of line and a buoy. Then, while they were watching, the whale shed the gear. The USCG recovered the buoy.	NSI	Entangled / entrapped	Fishery gear	Recreational crab pot	Recreational	Pot	L10	0	0

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AKRO	8/26/2016	WAK	Humpback Whale	Western North Pacific, Mex-Npac, Hawai'i-NorPac unit	NSI	A humpback whale was observed to be entangled in Dutch Harbor. The animal was observed with a thick nylon line exiting the right side of the mouth which led straight down and was heavily weighted by something on the bottom. A response team attempted to grapple the weighted line in order to cut the line and free the whale, but had no success. A short time later the whale was observed to free itself and was completely free of gear.	NSI	Entangled / entrapped	Marine debris (unidentified)	N/A	N/A	N/A	L2	0	0
AKRO	6/18/2017	GOA	Humpback Whale	Western North Pacific, Mex-Npac, Hawai'i-NorPac unit	PRORATE	A 24 - 28 ft commercial charter vessel traveling at 22 knots struck a humpback whale. Following the strike a small amount of blood was observed in the water, but the whale appeared to swim away unharmed. No external injuries to the whale were observed. There is no additional information on the health of the whale following the strike. L6b and L11 are both applicable criteria in this case. L11 has been assigned due to a higher level of severity.	PRORATE	Ship strike	Vessel (commercial)	AK/WA/OR/CA commercial passenger fishing vessel	Commercial	Unknown	L11	0.52	0.52
AKRO	9/27/2017	BS	Humpback Whale	Western North Pacific, Mex-Npac, Hawai'i-NorPac unit	SI	A humpback whale was observed entangled in AK BSAI Pacific cod pot fishery gear. The gear included a 500 lb pot, 66 fathoms of line, and the associated fishing floats. At one time the animal was described as appearing to be immobile. The whale was not relocated following the initial entanglement sighting on the previous day.	SI	Constricting entanglement	Fishery gear	AK BSAI Pacific cod pot	Commercial	Pot	L2	1	1
NPGOP	2/3/2018	BS	Humpback Whale	Western North Pacific, Mex-Npac, Hawai'i-NorPac unit	DEAD	A juvenile humpback whale was caught and killed by AK BSAI pollock trawl gear.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI pollock trawl	Commercial	Trawl	N/A	1	1
AKRO	7/1/2018	GOA	Humpback Whale	Western North Pacific, Mex-Npac, Hawai'i-NorPac unit	PRORATE	An adult humpback whale was observed to be entangled in recreational shrimp pot gear. The nature of the entanglement could not be confirmed; however, it included a buoy with 700 + ft of sinking line. It is believed that the animal self-released the gear, which was retrieved by boaters and passed on to harbor master. No injuries to the whale were observed or reported.	NSI	Entangled / entrapped	Fishery gear	Recreational shrimp pot	Recreational	Pot	L10	0	0
AKRO	8/10/2018	GOA	Humpback Whale	Western North Pacific, Mex-Npac, Hawai'i-NorPac unit	SI	A humpback whale was observed to be entangled. The animal was initially partially disentangled by a reporting party (unauthorized). Following the disentanglement attempt the whale was described to still be entangled in heavy-gauge line, originating forward on the body (mouth, flippers or both) with at least 400 ft of line trailing the animal. The entanglement configuration also included a red "A3" polyball, which trailed approximately 60 ft behind the animal, and at least another 60 ft of line trailing beyond the buoy. This case has been assigned an L2 due to the extensive amount of gear involved in the entanglement, which is likely to causing a significant amount of drag (heavily weighted), and due to the potential to become constricting. This animal was thought to be re-sighted numerous times following the initial observation with little to no change in the entanglement configuration. The outcome of this entanglement is unknown.	SI	Entangled / entrapped	Fishery gear	Unknown	Unknown	Unknown	L2	1	0

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AKRO	10/15/2018	BS	Humpback Whale	Western North Pacific, Mex-Npac, Hawai'i-NorPac unit	SI	A humpback whale was observed to be heavily entangled in Alaska Bering Sea, Aleutian Islands Pacific cod pot gear. The entanglement consisted of numerous buoys, a cod pot, and 200 ft of line wrapped around the animals fluke and head. The animal was unable to dive and was described as being "hog-tied." This animal was successfully disentangled with complete gear removal, and was observed to be swimming freely. There is no report of serious injury to the whale as a result of the entanglement.	NSI	Constricting entanglement	Fishery gear	AK Bering Sea, Aleutian Islands Pacific cod pot	Commercial	Pot	L2	0	1
AKRO	5/13/2019	GOA	Humpback Whale	Western North Pacific, Mex-Npac, Hawai'i-NorPac unit	PRORATE	A humpback whale was observed to be towing a 3-foot diameter orange poly buoy within 5 feet of the animal. No other details are known about the type of connecting and entangling line or its configuration on the animal. The whale was approximately 20 feet in length and alongside a larger humpback whale that was approximately 40 feet in length. The reporting party suspected that the buoy was part of shrimp pot gear but was unable to see whether a pot may have still been attached.	PRORATE	Entangled / entrapped	Fishery gear	Unknown shrimp pot	Unknown	Pot	L10	0.75	0
AKRO	10/8/2019	GOA	Humpback Whale	Western North Pacific, Mex-Npac, Hawai'i-NorPac unit	PRORATE	A humpback whale was observed entangled in Alaska subsistence crab pot gear. The entanglement involved the tail and/or the pectoral flipper. The whale at least partially self-released, and approximately 200 feet of 3/8-inch line and two 14-inch bullet Sponges buoys were recovered. There was broken line among the recovered gear. Observers were unable to confirm if the animal was completely free of the gear. A whale was observed departing the area, but it is unknown if this was the entangled whale. The owner of the gear was contacted and confirmed that it was subsistence crab pot gear and the missing pot was a 4x4 pyramid pot with over 400 feet of attached line.	PRORATE	Entangled / entrapped	Fishery gear	Subsistence crab pot	Alaska Subsistence	Pot	L10	0.75	0
NPGOP	7/10/2020	BS	Humpback Whale	Western North Pacific, Mex-Npac, Hawai'i-NorPac unit	DEAD	A humpback whale was caught and killed in AK BSAI pollock trawl gear.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI pollock trawl	Commercial	Trawl	N/A	1	1
NPGOP	7/5/2016	BS	Killer Whale	Eastern North Pacific Alaska Resident	DEAD	A killer whale became entangled in, and was killed by longline gear.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI Pacific cod longline	Commercial	Longline	N/A	1	1
NPGOP	4/30/2020	BS	Killer Whale	Eastern North Pacific Alaska Resident	DEAD	Two killer whales, one male and one female, were caught and killed in AK BSAI flatfish trawl gear. This record (male killer whale) represents 1 of 2 killer whales.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI flatfish trawl	Commercial	Trawl	N/A	1	1
NPGOP	4/30/2020	BS	Killer Whale	Eastern North Pacific Alaska Resident	DEAD	Two killer whales, one male and one female, were caught and killed in AK BSAI flatfish trawl gear. This record (female killer whale) represents 2 of 2 killer whales.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI flatfish trawl	Commercial	Trawl	N/A	1	1
NPGOP	7/28/2016	BS	Killer Whale	Eastern North Pacific Alaska Resident, Eastern North Pacific Gulf of Alaska, Aleutian Islands, and Bering Sea Transient	SI	An observer reported seeing about eight killer whales alongside the fishing vessel while it was trawling when suddenly there was a loud noise and the boat shook violently. After the shudder, blood was visible in the water at the vessel's stern. The killer whales that had surrounded the vessel immediately left the side of the vessel and remained at the location where the boat had shuddered. The observer reported that he and the captain both believed a calf was hit by the propeller.	SI	Ship strike	Vessel (commercial)	AK BSAI flatfish trawl	Commercial	Trawl	S3	1	1

Table 1 -- Human-marine mammal interaction records reviewed for injury and mortality, 2016-2020.

Source of Record	Date	Area	Common Name	Stock	Initial Assessment	Determination Details	Final Determination	Mechanism of Injury	Source of Injury	Fishery Name	Fishery Type	Fishery Method	SI Criteria	M/SI Value	LOF Value
AKRO	9/4/2016	SEAK	Killer Whale	Eastern North Pacific Alaska Resident, Eastern North Pacific Northern Resident, West Coast Transient	SI	A killer whale was reported to be entangled in pot gear in Icy Strait. The entanglement was thought to possibly originate at the tailstock / fluke. The reporting party attempted a disentanglement without success.	SI	Entangled / entrapped	Fishery gear	Unknown pot	Unknown	Pot	S6	1	0
NPGOP	7/25/2018	BS	Killer Whale	Eastern North Pacific Gulf of Alaska, Aleutian Islands, and Bering Sea Transient	DEAD	A male killer whale was caught and killed by AK BSAI flatfish trawl gear.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI flatfish trawl	Commercial	Trawl	N/A	1	1
WCRO	4/5/2016	WC	Killer Whale	West Coast Transient	NSI	A West coast transient killer whale was observed to be briefly entangled in CA Dungeness crab pot fishery gear. At least two buoys were visible. The gear self-released from the animal and no injuries were reported.	NSI	Entangled / entrapped	Fishery gear	CA Dungeness crab pot	Commercial	Pot	S7b	0	1
AKRO	7/10/2016	BS	Northern Fur Seal	Eastern Pacific	SI	An adult male fur seal was observed with a circumferential neck entanglement caused by unidentified material.	SI	Constricting entanglement	Marine debris (unidentified)	N/A	N/A	N/A	P8a	1	0
AKRO	7/10/2016	BS	Northern Fur Seal	Eastern Pacific	SI	A subadult male northern fur seal was observed with a circumferential neck entanglement caused by trawl netting.	SI	Constricting entanglement	Fishery gear	AK BSAI unknown trawl	Commercial	Trawl	P8a	1	0
AKRO	7/10/2016	BS	Northern Fur Seal	Eastern Pacific	SI	A subadult male northern fur seal was observed with a circumferential neck entanglement caused by a black rubber band.	SI	Constricting entanglement	Marine debris (rubber band)	N/A	N/A	N/A	P8a	1	0
AKRO	7/10/2016	BS	Northern Fur Seal	Eastern Pacific	SI	An adult male northern fur seal was observed with a circumferential neck entanglement caused by unidentified material.	SI	Constricting entanglement	Marine debris (unidentified)	N/A	N/A	N/A	P8a	1	0
AKRO	7/12/2016	BS	Northern Fur Seal	Eastern Pacific	SI	An adult male fur seal was observed with a circumferential neck entanglement caused by a packing band.	SI	Constricting entanglement	Marine debris (packing band)	N/A	N/A	N/A	P8a	1	0
AKRO	8/4/2016	BS	Northern Fur Seal	Eastern Pacific	SI	A subadult male northern fur seal with a circumferential neck entanglement caused by a packing band was captured and disentangled.	NSI	Constricting entanglement	Marine debris (packing band)	N/A	N/A	N/A	P7b	0	0
AKRO	8/15/2016	BS	Northern Fur Seal	Eastern Pacific	SI	An adult female northern fur seal was entangled in yellow trawl netting. The animal was disentangled.	NSI	Entangled / entrapped	Fishery gear	AK BSAI unknown trawl	Commercial	Trawl	P7b	0	0
AKRO	8/16/2016	BS	Northern Fur Seal	Eastern Pacific	SI	A subadult female northern fur seal with a circumferential neck entanglement caused by a packing band was captured and disentangled.	NSI	Constricting entanglement	Marine debris (packing band)	N/A	N/A	N/A	P7b	0	0
AKRO	8/22/2016	BS	Northern Fur Seal	Eastern Pacific	SI	A subadult female fur seal with a circumferential neck entanglement caused by trawl netting was captured and disentangled.	NSI	Constricting entanglement	Fishery gear	AK BSAI unknown trawl	Commercial	Trawl	P7b	0	0
AKRO	8/22/2016	BS	Northern Fur Seal	Eastern Pacific	SI	A subadult male northern fur seal entangled in trawl netting was captured and disentangled.	NSI	Entangled / entrapped	Fishery gear	AK BSAI unknown trawl	Commercial	Trawl	P7b	0	0

Table 1 -- Human-marine mammal interaction records reviewed for injury and mortality, 2016-2020.

Source of Record	Date	Area	Common Name	Stock	Initial Assessment	Determination Details	Final Determination	Mechanism of Injury	Source of Injury	Fishery Name	Fishery Type	Fishery Method	SI Criteria	M/SI Value	LOF Value
AKRO	9/22/2016	BS	Northern Fur Seal	Eastern Pacific	SI	A subadult fur seal was entangled in a considerable amount of netting and disentangled.	NSI	Constricting entanglement	Fishery gear	Unknown net	Unknown	Net	P7b	0	0
AKRO	9/22/2016	BS	Northern Fur Seal	Eastern Pacific	SI	An adult female fur seal was observed with a circumferential neck entanglement caused by a packing band.	SI	Constricting entanglement	Marine debris (packing band)	N/A	N/A	N/A	P8a	1	0
AKRO	9/22/2016	BS	Northern Fur Seal	Eastern Pacific	SI	A subadult northern fur seal was observed with a circumferential neck entanglement caused by a green packing band.	SI	Constricting entanglement	Marine debris (packing band)	N/A	N/A	N/A	P8a	1	0
AKRO	9/22/2016	BS	Northern Fur Seal	Eastern Pacific	SI	A subadult northern fur seal with a circumferential neck entanglement caused by line was captured and disentangled.	NSI	Constricting entanglement	Marine debris (unidentified)	N/A	N/A	N/A	P7b	0	0
AKRO	9/28/2016	BS	Northern Fur Seal	Eastern Pacific	SI	A subadult male fur seal with a rigid plastic ring around its neck was captured and the ring was removed.	NSI	Constricting entanglement	Marine debris (misc. plastic)	N/A	N/A	N/A	P7b	0	0
AKRO	9/28/2016	BS	Northern Fur Seal	Eastern Pacific	SI	An adult male northern fur seal was observed with a circumferential neck entanglement caused by unidentified material.	SI	Constricting entanglement	Marine debris (unidentified)	N/A	N/A	N/A	P8a	1	0
AKRO	10/3/2016	BS	Northern Fur Seal	Eastern Pacific	SI	A fur seal pup that was entangled in green netting was captured and disentangled.	NSI	Entangled / entrapped	Marine debris (unidentified)	N/A	N/A	N/A	P7b	0	0
AKRO	10/5/2016	BS	Northern Fur Seal	Eastern Pacific	SI	A subadult male northern fur seal with a circumferential neck entanglement caused by line was captured and disentangled.	NSI	Constricting entanglement	Marine debris (unidentified)	N/A	N/A	N/A	P7b	0	0
AKRO	10/5/2016	BS	Northern Fur Seal	Eastern Pacific	SI	A subadult northern fur seal was observed with a circumferential neck entanglement caused by what appeared to be green netting or line.	SI	Constricting entanglement	Marine debris (unidentified)	N/A	N/A	N/A	P8a	1	0
AKRO	10/20/2016	BS	Northern Fur Seal	Eastern Pacific	SI	A northern fur seal pup was observed with a circumferential neck entanglement caused by unidentified material.	SI	Constricting entanglement	Marine debris (unidentified)	N/A	N/A	N/A	P8a	1	0
NPGOP	5/6/2017	BS	Northern Fur Seal	Eastern Pacific	DEAD	A male northern fur seal was caught and killed by trawl gear.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI flatfish trawl	Commercial	Trawl	N/A	1	1
AKRO	7/19/2017	BS	Northern Fur Seal	Eastern Pacific	SI	An adult male northern fur seal was observed with a circumferential neck entanglement caused by green trawl netting.	SI	Constricting entanglement	Fishery gear	AK BSAI unknown trawl	Commercial	Trawl	P8a	1	0
AKRO	7/25/2017	BS	Northern Fur Seal	Eastern Pacific	SI	A northern fur seal was observed with a circumferential neck entanglement caused by unidentified marine debris.	SI	Constricting entanglement	Marine debris (unidentified)	N/A	N/A	N/A	P8a	1	0
AKRO	7/29/2017	BS	Northern Fur Seal	Eastern Pacific	SI	An adult female northern fur seal was observed with a constricting circumferential neck wound consistent with entanglement.	SI	Constricting entanglement	Marine debris (unidentified)	N/A	N/A	N/A	P8a	1	0
AKRO	7/31/2017	BS	Northern Fur Seal	Eastern Pacific	SI	A subadult male northern fur seal was observed with a constricting circumferential neck entanglement caused by blue twisted strand net.	SI	Constricting entanglement	Marine debris	N/A	N/A	N/A	P8a	1	0

Table 1 -- Human-marine mammal interaction records reviewed for injury and mortality, 2016-2020.

Source of Record	Date	Area	Common Name	Stock	Initial Assessment	Determination Details	Final Determination	Mechanism of Injury	Source of Injury	Fishery Name	Fishery Type	Fishery Method	SI Criteria	M/SI Value	LOF Value
AKRO	7/31/2017	BS	Northern Fur Seal	Eastern Pacific	SI	A subadult male northern fur seal was observed with a constricting circumferential neck entanglement caused by blue twisted strand net.	SI	Constricting entanglement	Marine debris	N/A	N/A	N/A	P8a	1	0
AKRO	8/5/2017	BS	Northern Fur Seal	Eastern Pacific	SI	An adult male northern fur seal was observed with a constricting circumferential neck entanglement caused by a packing band.	SI	Constricting entanglement	Marine debris (packing band)	N/A	N/A	N/A	P8a	1	0
AKRO	8/5/2017	BS	Northern Fur Seal	Eastern Pacific	SI	A subadult male northern fur seal with a circumferential neck entanglement caused by gray twisted strand net was captured and disentangled.	NSI	Constricting entanglement	Marine debris	N/A	N/A	N/A	P7b	0	0
AKRO	8/18/2017	BS	Northern Fur Seal	Eastern Pacific	SI	A yearling male northern fur seal with a circumferential neck entanglement caused by green netting was captured and disentangled.	NSI	Constricting entanglement	Marine debris	N/A	N/A	N/A	P7b	0	0
AKRO	9/4/2017	BS	Northern Fur Seal	Eastern Pacific	SI	An adult male northern fur seal was observed with a constricting circumferential neck entanglement caused by a blue packing band.	SI	Constricting entanglement	Marine debris (packing band)	N/A	N/A	N/A	P8a	1	0
AKRO	9/4/2017	BS	Northern Fur Seal	Eastern Pacific	SI	A juvenile northern fur seal was observed with a constricting circumferential neck entanglement caused by green netting.	SI	Constricting entanglement	Marine debris	N/A	N/A	N/A	P8a	1	0
AKRO	9/9/2017	BS	Northern Fur Seal	Eastern Pacific	SI	An adult female northern fur seal was observed with a constricting circumferential neck entanglement caused by a blue rope or part of a net.	SI	Constricting entanglement	Marine debris (unidentified)	N/A	N/A	N/A	P8a	1	0
AKRO	9/14/2017	BS	Northern Fur Seal	Eastern Pacific	SI	A northern fur seal pup was observed with a constricting circumferential neck entanglement caused by unidentified marine debris.	SI	Constricting entanglement	Marine debris (unidentified)	N/A	N/A	N/A	P8a	1	0
AKRO	9/26/2017	BS	Northern Fur Seal	Eastern Pacific	SI	A subadult female northern fur seal entangled in green fishing net was captured and disentangled.	NSI	Entangled / entrapped	Fishery gear	Unknown net	Unknown	Unknown net	P7b	0	0
AKRO	9/28/2017	BS	Northern Fur Seal	Eastern Pacific	SI	A yearling northern fur seal pup was observed with a constricting circumferential neck entanglement caused by unidentified marine debris.	SI	Constricting entanglement	Marine debris (unidentified)	N/A	N/A	N/A	P8a	1	0
AKRO	9/28/2017	BS	Northern Fur Seal	Eastern Pacific	SI	A 2-3 year old northern fur seal was observed with a constricting circumferential neck entanglement caused by yellow rope.	SI	Constricting entanglement	Marine debris (rope)	N/A	N/A	N/A	P8a	1	0
AKRO	9/30/2017	BS	Northern Fur Seal	Eastern Pacific	SI	A subadult male northern fur seal entangled in yellow braided strand netting was captured and disentangled. The entanglement did not break the skin or cause an external wound	NSI	Entangled / entrapped	Marine debris	N/A	N/A	N/A	P7b	0	0
AKRO	10/10/2017	BS	Northern Fur Seal	Eastern Pacific	SI	A subadult male northern fur seal was observed with a constricting circumferential neck entanglement caused by a packing band. A disentanglement effort was attempted but it was not successful at completely removing the band.	SI	Constricting entanglement	Marine debris (packing band)	N/A	N/A	N/A	P8a	1	0

Table 1 -- Human-marine mammal interaction records reviewed for injury and mortality, 2016-2020.

Source of Record	Date	Area	Common Name	Stock	Initial Assessment	Determination Details	Final Determination	Mechanism of Injury	Source of Injury	Fishery Name	Fishery Type	Fishery Method	SI Criteria	M/SI Value	LOF Value
AKRO	10/10/2017	BS	Northern Fur Seal	Eastern Pacific	SI	A subadult northern fur seal was observed with a single strand circumferential neck entanglement caused by unidentified marine debris.	SI	Constricting entanglement	Marine debris (unidentified)	N/A	N/A	N/A	P8a	1	0
AKRO	10/10/2017	BS	Northern Fur Seal	Eastern Pacific	SI	A 2 year old male northern fur seal entangled in blue net was captured and disentangled.	NSI	Entangled / entrapped	Marine debris	N/A	N/A	N/A	P7b	0	0
NPGOP	5/15/2018	BS	Northern Fur Seal	Eastern Pacific	DEAD	A male northern fur seal was caught and killed by AK BSAI flatfish trawl gear.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI flatfish trawl	Commercial	Trawl	N/A	1	1
NPGOP	6/1/2018	BS	Northern Fur Seal	Eastern Pacific	DEAD	A male northern fur seal was caught and killed by AK BSAI flatfish trawl gear.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI flatfish trawl	Commercial	Trawl	N/A	1	1
AKRO	6/1/2018	BS	Northern Fur Seal	Eastern Pacific	SI	An adult male northern fur seal was observed with a circumferential neck entanglement caused by a green net.	SI	Constricting entanglement	Marine debris	N/A	N/A	N/A	P8a	1	0
AKRO	7/11/2018	BS	Northern Fur Seal	Eastern Pacific	SI	An adult female northern fur seal was observed with a circumferential neck entanglement caused by a yellow line.	SI	Constricting entanglement	Marine debris	N/A	N/A	N/A	P8a	1	0
AKRO	7/14/2018	BS	Northern Fur Seal	Eastern Pacific	SI	An adult male northern fur seal was observed with a circumferential neck entanglement caused by an unknown material / marine debris.	SI	Constricting entanglement	Marine debris (unidentified)	N/A	N/A	N/A	P8a	1	0
AKRO	7/14/2018	BS	Northern Fur Seal	Eastern Pacific	SI	A subadult male northern fur seal was observed with a circumferential neck entanglement caused by a green net.	SI	Constricting entanglement	Marine debris	N/A	N/A	N/A	P8a	1	0
AKRO	7/14/2018	BS	Northern Fur Seal	Eastern Pacific	SI	A subadult male northern fur seal was observed with a circumferential neck entanglement caused by a blue packing band. This animal was captured and disentangled.	NSI	Constricting entanglement	Marine debris (packing band)	N/A	N/A	N/A	P7b	0	0
AKRO	7/19/2018	BS	Northern Fur Seal	Eastern Pacific	SI	A subadult male northern fur seal was observed with a circumferential neck entanglement caused by an unknown material / marine debris.	SI	Constricting entanglement	Marine debris (unidentified)	N/A	N/A	N/A	P8a	1	0
AKRO	7/24/2018	BS	Northern Fur Seal	Eastern Pacific	SI	An adult male northern fur seal was observed with a circumferential neck entanglement caused by green trawl net. The seal was captured and disentangled successfully. The green trawl net had cut deep into the neck area (about 180° around) and was bleeding heavily. Eventually the seal made its way into the water and swam away.	SI	Constricting entanglement	Fishery gear	AK BSAI unknown trawl	Commercial	Trawl	P7b	1	0
AKRO	8/15/2018	BS	Northern Fur Seal	Eastern Pacific	SI	A subadult male northern fur seal was observed with a circumferential neck entanglement caused by a rubber band.	SI	Constricting entanglement	Marine debris (rubber band)	N/A	N/A	N/A	P8a	1	0
AKRO	9/17/2018	BS	Northern Fur Seal	Eastern Pacific	SI	A subadult male northern fur seal was observed with a circumferential neck entanglement caused by braided green netting. This animal was captured and disentangled.	NSI	Constricting entanglement	Marine debris	N/A	N/A	N/A	P7b	0	0
AKRO	9/19/2018	BS	Northern Fur Seal	Eastern Pacific	SI	A subadult male northern fur seal was observed with a circumferential neck entanglement caused by twisted blue-green netting. This animal was captured and disentangled.	NSI	Constricting entanglement	Marine debris	N/A	N/A	N/A	P7b	0	0

Table 1 -- Human-marine mammal interaction records reviewed for injury and mortality, 2016-2020.

Source of Record	Date	Area	Common Name	Stock	Initial Assessment	Determination Details	Final Determination	Mechanism of Injury	Source of Injury	Fishery Name	Fishery Type	Fishery Method	SI Criteria	M/SI Value	LOF Value
AKRO	9/19/2018	BS	Northern Fur Seal	Eastern Pacific	SI	A subadult male northern fur seal was observed with a circumferential neck entanglement caused by braided green netting. This animal was captured and disentangled.	NSI	Constricting entanglement	Marine debris	N/A	N/A	N/A	P7b	0	0
AKRO	9/19/2018	BS	Northern Fur Seal	Eastern Pacific	SI	A subadult male northern fur seal was observed with a circumferential neck entanglement caused by twisted gray netting. This animal was captured and disentangled.	NSI	Constricting entanglement	Marine debris	N/A	N/A	N/A	P7b	0	0
AKRO	9/19/2018	BS	Northern Fur Seal	Eastern Pacific	SI	A subadult male northern fur seal was observed with a circumferential neck entanglement caused by twisted gray netting. This animal was captured and disentangled.	NSI	Constricting entanglement	Marine debris	N/A	N/A	N/A	P7b	0	0
AKRO	9/19/2018	BS	Northern Fur Seal	Eastern Pacific	SI	A subadult male northern fur seal was observed with a circumferential neck entanglement caused by a blue packing band. This animal was captured and disentangled.	NSI	Constricting entanglement	Marine debris (packing band)	N/A	N/A	N/A	P7b	0	0
AKRO	11/6/2018	BS	Northern Fur Seal	Eastern Pacific	SI	A subadult male northern fur seal was observed with a circumferential neck entanglement caused by a black packing band. This animal was captured and disentangled.	NSI	Constricting entanglement	Marine debris (packing band)	N/A	N/A	N/A	P7b	0	0
NPGOP	2/27/2019	BS	Northern Fur Seal	Eastern Pacific	DEAD	A male northern fur seal was caught and killed by AK BSAI flatfish trawl gear.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI flatfish trawl	Commercial	Trawl	N/A	1	1
NPGOP	5/9/2019	BS	Northern Fur Seal	Eastern Pacific	DEAD	A female northern fur seal was caught and killed by AK BSAI flatfish trawl gear.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI flatfish trawl	Commercial	Trawl	N/A	1	1
NPGOP	5/10/2019	BS	Northern Fur Seal	Eastern Pacific	DEAD	A male northern fur seal was caught and killed by AK BSAI flatfish trawl gear.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI flatfish trawl	Commercial	Trawl	N/A	1	1
NPGOP	5/12/2019	BS	Northern Fur Seal	Eastern Pacific	DEAD	A male juvenile northern fur seal was caught and killed by AK BSAI flatfish trawl gear.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI flatfish trawl	Commercial	Trawl	N/A	1	1
NPGOP	5/12/2019	BS	Northern Fur Seal	Eastern Pacific	DEAD	A male northern fur seal was caught and killed by AK BSAI flatfish trawl gear.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI flatfish trawl	Commercial	Trawl	N/A	1	1
NPGOP	5/14/2019	BS	Northern Fur Seal	Eastern Pacific	DEAD	A male northern fur seal was caught and killed by AK BSAI flatfish trawl gear.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI flatfish trawl	Commercial	Trawl	N/A	1	1
NPGOP	5/16/2019	BS	Northern Fur Seal	Eastern Pacific	DEAD	A female northern fur seal was caught and killed by AK BSAI flatfish trawl gear.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI flatfish trawl	Commercial	Trawl	N/A	1	1
NPGOP	5/28/2019	BS	Northern Fur Seal	Eastern Pacific	DEAD	A male northern fur seal was caught and killed by AK BSAI flatfish trawl gear.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI flatfish trawl	Commercial	Trawl	N/A	1	1
NPGOP	5/29/2019	BS	Northern Fur Seal	Eastern Pacific	DEAD	A male northern fur seal was caught and killed by AK BSAI flatfish trawl gear during an unsampled haul and is not included in the bycatch estimate for this fishery because other northern fur seals from this stock were seriously injured or killed in sampled hauls in this fishery in this year..	DEAD	Entangled / entrapped	Fishery gear	AK BSAI flatfish trawl	Commercial	Trawl	N/A	1	1

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Source of Record	Date	Area	Common Name	Stock	Initial Assessment	Determination Details	Final Determination	Mechanism of Injury	Source of Injury	Fishery Name	Fishery Type	Fishery Method	SI Criteria	M/SI Value	LOF Value
NPGOP	6/1/2019	BS	Northern Fur Seal	Eastern Pacific	DEAD	A male northern fur seal was caught and killed by AK BSAI flatfish trawl gear.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI flatfish trawl	Commercial	Trawl	N/A	1	1
NPGOP	6/6/2019	BS	Northern Fur Seal	Eastern Pacific	DEAD	A male northern fur seal was caught and killed by AK BSAI flatfish trawl gear.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI flatfish trawl	Commercial	Trawl	N/A	1	1
AKRO	6/25/2019	BS	Northern Fur Seal	Eastern Pacific	SI	A subadult male northern fur seal was observed with a constricting circumferential neck entanglement caused by a packing band. The animal was captured and disentangled.	NSI	Constricting entanglement	Marine debris (packing band)	N/A	N/A	N/A	P7b	0	0
AKRO	6/25/2019	BS	Northern Fur Seal	Eastern Pacific	SI	A subadult male northern fur seal was observed with a constricting circumferential neck entanglement caused by a white packing band.	SI	Constricting entanglement	Marine debris (packing band)	N/A	N/A	N/A	P8a	1	0
AKRO	6/26/2019	BS	Northern Fur Seal	Eastern Pacific	SI	An adult male northern fur seal was observed with a constricting circumferential neck entanglement caused by unknown marine debris.	SI	Constricting entanglement	Marine debris (unidentified)	N/A	N/A	N/A	P8a	1	0
ADFG	7/8/2019	SEAK	Northern Fur Seal	Eastern Pacific	SI	A northern fur seal was observed with a circumferential neck entanglement caused by a thick blue packing band.	SI	Constricting entanglement	Marine debris (packing band)	N/A	N/A	N/A	P8a	1	0
AKRO	7/17/2019	BS	Northern Fur Seal	Eastern Pacific	SI	A subadult male northern fur seal was observed with an open wound encircling sections of the dorsal and ventral neck. The entangling material was not visible around the animal's neck but the animal was not confirmed to be free of any entangling material.	SI	Constricting entanglement	Marine debris (unidentified)	N/A	N/A	N/A	P8a	1	0
AKRO	7/22/2019	BS	Northern Fur Seal	Eastern Pacific	SI	A subadult male northern fur seal was observed with a constricting circumferential neck entanglement caused by a green trawl net with some white line interwoven.	SI	Constricting entanglement	Fishery gear	Unknown trawl	Unknown	Trawl	P8a	1	0
AKRO	7/24/2019	BS	Northern Fur Seal	Eastern Pacific	SI	A subadult male northern fur seal was observed with a constricting circumferential neck entanglement caused by a green trawl net with some white line interwoven. The animal was captured and disentangled.	NSI	Constricting entanglement	Fishery gear	Unknown trawl	Unknown	Trawl	P7b	0	0
AKRO	7/31/2019	BS	Northern Fur Seal	Eastern Pacific	SI	A subadult male northern fur seal was observed with a constricting circumferential neck entanglement caused by a gray trawl net. The animal was captured and disentangled.	NSI	Constricting entanglement	Fishery gear	Unknown trawl	Unknown	Trawl	P7b	0	0
AKRO	7/31/2019	BS	Northern Fur Seal	Eastern Pacific	SI	A subadult male northern fur seal was observed with a constricting circumferential neck entanglement caused by a white packing band. The animal was captured and disentangled.	NSI	Constricting entanglement	Marine debris (packing band)	N/A	N/A	N/A	P7b	0	0
AKRO	8/2/2019	BS	Northern Fur Seal	Eastern Pacific	SI	A subadult male northern fur seal was observed with a constricting circumferential neck entanglement caused by a green trawl net. The animal was captured and disentangled.	NSI	Constricting entanglement	Fishery gear	Unknown trawl	Unknown	Trawl	P7b	0	0
AKRO	8/2/2019	BS	Northern Fur Seal	Eastern Pacific	SI	A subadult male northern fur seal was observed with a constricting circumferential neck entanglement caused by a black string. The animal was captured and disentangled.	NSI	Constricting entanglement	Marine debris	N/A	N/A	N/A	P7b	0	0

Table 1 -- Human-marine mammal interaction records reviewed for injury and mortality, 2016-2020.

Source of Record	Date	Area	Common Name	Stock	Initial Assessment	Determination Details	Final Determination	Mechanism of Injury	Source of Injury	Fishery Name	Fishery Type	Fishery Method	SI Criteria	M/SI Value	LOF Value
AKRO	8/5/2019	BS	Northern Fur Seal	Eastern Pacific	SI	A subadult male northern fur seal was observed with a constricting circumferential neck entanglement caused by unknown marine debris.	SI	Constricting entanglement	Marine debris (unidentified)	N/A	N/A	N/A	P8a	1	0
AKRO	8/22/2019	BS	Northern Fur Seal	Eastern Pacific	SI	A subadult male northern fur seal was observed with a constricting circumferential neck entanglement caused by a 1/2-inch diameter orange braided line.	SI	Constricting entanglement	Marine debris (rope)	N/A	N/A	N/A	P8a	1	0
AKRO	8/22/2019	BS	Northern Fur Seal	Eastern Pacific	SI	A subadult male northern fur seal was observed with a constricting circumferential neck entanglement caused by a green trawl net.	SI	Constricting entanglement	Fishery gear	Unknown trawl	Unknown	Trawl	P8a	1	0
AKRO	8/22/2019	BS	Northern Fur Seal	Eastern Pacific	SI	A subadult male northern fur seal was observed with a constricting circumferential neck entanglement caused by a green fishing net. The animal was captured and disentangled.	NSI	Constricting entanglement	Fishery gear	Unknown trawl	Unknown	Trawl	P7b	0	0
AKRO	8/25/2019	BS	Northern Fur Seal	Eastern Pacific	SI	A subadult male northern fur seal was observed with a constricting circumferential neck entanglement caused by an orange trawl net.	SI	Constricting entanglement	Fishery gear	Unknown trawl	Unknown	Trawl	P8a	1	0
AKRO	8/25/2019	BS	Northern Fur Seal	Eastern Pacific	SI	A subadult male northern fur seal was observed with a constricting circumferential neck entanglement caused by a green trawl net.	SI	Constricting entanglement	Fishery gear	Unknown trawl	Unknown	Trawl	P8a	1	0
AKRO	8/29/2019	BS	Northern Fur Seal	Eastern Pacific	SI	A subadult male northern fur seal was observed with a constricting circumferential neck entanglement caused by a 2-inch wide polyester belt. The animal was captured and disentangled.	NSI	Constricting entanglement	Marine debris (misc. plastic)	N/A	N/A	N/A	P7b	0	0
AKRO	8/31/2019	BS	Northern Fur Seal	Eastern Pacific	SI	A subadult male northern fur seal was observed with a constricting circumferential neck entanglement caused by a green and orange trawl net.	SI	Constricting entanglement	Fishery gear	Unknown trawl	Unknown	Trawl	P8a	1	0
AKRO	9/8/2019	BS	Northern Fur Seal	Eastern Pacific	SI	An adult female northern fur seal was observed with a constricting circumferential neck entanglement caused by a green trawl net.	SI	Constricting entanglement	Fishery gear	Unknown trawl	Unknown	Trawl	P8a	1	0
AKRO	9/20/2019	BS	Northern Fur Seal	Eastern Pacific	SI	A subadult male northern fur seal was observed with a constricting circumferential neck entanglement caused by monofilament line.	SI	Constricting entanglement	Fishery gear	Unknown hook and line	Unknown	Hook and line	P8a	1	0
AKRO	9/20/2019	BS	Northern Fur Seal	Eastern Pacific	SI	A subadult male northern fur seal was observed with a constricting circumferential neck entanglement caused by a blue packing band.	SI	Constricting entanglement	Marine debris (packing band)	N/A	N/A	N/A	P8a	1	0
AKRO	9/20/2019	BS	Northern Fur Seal	Eastern Pacific	SI	A subadult male northern fur seal was observed with a constricting circumferential neck entanglement caused by a green trawl net. The animal was captured and disentangled.	NSI	Constricting entanglement	Fishery gear	Unknown trawl	Unknown	Trawl	P7b	0	0
AKRO	9/20/2019	BS	Northern Fur Seal	Eastern Pacific	SI	A subadult male northern fur seal was observed with a constricting circumferential neck entanglement caused by a yellow fishing line. The animal was captured and disentangled.	NSI	Constricting entanglement	Fishery gear	Unknown hook and line	Unknown	Hook and line	P7b	0	0

Table 1 -- Human-marine mammal interaction records reviewed for injury and mortality, 2016-2020.

