



NOAA Technical Memorandum NMFS-AFSC-392

Human-caused Mortality and Injury of NMFS-managed Alaska Marine Mammal Stocks, 2012-2016

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U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
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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 2012 through 2016. A total of 797 unique interactions with potential evidence of human-caused mortality or injury were reviewed and are summarized in this report. Details regarding each interaction were assessed for evidence of human-caused injury to the marine mammal. Injury severity determinations were made for those injuries likely to be human-caused. Injury determination details regarding the injury source, type, severity, and criteria supporting the determination are presented in the appendices. Records of mortality are also included in this report, and assigned to source. Mortality and injury values were assigned to each interaction for comparison with the potential biological removal (PBR) levels for each stock calculated under the MMPA and appearing within the Alaska SARs. The mortality and serious injury values included in this report are derived solely from documented interactions. Not all human-caused mortality and serious injury to marine mammals is documented, this report represents a minimum count of human-caused mortality and serious injury to 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 source (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 human-caused mortality and serious injury for each stock from all sources, including specific commercial fishing operations, relative to the potential biological removal (PBR) levels calculated under the MMPA (Wade 1998). Mortality events are summed, assigned to source, and annual mortality estimates calculated. 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 source. Thorough examination of human-caused injuries to 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 their 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 within NMFS for distinguishing non-serious injuries (NSI) from SI and for documenting pertinent information considered in making injury determinations (NMFS 2012a, 2012b). 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, there are 25 records with known outcomes involving large whales which sustained vessel-strike lacerations of unknown severity, and in 13 of these instances (52%) the result was in 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 2012 through 2016 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 assessed in the U.S. Pacific Marine Mammal SARs but are found injured or dead in Alaska waters, the records are sent to the Southwest Fisheries Science Center

(SWFSC) for inclusion in the report summarizing mortality and injury for U.S. Pacific West Coast marine mammal stocks (Carretta et al. in prep.). Examples of stocks assessed in the U.S. Pacific SARs which 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. stock of Steller sea lions and Eastern Pacific northern fur seals, are reported in the Alaska SARs. 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 Alaska Native subsistence harvest data are not reported in this document except in cases with rare circumstances but are available in the SARs. Mortality and serious injury data were summarized by stock, source, and year and used for estimates reported in the 2018 SARs (Muto et al. in prep). 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 Alaska Regional Office (AKRO) stranding network, the Alaska Fisheries Science Center (AFSC) fisheries observer program, the West Coast Regional Office (WCRO) stranding network, the Northwest Fisheries Science Center (NWFSC) fisheries observer program, the NMFS Southwest Fisheries Science Center (SWFSC), the Marine Mammal Authorization Program (MMAP), the NOAA's Office of Protected Resources (OPR) and the Alaska Department of Fish and Game (ADF&G). Approximately 3,400 human-marine mammal interaction records from 2012 through 2016 were reviewed by an injury determination team at the Marine Mammal Laboratory (MML) for evidence of human-caused mortality or injury to the marine mammal(s) involved in the interaction. All available documentation (reports, emails, images, re-sight information, and necropsy results) was considered to assess interactions, make injury determinations, and attribute mortality and injury to a source. If more information was necessary for a determination we contacted the primary source of information.

Any interaction which met an injury category criteria in NMFS Instruction 02-038-01(2012b; e.g., ingested gear or hook(s), entanglements, ship strikes, lacerations, etc.) was deemed to potentially document a human-caused injury and a summary of all relevant information was recorded as a unique entry in an Access database (NMFS 2012b). Any mortality in which the MML injury determination team was able to confidently assign 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-related mortality or injury were identified the relevant information from each record was consolidated into a single entry within the database. The database allows MML staff to quickly sort and summarize a large number of 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 dependent calves or

pups of injured animals were observed, a separate database entry was added and the offspring were assessed as unique, but associated, events. Interaction records in which there was no potential for human-caused injury to the marine mammal, such as reports of animals feeding on fishery discards, or interactions that lacked sufficient information to assign an injury to human cause were retained for reference but excluded from the database and report.

Following the initial review of ~3,400 primary records, 797 unique cases of human-caused mortality or injury to marine mammals and were identified (Appendix Table 1-10). Each database entry was evaluated under NMFS' injury determination criteria (NMFS 2012b). Different sets of criteria, specific to large cetaceans (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 2-1 to 2-3). 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 or non-serious. Alaska Native subsistence harvest information, including numbers of struck and lost animals, is not included in this report but is reported in the SARs. Pinnipeds with gunshot wounds reported to the NMFS AKRO 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 unlawfully shot. Pinnipeds with gunshot wounds reported to the NMFS WCRO stranding network, such as Eastern U.S. stock of Steller sea lions in Washington, Oregon, or California were included in this report.

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 of time. Initial and final determinations may differ if an animal was determined to be seriously injured, but over time and through human intervention, its condition was improved. Two examples of situations where initial and final determinations differ include events where disentanglement teams remove gear from humpback whales (assuming there was no evidence of health decline or other injury) or the rehabilitation and release of stranded pinniped pups. In these cases, the final injury determination is reported in the SARs for comparison to PBR while the initial injury determination is 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 the final injury determination is used when classifying fisheries for the LOF or for comparison to PBR within the SARs (NMFS 2012a). For example, if a humpback became entangled in an active commercial gillnet and was released by fishermen at the time of the interaction and the whale 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 reflected in the SARs and the 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 would be NSI. This injury would not be counted in the mortality and serious injury estimates reported in the SARs or compared to PBR since the human intervention activities mitigated the death of the animal. However, for the purposes of categorizing 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 assignment to source are discussed and agreed upon by an injury determination team at MML. If necessary, experts at MML are consulted when making determinations. All determinations and assignments are then reviewed by experienced staff at other NMFS Science Centers to ensure determinations are consistent across the Science Centers. The AKRO provided fishery assignments for fisheries-related injuries and mortality for records that were not obtained from a fisheries observer program.

Results

Overall

Of the 797 human-marine mammal interactions summarized in this report, 671 interactions were found 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 in the interaction. The remaining 126 interactions were found to have resulted in a NSI to the marine mammal. Across all interactions, 407 entanglement/entrapment-related SI, prorated SIs, and mortalities were documented. The majority of these entanglements occurred in fishing gear (n = 288) and marine debris (n = 112) with a few other assorted sources of entanglement/entrapment (n = 7). The remainder of the confirmed cases of human-caused mortality and serious injury to marine mammal stocks appearing in this report represent animals that were hooked by fishing gear (n = 120, illegally shot (n = 96), struck by vessels (n = 28), or suffered injury or mortality due to other assorted causes (n = 20).

Of the 370 interaction records that were provided by the AKRO and WCRO stranding networks, 304 were found to have documented mortality or serious injury to the animal involved in the interaction. The most prevalent causes of mortality and serious injury were entanglements in fishing gear (n = 63), illegal shootings (n = 91), and entanglement in marine debris (n = 65). Fisheries observers associated with federal groundfish fisheries reported 257 interaction events which were reviewed for mortality and serious injury. The majority of these events resulted in

mortality (n = 189), with a relatively small number of serious injuries and prorated serious injuries (n = 15), and 53 non-serious injuries. An additional ~400 observations of Steller sea lion entanglements and fishery gear interactions, many of which were repeat sightings, were documented and reviewed by ADF&G based on standardized annual summer surveys conducted at nearly every sea lion haulout and rookery in Southeast Alaska, Prince William Sound, the Barren Islands, and Bristol Bay. From these observations, 117 incidents of seriously injured Steller sea lions were determined to be unique animals. Among these records, fishing gear ingestion (n = 65) and entanglements in fishing gear and marine debris (n = 48) were most prevalent.

Pinnipeds

Steller sea lions were the most common species in reports of human-caused mortality and serious injury between 2012 and 2016 (n = 430). The most common cause of serious injuries for the Eastern U.S. stock of Steller sea lions was entanglement, primarily in marine debris or fishery gear (n = 129), followed by injuries related to the ingestion of fishery gear from the commercial, charter, and recreational salmon troll fisheries (n = 104). Steller sea lion interactions with troll fishery gear, sometimes referred to as “flashers,” generally involves the ingestion of the hook. Of reported flasher entanglements, differentiation between commercial, charter, and recreational troll gear could be made only for a small number of the records of mortality and serious injury. Based on 15 years of annual summer surveys of Steller sea lions, ADF&G documented 15 marked individual Steller sea lions that have interacted with troll fisheries 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 liberate themselves from the flasher (presumably by biting through the monofilament line that connects the swallowed hook to the flasher) and survived at least one year beyond the date initially seen with the entanglement. The flasher was not present when these seven animals were resighted in subsequent years. Of the remaining eight animals, one was found dead due to the flasher and swallowed hook combination, one was subsistence harvested (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 resighted from 2001 through 2015. The analyses indicated that Steller sea lions that had ingested commercial, charter, or recreational salmon troll 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, penetrating the pleural cavity or pericardium.

Mortality and serious injury of the Western U.S. stock of Steller sea lions was primarily caused by federal groundfish trawl fisheries (n = 75) which are observed by federal fisheries observers.

These interactions typically resulted in mortality (the animal was already dead by the time it was observed) and injuries or serious injuries are rare (Breiwick 2013). Other leading causes of serious injury and mortality are constricting entanglements caused by marine debris (n = 10) and interactions with other types of fishery gear (n = 12). The differences in the leading causes of serious injury and mortality between the Eastern U.S. and Western U.S. stock of Steller sea lions may be due to the geographical distribution of commercial, charter, and recreational salmon troll fishing effort, which is much higher 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 actual entanglement rates in the Western U.S. stock of Steller sea lions, or the result of other factors which result in fewer reports of entanglement.

The majority of mortality and serious injury involving northern fur seals (n = 49) was due to circumferential neck entanglements in unidentified marine debris, packing bands, and various components of fishing gear (n = 37). Because Eastern Pacific northern fur seals are known to occur off the U.S. West Coast in winter/spring, any mortality and serious injury reported off the coasts of Washington, Oregon, and California during December through May was assigned to both the Eastern Pacific and California stocks of northern fur seals. Most cases of mortality and serious injury to phocids involved ringed (n = 9) and harbor seals (n = 27), with a few records of bearded (n = 10), ribbon (n = 5), and spotted seals (n = 7). Of the records reviewed for this report, entanglements and entrapments in trawl fishery gear was the leading cause of serious injury and mortality for all phocids.

Large Cetaceans

Human-caused mortality and serious injury was reported during the 5-year period from 2012 to 2016 for humpback whales, sperm whales, fin whales, bowhead whales, and unidentified whales (n = 93). Entanglements of humpback whales (n = 52) comprised the majority of the large whale serious injuries and mortalities. This was followed by vessel strikes of humpbacks (n = 21), some of which resulted in damage to property and human safety concerns (n = 7; e.g., vessels being damaged or disabled while underway or at anchor, vessel occupants being thrown from the boat, and in another instance, a vessel sinking). Mortality and injury events which occurred in the area where the Western North Pacific and Central North Pacific stocks of humpback whales are known to overlap were assigned to both stocks. Interactions of sperm whales with federal longline fisheries resulted in prorated serious injuries due to entanglements in fishery gear (n = 6). Sperm whales (and killer whales) are known to depredate fish from longline gear during hauling back, increasing the susceptibility for interaction with these fisheries (Sigler et al. 2008, Peterson et al. 2014).

All instances of large whale entanglements reported by NPGOP observers between 2012 and 2015 were reassessed to ensure that all relevant information was considered for this report edition. In previous editions, only marine mammal interaction forms and any photos/video

provided by observers were reviewed. For this edition, we also reviewed any available records that might include extra details on an entanglement, such as the observer's daily notes, haul forms, decksheets, and logbook data. Following this reassessment, one sperm whale entanglement that occurred in 2014 and was previously considered a prorated serious injury was changed to a non-serious injury. No other injury determinations were changed. Many of the large whale entanglements were assigned to injury category L10 "evidence of entanglement" (Appendix Table 2-1), 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, loosely wrapped, bridled, or draped (categories L2 and 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 to Alaska stocks of small cetaceans ($n = 35$). From 2012 through 2016, mortality and serious injury occurred incidental to various gillnet fisheries for all three stocks (Bering Sea, Gulf of Alaska, and Southeast Alaska) of harbor porpoise ($n = 9$). Reports of beluga whale mortality ($n = 7$) were due to fisheries interactions ($n = 5$) and incidental to MMPA-directed and NMFS-authorized research ($n = 2$). Dall's porpoise serious injury and mortality ($n = 4$) occurred incidental to Alaska commercial gillnet or seine fisheries. Mortality and serious injury of killer whales ($n = 9$) occurred primarily in the federal groundfish trawl fisheries ($n = 4$) followed by federal longline fisheries ($n = 3$). Additionally, a killer whale found stranded in northern California, entangled in Dungeness crab pot gear was included in this report as genetic analysis indicated the killer whale belonged to the Gulf of Alaska, Aleutian Islands, and Bering Sea transient stock. Another killer whale was observed entangled in unknown pot gear in Southeast Alaska.

Discussion

All records of human-caused mortality and serious injury to marine mammal stocks assessed in the Alaska SARs are obtained through dedicated efforts, such as commercial fisheries observer programs and ongoing agency research and monitoring programs, or 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, we understand the detection and reporting of stranded marine mammals to be 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 serious injury and mortality of Alaska pinniped and cetacean stocks are certainly 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 video 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, where not enough information is known about the configuration of the entanglement to differentiate between L2 (SI) and L3 (NSI) 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 simply as ‘evidence of entanglement’ as opposed to 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 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 assessed 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 to specific fisheries. It is also helpful for reporters to differentiate between commercial, recreational, and subsistence fishing gear or fishery interactions, when possible. Unfortunately, in some situations, the same type of fishing gear can be used by commercial, charter, and recreational fisheries (e.g., there is overlap in the gear used to troll for salmon in Southeast Alaska by these three groups), 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 Appendix 1

The following acronyms and abbreviations are used in Appendix Table 1-10.