Source of Record	Date	Area	Common Name	Stock	Initial Assessment	Determination Details	Final Determination	Mechanism of Injury	Source of Injury	Fishery Name	Fishery Type	Fishery Method	SI Criteria	M/SI Value	LOF Value
AKRO	9/21/2019	BS	Northern Fur Seal	Eastern Pacific	SI	A subadult male northern fur seal was observed with a constricting circumferential neck entanglement caused by a green twisted net with some white line interwoven. The animal was captured and disentangled.	NSI	Constricting entanglement	Fishery gear	Unknown trawl	Unknown	Trawl	P7b	0	0
AKRO	9/21/2019	BS	Northern Fur Seal	Eastern Pacific	SI	A subadult male northern fur seal was observed with a constricting circumferential neck entanglement caused by an orange braided trawl strand net. The animal was captured and disentangled.	NSI	Constricting entanglement	Fishery gear	Unknown trawl	Unknown	Trawl	P7b	0	0
AKRO	11/7/2019	BS	Northern Fur Seal	Eastern Pacific	SI	A subadult male northern fur seal was observed with a constricting circumferential neck entanglement caused by a green trawl net. The animal was captured and disentangled.	NSI	Constricting entanglement	Fishery gear	Unknown trawl	Unknown	Trawl	P7b	0	0
AKRO	11/10/2019	BS	Northern Fur Seal	Eastern Pacific	SI	A subadult male northern fur seal was observed with a constricting circumferential neck entanglement caused by a green trawl net. The animal was captured and disentangled.	NSI	Constricting entanglement	Fishery gear	Unknown trawl	Unknown	Trawl	P7b	0	0
NPGOP	3/15/2020	BS	Northern Fur Seal	Eastern Pacific	DEAD	A previously dead northern fur seal was caught in AK BSAI pollock trawl gear. The carcass was entangled in unknown netting that appeared to have been cut from another vessel's net; therefore, this interaction will not be counted against the AK BSAI pollock trawl fishery.	DEAD	Entangled / entrapped	Fishery gear	Unknown net	Unknown	Net	N/A	1	0
AKRO	5/18/2020	BS	Northern Fur Seal	Eastern Pacific	SI	A subadult male northern fur seal was observed with a circumferential neck entanglement caused by unidentified marine debris.	SI	Constricting entanglement	Marine debris (unidentified)	N/A	N/A	N/A	P8a	1	0
AKRO	7/1/2020	BS	Northern Fur Seal	Eastern Pacific	SI	A subadult male northern fur seal was observed with a circumferential neck entanglement caused by unidentified marine debris.	SI	Constricting entanglement	Marine debris (unidentified)	N/A	N/A	N/A	P8a	1	0
AKRO	7/13/2020	BS	Northern Fur Seal	Eastern Pacific	SI	A subadult northern fur seal was observed with a circumferential neck entanglement caused by unidentified marine debris.	SI	Constricting entanglement	Marine debris (unidentified)	N/A	N/A	N/A	P8a	1	0
AKRO	7/14/2020	BS	Northern Fur Seal	Eastern Pacific	SI	A subadult northern fur seal was observed with a circumferential neck entanglement caused by unidentified rope.	SI	Constricting entanglement	Marine debris (rope)	N/A	N/A	N/A	P8a	1	0
AKRO	7/17/2020	BS	Northern Fur Seal	Eastern Pacific	SI	A northern fur seal yearling was observed with a circumferential neck entanglement caused by an unknown trawl net. The animal was captured and disentangled.	NSI	Constricting entanglement	Fishery gear	Unknown trawl	Unknown	Trawl	P7b	0	0
AKRO	7/21/2020	BS	Northern Fur Seal	Eastern Pacific	SI	A northern fur seal pup was observed with a circumferential neck entanglement caused by unidentified marine debris.	SI	Constricting entanglement	Marine debris (unidentified)	N/A	N/A	N/A	P8a	1	0
WCRO	3/4/2017	WC	Northern Fur Seal	Eastern Pacific, California	DEAD	A northern fur seal was found dead with a section of bottom trawl net around its neck. The seal had hemorrhage on the right neck, its right eye was full of blood (left normal), bloody fluid in thoracic cavity, damage to its skull, and it was emaciated.	DEAD	Constricting entanglement	Fishery gear	unknown trawl	Unknown	Trawl	N/A	1	0
WCRO	3/8/2017	WC	Northern Fur Seal	Eastern Pacific, California	DEAD	Two juvenile northern fur seals were found dead and entangled in green trawl net. This record represents 2/2.	DEAD	Constricting entanglement	Fishery gear	unknown trawl	Unknown	Trawl	N/A	1	0

Table 1 -- Human-marine mammal interaction records reviewed for injury and mortality, 2016-2020.

Source of Record	Date	Area	Common Name	Stock	Initial Assessment	Determination Details	Final Determination	Mechanism of Injury	Source of Injury	Fishery Name	Fishery Type	Fishery Method	SI Criteria	M/SI Value	LOF Value
WCRO	3/8/2017	WC	Northern Fur Seal	Eastern Pacific, California	DEAD	Two juvenile northern fur seals were found dead and entangled in green trawl net. This record represents 1/2.	DEAD	Constricting entanglement	Fishery gear	unknown trawl	Unknown	Trawl	N/A	1	0
WCRO	1/22/2018	WC	Northern Fur Seal	Eastern Pacific, California	SI	A male northern fur seal pup was found with a circumferential neck entanglement. This animal was transferred briefly to Oregon Coast Aquarium where it was disentangled, held overnight, and released the next day at Yaquina Head Outstanding Natural Area, just north of Newport, OR.	SI	Constricting entanglement	Marine debris (misc. plastic)	N/A	N/A	N/A	P14	1	0
WCRO	1/5/2020	WC	Northern Fur Seal	Eastern Pacific, California	DEAD	A male northern fur seal yearling was found dead in a state of advanced decomposition. A necropsy found extensive injuries and trauma with associated hemorrhaging externally as well as internally, including rub marks and cuts on the flippers, and damage to the right eyeball, molars, and the muscles on the thorax and neck. The animal showed no signs of illness but had substantial pneumothorax around the right lung and a large amount of blood in the abdominal cavity. This injury is consistent with interactions with fishery gear and will be attributed to unknown fishery gear.	DEAD	Body trauma	Fishery gear	Unknown	Unknown	Unknown	N/A	1	0
WCRO	3/12/2020	WC	Northern Fur Seal	Eastern Pacific, California	DEAD	A male northern fur seal pup was found in a state of advanced decomposition. A necropsy found extensive injuries and trauma with associated hemorrhaging externally as well as internally. There was tremendous hemorrhaging throughout the right thorax, in the left pelvis area, and from the top of the head to the eye. The hemorrhaging was especially deep at the back of the head, under the left scapula, and under the sternum. There was also a suspected bullet hole in the stomach. This injury is consistent with interactions with unknown fishery gear and will be attributed to unknown fishery gear.	DEAD	Body trauma	Fishery gear	Unknown	Unknown	Unknown	N/A	1	0
WCRO	4/10/2020	WC	Northern Fur Seal	Eastern Pacific, California	SI	A male northern fur seal yearling was found alive with an excellent coat and no signs of illness. The animal was relatively thin, with ribs showing, and was not very active. It was taken to a rehab facility and died the following day. The animal had gashes and rubs on the head and around the flippers as well as a bloody and collapsed left eye. There was extensive hemorrhaging around the head, neck, sternum, and pelvis as well as blood in the thoracic cavity and bruising on some internal organs. This injury is consistent with interactions with fishery gear and will be attributed to unknown fishery gear.	DEAD	Body trauma	Fishery gear	Unknown	Unknown	Unknown	N/A	1	0
NPGOP	4/7/2019	BS	Pacific White Sided Dolphin	North Pacific	DEAD	Two female Pacific white-sided dolphins were caught and killed by AK BSAI pollock trawl gear. This record represents 2 of 2.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI pollock trawl	Commercial	Trawl	N/A	1	1
NPGOP	4/7/2019	BS	Pacific White Sided Dolphin	North Pacific	DEAD	Two female Pacific white-sided dolphins were caught and killed by AK BSAI pollock trawl gear. This record represents 1 of 2.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI pollock trawl	Commercial	Trawl	N/A	1	1
NPGOP	8/24/2016	BS	Ribbon Seal		DEAD	A ribbon seal was caught and killed in trawl gear.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI pollock trawl	Commercial	Trawl	N/A	1	1

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Source of Record	Date	Area	Common Name	Stock	Initial Assessment	Determination Details	Final Determination	Mechanism of Injury	Source of Injury	Fishery Name	Fishery Type	Fishery Method	SI Criteria	M/SI Value	LOF Value
NMFS OPR/HQ	8/14/2016	Arctic	Ringed Seal	Arctic	DEAD	A female ringed seal was incidentally killed during MMPA authorized research.	DEAD	Research related injury	MMPA authorized research	N/A	N/A	N/A	N/A	1	0
NPGOP	3/2/2017	BS	Ringed Seal	Arctic	DEAD	A female ringed seal was caught and killed by AK BSAI flatfish trawl gear.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI flatfish trawl	Commercial	Trawl	N/A	1	1
NPGOP	3/9/2017	BS	Ringed Seal	Arctic	DEAD	A female ringed seal was caught and killed by AK BSAI flatfish trawl gear.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI flatfish trawl	Commercial	Trawl	N/A	1	1
NPGOP	3/10/2017	BS	Ringed Seal	Arctic	DEAD	A female ringed seal was caught and killed by AK BSAI flatfish trawl gear.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI flatfish trawl	Commercial	Trawl	N/A	1	1
NPGOP	3/17/2017	BS	Ringed Seal	Arctic	DEAD	A female ringed seal was caught and killed by AK BSAI flatfish trawl gear.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI flatfish trawl	Commercial	Trawl	N/A	1	1
NPGOP	3/22/2017	BS	Ringed Seal	Arctic	DEAD	A male ringed seal was caught and killed by AK BSAI pollock trawl gear.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI pollock trawl	Commercial	Trawl	N/A	1	1
NPGOP	4/15/2017	BS	Ringed Seal	Arctic	DEAD	A male ringed seal was caught and killed by AK BSAI flatfish trawl gear.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI flatfish trawl	Commercial	Trawl	N/A	1	1
NPGOP	4/22/2017	BS	Ringed Seal	Arctic	DEAD	A male ringed seal was caught and killed by AK BSAI flatfish trawl gear.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI flatfish trawl	Commercial	Trawl	N/A	1	1
NPGOP	5/23/2017	BS	Ringed Seal	Arctic	DEAD	A male ringed seal was caught and killed by AK BSAI flatfish trawl gear.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI flatfish trawl	Commercial	Trawl	N/A	1	1
AKRO	8/3/2017	Arctic	Ringed Seal	Arctic	DEAD	An adult female ringed seal was found dead from apparent drowning (gas bubbles in blood vessel). The seal had a line impression around the snout consistent with entanglement from an unidentified material.	DEAD	Entangled / entrapped	Marine debris (unidentified)	N/A	N/A	N/A	N/A	1	0
NPGOP	11/13/2017	BS	Ringed Seal	Arctic	DEAD	A male ringed seal was caught and killed by AK BSAI flatfish trawl gear.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI flatfish trawl	Commercial	Trawl	N/A	1	1
NPGOP	3/26/2018	BS	Ringed Seal	Arctic	DEAD	A female ringed seal was caught and killed by AK BSAI flatfish trawl gear.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI flatfish trawl	Commercial	Trawl	N/A	1	1
NPGOP	4/26/2018	BS	Ringed Seal	Arctic	DEAD	A female ringed seal was caught and killed by AK BSAI flatfish trawl gear.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI flatfish trawl	Commercial	Trawl	N/A	1	1
NPGOP	4/30/2018	BS	Ringed Seal	Arctic	DEAD	A female ringed seal was caught and killed by AK BSAI flatfish trawl gear.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI flatfish trawl	Commercial	Trawl	N/A	1	1
NPGOP	5/6/2018	BS	Ringed Seal	Arctic	DEAD	A female ringed seal pup was caught and killed by AK BSAI flatfish trawl gear.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI flatfish trawl	Commercial	Trawl	N/A	1	1
NPGOP	5/10/2018	BS	Ringed Seal	Arctic	DEAD	A female ringed seal was caught and killed by AK BSAI flatfish trawl gear.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI flatfish trawl	Commercial	Trawl	N/A	1	1

Table 1 -- Human-marine mammal interaction records reviewed for injury and mortality, 2016-2020.

Source of Record	Date	Area	Common Name	Stock	Initial Assessment	Determination Details	Final Determination	Mechanism of Injury	Source of Injury	Fishery Name	Fishery Type	Fishery Method	SI Criteria	M/SI Value	LOF Value
NPGOP	5/13/2018	BS	Ringed Seal	Arctic	DEAD	A male ringed seal was caught and killed by AK BSAI flatfish trawl gear.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI flatfish trawl	Commercial	Trawl	N/A	1	1
NPGOP	5/15/2018	BS	Ringed Seal	Arctic	DEAD	A female ringed seal was caught and killed by AK BSAI flatfish trawl gear.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI flatfish trawl	Commercial	Trawl	N/A	1	1
NPGOP	5/18/2018	BS	Ringed Seal	Arctic	DEAD	A male ringed seal was caught and killed by AK BSAI flatfish trawl gear.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI flatfish trawl	Commercial	Trawl	N/A	1	1
NPGOP	5/18/2018	BS	Ringed Seal	Arctic	DEAD	A female ringed seal was caught and killed by AK BSAI flatfish trawl gear.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI flatfish trawl	Commercial	Trawl	N/A	1	1
NPGOP	5/22/2018	BS	Ringed Seal	Arctic	DEAD	A female ringed seal was caught and killed by AK BSAI flatfish trawl gear.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI flatfish trawl	Commercial	Trawl	N/A	1	1
NPGOP	5/22/2018	BS	Ringed Seal	Arctic	DEAD	A female ringed seal was caught and killed by AK BSAI flatfish trawl gear.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI flatfish trawl	Commercial	Trawl	N/A	1	1
NPGOP	5/23/2018	BS	Ringed Seal	Arctic	DEAD	A ringed seal was caught and killed by AK BSAI flatfish trawl gear.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI flatfish trawl	Commercial	Trawl	N/A	1	1
NPGOP	5/24/2018	BS	Ringed Seal	Arctic	DEAD	A female ringed seal was caught and killed by AK BSAI flatfish trawl gear.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI flatfish trawl	Commercial	Trawl	N/A	1	1
NPGOP	6/1/2018	BS	Ringed Seal	Arctic	DEAD	A female ringed seal was caught and killed by AK BSAI flatfish trawl gear.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI flatfish trawl	Commercial	Trawl	N/A	1	1
NPGOP	3/2/2019	BS	Ringed Seal	Arctic	DEAD	A female ringed seal was caught and killed by AK BSAI flatfish trawl gear.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI flatfish trawl	Commercial	Trawl	N/A	1	1
NPGOP	11/19/2019	BS	Ringed Seal	Arctic	DEAD	A female ringed seal was caught and killed by AK BSAI flatfish trawl gear.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI flatfish trawl	Commercial	Trawl	N/A	1	1
NPGOP	4/16/2020	BS	Ringed Seal	Arctic	DEAD	A female ringed seal was caught and killed in AK BSAI flatfish trawl gear during an unsampled haul. This mortality will be counted against the AK BSAI flatfish trawl fishery because mortality or serious injury of this stock was not observed by NPGOP observers in sampled hauls in this fishery in this year.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI flatfish trawl	Commercial	Trawl	N/A	1	1
AKRO	6/8/2020	BS	Ringed Seal	Arctic	DEAD	A male ringed seal pup was caught and killed in Alaska subsistence salmon gillnet	DEAD	Entangled / entrapped	Fishery gear	Unalakleet subsistence salmon gillnet	Alaska Subsistence	Gillnet	N/A	1	0
AKRO	8/12/2020	Arctic	Ringed Seal	Arctic	DEAD	A female ringed seal pup was caught and killed in Alaska subsistence gillnet. The animal was used for subsistence purposes.	DEAD	Entangled / entrapped	Fishery gear	Unknown subsistence gillnet	Alaska Subsistence	Gillnet	N/A	1	0

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Source of Record	Date	Area	Common Name	Stock	Initial Assessment	Determination Details	Final Determination	Mechanism of Injury	Source of Injury	Fishery Name	Fishery Type	Fishery Method	SI Criteria	M/SI Value	LOF Value
NPGOP	5/18/2016	GOA	Sperm Whale	North Pacific	PRORATE	An AK GOA sablefish longliner was retrieving gear when a sperm whale was observed entangled in the longline. In response, the vessel began retrieving from the other end of the line to retrieve the remaining gear. After all gear was brought aboard, three skates of gear were determined to be missing, and the observer noted the gear had been moved 2.5 miles from where it was originally set. The outcome of this interaction is prorated under criterion L10 due to the unknown final configuration of the entanglement.	PRORATE	Entangled / entrapped	Fishery gear	AK GOA sablefish longline	Commercial	Longline	L10	0.75	0.75
AKRO	6/7/2017	BS	Sperm Whale	North Pacific	SI	A subadult sperm whale was struck by a 378 ft USCG vessel traveling at 24 knots. The impact led to significant bleeding, behavioral changes, and wounds on the head, back, and pectoral fin. The whale was observed and documented following the strike until it died. L6a and L5a were both applicable criteria in this case.	DEAD	Ship strike	Vessel (government)	N/A	N/A	N/A	L6a	1	0
NPGOP	4/21/2018	BS	Sperm Whale	North Pacific	DEAD	A sperm whale was caught and killed by AK BSAI sablefish pot gear during an unsampled haul.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI sablefish pot	Commercial	Pot	N/A	1	1
AKRO	3/19/2019	SEAK	Sperm Whale	North Pacific	DEAD	A subadult male sperm whale was found dead on the beach in a state of advanced decomposition. A necropsy found that the whale had three deep, clean, parallel slices on the back from the cranium to the dorsal fin, with jumbled vertebrae that had many large and small fractures. The spinal cord was exposed and there were significant associated soft tissue injuries.	DEAD	Ship strike	Vessel (unknown)	N/A	N/A	N/A	N/A	1	0
NPGOP	5/8/2019	GOA	Sperm Whale	North Pacific	PRORATE	A sperm whale was observed interacting with AK GOA sablefish longline gear. During gear haulback, the line became taut and a sperm whale surfaced next to the vessel. After 1 minute, the line parted and the whale swam below the surface and was not seen again. This suggests the animal was attached to the gear in some way, either hooked or entangled. The observer was unable to see the whale's whole body, so cannot confirm a lack of entanglement/hooks, configuration of entanglement (if any), or location of hooking (if any). It is unknown how much gear was lost, so the amount of gear potentially still attached to the animal cannot be estimated.	PRORATE	Entangled / entrapped	Fishery gear	AK GOA sablefish longline	Commercial	Longline	L10	0.75	0.75
NPGOP	5/4/2016	BS	Spotted Seal	Bering	DEAD	A spotted seal was caught and killed by trawl gear.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI flatfish trawl	Commercial	Trawl	N/A	1	1
NMFS OPR/HQ	7/2/2016	Arctic	Spotted Seal	Bering	DEAD	A male spotted seal was incidentally killed during MMPA authorized research.	DEAD	Research related injury	MMPA authorized research	N/A	N/A	N/A	N/A	1	0
NPGOP	5/19/2017	BS	Spotted Seal	Bering	DEAD	A male spotted seal was caught and killed by AK BSAI flatfish trawl gear.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI flatfish trawl	Commercial	Trawl	N/A	1	1
NPGOP	6/4/2017	BS	Spotted Seal	Bering	DEAD	A male spotted seal was caught and killed by AK BSAI flatfish trawl gear.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI flatfish trawl	Commercial	Trawl	N/A	1	1

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Source of Record	Date	Area	Common Name	Stock	Initial Assessment	Determination Details	Final Determination	Mechanism of Injury	Source of Injury	Fishery Name	Fishery Type	Fishery Method	SI Criteria	M/SI Value	LOF Value
NPGOP	4/13/2019	BS	Spotted Seal	Bering	DEAD	A male spotted seal was caught and killed by AK BSAI flatfish trawl gear.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI flatfish trawl	Commercial	Trawl	N/A	1	1
NPGOP	5/21/2020	BS	Spotted Seal	Bering	DEAD	A male spotted seal was caught and killed in AK BSAI flatfish trawl gear.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI flatfish trawl	Commercial	Trawl	N/A	1	1
NPGOP	5/29/2020	BS	Spotted Seal	Bering	DEAD	A female spotted seal was caught and killed in AK BSAI flatfish trawl gear.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI flatfish trawl	Commercial	Trawl	N/A	1	1
WCGOP	2/7/2016	WC	Steller Sea Lion	Eastern US	NSI	A Steller sea lion was caught in trawl gear, brought on deck, and then released alive.	NSI	Entangled / entrapped	Fishery gear	Catch Shares Bottom Trawl	Commercial	Trawl	P4	0	0
WCGOP	2/12/2016	WC	Steller Sea Lion	Eastern US	NSI	A Steller sea lion was caught in trawl gear and then released alive.	NSI	Entangled / entrapped	Fishery gear	Catch Shares Bottom Trawl	Commercial	Trawl	P7b	0	0
WCGOP	2/13/2016	WC	Steller Sea Lion	Eastern US	NSI	A Steller sea lion was caught in trawl gear and then released alive.	NSI	Entangled / entrapped	Fishery gear	Catch Shares Bottom Trawl	Commercial	Trawl	P7b	0	0
WCGOP	2/16/2016	WC	Steller Sea Lion	Eastern US	DEAD	A Steller sea lion was caught and killed in trawl gear. This record represents sea lion 2 of 2	DEAD	Entangled / entrapped	Fishery gear	OA CA halibut bottom trawl	Commercial	Trawl	N/A	1	1
WCGOP	2/16/2016	WC	Steller Sea Lion	Eastern US	DEAD	A Steller sea lion was caught and killed in trawl gear. This record represents sea lion 1 of 2	DEAD	Entangled / entrapped	Fishery gear	OA CA halibut bottom trawl	Commercial	Trawl	N/A	1	1
WCRO	2/21/2016	WC	Steller Sea Lion	Eastern US	SI	A Steller sea lion was originally observed in a lethargic state on shore on 2/21 and was found dead on 2/28. A necropsy was conducted and a projectile was recovered from the carcass.	DEAD	Shot	Projectile weapon	N/A	N/A	N/A	N/A	1	0
WCGOP	2/26/2016	WC	Steller Sea Lion	Eastern US	DEAD	A Steller sea lion was caught and killed in trawl gear.	DEAD	Entangled / entrapped	Fishery gear	OA CA halibut bottom trawl	Commercial	Trawl	N/A	1	1
WCRO	3/7/2016	WC	Steller Sea Lion	Eastern US	DEAD	A Steller sea lion was found in a state of moderate decomposition and a necropsy was conducted. Suspicious holes and associated hemorrhage, twisted intestines, and hemorrhage in the organs indicated the animal had been shot.	DEAD	Shot	Projectile weapon	N/A	N/A	N/A	N/A	1	0
WCRO	3/12/2016	WC	Steller Sea Lion	Eastern US	DEAD	A Steller sea lion was found in a state of advanced decomposition and a necropsy was conducted. Suspicious holes, associated hemorrhage, organ damage, and twisted intestines indicated that the animal had been shot.	DEAD	Shot	Projectile weapon	N/A	N/A	N/A	N/A	1	0
WCRO	3/16/2016	WC	Steller Sea Lion	Eastern US	DEAD	A Steller sea lion was found in a state of advanced decomposition and a necropsy was conducted. Penetrating wounds with associated hemorrhage, and recovery of projectiles from the carcass indicated that the animal had been shot.	DEAD	Shot	Projectile weapon	N/A	N/A	N/A	N/A	1	0
WCGOP	4/5/2016	WC	Steller Sea Lion	Eastern US	DEAD	A Steller sea lion was caught and killed by longline gear.	DEAD	Entangled / entrapped	Fishery gear	Limited Entry Sablefish Longline	Commercial	Longline	N/A	1	1

Table 1 -- Human-marine mammal interaction records reviewed for injury and mortality, 2016-2020.

Source of Record	Date	Area	Common Name	Stock	Initial Assessment	Determination Details	Final Determination	Mechanism of Injury	Source of Injury	Fishery Name	Fishery Type	Fishery Method	SI Criteria	M/SI Value	LOF Value
WCRO	4/8/2016	WC	Steller Sea Lion	Eastern US	DEAD	A Steller sea lion was discovered in an advanced state of decomposition and a necropsy was conducted. Tracking wounds with associated hemorrhaging and recovery of projectiles indicate the animal had been shot.	DEAD	Shot	Projectile weapon	N/A	N/A	N/A	N/A	1	0
WCRO	4/12/2016	WC	Steller Sea Lion	Eastern US	DEAD	A Steller sea lion was found in a state of moderate decomposition and a necropsy was conducted. There was substantial hemorrhage in the head, body, and organs as well as bloody fluid and sand in the thoracic cavity, indicating the animal had been shot.	DEAD	Shot	Projectile weapon	N/A	N/A	N/A	N/A	1	0
WCRO	4/18/2016	WC	Steller Sea Lion	Eastern US	DEAD	A Steller sea lion was found in a state of moderate decomposition and a necropsy was conducted. Suspicious holes, marks that looked like bullet-grazes, and hemorrhage throughout the body indicated the animal had been shot.	DEAD	Shot	Projectile weapon	N/A	N/A	N/A	N/A	1	0
WCGOP	4/19/2016	WC	Steller Sea Lion	Eastern US	DEAD	A Steller sea lion was caught and killed by longline gear.	DEAD	Entangled / entrapped	Fishery gear	Limited Entry Sablefish Longline	Commercial	Longline	N/A	1	1
WCRO	4/19/2016	WC	Steller Sea Lion	Eastern US	DEAD	A Steller sea lion was found in a state of moderate decomposition and a necropsy was conducted. The animal had bullet holes in its body with associated hemorrhage, organ damage, and twisted intestines. Projectiles were recovered from the carcass.	DEAD	Shot	Projectile weapon	N/A	N/A	N/A	N/A	1	0
ADFG	4/22/2016	SEAK	Steller Sea Lion	Eastern US	SI	A Steller sea lion was observed with a circumferential neck entanglement caused by unknown material.	SI	Constricting entanglement	Marine debris (unidentified)	N/A	N/A	N/A	P8a	1	0
ADFG	4/26/2016	SEAK	Steller Sea Lion	Eastern US	SI	A Steller sea lion was observed with a circumferential neck entanglement caused by unknown material.	SI	Constricting entanglement	Marine debris (unidentified)	N/A	N/A	N/A	P8a	1	0
WCRO	4/26/2016	WC	Steller Sea Lion	Eastern US	SI	A Steller sea lion was observed with multiple straight, parallel incisions seen on its posterior. The deepest wound was approximately 30-40 cm long. The animal appeared to have a healthy bed of granulation tissue at the site of injury.	SI	Ship strike	Vessel (unknown)	N/A	N/A	N/A	P15	1	0
NPGOP	4/28/2016	SEAK	Steller Sea Lion	Eastern US	NSI	An observer reported that a live Steller sea lion was briefly entangled in longline gear during an unsampled haul.	NSI	Entangled / entrapped	Fishery gear	AK GOA halibut longline	Commercial	Longline	P7b	0	0
WCRO	5/5/2016	WC	Steller Sea Lion	Eastern US	DEAD	A Steller sea lion was found in a state of moderate decomposition and a necropsy was conducted. The animal had been shot, indicated by penetrating wounds with associated hemorrhage, twisted intestines, and an abdominal cavity filled with bloody fluid. Projectile(s) were recovered from the carcass.	DEAD	Shot	Projectile weapon	N/A	N/A	N/A	N/A	1	0
AKRO	5/15/2016	SEAK	Steller Sea Lion	Eastern US	SI	A Steller sea lion was observed entangled in salmon hook and line gear that consisted of a white hoochie and green flasher.	SI	Entangled / entrapped	Fishery gear	Salmon hook and line	Unknown	Hook and line	P8a	1	0
ADFG	5/28/2016	SEAK	Steller Sea Lion	Eastern US	SI	A subadult male Steller sea lion was observed with a flasher at the edge of its mouth.	SI	Hooked	Fishery gear	Salmon hook and line	Unknown	Hook and line	P2	1	0

Table 1 -- Human-marine mammal interaction records reviewed for injury and mortality, 2016-2020.

Source of Record	Date	Area	Common Name	Stock	Initial Assessment	Determination Details	Final Determination	Mechanism of Injury	Source of Injury	Fishery Name	Fishery Type	Fishery Method	SI Criteria	M/SI Value	LOF Value
ADFG	6/4/2016	SEAK	Steller Sea Lion	Eastern US	SI	An adult female Steller sea lion was observed with a circumferential neck entanglement caused by unknown material.	SI	Constricting entanglement	Marine debris (unidentified)	N/A	N/A	N/A	P8a	1	0
ADFG	6/9/2016	SEAK	Steller Sea Lion	Eastern US	NSI	A subadult male Steller sea lion was observed with a treble hook in its lip	NSI	Hooked	Fishery gear	Unknown hook and line	Unknown	Hook and line	P5b	0	0
WCRO	6/12/2016	WC	Steller Sea Lion	Eastern US	DEAD	A Steller sea lion was discovered in a state of moderate decomposition. The animal had a flasher in its mouth, and a hook was found perforating the animal's esophagus.	DEAD	Hooked	Fishery gear	Unknown hook and line	Unknown	Hook and line	N/A	1	0
ADFG	6/12/2016	SEAK	Steller Sea Lion	Eastern US	SI	An adult female Steller sea lion was observed with a circumferential neck entanglement caused by unidentified material.	SI	Constricting entanglement	Marine debris (unidentified)	N/A	N/A	N/A	P8a	1	0
ADFG	6/19/2016	SEAK	Steller Sea Lion	Eastern US	SI	An adult female Steller sea lion was observed with a circumferential neck entanglement caused by unidentified material.	SI	Constricting entanglement	Marine debris (unidentified)	N/A	N/A	N/A	P8a	1	0
AKRO	6/21/2016	SEAK	Steller Sea Lion	Eastern US	SI	A Steller sea lion was observed to be trailing an orange buoy through the water.	SI	Entangled / entrapped	Marine debris (unidentified)	N/A	N/A	N/A	P6	1	0
ADFG	6/22/2016	SEAK	Steller Sea Lion	Eastern US	SI	An adult male Steller sea lion was observed with a circumferential neck entanglement caused by unidentified material.	SI	Constricting entanglement	Marine debris (unidentified)	N/A	N/A	N/A	P8a	1	0
ADFG	6/24/2016	SEAK	Steller Sea Lion	Eastern US	SI		SI	Hooked	Fishery gear	Unknown hook and line	Unknown	Hook and line	P5a	1	0
ADFG	6/25/2016	SEAK	Steller Sea Lion	Eastern US	SI	A subadult male Steller sea lion was observed with a circumferential neck entanglement caused by unidentified material.	SI	Constricting entanglement	Marine debris (unidentified)	N/A	N/A	N/A	P8a	1	0
ADFG	6/28/2016	SEAK	Steller Sea Lion	Eastern US	SI	A Steller sea lion was observed with a circumferential neck entanglement caused by unidentified material.	SI	Constricting entanglement	Marine debris (unidentified)	N/A	N/A	N/A	P8a	1	0
ADFG	6/29/2016	SEAK	Steller Sea Lion	Eastern US	SI	An adult female Steller sea lion was observed with a flasher at the edge of its mouth.	SI	Hooked	Fishery gear	Salmon hook and line	Unknown	Hook and line	P2	1	0
ADFG	6/29/2016	SEAK	Steller Sea Lion	Eastern US	SI	A subadult male Steller sea lion was observed with a circumferential neck entanglement caused by a packing band.	SI	Constricting entanglement	Marine debris (packing band)	N/A	N/A	N/A	P8a	1	0
ADFG	6/29/2016	SEAK	Steller Sea Lion	Eastern US	SI	An adult female Steller sea lion was observed with a circumferential neck entanglement caused by unidentified material.	SI	Constricting entanglement	Marine debris (unidentified)	N/A	N/A	N/A	P8a	1	0
ADFG	6/29/2016	SEAK	Steller Sea Lion	Eastern US	SI	An adult male Steller sea lion was observed with a neck entanglement caused by unknown material.	SI	Constricting entanglement	Marine debris (unidentified)	N/A	N/A	N/A	P8a	1	0

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Source of Record	Date	Area	Common Name	Stock	Initial Assessment	Determination Details	Final Determination	Mechanism of Injury	Source of Injury	Fishery Name	Fishery Type	Fishery Method	SI Criteria	M/SI Value	LOF Value
ADFG	6/30/2016	SEAK	Steller Sea Lion	Eastern US	SI	An adult female Steller sea lion was observed with a circumferential neck entanglement caused by a packing band.	SI	Constricting entanglement	Marine debris (packing band)	N/A	N/A	N/A	P8a	1	0
ADFG	6/30/2016	SEAK	Steller Sea Lion	Eastern US	SI	A subadult male Steller sea lion was observed with a flasher at the edge of its mouth.	SI	Hooked	Fishery gear	Salmon hook and line	Unknown	Hook and line	P2	1	0
ADFG	6/30/2016	SEAK	Steller Sea Lion	Eastern US	SI	A subadult male Steller sea lion was observed with a flasher at the edge of its mouth.	SI	Hooked	Fishery gear	Salmon hook and line	Unknown	Hook and line	P2	1	0
ADFG	7/2/2016	SEAK	Steller Sea Lion	Eastern US	SI	A Steller sea lion was observed with a circumferential neck entanglement caused by unidentified material.	SI	Constricting entanglement	Marine debris (packing band)	N/A	N/A	N/A	P8a	1	0
ADFG	7/2/2016	SEAK	Steller Sea Lion	Eastern US	SI	A subadult male Steller sea lion that had ingested salmon hook and lion gear was captured, the flasher was removed, and the animal was released. An ingested hook was still presumed to be present.	SI	Hooked	Fishery gear	Salmon hook and line	Unknown	Hook and line	P2	1	0
ADFG	7/3/2016	SEAK	Steller Sea Lion	Eastern US	SI	An adult female Steller sea lion was observed with a flasher at the edge of its mouth.	SI	Hooked	Fishery gear	Salmon hook and line	Unknown	Hook and line	P2	1	0
ADFG	7/3/2016	SEAK	Steller Sea Lion	Eastern US	SI	An adult female Steller sea lion was observed with a flasher at the edge of its mouth.	SI	Hooked	Fishery gear	Salmon hook and line	Unknown	Hook and line	P2	1	0
AKRO	7/3/2016	GOA	Steller Sea Lion	Eastern US	DEAD	A Steller sea lion was found dead and necropsied. The animal had a 3cm round wound on its torso and a wound that matched in size and location on its right flipper where the flipper overlapped the torso. There was significant hemorrhage in the abdominal cavity associated with the wound.	DEAD	Shot	Projectile weapon	N/A	N/A	N/A	N/A	1	0
ADFG	7/4/2016	SEAK	Steller Sea Lion	Eastern US	SI	A subadult male Steller sea lion was observed with a circumferential neck entanglement caused by a packing band.	SI	Constricting entanglement	Marine debris	N/A	N/A	N/A	P8a	1	0
ADFG	7/4/2016	SEAK	Steller Sea Lion	Eastern US	SI	An adult male Steller sea lion was observed with a flasher at the edge of its mouth.	SI	Hooked	Fishery gear	Salmon hook and line	Unknown	Hook and line	P2	1	0
ADFG	7/5/2016	SEAK	Steller Sea Lion	Eastern US	SI	An adult male Steller sea lion was observed with a flasher at the edge of its mouth.	SI	Hooked	Fishery gear	Salmon hook and line	Unknown	Hook and line	P2	1	0
ADFG	7/5/2016	SEAK	Steller Sea Lion	Eastern US	SI	A subadult male Steller sea lion was observed with a flasher at the edge of its mouth.	SI	Hooked	Fishery gear	Salmon hook and line	Unknown	Hook and line	P2	1	0
ADFG	7/5/2016	SEAK	Steller Sea Lion	Eastern US	SI	A Steller sea lion was observed with a flasher tight to the edge of its mouth.	SI	Hooked	Fishery gear	Salmon hook and line	Unknown	Hook and line	P2	1	0
ADFG	7/6/2016	SEAK	Steller Sea Lion	Eastern US	SI	An adult male Steller sea lion was observed with a flasher at the edge of its mouth.	SI	Hooked	Fishery gear	Salmon hook and line	Unknown	Hook and line	P2	1	0
ADFG	7/6/2016	SEAK	Steller Sea Lion	Eastern US	SI	An adult male Steller sea lion was observed with a flasher in its mouth.	SI	Hooked	Fishery gear	Salmon hook and line	Unknown	Hook and line	P2	1	0

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Source of Record	Date	Area	Common Name	Stock	Initial Assessment	Determination Details	Final Determination	Mechanism of Injury	Source of Injury	Fishery Name	Fishery Type	Fishery Method	SI Criteria	M/SI Value	LOF Value
ADFG	7/6/2016	SEAK	Steller Sea Lion	Eastern US	SI	A Steller sea lion was observed with a circumferential neck entanglement caused by unidentified material.	SI	Constricting entanglement	Marine debris (unidentified)	N/A	N/A	N/A	P8a	1	0
ADFG	7/6/2016	SEAK	Steller Sea Lion	Eastern US	SI	A subadult male Steller sea lion was observed with a flasher at the edge of its mouth.	SI	Hooked	Fishery gear	Salmon hook and line	Unknown	Hook and line	P2	1	0
ADFG	7/7/2016	SEAK	Steller Sea Lion	Eastern US	SI	A subadult male Steller sea lion was observed with a flasher at the edge of its mouth.	SI	Hooked	Fishery gear	Salmon hook and line	Unknown	Hook and line	P2	1	0
WCRO	7/7/2016	WC	Steller Sea Lion	Eastern US	SI	A Steller sea lion was observed alive with an apparent gunshot wound. Two days later, the animal was found dead. A .22 caliber bullet was recovered from the animal's head by NOAA Law Enforcement.	DEAD	Shot	Projectile weapon	N/A	N/A	N/A	N/A	1	0
ADFG	7/8/2016	SEAK	Steller Sea Lion	Eastern US	SI	An adult female Steller sea lion was observed with a constricting neck entanglement caused by unknown material / marine debris. The animal was reported with a pup. This record represents the pup.	SI	Dependent animal with mother seriously injured	Marine debris (unidentified)	N/A	N/A	N/A	P14	1	0
ADFG	7/8/2016	SEAK	Steller Sea Lion	Eastern US	SI	A subadult male Steller sea lion was observed with a flasher at the edge of its mouth. The sea lion was captured, the flasher was removed, and the animal was released.	SI	Hooked	Fishery gear	Salmon hook and line	Unknown	Hook and line	P2	1	0
ADFG	7/8/2016	SEAK	Steller Sea Lion	Eastern US	SI	An adult female Steller sea lion was observed with a circumferential neck entanglement caused by unknown material.	SI	Constricting entanglement	Marine debris (unidentified)	N/A	N/A	N/A	P8a	1	0
ADFG	7/8/2016	SEAK	Steller Sea Lion	Eastern US	SI	An adult female Steller sea lion was observed with a circumferential neck entanglement caused by unidentified material.	SI	Constricting entanglement	Marine debris (unidentified)	N/A	N/A	N/A	P8a	1	0
ADFG	7/8/2016	SEAK	Steller Sea Lion	Eastern US	SI	An adult female Steller sea lion was observed with a circumferential neck entanglement caused by unidentified material.	SI	Constricting entanglement	Marine debris (unidentified)	N/A	N/A	N/A	P8a	1	0
ADFG	7/8/2016	SEAK	Steller Sea Lion	Eastern US	SI	A subadult male Steller sea lion was observed with a flasher at the edge of its mouth.	SI	Hooked	Fishery gear	Salmon hook and line	Unknown	Hook and line	P2	1	0
ADFG	7/8/2016	SEAK	Steller Sea Lion	Eastern US	SI	A subadult male Steller sea lion was observed with a flasher at the edge of its mouth.	SI	Hooked	Fishery gear	Salmon hook and line	Unknown	Hook and line	P2	1	0
ADFG	7/9/2016	SEAK	Steller Sea Lion	Eastern US	SI	An adult male Steller sea lion was observed with a flasher at the edge of its mouth.	SI	Hooked	Fishery gear	Salmon hook and line	Unknown	Hook and line	P2	1	0
ADFG	7/9/2016	SEAK	Steller Sea Lion	Eastern US	SI	A subadult male Steller sea lion was observed with a flasher tight to its mouth. The sea lion was captured, the flasher was removed, and the animal was released.	SI	Hooked	Fishery gear	Salmon hook and line	Unknown	Hook and line	P2	1	0
ADFG	7/9/2016	SEAK	Steller Sea Lion	Eastern US	SI	An adult male Steller sea lion was observed with a flasher at the edge of its mouth.	SI	Hooked	Fishery gear	Salmon hook and line	Unknown	Hook and line	P2	1	0

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Source of Record	Date	Area	Common Name	Stock	Initial Assessment	Determination Details	Final Determination	Mechanism of Injury	Source of Injury	Fishery Name	Fishery Type	Fishery Method	SI Criteria	M/SI Value	LOF Value
ADFG	7/9/2016	SEAK	Steller Sea Lion	Eastern US	SI	A subadult male Steller sea lion was observed with a circumferential neck entanglement caused by a packing band.	SI	Constricting entanglement	Marine debris (unidentified)	N/A	N/A	N/A	P8a	1	0
ADFG	7/9/2016	SEAK	Steller Sea Lion	Eastern US	SI	A subadult male Steller sea lion was observed with a flasher at the edge of its mouth.	SI	Hooked	Fishery gear	Salmon hook and line	Unknown	Hook and line	P2	1	0
ADFG	7/9/2016	SEAK	Steller Sea Lion	Eastern US	SI	A subadult male Steller sea lion was observed with a circumferential neck entanglement caused by a packing band.	SI	Constricting entanglement	Marine debris (packing band)	N/A	N/A	N/A	P8a	1	0
ADFG	7/10/2016	SEAK	Steller Sea Lion	Eastern US	SI	A Steller sea lion was observed with monofilament line that appeared to be wrapped around its neck and a weight hanging at its chest.	SI	Entangled / entrapped	Fishery gear	Unknown hook and line	Unknown	Hook and line	P6	1	0
ADFG	7/10/2016	SEAK	Steller Sea Lion	Eastern US	SI	A subadult Steller sea lion was observed with a circumferential neck entanglement caused by unidentified material.	SI	Constricting entanglement	Marine debris (unidentified)	N/A	N/A	N/A	P8a	1	0
ADFG	7/10/2016	SEAK	Steller Sea Lion	Eastern US	SI	A subadult male Steller sea lion was observed with a circumferential neck entanglement caused by unidentified material.	SI	Constricting entanglement	Marine debris (unidentified)	N/A	N/A	N/A	P8a	1	0
ADFG	7/10/2016	SEAK	Steller Sea Lion	Eastern US	SI	An adult male Steller sea lion was observed with a flasher at the edge of its mouth.	SI	Hooked	Fishery gear	Salmon hook and line	Unknown	Hook and line	P2	1	0
ADFG	7/10/2016	SEAK	Steller Sea Lion	Eastern US	SI	A subadult Steller sea lion was observed with a flasher at the edge of its mouth.	SI	Hooked	Fishery gear	Salmon hook and line	Unknown	Hook and line	P2	1	0
ADFG	7/10/2016	SEAK	Steller Sea Lion	Eastern US	SI	An adult male Steller sea lion was observed with a flasher at the edge of its mouth.	SI	Hooked	Fishery gear	Salmon hook and line	Unknown	Hook and line	P2	1	0
ADFG	7/10/2016	SEAK	Steller Sea Lion	Eastern US	SI	A Steller sea lion was observed with a flasher at the edge of its mouth.	SI	Hooked	Fishery gear	Salmon hook and line	Unknown	Hook and line	P2	1	0
ADFG	7/12/2016	SEAK	Steller Sea Lion	Eastern US	SI	An adult male Steller sea lion was observed with a circumferential neck entanglement caused by unidentified material.	SI	Constricting entanglement	Marine debris (unidentified)	N/A	N/A	N/A	P8a	1	0
ADFG	7/12/2016	SEAK	Steller Sea Lion	Eastern US	SI	A subadult male Steller sea lion was observed with a flasher at the edge of its mouth.	SI	Hooked	Fishery gear	Salmon hook and line	Unknown	Hook and line	P2	1	0
ADFG	7/12/2016	SEAK	Steller Sea Lion	Eastern US	SI	An adult female Steller sea lion was observed with a circumferential neck entanglement caused by unidentified material.	SI	Constricting entanglement	Marine debris (unidentified)	N/A	N/A	N/A	P8a	1	0
ADFG	7/12/2016	SEAK	Steller Sea Lion	Eastern US	SI	A subadult male Steller sea lion was observed with a flasher at the edge of its mouth.	SI	Hooked	Fishery gear	Salmon hook and line	Unknown	Hook and line	P2	1	0
ADFG	7/13/2016	SEAK	Steller Sea Lion	Eastern US	SI	A subadult male Steller sea lion was observed with a circumferential neck entangled caused by rope.	SI	Constricting entanglement	Marine debris (rope)	N/A	N/A	N/A	P8a	1	0

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Source of Record	Date	Area	Common Name	Stock	Initial Assessment	Determination Details	Final Determination	Mechanism of Injury	Source of Injury	Fishery Name	Fishery Type	Fishery Method	SI Criteria	M/SI Value	LOF Value
ADFG	7/13/2016	SEAK	Steller Sea Lion	Eastern US	SI	A Steller sea lion was observed with a flasher at the edge of its mouth.	SI	Hooked	Fishery gear	Salmon hook and line	Unknown	Hook and line	P2	1	0
ADFG	7/13/2016	SEAK	Steller Sea Lion	Eastern US	SI	A subadult male Steller sea lion was observed with a circumferential neck entanglement caused by unidentified material.	SI	Constricting entanglement	Marine debris (unidentified)	N/A	N/A	N/A	P8a	1	0
ADFG	7/13/2016	SEAK	Steller Sea Lion	Eastern US	SI	A subadult male Steller sea lion was observed with a circumferential neck entanglement caused by unidentified material.	SI	Constricting entanglement	Marine debris (unidentified)	N/A	N/A	N/A	P8a	1	0
ADFG	7/13/2016	SEAK	Steller Sea Lion	Eastern US	SI	A subadult Steller sea lion was observed with a flasher at the edge of its mouth.	SI	Hooked	Fishery gear	Salmon hook and line	Unknown	Hook and line	P2	1	0
ADFG	7/13/2016	SEAK	Steller Sea Lion	Eastern US	SI	A subadult Steller sea lion was observed with a flasher at the edge of its mouth.	SI	Hooked	Fishery gear	Salmon hook and line	Unknown	Hook and line	P2	1	0
ADFG	7/14/2016	SEAK	Steller Sea Lion	Eastern US	SI	An adult female Steller sea lion was observed with a flasher at the edge of its mouth.	SI	Hooked	Fishery gear	Salmon hook and line	Unknown	Hook and line	P2	1	0
ADFG	7/14/2016	SEAK	Steller Sea Lion	Eastern US	SI	A Steller sea lion was observed with a circumferential neck entanglement caused by unknown material.	SI	Constricting entanglement	Marine debris (unidentified)	N/A	N/A	N/A	P8a	1	0
ADFG	7/14/2016	SEAK	Steller Sea Lion	Eastern US	SI	A subadult male Steller sea lion was observe with a circumferential neck entanglement caused by unidentified material.	SI	Constricting entanglement	Marine debris (unidentified)	N/A	N/A	N/A	P8a	1	0
AKRO	7/14/2016	SEAK	Steller Sea Lion	Eastern US	SI	A Steller sea lion ingested salmon hook and line fishery gear and a flasher was observed tight to its right lip.	SI	Hooked	Fishery gear	Salmon hook and line	Unknown	Hook and line	P2	1	0
ADFG	7/14/2016	SEAK	Steller Sea Lion	Eastern US	SI	An adult female Steller sea lion was observed with a circumferential neck entanglement caused by rope.	SI	Constricting entanglement	Marine debris (rope)	N/A	N/A	N/A	P8a	1	0
WCRO	7/18/2016	WC	Steller Sea Lion	Eastern US	DEAD	A Steller sea lion was found in a state of moderate decomposition and a necropsy was conducted. What appeared to be bullet holes, associated hemorrhage, clotting, and organ damage indicated the animal had been shot.	DEAD	Shot	Projectile weapon	N/A	N/A	N/A	N/A	1	0
AKRO	7/19/2016	SEAK	Steller Sea Lion	Eastern US	SI	A Steller sea lion ingested salmon hook and line fishery gear and a flasher was observed hanging from its mouth.	SI	Hooked	Fishery gear	Salmon hook and line	Unknown	Hook and line	P2	1	0
WCRO	7/22/2016	WC	Steller Sea Lion	Eastern US	DEAD	A Steller sea lion was found in a state of advanced decomposition and a necropsy was conducted. Puncture marks of various sizes and depths on the ventral neck, tremendous hemorrhage in the ventral body, track-like wounds with entrance holes, and recovery of projectiles indicated the animal had been shot.	DEAD	Shot	Projectile weapon	N/A	N/A	N/A	N/A	1	0
WCRO	7/24/2016	WC	Steller Sea Lion	Eastern US	SI	A Steller sea lion was observed with a circumferential neck entanglement caused by what appeared to be a rubber band or packing band. The entanglement deeply cut into the animal.	SI	Constricting entanglement	Marine debris (unidentified)	N/A	N/A	N/A	P8a	1	0

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Source of Record	Date	Area	Common Name	Stock	Initial Assessment	Determination Details	Final Determination	Mechanism of Injury	Source of Injury	Fishery Name	Fishery Type	Fishery Method	SI Criteria	M/SI Value	LOF Value
WCRO	7/24/2016	WC	Steller Sea Lion	Eastern US	SI	An adult female Steller sea lion was observed with flasher hanging from its mouth. The animal appeared to have a dependent pup. This entry represents the pup.	SI	Dependent animal with mother seriously injured	Fishery gear	Unknown hook and line	Unknown	Hook and line	P14	1	0
WCRO	7/24/2016	WC	Steller Sea Lion	Eastern US	SI	An adult female Steller sea lion was observed with flasher hanging from its mouth. The animal appeared to have a dependent pup.	SI	Hooked	Fishery gear	Unknown hook and line	Unknown	Hook and line	P2	1	0
AKRO	7/26/2016	SEAK	Steller Sea Lion	Eastern US	SI	A Steller sea lion ingested salmon hook and line fishery gear, and a flasher and pink hoochie were observed hanging from its mouth.	SI	Hooked	Fishery gear	Salmon hook and line	Unknown	Hook and line	P2	1	0
AKRO	7/29/2016	SEAK	Steller Sea Lion	Eastern US	SI	A Steller sea lion ingested fishery gear and a flasher was observed hanging from the animal's mouth.	SI	Hooked	Fishery gear	Salmon hook and line	Unknown	Hook and line	P2	1	0
AKRO	8/1/2016	SEAK	Steller Sea Lion	Eastern US	SI	A Steller sea lion was observed with a circumferential neck entanglement caused by unknown material.	SI	Constricting entanglement	Marine debris (unidentified)	N/A	N/A	N/A	P8a	1	0
AKRO	8/2/2016	SEAK	Steller Sea Lion	Eastern US	NSI	A Steller sea lion was observed hauled out on a buoy with a circle hook attached to a gangion line in its lip.	NSI	Hooked	Fishery gear	Unknown longline	Unknown	Longline	P5b	0	0
SWFSC	8/7/2016	WC	Steller Sea Lion	Eastern US	SI	A Steller sea lion with monofilament line wrapped around its head and neck was captured, disentangled, and released.	NSI	Constricting entanglement	Fishery gear	Unknown hook and line	Unknown	Hook and line	P7b	0	0
AKRO	8/9/2016	SEAK	Steller Sea Lion	Eastern US	SI	A Steller sea lion ingested salmon hook and line fishery gear and was observed with a flasher with a white/silver body and red/orange rim hanging from its mouth.	SI	Hooked	Fishery gear	Salmon hook and line	Unknown	Hook and line	P2	1	0
AKRO	8/15/2016	SEAK	Steller Sea Lion	Eastern US	SI	A Steller sea lion ingested salmon hook and line fishery gear and a flasher was observed hanging from its mouth.	SI	Hooked	Fishery gear	Salmon hook and line	Unknown	Hook and line	P2	1	0
ADFG	8/16/2016	SEAK	Steller Sea Lion	Eastern US	SI	An adult male Steller sea lion was observed with a circumferential neck entanglement caused by unknown material.	SI	Constricting entanglement	Marine debris (unidentified)	N/A	N/A	N/A	P8a	1	0
ADFG	8/16/2016	SEAK	Steller Sea Lion	Eastern US	SI	A male Steller sea lion was observed with a flasher at the edge of its mouth.	SI	Hooked	Fishery gear	Salmon hook and line	Unknown	Hook and line	P2	1	0
ADFG	8/16/2016	SEAK	Steller Sea Lion	Eastern US	SI	An adult male Steller sea lion was observed with a flasher at the edge of its mouth.	SI	Hooked	Fishery gear	Salmon hook and line	Unknown	Hook and line	P2	1	0
AKRO	8/30/2016	SEAK	Steller Sea Lion	Eastern US	SI	A Steller sea lion was observed hauled out on a buoy with a plastic packing band around its neck. It had also ingested salmon hook and line fishing gear, and a black and white flasher was observed hanging from its mouth.	SI	Hooked	Fishery gear	Salmon hook and line	Unknown	Hook and line	P2	1	0
AKRO	9/8/2016	SEAK	Steller Sea Lion	Eastern US	SI	A Steller sea lion was observed hauled out on a buoy. The sea lion had a hook in its mouth and heavy duty monofilament was reported to be around the animal's neck.	SI	Hooked	Fishery gear	Unknown hook and line	Unknown	Hook and line	P5a	1	0

Table 1 -- Human-marine mammal interaction records reviewed for injury and mortality, 2016-2020.

Source of Record	Date	Area	Common Name	Stock	Initial Assessment	Determination Details	Final Determination	Mechanism of Injury	Source of Injury	Fishery Name	Fishery Type	Fishery Method	SI Criteria	M/SI Value	LOF Value
A-SHOP	10/4/2016	WC	Steller Sea Lion	Eastern US	DEAD	A Steller sea lion was caught and killed in trawl gear.	DEAD	Entangled / entrapped	Fishery gear	At-sea hake mothership catcher vessel midwater trawl	Commercial	Trawl	N/A	1	1
A-SHOP	10/5/2016	WC	Steller Sea Lion	Eastern US	DEAD	A Steller sea lion was caught and killed in trawl gear.	DEAD	Entangled / entrapped	Fishery gear	At-sea hake catcher processor midwater trawl	Commercial	Trawl	N/A	1	1
A-SHOP	10/14/2016	WC	Steller Sea Lion	Eastern US	DEAD	Two Steller sea lions were caught and killed by trawl gear. This record represents animal 2 of 2.	DEAD	Entangled / entrapped	Fishery gear	At-sea hake catcher processor midwater trawl	Commercial	Trawl	N/A	1	1
A-SHOP	10/14/2016	WC	Steller Sea Lion	Eastern US	NSI	A Steller sea lion was caught in trawl gear. According to the observer the animal was disentangled and released by crew without injuries.	NSI	Entangled / entrapped	Fishery gear	At-sea hake catcher processor midwater trawl	Commercial	Trawl	P7b	0	0
A-SHOP	10/14/2016	WC	Steller Sea Lion	Eastern US	DEAD	Two Steller sea lions were caught and killed by trawl gear. This record represents animal 1 of 2.	DEAD	Entangled / entrapped	Fishery gear	At-sea hake catcher processor midwater trawl	Commercial	Trawl	N/A	1	1
A-SHOP	10/19/2016	WC	Steller Sea Lion	Eastern US	DEAD	A Steller sea lion was caught and killed by trawl gear.	DEAD	Entangled / entrapped	Fishery gear	At-sea hake catcher processor midwater trawl	Commercial	Trawl	N/A	1	1
A-SHOP	10/27/2016	WC	Steller Sea Lion	Eastern US	DEAD	A Steller sea lion was caught and killed by trawl gear.	DEAD	Entangled / entrapped	Fishery gear	At-sea hake mothership catcher vessel midwater trawl	Commercial	Trawl	N/A	1	1
A-SHOP	11/2/2016	WC	Steller Sea Lion	Eastern US	DEAD	A Steller sea lion was caught and killed in trawl gear.	DEAD	Entangled / entrapped	Fishery gear	At-sea hake catcher processor midwater trawl	Commercial	Trawl	N/A	1	1
A-SHOP	11/5/2016	WC	Steller Sea Lion	Eastern US	DEAD	A Steller sea lion was caught and killed in trawl gear.	DEAD	Entangled / entrapped	Fishery gear	At-sea hake catcher processor midwater trawl	Commercial	Trawl	N/A	1	1
A-SHOP	11/6/2016	WC	Steller Sea Lion	Eastern US	DEAD	A Steller sea lion was caught and killed in trawl gear.	DEAD	Entangled / entrapped	Fishery gear	At-sea hake catcher processor midwater trawl	Commercial	Trawl	N/A	1	1
A-SHOP	11/6/2016	WC	Steller Sea Lion	Eastern US	DEAD	A Steller sea lion was caught and killed in trawl gear.	DEAD	Entangled / entrapped	Fishery gear	At-sea hake catcher processor midwater trawl	Commercial	Trawl	N/A	1	1
A-SHOP	11/11/2016	WC	Steller Sea Lion	Eastern US	DEAD	A Steller sea lion was caught and killed in trawl gear.	DEAD	Entangled / entrapped	Fishery gear	At-sea hake catcher processor midwater trawl	Commercial	Trawl	N/A	1	1

Table 1 -- Human-marine mammal interaction records reviewed for injury and mortality, 2016-2020.

Source of Record	Date	Area	Common Name	Stock	Initial Assessment	Determination Details	Final Determination	Mechanism of Injury	Source of Injury	Fishery Name	Fishery Type	Fishery Method	SI Criteria	M/SI Value	LOF Value
A-SHOP	11/11/2016	WC	Steller Sea Lion	Eastern US	DEAD	A Steller sea lion was caught and killed in trawl gear.	DEAD	Entangled / entrapped	Fishery gear	At-sea hake catcher processor midwater trawl	Commercial	Trawl	N/A	1	1
A-SHOP	11/12/2016	WC	Steller Sea Lion	Eastern US	NSI	A Steller sea lion was caught in trawl gear, brought aboard, released from the net and motivated by the crew to return to the water.	NSI	Entangled / entrapped	Fishery gear	At-sea hake catcher processor midwater trawl	Commercial	Trawl	P4	0	0
A-SHOP	11/12/2016	WC	Steller Sea Lion	Eastern US	NSI	A Steller sea lion was caught in trawl gear, brought aboard, released from the net. It acted aggressively toward the crew, and was forced back into the water.	NSI	Entangled / entrapped	Fishery gear	At-sea hake catcher processor midwater trawl	Commercial	Trawl	P4	0	0
A-SHOP	11/12/2016	WC	Steller Sea Lion	Eastern US	DEAD	A Steller sea lion was caught and killed in trawl gear.	DEAD	Entangled / entrapped	Fishery gear	At-sea hake catcher processor midwater trawl	Commercial	Trawl	N/A	1	1
A-SHOP	11/13/2016	WC	Steller Sea Lion	Eastern US	DEAD	Three Steller sea lions were caught and killed in trawl gear. This record represents animal 1 of 3.	DEAD	Entangled / entrapped	Fishery gear	At-sea hake catcher processor midwater trawl	Commercial	Trawl	N/A	1	1
A-SHOP	11/13/2016	WC	Steller Sea Lion	Eastern US	DEAD	Three Steller sea lions were caught and killed in trawl gear. This record represents animal 2 of 3	DEAD	Entangled / entrapped	Fishery gear	At-sea hake catcher processor midwater trawl	Commercial	Trawl	N/A	1	1
A-SHOP	11/13/2016	WC	Steller Sea Lion	Eastern US	DEAD	Three Steller sea lions were caught and killed in trawl gear. This record represents animal 3 of 3.	DEAD	Entangled / entrapped	Fishery gear	At-sea hake catcher processor midwater trawl	Commercial	Trawl	N/A	1	1
A-SHOP	11/14/2016	WC	Steller Sea Lion	Eastern US	NSI	A Steller sea lion was caught in trawl gear, brought aboard, released from the net, and was motivated by the crew to return to the water.	NSI	Entangled / entrapped	Fishery gear	At-sea hake catcher processor midwater trawl	Commercial	Trawl	P4	0	0
A-SHOP	11/15/2016	WC	Steller Sea Lion	Eastern US	DEAD	A Steller sea lion was caught and killed in trawl gear.	DEAD	Entangled / entrapped	Fishery gear	At-sea hake catcher processor midwater trawl	Commercial	Trawl	N/A	1	1
A-SHOP	11/16/2016	WC	Steller Sea Lion	Eastern US	NSI	A Steller sea lion was caught in trawl gear, brought aboard, released from the net, and was motivated by the crew to return to the water.	NSI	Entangled / entrapped	Fishery gear	At-sea hake catcher processor midwater trawl	Commercial	Trawl	P4	0	0
A-SHOP	11/16/2016	WC	Steller Sea Lion	Eastern US	DEAD	Three Steller sea lions were caught and killed in trawl gear. This record represents animal 2 of 3.	DEAD	Entangled / entrapped	Fishery gear	At-sea hake catcher processor midwater trawl	Commercial	Trawl	N/A	1	1
A-SHOP	11/16/2016	WC	Steller Sea Lion	Eastern US	DEAD	Three Steller sea lions were caught and killed in trawl gear. This record represents animal 1 of 3.	DEAD	Entangled / entrapped	Fishery gear	At-sea hake catcher processor midwater trawl	Commercial	Trawl	N/A	1	1
A-SHOP	11/16/2016	WC	Steller Sea Lion	Eastern US	DEAD	A Steller sea lion was caught and killed in trawl gear.	DEAD	Entangled / entrapped	Fishery gear	At-sea hake catcher processor midwater trawl	Commercial	Trawl	N/A	1	1

Table 1 -- Human-marine mammal interaction records reviewed for injury and mortality, 2016-2020.

Source of Record	Date	Area	Common Name	Stock	Initial Assessment	Determination Details	Final Determination	Mechanism of Injury	Source of Injury	Fishery Name	Fishery Type	Fishery Method	SI Criteria	M/SI Value	LOF Value
A-SHOP	11/16/2016	WC	Steller Sea Lion	Eastern US	DEAD	A Steller sea lion was caught and killed in trawl gear.	DEAD	Entangled / entrapped	Fishery gear	At-sea hake catcher processor midwater trawl	Commercial	Trawl	N/A	1	1
A-SHOP	11/16/2016	WC	Steller Sea Lion	Eastern US	DEAD	Three Steller sea lions were caught and killed in trawl gear. This record represents animal 3 of 3.	DEAD	Entangled / entrapped	Fishery gear	At-sea hake catcher processor midwater trawl	Commercial	Trawl	N/A	1	1
A-SHOP	11/18/2016	WC	Steller Sea Lion	Eastern US	DEAD	A Steller sea lion was caught and killed in trawl gear.	DEAD	Entangled / entrapped	Fishery gear	At-sea hake catcher processor midwater trawl	Commercial	Trawl	N/A	1	1
WCGOP	2/3/2017	WC	Steller Sea Lion	Eastern US	NSI	A Steller sea lion was caught in trawl gear, brought aboard, and released from the net. Once free from the net the sea lion quickly jumped off the side of the boat and into the water. No visible signs of injury.	NSI	Entangled / entrapped	Fishery gear	Catch shares bottom trawl	Commercial	Trawl	P4	0	0
WCGOP	3/16/2017	WC	Steller Sea Lion	Eastern US	DEAD	A Steller sea lion was caught and killed in Open Access (OA) CA Halibut bottom trawl gear.	DEAD	Entangled / entrapped	Fishery gear	OA CA Halibut bottom trawl	Commercial	Trawl	N/A	1	1
AKRO	4/11/2017	SEAK	Steller Sea Lion	Eastern US	SI	A Steller sea lion was observed hauled out on a green buoy with a circumferential neck entanglement caused by unknown material / marine debris.	SI	Constricting entanglement	Marine debris (unidentified)	N/A	N/A	N/A	P8a	1	0
WCRO	4/24/2017	WC	Steller Sea Lion	Eastern US	DEAD	An adult male Steller sea lion was found freshly dead of a gunshot wound. A necropsy found a 1 cm diameter buckshot lodged in tissue just above the lower left mandible with fractures of the left lower and upper canines.	DEAD	Shot	Projectile weapon	N/A	N/A	N/A	N/A	1	0
NPGOP	4/25/2017	GOA	Steller Sea Lion	Eastern US	DEAD	A Steller sea lion was caught and killed by an AK GOA sablefish longline gear.	DEAD	Hooked	Fishery gear	AK GOA sablefish longline	Commercial	Longline	N/A	1	1
AKRO	4/25/2017	SEAK	Steller Sea Lion	Eastern US	SI	A sub adult male Steller sea lion was observed hauled out on the west side of Benjamin Island, AK, with a constricting circumferential neck entanglement caused by unknown material / marine debris.	SI	Constricting entanglement	Marine debris (unidentified)	N/A	N/A	N/A	P8a	1	0
AKRO	5/4/2017	SEAK	Steller Sea Lion	Eastern US	SI	A Steller sea lion was observed hauled out with a circumferential neck entanglement caused by unidentified material.	SI	Constricting entanglement	Marine debris (unidentified)	N/A	N/A	N/A	P8a	1	0
ADFG	5/6/2017	SEAK	Steller Sea Lion	Eastern US	SI	An adult male Steller sea lion was observed with a flasher at the edge of its mouth.	SI	Hooked	Fishery gear	Salmon hook and line	Unknown	Hook and line	P2	1	0
AKRO	5/8/2017	SEAK	Steller Sea Lion	Eastern US	SI	A Steller sea lion was observed hauled out on Benjamin Island, AK, with a constricting circumferential neck entanglement caused by unknown material / marine debris.	SI	Constricting entanglement	Marine debris (unidentified)	N/A	N/A	N/A	P8a	1	0
AKRO	5/13/2017	SEAK	Steller Sea Lion	Eastern US	SI	A Steller sea lion was observed hauled out on South Marble Island with a constricting circumferential neck entanglement caused by unknown material / marine debris.	SI	Constricting entanglement	Marine debris (unidentified)	N/A	N/A	N/A	P8a	1	0

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Source of Record	Date	Area	Common Name	Stock	Initial Assessment	Determination Details	Final Determination	Mechanism of Injury	Source of Injury	Fishery Name	Fishery Type	Fishery Method	SI Criteria	M/SI Value	LOF Value
ADFG	5/29/2017	SEAK	Steller Sea Lion	Eastern US	SI	An adult female Steller sea lion was observed with a circumferential neck entanglement caused by an unknown material.	SI	Constricting entanglement	Marine debris (unidentified)	N/A	N/A	N/A	P8a	1	0
ADFG	5/30/2017	SEAK	Steller Sea Lion	Eastern US	SI	A Steller sea lion was observed with a circumferential neck entanglement caused by an unknown material.	SI	Constricting entanglement	Marine debris (unidentified)	N/A	N/A	N/A	P8a	1	0
ADFG	6/3/2017	SEAK	Steller Sea Lion	Eastern US	SI	A male Steller sea lion was observed with a circumferential neck entanglement caused by an unknown material.	SI	Constricting entanglement	Marine debris (unidentified)	N/A	N/A	N/A	P8a	1	0
ADFG	6/6/2017	SEAK	Steller Sea Lion	Eastern US	SI	An adult female Steller sea lion was observed with a circumferential neck entanglement caused by a packing band.	SI	Constricting entanglement	Marine debris (packing band)	N/A	N/A	N/A	P8a	1	0
ADFG	6/9/2017	SEAK	Steller Sea Lion	Eastern US	SI	A male Steller sea lion was observed with a circumferential neck entanglement caused by a packing band.	SI	Constricting entanglement	Marine debris (packing band)	N/A	N/A	N/A	P8a	1	0
ADFG	6/10/2017	SEAK	Steller Sea Lion	Eastern US	SI	A male Steller sea lion was observed with a circumferential neck entanglement caused by an unknown material.	SI	Constricting entanglement	Marine debris (unidentified)	N/A	N/A	N/A	P8a	1	0
WCGOP	6/13/2017	WC	Steller Sea Lion	Eastern US	NSI	A Steller sea lion was caught in trawl gear, brought aboard, and released from the net. Once free from the net the sea lion quickly jumped off the side of the boat and into the water. No visible signs of injury.	NSI	Entangled / entrapped	Fishery gear	Catch shares bottom trawl	Commercial	Trawl	P4	0	0
ADFG	6/16/2017	SEAK	Steller Sea Lion	Eastern US	SI	A female Steller sea lion was observed with a flasher at the edge of its mouth.	SI	Hooked	Fishery gear	Salmon hook and line	Unknown	Hook and line	P2	1	0
ADFG	6/19/2017	SEAK	Steller Sea Lion	Eastern US	NSI	An adult male Steller sea lion was observed with a hook in its cheek, outside of the teeth.	NSI	Hooked	Fishery gear	Unknown	Unknown	Unknown	P5b	0	0
AKRO	6/23/2017	GOA	Steller Sea Lion	Eastern US	SI	A male Steller sea lion was hooked in the mouth with a circle hook from an Alaska halibut subsistence longline. The line was cut leaving the circle hook, gangion, and 10 feet of groundline trailing behind the animal.	SI	Hooked	Fishery gear	AK halibut longline	Alaska Subsistence	Longline	P5a	1	0
ADFG	6/23/2017	SEAK	Steller Sea Lion	Eastern US	SI	An adult female Steller sea lion was observed with a circumferential neck entanglement caused by an unknown material.	SI	Constricting entanglement	Marine debris (unidentified)	N/A	N/A	N/A	P8a	1	0
ADFG	6/27/2017	SEAK	Steller Sea Lion	Eastern US	SI	An adult female Steller sea lion was observed with a circumferential neck entanglement caused by an unknown material.	SI	Constricting entanglement	Marine debris (unidentified)	N/A	N/A	N/A	P8a	1	0
WCRO	7/1/2017	WC	Steller Sea Lion	Eastern US	SI	A subadult Steller sea lion was observed with a mass of gray trawl net wrapped around its neck.	SI	Constricting entanglement	Fishery gear	Unknown trawl	Unknown	Trawl	P8a	1	0
ADFG	7/2/2017	SEAK	Steller Sea Lion	Eastern US	SI	An adult female Steller sea lion was observed with a circumferential neck entanglement caused by a packing band.	SI	Constricting entanglement	Marine debris (packing band)	N/A	N/A	N/A	P8a	1	0

Table 1 -- Human-marine mammal interaction records reviewed for injury and mortality, 2016-2020.