Areas:

AK: Alaska
BC: British Columbia
BS: Bering Sea
BSAI: Bering Sea/Aleutian Islands
GOA: Gulf of Alaska
SCAK: Southcentral Alaska
SEAK: Southeast Alaska
WA: Washington
WAK: Western Alaska
WC: U.S. West Coast

Sources of Information:

ADF&G: Alaska Department of Fish and Game
AKRO: National Marine Fisheries Service, Alaska Regional Office
AMMOP: National Marine Fisheries Service, Alaska Marine Mammal Observer Program
A-SHOP: National Marine Fisheries Service, At Sea Hake Observer Program
MMAP: Marine Mammal Authorization Program
NPGOP: National Marine Fisheries Service, North Pacific Groundfish Observer Program
NPLWERN: North Pacific Large Whale Entanglement Response Network
NWFSC: National Marine Fisheries Service, Northwest Fisheries Science Center
NWRO: National Marine Fisheries Service, West Coast Regional Office
SWFSC: National Marine Fisheries Service, Southwest Fisheries Science Center
WCGOP: National Marine Fisheries Service, West Coast Groundfish Observer Program

Initial Assessment and Final Determination Codes:

CBD: Cannot be Determined
COD: Cause of Death
NSI: Non-Serious Injury
SI: Serious Injury

Other:

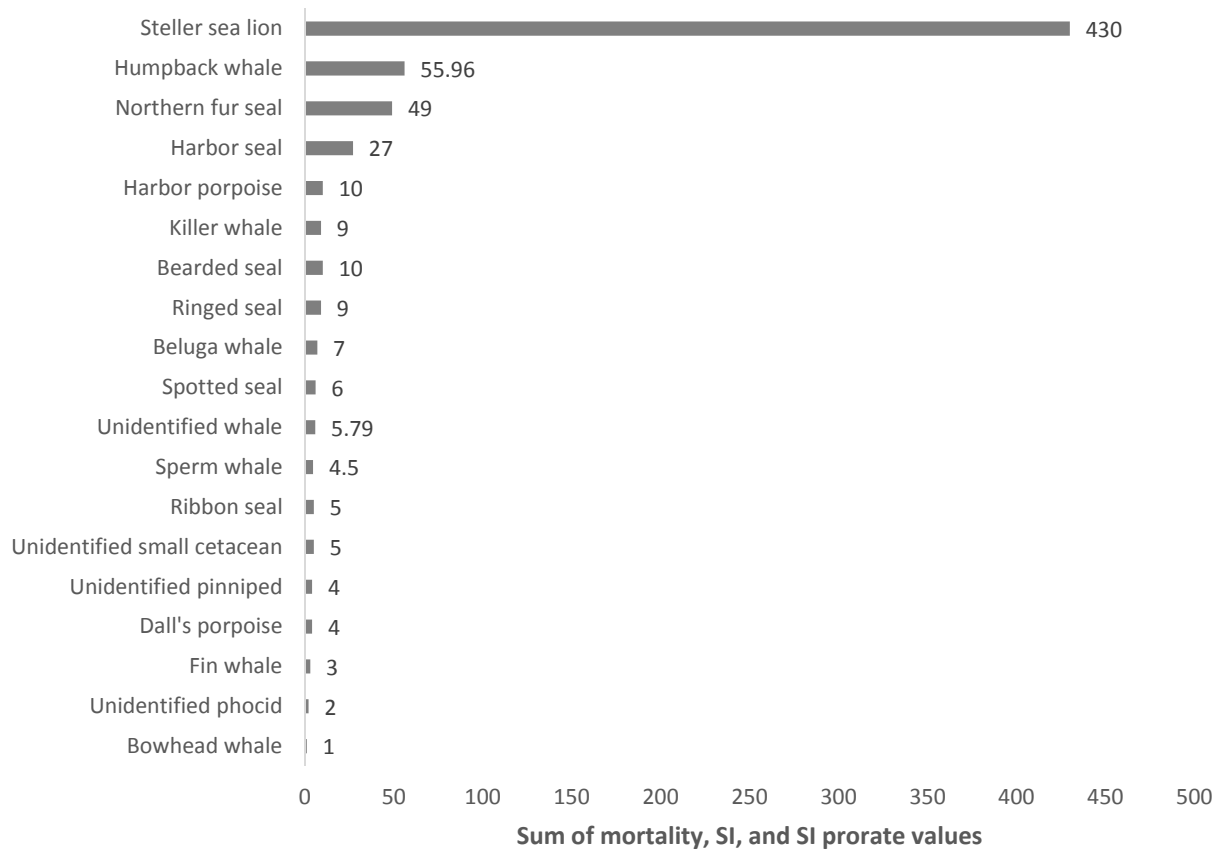
ASLC: Alaska Sea Life Center
ID: Species Identity
LOF: List of Fisheries
MMPA: Marine Mammal Protection Act
SSL: Steller Sea Lion

Appendix 1

Human-caused injury and mortality records of NMFS-managed Alaska marine mammal stocks reported for 2012-2016 and summary tables. A guide to the acronyms and abbreviations found in the tables of Appendix 1 is included on p. 13. Some terminology may be specific to a particular industry or practice (e.g., ‘flasher’ and ‘hoochie’ are types of lures used in recreational and commercial troll fisheries; ‘cod-end’ is the narrow end of a tapered trawl net, etc.) For any questions regarding specific terminology, contact the authors for clarification.

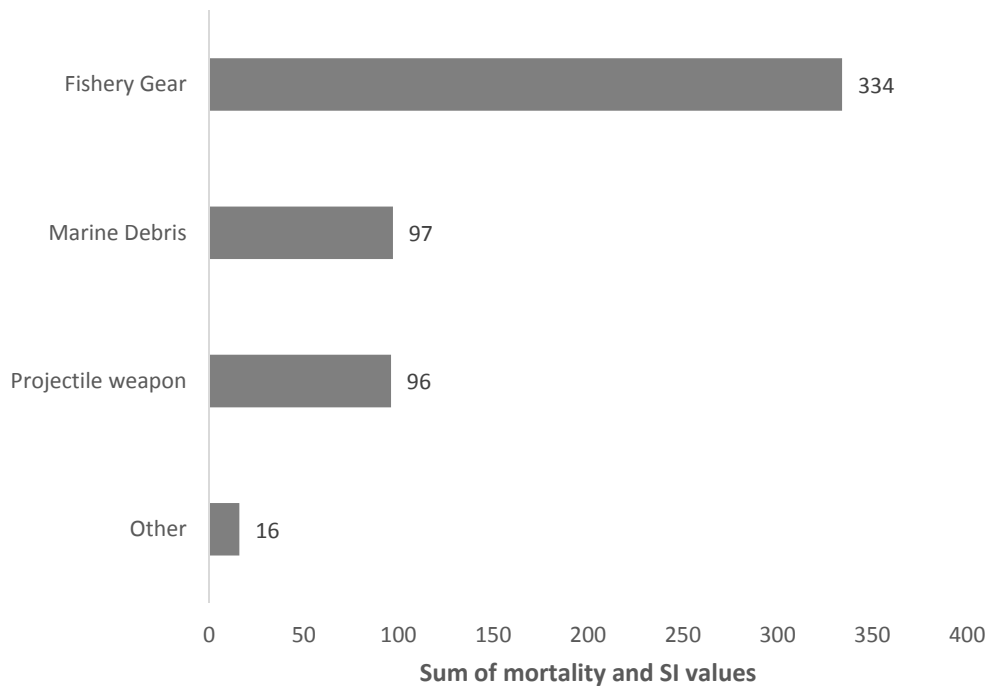
- Appendix Figure 1-1: Human-caused serious injury and mortality to Alaska marine mammal species appearing in the Alaska SARs.
- Appendix Figure 1-2: Human-caused serious injury and mortality to Alaska pinniped species by mechanism of injury.
- Appendix Figure 1-3: Human-caused serious injury and mortality to Alaska pinniped species by general source of injury.
- Appendix Figure 1-4: Fishery-related serious injury and mortality to pinnipeds by fishery gear type.
- Appendix Figure 1-5: Human-caused serious injury and mortality to Alaska large whale species by mechanism of injury.
- Appendix Figure 1-6: Human-caused serious injury and mortality to Alaska large whale species by general source of injury.
- Appendix Figure 1-7: Fishery-related serious injury and mortality to Alaska large whale species by fishery gear type.
- Appendix Figure 1-8: Human-caused serious injury and mortality to Alaska small cetacean species by source of injury.
- Appendix Figure 1-9: Fishery-related serious injury and mortality to Alaska small cetacean species by fishery gear type.
- Appendix Table 1-10: Human / marine mammal interaction records reviewed for serious injury and mortality.

Appendix Figure 1-1. --Total human-caused serious injury and mortality values to Alaska marine mammal species appearing in the Alaska Stock Assessment Reports for 2012-2016.



Appendix Figures 1-2 through 1-4. -- Summaries of human-caused serious injury and mortality to Alaska pinniped species reported for 2012-2016.

Appendix Figure 1-2. -- Human-caused serious injury and mortality to Alaska pinniped species by mechanism of injury.



Appendix Figure 1-3. -- Human-caused serious injury and mortality to Alaska pinniped species by general source of injury.

Appendix Figures 1-2 through 1-4. -- Summaries of human-caused serious injury and mortality to Alaska pinniped species reported for 2012-2016.

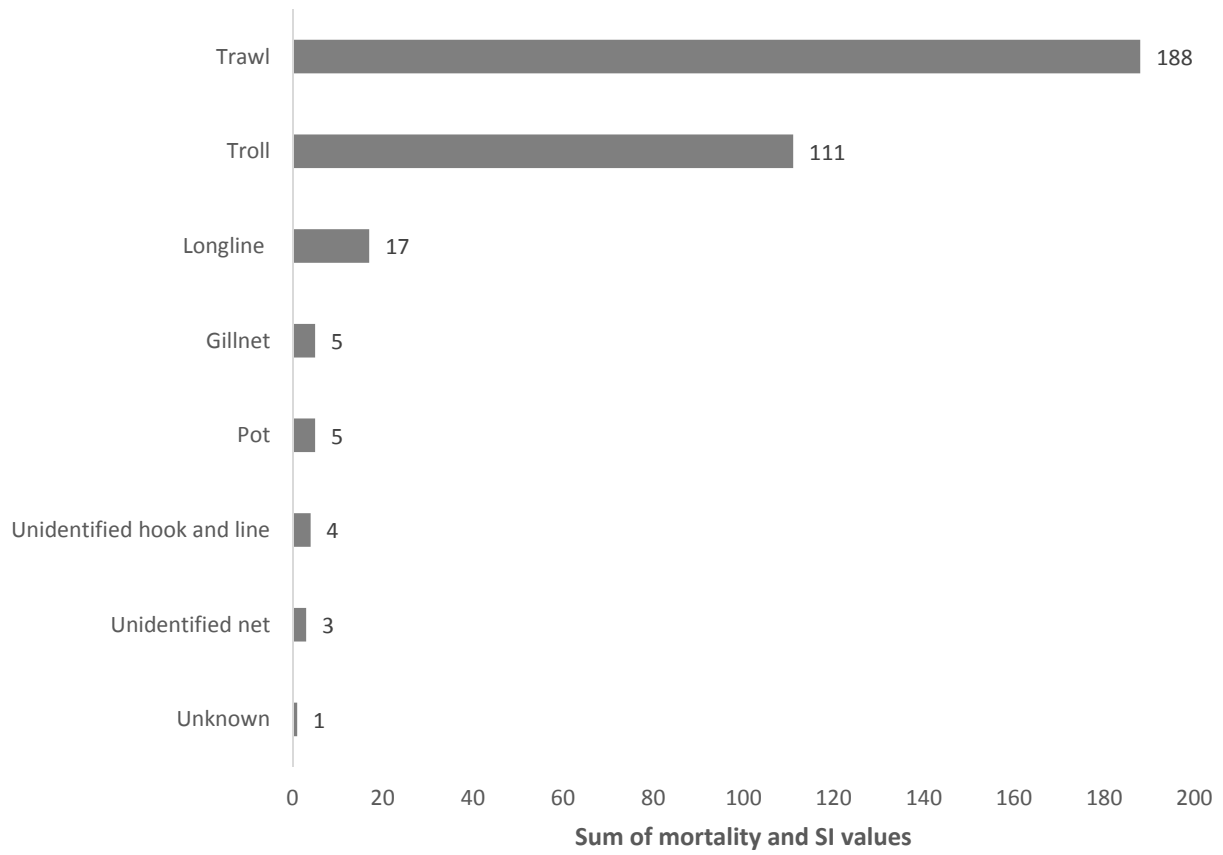


Figure 1-4. -- Fishery-related serious injury and mortality to pinnipeds by fishery gear type.

Appendix Figures 1-5 through 1-7. -- Summaries of human-caused serious injury and mortality to Alaska large whale species reported for 2012-2016.

Figure 1-5. -- Human-caused serious injury and mortality to Alaska large whale species by mechanism of injury.

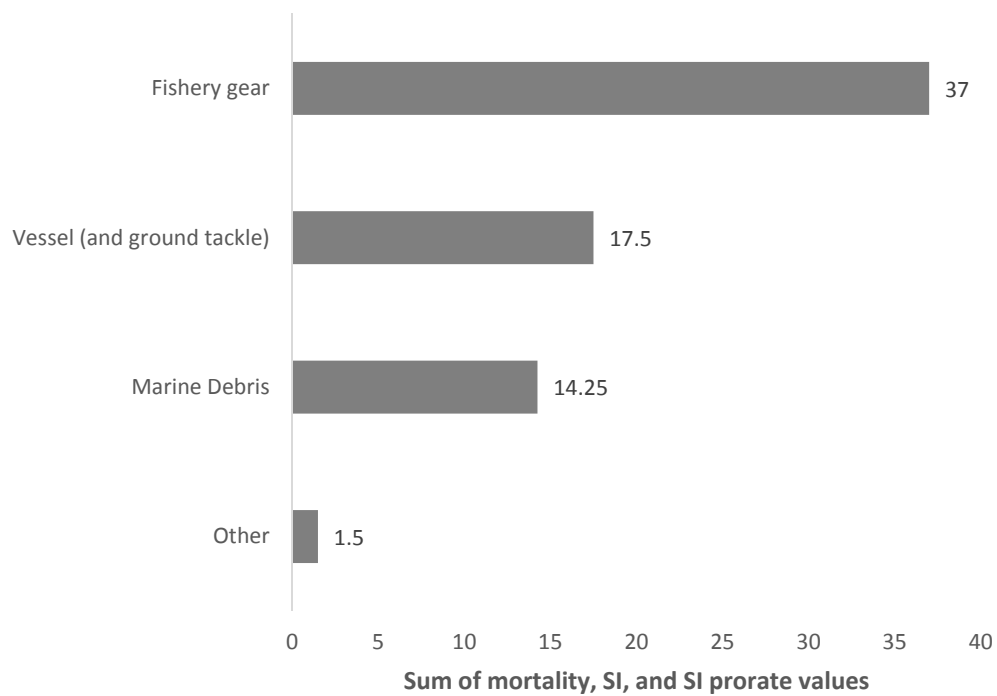


Figure 1-6. Human-caused serious injury and mortality to Alaska large whale species by general source of injury.

Appendix Figures 1-5 through 1-7. -- Summaries of human-caused serious injury and mortality to Alaska large whale species reported for 2012-2016.

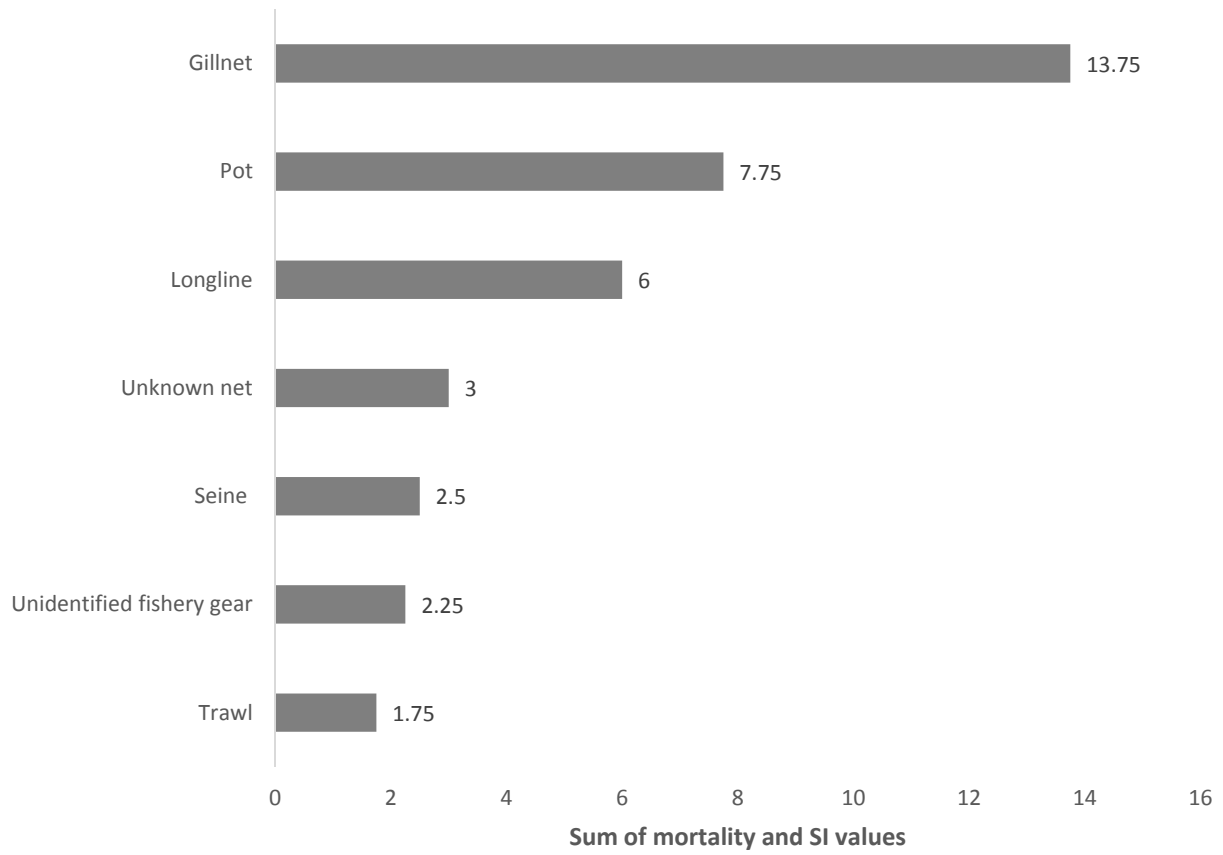


Figure 1-7. -- Fishery-related serious injury and mortality to Alaska large whale species by fishery gear type.