Source of Record	Date	Area	Common Name	Stock	Initial Assessment	Determination Details	Final Determination	Mechanism of Injury	Source of Injury	Fishery Name	Fishery Type	Fishery Method	SI Criteria	M/SI Value	LOF Value
ADFG	7/2/2017	SEAK	Steller Sea Lion	Eastern US	SI	A male Steller sea lion was observed with a circumferential neck entanglement caused by an unknown material.	SI	Constricting entanglement	Marine debris (unidentified)	N/A	N/A	N/A	P8a	1	0
ADFG	7/2/2017	SEAK	Steller Sea Lion	Eastern US	SI	A subadult female Steller sea lion was observed with a circumferential neck entanglement caused by a packing band. This animal was darted and disentangled on 6/30/2018.	NSI	Constricting entanglement	Marine debris (packing band)	N/A	N/A	N/A	P7b	0	0
ADFG	7/3/2017	SEAK	Steller Sea Lion	Eastern US	SI	A male Steller sea lion was observed with a hook in its mouth with trailing baited line.	SI	Hooked	Fishery gear	Unknown hook and line	Unknown	Hook and line	P5a	1	0
ADFG	7/3/2017	SEAK	Steller Sea Lion	Eastern US	SI	A subadult Steller sea lion was observed with a flasher at the edge of its mouth.	SI	Hooked	Fishery gear	Salmon hook and line	Unknown	Hook and line	P2	1	0
ADFG	7/3/2017	SEAK	Steller Sea Lion	Eastern US	SI	An adult female Steller sea lion was observed with a circumferential neck entanglement caused by a packing band.	SI	Constricting entanglement	Marine debris (packing band)	N/A	N/A	N/A	P8a	1	0
ADFG	7/3/2017	SEAK	Steller Sea Lion	Eastern US	SI	An adult female Steller sea lion was observed with a circumferential neck entanglement caused by an unknown material.	SI	Constricting entanglement	Marine debris (unidentified)	N/A	N/A	N/A	P8a	1	0
ADFG	7/3/2017	SEAK	Steller Sea Lion	Eastern US	SI	A juvenile Steller sea lion was observed with a hook in its lip with trailing cord.	SI	Hooked	Fishery gear	Unknown hook and line	Unknown	Hook and line	P6	1	0
ADFG	7/3/2017	SEAK	Steller Sea Lion	Eastern US	NSI	An adult male Steller sea lion was observed with a hook in its lip, outside of the teeth.	NSI	Hooked	Fishery gear	Unknown hook and line	Unknown	Hook and line	P5b	0	0
ADFG	7/4/2017	SEAK	Steller Sea Lion	Eastern US	SI	An adult female Steller sea lion was observed with a circumferential neck entanglement caused by an unknown material.	SI	Constricting entanglement	Marine debris (unidentified)	N/A	N/A	N/A	P8a	1	0
ADFG	7/4/2017	SEAK	Steller Sea Lion	Eastern US	SI	An adult female Steller sea lion was observed with a circumferential neck entanglement caused by an unknown material.	SI	Constricting entanglement	Marine debris (unidentified)	N/A	N/A	N/A	P8a	1	0
AKRO	7/5/2017	SEAK	Steller Sea Lion	Eastern US	SI	A subadult male Steller sea lion was observed hauled out with a flasher at the edge of its mouth. A disentanglement effort using a dart was unsuccessful.	SI	Hooked	Fishery gear	Salmon hook and line	Unknown	Hook and line	P2	1	0
AKRO	7/5/2017	SEAK	Steller Sea Lion	Eastern US	SI	A large male Steller sea lion was observed hauled out with a fishing lure hooked in its mouth. The flasher was hanging from its mouth.	SI	Hooked	Fishery gear	Salmon hook and line	Unknown	Hook and line	P5a	1	0
ADFG	7/5/2017	SEAK	Steller Sea Lion	Eastern US	SI	A subadult Steller sea lion was observed with a flasher at the edge of its mouth with trailing monofilament line. A disentanglement attempt was unsuccessful.	SI	Hooked	Fishery gear	Salmon hook and line	Unknown	Hook and line	P2	1	0
ADFG	7/5/2017	SEAK	Steller Sea Lion	Eastern US	SI	An adult female Steller sea lion was observed with a circumferential neck entanglement caused by an unknown material.	SI	Constricting entanglement	Marine debris (unidentified)	N/A	N/A	N/A	P8a	1	0

Table 1 -- Human-marine mammal interaction records reviewed for injury and mortality, 2016-2020.

Source of Record	Date	Area	Common Name	Stock	Initial Assessment	Determination Details	Final Determination	Mechanism of Injury	Source of Injury	Fishery Name	Fishery Type	Fishery Method	SI Criteria	M/SI Value	LOF Value
ADFG	7/5/2017	SEAK	Steller Sea Lion	Eastern US	SI	An adult male Steller sea lion was observed with a flasher at the edge of its mouth.	SI	Hooked	Fishery gear	Salmon hook and line	Unknown	Hook and line	P2	1	0
ADFG	7/5/2017	SEAK	Steller Sea Lion	Eastern US	SI	An adult male Steller sea lion was observed with a circumferential neck entanglement caused by monofilament line.	SI	Constricting entanglement	Fishery gear	Salmon hook and line	Unknown	Hook and line	P8a	1	0
ADFG	7/6/2017	SEAK	Steller Sea Lion	Eastern US	SI	A female Steller sea lion was observed with a flasher at the edge of its mouth.	SI	Hooked	Fishery gear	Salmon hook and line	Unknown	Hook and line	P2	1	0
ADFG	7/6/2017	SEAK	Steller Sea Lion	Eastern US	SI	A subadult male Steller sea lion was observed with a flasher at the edge of its mouth.	SI	Hooked	Fishery gear	Salmon hook and line	Unknown	Hook and line	P2	1	0
ADFG	7/6/2017	SEAK	Steller Sea Lion	Eastern US	SI	An adult Steller sea lion was observed with a flasher at the edge of its mouth.	SI	Hooked	Fishery gear	Salmon hook and line	Unknown	Hook and line	P2	1	0
AKRO	7/6/2017	SEAK	Steller Sea Lion	Eastern US	SI	A subadult male Steller sea lion with a circumferential neck entanglement caused by a thick rubber belt was darted and disentangled.	NSI	Constricting entanglement	Marine debris (unidentified)	N/A	N/A	N/A	P7b	0	0
ADFG	7/6/2017	SEAK	Steller Sea Lion	Eastern US	SI	A male Steller sea lion was observed with a circumferential neck entanglement caused by a fan belt. This animal was darted and disentangled on 7/06/2017.	NSI	Constricting entanglement	Marine debris	N/A	N/A	N/A	P7b	0	0
ADFG	7/7/2017	SEAK	Steller Sea Lion	Eastern US	SI	A male Steller sea lion was initially observed with a suspected circumferential neck entanglement caused by unidentified material on 07/07/2017. The animal was resighted in 08/2017 and darted on 7/04/2018 which revealed that the entanglement was gone leaving only a scar.	NSI	Constricting entanglement	Marine debris (unidentified)	N/A	N/A	N/A	P7b	0	0
AKRO	7/8/2017	SEAK	Steller Sea Lion	Eastern US	SI	A sub adult male Steller sea lion was observed hauled out with a flasher at the edge of its mouth.	SI	Hooked	Fishery gear	Salmon hook and line	Unknown	Hook and line	P2	1	0
ADFG	7/9/2017	SEAK	Steller Sea Lion	Eastern US	SI	An adult female Steller sea lion was observed with a circumferential neck entanglement caused by an unidentified material.	SI	Constricting entanglement	Marine debris (unidentified)	N/A	N/A	N/A	P8a	1	0
ADFG	7/10/2017	SEAK	Steller Sea Lion	Eastern US	NSI	A juvenile Steller sea lion was observed with a hook in the lip only, outside of the teeth.	NSI	Hooked	Fishery gear	Unknown hook and line	Unknown	Hook and line	P5b	0	0
AKRO	7/10/2017	SEAK	Steller Sea Lion	Eastern US	SI	An adult male Steller sea lion was observed hauled out with a flasher at the edge of its mouth with trailing monofilament line.	SI	Hooked	Fishery gear	Salmon hook and line	Unknown	Hook and line	P2	1	0
ADFG	7/10/2017	SEAK	Steller Sea Lion	Eastern US	SI	A juvenile Steller sea lion was observed with a flasher at the edge of its mouth.	SI	Hooked	Fishery gear	Salmon hook and line	Unknown	Hook and line	P2	1	0
ADFG	7/10/2017	SEAK	Steller Sea Lion	Eastern US	SI	A juvenile Steller sea lion was observed with a flasher at the edge of its mouth.	SI	Hooked	Fishery gear	Salmon hook and line	Unknown	Hook and line	P2	1	0
ADFG	7/12/2017	SEAK	Steller Sea Lion	Eastern US	SI	An adult female Steller sea lion was observed with a circumferential neck entanglement caused by an unidentified material.	SI	Constricting entanglement	Marine debris (unidentified)	N/A	N/A	N/A	P8a	1	0

Table 1 -- Human-marine mammal interaction records reviewed for injury and mortality, 2016-2020.

Source of Record	Date	Area	Common Name	Stock	Initial Assessment	Determination Details	Final Determination	Mechanism of Injury	Source of Injury	Fishery Name	Fishery Type	Fishery Method	SI Criteria	M/SI Value	LOF Value
ADFG	7/12/2017	SEAK	Steller Sea Lion	Eastern US	SI	An adult female Steller sea lion was observed with a circumferential neck entanglement caused by an unidentified material.	SI	Constricting entanglement	Marine debris (unidentified)	N/A	N/A	N/A	P8a	1	0
AKRO	7/13/2017	SEAK	Steller Sea Lion	Eastern US	SI	A subadult male Steller sea lion with a flasher at the edge of its mouth was darted, captured, and the ingested fishing gear was removed. The animal was then released.	NSI	Hooked	Fishery gear	Salmon hook and line	Unknown	Hook and line	P5c	0	0
ADFG	7/13/2017	SEAK	Steller Sea Lion	Eastern US	SI	An adult male Steller sea lion was observed with a flasher at the edge of its mouth.	SI	Hooked	Fishery gear	Salmon hook and line	Unknown	Hook and line	P2	1	0
ADFG	7/13/2017	SEAK	Steller Sea Lion	Eastern US	SI	A Steller sea lion was observed entangled with line above the eyes and around the face and mouth.	SI	Constricting entanglement	Marine debris	N/A	N/A	N/A	P8a	1	0
AKRO	7/14/2017	SEAK	Steller Sea Lion	Eastern US	SI	A Steller sea lion was observed hauled out with a flasher at the edge of its mouth.	SI	Hooked	Fishery gear	Salmon hook and line	Unknown	Hook and line	P2	1	0
ADFG	7/14/2017	SEAK	Steller Sea Lion	Eastern US	SI	An adult female Steller sea lion was observed with a circumferential neck entanglement caused by a packing band.	SI	Constricting entanglement	Marine debris (packing band)	N/A	N/A	N/A	P8a	1	0
ADFG	7/14/2017	SEAK	Steller Sea Lion	Eastern US	SI	A Steller sea lion was observed with a circumferential neck entanglement caused by a packing band.	SI	Constricting entanglement	Marine debris (packing band)	N/A	N/A	N/A	P8a	1	0
ADFG	7/14/2017	SEAK	Steller Sea Lion	Eastern US	SI	A male Steller sea lion was observed with a flasher at the edge of its mouth.	SI	Hooked	Fishery gear	Salmon hook and line	Unknown	Hook and line	P2	1	0
ADFG	7/15/2017	SEAK	Steller Sea Lion	Eastern US	SI	A male Steller sea lion was observed with a flasher at the edge of its mouth. A disentanglement effort removed the flasher but not the ingested hook.	SI	Hooked	Fishery gear	Salmon hook and line	Unknown	Hook and line	P2	1	0
ADFG	7/19/2017	SEAK	Steller Sea Lion	Eastern US	SI	A juvenile Steller sea lion was observed with a flasher at the edge of its mouth.	SI	Hooked	Fishery gear	Salmon hook and line	Unknown	Hook and line	P2	1	0
AKRO	7/27/2017	SEAK	Steller Sea Lion	Eastern US	SI	A Steller sea lion was observed hauled out with a flasher at the edge of its mouth.	SI	Hooked	Fishery gear	Salmon hook and line	Unknown	Hook and line	P2	1	0
AKRO	7/29/2017	SEAK	Steller Sea Lion	Eastern US	SI	A small Steller sea lion was observed with a fishing flasher trailing behind it, and it may have swallowed fishing gear.	SI	Hooked	Fishery gear	Salmon hook and line	Unknown	Hook and line	P2	1	0
WCGOP	7/30/2017	WC	Steller Sea Lion	Eastern US	DEAD	A dead Steller sea lion was caught in catch shares EM bottom trawl gear.	DEAD	Entangled / entrapped	Fishery gear	Catch shares EM bottom trawl	Commercial	Trawl	N/A	1	1
WCGOP	8/27/2017	WC	Steller Sea Lion	Eastern US	NSI	A Steller sea lion was caught in trawl gear, brought aboard the vessel, and released from the net. The crew yelled and sprayed the animal with the deck hose until it jumped off the trawl ramp. The animal seemed confused but had no visible signs of injury.	NSI	Entangled / entrapped	Fishery gear	Catch shares bottom trawl	Commercial	Trawl	P4	0	0
AKRO	8/30/2017	SEAK	Steller Sea Lion	Eastern US	SI	A Steller sea lion was observed hauled out with a flasher at the edge of its mouth.	SI	Hooked	Fishery gear	Salmon hook and line	Unknown	Hook and line	P2	1	0

Table 1 -- Human-marine mammal interaction records reviewed for injury and mortality, 2016-2020.

Source of Record	Date	Area	Common Name	Stock	Initial Assessment	Determination Details	Final Determination	Mechanism of Injury	Source of Injury	Fishery Name	Fishery Type	Fishery Method	SI Criteria	M/SI Value	LOF Value
ADFG	9/12/2017	SEAK	Steller Sea Lion	Eastern US	SI	An adult male Steller sea lion was observed with a circumferential neck entanglement caused by unidentified material.	SI	Constricting entanglement	Marine debris (unidentified)	N/A	N/A	N/A	P8a	1	0
AKRO	9/15/2017	SEAK	Steller Sea Lion	Eastern US	SI	An adult male Steller sea lion was observed hauled out with a flasher at the edge of its mouth.	SI	Hooked	Fishery gear	Salmon hook and line	Unknown	Hook and line	P2	1	0
AKRO	9/15/2017	SEAK	Steller Sea Lion	Eastern US	SI	A Steller sea lion was observed with a circumferential neck entanglement caused by unidentified marine debris.	SI	Constricting entanglement	Marine debris (unidentified)	N/A	N/A	N/A	P8a	1	0
A-SHOP	9/16/2017	WC	Steller Sea Lion	Eastern US	SI	A Steller sea lion was observed with a thin white line around its neck.	SI	Entangled / entrapped	Marine debris	N/A	N/A	N/A	P6	1	0
WCRO	9/23/2017	WC	Steller Sea Lion	Eastern US	SI	An adult female Steller sea lion was observed hauled out on a buoy with a flasher at the edge of its mouth.	SI	Hooked	Fishery gear	Salmon hook and line	Unknown	Hook and line	P2	1	0
A-SHOP	10/1/2017	WC	Steller Sea Lion	Eastern US	DEAD	A Steller sea lion was caught and killed by at-sea hake catcher processor midwater trawl gear.	DEAD	Entangled / entrapped	Fishery gear	At-sea hake mothership catcher vessel midwater trawl	Commercial	Trawl	N/A	1	1
A-SHOP	10/6/2017	WC	Steller Sea Lion	Eastern US	DEAD	A female Steller sea lion was caught and killed by at-sea hake catcher processor midwater trawl gear.	DEAD	Entangled / entrapped	Fishery gear	At-sea hake mothership catcher vessel midwater trawl	Commercial	Trawl	N/A	1	1
A-SHOP	10/8/2017	WC	Steller Sea Lion	Eastern US	DEAD	A female Steller sea lion was caught and killed by at-sea hake catcher processor midwater trawl gear.	DEAD	Entangled / entrapped	Fishery gear	At-sea hake catcher processor midwater trawl	Commercial	Trawl	N/A	1	1
WCGOP	10/23/2017	WC	Steller Sea Lion	Eastern US	NSI	A Steller sea lion was caught in catch shares EM trawl gear, brought aboard the vessel, and released from the net. The animal jumped overboard a few minutes after the codend was emptied. No visible signs of injury.	NSI	Entangled / entrapped	Fishery gear	Catch shares EM bottom trawl	Commercial	Trawl	P4	0	0
A-SHOP	10/23/2017	WC	Steller Sea Lion	Eastern US	DEAD	A Steller sea lion was caught and killed by at-sea hake catcher processor midwater trawl gear.	DEAD	Entangled / entrapped	Fishery gear	At-sea hake mothership catcher vessel midwater trawl	Commercial	Trawl	N/A	1	1
A-SHOP	10/24/2017	WC	Steller Sea Lion	Eastern US	DEAD	A Steller sea lion was caught and killed by at-sea hake - midwater trawl gear.	DEAD	Entangled / entrapped	Fishery gear	At-sea hake mothership catcher vessel midwater trawl	Commercial	Trawl	N/A	1	1
A-SHOP	10/25/2017	WC	Steller Sea Lion	Eastern US	DEAD	A male Steller sea lion was caught and killed by at-sea hake catcher processor midwater trawl gear.	DEAD	Entangled / entrapped	Fishery gear	At-sea hake mothership catcher vessel midwater trawl	Commercial	Trawl	N/A	1	1

Table 1 -- Human-marine mammal interaction records reviewed for injury and mortality, 2016-2020.

Source of Record	Date	Area	Common Name	Stock	Initial Assessment	Determination Details	Final Determination	Mechanism of Injury	Source of Injury	Fishery Name	Fishery Type	Fishery Method	SI Criteria	M/SI Value	LOF Value
A-SHOP	10/25/2017	WC	Steller Sea Lion	Eastern US	DEAD	A Steller sea lion was caught and killed by at-sea hake catcher processor midwater trawl gear.	DEAD	Entangled / entrapped	Fishery gear	At-sea hake mothership catcher vessel midwater trawl	Commercial	Trawl	N/A	1	1
A-SHOP	10/27/2017	WC	Steller Sea Lion	Eastern US	DEAD	A Steller sea lion was caught and killed by at-sea hake catcher processor midwater trawl gear.	DEAD	Entangled / entrapped	Fishery gear	At-sea hake mothership catcher vessel midwater trawl	Commercial	Trawl	N/A	1	1
WCGOP	11/1/2017	WC	Steller Sea Lion	Eastern US	NSI	A Steller sea lion was caught in trawl gear, brought aboard the vessel, and released from the net. The animal left the vessel once the haul was dumped in the trawl alley. No visible signs of injury.	NSI	Entangled / entrapped	Fishery gear	Catch shares bottom trawl	Commercial	Trawl	P4	0	0
WCGOP	11/3/2017	WC	Steller Sea Lion	Eastern US	NSI	A Steller sea lion was caught in trawl gear, brought aboard the vessel, and released from the net. The animal left the vessel once the haul dumped in the trawl alley. No visible signs of injury.	NSI	Entangled / entrapped	Fishery gear	Catch shares bottom trawl	Commercial	Trawl	P4	0	0
A-SHOP	11/6/2017	WC	Steller Sea Lion	Eastern US	DEAD	Two male Steller sea lions were caught and killed by at-sea hake catcher processor midwater trawl gear. This record represent 2/2.	DEAD	Entangled / entrapped	Fishery gear	At-sea hake catcher processor midwater trawl	Commercial	Trawl	N/A	1	1
A-SHOP	11/6/2017	WC	Steller Sea Lion	Eastern US	DEAD	Two male Steller sea lions were caught and killed by at-sea hake catcher processor midwater trawl gear. This record represent 1/2.	DEAD	Entangled / entrapped	Fishery gear	At-sea hake catcher processor midwater trawl	Commercial	Trawl	N/A	1	1
WCGOP	11/25/2017	WC	Steller Sea Lion	Eastern US	NSI	A Steller sea lion was caught in trawl gear, brought aboard the vessel, and released from the net. The animal jumped overboard as soon as the trawl net was dumped. No visible signs of injury.	NSI	Entangled / entrapped	Fishery gear	Catch shares bottom trawl	Commercial	Trawl	P4	0	0
WCGOP	11/25/2017	WC	Steller Sea Lion	Eastern US	DEAD	A Steller sea lion was caught and killed in catch shares bottom trawl gear.	DEAD	Entangled / entrapped	Fishery gear	Catch shares bottom trawl	Commercial	Trawl	N/A	1	1
WCGOP	12/7/2017	WC	Steller Sea Lion	Eastern US	NSI	Two Steller sea lions were caught in trawl gear, brought aboard the vessel, and released from the net. The animals jumped overboard as soon as the trawl net was dumped. No visible signs of injury. This record represents 2/2.	NSI	Entangled / entrapped	Fishery gear	Catch shares bottom trawl	Commercial	Trawl	P4	0	0
WCGOP	12/7/2017	WC	Steller Sea Lion	Eastern US	NSI	Two Steller sea lions were caught in trawl gear, brought aboard the vessel, and released from the net. The animals jumped overboard as soon as the trawl net was dumped. No visible signs of injury. This record represents 1/2.	NSI	Entangled / entrapped	Fishery gear	Catch shares bottom trawl	Commercial	Trawl	P4	0	0
WCGOP	12/12/2017	WC	Steller Sea Lion	Eastern US	NSI	A Steller sea lion was caught in catch shares EM trawl gear, brought aboard the vessel, and released from the net. The animal jumped overboard on its own following release from the net. No visible signs of injury.	NSI	Entangled / entrapped	Fishery gear	Catch shares EM bottom trawl	Commercial	Trawl	P4	0	0

Table 1 -- Human-marine mammal interaction records reviewed for injury and mortality, 2016-2020.

Source of Record	Date	Area	Common Name	Stock	Initial Assessment	Determination Details	Final Determination	Mechanism of Injury	Source of Injury	Fishery Name	Fishery Type	Fishery Method	SI Criteria	M/SI Value	LOF Value
WCGOP	1/4/2018	WC	Steller Sea Lion	Eastern US	NSI	A Steller sea lion was caught in catch shares bottom trawl gear and brought on deck. The animal was released from the gear and exited the vessel on its own. No injuries were reported for this animal.	NSI	Entangled / entrapped	Fishery gear	Catch shares bottom trawl	Commercial	Trawl	P4	0	0
AKRO	1/16/2018	SEAK	Steller Sea Lion	Eastern US	SI	An adult female Steller sea lion was observed with a circumferential neck entanglement caused by an unknown material / marine debris.	SI	Constricting entanglement	Marine debris (unidentified)	N/A	N/A	N/A	P8a	1	0
AKRO	1/17/2018	SEAK	Steller Sea Lion	Eastern US	DEAD	A subadult female Steller sea lion was found dead due to a flipper entanglement caused by line / marine debris.	DEAD	Entangled / entrapped	Marine debris (unidentified)	N/A	N/A	N/A	N/A	1	0
WCGOP	1/30/2018	WC	Steller Sea Lion	Eastern US	DEAD	A male Steller sea lion was caught and killed in OA CA halibut bottom trawl gear.	DEAD	Entangled / entrapped	Fishery gear	OA CA Halibut Bottom Trawl	Commercial	Trawl	N/A	1	1
WCGOP	1/31/2018	WC	Steller Sea Lion	Eastern US	NSI	A Steller sea lion was caught in catch shares bottom trawl gear. The vessel's crew cut a hole in the trawl net before bringing it onboard. The animal was then able to swim out of the net unharmed. No injuries were reported for this animal.	NSI	Entangled / entrapped	Fishery gear	Catch shares bottom trawl	Commercial	Trawl	P4	0	0
WCRO	2/26/2018	WC	Steller Sea Lion	Eastern US	DEAD	An adult male Steller sea lion was found dead in a state of moderate decomposition. The animal was necropsied and a fish hook was recovered from its esophagus. The necropsy also found significant signs of trauma, including bloody fluid in the thoracic cavity, areas of hemorrhage, and tissue/organ damage. The animal's intestines were twisted, but otherwise the sea lion had excellent body condition.	DEAD	Hooked	Fishery gear	Unknown hook and line	Unknown	Unknown	N/A	1	0
WCGOP	3/7/2018	WC	Steller Sea Lion	Eastern US	NSI	A Steller sea lion was caught in catch shares EM bottom trawl gear and brought on deck. The animal was released from the gear and exited the vessel on its own. No injuries were reported for this animal.	NSI	Entangled / entrapped	Fishery gear	Catch Shares EM bottom trawl	Commercial	Trawl	P4	0	0
WCGOP	3/9/2018	WC	Steller Sea Lion	Eastern US	NSI	A Steller sea lion was caught in catch shares bottom trawl gear and brought on deck. The animal was released from the gear at which time it jumped off the boat. No injuries were reported for this animal.	NSI	Entangled / entrapped	Fishery gear	Catch shares bottom trawl	Commercial	Trawl	P4	0	0
AKRO	4/13/2018	SEAK	Steller Sea Lion	Eastern US	DEAD	An adult Steller sea lion was found dead of a gunshot wound to the head. An OLE investigation concluded that the shooting was intentional and non-subsistence.	DEAD	Shot	Projectile weapon	N/A	N/A	N/A	N/A	1	0
WCGOP	4/28/2018	WC	Steller Sea Lion	Eastern US	NSI	A Steller sea lion was caught in catch shares bottom trawl gear and brought on deck. The animal was released from the gear and jumped off the boat after 10 minutes. No injuries were reported for this animal.	NSI	Entangled / entrapped	Fishery gear	Catch shares bottom trawl	Commercial	Trawl	P4	0	0
WCRO	5/14/2018	WC	Steller Sea Lion	Eastern US	DEAD	A female Steller sea lion pup was found in a state of advanced decomposition. A necropsy was conducted and found that the animal's lower jaw and nasal area of the skull were broken. There was also hemorrhage and trauma on head and neck. This animal's death is suspected to be of human causes.	DEAD	Body trauma	Other	N/A	N/A	N/A	N/A	1	0

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Source of Record	Date	Area	Common Name	Stock	Initial Assessment	Determination Details	Final Determination	Mechanism of Injury	Source of Injury	Fishery Name	Fishery Type	Fishery Method	SI Criteria	M/SI Value	LOF Value
ADFG	5/28/2018	SEAK	Steller Sea Lion	Eastern US	SI	An adult male Steller sea lion was observed with a circumferential neck entanglement caused by an unknown material / marine debris.	SI	Constricting entanglement	Marine debris (unidentified)	N/A	N/A	N/A	P8a	1	0
ADFG	5/29/2018	SEAK	Steller Sea Lion	Eastern US	SI	An adult male Steller sea lion was observed with a circumferential neck entanglement caused by an unknown material / marine debris.	SI	Constricting entanglement	Marine debris (unidentified)	N/A	N/A	N/A	P8a	1	0
ADFG	5/29/2018	SEAK	Steller Sea Lion	Eastern US	SI	A subadult male Steller sea lion was observed with a circumferential neck entanglement caused by an unknown material / marine debris.	SI	Constricting entanglement	Marine debris (unidentified)	N/A	N/A	N/A	P8a	1	0
ADFG	6/4/2018	SEAK	Steller Sea Lion	Eastern US	SI	An adult female Steller sea lion was observed with a circumferential neck entanglement caused by an unknown material / marine debris. This animal was also observed nursing a pup.	SI	Constricting entanglement	Marine debris (unidentified)	N/A	N/A	N/A	P8a	1	0
ADFG	6/6/2018	SEAK	Steller Sea Lion	Eastern US	SI	An adult female Steller sea lion was observed with a circumferential neck entanglement caused by a white packing band. This animal was also observed with a pup.	SI	Constricting entanglement	Marine debris (packing band)	N/A	N/A	N/A	P8a	1	0
AKRO	6/13/2018	SEAK	Steller Sea Lion	Eastern US	SI	A Steller sea lion was observed with a circumferential neck entanglement caused by an unknown material / marine debris.	SI	Constricting entanglement	Marine debris (unidentified)	N/A	N/A	N/A	P8a	1	0
ADFG	6/14/2018	SEAK	Steller Sea Lion	Eastern US	SI	A subadult male Steller sea lion was observed with a circumferential neck entanglement caused by an unknown material / marine debris.	SI	Constricting entanglement	Marine debris (unidentified)	N/A	N/A	N/A	P8a	1	0
A-SHOP	6/17/2018	WC	Steller Sea Lion	Eastern US	DEAD	Two Steller sea lions were caught and killed by at-sea hake - midwater trawl gear. This record represents 2/2.	DEAD	Entangled / entrapped	Fishery gear	At-sea hake - MS catcher vessel - midwater trawl	Commercial	Trawl	N/A	1	1
A-SHOP	6/17/2018	WC	Steller Sea Lion	Eastern US	DEAD	Two Steller sea lions were caught and killed by at-sea hake - midwater trawl gear. This record represents 1/2.	DEAD	Entangled / entrapped	Fishery gear	At-sea hake - MS catcher vessel - midwater trawl	Commercial	Trawl	N/A	1	1
A-SHOP	6/20/2018	WC	Steller Sea Lion	Eastern US	DEAD	Two female Steller sea lions were caught and killed by at-sea hake - midwater trawl gear. This record represents 1/2.	DEAD	Entangled / entrapped	Fishery gear	At-sea hake - MS catcher vessel - midwater trawl	Commercial	Trawl	N/A	1	1
A-SHOP	6/20/2018	WC	Steller Sea Lion	Eastern US	DEAD	Two female Steller sea lions were caught and killed by at-sea hake - midwater trawl gear. This record represents 2/2.	DEAD	Entangled / entrapped	Fishery gear	At-sea hake - MS catcher vessel - midwater trawl	Commercial	Trawl	N/A	1	1
ADFG	6/27/2018	SEAK	Steller Sea Lion	Eastern US	SI	A Steller sea lion was observed with a circumferential neck entanglement caused by an unknown material / marine debris.	SI	Constricting entanglement	Marine debris (unidentified)	N/A	N/A	N/A	P8a	1	0
ADFG	6/27/2018	SEAK	Steller Sea Lion	Eastern US	SI	A subadult male Steller sea lion was observed with a circumferential neck entanglement caused by an unknown material / marine debris.	SI	Constricting entanglement	Marine debris (unidentified)	N/A	N/A	N/A	P8a	1	0

Table 1 -- Human-marine mammal interaction records reviewed for injury and mortality, 2016-2020.

Source of Record	Date	Area	Common Name	Stock	Initial Assessment	Determination Details	Final Determination	Mechanism of Injury	Source of Injury	Fishery Name	Fishery Type	Fishery Method	SI Criteria	M/SI Value	LOF Value
ADFG	6/28/2018	SEAK	Steller Sea Lion	Eastern US	SI	A Steller sea lion was observed with a circumferential neck entanglement caused by an unknown material / marine debris.	SI	Constricting entanglement	Marine debris (unidentified)	N/A	N/A	N/A	P8a	1	0
ADFG	6/28/2018	SEAK	Steller Sea Lion	Eastern US	SI	A subadult male Steller sea lion was observed with a circumferential neck entanglement caused by a packing band. This animal was captured and disentangled on 06/30/2018.	NSI	Constricting entanglement	Marine debris (packing band)	N/A	N/A	N/A	P7b	0	0
ADFG	6/29/2018	SEAK	Steller Sea Lion	Eastern US	SI	A subadult male Steller sea lion ingested salmon fish and line gear and was observed with green flasher line hanging from its mouth.	SI	Hooked	Fishery gear	Salmon hook and line	Unknown	Hook and line	P2	1	0
ADFG	6/30/2018	SEAK	Steller Sea Lion	Eastern US	SI	A Steller sea lion was observed with a circumferential neck entanglement caused by an unknown material / marine debris.	SI	Constricting entanglement	Marine debris (unidentified)	N/A	N/A	N/A	P8a	1	0
ADFG	6/30/2018	SEAK	Steller Sea Lion	Eastern US	SI	An adult female Steller sea lion was observed with a circumferential neck entanglement caused by an unknown material / marine debris.	SI	Constricting entanglement	Marine debris (unidentified)	N/A	N/A	N/A	P8a	1	0
ADFG	7/1/2018	SEAK	Steller Sea Lion	Eastern US	SI	A juvenile Steller sea lion was observed with a constricting monofilament line entanglement around the lower hips/abdomen.	SI	Constricting entanglement	Marine debris	N/A	N/A	N/A	P8a	1	0
ADFG	7/2/2018	SEAK	Steller Sea Lion	Eastern US	SI	A subadult male Steller sea lion was observed with a silver flasher at the edge of its mouth.	SI	Hooked	Fishery gear	Salmon hook and line	Unknown	Hook and line	P2	1	0
ADFG	7/2/2018	SEAK	Steller Sea Lion	Eastern US	SI	An adult male Steller sea lion was observed with a silver flasher at the edge of its mouth.	SI	Hooked	Fishery gear	Salmon hook and line	N/A	Hook and line	P2	1	0
ADFG	7/3/2018	SEAK	Steller Sea Lion	Eastern US	SI	An adult female Steller sea lion was observed with a circumferential neck entanglement caused by an unknown material / marine debris. This animal was also observed nursing a pup.	SI	Constricting entanglement	Marine debris (unidentified)	N/A	N/A	N/A	P8a	1	0
ADFG	7/3/2018	SEAK	Steller Sea Lion	Eastern US	SI	A juvenile Steller sea lion was observed with a circumferential neck entanglement caused by an unknown material / marine debris.	SI	Constricting entanglement	Marine debris (unidentified)	N/A	N/A	N/A	P8a	1	0
ADFG	7/3/2018	SEAK	Steller Sea Lion	Eastern US	SI	An adult female Steller sea lion was observed with a circumferential neck entanglement caused by an unknown material / marine debris.	SI	Constricting entanglement	Marine debris (unidentified)	N/A	N/A	N/A	P8a	1	0
ADFG	7/3/2018	SEAK	Steller Sea Lion	Eastern US	SI	An adult female Steller sea lion was observed with a circumferential neck entanglement caused by an unknown material / marine debris.	SI	Constricting entanglement	Marine debris (unidentified)	N/A	N/A	N/A	P8a	1	0
ADFG	7/3/2018	SEAK	Steller Sea Lion	Eastern US	SI	An adult male Steller sea lion was observed with a flasher at the edge of its mouth. The sea lion also had an eye injury.	SI	Hooked	Fishery gear	Salmon hook and line	Unknown	Hook and line	P2	1	0
ADFG	7/4/2018	SEAK	Steller Sea Lion	Eastern US	SI	An adult female Steller sea lion was observed with a circumferential neck entanglement caused by an unknown material / marine debris.	SI	Constricting entanglement	Marine debris (unidentified)	N/A	N/A	N/A	P8a	1	0

Table 1 -- Human-marine mammal interaction records reviewed for injury and mortality, 2016-2020.