Appendix Figures 1-8 through 1-9. -- Summaries of human-caused serious injury and mortality to Alaska small cetacean species reported for 2012-2016.

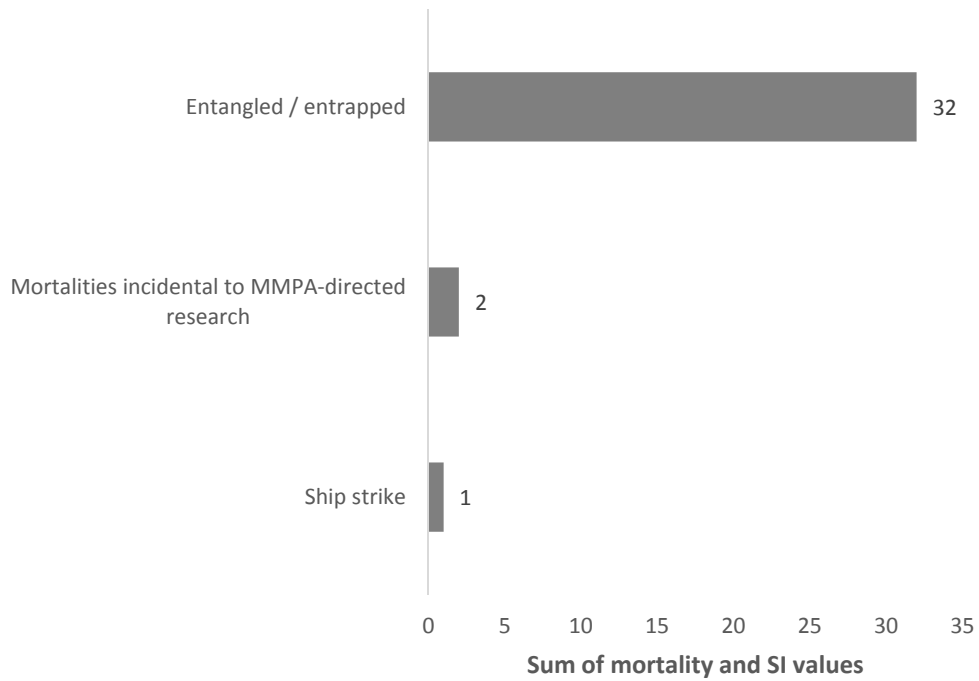


Figure 1-8. -- Human-caused serious injury and mortality to Alaska small cetacean species by mechanism of injury.

Figure 1-9. -- Fishery-related serious injury and mortality to Alaska small cetacean species by fishery gear type.

Appendix Table 1.10. -- Human / marine mammal interaction records reviewed for serious injury and mortality. Records are sorted by species, stock, and date.

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 Criterion	Suggested Value for PBR	Suggested Value for LOF
NPGOP	8/9/2012	WAK	Bearded Seal	Alaska	DEAD	A bearded seal was found dead in a live tank. The animal was reported to be killed by gear.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI pollock trawl	Commercial	Trawl	N/A	1	1
NPGOP	8/29/2012	WAK	Bearded Seal	Alaska	DEAD	A bearded seal was found fresh dead in an AK BSAI flatfish trawl haul. Animal was foaming from mouth, reported as killed by gear.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI flatfish trawl	Commercial	Trawl	N/A	1	1
NPGOP	5/21/2013	WAK	Bearded Seal	Alaska	DEAD	A male bearded seal 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	3/3/2014	WAK	Bearded Seal	Alaska	DEAD	A bearded seal was found dead in the vessel's live tank following an AK BSAI flatfish trawl.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI flatfish trawl	Commercial	Trawl	N/A	1	1
NMFS OPR/HQ	10/7/2014	Arctic	Bearded Seal	Alaska	REMOVAL	A bearded seal was captured in Kotzebue Sound and removed from the population for MMPA-authorized research purposes.	REMOVAL	Removal from population	MMPA authorized research	N/A	N/A	N/A	N/A	1	0
NPGOP	7/27/2014	WAK	Bearded Seal	Alaska	DEAD	A freshly dead bearded seal was found in the vessel's live tank following an AK BSAI pollock trawl.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI pollock trawl	Commercial	Trawl	N/A	1	1
NPGOP	5/26/2015	WAK	Bearded Seal	Alaska	DEAD	A bearded 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
NMFS OPR/HQ	9/14/2015	Arctic	Bearded Seal	Alaska	REMOVAL	A bearded seal was captured in Kotzebue Sound and removed from the population for MMPA-authorized research purposes.	REMOVAL	Removal from population	MMPA authorized research	N/A	N/A	N/A	N/A	1	0
NPGOP	5/11/2016	BS	Bearded Seal	Alaska	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	Alaska	DEAD	A bearded seal was caught and killed in trawl gear.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI pollock trawl	Commercial	Trawl	N/A	1	0
AKRO	5/29/2013	WAK	Beluga Whale	Bristol Bay	SI	A large group of people observed a beluga swim into a king salmon subsistence set net. The beluga became entangled and drowned. The carcass was then recovered by net owner, who butchered the carcass for subsistence purposes. Some samples were also taken. The whale appeared to be a juvenile and had a bluish tint.	DEAD	Entangled / entrapped	Fishery gear	Bristol Bay (Naknek) king salmon set net	Subsistence	Gillnet	N/A	1	0
AKRO	7/1/2013	WAK	Beluga Whale	Bristol Bay	DEAD	A juvenile beluga whale was caught in a subsistence salmon gillnet, and then harvested for subsistence purposes.	DEAD	Entangled / entrapped	Fishery gear	AK Bristol Bay salmon set gillnet	Subsistence	Gillnet	N/A	1	0
AKRO	7/18/2013	WAK	Beluga Whale	Bristol Bay	DEAD	A dead juvenile beluga whale was found stranded in Bristol Bay. The carcass was relatively fresh, was estimated to be dead for 1-2 days, and exhibited signs consistent with gillnet entanglement, including many 'thin cut marks,' particularly across the animal's back.	DEAD	Entangled / entrapped	Fishery gear	AK Bristol Bay unknown salmon gillnet	Unknown	Gillnet	N/A	1	0
AKRO	10/1/2014	WAK	Beluga Whale	Bristol Bay	DEAD	An adult beluga whale was caught in a subsistence salmon gillnet, and then harvested for subsistence purposes.	DEAD	Entangled / entrapped	Fishery gear	AK Bristol Bay Salmon Set Gillnet	Subsistence	Gillnet	N/A	1	0
AKRO	6/27/2014	WAK	Beluga Whale	Eastern Bering Sea	NSI	A live beluga whale was discovered in the morning by a fisherman returning to his gillnet. The subsistence salmon set gillnet had been set the evening before. Despite entanglement, the whale was observed to be surfacing regularly. Upon closer inspection the fisherman noticed the beluga had punched through the gillnet and only had the anchor line wrapped around its tailstock. After some time to assess the situation the fisherman then cut the anchor line, releasing the beluga alive. A MML beluga researcher was consulted on whether this interaction qualified as a serious injury- and his opinion was that the beluga would survive the interaction.	NSI	Entangled / entrapped	Fishery gear	Nome salmon set gillnet	Subsistence	Gillnet	S7b	0	0
NMFS OPR/HQ	7/30/2012	Arctic	Beluga Whale	Eastern Chukchi Sea	DEAD	Two adult female beluga whales died as a result of marine mammal research activities near Barrow, AK. This record represents beluga 1 of 2.	DEAD	Research related injury	MMPA authorized research	N/A	N/A	N/A	N/A	1	0
NMFS OPR/HQ	7/30/2012	Arctic	Beluga Whale	Eastern Chukchi Sea	DEAD	Two adult female beluga whales died as a result of marine mammal research activities near Barrow, AK. This record represents beluga 2 of 2.	DEAD	Research related injury	MMPA authorized research	N/A	N/A	N/A	N/A	1	0
NPGOP	7/11/2013	WAK	Beluga Whale	Eastern Chukchi Sea, Eastern Bering Sea, Bristol Bay, Unknown	DEAD	A beluga whale was caught and killed by AK BSAI trawl gear.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI pollock trawl	Commercial	Trawl	N/A	1	1
AKRO	7/7/2015	WAK	Bowhead Whale	Western Arctic	DEAD	A dead adult female bowhead whale was discovered on the north shore of St. Lawrence Island. The whale had a considerable length (>200 ft) of line wrapped around and trailing from its peduncle. This line was also attached to two vinyl floats. A reporting party noted that the tendons were visible at the region of the peduncle where the lines had been wrapped indicating that the whale was entangled before it died. The gear was identified as belonging to a 2012 / 2013 commercial crab pot fishery.	DEAD	Entangled / entrapped	Fishery gear	AK BS/Al blue king crab pot	Commercial	Pot	N/A	1	1

Appendix Table 1.10. -- Human / marine mammal interaction records reviewed for serious injury and mortality. Records are sorted by species, stock, and date.

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 Criterion	Suggested Value for PBR	Suggested Value for LOF
AMMOP	8/5/2012	SEAK	Dall's Porpoise	Alaska	SI	A Dall's porpoise was entangled in SEAK Salmon drift gillnet. The observer reported the animal was entangled for about 2 minutes. In order to free the animal the fisherman had to haul the net out of the water and cut the animal free about one and a half meters above the water's surface. The porpoise was noted to be bleeding from the tail fluke and dorsal fin. It did not appear to be trailing any gear once released and swam away rapidly. This interaction is considered a serious injury as the process of hauling this porpoise out of the water could have caused stress and increased the likelihood of capture myopathy or hidden injuries.	SI	Entangled / entrapped	Fishery gear	SEAK salmon drift gillnet	Commercial	Gillnet	S7b	1	1
MMAP	6/15/2013	PWS	Dall's Porpoise	Alaska	DEAD	A Dall's porpoise was caught and killed in salmon drift gillnet gear.	DEAD	Entangled / entrapped	Fishery gear	AK Prince William Sound salmon drift gillnet	Commercial	Gillnet	N/A	1	1
MMAP	6/27/2013	GOA	Dall's Porpoise	Alaska	DEAD	A Dall's porpoise was caught and killed by salmon seine gear.	DEAD	Entangled / entrapped	Fishery gear	AK Kodiak salmon purse seine	Commercial	Seine	N/A	1	1
MMAP	6/23/2014	SEAK	Dall's Porpoise	Alaska	DEAD	A Dall's porpoise was caught and killed by drift gillnet gear.	DEAD	Entangled / entrapped	Fishery gear	AK Southeast salmon drift gillnet	Commercial	Gillnet	N/A	1	1
AKRO	4/17/2012	GOA	Fin Whale	Northeast Pacific	SI	A fin whale was foraging mid-water when it caught an anchor cable from a fishing vessel in its mouth and became entangled in the ground tackle. The whale pulled the boat for a while but did not resurface and the captain cut and lost the cable. Nine days later the carcass floated to the surface and Kate Wynne captured photographs.	DEAD	Entangled / entrapped	Ship's ground tackle	Pacific cod mechanical jig	Commercial	N/A	N/A	1	1
AKRO	7/13/2014	WAK	Fin Whale	Northeast Pacific	DEAD	A 800+ ft container ship's captain discovered that a fresh dead fin whale was lodged on the vessel's bulbous bow. In order to free the dead whale from the bow the vessel had to back down. The Captain believes the vessel struck the whale 75 miles south of Buldir Island. The strike occurred at night and no necropsy was conducted. Assigning cause of death to a ship strike may be speculative as it is possible the whale was already dead when it was picked up by the bulbous bow, though considering the whale appeared to be fresh dead it is likely the whale was killed by the ship.	DEAD	Ship strike	Vessel	N/A	N/A	N/A	N/A	1	0
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	N/A	N/A	N/A	N/A	1	0
AKRO	8/1/2012	WAK	Harbor Porpoise	Bering Sea	DEAD	A harbor porpoise was found dead and entangled in a subsistence gillnet offshore from Nome. The carcass was then used for subsistence purposes.	DEAD	Entangled / entrapped	Fishery gear	Nome salmon gillnet	Subsistence	Gillnet	N/A	1	0
AKRO	8/2/2013	WAK	Harbor Porpoise	Bering Sea	DEAD	A young harbor porpoise was found dead in a fishing net near the mouth of the Noatak River in Kotzebue Sound. The carcass was in good condition and was fairly fresh so it was shipped to Anchorage for necropsy. The necropsy revealed the animal most likely drowned in the net.	DEAD	Entangled / entrapped	Fishery gear	Kotzebue salmon set gillnet	Commercial	Gillnet	N/A	1	1
MMAP	7/8/2012	GOA	Harbor Porpoise	Gulf of Alaska	DEAD	A harbor porpoise was caught and killed in Kodiak salmon set net gear.	DEAD	Entangled / entrapped	Fishery gear	AK Kodiak salmon set gillnet	Commercial	Gillnet	N/A	1	1
MMAP	7/14/2012	GOA	Harbor Porpoise	Gulf of Alaska	DEAD	A harbor porpoise was caught and killed in Kodiak salmon set net gear.	DEAD	Entangled / entrapped	Fishery gear	AK Kodiak salmon set gillnet	Commercial	Gillnet	N/A	1	1
MMAP	7/24/2012	GOA	Harbor Porpoise	Gulf of Alaska	DEAD	A harbor porpoise was caught and killed in Kodiak salmon set net gear.	DEAD	Entangled / entrapped	Fishery gear	AK Kodiak salmon set gillnet	Commercial	Gillnet	N/A	1	1
AKRO	7/14/2013	SCAK	Harbor Porpoise	Gulf of Alaska	DEAD	A fishing vessel caught a harbor porpoise in a drift gillnet. The carcass was recovered from the net and frozen for future necropsy. The necropsy showed that the cause of death was drowning.	DEAD	Entangled / entrapped	Fishery gear	Cook Inlet salmon drift gillnet	Commercial	Gillnet	N/A	1	1
AKRO	7/22/2014	GOA	Harbor Porpoise	Gulf of Alaska	DEAD	A one to two month old harbor porpoise calf was found dead near the Homer spit. The animal was necropsied, and it was determined the animal drowned in a net due to marked pulmonary edema and trauma associated with entanglement.	DEAD	Entangled / entrapped	Fishery gear	Unknown net	Unknown	Net	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.	DEAD	Entangled / entrapped	Fishery gear	AK PWS salmon drift gillnet	Commercial	Gillnet	N/A	1	1

Appendix Table 1.10. -- Human / marine mammal interaction records reviewed for serious injury and mortality. Records are sorted by species, stock, and date.

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 Criterion	Suggested Value for PBR	Suggested Value for LOF
AMMOP	7/8/2013	SEAK	Harbor Porpoise	Southeast Alaska	SI	A harbor porpoise was entangled repeatedly in a salmon drift gillnet. It had a deep laceration on its fluke and some smaller lacerations on its lower jaw and pectoral fin. It was cut free and no gear remained. When it was finally released it swam away strongly. This interaction will be considered under criteria S7b (case specific injury value). Although the lacerations alone would not be considered serious, the entire interaction is considered a serious injury because 1) the animal was entangled repeatedly, 2) it was lifted out of the water by its tail fluke, and 3) this species is known to be sensitive to capture myopathy during handling/entanglements. As with criterion S4 (animal brought on deck of vessel; a serious injury), lifting porpoises out of the water by their tail fluke would cause substantial stress to the individual and subjects the individual to a high risk of later death due to capture myopathy or hidden injuries.	SI	Entangled / entrapped	Fishery gear	SEAK salmon drift gillnet	Commercial	Gillnet	S7b	1	1
MMAP	7/9/2013	SEAK	Harbor Porpoise	Southeast Alaska	NSI	A harbor porpoise was caught in an actively fished gillnet. The fisher disentangled the porpoise entirely from the net while the animal was still in the water. The fisher noted minor cuts on the porpoise's fins associated with a small amount of blood. The animal was reportedly released in 'good health'. This interaction will be considered a non-serious injury under criterion S7b due to the fisher's ability to entirely disentangle the porpoise within the water, the report of good health, and the report of only minor lacerations.	NSI	Entangled / entrapped	Fishery gear	AK Southeast salmon drift gillnet	Commercial	Gillnet	S7b	0	0
AMMOP	7/9/2013	SEAK	Harbor Porpoise	Southeast Alaska	SI	The observer reported a porpoise was briefly entangled in a salmon drift gillnet before the permit holder was able to free the animal. The animal was released quickly, without apparent injury, and was not trailing gear.	NSI	Entangled / entrapped	Fishery gear	SEAK salmon drift gillnet	Commercial	Gillnet	S7b	0	0
AMMOP	7/31/2013	SEAK	Harbor Porpoise	Southeast Alaska	SI	A harbor porpoise became entangled in a salmon drift gillnet. The harbor porpoise was released after a couple minutes and was reportedly able to breathe at the surface during this time. It became re-entangled but was successfully disentangled without any apparent injury to the observer. It swam away rapidly, free of gear. This interaction qualifies as S7b (case specific injury value). Given the lack of any apparent injury, the conditions of entanglement, and the short entanglement period this is considered a non-serious injury.	NSI	Entangled / entrapped	Fishery gear	SEAK salmon drift gillnet	Commercial	Gillnet	S7b	0	0
AMMOP	8/26/2013	SEAK	Harbor Porpoise	Southeast Alaska	SI	A harbor porpoise was entangled in a SEAK salmon drift gillnet. The porpoise was pulled most of the way out the water, cut free, and reportedly swam away free of gear. No large lacerations were observed and observer believed any injuries were minimal. This interaction will be considered criteria S7b (case specific injury value). Although the lacerations alone would not be considered serious, the entire interaction is considered a serious injury because 1) it was lifted out of the water, 2) this species is known to be sensitive to capture myopathy during handling/entanglements. As with criterion S4 (animal brought on deck of vessel; a serious injury), lifting porpoises out of the water by their tail fin would cause "substantial stress to the individual and subjects the individual to a high risk of later death due to capture myopathy or hidden injuries.	SI	Entangled / entrapped	Fishery gear	SEAK salmon drift gillnet	Commercial	Gillnet	S7b	1	1
NPGOP	6/28/2014	WAK	Harbor Seal	Aleutian Islands	DEAD	A harbor seal was found in the vessel's live tanks following an AK BSAI rockfish trawl. The observer took photos and the head as a sample.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI rockfish 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	2/16/2012	WAK	Harbor Seal	Bristol Bay	DEAD	A harbor seal was caught and killed in a haul.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI flatfish trawl	Commercial	Trawl	N/A	1	1
NPGOP	3/16/2012	WAK	Harbor Seal	Bristol Bay	DEAD	A harbor seal was found dead in a vessel's live tank and determined to be killed by gear.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI flatfish trawl	Commercial	Trawl	N/A	1	1
NPGOP	1/6/2014	WAK	Harbor Seal	Bristol Bay	DEAD	A harbor seal was caught in an AK BSAI Pacific cod pot. The observer reported the animal had drowned in the pot, and noted foam at the animal's mouth.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI Pacific cod pot	Commercial	Pot	N/A	1	1
NPGOP	2/6/2014	WAK	Harbor Seal	Bristol Bay	DEAD	A male harbor seal was caught in an AK BSAI pollock trawl. The observer noted foam at the mouth and a lack of visible decay or smell associated with the carcass. The observer took the snout, length, and photos.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI pollock trawl	Commercial	Trawl	N/A	1	1
NPGOP	2/11/2014	WAK	Harbor Seal	Bristol Bay	DEAD	A harbor seal was caught in AK BSAI pollock trawl gear. The observer noted the animal appeared to have drowned in the net. The observer took photos and saved the head as a specimen.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI pollock trawl	Commercial	Trawl	N/A	1	1
NPGOP	10/5/2014	WAK	Harbor Seal	Bristol Bay	DEAD	A harbor seal was caught in an AK BSAI Pacific cod pot. The observer took length, photos, and the head as a sample.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI Pacific cod pot	Commercial	Pot	N/A	1	1
NPGOP	10/28/2014	WAK	Harbor Seal	Bristol Bay	DEAD	A harbor seal was found freshly dead in an AK BSAI Pacific cod pot.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI Pacific cod pot	Commercial	Pot	N/A	1	1
NPGOP	12/2/2014	WAK	Harbor Seal	Bristol Bay	DEAD	A harbor seal was caught in an AK BSAI Pacific cod pot.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI Pacific cod pot	Commercial	Pot	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

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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 Criterion	Suggested Value for PBR	Suggested Value for LOF
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
AKRO	8/9/2012	SEAK	Harbor Seal	Clarence Strait	SI	A NOAA Law Enforcement vessel struck a harbor seal while travelling at 35 knots. The seal was observed slowly swimming away from a large patch of blood in the water. The seal was observed twice on the surface, but was not seen again. The SI criterion for pinniped-related ship strikes is P15. This interaction is rated SI given the vessel's speed and the quantity of blood observed in the water.	SI	Ship strike	Vessel	N/A	N/A	N/A	P15	1	0
AKRO	7/14/2014	SCAK	Harbor Seal	Cook Inlet/Shellkof	DEAD	A harbor seal was killed in set gillnet gear.	DEAD	Entangled / entrapped	Fishery gear	Cook Inlet salmon set gillnet	Unknown	Gillnet	N/A	1	0
NPGOP	8/15/2015	GOA	Harbor Seal	Cook Inlet/Shellkof	DEAD	A harbor seal was caught and killed by AK GOA Pacific halibut longline gear.	DEAD	Hooked	Fishery gear	AK GOA halibut longline	Commercial	Hook and line	N/A	1	1
AKRO	9/5/2014	GOA	Harbor Seal	North Kodiak	DEAD	A harbor seal was caught and killed in a research trawl.	DEAD	Entangled / entrapped	Fishery gear	ADF&G research trawl	Research	Trawl	N/A	1	0
AKRO	7/27/2015	SCAK	Harbor Seal	Prince William Sound	DEAD	This is one of many marine mammal carcasses examined on the Copper River Delta. A dead harbor seal that appeared to be shot was discovered. The carcass had a fractured skull associated with what appeared to be a bullet entry / exit wound.	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. 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. 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	7/19/2016	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
NPGOP	3/23/2013	GOA	Harbor Seal	South Kodiak	DEAD	An observer reported that a female harbor seal was caught and killed by AK GOA flatfish trawl gear. A subsequent review of photos and the snout were inconclusive, but species identification was confirmed by genetics.	DEAD	Entangled / entrapped	Fishery gear	AK GOA flatfish trawl	Commercial	Trawl	N/A	1	1
NPGOP	4/8/2013	GOA	Harbor Seal	South Kodiak	DEAD	An observer reported a harbor seal was caught and killed by AK GOA flatfish trawl gear. A review of photos and the snout were inconclusive, but species identification was confirmed by genetics.	DEAD	Entangled / entrapped	Fishery gear	AK GOA flatfish trawl	Commercial	Trawl	N/A	1	1
NPGOP	9/30/2014	WAK	Harbor Seal	South Kodiak	DEAD	A harbor seal was found dead inside pot gear. During the entanglement the seal ripped the tunnel of the pot gear and the tunnel had to be replaced.	DEAD	Entangled / entrapped	Fishery gear	AK GOA Pacific cod pot	Commercial	Pot	N/A	1	1
AKRO	5/1/2012	SEAK	Humpback Whale	Central North Pacific	PRORATE	A seaplane pilot reported sighting a humpback whale calf that was towing an orange buoy between Horse and Colt Islands. The whale appeared to be moving rapidly. A disentanglement team arrived and attached a telemetry buoy to the calf. The calf subsequently shed all gear. The initial injury determination was to prorate under L10, however, all gear was shed and the final determination is NSI.	NSI	Entangled / entrapped	Fishery gear	SEAK unknown crab pot	Unknown	Pot	L10	0	0
AKRO	5/14/2012	SEAK	Humpback Whale	Central North Pacific	SI	A humpback whale became entangled in a drift gillnet in Taku River. The fisher tried to free the whale, but had to cut the net. The entanglement was thought to consist of 30 fathoms of net, a 36 inch orange poly buoy, and a high filer with light. The entanglement was believed to consist of multiple wraps of gillnet and heavy line around the rostral portion of the whale's body. The animal became entangled at 2300 on 5/14/2012 and its location was observed via high filer through 0230 on 5/15/2012. Subsequent searches of the area failed to turn up entangled whale. Due to multiple wraps of netting and line around the animal's head this will be considered a serious injury under criteria L2.	SI	Entangled / entrapped	Fishery gear	SEAK salmon drift gillnet	Commercial	Gillnet	L2	1	1
AKRO	6/7/2012	SEAK	Humpback Whale	Central North Pacific	SI	A 294 meter vessel struck a humpback whale while travelling at 14 knots. The whale was reported to be observed swimming normally after the incident. The final outcome is a SI per criteria L6a due to vessel's size and speed.	SI	Ship strike	Vessel	N/A	N/A	N/A	L6a	1	0

Appendix Table 1.10. -- Human / marine mammal interaction records reviewed for serious injury and mortality. Records are sorted by species, stock, and date.

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 Criterion	Suggested Value for PBR	Suggested Value for LOF
AKRO	6/22/2012	SEAK	Humpback Whale	Central North Pacific	PRORATE	A captain self-reported a ship strike of a humpback whale. The vessel was a 41 ft pilot vessel that was travelling at 23 knots. The captain turned hard and backed down in attempt to avoid whale, but the starboard side of the vessel struck the whale. The whale was then seen swimming normally following the strike. This interaction meets criteria L6b and was prorated accordingly.	PRORATE	Ship strike	Vessel	N/A	N/A	N/A	L6b	0.2	0
AKRO	7/2/2012	SEAK	Humpback Whale	Central North Pacific	PRORATE	A subadult humpback whale became entangled in a drift gillnet. Two fishing vessels tensioned the net on either end and the whale broke free. The whale was then seen swimming away from the fishing gear. There was no report of trailing gear or gear missing from the net.	NSI	Entangled / entrapped	Fishery gear	SEAK salmon drift gillnet	Commercial	Gillnet	L10	0	0
AKRO	7/13/2012	SEAK	Humpback Whale	Central North Pacific	NSI	A humpback whale surfaced under an 18 ft small boat whose occupants were engaged in recreational halibut fishing. The boat was capsized and the occupants were thrown into the water. This is considered an NSI under L6c due to lack of evidence of injury and the small size of the boat.	NSI	Ship strike	Vessel	N/A	N/A	N/A	L6c	0	0
AKRO	7/17/2012	SEAK	Humpback Whale	Central North Pacific	PRORATE	A humpback whale calf swam into a subsistence drift gillnet. The fisher was able to apply tension to buoy line and the whale rolled out of net, appearing unharmed. The net was damaged but no gear appeared to be missing. This interaction is considered a NSI due to final outcome.	NSI	Entangled / entrapped	Fishery gear	SEAK salmon drift gillnet	Subsistence	Gillnet	L10	0	0
AKRO	8/5/2012	SEAK	Humpback Whale	Central North Pacific	PRORATE	An adult humpback whale was observed entangled in Kasaan Bay. The whale was trailing over a hundred ft of line with a 12 inch pink and white buoy. The reporting party believed this was subsistence halibut gear. This interaction is prorated under criteria L10 as the full nature of entanglement is unknown.	PRORATE	Entangled / entrapped	Fishery gear	SEAK halibut longline	Subsistence	Hook and line	L10	0.75	0
AKRO	8/6/2012	SEAK	Humpback Whale	Central North Pacific	DEAD	A dead 30 ft humpback whale calf was found entangled in gillnet. The animal was moderately decomposed and was being scavenged on by bears. The majority of the gillnet appeared to be wrapped around the flukes, and net stretched towards the whale's head. Photos depict a whale that was entangled from its flukes to its tail.	DEAD	Entangled / entrapped	Fishery gear	Unknown gillnet	Unknown	Gillnet	N/A	1	0
AKRO	8/16/2012	SEAK	Humpback Whale	Central North Pacific	PRORATE	A 16 ft skiff struck a humpback whale. The skiff was travelling at 30 mph. One crew member was ejected and both suffered injuries. The whale's condition was unknown and will be prorated under criteria L6b.	PRORATE	Ship strike	Vessel	N/A	N/A	N/A	L6b	0.2	0
AKRO	8/30/2012	SEAK	Humpback Whale	Central North Pacific	PRORATE	An adult humpback whale was reported to be trailing up to 30 ft of gillnet and line. No buoys or corks were observed. The animal was mobile and appeared to be feeding / deep diving. Since the full nature of the entanglement is unknown this interaction is prorated under criteria L10.	PRORATE	Entangled / entrapped	Fishery gear	SEAK salmon drift gillnet	Commercial	Gillnet	L10	0.75	0.75
NPLWERN	5/22/2013	SEAK	Humpback Whale	Central North Pacific	PRORATE	A humpback whale was observed trailing line and a buoy in Chilkat Inlet near Haines. No response was mounted and no other information is available. Given evidence of entanglement and the lack of additional information this interaction will be prorated using criteria L10.	PRORATE	Entangled / entrapped	Marine debris (rope and buoy)	N/A	N/A	N/A	L10	0.75	0
AKRO	6/8/2013	SEAK	Humpback Whale	Central North Pacific	PRORATE	A 30 ft vessel was underway at 20-25 mph. Suddenly the operator saw a whale's fluke right off the bow. Despite swerving and decreasing speed, the operator felt and heard the vessel make contact with the whale. The operator saw the whale a couple minutes later and it appeared to be breathing normally and did not have any evident injuries. This interaction will be prorated using criteria L7b, since speed decreased before impact but it is unknown whether speed was greater than ten knots.	PRORATE	Ship strike	Vessel	N/A	N/A	N/A	L7b	0.14	0
AKRO	6/13/2013	SEAK	Humpback Whale	Central North Pacific	NSI	A charter vessel was whale watching in the midst of 15 feeding whales when it was struck hard by a whale from below. The boat was adrift and the motor was off. The passengers and crew fell to the deck following the strike. The whale may have been observed after the collision, but it cannot be certain the whale observed was the same whale that collided with the boat. The boat was lifted several ft out of the water, but there was no damage to the boat. Because the vessel was not underway this is a non-serious injury using criteria L6c.	NSI	Ship strike	Vessel	N/A	N/A	N/A	L6c	0	0
AKRO	6/20/2013	SEAK	Humpback Whale	Central North Pacific	PRORATE	A vessel pulled into Washington Bay at approximately 5:00 pm and the occupants noted a juvenile humpback thrashing around. It appeared to be entangled in netting wrapped around its fluke and tailstock. The whale appeared to be rubbing against rocks at the time of the sighting and was gone the next morning. Given the evidence of entanglement and lack of additional information this interaction is prorated using criteria L10.	PRORATE	Entangled / entrapped	Fishery gear	SEAK unknown net	Unknown	Net	L10	0.75	0
AKRO	6/25/2013	SEAK	Humpback Whale	Central North Pacific	NSI	A captain and owner of a fishing vessel reported an incident where three humpback whales swam through and broke off a set of his trolling gear. A Glacier Bay National Park biologist was surveying that area the same day and believed the whales to be #535, #235, and #465. The reporting party was unable to confirm whether whales were actually entangled. A subsequent observation of suspected whales provided no evidence of entanglements. This interaction is a NSI under criteria L4.	NSI	Entangled / entrapped	Fishery gear	SEAK unknown salmon troll	Unknown	Troll	L4	0	0
MMAP	7/1/2013	SEAK	Humpback Whale	Central North Pacific	PRORATE	A humpback whale became entangled in a salmon seine and was released trailing gear in an unknown configuration.	PRORATE	Entangled / entrapped	Fishery gear	AK Southeast salmon purse seine	Commercial	Seine	L10	0.75	0.75

Appendix Table 1.10. -- Human / marine mammal interaction records reviewed for serious injury and mortality. Records are sorted by species, stock, and date.