Source of Record	Date	Area	Common Name	Stock	Initial Assessment	Determination Details	Final Determination	Mechanism of Injury	Source of Injury	Fishery Name	Fishery Type	Fishery Method	SI Criteria	M/SI Value	LOF Value
ADFG	7/4/2018	SEAK	Steller Sea Lion	Eastern US	SI	A Steller sea lion was observed with a green and red flasher at the edge of its mouth.	SI	Hooked	Fishery gear	Salmon hook and line	Unknown	Hook and line	P2	1	0
ADFG	7/4/2018	SEAK	Steller Sea Lion	Eastern US	SI	An adult female Steller sea lion was observed with a circumferential neck entanglement caused by an unknown material / marine debris. This animal was also observed nursing a juvenile.	SI	Constricting entanglement	Marine debris (unidentified)	N/A	N/A	N/A	P8a	1	0
ADFG	7/5/2018	SEAK	Steller Sea Lion	Eastern US	SI	An adult male Steller sea lion was observed with a circumferential neck entanglement caused by an unknown material / marine debris.	SI	Constricting entanglement	Marine debris (unidentified)	N/A	N/A	N/A	P8a	1	0
ADFG	7/5/2018	SEAK	Steller Sea Lion	Eastern US	SI	An adult male Steller sea lion was observed with a flasher, a 2 inch orange ball, and 20 - 30 inches of line hanging from its mouth.	SI	Hooked	Fishery gear	Salmon hook and line	Unknown	Hook and line	P2	1	0
ADFG	7/5/2018	SEAK	Steller Sea Lion	Eastern US	SI	An adult male Steller sea lion was observed to be hooked with a white fishing lure at the edge of its mouth.	SI	Hooked	Fishery gear	Unknown hook and line	Unknown	Hook and line	P5a	1	0
ADFG	7/5/2018	SEAK	Steller Sea Lion	Eastern US	SI	A Steller sea lion was observed with a circumferential neck entanglement caused by an unknown material / marine debris.	SI	Constricting entanglement	Marine debris (unidentified)	N/A	N/A	N/A	P8a	1	0
ADFG	7/5/2018	SEAK	Steller Sea Lion	Eastern US	SI	An adult male Steller sea lion was observed with a blue flasher at the edge of its mouth.	SI	Hooked	Fishery gear	Salmon hook and line	Unknown	Hook and line	P2	1	0
ADFG	7/5/2018	SEAK	Steller Sea Lion	Eastern US	SI	A subadult male Steller sea lion was observed with a green and red flasher at the edge of its mouth.	SI	Hooked	Fishery gear	Salmon hook and line	Unknown	Hook and line	P2	1	0
ADFG	7/6/2018	SEAK	Steller Sea Lion	Eastern US	SI	An adult male Steller sea lion was observed with a circumferential neck entanglement caused by an unknown material / marine debris.	SI	Constricting entanglement	Marine debris (unidentified)	N/A	N/A	N/A	P8a	1	0
ADFG	7/6/2018	SEAK	Steller Sea Lion	Eastern US	SI	An adult female Steller sea lion was observed with a circumferential neck entanglement caused by an unknown material / marine debris.	SI	Constricting entanglement	Marine debris (unidentified)	N/A	N/A	N/A	P8a	1	0
ADFG	7/7/2018	SEAK	Steller Sea Lion	Eastern US	SI	An adult male Steller sea lion was observed with a circumferential neck entanglement caused by an unknown material / marine debris.	SI	Constricting entanglement	Marine debris (unidentified)	N/A	N/A	N/A	P8a	1	0
ADFG	7/7/2018	SEAK	Steller Sea Lion	Eastern US	SI	An adult female Steller sea lion was observed with a circumferential neck entanglement caused by an unknown material / marine debris.	SI	Constricting entanglement	Marine debris (unidentified)	N/A	N/A	N/A	P8a	1	0
ADFG	7/8/2018	SEAK	Steller Sea Lion	Eastern US	SI	A subadult male Steller sea lion ingested fishery gear and was observed with green monofilament line hanging from its mouth.	SI	Hooked	Fishery gear	Unknown hook and line	Unknown	Hook and line	P2	1	0
ADFG	7/9/2018	SEAK	Steller Sea Lion	Eastern US	SI	A subadult male Steller sea lion was observed with a circumferential neck entanglement caused by an unknown material / marine debris.	SI	Constricting entanglement	Marine debris (unidentified)	N/A	N/A	N/A	P8a	1	0

Table 1 -- Human-marine mammal interaction records reviewed for injury and mortality, 2016-2020.

Source of Record	Date	Area	Common Name	Stock	Initial Assessment	Determination Details	Final Determination	Mechanism of Injury	Source of Injury	Fishery Name	Fishery Type	Fishery Method	SI Criteria	M/SI Value	LOF Value
AKRO	8/12/2018	SEAK	Steller Sea Lion	Eastern US	SI	A Steller sea lion ingested troll fishery gear and was observed with a halibut hook, line, gangion, and weight hanging from its mouth.	SI	Hooked	Fishery gear	Unknown halibut	Unknown	Longline	P2	1	0
AKRO	8/20/2018	SEAK	Steller Sea Lion	Eastern US	SI	A subadult Steller sea lion was observed with a flasher at the edge of its mouth. This animal was captured and disentangled.	NSI	Hooked	Fishery gear	Salmon hook and line	Unknown	Hook and line	P7b	0	0
WCRO	9/4/2018	WC	Steller Sea Lion	Eastern US	DEAD	An adult male Steller sea lion hybrid was found dead in an advanced state of decomposition. A necropsy was conducted and found that the animal appeared to have excellent body condition with heavy trauma and possible pellet holes in neck with associated hemorrhage. The animal's skull appeared to be that of a Steller sea lion but the baculum was clearly a California sea lion. This animal has been categorized as a Steller sea lion for the purpose of this report.	DEAD	Shot	Projectile weapon	N/A	N/A	N/A	N/A	1	0
AKRO	9/14/2018	SEAK	Steller Sea Lion	Eastern US	SI	A Steller sea lion was observed with a flasher at the edge of its mouth. The animal was isolated and appeared in distress.	SI	Hooked	Fishery gear	Salmon hook and line	Unknown	Hook and line	P2	1	0
A-SHOP	9/16/2018	WC	Steller Sea Lion	Eastern US	DEAD	A female Steller sea lion was caught and killed by at-sea hake catcher processor midwater trawl gear.	DEAD	Entangled / entrapped	Fishery gear	At-sea hake - catcher processor - midwater trawl	Commercial	Trawl	N/A	1	1
A-SHOP	9/25/2018	WC	Steller Sea Lion	Eastern US	DEAD	A Steller sea lion was caught and killed by at-sea hake - midwater trawl gear.	DEAD	Entangled / entrapped	Fishery gear	At-sea hake - mothership catcher vessel - midwater trawl	Commercial	Trawl	N/A	1	1
WCGOP	9/30/2018	WC	Steller Sea Lion	Eastern US	NSI	A Steller sea lion was caught in catch shares bottom trawl gear and brought on deck. The animal was released from the gear and exited the vessel on its own. No injuries were reported for this animal.	NSI	Entangled / entrapped	Fishery gear	Catch shares bottom trawl	Commercial	Trawl	P4	0	0
AKRO	10/2/2018	SEAK	Steller Sea Lion	Eastern US	SI	A subadult male Steller sea lion was observed with a circumferential neck entanglement caused by an unknown material / marine debris.	SI	Constricting entanglement	Marine debris (unidentified)	N/A	N/A	N/A	P8a	1	0
AKRO	10/2/2018	SEAK	Steller Sea Lion	Eastern US	SI	A subadult Steller sea lion was observed with a flasher at the edge of its mouth. By Oct 12, 2018 the animal started to look in poor health. No reports thereafter.	SI	Hooked	Fishery gear	Salmon hook and line	Unknown	Hook and line	P2	1	0
A-SHOP	10/14/2018	WC	Steller Sea Lion	Eastern US	DEAD	A female Steller sea lion was caught and killed by at-sea hake catcher processor midwater trawl gear.	DEAD	Entangled / entrapped	Fishery gear	At-sea hake - catcher processor - midwater trawl	Commercial	Trawl	N/A	1	1
A-SHOP	10/18/2018	WC	Steller Sea Lion	Eastern US	SI	A female Steller sea lion was caught in at-sea hake catcher processor midwater trawl gear and brought on deck. The animal was still breathing and moving around slightly but had white foam coming from its mouth. No other visible injuries were observed, but it was reported that it is unlikely that the animal made it out of the encounter unharmed. The animal was released overboard, but the observer was unsure if it survived the encounter.	SI	Entangled / entrapped	Fishery gear	At-sea hake - catcher processor - midwater trawl	Commercial	Trawl	P4	1	1

Table 1 -- Human-marine mammal interaction records reviewed for injury and mortality, 2016-2020.

Source of Record	Date	Area	Common Name	Stock	Initial Assessment	Determination Details	Final Determination	Mechanism of Injury	Source of Injury	Fishery Name	Fishery Type	Fishery Method	SI Criteria	M/SI Value	LOF Value
A-SHOP	10/18/2018	WC	Steller Sea Lion	Eastern US	NSI	A Steller sea lion was caught in at-sea hake catcher processor midwater trawl gear, brought aboard the vessel, and released from the net. After the release the animal disembarked the vessel. There were no reports of injury to the animal.	NSI	Entangled / entrapped	Fishery gear	At-sea hake - catcher processor - midwater trawl	Commercial	Trawl	P4	0	0
A-SHOP	10/18/2018	WC	Steller Sea Lion	Eastern US	DEAD	A male Steller sea lion was caught and killed by at-sea hake catcher processor midwater trawl gear.	DEAD	Entangled / entrapped	Fishery gear	At-sea hake - catcher processor - midwater trawl	Commercial	Trawl	N/A	1	1
A-SHOP	10/22/2018	WC	Steller Sea Lion	Eastern US	DEAD	A female Steller sea lion was caught and killed by at-sea hake - midwater trawl gear.	DEAD	Entangled / entrapped	Fishery gear	At-sea hake - mothership catcher vessel - midwater trawl	Commercial	Trawl	N/A	1	1
A-SHOP	10/26/2018	WC	Steller Sea Lion	Eastern US	DEAD	A female Steller sea lion was caught and killed by at-sea hake - midwater trawl gear.	DEAD	Entangled / entrapped	Fishery gear	At-sea hake - mothership catcher vessel - midwater trawl	Commercial	Trawl	N/A	1	1
A-SHOP	10/28/2018	WC	Steller Sea Lion	Eastern US	DEAD	A female Steller sea lion was caught and killed by at-sea hake - midwater trawl gear.	DEAD	Entangled / entrapped	Fishery gear	At-sea hake - mothership catcher vessel - midwater trawl	Commercial	Trawl	N/A	1	1
WCGOP	11/3/2018	WC	Steller Sea Lion	Eastern US	NSI	Two Steller sea lions were caught in catch shares bottom trawl gear and brought on deck (2 different hauls). The animals were released from the gear and exited the vessel on their own. No injuries were reported for these animals. This record represents 2/2.	NSI	Entangled / entrapped	Fishery gear	Catch shares bottom trawl	Commercial	Trawl	P4	0	0
WCGOP	11/3/2018	WC	Steller Sea Lion	Eastern US	NSI	Two Steller sea lions were caught in catch shares bottom trawl gear and brought on deck (2 different hauls). The animals were released from the gear and exited the vessel on their own. No injuries were reported for these animals. This record represents 1/2.	NSI	Entangled / entrapped	Fishery gear	Catch shares bottom trawl	Commercial	Trawl	P4	0	0
WCGOP	11/12/2018	WC	Steller Sea Lion	Eastern US	NSI	A Steller sea lion was caught twice (2 different hauls) in catch shares bottom trawl gear and brought on deck. On both occasions the animal was released from the gear and exited the vessel on its own. No injuries were reported for this animal on either occasion. This record represents 1/2.	NSI	Entangled / entrapped	Fishery gear	Catch shares bottom trawl	Commercial	Trawl	P4	0	0
WCGOP	11/12/2018	WC	Steller Sea Lion	Eastern US	NSI	A Steller sea lion was caught twice (2 different hauls) in catch shares bottom trawl gear and brought on deck. On both occasions the animal was released from the gear and exited the vessel on its own. No injuries were reported for this animal on either occasion. This record represents 2/2.	NSI	Entangled / entrapped	Fishery gear	Catch shares bottom trawl	Commercial	Trawl	P4	0	0

Table 1 -- Human-marine mammal interaction records reviewed for injury and mortality, 2016-2020.

Source of Record	Date	Area	Common Name	Stock	Initial Assessment	Determination Details	Final Determination	Mechanism of Injury	Source of Injury	Fishery Name	Fishery Type	Fishery Method	SI Criteria	M/SI Value	LOF Value
A-SHOP	11/19/2018	WC	Steller Sea Lion	Eastern US	NSI	A Steller sea lion was caught in at-sea hake catcher processor midwater trawl gear, brought aboard the vessel, and released from the net. After the release the animal disembarked the vessel via the stern trawl ramp. The animal was reported as being fully alive and mobile, and there were no reports of injury to the animal.	NSI	Entangled / entrapped	Fishery gear	At-sea hake - catcher processor - midwater trawl	Commercial	Trawl	P4	0	0
A-SHOP	11/20/2018	WC	Steller Sea Lion	Eastern US	NSI	A Steller sea lion was caught in midwater rockfish EM trawl gear and brought on deck. The animal was released from the gear at which time it jumped off the boat. No injuries were reported for this animal.	NSI	Entangled / entrapped	Fishery gear	Midwater Rockfish EM - Midwater Trawl	Commercial	Trawl	P4	0	0
NWIFC	1/1/2019	WC	Steller Sea Lion	Eastern US	DEAD	A Steller sea lion was incidentally killed in association with Washington tribal treaty salmon set gillnet fishing operations.	DEAD	Unknown	Unknown	Salmon set gillnet	WA Tribal	Gillnet	N/A	1	0
WCRO	1/23/2019	WC	Steller Sea Lion	Eastern US	DEAD	An adult female Steller sea lion was found dead in a state of moderate decomposition. A necropsy was conducted and found that the animal was pregnant, appeared to have good body condition, and died of wounds consistent with a gunshot to the posterior abdomen/pelvic area with associated hemorrhage.	DEAD	Shot	Projectile weapon	N/A	N/A	N/A	N/A	1	0
A-SHOP	2/4/2019	WC	Steller Sea Lion	Eastern US	NSI	A Steller sea lion was caught in midwater rockfish EM trawl gear and brought on deck. The animal was released from the gear, at which time it jumped off the boat. No injuries were reported for this animal.	NSI	Entangled / entrapped	Fishery gear	Midwater Rockfish EM - Midwater Trawl	Commercial	Trawl	P4	0	0
WCGOP	2/7/2019	WC	Steller Sea Lion	Eastern US	DEAD	A male Steller sea lion was caught and killed in OA CA halibut bottom trawl gear.	DEAD	Entangled / entrapped	Fishery gear	OA CA halibut bottom trawl	Commercial	Trawl	N/A	1	1
WCGOP	3/10/2019	WC	Steller Sea Lion	Eastern US	DEAD	An adult Steller sea lion was caught and killed by OA CA Halibut bottom trawl gear.	DEAD	Entangled / entrapped	Fishery gear	OA CA halibut bottom trawl	Commercial	Trawl	N/A	1	1
WCRO	3/22/2019	WC	Steller Sea Lion	Eastern US	DEAD	An adult female Steller sea lion was found dead in a state of advanced decomposition. A necropsy found that the animal was pregnant, appeared to have good body condition, and had a gunshot wound in the abdomen and into the uterus and stomach with associated hemorrhage.	DEAD	Shot	Projectile weapon	N/A	N/A	N/A	N/A	1	0
WCRO	3/28/2019	WC	Steller Sea Lion	Eastern US	DEAD	A yearling male Steller sea lion was found dead in a state of moderate decomposition. A necropsy found that the animal appeared to have poor body condition with gouges and scrapes associated with extensive dorsal hemorrhage along the back and around the neck, as well as extensive trauma on the left side of the head and internal bleeding. The examiner believed the injuries were consistent with a fishery interaction.	DEAD	Entangled / entrapped	Fishery gear	Unknown	Unknown	Unknown	N/A	1	0
WCRO	3/29/2019	WC	Steller Sea Lion	Eastern US	DEAD	A yearling male Steller sea lion was found dead in a state of moderate decomposition. A necropsy found that the animal appeared to have good body condition with line marks across the stomach and associated bruising on the abdomen, hemorrhage on the head and dorsal side, internal bleeding, fluid in the lungs, and twisted intestines. The examiner believed the injuries were consistent with a fishery interaction.	DEAD	Entangled / entrapped	Fishery gear	Unknown	Unknown	Unknown	N/A	1	0

Table 1 -- Human-marine mammal interaction records reviewed for injury and mortality, 2016-2020.

Source of Record	Date	Area	Common Name	Stock	Initial Assessment	Determination Details	Final Determination	Mechanism of Injury	Source of Injury	Fishery Name	Fishery Type	Fishery Method	SI Criteria	M/SI Value	LOF Value
ADFG	3/30/2019	SEAK	Steller Sea Lion	Eastern US	SI	An adult female Steller sea lion was observed with a circumferential neck entanglement caused by an unknown material / marine debris.	SI	Constricting entanglement	Marine debris (unidentified)	N/A	N/A	N/A	P8a	1	0
WCGOP	4/2/2019	WC	Steller Sea Lion	Eastern US	DEAD	An adult female Steller sea lion was caught and killed by OA CA Halibut bottom trawl gear.	DEAD	Entangled / entrapped	Fishery gear	OA CA halibut bottom trawl	Commercial	Trawl	N/A	1	1
WCRO	4/9/2019	WC	Steller Sea Lion	Eastern US	DEAD	An adult male Steller sea lion was found fresh dead. A necropsy found that the animal died of wounds consistent with a gunshot to the neck.	DEAD	Shot	Projectile weapon	N/A	N/A	N/A	N/A	1	0
WCRO	4/16/2019	WC	Steller Sea Lion	Eastern US	DEAD	A yearling male Steller sea lion was found in a state of moderate decomposition. A necropsy found that the animal had excellent body condition with external rub marks, hemorrhage, and trauma on its body, especially from the head to the foreflippers. Blood was found at the back of the neck and around the posterior brain. The examiner believed the injuries were consistent with a fishery interaction.	DEAD	Entangled / entrapped	Fishery gear	Unknown	Unknown	Unknown	N/A	1	0
ADFG	4/17/2019	SEAK	Steller Sea Lion	Eastern US	SI	An adult female Steller sea lion with a nursing juvenile was observed with a circumferential neck entanglement caused by an unknown material / marine debris. Based on its age, the juvenile was presumed to be feeding on its own to some degree and was likely not entirely dependent on the mother, so it is not considered a separate serious injury.	SI	Constricting entanglement	Marine debris (unidentified)	N/A	N/A	N/A	P8a	1	0
WCGOP	4/18/2019	WC	Steller Sea Lion	Eastern US	DEAD	A Steller sea lion was caught and killed in catch shares bottom trawl gear.	DEAD	Entangled / entrapped	Fishery gear	Catch shares bottom trawl	Commercial	Trawl	N/A	1	1
WCRO	4/28/2019	WC	Steller Sea Lion	Eastern US	DEAD	An adult male Steller sea lion was found in a state of advanced decomposition to the point where a necropsy could not be performed on the body. The right rear flipper was missing. Only the head was collected for necropsy and 13 bullet pellets were found inside the skull. The animal was assumed to have died from gunshot wounds.	DEAD	Shot	Projectile weapon	N/A	N/A	N/A	N/A	1	0
WCRO	5/9/2019	WC	Steller Sea Lion	Eastern US	DEAD	An adult male Steller sea lion was found in a state of advanced decomposition. A necropsy found that the animal's teeth had been removed by unknown person(s), the skull was exposed, and there was deep hemorrhage at the pelvis, neck and upper back area, and a bullet/pellet hole in the esophagus with associated blood in the stomach.	DEAD	Shot	Projectile weapon	N/A	N/A	N/A	N/A	1	0
WCRO	5/9/2019	WC	Steller Sea Lion	Eastern US	DEAD	An adult female Steller sea lion was found in a state of moderate decomposition. A necropsy found that the animal was pregnant, appeared to have excellent body condition, and had a gunshot wound to the abdomen/pelvic area with associated hemorrhage to the colon. There was no sign of illness.	DEAD	Shot	Projectile weapon	N/A	N/A	N/A	N/A	1	0
ADFG	6/4/2019	SEAK	Steller Sea Lion	Eastern US	SI	An adult female Steller sea lion was observed with an orange flasher at the edge of its mouth.	SI	Hooked	Fishery gear	Salmon hook and line	Unknown	Hook and line	P2	1	0

Table 1 -- Human-marine mammal interaction records reviewed for injury and mortality, 2016-2020.

Source of Record	Date	Area	Common Name	Stock	Initial Assessment	Determination Details	Final Determination	Mechanism of Injury	Source of Injury	Fishery Name	Fishery Type	Fishery Method	SI Criteria	M/SI Value	LOF Value
ADFG	6/4/2019	SEAK	Steller Sea Lion	Eastern US	SI	An adult female Steller sea lion was observed with a circumferential neck entanglement caused by an unknown material / marine debris.	SI	Constricting entanglement	Marine debris (unidentified)	N/A	N/A	N/A	P8a	1	0
ADFG	6/10/2019	SEAK	Steller Sea Lion	Eastern US	SI	An adult female Steller sea lion was observed with a circumferential neck entanglement caused by a packing band.	SI	Constricting entanglement	Marine debris (packing band)	N/A	N/A	N/A	P8a	1	0
ADFG	6/13/2019	SEAK	Steller Sea Lion	Eastern US	SI	An adult female Steller sea lion was observed with a circumferential neck entanglement caused by an unknown material / marine debris.	SI	Constricting entanglement	Marine debris (unidentified)	N/A	N/A	N/A	P8a	1	0
ADFG	6/14/2019	SEAK	Steller Sea Lion	Eastern US	SI	An adult female Steller sea lion was observed with a circumferential neck entanglement caused by an unknown material / marine debris.	SI	Constricting entanglement	Marine debris (unidentified)	N/A	N/A	N/A	P8a	1	0
ADFG	6/21/2019	SEAK	Steller Sea Lion	Eastern US	SI	A subadult male Steller sea lion was observed with a circumferential neck entanglement caused by an unknown material / marine debris.	SI	Constricting entanglement	Marine debris (unidentified)	N/A	N/A	N/A	P8a	1	0
ADFG	6/28/2019	SEAK	Steller Sea Lion	Eastern US	SI	An adult female Steller sea lion was observed with a circumferential neck entanglement caused by an unknown material / marine debris.	SI	Constricting entanglement	Marine debris (unidentified)	N/A	N/A	N/A	P8a	1	0
ADFG	6/28/2019	SEAK	Steller Sea Lion	Eastern US	SI	An adult male Steller sea lion ingested fishery gear and was observed with a blue flasher with 4 feet of line hanging from the left side of the mouth as well as four small puncture wounds and a slash scar on its left side.	SI	Hooked	Fishery gear	Salmon hook and line	Unknown	Hook and line	P2	1	0
ADFG	6/29/2019	SEAK	Steller Sea Lion	Eastern US	SI	An adult female Steller sea lion was observed with a circumferential neck entanglement caused by an unknown material / marine debris.	SI	Constricting entanglement	Marine debris (unidentified)	N/A	N/A	N/A	P8a	1	0
ADFG	6/29/2019	SEAK	Steller Sea Lion	Eastern US	SI	An adult female Steller sea lion was observed with a circumferential neck entanglement caused by an unknown material / marine debris, possibly a white packing band.	SI	Constricting entanglement	Marine debris (packing band)	N/A	N/A	N/A	P8a	1	0
NWFC	7/1/2019	WC	Steller Sea Lion	Eastern US	DEAD	A Steller sea lion was incidentally killed in association with Washington tribal treaty sablefish longline fishing operations.	DEAD	Unknown	Unknown	Sablefish longline	WA Tribal	Longline	N/A	1	0
ADFG	7/3/2019	SEAK	Steller Sea Lion	Eastern US	SI	A juvenile Steller sea lion ingested fishery gear and was observed with an orange and silver flasher with 2 feet of attached line hanging from its mouth	SI	Hooked	Fishery gear	Salmon hook and line	Unknown	Hook and line	P2	1	0
ADFG	7/3/2019	SEAK	Steller Sea Lion	Eastern US	SI	An adult male Steller sea lion ingested fishery gear and was observed with a long piece of monofilament line hanging from its mouth.	SI	Hooked	Fishery gear	Unknown hook and line	Unknown	Hook and line	P2	1	0
ADFG	7/4/2019	SEAK	Steller Sea Lion	Eastern US	SI	A juvenile Steller sea lion was observed with a circle hook in the right side of its mouth.	SI	Hooked	Fishery gear	Unknown hook and line	Unknown	Hook and line	P2	1	0

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Source of Record	Date	Area	Common Name	Stock	Initial Assessment	Determination Details	Final Determination	Mechanism of Injury	Source of Injury	Fishery Name	Fishery Type	Fishery Method	SI Criteria	M/SI Value	LOF Value
ADFG	7/5/2019	SEAK	Steller Sea Lion	Eastern US	SI	An adult female Steller sea lion was observed with a circumferential neck entanglement from a white packing band that was not cutting into the skin. The animal was later observed to have self-released from the entanglement.	NSI	Constricting entanglement	Marine debris (packing band)	N/A	N/A	N/A	P7b	0	0
ADFG	7/5/2019	SEAK	Steller Sea Lion	Eastern US	SI	A subadult male Steller sea lion ingested fishery gear and was observed with a green and gold flasher tight to the right side of its mouth with at least 5 feet of trailing line.	SI	Hooked	Fishery gear	Salmon hook and line	Unknown	Hook and line	P2	1	0
ADFG	7/8/2019	SEAK	Steller Sea Lion	Eastern US	SI	An adult male Steller sea lion was observed with a circumferential neck entanglement caused by an unknown material / marine debris, possibly heavy monofilament or a gangion.	SI	Constricting entanglement	Fishery gear	Unknown	Unknown	Unknown	P8a	1	0
ADFG	7/8/2019	SEAK	Steller Sea Lion	Eastern US	SI	A juvenile Steller sea lion ingested fishery gear and was observed with an orange flasher near the left side of its mouth	SI	Hooked	Fishery gear	Salmon hook and line	Unknown	Hook and line	P2	1	0
ADFG	7/9/2019	SEAK	Steller Sea Lion	Eastern US	SI	A subadult male Steller sea lion was observed with a circumferential neck entanglement caused by an unknown material / marine debris.	SI	Constricting entanglement	Marine debris (unidentified)	N/A	N/A	N/A	P8a	1	0
ADFG	7/10/2019	SEAK	Steller Sea Lion	Eastern US	SI	An adult female Steller sea lion was observed with a circumferential neck entanglement caused by an unknown material / marine debris, possibly monofilament.	SI	Constricting entanglement	Marine debris (unidentified)	N/A	N/A	N/A	P8a	1	0
AKRO	7/10/2019	GOA	Steller Sea Lion	Eastern US	SI	A Steller sea lion was observed hauled out with a red and white flasher hanging from the edge of its mouth.	SI	Hooked	Fishery gear	Salmon hook and line	Unknown	Hook and line	P2	1	0
ADFG	7/10/2019	SEAK	Steller Sea Lion	Eastern US	SI	An adult male Steller sea lion ingested fishery gear and was observed with a silver flasher tight against the right side of its mouth.	SI	Hooked	Fishery gear	Salmon hook and line	Unknown	Hook and line	P2	1	0
ADFG	7/11/2019	SEAK	Steller Sea Lion	Eastern US	SI	A subadult male Steller sea lion was observed with a circumferential neck entanglement caused by an unknown material / marine debris.	SI	Constricting entanglement	Marine debris (unidentified)	N/A	N/A	N/A	P8a	1	0
AKRO	7/14/2019	SEAK	Steller Sea Lion	Eastern US	SI	A Steller sea lion was observed hauled out with a white or silver flasher close to its head, covering part of the face. The location of hook was not determined but it was believed to be in the head (not in the mouth or ingested) with the flasher hanging next to the face. Given the likely location of the hooking, trailing gear has the potential to interfere with feeding, be ingested, accumulate drag, or become snagged on something in the environment, anchoring the animal.	SI	Hooked	Fishery gear	Salmon hook and line	Unknown	Hook and line	P6	1	0
WCGOP	7/21/2019	WC	Steller Sea Lion	Eastern US	DEAD	A Steller sea lion was caught and killed by Catch Shares EM bottom trawl gear.	DEAD	Entangled / entrapped	Fishery gear	Catch shares EM bottom trawl	Commercial	Trawl	N/A	1	1
AKRO	8/24/2019	SEAK	Steller Sea Lion	Eastern US	SI	An adult female Steller sea lion was observed hauled out with silver flasher tight against the edge of its mouth.	SI	Hooked	Fishery gear	Salmon hook and line	Unknown	Hook and line	P2	1	0

Table 1 -- Human-marine mammal interaction records reviewed for injury and mortality, 2016-2020.

Source of Record	Date	Area	Common Name	Stock	Initial Assessment	Determination Details	Final Determination	Mechanism of Injury	Source of Injury	Fishery Name	Fishery Type	Fishery Method	SI Criteria	M/SI Value	LOF Value
AKRO	8/24/2019	SEAK	Steller Sea Lion	Eastern US	SI	A Steller sea lion was observed hauled out with a silver flasher with an orange rim at the edge of its mouth.	SI	Hooked	Fishery gear	Salmon hook and line	Unknown	Hook and line	P2	1	0
AKRO	8/30/2019	SEAK	Steller Sea Lion	Eastern US	SI	A Steller sea lion was observed hauled out with a flasher at the edge of its mouth.	SI	Hooked	Fishery gear	Salmon hook and line	Unknown	Hook and line	P2	1	0
WCRO	9/1/2019	WC	Steller Sea Lion	Eastern US	SI	A subadult male Steller sea lion was observed with a flasher connected to fishing line hanging from the inside right corner of its mouth. The animal was sedated and the flasher and line were removed as close to the mouth as possible. There is no information regarding the status of the hook.	SI	Hooked	Fishery gear	Unknown hook and line	Unknown	Hook and line	P2	1	0
WCGOP	9/30/2019	WC	Steller Sea Lion	Eastern US	NSI	A Steller sea lion was caught in catch shares bottom trawl gear. The vessel's crew tried letting out the net to allow the animal to swim out, but the animal swam further into the net. The crew then tied off the net and opened the lower end of it, releasing the animal unharmed. No injuries were reported for this animal.	NSI	Entangled / entrapped	Fishery gear	Catch shares bottom trawl	Commercial	Trawl	P7b	0	0
WCGOP	10/4/2019	WC	Steller Sea Lion	Eastern US	NSI	A Steller sea lion was caught in catch shares bottom trawl gear. The animal was freed from the net and released alive. The observer did not note any sign of injury to the animal.	NSI	Entangled / entrapped	Fishery gear	Catch shares bottom trawl	Commercial	Trawl	P7b	0	0
WCRO	12/5/2019	WC	Steller Sea Lion	Eastern US	DEAD	An adult male Steller sea lion was found fresh dead. A necropsy found numerous shot pellets and associated hemorrhage in the head, neck and shoulder area.	DEAD	Shot	Projectile weapon	N/A	N/A	N/A	N/A	1	0
WCRO	2/3/2020	WC	Steller Sea Lion	Eastern US	DEAD	An adult female Steller sea lion was found fresh dead. A necropsy found numerous shot pellets and associated hemorrhage in the nares, mouth, eye area, and frontal lobe of the brain.	DEAD	Shot	Projectile weapon	N/A	N/A	N/A	N/A	1	0
WCRO	2/15/2020	WC	Steller Sea Lion	Eastern US	DEAD	A subadult male Steller sea lion was found fresh dead. A necropsy found a clear bullet hole on the left side of the chest, fractured ribs, and associated hemorrhaging. The animal was assumed to have died from a gunshot wound.	DEAD	Shot	Projectile weapon	N/A	N/A	N/A	N/A	1	0
MMAP	3/17/2020	SEAK	Steller Sea Lion	Eastern US	DEAD	A Steller sea lion was caught and killed by AK GOA sablefish longline gear. This mortality will be counted against the AK GOA sablefish longline fishery because mortality or serious injury of this stock was not observed by NPGOP observers in this fishery in this year.	DEAD	Hooked	Fishery gear	AK GOA sablefish longline	Commercial	Longline	N/A	1	1
WCGOP	3/19/2020	WC	Steller Sea Lion	Eastern US	NSI	A Steller sea lion was caught in catch shares EM bottom trawl gear, brought on deck, and released alive. The animal had a visible injury to its eye but no other information regarding the injury was provided. *Waiting for additional info/photos to determine if SI or NSI*	NSI	Entangled / entrapped	Fishery gear	Catch shares EM bottom trawl	Commercial	Trawl	P9	0	0

Table 1 -- Human-marine mammal interaction records reviewed for injury and mortality, 2016-2020.

Source of Record	Date	Area	Common Name	Stock	Initial Assessment	Determination Details	Final Determination	Mechanism of Injury	Source of Injury	Fishery Name	Fishery Type	Fishery Method	SI Criteria	M/SI Value	LOF Value
WCRO	4/14/2020	WC	Steller Sea Lion	Eastern US	DEAD	An adult male Steller sea lion was found in a state of advanced decomposition. A necropsy found that the animal had excellent body condition with a clear bullet entry and exit holes on the lateral anterior abdominal area and other bullet holes along the right side of the body. The animal was assumed to have died from gunshot wounds.	DEAD	Shot	Projectile weapon	N/A	N/A	N/A	N/A	1	0
WCRO	4/27/2020	WC	Steller Sea Lion	Eastern US	DEAD	An adult female Steller sea lion was found in a state of advanced decomposition. A necropsy found that the animal had good body condition with signs of illness as well as signs of trauma and associated hemorrhage to the head, and face. The necropsy also found bullet holes, trauma, and associated hemorrhage in the animal's abdominal areas as well as in the fetus inside the animal, which had a hole in its abdomen.	DEAD	Shot	Projectile weapon	N/A	N/A	N/A	N/A	1	0
WCRO	4/27/2020	WC	Steller Sea Lion	Eastern US	DEAD	An adult male Steller sea lion was found in a state of moderate decomposition. A necropsy found that the animal had excellent body condition with a bullet hole in the right scapula and third right rib and associated hemorrhage in the thoracic cavity. There was no sign of illness.	DEAD	Shot	Projectile weapon	N/A	N/A	N/A	N/A	1	0
NWIFC	5/1/2020	WC	Steller Sea Lion	Eastern US	DEAD	A Steller sea lion was incidentally killed in association with Washington tribal treaty salmon hook and line fishing operations.	DEAD	Unknown	Unknown	Salmon hook and line	WA Tribal	Hook and line	N/A	1	0
NWIFC	5/1/2020	WC	Steller Sea Lion	Eastern US	DEAD	A Steller sea lion was incidentally killed in association with Washington tribal treaty salmon hook and line fishing operations.	DEAD	Unknown	Unknown	Salmon hook and line	WA Tribal	Hook and line	N/A	1	0
NWIFC	5/1/2020	WC	Steller Sea Lion	Eastern US	DEAD	A Steller sea lion was incidentally killed in association with Washington tribal treaty salmon hook and line fishing operations.	DEAD	Unknown	Unknown	Salmon hook and line	WA Tribal	Hook and line	N/A	1	0
NWIFC	5/1/2020	WC	Steller Sea Lion	Eastern US	DEAD	A Steller sea lion was incidentally killed in association with Washington tribal treaty salmon hook and line fishing operations.	DEAD	Unknown	Unknown	Salmon hook and line	WA Tribal	Hook and line	N/A	1	0
NWIFC	5/1/2020	WC	Steller Sea Lion	Eastern US	DEAD	A Steller sea lion was incidentally killed in association with Washington tribal treaty salmon hook and line fishing operations.	DEAD	Unknown	Unknown	Salmon hook and line	WA Tribal	Hook and line	N/A	1	0
AKRO	5/4/2020	SEAK	Steller Sea Lion	Eastern US	NSI	A subadult Steller sea lion was observed hauled out with an unknown longline hook and gangion in its lip.	NSI	Hooked	Fishery gear	Unknown longline	Unknown	Longline	P5d	0	0
WCRO	5/11/2020	WC	Steller Sea Lion	Eastern US	DEAD	An adult female Steller sea lion was found in a state of advanced decomposition. A necropsy found that the animal had excellent body condition, was pregnant, and had numerous shot pellets in its head with associated hemorrhage in the skull.	DEAD	Shot	Projectile weapon	N/A	N/A	N/A	N/A	1	0
WCGOP	5/25/2020	WC	Steller Sea Lion	Eastern US	DEAD	Two female Steller sea lions were caught and killed in at-sea hake catcher-processor midwater trawl gear. This record represents 2 of 2.	DEAD	Entangled / entrapped	Fishery gear	At-sea hake catcher-processor midwater trawl	Commercial	Trawl	N/A	1	1

Table 1 -- Human-marine mammal interaction records reviewed for injury and mortality, 2016-2020.