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 Criterion	Suggested Value for PBR	Suggested Value for LOF
AKRO	7/16/2013	SEAK	Humpback Whale	Central North Pacific	NSI	A vessel operator called the USCG to report a collision with a humpback whale. The reporting party stated that he was traveling at four knots on autopilot when he felt the boat lift out of the water. He then observed a humpback surface ahead of the bow. The reporting party saw no sign of injury and the whale appeared to exhibit normal behavior for two dive cycles. The boat was 56 ft long. Due to the slow speed of the vessel and lack of any apparent injury to the whale this interaction is classified as a non-serious injury under criteria L6c.	NSI	Ship strike	Vessel	N/A	N/A	N/A	L6c	0	0
AKRO	7/17/2013	SEAK	Humpback Whale	Central North Pacific	SI	A humpback whale swam into an actively fishing gillnet. The whale could not be disentangled and was hogtied, so the fisherman towed the whale back to port and began cutting gear off. A disentanglement team attempted to depart from Juneau, but experienced engine trouble and never arrived. The whale was released by the fisherman trailing 50-75 ft of gear. As time went on fisherman were able to remove more and more gear from the whale as it rested and ultimately only a little mesh and six to seven corks remained on the whale. This interaction initially qualified as a serious injury, but due to human intervention the severity of the entanglement was reduced and this interaction can be classified under criteria L10 due to a lack of better information.	PRORATE	Entangled / entrapped	Fishery gear	SEAK salmon drift gillnet	Commercial	Gillnet	L10	0.75	0.75
AKRO	9/1/2013	SEAK	Humpback Whale	Central North Pacific	PRORATE	A number of photos were taken of a concentration of humpback whales observed feeding on the surface. Upon review of the photos it was noted that one of the humpback whales was to some extent entangled in a line. The reporting party noted that there was no indication of any animal in distress at the time of the observation. Prorated using criteria L10 due to a lack of information.	PRORATE	Entangled / entrapped	Marine debris (rope)	N/A	N/A	N/A	L10	0.75	0
AKRO	9/1/2013	SEAK	Humpback Whale	Central North Pacific	DEAD	A humpback whale was found stranded in a state of moderate decomposition. A necropsy was conducted. There was bruising and hemorrhage on the right side of the body and right pectoral fin. The examiner noted the injuries were the result of blunt trauma / ship strike.	DEAD	Ship strike	Vessel	N/A	N/A	N/A	N/A	1	0
NPLWERN	9/5/2013	SEAK	Humpback Whale	Central North Pacific	SI	A humpback whale was originally entangled on 8/23/2013 near Haines in gillnet. The whale was cut away with gear remaining. Numerous disentanglement attempts were made in subsequent weeks with varying success. The last time the whale was observed on 9/5/2013 a likely life threatening gear configuration remained. The last observed configuration showed a bridle style entanglement with 24 fathoms of trailing gear. This is considered a serious injury under category L2 due to amount of gear and observed tail distortion on the animal. ** Note: this interaction was originally recorded by an AMMOP observer - however, the whale disentanglement network database provided weeks' worth of follow up information on the entanglement.	SI	Entangled / entrapped	Fishery gear	SEAK salmon drift gillnet	Commercial	Gillnet	L2	1	1
AKRO	4/17/2014	SEAK	Humpback Whale	Central North Pacific	PRORATE	A humpback whale was observed to be entangled in unidentified marine debris or gear. The animal was observed by multiple parties dragging a red polyball buoy with several hundred ft of line. Due to the unknown nature and outcome of the remaining entanglement this interaction is prorated under criterion L10.	PRORATE	Entangled / entrapped	Marine debris (rope and buoy)	N/A	N/A	N/A	L10	0.75	0
AKRO	6/15/2014	SEAK	Humpback Whale	Central North Pacific	NSI	A humpback whale struck a 38 ft charter vessel lightly with its fluke as it dove. The boat was making way at forward idle speed and there was no damage to the boat or injury to the crew. The interaction was thought to occur near Icy Strait.	NSI	Ship strike	Vessel	N/A	N/A	N/A	L6c	0	0
AKRO	6/24/2014	SEAK	Humpback Whale	Central North Pacific	PRORATE	An adult humpback whale was reported entangled in a tended gillnet set. Due to safety concerns the gear was cut free. Approximately 150 - 250 ft of gillnet likely remained around the head region and forward of the pectoral flippers. Other than being entangled the whale appeared in good condition. According to NPLWERN, the entanglement was likely life threatening.	PRORATE	Entangled / entrapped	Fishery gear	SEAK salmon drift gillnet	Commercial	Gillnet	L10	0.75	0.75
MMAP	6/24/2014	SEAK	Humpback Whale	Central North Pacific	PRORATE	A humpback whale became entangled in salmon gillnet gear and was released trailing gear in an unknown configuration.	PRORATE	Entangled / entrapped	Fishery gear	SEAK salmon drift gillnet	Commercial	Gillnet	L10	0.75	0.75
AKRO	6/30/2014	SEAK	Humpback Whale	Central North Pacific	PRORATE	A humpback whale was observed trailing several corkline floats from gillnet gear in Chatham Strait. This is possibly the same animal as that reported entangled on 6/24/2014. The full nature of the entanglement is unknown and this event is prorated at L10 due to a lack of information regarding gear configuration.	PRORATE	Entangled / entrapped	Fishery gear	SEAK salmon drift gillnet	Commercial	Gillnet	L10	0.75	0.75
AKRO	7/1/2014	SEAK	Humpback Whale	Central North Pacific	DEAD	A fresh dead humpback whale was observed floating in Funter Bay on 7/1/2014. A necropsy was conducted on 7/3/2014. The necropsy showed that the whale had been killed in a shipstrike between approximately 6/29/2014 and 7/1/2014. There was massive trauma to the head characterized by a fractured left mandible, dislocated right mandible, and laceration to the animal's fluke.	DEAD	Ship strike	Vessel	N/A	N/A	N/A	N/A	1	0

Appendix Table 1.10. -- Human / marine mammal interaction records reviewed for serious injury and mortality. Records are sorted by species, stock, and date.

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 Criterion	Suggested Value for PBR	Suggested Value for LOF
AKRO	7/2/2014	SEAK	Humpback Whale	Central North Pacific	PRORATE	A 26 ft cabin cruiser was underway in Clarence Strait at 15-20 knots. When a humpback whale surfaced underneath the vessel. The vessel was lifted up and onboard was disabled. Some comments indicate blood was observed in the water and a whale was seen the in the area the next day with prop marks near the whale's dorsal fin. This interaction is prorated under L11 due to the ship strike and evidence pointing to a laceration injury on the animal.	PRORATE	Ship strike	Vessel	N/A	N/A	N/A	L11	0.52	0
AKRO	7/12/2014	SEAK	Humpback Whale	Central North Pacific	SI	A report was received that a 120+ ft vessel struck a humpback whale while traveling at 12 knots. The whale was observed immediately after the ship strike and there appeared to be no sign of injury. There was no blood observed in the water. Due to vessel size and speed this event qualifies as L6a and is considered a serious injury.	SI	Ship strike	Vessel	N/A	N/A	N/A	L6a	1	0
AKRO	7/12/2014	SEAK	Humpback Whale	Central North Pacific	PRORATE	A fishing vessel's crew reported seeing an entangled humpback whale trailing an A3 polyball 20 - 30 ft behind the animal. The entangled animal was also associated with a smaller whale. Both animals were in a frantic state, possibly due to the entanglement or possibly due to the presence of killer whales which were observed in the area. This animal may be the same as the animal reported on 7/13/2014. This interaction is classified under criteria L10 due to the unknown nature of the entanglement.	PRORATE	Entangled / entrapped	Marine debris (rope and buoy)	N/A	N/A	N/A	L10	0.75	0
AKRO	7/13/2014	SEAK	Humpback Whale	Central North Pacific	PRORATE	A subadult humpback whale was observed trailing a red polyball and yellow polypro line. The reporting party cut some of the trailing poly line free from the whale. This whale could possibly be the same animal as that reported entangled on 7/12/2014, but this cannot be confirmed, and there are differences between the two reported events. Due to the unknown nature and outcome of the remaining entanglement this interaction is prorated under criterion L10.	PRORATE	Entangled / entrapped	Marine debris (rope and buoy)	N/A	N/A	N/A	L10	0.75	0
AKRO	7/22/2014	SEAK	Humpback Whale	Central North Pacific	PRORATE	A troller reported seeing an adult humpback whale near Craig, AK that was trailing 100 to 250 ft of line and an orange and blue buoy. The whale was reportedly still able to dive. No other reports of the animal were received. According to NPLWERN this is possibly the same whale as those reported on 7/12/14 and 7/13/14.	PRORATE	Entangled / entrapped	Marine debris (rope and buoy)	N/A	N/A	N/A	L10	0.75	0
AKRO	7/26/2014	SEAK	Humpback Whale	Central North Pacific	PRORATE	A humpback whale was spotted entangled in unidentified gear multiple times over the same day. The whale was towing an orange polyball and bullet buoys about 45 ft behind it. The whale was not seen again. This interaction will be prorated under criterion L10 due to the unknown nature of entanglement and unknown outcome.	PRORATE	Entangled / entrapped	Marine debris (rope and buoy)	N/A	N/A	N/A	L10	0.75	0
AKRO	7/28/2014	SEAK	Humpback Whale	Central North Pacific	NSI	A humpback whale calf was observed with a fishing lure hooked onto its fluke. There was no other sign of injury or entanglements, but the whole body was not observed. The hooked calf was observed with its mother. The cow was then observed repeatedly beginning two weeks later without the calf. There is no indication the external hook contributed to the calf's subsequent disappearance. This interaction qualifies as criterion L4, and as such is to be considered a NSI.	NSI	Hooked	Fishery gear	SEAK halibut hook and line	Recreational	Hook and line	L4	0	0
AKRO	8/14/2014	SEAK	Humpback Whale	Central North Pacific	NSI	A subadult humpback whale became entangled in a sport fishing vessel's anchor line. The whale initially was entangled in an unknown configuration and after a period of time disentangled itself when the anchor grabbed onto the bottom. The whale then shed gear and all gear was recovered. This interaction's final outcome is a NSI, but will be categorized under L10 due to the initial unknown entanglement configuration.	NSI	Entangled / entrapped	Ship's ground tackle	AK commercial passenger fishing vessel	Commercial	Hook and line	L10	0	0
AKRO	9/7/2014	SEAK	Humpback Whale	Central North Pacific	SI	An adult humpback whale was observed entangled in gillnet. A whale disentanglement network responder documented the entanglement and noted multiple wraps of gillnet, a head rope from rostrum to dorsal fin. Gear was noted to be tight in spots and cutting into the whale's body. Accordingly this interaction qualifies under criteria L2 and is considered a serious injury.	SI	Entangled / entrapped	Fishery gear	SEAK salmon drift gillnet	Commercial	Gillnet	L2	1	1
AKRO	9/29/2014	SEAK	Humpback Whale	Central North Pacific	SI	The captain of a 400+ ft vessel travelling at 15 knots reported grazing a humpback whale. The crew reportedly saw the whale, maneuvered to avoid the animal, and felt a bump associated with hitting the animal. The whale was not seen afterwards. Considered a SI under criterion L6a due to vessel size and speed.	SI	Ship strike	Vessel	N/A	N/A	N/A	L6a	1	0
AKRO	2/16/2015	GOA	Humpback Whale	Central North Pacific	PRORATE	A humpback whale was observed entangled in what was identified as halibut subsistence longline gear. The whale was trailing a small anchor and large orange buoy approximately 150 ft behind it. Members of the public cut the buoy free, and reported that they thought the rest of the gear came off as well because the whale started behaving "normally." This interaction will be prorated under criterion L10 due to the unknown initial configuration of the gear, and although members of the public that cut the buoy from the whale thought the whale was free from its entanglement, this could not be confirmed.	PRORATE	Entangled / entrapped	Fishery gear	AK SEAK halibut longline - subsistence	Recreational	Hook and line	L10	0.75	0

Appendix Table 1.10. -- Human / marine mammal interaction records reviewed for serious injury and mortality. Records are sorted by species, stock, and date.

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 Criterion	Suggested Value for PBR	Suggested Value for LOF
AKRO	5/18/2015	SCAK	Humpback Whale	Central North Pacific	SI	A subadult humpback whale was reported to be severely entangled in salmon drift gillnet with most likely two wraps of gear around it. In addition, the fluke and head were also wrapped in net. The whale was reported to appear tired, but was breathing. Three boats were reported to be engaged in attempting to free the whale. A disentanglement response team was unable to respond, and the final outcome is unknown. Given the unknown final configuration of the entanglement or outcome the assignment of injury criterion L10 is appropriate.	PRORATE	Entangled / entrapped	Fishery gear	AK PWS salmon drift gillnet	Commercial	Gillnet	L10	0.75	0.75
AKRO	5/30/2015	PWS	Humpback Whale	Central North Pacific	PRORATE	A fisherman reported that a humpback whale hit his gillnet, broke through, and swam away with 40 ft of gillnet on its back. Due to a lack of specific details regarding the entanglement, this interaction qualifies as a prorated serious injury under criterion L10.	PRORATE	Entangled / entrapped	Fishery gear	AK PWS salmon drift gillnet	Commercial	Gillnet	L10	0.75	0.75
AKRO	6/2/2015	SEAK	Humpback Whale	Central North Pacific	PRORATE	An adult humpback whale was observed thrashing and entangled in gear with two orange buoys visible as part of the entanglement. A disentanglement response was initiated, but before the team could arrive the whale was observed to no longer be thrashing, and the pair of buoys was floating free. The disentanglement response team picked up the buoys and associated line, and was able to identify the fisherman the gear belonged to. The fisherman picked up the recovered gear and the remainder of the set that the lost gear originated from, and reported that no line was missing and there was only one missing sub-buoy. This interaction would have originally qualified as an entanglement under criterion L10, but due to the whale's self-disentanglement and recovery of all longline the final outcome will be considered a non-serious injury.	NSI	Entangled / entrapped	Fishery gear	AK SEAK halibut longline / set line	Commercial	Hook and line	L10	0	0.75
AKRO	6/28/2015	SEAK	Humpback Whale	Central North Pacific	PRORATE	A 27 ft vessel was underway at 25 knots when a group of 3-6 humpback whales surfaced immediately in front of the boat. The operator was unable to avoid the whales, and thinks that the boat hit 2-3 whales. There was no damage to the boat, and no observed injuries or blood in the water. The whales were reported to behave normally following the strike. This interaction qualifies as a prorated serious injury under criterion L6b. This is whale 2 of 3.	PRORATE	Ship strike	Vessel	N/A	N/A	N/A	L6b	0.2	0
AKRO	6/28/2015	SEAK	Humpback Whale	Central North Pacific	PRORATE	A 27 ft vessel was underway at 25 knots when a group of 3-6 humpback whales surfaced immediately in front of the boat. The operator was unable to avoid the whales, and thinks that the boat hit 2-3 whales. There was no damage to the boat, and no observed injuries or blood in the water. The whales were reported to behave normally following the strike. This interaction qualifies as a prorated serious injury under criterion L6b. This is whale 3 of 3.	PRORATE	Ship strike	Vessel	N/A	N/A	N/A	L6b	0.2	0
AKRO	6/28/2015	SEAK	Humpback Whale	Central North Pacific	PRORATE	A 27 ft vessel was underway at 25 knots when a group of 3-6 humpback whales surfaced immediately in front of the boat. The operator was unable to avoid hitting the whales and thinks that the boat hit 2-3 whales. There was no damage to the boat, and no observed injuries or blood in the water. The whales were reported to behave normally following the strike. This interaction qualifies as a prorated serious injury under criterion L6b. This is whale 1 of 3.	PRORATE	Ship strike	Vessel	N/A	N/A	N/A	L6b	0.2	0
AKRO	7/1/2015	SEAK	Humpback Whale	Central North Pacific	NSI	A subadult humpback whale was observed with a small amount of gillnet caught on the tubercles and barnacles on the animal's pectoral flippers. The netting trailed only 3-4 ft. The mouth and peduncle were free from gear, and there were no wraps or connections of gear between the animal's pectoral flippers. This entanglement qualifies as a non-serious injury under criterion L3.	NSI	Entangled / entrapped	Fishery gear	AK SEAK salmon drift gillnet	Commercial	Gillnet	L3	0	0
AKRO	7/7/2015	SEAK	Humpback Whale	Central North Pacific	PRORATE	A member of the public reported that he observed a humpback whale entangled in what was described as "line across the rostrum." The whale was aggressively breaching, lob-tailing, and spiraling its body in what appeared to be an effort to free itself. The observer reported that the whale freed itself and swam off. This interaction will initially be considered a prorated serious injury based on the reported entanglement of unknown configuration and the final determination will remain a prorated serious injury under L10 as it is possible that some gear remained on the whale which the observer was unaware of.	PRORATE	Entangled / entrapped	Marine debris (rope)	N/A	N/A	N/A	L10	0.75	0
AKRO	7/17/2015	SEAK	Humpback Whale	Central North Pacific	PRORATE	A humpback whale was reported by an observer to be entangled in what appeared to be gear from a gillnet or purse seine. No mesh was observed, just line and white floats across the animal's rostrum and fluke. The whale was lunging and lob-tailing and after 20 minutes of observation reportedly freed itself from the gear and swam off. This interaction is initially prorated as a serious injury under criterion L10 due to the unknown configuration of the entanglement and the final determination will remain a prorated serious injury under L10 as the absence of any remaining gear could not be confirmed.	PRORATE	Entangled / entrapped	Fishery gear	AK SEAK unknown	Unknown	Net	L10	0.75	0

Appendix Table 1.10. -- Human / marine mammal interaction records reviewed for serious injury and mortality. Records are sorted by species, stock, and date.