Source of Record	Date	Area	Common Name	Stock	Initial Assessment	Determination Details	Final Determination	Mechanism of Injury	Source of Injury	Fishery Name	Fishery Type	Fishery Method	SI Criteria	M/SI Value	LOF Value
WCGOP	5/25/2020	WC	Steller Sea Lion	Eastern US	DEAD	Two female Steller sea lions were caught and killed in at-sea hake catcher-processor midwater trawl gear. This record represents 1 of 2.	DEAD	Entangled / entrapped	Fishery gear	At-sea hake catcher-processor midwater trawl	Commercial	Trawl	N/A	1	1
WCGOP	6/16/2020	WC	Steller Sea Lion	Eastern US	DEAD	A male Steller sea lion was caught and killed in at-sea hake catcher-processor midwater trawl gear.	DEAD	Entangled / entrapped	Fishery gear	At-sea hake catcher-processor midwater trawl	Commercial	Trawl	N/A	1	1
WCRO	7/3/2020	WC	Steller Sea Lion	Eastern US	DEAD	A subadult male Steller sea lion was found in a state of moderate decomposition. The reporting party described bullet holes in the back of the animal. Given the expertise of the reporting party, the animal was assumed to have died from gunshot wounds.	DEAD	Shot	Projectile weapon	N/A	N/A	N/A	N/A	1	0
AKRO	7/9/2020	GOA	Steller Sea Lion	Eastern US	DEAD	An adult male Steller sea lion was found fresh dead with two small holes in its head consistent with a gunshot wound. Given the expertise of the reporting party, the animal was assumed to have died from gunshot wounds.	DEAD	Shot	Projectile weapon	N/A	N/A	N/A	N/A	1	0
AKRO	7/17/2020	SEAK	Steller Sea Lion	Eastern US	SI	An adult male Steller sea lion was observed hauled out with a circumferential neck entanglement caused by unknown monofilament line.	SI	Constricting entanglement	Fishery gear	Unknown	Unknown	Unknown	P8a	1	0
WCGOP	8/3/2020	WC	Steller Sea Lion	Eastern US	DEAD	A male Steller sea lion was caught and killed in catch shares bottom trawl gear.	DEAD	Entangled / entrapped	Fishery gear	Catch shares bottom trawl	Commercial	Trawl	N/A	1	1
AKRO	8/5/2020	SEAK	Steller Sea Lion	Eastern US	SI	A male subadult Steller sea lion was observed hauled out with a silver flasher with a pink rim at the edge of its mouth with about 8 inches of trailing monofilament line.	SI	Hooked	Fishery gear	Salmon hook and line	Unknown	Hook and line	P2	1	0
AKRO	8/11/2020	SEAK	Steller Sea Lion	Eastern US	SI	A male subadult Steller sea lion was observed hauled out with a silver flasher with a green rim at the edge of its mouth.	SI	Hooked	Fishery gear	Salmon hook and line	Unknown	Hook and line	P2	1	0
AKRO	8/31/2020	SEAK	Steller Sea Lion	Eastern US	DEAD	An adult male Steller sea lion was found dead due to entanglement in the netting of a hatchery salmon pen.	DEAD	Entangled / entrapped	Other	N/A	N/A	N/A	N/A	1	0
AKRO	9/6/2020	SEAK	Steller Sea Lion	Eastern US	DEAD	A Steller sea lion in a state of advanced decomposition was found on the beach with a green and silver flasher hanging out of its mouth.	DEAD	Hooked	Fishery gear	Salmon hook and line	Unknown	Hook and line	N/A	1	0
ODFW	10/14/2020	WC	Steller Sea Lion	Eastern US	DEAD	A Steller sea lion was caught and euthanized at the Bonneville Dam under a NMFS-authorized MMPA section 120(f) permit.	DEAD	Removal from population	MMPA authorized removal	N/A	N/A	N/A	N/A	1	N/A
ODFW	10/15/2020	WC	Steller Sea Lion	Eastern US	DEAD	A Steller sea lion was caught and euthanized at the Bonneville Dam under a NMFS-authorized MMPA section 120(f) permit.	DEAD	Removal from population	MMPA authorized removal	N/A	N/A	N/A	N/A	1	N/A
WCGOP	10/19/2020	WC	Steller Sea Lion	Eastern US	DEAD	A Steller sea lion was caught and killed in rockfish EM midwater trawl gear.	DEAD	Entangled / entrapped	Fishery gear	Rockfish EM - Midwater Trawl	Commercial	Trawl	N/A	1	1

Table 1 -- Human-marine mammal interaction records reviewed for injury and mortality, 2016-2020.

Source of Record	Date	Area	Common Name	Stock	Initial Assessment	Determination Details	Final Determination	Mechanism of Injury	Source of Injury	Fishery Name	Fishery Type	Fishery Method	SI Criteria	M/SI Value	LOF Value
ODFW	10/22/2020	WC	Steller Sea Lion	Eastern US	DEAD	A Steller sea lion was caught and euthanized at the Bonneville Dam under a NMFS-authorized MMPA section 120(f) permit.	DEAD	Removal from population	MMPA authorized removal	N/A	N/A	N/A	N/A	1	N/A
ODFW	11/3/2020	WC	Steller Sea Lion	Eastern US	DEAD	A Steller sea lion was caught and euthanized at the Bonneville Dam under a NMFS-authorized MMPA section 120(f) permit.	DEAD	Removal from population	MMPA authorized removal	N/A	N/A	N/A	N/A	1	N/A
ODFW	11/4/2020	WC	Steller Sea Lion	Eastern US	DEAD	A Steller sea lion was caught and euthanized at the Bonneville Dam under a NMFS-authorized MMPA section 120(f) permit.	DEAD	Removal from population	MMPA authorized removal	N/A	N/A	N/A	N/A	1	N/A
ODFW	11/5/2020	WC	Steller Sea Lion	Eastern US	DEAD	A Steller sea lion was caught and euthanized at the Bonneville Dam under a NMFS-authorized MMPA section 120(f) permit.	DEAD	Removal from population	MMPA authorized removal	N/A	N/A	N/A	N/A	1	N/A
WCRO	12/5/2020	WC	Steller Sea Lion	Eastern US	DEAD	An adult male Steller sea lion was found in a state of advanced decomposition. A necropsy found that the animal had a gap between the last molars and radiographs confirmed a bullet in the skull with associated hemorrhaging. The animal was assumed to have died from a gunshot wound.	DEAD	Shot	Projectile weapon	N/A	N/A	N/A	N/A	1	0
NPGOP	1/31/2016	BS	Steller Sea Lion	Western US	DEAD	A Steller sea lion was caught and killed in trawl gear.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI flatfish trawl	Commercial	Trawl	N/A	1	1
NPGOP	2/4/2016	BS	Steller Sea Lion	Western US	DEAD	A Steller sea lion was caught and killed in trawl gear.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI flatfish trawl	Commercial	Trawl	N/A	1	1
NPGOP	2/5/2016	BS	Steller Sea Lion	Western US	DEAD	A Steller sea lion was caught and killed in trawl gear.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI pollock trawl	Commercial	Trawl	N/A	1	1
NPGOP	2/8/2016	BS	Steller Sea Lion	Western US	DEAD	A Steller sea lion was caught and killed in trawl gear.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI pollock trawl	Commercial	Trawl	N/A	1	1
NPGOP	2/8/2016	BS	Steller Sea Lion	Western US	DEAD	Two Steller sea lions were caught and killed in trawl gear. This is animal two of two.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI pollock trawl	Commercial	Trawl	N/A	1	1
NPGOP	2/8/2016	BS	Steller Sea Lion	Western US	DEAD	Two Steller sea lions were caught and killed in trawl gear. This is animal one of two.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI pollock trawl	Commercial	Trawl	N/A	1	1
NPGOP	2/12/2016	BS	Steller Sea Lion	Western US	DEAD	A Steller sea lion was caught and killed in trawl gear.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI pollock trawl	Commercial	Trawl	N/A	1	1
NPGOP	2/17/2016	BS	Steller Sea Lion	Western US	DEAD	A Steller sea lion was caught and killed in trawl gear.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI pollock trawl	Commercial	Trawl	N/A	1	1
NPGOP	2/25/2016	BS	Steller Sea Lion	Western US	DEAD	A Steller sea lion was caught and killed in trawl gear.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI pollock trawl	Commercial	Trawl	N/A	1	1
NPGOP	2/29/2016	BS	Steller Sea Lion	Western US	DEAD	A Steller sea lion was caught and killed in trawl gear.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI pollock trawl	Commercial	Trawl	N/A	1	1

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Source of Record	Date	Area	Common Name	Stock	Initial Assessment	Determination Details	Final Determination	Mechanism of Injury	Source of Injury	Fishery Name	Fishery Type	Fishery Method	SI Criteria	M/SI Value	LOF Value
NPGOP	2/29/2016	WAK	Steller Sea Lion	Western US	DEAD	A Steller sea lion was caught and killed by trawl gear.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI flatfish trawl	Commercial	Trawl	N/A	1	1
NPGOP	3/3/2016	BS	Steller Sea Lion	Western US	DEAD	A Steller sea lion was caught and killed in trawl gear.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI pollock trawl	Commercial	Trawl	N/A	1	1
NPGOP	3/10/2016	BS	Steller Sea Lion	Western US	DEAD	A Steller sea lion was caught and killed in trawl gear.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI flatfish trawl	Commercial	Trawl	N/A	1	1
AKRO	3/11/2016	GOA	Steller Sea Lion	Western US	SI	A Steller sea lion was observed with a circumferential neck entanglement caused by rope or line.	SI	Constricting entanglement	Marine debris (rope)	N/A	N/A	N/A	P8a	1	0
NPGOP	3/22/2016	BS	Steller Sea Lion	Western US	DEAD	A Steller sea lion was caught and killed in trawl gear.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI pollock trawl	Commercial	Trawl	N/A	1	1
NPGOP	3/30/2016	BS	Steller Sea Lion	Western US	DEAD	A Steller sea lion was caught and killed in trawl gear.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI pollock trawl	Commercial	Trawl	N/A	1	1
NPGOP	4/13/2016	BS	Steller Sea Lion	Western US	DEAD	A Steller sea lion was caught and killed in trawl gear.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI flatfish trawl	Commercial	Trawl	N/A	1	1
NPGOP	4/27/2016	BS	Steller Sea Lion	Western US	DEAD	A Steller sea lion was caught and killed in trawl gear.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI flatfish trawl	Commercial	Trawl	N/A	1	1
NPGOP	5/11/2016	BS	Steller Sea Lion	Western US	DEAD	A Steller sea lion was caught and killed in trawl gear.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI flatfish trawl	Commercial	Trawl	N/A	1	1
NPGOP	5/11/2016	BS	Steller Sea Lion	Western US	DEAD	A Steller sea lion was caught and killed in trawl gear.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI flatfish trawl	Commercial	Trawl	N/A	1	1
NPGOP	5/20/2016	BS	Steller Sea Lion	Western US	DEAD	A Steller sea lion was caught and killed by trawl gear.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI flatfish trawl	Commercial	Trawl	N/A	1	1
AKRO	6/21/2016	SCAK	Steller Sea Lion	Western US	DEAD	A Steller sea lion carcass was discovered during Copper River Delta carcass surveys. A tracking wound and damage to the skull was noted by examiners, and metal fragments were identified in the animal's head with x-ray indicating that the animal had been shot.	DEAD	Shot	Projectile weapon	N/A	N/A	N/A	N/A	1	0
NMFS OPR/HQ	7/3/2016	SEAK	Steller Sea Lion	Western US	DEAD	Two Steller sea lions were incidentally killed during MMPA authorized research. This record represents sea lion 2 of 2.	DEAD	Research related injury	MMPA authorized research	N/A	N/A	N/A	N/A	1	0
NMFS OPR/HQ	7/3/2016	SEAK	Steller Sea Lion	Western US	DEAD	Two Steller sea lions were incidentally killed during MMPA authorized research. This record represents sea lion 1 of 2.	DEAD	Research related injury	MMPA authorized research	N/A	N/A	N/A	N/A	1	0
NPGOP	7/31/2016	BS	Steller Sea Lion	Western US	DEAD	A Steller sea lion was caught and killed in trawl gear.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI pollock trawl	Commercial	Trawl	N/A	1	1

Table 1 -- Human-marine mammal interaction records reviewed for injury and mortality, 2016-2020.

Source of Record	Date	Area	Common Name	Stock	Initial Assessment	Determination Details	Final Determination	Mechanism of Injury	Source of Injury	Fishery Name	Fishery Type	Fishery Method	SI Criteria	M/SI Value	LOF Value
NPGOP	9/16/2016	GOA	Steller Sea Lion	Western US	DEAD	A Steller sea lion was caught and killed in trawl gear.	DEAD	Entangled / entrapped	Fishery gear	AK GOA pollock trawl	Commercial	Trawl	N/A	1	1
NPGOP	9/21/2016	BS	Steller Sea Lion	Western US	DEAD	A Steller sea lion was caught and killed in trawl gear.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI pollock trawl	Commercial	Trawl	N/A	1	1
NPGOP	11/1/2016	GOA	Steller Sea Lion	Western US	DEAD	A Steller sea lion was caught and killed in trawl gear.	DEAD	Entangled / entrapped	Fishery gear	AK GOA Pacific cod trawl	Commercial	Trawl	N/A	1	1
NPGOP	1/29/2017	BS	Steller Sea Lion	Western US	DEAD	A Steller sea lion was caught and killed by trawl gear.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI pollock trawl	Commercial	Trawl	N/A	1	1
NPGOP	2/11/2017	BS	Steller Sea Lion	Western US	DEAD	A Steller sea lion was caught and killed by trawl gear.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI pollock trawl	Commercial	Trawl	N/A	1	1
NPGOP	2/26/2017	BS	Steller Sea Lion	Western US	DEAD	Two Steller sea lions were caught and killed by trawl gear. This record represents 2/2 - Male.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI pollock trawl	Commercial	Trawl	N/A	1	1
NPGOP	2/26/2017	BS	Steller Sea Lion	Western US	DEAD	Two Steller sea lions were caught and killed by trawl gear. This record represents 1/2 - Male.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI pollock trawl	Commercial	Trawl	N/A	1	1
NPGOP	2/28/2017	BS	Steller Sea Lion	Western US	DEAD	A female Steller sea lion was caught and killed by trawl gear.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI Pacific cod trawl	Commercial	Trawl	N/A	1	1
NPGOP	3/24/2017	BS	Steller Sea Lion	Western US	DEAD	A male Steller sea lion was caught and killed by trawl gear.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI pollock trawl	Commercial	Trawl	N/A	1	1
NPGOP	3/30/2017	WAK	Steller Sea Lion	Western US	DEAD	An adult male Steller sea lion was caught and killed by trawl gear.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI Atka mackerel trawl	Commercial	Trawl	N/A	1	1
NPGOP	4/22/2017	AK	Steller Sea Lion	Western US	DEAD	A female Steller sea lion was caught and killed by BSAI pollock trawl gear.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI pollock trawl	Commercial	Trawl	N/A	1	0
NPGOP	4/23/2017	BS	Steller Sea Lion	Western US	DEAD	A male Steller sea lion was caught and killed by trawl gear.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI flatfish trawl	Commercial	Trawl	N/A	1	1
NPGOP	5/15/2017	BS	Steller Sea Lion	Western US	DEAD	A male Steller sea lion was caught and killed by trawl gear.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI flatfish trawl	Commercial	Trawl	N/A	1	1
NPGOP	5/15/2017	BS	Steller Sea Lion	Western US	DEAD	A Steller sea lion was caught and killed by trawl gear.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI flatfish trawl	Commercial	Trawl	N/A	1	1
NPGOP	5/18/2017	BS	Steller Sea Lion	Western US	DEAD	A male Steller sea lion was caught and killed by trawl gear.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI flatfish trawl	Commercial	Trawl	N/A	1	1
NPGOP	5/21/2017	BS	Steller Sea Lion	Western US	DEAD	A male Steller sea lion was caught and killed by trawl gear.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI flatfish trawl	Commercial	Trawl	N/A	1	1
NPGOP	5/27/2017	BS	Steller Sea Lion	Western US	DEAD	A male Steller sea lion was caught and killed by trawl gear.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI flatfish trawl	Commercial	Trawl	N/A	1	1

Table 1 -- Human-marine mammal interaction records reviewed for injury and mortality, 2016-2020.

Source of Record	Date	Area	Common Name	Stock	Initial Assessment	Determination Details	Final Determination	Mechanism of Injury	Source of Injury	Fishery Name	Fishery Type	Fishery Method	SI Criteria	M/SI Value	LOF Value
NPGOP	6/3/2017	BS	Steller Sea Lion	Western US	DEAD	A male Steller sea lion was caught and killed by trawl gear.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI flatfish trawl	Commercial	Trawl	N/A	1	1
NPGOP	6/14/2017	BS	Steller Sea Lion	Western US	DEAD	A Steller sea lion was caught and killed by an AK BSAI Pacific cod longline gear.	DEAD	Hooked	Fishery gear	AK BSAI Pacific cod longline	Commercial	Longline	N/A	1	1
ADFG	7/10/2017	PWS	Steller Sea Lion	Western US	SI	A male Steller sea lion was observed with a circumferential neck entanglement caused by unidentified material.	SI	Constricting entanglement	Marine debris (unidentified)	N/A	N/A	N/A	P8a	1	0
ADFG	7/12/2017	SCAK	Steller Sea Lion	Western US	SI	An adult female Steller sea lion was observed with a circumferential neck entanglement caused by unidentified material.	SI	Constricting entanglement	Marine debris (unidentified)	N/A	N/A	N/A	P8a	1	0
NPGOP	7/13/2017	BS	Steller Sea Lion	Western US	DEAD	A male Steller sea lion was caught and killed by trawl gear.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI flatfish trawl	Commercial	Trawl	N/A	1	1
ADFG	7/17/2017	Kodiak	Steller Sea Lion	Western US	SI	A male Steller sea lion was observed with a flasher at the edge of its mouth with 4' of trailing line.	SI	Hooked	Fishery gear	Salmon hook and line	Unknown	Hook and line	P2	1	0
ADFG	7/17/2017	Kodiak	Steller Sea Lion	Western US	SI	An adult female Steller sea lion was observed with a circumferential neck entanglement caused by unidentified material.	SI	Constricting entanglement	Marine debris (unidentified)	N/A	N/A	N/A	P8a	1	0
NPGOP	9/10/2017	BS	Steller Sea Lion	Western US	DEAD	A Steller sea lion was caught and killed by trawl gear.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI pollock trawl	Commercial	Trawl	N/A	1	1
NPGOP	9/23/2017	BS	Steller Sea Lion	Western US	DEAD	A male Steller sea lion was caught and killed by trawl gear.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI flatfish trawl	Commercial	Trawl	N/A	1	1
NPGOP	9/29/2017	BS	Steller Sea Lion	Western US	DEAD	A Steller sea lion was caught and killed by trawl gear.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI flatfish trawl	Commercial	Trawl	N/A	1	1
NPGOP	9/30/2017	BS	Steller Sea Lion	Western US	DEAD	A male Steller sea lion was caught and killed by trawl gear.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI flatfish trawl	Commercial	Trawl	N/A	1	1
AKRO	10/24/2017	SCAK	Steller Sea Lion	Western US	DEAD	A subadult Steller sea lion was found dead and entangled in gillnet fishing gear. Mortality and serious injury estimates for this fishery are obtained from observer data and not stranding data or fishermen self-reported (MMAF) data; therefore, this record will not be assigned an M/SI or LOF value.	DEAD	Entangled / entrapped	Fishery gear	AK PWS salmon drift gillnet	Commercial	Gillnet	N/A	1	1
NPGOP	11/10/2017	BS	Steller Sea Lion	Western US	DEAD	A male Steller sea lion was caught and killed by trawl gear.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI flatfish trawl	Commercial	Trawl	N/A	1	1
NPGOP	11/13/2017	BS	Steller Sea Lion	Western US	DEAD	A male Steller sea lion was caught and killed by trawl gear.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI flatfish trawl	Commercial	Trawl	N/A	1	1
NPGOP	1/28/2018	BS	Steller Sea Lion	Western US	DEAD	Four male Steller sea lions were caught and killed by AK BSAI Atka mackerel trawl gear. This record represents 1/4.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI Atka mackerel trawl	Commercial	Trawl	N/A	1	1

Table 1 -- Human-marine mammal interaction records reviewed for injury and mortality, 2016-2020.

Source of Record	Date	Area	Common Name	Stock	Initial Assessment	Determination Details	Final Determination	Mechanism of Injury	Source of Injury	Fishery Name	Fishery Type	Fishery Method	SI Criteria	M/SI Value	LOF Value
NPGOP	1/28/2018	BS	Steller Sea Lion	Western US	DEAD	Four male Steller sea lions were caught and killed by AK BSAI Atka mackerel trawl gear. This record represents 4/4.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI Atka mackerel trawl	Commercial	Trawl	N/A	1	1
NPGOP	1/28/2018	BS	Steller Sea Lion	Western US	DEAD	Four male Steller sea lions were caught and killed by AK BSAI Atka mackerel trawl gear. This record represents 2/4.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI Atka mackerel trawl	Commercial	Trawl	N/A	1	1
NPGOP	1/28/2018	BS	Steller Sea Lion	Western US	DEAD	Four male Steller sea lions were caught and killed by AK BSAI Atka mackerel trawl gear. This record represents 3/4.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI Atka mackerel trawl	Commercial	Trawl	N/A	1	1
NPGOP	2/8/2018	BS	Steller Sea Lion	Western US	DEAD	A female Steller sea lion was caught and killed by AK BSAI pollock trawl gear.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI pollock trawl	Commercial	Trawl	N/A	1	1
NPGOP	2/16/2018	BS	Steller Sea Lion	Western US	DEAD	A male Steller sea lion was caught and killed by AK BSAI flatfish trawl gear.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI flatfish trawl	Commercial	Trawl	N/A	1	1
NPGOP	2/19/2018	BS	Steller Sea Lion	Western US	DEAD	A female Steller sea lion was caught and killed by AK BSAI pollock trawl gear.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI pollock trawl	Commercial	Trawl	N/A	1	1
NPGOP	2/19/2018	BS	Steller Sea Lion	Western US	DEAD	A male Steller sea lion was caught and killed by AK BSAI pollock trawl gear.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI pollock trawl	Commercial	Trawl	N/A	1	1
NPGOP	2/24/2018	BS	Steller Sea Lion	Western US	DEAD	A male Steller sea lion was caught and killed by AK BSAI Atka mackerel trawl gear.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI Atka mackerel trawl	Commercial	Trawl	N/A	1	1
NPGOP	2/25/2018	BS	Steller Sea Lion	Western US	DEAD	A male Steller sea lion was caught and killed by AK BSAI flatfish trawl gear.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI flatfish trawl	Commercial	Trawl	N/A	1	1
NPGOP	3/1/2018	BS	Steller Sea Lion	Western US	DEAD	A male Steller sea lion was caught and killed by AK BSAI pollock trawl gear.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI pollock trawl	Commercial	Trawl	N/A	1	1
NPGOP	3/11/2018	BS	Steller Sea Lion	Western US	DEAD	A male Steller sea lion was caught and killed by AK BSAI flatfish trawl gear.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI flatfish trawl	Commercial	Trawl	N/A	1	1
NPGOP	3/12/2018	BS	Steller Sea Lion	Western US	DEAD	A male Steller sea lion was caught and killed by AK BSAI pollock trawl gear.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI pollock trawl	Commercial	Trawl	N/A	1	1
NPGOP	3/23/2018	BS	Steller Sea Lion	Western US	DEAD	A male Steller sea lion was caught and killed by AK BSAI pollock trawl gear.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI pollock trawl	Commercial	Trawl	N/A	1	1
NPGOP	3/28/2018	BS	Steller Sea Lion	Western US	DEAD	A male Steller sea lion was caught and killed by AK BSAI Pacific cod trawl gear.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI Pacific cod trawl	Commercial	Trawl	N/A	1	1
NPGOP	5/16/2018	BS	Steller Sea Lion	Western US	DEAD	A male Steller sea lion was caught and killed by AK BSAI flatfish trawl gear.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI flatfish trawl	Commercial	Trawl	N/A	1	1
NPGOP	5/25/2018	BS	Steller Sea Lion	Western US	DEAD	A male Steller sea lion was caught and killed by AK BSAI flatfish trawl gear.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI flatfish trawl	Commercial	Trawl	N/A	1	1
NPGOP	6/6/2018	BS	Steller Sea Lion	Western US	DEAD	A male Steller sea lion was caught and killed by AK BSAI flatfish trawl gear.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI flatfish trawl	Commercial	Trawl	N/A	1	1

Table 1 -- Human-marine mammal interaction records reviewed for injury and mortality, 2016-2020.

Source of Record	Date	Area	Common Name	Stock	Initial Assessment	Determination Details	Final Determination	Mechanism of Injury	Source of Injury	Fishery Name	Fishery Type	Fishery Method	SI Criteria	M/SI Value	LOF Value
NPGOP	6/8/2018	BS	Steller Sea Lion	Western US	DEAD	A male Steller sea lion was caught and killed by AK BSAI flatfish trawl gear.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI flatfish trawl	Commercial	Trawl	N/A	1	1
NPGOP	6/8/2018	BS	Steller Sea Lion	Western US	DEAD	A female Steller sea lion was caught and killed by AK BSAI flatfish trawl gear.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI flatfish trawl	Commercial	Trawl	N/A	1	1
ADFG	7/10/2018	PWS	Steller Sea Lion	Western US	SI	A subadult male Steller sea lion was observed with a circumferential neck entanglement caused by an unknown material / marine debris.	SI	Constricting entanglement	Marine debris (unidentified)	N/A	N/A	N/A	P8a	1	0
ADFG	7/14/2018	Kodiak	Steller Sea Lion	Western US	SI	An adult male Steller sea lion was observed with a circumferential neck entanglement caused by an unknown material / marine debris.	SI	Constricting entanglement	Marine debris (unidentified)	N/A	N/A	N/A	P8a	1	0
ADFG	7/22/2018	Kodiak	Steller Sea Lion	Western US	SI	An adult female Steller sea lion was observed with a circumferential neck entanglement caused by an unknown material / marine debris.	SI	Constricting entanglement	Marine debris (unidentified)	N/A	N/A	N/A	P8a	1	0
AKRO	8/10/2018	Kodiak	Steller Sea Lion	Western US	SI	A Steller sea lion was observed with a silver flasher at the edge of its mouth.	SI	Hooked	Fishery gear	Salmon hook and line	Unknown	Hook and line	P2	1	0
AKRO	9/24/2018	Kodiak	Steller Sea Lion	Western US	DEAD	An adult female Steller sea lion was found dead in a seine net. The animal had net marks on its body and was in an advanced state of decomposition.	DEAD	Entangled / entrapped	Fishery gear	AK Kodiak salmon fisheries, Kitoi Bay salmon hatchery	Commercial	Seine	N/A	1	1
MMAP	11/24/2018	Kodiak	Steller Sea Lion	Western US	DEAD	Two dead Steller sea lions caught in trawl net with unidentified marine debris (rope) still attached. This interaction will not be counted against the fishery because the animals were previously killed by marine debris. This record represents 2/2.	DEAD	Entangled / entrapped	Marine debris (rope)	N/A	N/A	N/A	N/A	1	0
MMAP	11/24/2018	Kodiak	Steller Sea Lion	Western US	DEAD	Two dead Steller sea lions caught in trawl net with unidentified marine debris (rope) still attached. This interaction will not be counted against the fishery because the animals were previously killed by marine debris. This record represents 1/2.	DEAD	Entangled / entrapped	Marine debris (rope)	N/A	N/A	N/A	N/A	1	0
NPGOP	11/27/2018	BS	Steller Sea Lion	Western US	NSI	A Steller sea lion was caught in AK BSAI flatfish trawl gear and brought on deck. The animal was released from the gear at which time it began to move and snarl. The animal was then released overboard. There are no reports of injury to the animal.	NSI	Entangled / entrapped	Fishery gear	AK BSAI flatfish trawl	Commercial	Trawl	P4	0	0
NPGOP	2/15/2019	BS	Steller Sea Lion	Western US	DEAD	A male Steller sea lion was caught and killed by AK BSAI flatfish trawl gear.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI flatfish trawl	Commercial	Trawl	N/A	1	1
NPGOP	2/25/2019	BS	Steller Sea Lion	Western US	DEAD	A male Steller sea lion was caught and killed by AK BSAI flatfish trawl gear.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI flatfish trawl	Commercial	Trawl	N/A	1	1
NPGOP	2/26/2019	BS	Steller Sea Lion	Western US	DEAD	A male Steller sea lion was caught and killed by AK BSAI flatfish trawl gear.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI flatfish trawl	Commercial	Trawl	N/A	1	1
NPGOP	3/2/2019	BS	Steller Sea Lion	Western US	DEAD	A male Steller sea lion was caught and killed by AK BSAI flatfish trawl gear.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI flatfish trawl	Commercial	Trawl	N/A	1	1

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Source of Record	Date	Area	Common Name	Stock	Initial Assessment	Determination Details	Final Determination	Mechanism of Injury	Source of Injury	Fishery Name	Fishery Type	Fishery Method	SI Criteria	M/SI Value	LOF Value
NPGOP	3/10/2019	BS	Steller Sea Lion	Western US	DEAD	A male Steller sea lion was caught and killed by AK BSAI flatfish trawl gear.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI flatfish trawl	Commercial	Trawl	N/A	1	1
NPGOP	3/15/2019	BS	Steller Sea Lion	Western US	DEAD	A male Steller sea lion was caught and killed by AK BSAI flatfish trawl gear.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI flatfish trawl	Commercial	Trawl	N/A	1	1
NPGOP	4/6/2019	BS	Steller Sea Lion	Western US	DEAD	A male Steller sea lion was caught and killed by AK BSAI flatfish trawl gear.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI flatfish trawl	Commercial	Trawl	N/A	1	1
NPGOP	4/13/2019	BS	Steller Sea Lion	Western US	DEAD	A male Steller sea lion was caught and killed by AK BSAI flatfish trawl gear.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI flatfish trawl	Commercial	Trawl	N/A	1	1
NPGOP	5/3/2019	BS	Steller Sea Lion	Western US	DEAD	A male Steller sea lion was caught and killed by AK BSAI flatfish trawl gear.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI flatfish trawl	Commercial	Trawl	N/A	1	1
AKRO	6/21/2019	SCAK	Steller Sea Lion	Western US	DEAD	An adult male Steller sea lion carcass was discovered during the Copper River Delta carcass survey in a state of moderate decomposition. A metal detector signaled at the head and across the back; the head was collected and radiographs confirmed a bullet in the skull.	DEAD	Shot	Projectile weapon	N/A	N/A	N/A	N/A	1	0
AKRO	6/21/2019	SCAK	Steller Sea Lion	Western US	DEAD	A subadult female Steller sea lion carcass was discovered during the Copper River Delta carcass survey in a state of moderate decomposition. A metal detector signaled at the skull and near the pelvis; the head was collected and radiographs confirmed a bullet in the skull.	DEAD	Shot	Projectile weapon	N/A	N/A	N/A	N/A	1	0
AKRO	6/21/2019	SCAK	Steller Sea Lion	Western US	DEAD	An adult male Steller sea lion carcass was discovered fresh dead during the Copper River Delta carcass survey. A metal detector signaled at the head and across the back; the head was collected and radiographs confirmed bullet fragments and multiple fractures in the skull.	DEAD	Shot	Projectile weapon	N/A	N/A	N/A	N/A	1	0
NPGOP	7/5/2019	BS	Steller Sea Lion	Western US	DEAD	A male Steller sea lion was caught and killed by AK BSAI pollock trawl gear.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI pollock trawl	Commercial	Trawl	N/A	1	1
ADFG	7/16/2019	SCAK	Steller Sea Lion	Western US	SI	An adult female Steller sea lion was observed with a circumferential neck entanglement caused by an unknown material / marine debris.	SI	Constricting entanglement	Marine debris (unidentified)	N/A	N/A	N/A	P8a	1	0
ADFG	7/19/2019	Kodiak	Steller Sea Lion	Western US	SI	A juvenile Steller sea lion was observed with a circumferential neck entanglement caused by an unknown material / marine debris.	SI	Constricting entanglement	Marine debris (unidentified)	N/A	N/A	N/A	P8a	1	0
AKRO	8/12/2019	SCAK	Steller Sea Lion	Western US	SI	A Steller sea lion was observed hauled out with spoon or flasher at the edge of its mouth.	SI	Hooked	Fishery gear	Salmon hook and line	Unknown	Hook and line	P2	1	0
NPGOP	8/16/2019	GOA	Steller Sea Lion	Western US	DEAD	A Steller sea lion was caught and killed by AK GOA sablefish longline gear.	DEAD	Entangled / entrapped	Fishery gear	AK GOA sablefish longline	Commercial	Longline	N/A	1	1

Table 1 -- Human-marine mammal interaction records reviewed for injury and mortality, 2016-2020.