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 Criterion	Suggested Value for PBR	Suggested Value for LOF
AKRO	7/26/2015	SEAK	Humpback Whale	Central North Pacific	NSI	A humpback whale was observed by cruise ship staff to be entangled in a purse seine. The observer reported that the whale appeared to be struggling to keep its head above water, and the net appeared to be weighing the whale down. During the observation a couple fishing boats appeared to be responding to the situation. Follow up investigation with the fisherman revealed that the whale had been rolled out of the seine and "it was ok." The fisherman had previously attended whale disentanglement training. This will be considered a non-serious injury because the whale was released both alive and reportedly uninjured.	NSI	Entangled / entrapped	Fishery gear	AK Metlakatta salmon purse seine	Commercial	Seine	L2	0	0
AKRO	7/26/2015	SEAK	Humpback Whale	Central North Pacific	NSI	A US Coast Guard Cutter's crew observed a naval vessel (>65 ft) strike a humpback whale with its bow. The vessel was travelling at 10 knots. No blood was observed in the water and the whale was not observed again. According to injury criterion L6c this interaction qualifies as a non-serious injury.	NSI	Ship strike	Vessel	N/A	N/A	N/A	L6c	0	0
AKRO	7/31/2015	SEAK	Humpback Whale	Central North Pacific	PRORATE	A humpback whale with a calf was observed entangled from 7/31/2015 to 8/3/2015, with a green A3 polyball buoy located along the animal's left flank. The configuration of gear was not evident, but the mother would not fluke indicating the possibility of additional gear that was not visible. The whales were not resighted after 8/3/2015. This interaction will be considered a prorated serious injury under criterion L10 for the mother and L8 for the calf. This record represents the calf.	PRORATE	Dependent animal with mother seriously injured	Fishery gear	AK SEAK crab pot or AK SEAK shrimp pot	Commercial	Pot	L8	0.75	0
AKRO	7/31/2015	SEAK	Humpback Whale	Central North Pacific	PRORATE	A humpback whale with calf was observed from 7/31/2015 to 8/3/2015 with a green A3 polyball along the animal's left flank. The configuration of gear was not evident, however, the animal would not fluke. The whale was not resighted after 8/3/2015. This interaction will be considered a prorated serious injury under criterion L10 for the mother and L8 for the calf. This record represents the mother.	PRORATE	Entangled / entrapped	Fishery gear	AK SEAK crab pot or AK SEAK shrimp pot	Commercial	Pot	L10	0.75	0
AKRO	8/3/2015	SEAK	Humpback Whale	Central North Pacific	PRORATE	A subadult humpback whale became entangled in a purse seine and began thrashing wildly at the surface. Cuts and abrasions were apparent on the fluke and tailstock. The whale then broke free and took much of the purse seine with it. The fisher indicated that there was as much as 600 ft of net and line trailing from the whale. This entanglement will be prorated under criterion L10 due to the unknown configuration of the entanglement.	PRORATE	Entangled / entrapped	Fishery gear	AK SEAK salmon purse seine	Commercial	Seine	L10	0.75	0.75
AKRO	8/4/2015	SEAK	Humpback Whale	Central North Pacific	PRORATE	A humpback whale was reported to have netting associated with a turquoise buoy wrapped around its body. No additional details are available, therefore this will be considered a prorated serious injury under criterion L10.	PRORATE	Entangled / entrapped	Fishery gear	AK SEAK unknown	Unknown	Net	L10	0.75	0
AKRO	8/5/2015	SEAK	Humpback Whale	Central North Pacific	SI	A large vessel (>65 ft) struck a humpback whale while underway at 16 knots. A whale was seen swimming a half mile astern of the ship following the strike, but the male was uncertain that it was the same whale. No blood was observed in the water. This event is considered a serious injury under criterion L6a due to the vessel's size and speed.	SI	Ship strike	Vessel	N/A	N/A	N/A	L6a	1	0
AKRO	8/14/2015	SEAK	Humpback Whale	Central North Pacific	PRORATE	A humpback whale mother with a calf was reported to be entangled in lead line, yellow polyline, and a green polyball buoy. Due to the limited details on the entanglement, this interaction will be considered a prorated serious injury under criterion L10 for the mother and L8 for the calf. This record represents the dependent calf.	PRORATE	Dependent animal with mother seriously injured	Fishery gear	AK SEAK unknown	Unknown	Unknown	L8	0.75	0
AKRO	8/14/2015	SEAK	Humpback Whale	Central North Pacific	PRORATE	A humpback whale mother was reported to be entangled in lead line, yellow polyline, and a green polyball buoy. Due to the limited details on the entanglement, this interaction will be considered a prorated serious injury under criterion L10 for the mother and L8 for the calf. This record represents the mother.	PRORATE	Entangled / entrapped	Fishery gear	AK SEAK unknown	Unknown	Unknown	L10	0.75	0
AKRO	8/26/2015	SEAK	Humpback Whale	Central North Pacific	PRORATE	A subadult humpback whale was observed with 1/2 inch - 5/8 inch line wrapped around its tailstock. The line was reported to be neither loose nor constricting. The whale was not trailing anything, appeared robust and was behaving similarly to the other whales. This entanglement qualifies as a serious injury under criterion L2, as the wrapped line could become constricting over time as the subadult whale continued to grow.	PRORATE	Entangled / entrapped	Marine debris (rope)	N/A	N/A	N/A	L2	1	0
AKRO	8/26/2015	SEAK	Humpback Whale	Central North Pacific	DEAD	A humpback whale carcass was spotted on 8/26/2015 at East Brothers Island and a necropsy was conducted on September 1. The necropsy revealed areas of hemorrhage, bruising, and edema on the left side of the whale's head and neck. Findings included evidence of blunt trauma, consistent with a vessel hull strike. This may be the same whale as the 8/5/2015 event.	DEAD	Ship strike	Vessel	N/A	N/A	N/A	N/A	1	0
AKRO	9/7/2015	SEAK	Humpback Whale	Central North Pacific	PRORATE	An adult humpback whale was observed traveling with blue/green netting draped across its back, anterior to the dorsal fin. The reporting party thought the netting looked like gillnet gear. No buoys, line, or trailing gear was visible. The whale did not appear to be in distress. This entanglement will be considered a prorated serious injury under criterion L10 due to the unknown configuration and nature of the entanglement.	PRORATE	Entangled / entrapped	Fishery gear	AK SEAK salmon drift gillnet	Commercial	Gillnet	L10	0.75	0.75

Appendix Table 1.10. -- Human / marine mammal interaction records reviewed for serious injury and mortality. Records are sorted by species, stock, and date.

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 Criterion	Suggested Value for PBR	Suggested Value for LOF
AKRO	9/7/2015	SEAK	Humpback Whale	Central North Pacific	PRORATE	A small (22ft) fiberglass boat travelling at 24 knots hit a humpback whale that surfaced ahead of the boat. After the collision, the whale continued with what appeared to be normal behavior of diving, surfacing, and feeding. There were no visible injuries to the whale, and no blood in the water. The boat suffered a cracked propeller, but there was no indication of laceration injuries to the whale. This interaction is considered a prorated serious injury under criterion L6b due to the vessel's speed.	PRORATE	Ship strike	Vessel	N/A	N/A	N/A	L6b	0.2	0
AKRO	9/12/2015	SEAK	Humpback Whale	Central North Pacific	NSI	A whale watch vessel's bow struck a humpback whale that surfaced immediately in front of the vessel. The vessel hit the whale at 4 knots and the captain and crew watched the whale swim away and dive with no sign of injury. This interaction is considered a non-serious injury under criterion L6c due to the vessel's low rate of speed.	NSI	Ship strike	Vessel	N/A	N/A	N/A	L6c	0	0
AKRO	9/22/2015	GOA	Humpback Whale	Central North Pacific	PRORATE	A humpback whale was observed with an entanglement consisting of a light blue, round 1.5 ft buoy that appeared to be tight to the whale between the dorsal fin and tail. The observer noted that the float would stay on the surface between shallow dives. On deeper dives the float would submerge with the whale. This is possibly the same animal as the 8/4/2015 event based on the buoy type and entanglement configuration, but this cannot be confirmed. This entanglement will be considered a prorated serious injury under criterion L10 due to the unknown configuration and nature of the entanglement.	PRORATE	Entangled / entrapped	Fishery gear	AK SEAK unknown	Unknown	Unknown	L10	0.75	0
AKRO	4/4/2016	GOA	Humpback Whale	Central North Pacific	PRORATE	A humpback whale reportedly became entangled in subsistence gillnet and broke free trailing a 5 fathom section of webbing and a basketball sized buoy. The whale was not re-sighted. 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 subsistence gillnet	Subsistence	Gillnet	L10	0.75	0
AKRO	5/15/2016	SEAK	Humpback Whale	Central North Pacific	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	Central North Pacific	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	Central North Pacific	PRORATE	A humpback whale reportedly became entangled in loose webbing that hung from a remote king salmon release site. The whale managed to free itself by the time responders arrived to 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
AKRO	6/30/2016	SEAK	Humpback Whale	Central North Pacific	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	Central North Pacific	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 full nature 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	Central North Pacific	PRORATE	A humpback whale became entangled in actively fished salmon drift gillnet. After the whale began towing the vessel, the fisher began to cut the vessel free from the entangling gear. While the gear was being cut free the whale dove and when it resurfaced 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	Central North Pacific	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 gear trailing. 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	Central North Pacific	NSI	A humpback whale calf was observed entangled in 3/8" 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

Appendix Table 1.10. -- Human / marine mammal interaction records reviewed for serious injury and mortality. Records are sorted by species, stock, and date.

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 Criterion	Suggested Value for PBR	Suggested Value for LOF
AKRO	7/15/2016	SEAK	Humpback Whale	Central North Pacific	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	Central North Pacific	NSI	A humpback whale became entangled in an anchorline 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	7/31/2016	SEAK	Humpback Whale	Central North Pacific	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
AKRO	9/11/2016	GOA	Humpback Whale	Central North Pacific	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	N/A	N/A	N/A	N/A	1	0
AKRO	6/1/2012	WAK	Humpback Whale	Western North Pacific, Central North Pacific	PRORATE	A humpback whale was sighted outside of Dutch Harbor towing a football sized buoy. The buoy would disappear with each dive. This interaction is prorated under criteria L10.	PRORATE	Entangled / entrapped	Marine debris (rope and buoy)	N/A	N/A	N/A	L10	0.75	0
AKRO	7/1/2012	SCAK	Humpback Whale	Western North Pacific, Central North Pacific	PRORATE	A 28 ft halibut charter boat captain reported striking a humpback whale with his vessel. The damage was reported to be extensive. The vessel was travelling towards Seward at 22-25 knots when the strike occurred. This interaction is prorated under criteria L6b.	PRORATE	Ship strike	Vessel	AK/WA/OR/CA commercial passenger fishing vessel	Commercial	N/A	L6b	0.2	0.2
AKRO	7/9/2012	SCAK	Humpback Whale	Western North Pacific, Central North Pacific	SI	A vessel passenger provided a report regarding a ship strike of a humpback whale. The vessel was travelling at greater than 20 knots and was greater than 65 ft. Following the strike the animal was observed bleeding, and after breaching, remained in one spot. Pictures are available and show blood in water. This interaction is considered a SI under criteria L6a.	SI	Ship strike	Vessel	N/A	N/A	N/A	L6a	1	0
MMAP	7/14/2012	GOA	Humpback Whale	Western North Pacific, Central North Pacific	DEAD	A humpback whale drowned after becoming entangled in a salmon seine.	DEAD	Entangled / entrapped	Fishery gear	AK Kodiak salmon purse seine	Commercial	Seine	N/A	1	1
AKRO	8/3/2012	GOA	Humpback Whale	Western North Pacific, Central North Pacific	PRORATE	A humpback whale was entangled in Dungeness crab pot gear with wraps of line around the animal's midsection and tailstock. The animal appeared very tired and local fisherman and the reporting party were able to apply tension to the line. This allowed the midsection wrap of line to drop loose, although the wraps around tailstock remained. Later the whale was sighted and observed to shed its remaining gear. The final outcome of this interaction is a NSI.	NSI	Entangled / entrapped	Fishery gear	GOA / Kodiak unknown dungeness crab pot	Unknown	Pot	L10	0	0
NPGOP	10/5/2012	WAK	Humpback Whale	Western North Pacific, Central North Pacific	DEAD	A freshly dead humpback whale was entangled in a trawl net and the dead whale was cut free at the trawl ramp. The observer was unable to identify the whale but analysis at MML confirmed the animal was a humpback whale.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI pollock trawl	Commercial	Trawl	N/A	1	1
AKRO	4/15/2013	GOA	Humpback Whale	Western North Pacific, Central North Pacific	DEAD	A humpback whale became entangled in an anchor cable of a vessel that was anchored for the night. The crew discovered the dead humpback the next morning. The whale was cut loose and one photo was taken. This photo shows the anchor cable wrapped and knotted around the flukes and tail stock multiple times.	DEAD	Entangled / entrapped	Ship's ground tackle			N/A	N/A	1	0
AKRO	6/19/2013	GOA	Humpback Whale	Western North Pacific, Central North Pacific	NSI	A couple was fishing for halibut in their 22 ft boat near Kodiak. The boat was at anchor and the motor was off. A whale was initially observed about 300 yards away. Shortly afterwards a whale surfaced immediately beneath the boat. The boat was lifted out of the water and the halibut lines then began to stream out as the whale submerged. The lines were cut. There was damage reported to the boats prop and a 4 inch piece of black skin was found on the vessel's keel. The interaction was determined to result in a non-serious injury using criteria L6c and L5b. L4 could also be considered to be a secondary injury criteria.	NSI	Ship strike	Vessel	N/A	N/A	N/A	L6c	0	0
AKRO	5/1/2014	SCAK	Humpback Whale	Western North Pacific, Central North Pacific	PRORATE	A subadult humpback whale was reported entangled and trailing a green buoy 30 to 50 ft behind it. Entanglement was thought to originate on the whale's flukes or mouth. This interaction is prorated under criterion L10 due to uncertainties regarding entanglement configuration.	PRORATE	Entangled / entrapped	Marine debris (rope and buoy)	N/A	N/A	N/A	L10	0.75	0

Appendix Table 1.10. -- Human / marine mammal interaction records reviewed for serious injury and mortality. Records are sorted by species, stock, and date.

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 Criterion	Suggested Value for PBR	Suggested Value for LOF
AKRO	7/26/2014	SCAK	Humpback Whale	Western North Pacific, Central North Pacific	DEAD	A humpback whale was struck by a vessel (approximately 400 ft in length) during a period of poor visibility on 7/26/2014. No one aboard realized the vessel struck a humpback whale until a whale was observed sliding off the bulbous bow when the vessel was put into reverse while pulling into port. The whale appeared dead and sank. Two days later the whale was found floating off Puffin Island and the whale was necropsied on 7/30/2014. The necropsy confirmed the whale was fresh dead and killed by ship strike. There were multiple comminuted fractures of the cranium and ribs.	DEAD	Ship strike	Vessel	N/A	N/A	N/A	N/A	1	0
AKRO	8/4/2014	PWS	Humpback Whale	Western North Pacific, Central North Pacific	PRORATE	A captain reported that his boat likely struck a whale while underway at 20 knots while travelling in a deep passage. The captain reported that after hitting something he came to a stop, and a humpback surfaced 100 ft away. No blood or injuries were observed.	PRORATE	Ship strike	Vessel	N/A	N/A	N/A	L6b	0.2	0
AKRO	8/20/2014	PWS	Humpback Whale	Western North Pacific, Central North Pacific	SI	A humpback whale was observed in Prince William Sound entangled in what was reported to be shrimp fishery gear. The whale was observed repeatedly on 8/20/2014, but could not be relocated when a rescue effort was mounted on 8/21/2014. The whale was entangled in multiple areas, including its mouth, and appeared to be heavily weighted. This interaction is considered a SI under criterion L2.	SI	Entangled / entrapped	Fishery gear	PWS unknown shrimp pot	Unknown	Pot	L2	1	0
AKRO	6/1/2015	GOA	Humpback Whale	Western North Pacific, Central North Pacific	SI	A humpback whale became entangled in a set gillnet. The whale appeared to have netting tangled around its tailstock, dorsal fin, and left pectoral fin. Troopers responded by skiff and cut the netting and lead line free from the whale. The whale then swam away. The troopers reported that they were unsure whether any netting remained on the whale, although they did observe the whale use both pectoral fins and fluke without restriction. The initial injury determination was a serious injury under criterion L2, but due to intervention by troopers the severity of this injury was reduced criterion L10. This interaction cannot be considered a non-serious injury because the absence of gear on the whale could not be confirmed.	PRORATE	Entangled / entrapped	Fishery gear	AK Kodiak salmon set gillnet	Commercial	Gillnet	L2	0.75	1
AKRO	7/12/2015	PWS	Humpback Whale	Western North Pacific, Central North Pacific	NSI	A humpback whale became caught in a purse seine. While in the net, the whale exhibited normal behavior and breathing. The fisherman freed the whale from the net, and stated that the whale swam free - uninjured and trailing no gear. The fisherman then watched the whale surface normally for ~30 minutes before he left the area. This interaction qualifies as a non-serious injury.	NSI	Entangled / entrapped	Fishery gear	AK salmon purse seine	Commercial	Seine	L10	0	0
AKRO	7/29/2015	GOA	Humpback Whale	Western North Pacific, Central North Pacific	PRORATE	A humpback whale was reported to be entangled in crab pot gear. Several wraps around the animal's tailstock were confirmed, but the head, mouth, and pectoral flippers were free from gear. The animal was reported to be trailing 30 fathoms of line with a sponex buoy at the end. The gear was determined to have been set three days prior. Despite efforts to resight the entangled whale it was not seen again. The whale may have shed the gear, but this cannot be confirmed, therefore this interaction qualifies as a prorated serious injury under criterion L10.	PRORATE	Entangled / entrapped	Fishery gear	AK GOA dungeness crab pot	Recreational	Pot	L10	0.75	0
AKRO	8/6/2015	GOA	Humpback Whale	Western North Pacific, Central North Pacific	NSI	A humpback whale was entangled in a purse seine net. The whale was initially cut free from the boat, but remained entangled in gear, however, the fishers were eventually able to remove all gear from the whale. There are very few details for this interaction, so this will be considered a non-serious injury due to the whale being released by the fisherman free of gear.	NSI	Entangled / entrapped	Fishery gear	AK Cook Inlet salmon purse seine	Commercial	Seine	L10	0	0
AKRO	9/6/2015	GOA	Humpback Whale	Western North Pacific, Central North Pacific	PRORATE	A sail boater reported observing an entangled humpback whale. The whale was reported to be entangled with at least one, and perhaps multiple shrimp pots. The entanglement was located on the animal's tailstock. The whale was mobile and was not sighted again. This entanglement will be considered a prorated serious injury under criterion L10 due to the unknown configuration and nature of the entanglement.	PRORATE	Entangled / entrapped	Fishery gear	AK GOA shrimp pot	Recreational	Pot	L10	0.75	0
AKRO	10/20/2015	WAK	Humpback Whale	Western North Pacific, Central North Pacific	SI	A subadult male humpback whale was observed near Dutch Harbor. The animal appeared sick and showed signs of entanglement. Some investigation indicated that the whale was entangled, heavily weighted, and in poor health. The whale died before a disentanglement team could assist the whale. A necropsy showed the whale had been entangled in multiple sets of pot gear for an extended period of time, as indicated by the very chronic and inflamed lacerations at the areas of entanglement.	DEAD	Entangled / entrapped	Fishery gear	BS/AI unknown pot - commercial and BS/AI dungeness pot - subsistence	Commercial	Pot	L2	1	0
AKRO	6/22/2016	SEAK	Humpback Whale	Western North Pacific, Central North Pacific	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	Kodiak	Humpback Whale	Western North Pacific, Central North Pacific	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	N/A	N/A	N/A	L6b	0.2	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 Criterion	Suggested Value for PBR	Suggested Value for LOF
AKRO	7/24/2016	WAK	Humpback Whale	Western North Pacific, Central North Pacific	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	SCAK	Humpback Whale	Western North Pacific, Central North Pacific	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	N/A	N/A	N/A	L6c	0	0
AKRO	7/28/2016	SCAK	Humpback Whale	Western North Pacific, Central North Pacific	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	8/24/2016	Kodiak	Humpback Whale	Western North Pacific, Central North Pacific	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	Unknown dungeness crab pot	Recreational	Pot	L10	0	0
AKRO	8/26/2016	GOA	Humpback Whale	Western North Pacific, Central North Pacific	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
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	Hook and line	N/A	1	1
NPGOP	3/2/2012	WAK	Killer Whale	Eastern North Pacific Alaska Resident, Eastern North Pacific Gulf of Alaska, Aleutian Islands, and Bering Sea Transient	SI	A killer whale was observed to be entangled in Pacific cod longline gear. In response to the entanglement, the line was cut at the crucifier and the other end of the gear was retrieved. In the meantime, the whale reportedly freed itself and all gear was recovered. The final outcome of this interaction was a NSI.	NSI	Entangled / entrapped	Fishery gear	AK BSAI Pacific cod longline	Commercial	Hook and line	S7b	0	0
NPGOP	3/12/2012	WAK	Killer Whale	Eastern North Pacific Alaska Resident, Eastern North Pacific Gulf of Alaska, Aleutian Islands, and Bering Sea Transient	DEAD	A juvenile killer whale was entangled in longline gear and reported by the observer to be killed by gear.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI Pacific cod longline	Commercial	Hook and line	N/A	1	1
NPGOP	7/30/2012	WAK	Killer Whale	Eastern North Pacific Alaska Resident, Eastern North Pacific Gulf of Alaska, Aleutian Islands, and Bering Sea Transient	SI	A male killer whale was caught in trawl gear and the whale was brought onto deck two times before crew was able to release the whale. Blood was observed on deck. Since the animal was brought onto deck this event automatically qualifies as criteria S4 and a SI.	SI	Entangled / entrapped	Fishery gear	AK BSAI flatfish trawl	Commercial	Trawl	S4	1	1

Appendix Table 1.10. -- Human / marine mammal interaction records reviewed for serious injury and mortality. Records are sorted by species, stock, and date.

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 Criterion	Suggested Value for PBR	Suggested Value for LOF
NPGOP	7/5/2013	WAK	Killer Whale	Eastern North Pacific Alaska Resident, Eastern North Pacific Gulf of Alaska, Aleutian Islands, and Bering Sea Transient	SI	A killer whale was caught in the opening of a net during an AK BSAI flatfish trawl. The net's webbing was cut away, but some still remained around the animal's dorsal fin and tail. After being freed the whale remained on the surface for a while, appearing "shook up" as reported by the observer, and then swam off in the direction of the other killer whales. It is unknown whether the killer whale was brought on deck, but it was brought up in the haul and out of the water. The closest criteria is S4, a serious injury. Whale was also noted to be acting unusual at the surface following the interaction.	SI	Entangled / entrapped	Fishery gear	AK BSAI flatfish trawl	Commercial	Trawl	S4	1	1
NPGOP	7/16/2013	WAK	Killer Whale	Eastern North Pacific Alaska Resident, Eastern North Pacific Gulf of Alaska, Aleutian Islands, and Bering Sea Transient	SI	A killer whale was caught during an AK BSAI flatfish trawl. The whale was reportedly cut free from the net and pushed down the trawl ramp and into the water. The observer said the entire interaction only lasted a few minutes. The whale reportedly swam off and rejoined the pod - no gear remained on the whale and the whale "seemed to be fine" according to the observer. Classified as serious injury using criterion S4.	SI	Entangled / entrapped	Fishery gear	AK BSAI flatfish trawl	Commercial	Trawl	S4	1	1
NPGOP	7/19/2015	WAK	Killer Whale	Eastern North Pacific Alaska Resident, Eastern North Pacific Gulf of Alaska, Aleutian Islands, and Bering Sea Transient	SI	A killer whale was hooked on AK BSAI Greenland turbot longline gear and released. The interaction was not observed by the fishery observer aboard the vessel, but reported following a conversation with the captain. The captain reported that the whale was released immediately without notifying the observer because the hooked / entangled whale posed a threat to the ship. The captain reported that the whale was "not moving very much" after it was released. Although the details are limited, this interaction is best classified under SI criterion S7b and should be considered a serious injury due to the animal's reported behavior following release. It is also unclear whether all gear was recovered or if the animal was released trailing gear.	SI	Entangled / entrapped	Fishery gear	AK BSAI Greenland turbot longline	Commercial	Hook and line	S6	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	AK BSAI flatfish trawl	Commercial	Trawl	S3	1	1
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
SWFSC	4/18/2015	WC	Killer Whale	Eastern North Pacific Gulf of Alaska, Aleutian Islands, and Bering Sea Transient	DEAD	A large adult male killer whale was found dead and entangled in a considerable amount of crab pot gear. A necropsy showed that the animal was alive when it was initially entangled and a genetic analysis indicated that it was from the Eastern North Pacific Gulf of Alaska, Aleutian Islands, and Bering Sea Transient stock.	DEAD	Entangled / entrapped	Fishery gear	California dungeness crab pot	Commercial	Pot	N/A	1	1
AKRO	7/12/2012	WAK	Northern Fur Seal	Eastern Pacific	SI	A four to five year old subadult male northern fur seal was observed with a 360 degree wound caused by a packing band. The band was removed and the animal was released.	NSI	Constricting entanglement	Marine debris (packing band)	N/A	N/A	N/A	P7b	0	0

Appendix Table 1.10. -- Human / marine mammal interaction records reviewed for serious injury and mortality. Records are sorted by species, stock, and date.