Source of Record	Date	Area	Common Name	Stock	Initial Assessment	Determination Details	Final Determination	Mechanism of Injury	Source of Injury	Fishery Name	Fishery Type	Fishery Method	SI Criteria	M/SI Value	LOF Value
NPGOP	8/27/2019	BS	Steller Sea Lion	Western US	DEAD	A male Steller sea lion was caught and killed by AK BSAI pollock trawl gear. Observer said animal was previously dead but examination of photos indicates fresh dead/killed by gear.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI pollock trawl	Commercial	Trawl	N/A	1	1
NPGOP	9/21/2019	BS	Steller Sea Lion	Western US	DEAD	Two male Steller sea lions were caught and killed by AK BSAI pollock trawl gear. This record represents 1 of 2.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI pollock trawl	Commercial	Trawl	N/A	1	1
NPGOP	9/21/2019	BS	Steller Sea Lion	Western US	DEAD	Two male Steller sea lions were caught and killed by AK BSAI pollock trawl gear. This record represents 2 of 2.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI pollock trawl	Commercial	Trawl	N/A	1	1
NPGOP	9/30/2019	BS	Steller Sea Lion	Western US	DEAD	A male Steller sea lion was caught and killed by AK BSAI flatfish trawl gear.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI flatfish trawl	Commercial	Trawl	N/A	1	1
NPGOP	10/1/2019	GOA	Steller Sea Lion	Western US	DEAD	A Steller sea lion was caught and killed by AK GOA sablefish longline gear.	DEAD	Hooked	Fishery gear	AK GOA sablefish longline	Commercial	Longline	N/A	1	1
NPGOP	11/5/2019	BS	Steller Sea Lion	Western US	DEAD	A male Steller sea lion was caught and killed by AK BSAI flatfish trawl gear.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI flatfish trawl	Commercial	Trawl	N/A	1	1
NPGOP	11/26/2019	BS	Steller Sea Lion	Western US	DEAD	A male Steller sea lion was caught and killed by AK BSAI flatfish trawl gear.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI flatfish trawl	Commercial	Trawl	N/A	1	1
NPGOP	11/27/2019	BS	Steller Sea Lion	Western US	DEAD	A female Steller sea lion was caught and killed by AK BSAI flatfish trawl gear.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI flatfish trawl	Commercial	Trawl	N/A	1	1
NPGOP	11/30/2019	BS	Steller Sea Lion	Western US	DEAD	A male Steller sea lion was caught and killed by AK BSAI flatfish trawl gear.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI flatfish trawl	Commercial	Trawl	N/A	1	1
NPGOP	12/5/2019	GOA	Steller Sea Lion	Western US	DEAD	Two male Steller sea lions were caught and killed by AK GOA flatfish trawl gear during an unsampled haul. This record represents 1 of 2.	DEAD	Entangled / entrapped	Fishery gear	AK GOA flatfish trawl	Commercial	Trawl	N/A	1	1
NPGOP	12/5/2019	GOA	Steller Sea Lion	Western US	DEAD	Two male Steller sea lions were caught and killed by AK GOA flatfish trawl gear during an unsampled haul. This record represents 2 of 2.	DEAD	Entangled / entrapped	Fishery gear	AK GOA flatfish trawl	Commercial	Trawl	N/A	1	1
NPGOP	1/26/2020	BS	Steller Sea Lion	Western US	DEAD	A male Steller sea lion was caught and killed in AK BSAI flatfish trawl gear.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI flatfish trawl	Commercial	Trawl	N/A	1	1
NPGOP	2/3/2020	BS	Steller Sea Lion	Western US	DEAD	A Steller sea lion was caught and killed in AK BSAI pollock trawl gear during an unsampled haul. This mortality will not be counted against this fishery since this stock has also been taken in sampled hauls in this fishery in this year.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI pollock trawl	Commercial	Trawl	N/A	N/A	N/A
NPGOP	2/4/2020	BS	Steller Sea Lion	Western US	DEAD	A male Steller sea lion was caught and killed in AK BSAI flatfish trawl gear.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI flatfish trawl	Commercial	Trawl	N/A	1	1
NPGOP	2/12/2020	BS	Steller Sea Lion	Western US	DEAD	A male Steller sea lion was caught and killed in AK BSAI flatfish trawl gear.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI flatfish trawl	Commercial	Trawl	N/A	1	1

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Source of Record	Date	Area	Common Name	Stock	Initial Assessment	Determination Details	Final Determination	Mechanism of Injury	Source of Injury	Fishery Name	Fishery Type	Fishery Method	SI Criteria	M/SI Value	LOF Value
NPGOP	2/14/2020	BS	Steller Sea Lion	Western US	DEAD	A Steller sea lion was caught and killed in AK BSAI flatfish trawl gear.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI flatfish trawl	Commercial	Trawl	N/A	1	1
NPGOP	2/29/2020	BS	Steller Sea Lion	Western US	DEAD	A female Steller sea lion was caught and killed in AK BSAI pollock trawl gear.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI pollock trawl	Commercial	Trawl	N/A	1	1
NPGOP	4/1/2020	BS	Steller Sea Lion	Western US	DEAD	A Steller sea lion was caught and killed in AK BSAI flatfish trawl gear.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI flatfish trawl	Commercial	Trawl	N/A	1	1
NPGOP	4/2/2020	BS	Steller Sea Lion	Western US	DEAD	A male Steller sea lion was caught and killed in AK BSAI flatfish trawl gear.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI flatfish trawl	Commercial	Trawl	N/A	1	1
NPGOP	4/14/2020	BS	Steller Sea Lion	Western US	DEAD	Two male Steller sea lions were caught and killed in AK BSAI pollock trawl gear. This record represents 1 of 2.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI pollock trawl	Commercial	Trawl	N/A	1	1
NPGOP	4/14/2020	BS	Steller Sea Lion	Western US	DEAD	A Steller sea lion was caught and killed in AK BSAI flatfish trawl gear.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI flatfish trawl	Commercial	Trawl	N/A	1	1
NPGOP	4/14/2020	BS	Steller Sea Lion	Western US	DEAD	Two male Steller sea lions were caught and killed in AK BSAI pollock trawl gear. This record represents 2 of 2.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI pollock trawl	Commercial	Trawl	N/A	1	1
AKRO	4/15/2020	Kodiak	Steller Sea Lion	Western US	SI	A Steller sea lion was observed hauled out with a circumferential neck entanglement caused by a white packing band.	SI	Constricting entanglement	Marine debris (packing band)	N/A	N/A	N/A	P8a	1	0
NPGOP	5/5/2020	BS	Steller Sea Lion	Western US	DEAD	A male Steller sea lion was caught and killed in AK BSAI pollock trawl gear.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI pollock trawl	Commercial	Trawl	N/A	1	1
NPGOP	5/26/2020	BS	Steller Sea Lion	Western US	DEAD	A male Steller sea lion was caught and killed in AK BSAI flatfish trawl gear.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI flatfish trawl	Commercial	Trawl	N/A	1	1
NPGOP	5/29/2020	BS	Steller Sea Lion	Western US	DEAD	A male Steller sea lion was caught and killed in AK BSAI flatfish trawl gear.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI flatfish trawl	Commercial	Trawl	N/A	1	1
ADFG	6/1/2020	BS	Steller Sea Lion	Western US	SI	An adult male Steller sea lion was observed with a circumferential neck entanglement caused by unidentified marine debris.	SI	Constricting entanglement	Marine debris (unidentified)	N/A	N/A	N/A	P8a	1	0
NPGOP	6/2/2020	BS	Steller Sea Lion	Western US	DEAD	A Steller sea lion was caught and killed in AK BSAI flatfish trawl gear.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI flatfish trawl	Commercial	Trawl	N/A	1	1
NPGOP	6/6/2020	BS	Steller Sea Lion	Western US	DEAD	A Steller sea lion was caught and killed in AK BSAI flatfish trawl gear.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI flatfish trawl	Commercial	Trawl	N/A	1	1
NPGOP	6/19/2020	BS	Steller Sea Lion	Western US	DEAD	A Steller sea lion was caught and killed in AK BSAI pollock trawl gear.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI pollock trawl	Commercial	Trawl	N/A	1	1
ADFG	6/20/2020	BS	Steller Sea Lion	Western US	SI	A subadult male Steller sea lion was observed with a circumferential neck entanglement caused by unidentified marine debris.	SI	Constricting entanglement	Marine debris (unidentified)	N/A	N/A	N/A	P8a	1	0

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Source of Record	Date	Area	Common Name	Stock	Initial Assessment	Determination Details	Final Determination	Mechanism of Injury	Source of Injury	Fishery Name	Fishery Type	Fishery Method	SI Criteria	M/SI Value	LOF Value
ADFG	6/20/2020	GOA	Steller Sea Lion	Western US	SI	A juvenile Steller sea lion was observed with a circumferential neck entanglement caused by unidentified marine debris.	SI	Constricting entanglement	Marine debris (unidentified)	N/A	N/A	N/A	P8a	1	0
ADFG	6/20/2020	GOA	Steller Sea Lion	Western US	SI	An adult female Steller sea lion was observed with a circumferential neck entanglement caused by unidentified marine debris.	SI	Constricting entanglement	Marine debris (unidentified)	N/A	N/A	N/A	P8a	1	0
AKRO	7/14/2020	SCAK	Steller Sea Lion	Western US	SI	An adult male Steller sea lion was observed swimming with a circumferential neck entanglement caused by unidentified marine debris.	SI	Constricting entanglement	Marine debris (unidentified)	N/A	N/A	N/A	P8a	1	0
AKRO	7/28/2020	SCAK	Steller Sea Lion	Western US	DEAD	A female Steller sea lion yearling was found dead in a state of moderate decomposition with lesions consistent with a gunshot injury. A necropsy was conducted and radiographs found metal fragments in the skull.	DEAD	Shot	Projectile weapon	N/A	N/A	N/A	N/A	1	0
NPGOP	7/30/2020	BS	Steller Sea Lion	Western US	DEAD	A male Steller sea lion was caught and killed in AK BSAI pollock trawl gear.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI pollock trawl	Commercial	Trawl	N/A	1	1
ADFG	8/5/2020	BS	Steller Sea Lion	Western US	SI	A Steller sea lion was observed with a circumferential neck entanglement caused by unidentified marine debris.	SI	Constricting entanglement	Marine debris (unidentified)	N/A	N/A	N/A	P8a	1	0
NPGOP	8/25/2020	BS	Steller Sea Lion	Western US	SI	A free-swimming female Steller sea lion was observed entangled in green and orange trawl gear.	SI	Entangled / entrapped	Fishery gear	Unknown trawl	Unknown	Trawl	P6	1	0
NPGOP	8/25/2020	BS	Steller Sea Lion	Western US	DEAD	A female Steller sea lion was caught and killed in AK BSAI pollock trawl gear.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI pollock trawl	Commercial	Trawl	N/A	1	1
NPGOP	8/26/2020	GOA	Steller Sea Lion	Western US	DEAD	A Steller sea lion was caught and killed in AK GOA pollock trawl gear. This take was reported through EM while the fishery was operating on an exempted fishing permit (EFP).	DEAD	Entangled / entrapped	Fishery gear	AK GOA pollock trawl	Commercial	Trawl	N/A	1	1
AKRO	8/28/2020	Kodiak	Steller Sea Lion	Western US	SI	An adult male Steller sea lion was observed hauled out and swimming with a circumferential neck entanglement caused by a packing band.	SI	Constricting entanglement	Marine debris (packing band)	N/A	N/A	N/A	P8a	1	0
NPGOP	8/31/2020	BS	Steller Sea Lion	Western US	DEAD	A male Steller sea lion was caught and killed in AK BSAI pollock trawl gear.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI pollock trawl	Commercial	Trawl	N/A	1	1
NPGOP	9/10/2020	BS	Steller Sea Lion	Western US	DEAD	A male Steller sea lion was caught and killed in AK BSAI flatfish trawl gear.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI flatfish trawl	Commercial	Trawl	N/A	1	1
NPGOP	10/6/2020	BS	Steller Sea Lion	Western US	DEAD	A male Steller sea lion was caught and killed in AK BSAI pollock trawl gear.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI pollock trawl	Commercial	Trawl	N/A	1	1
NPGOP	10/12/2020	BS	Steller Sea Lion	Western US	DEAD	A male Steller sea lion was caught and killed in AK BSAI pollock trawl gear.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI pollock trawl	Commercial	Trawl	N/A	1	1
NPGOP	10/13/2020	BS	Steller Sea Lion	Western US	DEAD	A male Steller sea lion was caught and killed in AK BSAI flatfish trawl gear.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI flatfish trawl	Commercial	Trawl	N/A	1	1

Table 1 -- Human-marine mammal interaction records reviewed for injury and mortality, 2016-2020.

Source of Record	Date	Area	Common Name	Stock	Initial Assessment	Determination Details	Final Determination	Mechanism of Injury	Source of Injury	Fishery Name	Fishery Type	Fishery Method	SI Criteria	M/SI Value	LOF Value
NPGOP	11/15/2020	BS	Steller Sea Lion	Western US	DEAD	A male Steller sea lion was caught and killed in AK BSAI flatfish trawl gear.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI flatfish trawl	Commercial	Trawl	N/A	1	1
AKRO	12/1/2018	SEAK	Unidentified Large Whale	Unknown	PRORATE	An unidentified large cetacean was observed to be entangled. The nature of the entanglement is unknown; however, the whale was seen dragging 15 feet of line and a small buoy. The whale did not appear to be struggling. No additional information was reported for this case.	PRORATE	Entangled / entrapped	Marine debris (unidentified)	N/A	N/A	N/A	L10	0.75	0
AKRO	9/5/2019	BS	Unidentified Large Whale	Unknown	DEAD	A floating unidentified large whale carcass in an advanced state of decomposition was observed with line tightly wrapped around its tail stock. Local experts suspected that this animal died from entanglement in BSAI Pacific cod pot gear, but that this was not able to be confirmed, therefore is not being assigned.	DEAD	Entangled / entrapped	Fishery gear	Unknown	Unknown	Unknown	N/A	1	0
AKRO	8/11/2020	SEAK	Unidentified Large Whale	Unknown	PRORATE	An unidentified large whale was observed to be entangled in an AK Southeast salmon drift gillnet in an unknown configuration. The reporting party described the whale surfacing in the middle of a ball-up net with more than 100 cork floats in 3-4 layers of line totaling 4-5 times the length of the animal. Subsequent attempts to locate the animal were unsuccessful.	PRORATE	Entangled / entrapped	Fishery gear	AK Southeast salmon drift gillnet	Commercial	Gillnet	L10	0.75	0.75
WCGOP	1/3/2018	WC	Unidentified Otariid	Eastern US	NSI	An unidentified otariid was caught in catch shares EM bottom trawl gear and brought on deck. The animal was released from the gear and exited the vessel on its own. No injuries were reported for this animal.	NSI	Entangled / entrapped	Fishery gear	Catch Shares EM bottom trawl	Commercial	Trawl	P4	0	0
A-SHOP	5/9/2018	WC	Unidentified Otariid	Eastern US	DEAD	An unidentified otariid was caught and killed in midwater rockfish EM trawl gear.	DEAD	Entangled / entrapped	Fishery gear	Midwater Rockfish EM - Midwater Trawl	Commercial	Trawl	N/A	1	1
A-SHOP	10/6/2017	WC	Unidentified Otariid	Unknown	NSI	Four unidentified otariids were caught in at-sea hake catcher processor midwater trawl gear and hauled up to the stern ramp. The animals were slowly rolled towards the front of the net, and were eventually released from the net at the end of the stern ramp. Hoses were then utilized to coax the animals into the water. No injuries were reported. This record is 3/4.	NSI	Entangled / entrapped	Fishery gear	At-sea hake catcher-processor midwater trawl	Commercial	Trawl	P7b	0	0
A-SHOP	10/6/2017	WC	Unidentified Otariid	Unknown	NSI	Four unidentified otariids were caught in at-sea hake catcher processor midwater trawl gear and hauled up to the stern ramp. The animals were slowly rolled towards the front of the net, and were eventually released from the net at the end of the stern ramp. Hoses were then utilized to coax the animals into the water. No injuries were reported. This record is 1/4.	NSI	Entangled / entrapped	Fishery gear	At-sea hake catcher-processor midwater trawl	Commercial	Trawl	P7b	0	0
A-SHOP	10/6/2017	WC	Unidentified Otariid	Unknown	NSI	Four unidentified otariids were caught in at-sea hake catcher processor midwater trawl gear and hauled up to the stern ramp. The animals were slowly rolled towards the front of the net, and were eventually released from the net at the end of the stern ramp. Hoses were then utilized to coax the animals into the water. No injuries were reported. This record is 2/4.	NSI	Entangled / entrapped	Fishery gear	At-sea hake catcher-processor midwater trawl	Commercial	Trawl	P7b	0	0

Table 1 -- Human-marine mammal interaction records reviewed for injury and mortality, 2016-2020.

Source of Record	Date	Area	Common Name	Stock	Initial Assessment	Determination Details	Final Determination	Mechanism of Injury	Source of Injury	Fishery Name	Fishery Type	Fishery Method	SI Criteria	M/SI Value	LOF Value
A-SHOP	10/6/2017	WC	Unidentified Otariid	Unknown	NSI	Four unidentified otariids were caught in at-sea hake catcher processor midwater trawl gear and hauled up to the stern ramp. The animals were slowly rolled towards the front of the net, and were eventually released from the net at the end of the stern ramp. Hoses were then utilized to coax the animals into the water. No injuries were reported. This record is 4/4.	NSI	Entangled / entrapped	Fishery gear	At-sea hake catcher-processor midwater trawl	Commercial	Trawl	P7b	0	0
A-SHOP	10/8/2017	WC	Unidentified Otariid	Unknown	NSI	An unidentified otariid was caught in at-sea hake catcher processor midwater trawl gear and hauled onto the deck of the vessel. The ship's deck hands sprayed water onto the animal and pulled at the net until the animal moved out of the net through a hole that was made by the deck hands. The net was then sent back into the water with the animal still on it. Once the net hit the water the animal jumped off the side and into the water. The animal initially seemed lethargic, but perked up once it passed the top of the stern ramp during release to the water. No injuries were reported.	NSI	Entangled / entrapped	Fishery gear	At-sea hake catcher-processor midwater trawl	Commercial	Trawl	P4	0	0
WCGOP	3/6/2019	WC	Unidentified Otariid	Unknown	DEAD	An unidentified otariid was caught and killed in catch shares EM bottom trawl gear.	DEAD	Entangled / entrapped	Fishery gear	Catch shares EM bottom trawl	Commercial	Trawl	N/A	1	1
NPGOP	5/3/2019	BS	Unidentified Otariid	Unknown	DEAD	An unidentified otariid was caught and killed by AK BSAI flatfish trawl gear.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI flatfish trawl	Commercial	Trawl	N/A	1	1
WCGOP	7/25/2019	WC	Unidentified Otariid	Unknown	DEAD	An unidentified otariid was caught and killed in catch shares EM bottom trawl gear.	DEAD	Entangled / entrapped	Fishery gear	Catch shares EM bottom trawl	Commercial	Trawl	N/A	1	1
NPGOP	3/11/2016	BS	Unidentified Phocid	Unknown	DEAD	An unidentified phocid was caught and killed in trawl gear.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI Pacific cod trawl	Commercial	Trawl	N/A	1	1
NPGOP	6/14/2017	BS	Unidentified Phocid	Unknown	DEAD	An unidentified pinniped was caught and killed by trawl gear.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI pollock trawl	Commercial	Trawl	N/A	1	1
NPGOP	3/20/2019	GOA	Unidentified Phocid	Unknown	DEAD	An unidentified phocid was caught and killed by AK GOA halibut longline gear.	DEAD	Hooked	Fishery gear	AK GOA halibut longline	Commercial	Longline	N/A	1	1
NPGOP	9/4/2020	BS	Unidentified Phocid	Unknown	DEAD	An unidentified phocid was caught and killed by AK BSAI Pacific cod longline gear.	DEAD	Hooked	Fishery gear	AK BSAI Pacific cod longline	Commercial	Longline	N/A	1	1
NPGOP	11/22/2020	BS	Unidentified Phocid	Unknown	DEAD	An unidentified phocid was caught and killed by AK BSAI Pacific cod longline gear.	DEAD	Hooked	Fishery gear	AK BSAI Pacific cod longline	Commercial	Longline	N/A	1	1
NPGOP	8/12/2016	BS	Unidentified Pinniped	Unknown	DEAD	An unidentified pinniped was caught and killed by longline gear.	DEAD	Hooked	Fishery gear	AK BSAI Pacific cod longline	Commercial	Longline	N/A	1	1
A-SHOP	11/8/2016	WC	Unidentified Pinniped	Unknown	NSI	An unidentified pinniped was reported by a member of the crew to have been entangled in trawl gear before being released. The observer did not witness the interaction.	NSI	Entangled / entrapped	Fishery gear	At-sea hake catcher-processor midwater trawl	Commercial	Trawl	P7b	0	0

Table 1 -- Human-marine mammal interaction records reviewed for injury and mortality, 2016-2020.

Source of Record	Date	Area	Common Name	Stock	Initial Assessment	Determination Details	Final Determination	Mechanism of Injury	Source of Injury	Fishery Name	Fishery Type	Fishery Method	SI Criteria	M/SI Value	LOF Value
A-SHOP	11/8/2016	WC	Unidentified Pinniped	Unknown	NSI	An unidentified pinniped was found in the live tank. A plank was lowered into the live tank, and the sea lion was motivated up the plank with a hose. It exited the live tank and promptly entered the water.	NSI	Entangled / entrapped	Fishery gear	At-sea hake catcher-processor midwater trawl	Commercial	Trawl	P7b	0	0
A-SHOP	11/12/2016	WC	Unidentified Pinniped	Unknown	NSI	A member of the crew informed the observer that an unidentified pinniped had been found in the live tank and then released alive. The observer did not witness the interaction.	NSI	Entangled / entrapped	Fishery gear	At-sea hake catcher-processor midwater trawl	Commercial	Trawl	P4	0	0
A-SHOP	11/12/2016	WC	Unidentified Pinniped	Unknown	NSI	A member of the crew informed the observer that an unidentified pinniped had been found in the live tank and then released alive. The observer did not witness the interaction.	NSI	Entangled / entrapped	Fishery gear	At-sea hake catcher-processor midwater trawl	Commercial	Trawl	P4	0	0
A-SHOP	11/12/2016	WC	Unidentified Pinniped	Unknown	NSI	An unidentified pinniped was caught in trawl gear and brought aboard, released from the net, and then returned to the water.	NSI	Entangled / entrapped	Fishery gear	At-sea hake catcher-processor midwater trawl	Commercial	Trawl	P4	0	0
A-SHOP	11/13/2016	WC	Unidentified Pinniped	Unknown	NSI	An unidentified pinniped was caught in trawl gear, brought aboard, released from the net, and was motivated by the crew to return to the water.	NSI	Entangled / entrapped	Fishery gear	At-sea hake catcher-processor midwater trawl	Commercial	Trawl	P4	0	0
A-SHOP	10/19/2019	WC	Unidentified Pinniped	Unknown	NSI	An unidentified pinniped was caught in at-sea hake catcher processor midwater trawl gear, brought aboard the vessel, and released from the net. After the release the animal went into the ship's gear locker. The vessel's crew corralled the animal by yelling at the animal while holding boards in front of themselves until the animal jumped off the stern of the vessel. No injuries were reported for this animal.	NSI	Entangled / entrapped	Fishery gear	At-sea hake catcher-processor midwater trawl	Commercial	Trawl	P4	0	0
NPGOP	3/2/2020	BS	Unidentified Pinniped	Unknown	NSI	An unidentified pinniped was caught in AK BSAI flatfish trawl gear. The animal was brought on deck and was released alive, after 40 minutes in the net, with minor superficial wounds. Both SI criteria P4 and P7b apply to this interaction.	NSI	Entangled / entrapped	Fishery gear	AK BSAI flatfish trawl	Commercial	Trawl	P4	0	0
NPGOP	7/4/2020	BS	Unidentified Pinniped	Unknown	SI	An unidentified pinniped on deck was struck multiple times with a hammer by the vessel captain. The observer on board was not notified until after the animal had left the vessel. No additional information is available regarding the injury.	SI	Body trauma	Other	AK BSAI pollock trawl	Commercial	Trawl	P9	1	1
MMAF	8/9/2017	SCAK	Unidentified Small Cetacean	Unknown	DEAD	Two unidentified small cetaceans were self-reported to have been killed by AK Cook Inlet set-net fishing gear. This record represents 1/2.	DEAD	Entangled / entrapped	Fishery gear	AK Cook Inlet salmon set gillnet	Commercial	Gillnet	N/A	1	1
MMAF	8/9/2017	SCAK	Unidentified Small Cetacean	Unknown	DEAD	Two unidentified small cetaceans were self-reported to have been killed by AK Cook Inlet set-net fishing gear. This record represents 2/2.	DEAD	Entangled / entrapped	Fishery gear	AK Cook Inlet salmon set gillnet	Commercial	Gillnet	N/A	1	1

Table 1 -- Human-marine mammal interaction records reviewed for injury and mortality, 2016-2020.

Source of Record	Date	Area	Common Name	Stock	Initial Assessment	Determination Details	Final Determination	Mechanism of Injury	Source of Injury	Fishery Name	Fishery Type	Fishery Method	SI Criteria	M/SI Value	LOF Value
AKRO	6/15/2016	GOA	Unidentified Whale	Unknown	PRORATE	A vessel struck an unidentified cetacean while underway at 20 knots. The vessel was less than 65 ft long. Blood was observed in the water and the whale was reported to appear dazed prior to disappearing from sight. This interaction qualifies as a prorated serious injury under criterion L6b due to the vessel's size and speed and L11 due to the resulting laceration.	PRORATE	Ship strike	Vessel (commercial)	N/A	N/A	N/A	L11	0.52	0
AKRO	6/17/2016	GOA	Unidentified Whale	Unknown	PRORATE	An unidentified whale was observed during an aerial survey that was trailing netting, 120+ feet of line, and a polyball. This entanglement will be considered a prorated serious injury under criterion L10 due to the unknown configuration of the entanglement.	PRORATE	Entangled / entrapped	Fishery gear	Unknown net	Unknown	Net	L10	0.75	0
AKRO	9/14/2016	SEAK	Unidentified Whale	Unknown	PRORATE	An unidentified large whale, described as over 65 ft in length, was observed for over a week to be entangled in gear consisting of a line and a buoy in an unknown configuration near Prince of Wales Island. This entanglement will be considered a prorated serious injury under criterion L10 due to the unknown configuration of the entanglement.	PRORATE	Entangled / entrapped	Marine debris (unidentified)	N/A	N/A	N/A	L10	0.75	0
AKRO	3/18/2017	SEAK	Unidentified Whale	Unknown	PRORATE	A small humpback whale or minke whale was observed with a trailing buoy. The extent of the entanglement could not be confirmed; thus, this event is prorated at L10.	PRORATE	Entangled / entrapped	Marine debris (rope and buoy)	N/A	N/A	N/A	L10	0.75	0
AKRO	5/12/2017	SEAK	Unidentified Whale	Unknown	SI	The bow of a 959.6 ft cruise ship traveling at 20.5 knots struck an unidentified whale. The crew of the ship briefly saw the whale dead ahead of the vessel but were unable to maneuver in time to avoid impact. The ship shuddered when the whale was hit. The outcome of the impact is unknown.	SI	Ship strike	Vessel (commercial)	N/A	N/A	N/A	L6a	1	0
NPGOP	6/21/2017	BS	Unidentified Whale	Unknown	PRORATE	An unidentified animal possibly collided with the ships propeller. A very large pool of blood was observed behind the boat following a loud bang; however, the presumed animal was never seen. There is not enough definitive information in the record to make a SI/M determination.	PRORATE	Ship strike	Vessel (commercial)	AK BSAI flatfish trawl	Commercial	Trawl	L11	0.52	0
AKRO	10/11/2017	SEAK	Unidentified Whale	Unknown	PRORATE	An unidentified whale was observed to be towing a 16 inch red buoy, possibly associated with shrimp pots. The whale appeared to be smaller and traveling alone and slow. No additional information or photographs are available. The extent of the entanglement cannot be determined; thus, this case is prorated at L10.	PRORATE	Entangled / entrapped	Fishery gear	Unknown	Unknown	Unknown	L10	0.75	0
AKRO	12/6/2017	BS	Unidentified Whale	Unknown	SI	An unidentified whale was observed to be entangled in parallel pot cod fishery gear. The entangled gear included 1 beach-ball sized polybuoy with 50 ft of 3/4 inch line, a second beach-ball sized polybuoy with 66 fathoms of line, and one pot (weight ~ 600-700 lb, 6.5 ft x 6.5 ft x 36 inches tall). The base of the whale's tail was wrapped 3-5 times in the main line under the second buoy, but no other areas appeared to be wrapped. The whale and fishery gear were not re-sighted after the initial discovery.	SI	Constricting entanglement	Fishery gear	AK state waters parallel pot cod fishery	Commercial	Pot	L2	1	1

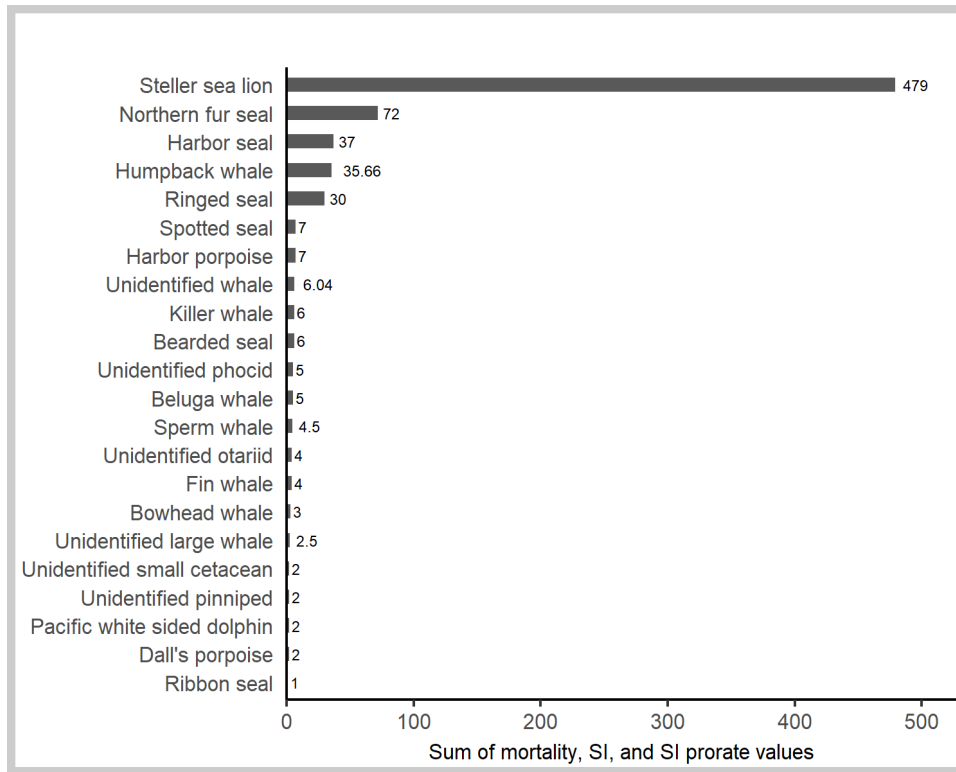


Figure 1. -- Total human-caused serious injury and mortality of Alaska marine mammal species appearing in the Alaska Stock Assessment Reports, 2016-2020. Some large whale injury categories are prorated (i.e., assigned a serious injury value less than one), so the sum of mortality, SI, and SI prorate values may not be a whole number. See the text of the report for more information.

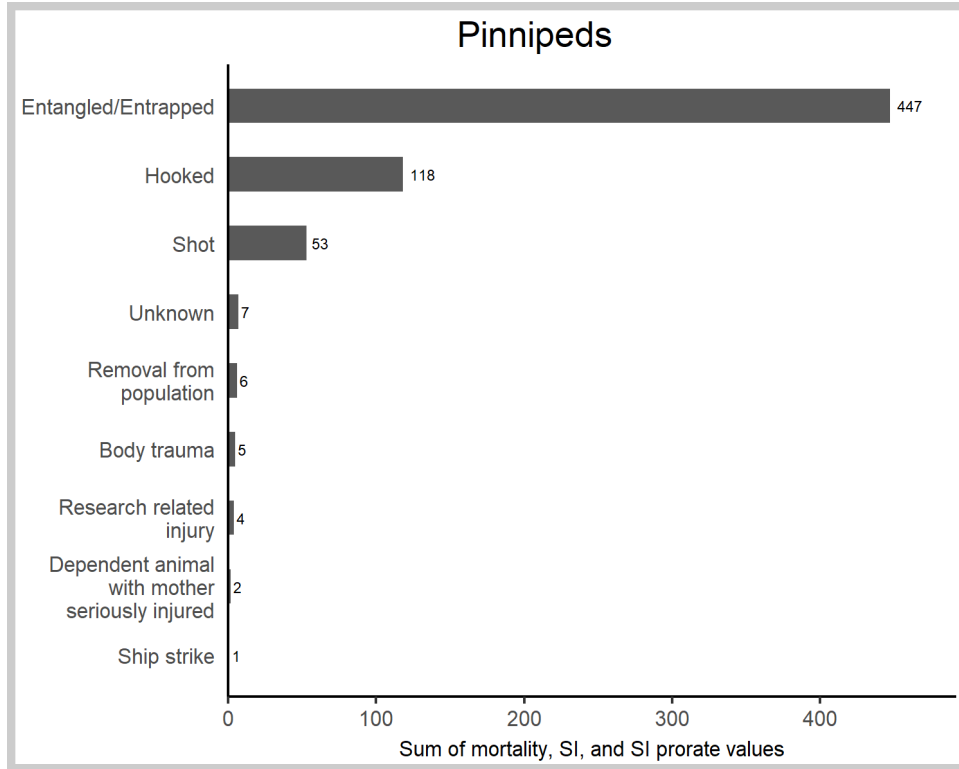


Figure 2. -- Human-caused serious injury and mortality of Alaska pinniped species by mechanism of injury, 2016-2020.

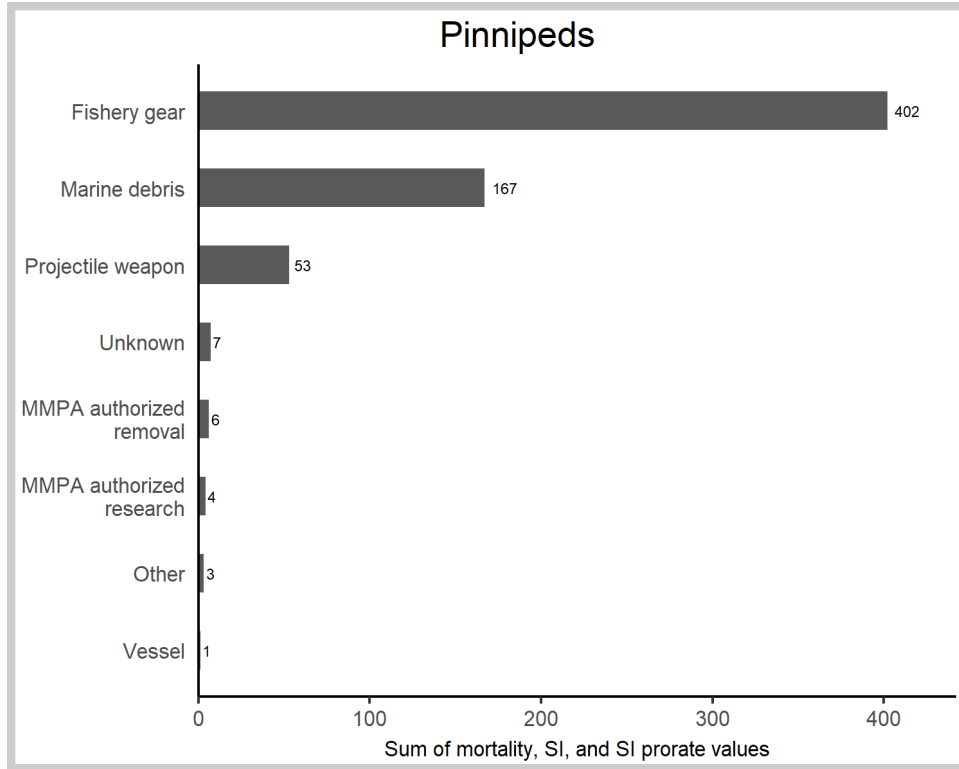


Figure 3. -- Human-caused serious injury and mortality of Alaska pinniped species by general cause of injury, 2016-2020. Dependent animals with seriously injured mothers are assigned the same cause of injury as their mothers.

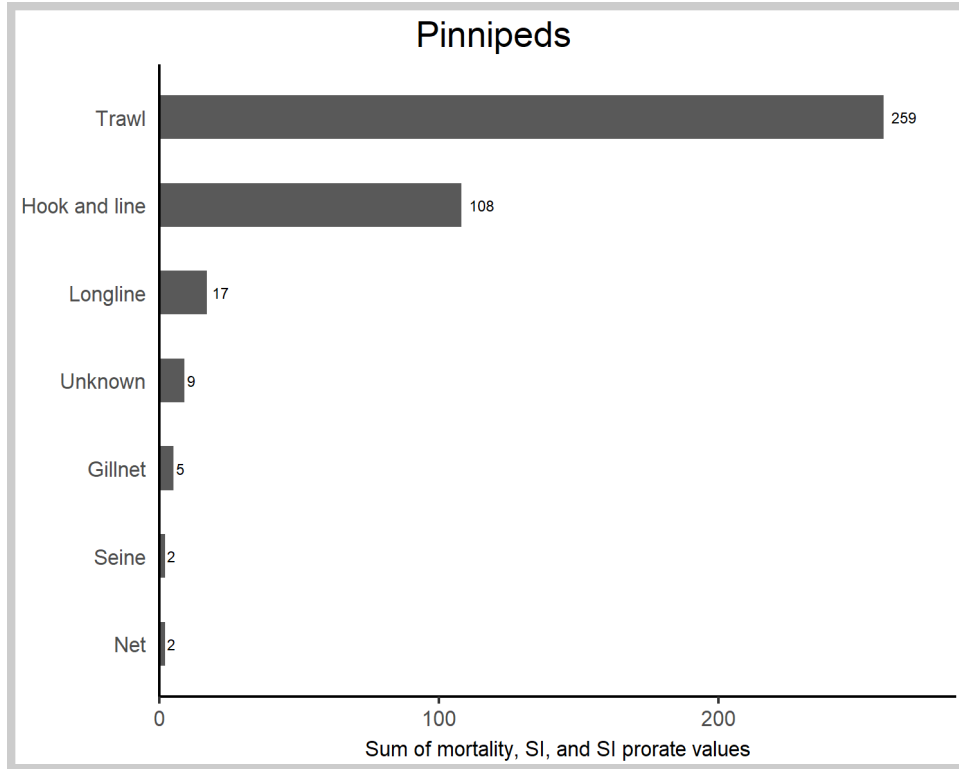


Figure 4. -- Fishery-related serious injury and mortality of Alaska pinniped species (fishery gear as the cause of injury) by fishery gear type, 2016-2020.

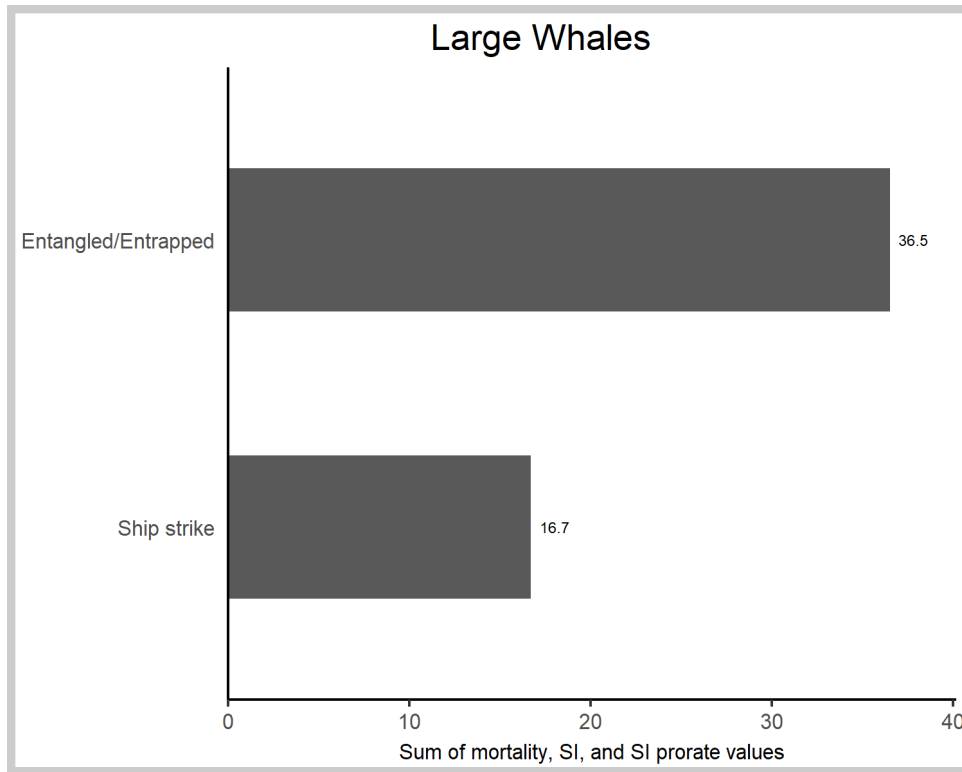


Figure 5. -- Human-caused serious injury and mortality of Alaska large whale species by mechanism of injury, 2016-2020. Some large whale injury categories are prorated (i.e., assigned a serious injury value less than one), so the sum of mortality, SI, and SI prorate values may not be a whole number. See the text of the report for more information.

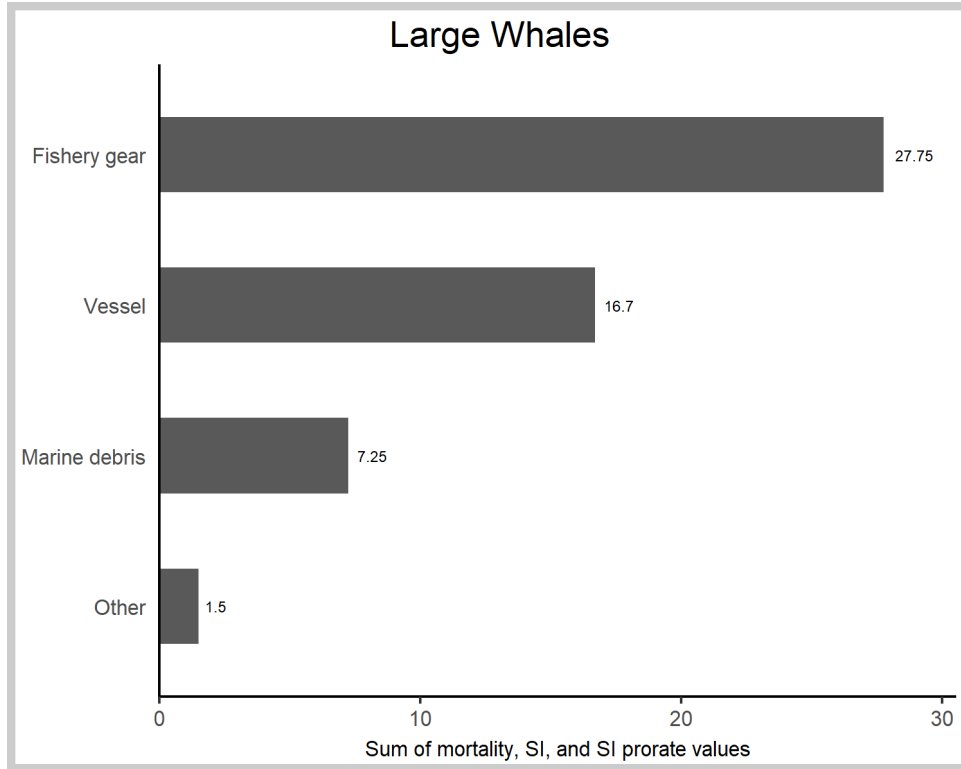


Figure 6. -- Human-caused serious injury and mortality of Alaska large whale species by general cause of injury, 2016-2020. Dependent animals with seriously injured mothers are assigned the same cause of injury as their mothers. Some large whale injury categories are prorated (i.e., assigned a serious injury value less than one), so the sum of mortality, SI, and SI prorate values may not be a whole number. See the text of the report for more information.

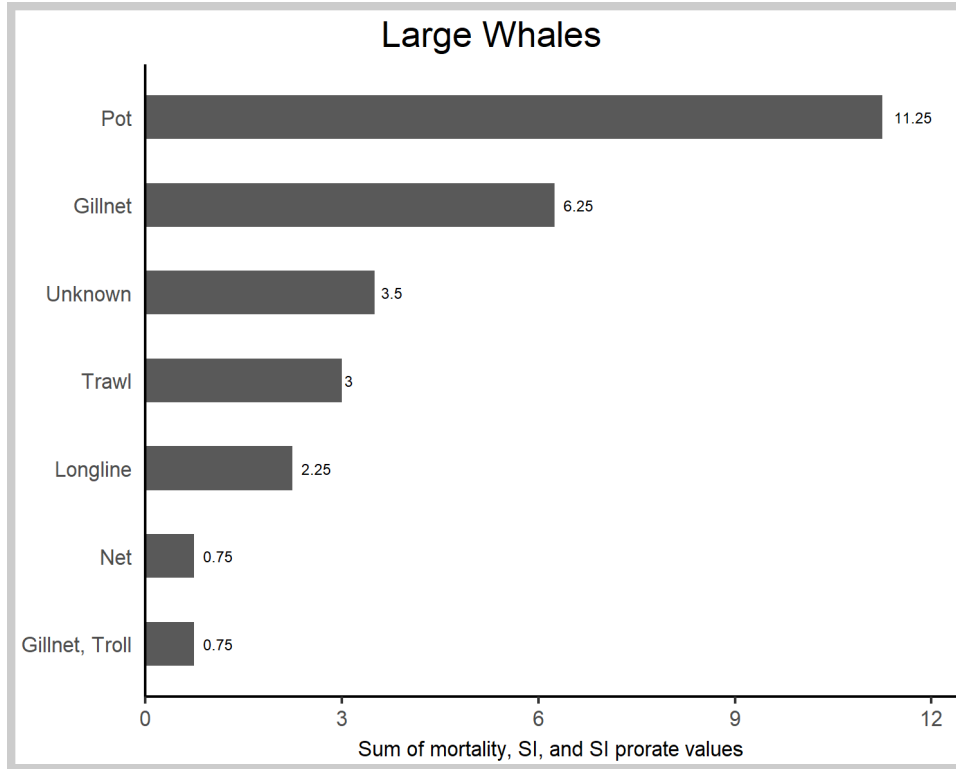


Figure 7. -- Fishery-related serious injury and mortality (fishery gear as the cause of injury) of Alaska large whale species by fishery gear type, 2016-2020. Some large whale injury categories are prorated (i.e., assigned a serious injury value less than one), so the sum of mortality, SI, and SI prorate values may not be a whole number. See the text of the report for more information.

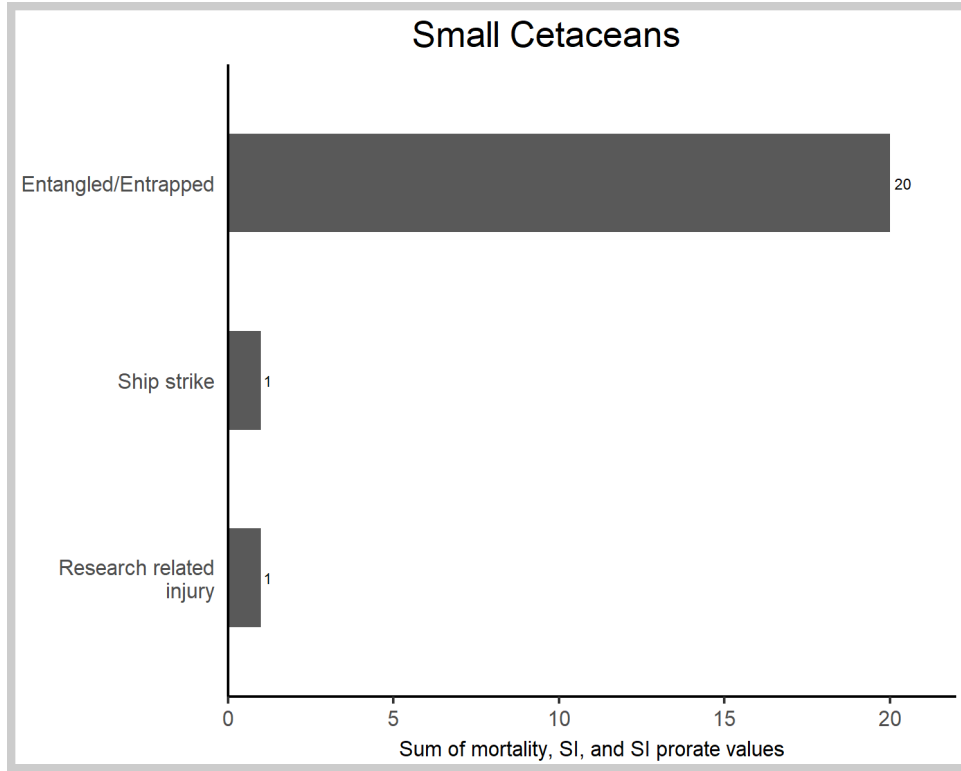


Figure 8. -- Human-caused serious injury and mortality of Alaska small cetacean species by mechanism of injury, 2016-2020.

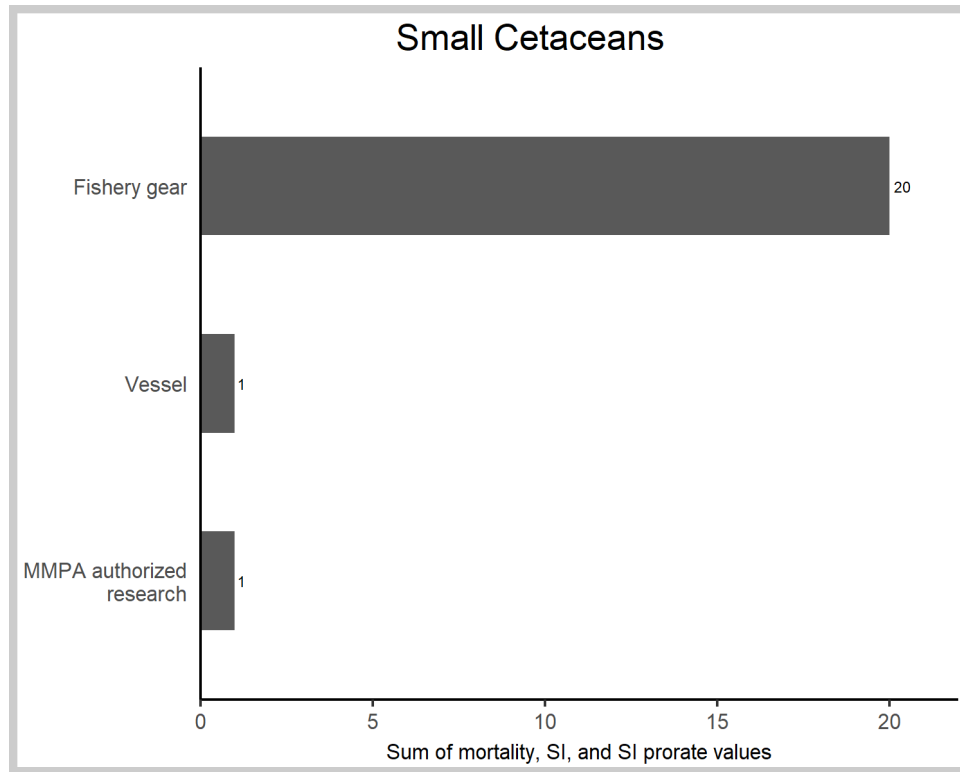


Figure 9. -- Human-caused serious injury and mortality of Alaska small cetacean species by general cause of injury, 2016-2020.

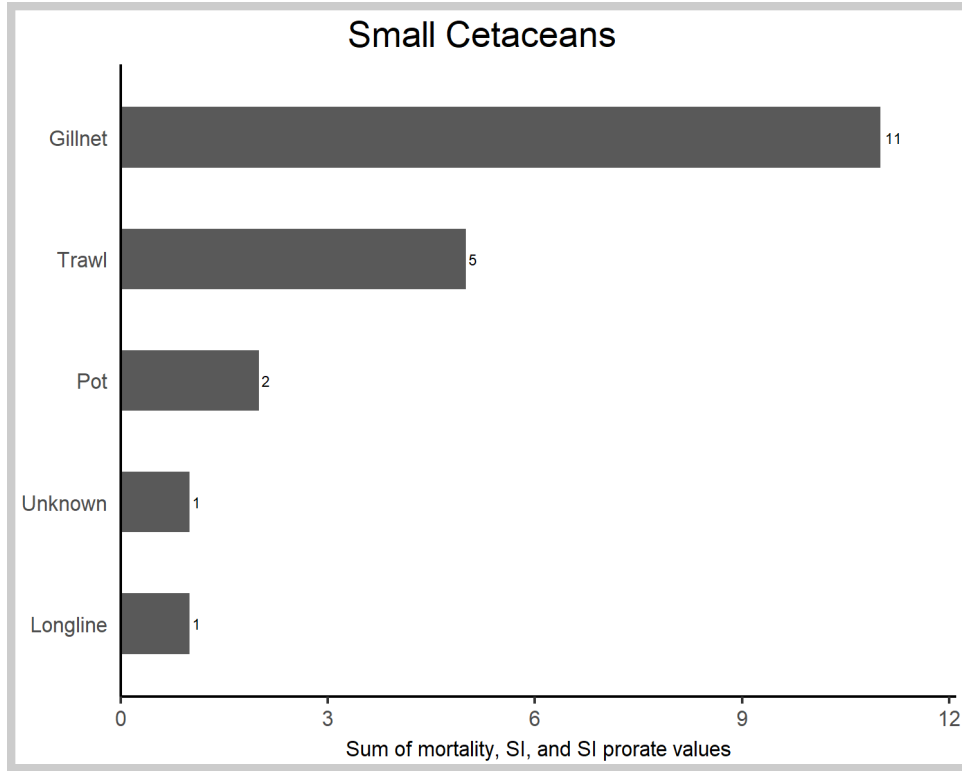


Figure 10. -- Fishery-related serious injury and mortality (fishery gear as the cause of injury) of Alaska small cetacean species by fishery gear type, 2016-2020.

Appendix

Appendix Tables 1 to 3 summarize the large whale, small cetacean, and pinniped injury categories and criteria, which are copied from tables 1 to 3 in the guidelines for “Distinguishing Serious from Non-Serious Injury of Marine Mammals” pursuant to the Marine Mammal Protection Act (NMFS 2012b). (Available online: <https://www.fisheries.noaa.gov/national/marine-mammal-protection/marine-mammal-protection-act-policies-guidance-and-regulations>).

Appendix Table 1: Summary of Large Cetacean Injury Categories and Criteria.

Appendix Table 2: Summary of Small Cetacean Injury Categories and Criteria.

Appendix Table 3: Summary of Pinniped Injury Categories and Criteria.

Appendix Table 1. -- Summary of Large Cetacean¹ Injury Categories and Criteria

Instructions: Each large cetacean injury event is recorded to the appropriate injury/information category using all available information and scientific judgment, as described in the Procedural Directive. Criteria L10 - L12 accommodate events that lack details necessary for assignment to a more specific category. For a single injury event to which several categories apply, the injury determination with the highest level of severity is assigned. More detailed information or extended observation on an individual case/animal may justify a determination differing from the guidance of this table. An animal that is fully disentangled would generally be considered not seriously injured, unless there is additional evidence of a serious injury. Any injury leading to apparent significant health decline (e.g., skin discoloration, lesions near the nares, fat loss, increased cyamid loads) is a serious injury.

Category	Injury/ Information	Injury Determination	Criteria
L1	Ingested gear ² or hook(s)	SI ³	Swallowed, not simply draped through mouth
L2	Constricting wrap	SI	Tightly wrapped line anywhere on body that indents the skin or does not shift with whale's movement, or line that is likely to become constricting as the whale grows. Indication that a whale that is heavily weighted, anchored or has a discolored appendage is sufficient evidence of constricting gear
L3	Loose wrap, bridled or draped gear	NSI ⁴	Loosely wrapped gear that moves or shifts freely with whale's movement. Absence of constricting gear must be confirmed
L4	External hook	NSI	Fishing hook of any size on any part of the body (i.e., not ingested)
L5a	Deep laceration ⁵	SI	Laceration with the potential to affect major artery (e.g., laceration or severing at insertion of flipper/fluke), penetrating body cavity, or cutting bone
L5b	Superficial laceration	NSI	Laceration not deeper than blubber layer, does not affect major artery, or cut bone
L6a	Vessel much greater in size than whale or vessel ≥65' and >10 knots	SI	Struck by vessel much greater in size than the whale and traveling greater than 10 knots, or struck by vessel equal or greater than 65' and traveling greater than 10 knots, and no information on injury to the whale
L6b	Vessel smaller in size than whale or vessel <65' and >10 knots	Prorate ⁶ : 0.20	Struck by vessel smaller in size than the whale and traveling greater than 10 knots, or struck by vessel less than 65' and traveling greater than 10 knots, and no information on injury to the whale. A strike to a calf by a vessel of any size and traveling greater than 10 knots will be considered a serious injury

¹ For the purposes of this table, "large cetaceans" include all mysticetes and sperm whales.

² For the purposes of this table, "gear" is defined as any portion of fishing gear excluding the hook, which is considered separately.

³ SI = Serious Injury.

⁴ NSI = Non-Serious Injury.

⁵ For the purposes of this table, "laceration" is defined as a ragged incision or a tearing of the skin. Lacerations are caused by trauma that results in stretching, tearing, crushing, shearing, or avulsion of the tissue. Trauma, including blunt and sharp force trauma, includes a wound or bodily harm caused by an extrinsic agent.

⁶ "Prorate" means the number of events assigned to a given category within the assessment period is multiplied by the prorate number provided for that category.

Appendix Table 1. -- Continued.

L6c	Vessel any size 10 knots	NSI	Struck by vessel of any size traveling at equal or less than 10 knots and no information on injury to the whale
L7a	Vessel much greater in size than whale or vessel 2'65' and speed unknown	Prorate: 0.56	Struck by vessel much greater in size than the whale traveling at an unknown speed, or struck by vessel equal or greater than 65' and traveling at unknown speed, and no information on injury to the whale. A strike to a calf by a vessel of any size when speed is unknown will be considered a serious injury
L7b	Vessel smaller in size than whale or vessel <65' and speed unknown	Prorate: 0.14	Struck by vessel smaller than the whale traveling at an unknown speed, or struck by vessel less than 65' and traveling at unknown speed, and no information on injury to the whale. A strike to a calf by a vessel of any size when speed is unknown will be considered a serious injury
L8	Dependent ⁷	SI	Dependent calf of a dead or seriously injured mother
L9	Brought on deck	SI	Whale removed from water and brought on deck
L10	Evidence of entanglement	Prorate: 0.75	Confirmed entanglement but insufficient information available to place in any of the L1-L4 criteria with a high degree of certainty
L11	Vessel strike laceration	Prorate: 0.52	Whale confirmed with non-entanglement related laceration but lacking details to place in either criteria L5a or L5b with a high degree of certainty. Includes observation of blood in water
L12	Vessel strike observed	Prorate: 0.36	Confirmed vessel strike report where there is insufficient detail to assign event to criteria L6a – L7b with a high degree of certainty. A strike to a calf by a vessel of unknown size traveling at an unknown speed will be considered a serious injury

⁷ “Dependent” for a large cetacean means a non-weaned calf. Weaned calves and juvenile large cetaceans are no longer dependent on their mothers.

Appendix Table 2. -- Summary of Small Cetacean¹ Injury Categories and Criteria

Instructions: Each small cetacean injury event is recorded to the appropriate injury/information category using all available information and scientific judgment, as described in the Procedural Directive. For a single injury event to which several categories apply, the injury determination with the highest level of severity is assigned. More detailed information or extended observation on an individual case/animal may justify a determination differing from the guidance of this table. Any injury leading to apparent significant health decline (e.g., skin discoloration, fat loss) is a serious injury.			
Category	Injury/Information	Injury Determination ²	Additional factors for evaluating whether “case-specific” injuries are serious or non-serious (additional factors at end of table)
S1	A free-swimming animal observed at a date later than its human interaction, exhibiting signs of declining health believed to be resulting from initial injury (e.g., a marked skin discoloration, fat loss)	SI ³	*
S2	Ingested gear ⁴ or hook(s)	SI	
S3	Visible blood loss	Case specific ⁵	Amount of blood, location of the bleeding injury, duration of bleeding
S4	Animal brought on vessel deck following entanglement/entrapment (excluding scientific research targeting marine mammals and authorized as such under a NMFS scientific research permit, where the animal is brought on and placed on the vessel deck in a controlled manner)	SI	
S5a	Hook(s) in head (excluding criterion S5b), regardless of the presence of gear	SI	
S5b	Hook(s) confirmed in lip only, external tissue outside of teeth, no trailing gear	Case specific	Prolonged restraint or struggle that could lead to capture myopathy, size of hook, depth of hooking, impairing ability to feed, presence of other injuries
S5c	Hook(s) in any body part, but hook(s) is removed or pulls out	Case specific	Prolonged restraint or struggle that could lead to capture myopathy, depth of hook, hook pulls out cleanly vs. causes further injury during dehooking, method used to remove hook, length of time hooked
S5d	Hook(s) in appendage or body (excluding criterion S5a), without trailing gear or with trailing gear that does not have the potential ⁶ to: 1) become a constricting wrap on animal; 2) be ingested; 3) accumulate drag; or 4) become snagged on something in the environment, anchoring the animal	Case specific	Prolonged restraint or struggle that could lead to capture myopathy, depth and location of hook, type and amount of gear attached

¹For the purposes of this table, small cetaceans include all odontocetes except sperm whales.

²This table includes only those criteria determined to be serious injuries or case-specific based on expert opinion at the 2007 Workshop (Anderson et al., 2008) and by small cetacean experts on the NMFS Determination Staff working group. For the purposes of streamlining the information for the reader, criteria determined to be non-serious injuries are not included in this table.

³SI = serious injury.

⁴For the purposes of this table, gear is defined as any portion of fishing gear excluding the hook, which is considered separately. Lures are considered gear. Gear also generally refers to any type of debris entangling or attached to the animal.

⁵Case-specific = Could be a serious or non-serious injury, but either 1) there is insufficient information about the impact of a particular injury, or 2) additional factors must be considered on a case-by-case basis to determine the severity.

⁶For the purposes of this table, "potential" as it relates to criterion S5d indicates that the trailing gear IS NOT capable of leading to any of the situations listed.

Appendix Table 2. -- Continued.

S6	Gear attached to free-swimming animal with potential ⁷ to: 1) become a constricting wrap on animal; 2) be ingested; 3) accumulate drag; or 4) become snagged on something in the environment, anchoring the animal	SI	
S7a	Anchored, immobilized, or entrapped and not freed	SI	
S7b	Anchored, immobilized, entangled, or entrapped before being freed without gear attached	Case specific	Duration of entanglement/entrapment, prolonged restraint or struggle that could lead to capture myopathy, gear type, where/how gear is attached to animal, associated injury (i.e., where directly or indirectly caused by initial entanglement), response of individual animal, method used by human to remove gear from animal
S8a	Gear wrapped and constricting on any body part or is likely to become constricting as the animal moves or grows	SI	
S8b	Gear wrapped and loose on any body part	Case specific	Gear type, amount of gear, potential for snag, potential to lead to criterion S8a, animal body size relative to gear (e.g., because of species or age), effect on animal movement, species sensitivity (e.g., frightens easily)
S9	Body trauma ⁸ not covered by any other criteria	Case specific	Location of wound, depth (e.g., superficial or to the bone, penetrating muscle or organs), length, number of lacerations, cleanliness (i.e., compression vs. tearing)
S10	Visible fracture(s), excluding pectoral fins (see criterion S13d for pectoral fin fractures)	SI	
S11	Vertebral transection, including fully severed flukes	SI	
S12	Body cavity penetration ⁹ by foreign object or body cavity exposure	SI	
S13a	Loss or disfigurement of dorsal fin	Case specific	Cleanliness (i.e., compression vs. tearing), nature of injury causing the loss, extent of fin loss (i.e., full or partial), amount and duration of blood loss
S13b	Partially severed flukes, transecting midline	SI	

⁷ For the purposes of this table, potential as it relates criterion S6 indicates that the trailing gear IS capable of leading to any of the situations listed.

⁸ For the purposes of this table, “trauma” is defined as a wound or bodily harm caused by an extrinsic agent. Blunt trauma is an injury (abrasion, laceration, contusion or skeletal fracture) produced by a blunt object striking the body or impact of the body against a blunt object or surface. Sharp force trauma is an injury caused by a sharp or pointed object creating a penetrating (stab, chop or incision) wound. Laceration is defined as a ragged incision or a tearing of the skin. Lacerations are caused by blunt trauma that results in stretching, tearing, crushing, shearing, or avulsion of the tissue.

⁹ For the purposes of this table, “penetration” is defined as a wound occurring when a foreign object punctures the body. Penetrating wounds can be characterized as one of three types: stab (small external wound that is greater in length into the body than is apparent on the skin surface), incised (clean cuts into the skin which are longer on the skin surface than they are deep), or chop wounds (incised wounds that penetrate deep to the bone, leaving a groove or cut in the bone).

Appendix Table 2. -- Continued.

S13c	Partially severed flukes, not transecting midline	Case specific	Cleanliness (i.e., compression vs. tearing), nature of injury causing the loss, amount and duration of blood loss
S13d	Partially or completely severed or fractured pectoral fin(s)	Case specific	Cleanliness (i.e., compression vs. tearing), nature of injury causing the loss, extent of fin loss (i.e., full or partial), amount and duration of blood loss, opened or closed fracture
S14	Social animal separated from group and/or released alone post-interaction (excluding criterion S15)	Case specific	Species (e.g., sensitivity, offshore vs. inshore), location of release (e.g., likelihood of animal locating its conspecifics)
S15	Dependent animal (i.e., calf, juvenile) released alone post-interaction or dependent animal left with a seriously injured or dead mother	SI	
S16	Observed or reported collision with vessel	Case specific	Speed of vessel, size of vessel, hull shape, part of vessel to strike the animal, size of animal compared to size of vessel, behavior of animal after collision, extent and location of wound(s) on animal

* Factors listed in the far right column of Appendix Table 2-2 are unique to the associated injury type. In addition to those listed in this column, the factors that should be considered, if available, when reviewing all case specific injury events in this table include, but are not limited to the following:

- Species
- Age or age class (e.g., calf, juvenile, adult)
- Sex
- Size of animal
- Overall health (e.g., nutritional status, body condition, pre-existing disease state, pre-existing injuries)
- Behavior during and/or after injury-causing interaction (e.g., dorsal arching, listlessness)
- Reproductive status (e.g., pregnant, lactating, has dependent calf)
- Natural history (e.g., indigenous, migratory)
- Location of injury (e.g., mouth, head, body, fin, tail, internal)
- Size of injury
- Duration of injury (e.g., single event, repeated, chronic)
- Depth of injury (e.g., superficial or to the bone, penetrating muscle or organs)
- Cleanliness of injury (e.g., compression, tearing)
- Environmental condition (e.g., individuals out of their normal habitat, climate stressors)
- Social stressors (e.g., social structure of species, separation of social individuals from the group, cow/calf separation)
- Cumulative effects of repeated exposures
- Compounding effects of multiple injuries obtained during a single event
- Availability of data on multiple sequential events involving the same individual over time
- Susceptibility of the species to capture myopathy (spinner dolphins and porpoises notoriously sensitive; bottlenose dolphins robust; many others fall in between, with some unknown)
- Ability of rehabilitated animal to be released
- Relative effect of blood loss on different species

In addition to those factors listed above, the factors that apply to all fishery-interaction related case specific injuries include, but are not limited to the following:

- Entanglement type (e.g., hooked, anchored, entrapment)
- Amount and size of gear (e.g., size, length and number of branches of line; number of buoys, traps or anchors; volume of netting)
- Entanglement constriction (e.g., tight, loose, multiple wraps)
- Habitat where animal is located (e.g., an animal with trailing gear areas of dense gear or an area with vegetation is more likely to risk snagging the gear and becoming anchored)
- Entanglement duration
- Existence, type and amount of any trailing gear
- Method of handling the animal during disentanglement

Appendix Table 3. -- Summary of Pinniped¹ Injury Categories and Criteria

<p>Instructions: Each pinniped injury event is recorded to the appropriate injury/information category using all available information and scientific judgment, as described in the Procedural Directive. For a single injury event to which several categories apply, the injury determination with the highest level of severity is assigned. More detailed information or extended observation on an individual case/animal may justify a determination differing from the guidance of this table. Any injury leading to apparent significant health decline (e.g., skin discoloration, fat loss) is a serious injury.</p>			
Category	Injury/Information	Injury Determination ²	Additional factors for evaluating whether “case-specific” injuries are serious or non-serious (additional factors at end of table)
P1	A free-swimming animal observed at a date later than its human interaction, exhibiting signs of declining health believed to be resulting from initial injury (e.g., a marked change in body condition, tissue necrosis, emaciation, gangrene).	SI ³	*
P2	Ingested gear ⁴ or hook(s)	SI	
P3	Visible blood loss	Case specific ⁵	Amount of blood, location of the bleeding injury, duration of bleeding
P4	Animal brought on vessel deck following entanglement/entrapment (excluding scientific research targeting marine mammals and authorized as such under a NMFS scientific research permit, where the animal is brought on and placed on the vessel deck in a controlled manner)	Case specific	Manner in which animal is brought on deck, length of time animal is on deck, environmental conditions (e.g., temperature)
P5a	Hook(s) in mouth (excluding criterion P5b), regardless of the presence of gear	SI	
P5b	Hook(s) confirmed in head (excluding criterion P5a), or in lip only (external tissue outside of teeth), no trailing gear	Case specific	Location on head (e.g., eye), depth of penetration, type of hook, prolonged restraint or struggle that could lead to capture myopathy, size of hook, impairing ability to feed
P5c	Hook(s) in any body part, but hook(s) is removed or pulls out	Case specific	Prolonged restraint or struggle that could lead to capture myopathy, location of hooking on the body, depth of hook, hook pulls out cleanly vs. causes further injury during dehooking, method used to remove hook, length of time hooked

¹For the purposes of this table, pinnipeds include all pinniped species except walrus.

²This table includes only those criteria determined to be serious injuries or case-specific based on expert opinion at the 2007 Workshop (Anderson et al., 2008) and by pinniped experts on the NMFS Determination Staff working group. For the purposes of streamlining the information for the reader, criteria determined to be non-serious injuries are not included in this table.

³SI = serious injury.

⁴For the purposes of this table, gear is defined as any portion of fishing gear excluding the hook, which is considered separately. Lures are considered gear. Gear also generally refers to any type of debris entangling or attached to the animal.

⁵Case-specific = Could be a serious or non-serious injury, but either 1) there is insufficient information about the impact of a particular injury, or 2) additional factors must be considered on a case-by-case basis to determine the severity.

Appendix Table 3. -- Continued.

P5d	Hook(s) in appendage or body (excluding criteria P5a-c and P12), without trailing gear or with trailing gear that does not have the potential ⁶ to: 1) become a constricting wrap on animal; 2) be ingested, 3) accumulate drag; or 4) become snagged on something in the environment, anchoring the animal	NSI ⁷	
P6	Gear attached in any manner to free-swimming animal with potential ⁸ to: 1) become a constricting wrap on animal; 2) be ingested; 3) accumulate drag; or 4) become snagged on something in the environment, anchoring the animal	SI	
P7a	Anchored/immobilized and not freed	SI	
P7b	Anchored, immobilized, or entangled before being freed without gear attached	Case specific	Duration of entanglement, prolonged restraint or struggle that could lead to capture myopathy, type of fishing gear, where/how gear immobilized animal, associated injury (where directly or indirectly caused by initial entanglement), response of individual
P8a	Gear wrapped and constricting any body part or likely to become constricting as the animal moves or grows	SI	
P8b	Gear wrapped loosely on any body part	Case specific	Type and amount of fishing gear, animal body size relative to gear (species, age), effect on movement, species sensitivity
P9	Body trauma ⁹ not covered by any other criteria	Case specific	Location of trauma on body, depth (superficial or to the bone, penetrating muscle or organs) length of laceration(s), number of lacerations, cleanliness (compression vs. tearing), amount and duration of blood loss, risk of infection or disease transmission (e.g., dog bites)
P10	Visible fracture(s), excluding broken appendages (see criterion P13 for broken appendages)	SI	
P11	Vertebral transection or fully severed flipper(s)	SI	
P12	Body cavity penetration ¹⁰ by foreign object or body cavity exposure	SI	

⁶ For the purposes of this table, potential as it relates to criterion P5d indicates that the trailing gear IS NOT capable of leading to any of the situations listed.

⁷ NSI = non-serious injury.

⁸ For the purposes of this table, potential as it relates to criterion P6 indicates that the trailing gear IS capable of leading to any of the situations listed.

⁹ For the purposes of this table, “trauma” is defined as a wound or bodily harm caused by an extrinsic agent. Blunt trauma is an injury (abrasion, laceration, contusion or skeletal fracture) produced by a blunt object striking the body or impact of the body against a blunt object or surface. Sharp force trauma is an injury caused by a sharp or pointed object or a bullet from a gunshot creating a penetrating (stab, chop or incision) wound. Laceration is defined as a ragged incision or a tearing of the skin. Lacerations are caused by blunt trauma that results in stretching, tearing, crushing, shearing, or avulsion of the tissue.

¹⁰ For the purposes of this table, “penetration” is defined as a wound occurring when a foreign object punctures the body, such as a bullet from a gunshot. Penetrating wounds can be characterized as one of three types: stab (small external wound that is greater in length into the body than is apparent on the skin surface), incised (clean cuts into the skin which are longer on the skin surface than they are deep), or chop wounds (incised wounds that penetrate deep to the bone, leaving a groove or cut in the bone).

Appendix Table 3. -- Continued.

P13	Partially severed or fractured flipper(s)	Case specific	Cleanliness (clean cut vs. tear), nature of injury causing the loss, extent of fin or flipper loss, opened or closed fracture, dislocation, amount/duration of blood loss
P14	Dependent animal (i.e., pup, juvenile) released alone post-interaction or dependent animal left with a seriously injured or dead mother	SI	
P15	Observed or reported collision with vessel	Case specific	Speed of vessel, size of vessel, hull shape, part of vessel to strike the animal (e.g., propeller, hull), size of animal compared to size of vessel, location of strike on animal's body, extent and location of wound(s) to animal

* Factors listed in the far right column of Appendix Table 2-3 are unique to the associated injury type. In addition to those listed in this column, the factors that should be considered, if available, when reviewing all case specific injury events in this table include, but are not limited to the following:

- Species
- Age or age class (e.g., calf, juvenile, adult)
- Sex
- Size of animal
- Overall health (e.g., nutritional status, body condition, pre-existing disease state, pre-existing injuries)
- Behavior during and/or after injury-causing interaction (e.g., listlessness)
- Reproductive status (e.g., pregnant, lactating, has dependent pup)
- Natural history (e.g., small home range, large home range)
- Location of injury (e.g., mouth, head, body, flipper/fin, internal)
- Size of injury
- Duration of injury (e.g., single event, repeated, chronic)
- Depth of injury (e.g., superficial or to the bone, penetrating muscle or organs)
- Cleanliness of injury (e.g., compression, tearing)
- Environmental condition (e.g., individuals out of their normal habitat, environmental stressors)
- Social stressors (e.g., social structure of species, separation of social individuals from the group, mother/pup separation)
- Cumulative effects of repeated exposures
- Compounding effects of multiple injuries obtained during a single event
- Availability of data on multiple sequential events involving the same individual over time
- Susceptibility of the species to capture myopathy (some sensitive, others robust, some unknown)
- Ability of rehabilitated animal to be released
- Relative effect of blood loss on different species

In addition to those factors listed above, the factors that apply to all fishery or marine-debris interaction related case specific injuries include, but are not limited to the following:

- Entanglement type (e.g., hooked, anchored, entrapment)
- Amount and size of gear (e.g., size, length and number of lines; number of buoys, traps or anchors; volume of netting; material of gear)
- Method of handling the animal during disentangling
- Entanglement constriction (e.g., tight, loose, multiple wraps)
- Habitat where animal is located (e.g., an animal with trailing gear in areas of dense gear or an area with vegetation or on shore is more likely to risk snagging the gear and becoming anchored)
- Entanglement duration
- Existence, type and amount of any trailing gear



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