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 Criterion	Suggested Value for PBR	Suggested Value for LOF
AKRO	7/12/2012	WAK	Northern Fur Seal	Eastern Pacific	SI	An approximately three year old subadult male northern fur seal was observed with a 360 degree wound caused by a blue packing band and line. The band was removed and animal was released.	NSI	Constricting entanglement	Marine debris (packing band)	N/A	N/A	N/A	P7b	0	0
AKRO	7/12/2012	WAK	Northern Fur Seal	Eastern Pacific	SI	A six to seven year old male northern fur seal was observed with a circumferential neck entanglement.	SI	Constricting entanglement	Marine debris (unidentified)	N/A	N/A	N/A	P8a	1	0
AKRO	7/12/2012	WAK	Northern Fur Seal	Eastern Pacific	SI	An approximately six year old male northern fur seal was observed with a circumferential neck entanglement.	SI	Constricting entanglement	Marine debris (unidentified)	N/A	N/A	N/A	P8a	1	0
AKRO	7/27/2012	WAK	Northern Fur Seal	Eastern Pacific	SI	A subadult male northern fur seal was observed entangled in 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	7/27/2012	WAK	Northern Fur Seal	Eastern Pacific	SI	A subadult male northern fur seal was observed entangled in an unspecified fishing net. The animal was then captured and disentangled.	NSI	Constricting entanglement	Marine debris (packing band)	N/A	N/A	N/A	P7b	0	0
AKRO	8/3/2012	WAK	Northern Fur Seal	Eastern Pacific	SI	A subadult male northern fur seal was observed entangled in a piece of trawl net. The animal was captured and disentangled.	NSI	Constricting entanglement	Marine debris (packing band)	N/A	N/A	N/A	P7b	0	0
AKRO	8/9/2012	WAK	Northern Fur Seal	Eastern Pacific	SI	An adult female northern fur seal was observed entangled with a fishing net around its neck.	SI	Constricting entanglement	Fishery gear	BSAI unknown net	Unknown	Net	P8a	1	0
AKRO	8/9/2012	WAK	Northern Fur Seal	Eastern Pacific	SI	A subadult male northern fur seal was observed with green fishing net wound around neck. A 360 degree wound was observed.	SI	Constricting entanglement	Fishery gear	BSAI unknown net	Unknown	Net	P8a	1	0
AKRO	8/11/2012	WAK	Northern Fur Seal	Eastern Pacific	SI	A northern fur seal pup was observed entangled in a white packing band. The pup was captured and disentangled.	NSI	Constricting entanglement	Marine debris (packing band)	N/A	N/A	N/A	P7b	0	0
AKRO	8/11/2012	WAK	Northern Fur Seal	Eastern Pacific	SI	A four to five year old northern fur seal was observed entangled in a section of fishing net.	SI	Entangled / entrapped	Fishery gear	BSAI unknown trawl	Commercial	Trawl	P8a	1	0
AKRO	8/20/2012	WAK	Northern Fur Seal	Eastern Pacific	SI	A young adult female northern fur seal was entangled in 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	8/22/2012	WAK	Northern Fur Seal	Eastern Pacific	SI	A five to six year old male northern fur seal was entangled in 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	8/22/2012	WAK	Northern Fur Seal	Eastern Pacific	SI	A young male northern fur seal was entangled in trawl netting. The animal was captured and disentangled.	NSI	Entangled / entrapped	Fishery gear	BSAI unknown trawl	Commercial	Trawl	P7b	0	0
AKRO	8/23/2012	WAK	Northern Fur Seal	Eastern Pacific	SI	An adult female northern fur seal was observed entangled in green trawl net. The animal was captured and disentangled.	NSI	Entangled / entrapped	Fishery gear	BSAI unknown trawl	Commercial	Trawl	P7b	0	0
AKRO	8/27/2012	WAK	Northern Fur Seal	Eastern Pacific	SI	An approximately five year old male northern fur seal was observed with a circumferential neck entanglement. Disentanglement was not attempted.	SI	Constricting entanglement	Marine debris (unidentified)	N/A	N/A	N/A	P8a	1	0
NPGOP	8/27/2012	AK	Northern Fur Seal	Eastern Pacific	DEAD	A dead northern fur seal was observed on the vessel's deck following offload. The observer stated the fur seal was found in one of the fishing vessel's tanks. This mortality cannot be applied to a specific fishery due to how and when the fur seal was discovered.	DEAD	Entangled / entrapped	Fishery gear	Unknown trawl	Commercial	Trawl	N/A	1	0
AKRO	10/16/2012	WAK	Northern Fur Seal	Eastern Pacific	SI	A subadult northern fur seal was observed entangled in a stiff plastic loop. No injury was present at the time of observation but the possibility exists for future injury as the animal grows.	SI	Entangled / entrapped	Marine debris (misc. plastic)	N/A	N/A	N/A	P8a	1	0
AKRO	6/23/2013	WAK	Northern Fur Seal	Eastern Pacific	SI	A six to seven year old northern fur seal was observed with a circumferential neck entanglement at the St. George harbor. The animal could not be disentangled.	SI	Constricting entanglement	Marine debris (unidentified)	N/A	N/A	N/A	P8a	1	0
NPGOP	5/18/2014	WAK	Northern Fur Seal	Eastern Pacific	DEAD	A northern fur seal was caught in AK BSAI flatfish trawl gear. The animal was reported by the observer to be freshly killed.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI flatfish trawl	Commercial	Trawl	N/A	1	1
NPGOP	7/4/2014	WAK	Northern Fur Seal	Eastern Pacific	NSI	A live northern fur seal was caught in an AK BSAI flatfish trawl and dumped into the live tanks with the catch. The crew was able to wrap the seal in netting and hoist the animal out of the live tank. The animal was released from the net while on the stern ramp, made its way to the water, and swam away on its own power. Reviewed video and consulted with MML expert for this determination.	NSI	Entangled / entrapped	Fishery gear	AK BSAI flatfish trawl	Commercial	Trawl	P4	0	0
AKRO	7/31/2014	WAK	Northern Fur Seal	Eastern Pacific	SI	A subadult male northern fur seal was observed with a circumferential neck entanglement caused by line. The entanglement caused a 180 degree wound.	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 Criterion	Suggested Value for PBR	Suggested Value for LOF
AKRO	8/6/2014	WAK	Northern Fur Seal	Eastern Pacific	SI	An adult male northern fur seal was observed with a circumferential neck entanglement on St. George Island.	SI	Constricting entanglement	Marine debris (packing band)	N/A	N/A	N/A	P8a	1	0
AKRO	8/7/2014	WAK	Northern Fur Seal	Eastern Pacific	SI	A northern fur seal was observed and photographed at St. George Island with a circumferential neck entanglement caused by a trawl net.	SI	Constricting entanglement	Fishery gear	BSAI unknown trawl	Commercial	Trawl	P8a	1	0
AKRO	8/7/2014	WAK	Northern Fur Seal	Eastern Pacific	SI	A subadult male northern fur seal was observed entangled in gray trawl netting around its neck. The fur seal was tagged with a white all flex tag marked 1067E.	SI	Constricting entanglement	Fishery gear	BSAI unknown trawl	Commercial	Trawl	P8a	1	0
AKRO	8/8/2014	WAK	Northern Fur Seal	Eastern Pacific	SI	A northern fur seal was sighted with a circumferential packing band entanglement at St. Paul Island, was disentangled, and released.	NSI	Constricting entanglement	Marine debris (packing band)	N/A	N/A	N/A	P7b	0	0
AKRO	8/15/2014	WAK	Northern Fur Seal	Eastern Pacific	SI	An adult female northern fur seal was observed entangled in blue line. Researchers were able to capture and disentangle the animal.	NSI	Entangled / entrapped	Marine debris (rope)	N/A	N/A	N/A	P7b	0	0
AKRO	8/20/2014	WAK	Northern Fur Seal	Eastern Pacific	SI	A subadult male northern fur seal was observed entangled in a packing band. Researchers were able to disentangle the animal.	NSI	Entangled / entrapped	Marine debris (packing band)	N/A	N/A	N/A	P7b	0	0
AKRO	8/21/2014	WAK	Northern Fur Seal	Eastern Pacific	SI	A subadult northern fur seal was observed entangled in a blue trawl net. The net was wrapped around the animal's neck and caused a 360 degree wound. Researchers were able to disentangle the animal.	NSI	Constricting entanglement	Fishery gear	BSAI unknown trawl	Commercial	Trawl	P7b	0	0
AKRO	8/22/2014	WAK	Northern Fur Seal	Eastern Pacific	SI	A subadult male northern fur seal was observed with a line wrapped around its neck.	SI	Constricting entanglement	Marine debris (rope)	N/A	N/A	N/A	P8a	1	0
AKRO	8/26/2014	WAK	Northern Fur Seal	Eastern Pacific	SI	A subadult male northern fur seal was observed on two occasions with a green line wrapped around its neck. The line was observed to be cutting into the animal's neck.	SI	Constricting entanglement	Marine debris (rope)	N/A	N/A	N/A	P8a	1	0
AKRO	8/26/2014	WAK	Northern Fur Seal	Eastern Pacific	SI	A subadult male northern fur seal was observed entangled in green trawl netting. The netting was wrapped around the animal's neck.	SI	Constricting entanglement	Fishery gear	BSAI unknown trawl	Commercial	Trawl	P8a	1	0
AKRO	9/5/2014	WAK	Northern Fur Seal	Eastern Pacific	SI	A subadult male northern fur seal was observed entangled in trawl netting. The netting was wrapped around the animal's neck. The animal was reported to be bright, alert, and responsive, and the wound was not reported to be severe.	SI	Constricting entanglement	Fishery gear	BSAI unknown trawl	Commercial	Trawl	P8a	1	0
AKRO	9/10/2014	WAK	Northern Fur Seal	Eastern Pacific	SI	A subadult male northern fur seal was observed with a black rubber band around its neck.	SI	Constricting entanglement	Marine debris (rubber band)	N/A	N/A	N/A	P8a	1	0
AKRO	9/11/2014	WAK	Northern Fur Seal	Eastern Pacific	SI	A subadult male northern fur seal was observed entangled in a large section of trawl netting. The netting was wrapped around the animal's neck.	SI	Constricting entanglement	Fishery gear	BSAI unknown trawl	Commercial	Trawl	P8a	1	0
AKRO	9/13/2014	WAK	Northern Fur Seal	Eastern Pacific	SI	A male subadult northern fur seal was observed with a solid plastic ring around its neck.	SI	Constricting entanglement	Marine debris (misc. plastic)	N/A	N/A	N/A	P8a	1	0
AKRO	9/18/2014	WAK	Northern Fur Seal	Eastern Pacific	SI	A juvenile female northern fur seal was observed with a circumferential neck entanglement caused by a gray trawl / seine net.	SI	Constricting entanglement	Fishery gear	Unknown net	Unknown	Net	P8a	1	0
AKRO	9/19/2014	WAK	Northern Fur Seal	Eastern Pacific	SI	An adult northern fur seal was observed with a circumferential neck entanglement caused by a packing band. The packing band caused a 360 degree wound. The animal was noted to be sluggish compared to its peers.	SI	Constricting entanglement	Marine debris (packing band)	N/A	N/A	N/A	P8a	1	0
AKRO	10/4/2014	WAK	Northern Fur Seal	Eastern Pacific	SI	A subadult male northern fur seal was observed with a circumferential neck entanglement caused by line or a packing band. The wound caused by the packing band was severe and oozing and the injury appeared to be affecting the animal's behavior and comfort.	SI	Constricting entanglement	Marine debris (unidentified)	N/A	N/A	N/A	P8a	1	0
AKRO	10/10/2014	WAK	Northern Fur Seal	Eastern Pacific	SI	A female northern fur seal pup was observed with a plastic bag around its neck on 10/10/2014. Under criterion P8a this entanglement qualifies as a serious injury. The pup was resighted without the entanglement the next day resulting in a final outcome of non-serious injury.	NSI	Constricting entanglement	Marine debris (misc. plastic)	N/A	N/A	N/A	P7b	0	0
AKRO	10/11/2014	WAK	Northern Fur Seal	Eastern Pacific	SI	A northern fur seal pup was observed on 10/11/2014 to be entangled in halibut longline gear. A portion of line and hook was wrapped around the animal's midsection. The seal was resighted the next day. The animal was no longer entangled, but was hooked in the lower jaw and dangling the same section of line.	SI	Hooked	Fishery gear	BSAI halibut longline	Commercial	Hook and line	P5a	1	1
AKRO	10/12/2014	WAK	Northern Fur Seal	Eastern Pacific	SI	A pup was observed at St. George that had swallowed long line gear. A hook was penetrating the animal's lower jaw.	SI	Hooked	Fishery gear	BSAI halibut longline	Commercial	Hook and line	P5a	1	1
AKRO	10/12/2014	WAK	Northern Fur Seal	Eastern Pacific	SI	A female yearling northern fur seal was observed with a severe circumferential neck entanglement. The object causing the entanglement could not be identified, but was causing a severe 360 degree wound that was cutting deeply into tissue.	SI	Constricting entanglement	Marine debris (unidentified)	N/A	N/A	N/A	P8a	1	0
AKRO	10/12/2014	WAK	Northern Fur Seal	Eastern Pacific	SI	A subadult male northern fur seal was observed with a section of green trawl netting wrapped around its neck causing a circumferential neck entanglement.	SI	Constricting entanglement	Fishery gear	BSAI unknown trawl	Commercial	Trawl	P8a	1	0

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AKRO	10/12/2014	WAK	Northern Fur Seal	Eastern Pacific	SI	A subadult female northern fur seal was observed with a circumferential neck entanglement caused by green gillnet.	SI	Constricting entanglement	Fishery gear	Unknown gillnet	Commercial	Gillnet	P8a	1	0
AKRO	10/14/2014	WAK	Northern Fur Seal	Eastern Pacific	SI	A northern fur seal pup was observed with a circumferential neck entanglement caused by unidentified marine debris which resembled a potato chip bag.	SI	Constricting entanglement	Marine debris (misc. plastic)	N/A	N/A	N/A	P8a	1	0
AKRO	10/14/2014	WAK	Northern Fur Seal	Eastern Pacific	SI	A male northern fur seal pup was observed on multiple occasions with a hook through the lower jaw. The hook was part of a halibut longline ganglion. Despite the injury, the pup was reported to be acting normally.	SI	Hooked	Fishery gear	BSAI halibut longline	Commercial	Hook and line	P5a	1	1
AKRO	10/16/2014	WAK	Northern Fur Seal	Eastern Pacific	SI	A yearling northern fur seal was observed with a circumferential neck entanglement. The entanglement appeared to be caused by a yellow packing band.	SI	Constricting entanglement	Marine debris (packing band)	N/A	N/A	N/A	P8a	1	0
AKRO	6/11/2015	WAK	Northern Fur Seal	Eastern Pacific	SI	A northern fur seal with a circumferential neck entanglement caused by trawl netting was disentangled and released on St. Paul Island. This interaction was initially a serious injury under criterion P8a, but the final determination is a non-serious injury because the animal was disentangled.	NSI	Constricting entanglement	Fishery gear	AK BSAI unknown trawl	Unknown	Trawl	P7b	0	0
NPGOP	7/2/2015	WAK	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	8/11/2015	WAK	Northern Fur Seal	Eastern Pacific	SI	A subadult male northern fur seal with a circumferential neck entanglement caused by a combination of line and tubing was captured and disentangled.	NSI	Constricting entanglement	Marine debris (misc. plastic)	N/A	N/A	N/A	P7b	0	0
AKRO	8/11/2015	WAK	Northern Fur Seal	Eastern Pacific	DEAD	A subadult northern fur seal carcass was discovered with a circumferential neck entanglement caused by green trawl netting. The trawl netting appeared to have also snagged on rocks while the seal was still alive, further entrapping the animal. The net was twisted numerous times and the seal carcass was contorted among the rocks.	DEAD	Entangled / entrapped	Fishery gear	BSAI unknown trawl	Unknown	Trawl	N/A	1	0
AKRO	8/13/2015	WAK	Northern Fur Seal	Eastern Pacific	SI	A subadult male northern fur seal with a circumferential neck entanglement caused by a section of blue plastic pipe was captured and the pipe was removed from the animal's neck.	NSI	Constricting entanglement	Marine debris (misc. plastic)	N/A	N/A	N/A	P7b	0	0
AKRO	8/13/2015	WAK	Northern Fur Seal	Eastern Pacific	SI	A subadult female northern fur seal with a circumferential neck entanglement caused by monofilament gillnet was captured and a disentanglement was attempted. The net was embedded into the animal's tissue, so complete removal was impossible. Responders believe they cut all encircling material, but were not certain and some netting remained embedded in the animal's neck.	SI	Constricting entanglement	Fishery gear	AK BSAI unknown gillnet	Unknown	Gillnet	P8a	1	0
AKRO	8/14/2015	WAK	Northern Fur Seal	Eastern Pacific	SI	A subadult northern fur seal with a circumferential neck entanglement caused by a single strand of line was captured and disentangled.	NSI	Constricting entanglement	Marine debris (rope)	N/A	N/A	N/A	P7b	0	0
AKRO	8/14/2015	WAK	Northern Fur Seal	Eastern Pacific	SI	A subadult male northern fur seal with a circumferential neck entanglement caused by a plastic lid rim was captured and disentangled.	NSI	Constricting entanglement	Marine debris (misc. plastic)	N/A	N/A	N/A	P7b	0	0
AKRO	10/16/2015	WAK	Northern Fur Seal	Eastern Pacific	SI	A northern fur seal was accidentally hit by a vehicle on the Polovina Turnpike in the early morning on St. Paul Island. The seal was euthanized following the accident.	DEAD	Body trauma	Vehicle	N/A	N/A	N/A	P9	1	0
AKRO	10/26/2015	WAK	Northern Fur Seal	Eastern Pacific	SI	A subadult 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	10/27/2015	WAK	Northern Fur Seal	Eastern Pacific	SI	A subadult male northern fur seal with a circumferential neck entanglement that was caused by a yellow packing band / line was captured and disentangled.	NSI	Constricting entanglement	Marine debris (unidentified)	N/A	N/A	N/A	P7b	0	0
AKRO	10/28/2015	WAK	Northern Fur Seal	Eastern Pacific	SI	A subadult northern fur seal was observed with a circumferential neck entanglement caused by either gillnet or monofilament line.	SI	Constricting entanglement	Fishery gear	BSAI unknown	Unknown	Unknown	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	Unknown trawl	Unknown	Trawl	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	7/10/2016	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 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

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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	Unknown trawl	Unknown	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	Unknown trawl	Unknown	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	Unknown trawl	Unknown	Trawl	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	9/22/2016	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	9/28/2016	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
NWRO	5/6/2012	WC	Northern Fur Seal	Eastern Pacific, California	NSI	Malnutrition, dehydration; deep laceration to ventral side of neck due to net/fishing line no longer on animal. Taken to rehab facility, treated and released with orange rototag #22371.	NSI	Entangled / entrapped	Fishery gear	Unknown	Unknown	Unknown	N/A	0	0
NWRO	5/28/2012	WC	Northern Fur Seal	Eastern Pacific, California	DEAD	Carcass discovered in station cooling water system.	DEAD	Entangled / entrapped	Power plant	N/A	N/A	N/A	N/A	1	0
NWRO	5/12/2014	WC	Northern Fur Seal	Eastern Pacific, California	DEAD	Two northern fur seals were found dead and entangled in a massive wad of blue green trawl net. This record is northern fur seal one of two.	DEAD	Entangled / entrapped	Fishery gear	Unknown trawl	Unknown	Trawl	N/A	1	0
NWRO	5/12/2014	WC	Northern Fur Seal	Eastern Pacific, California	DEAD	Two northern fur seals were found dead and entangled in a massive wad of blue green trawl net. This record is northern fur seal two of two.	DEAD	Entangled / entrapped	Fishery gear	Unknown trawl	Unknown	Trawl	N/A	1	0
NPGOP	8/5/2012	WAK	Ribbon Seal	Alaska	DEAD	A ribbon seal was caught and killed in an AK BSAI flatfish trawl.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI flatfish trawl	Commercial	Trawl	N/A	1	1
NPGOP	3/5/2014	WAK	Ribbon Seal	Alaska	DEAD	A ribbon seal (originally reported by observer to be a northern fur seal) was caught in an AK BSAI Pacific cod trawl.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI Pacific cod trawl	Commercial	Trawl	N/A	1	1
NPGOP	6/26/2014	WAK	Ribbon Seal	Alaska	DEAD	A ribbon seal was caught in an AK BSAI flatfish trawl. The observer reported the animal showed no signs of trauma, other than foam at the mouth.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI flatfish trawl	Commercial	Trawl	N/A	1	1
NPGOP	7/25/2014	WAK	Ribbon Seal	Alaska	DEAD	A ribbon seal was caught in an AK BSAI rockfish trawl. The animal was reported to still be warm when it was brought on deck.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI rockfish trawl	Commercial	Trawl	N/A	1	1
NPGOP	8/24/2016	BS	Ribbon Seal	Alaska	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
NPGOP	6/5/2012	WAK	Ringed Seal	Alaska	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

Appendix Table 1.10. -- Human / marine mammal interaction records reviewed for serious injury and mortality. Records are sorted by species, stock, and date.

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 Criterion	Suggested Value for PBR	Suggested Value for LOF
NPGOP	6/10/2012	WAK	Ringed Seal	Alaska	DEAD	A ringed seal was caught and killed in an AK BSAI flatfish trawl.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI flatfish trawl	Commercial	Trawl	N/A	1	1
NPGOP	9/9/2012	WAK	Ringed Seal	Alaska	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	5/14/2013	WAK	Ringed Seal	Alaska	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
NMFS OPR/HQ	7/29/2013	Arctic	Ringed Seal	Alaska	DEAD	An adult male ringed seal died as a result of marine mammal research activities in Alaska.	DEAD	Research related injury	MMPA authorized research	N/A	N/A	N/A	N/A	1	0
NPGOP	3/14/2015	WAK	Ringed Seal	Alaska	DEAD	A ringed 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
NMFS OPR/HQ	7/2/2016	Arctic	Ringed Seal	Alaska	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	5/21/2013	WAK	Ringed Seal	Unknown	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	5/21/2013	WAK	Ringed Seal	Unknown	DEAD	Two seals were caught by AK BSAI flatfish trawl gear. Both were reported by the observer to be 'previously dead.' Post processing of specimens allowed one of the seals to be identified as a ringed seal that was determined to be killed by gear. The other seal remains classified as 'unidentified' and 'previously dead'.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI flatfish trawl	Commercial	Trawl	N/A	1	1
NPGOP	5/18/2012	GOA	Sperm Whale	North Pacific	PRORATE	A sperm whale was reported to be entangled in AK GOA sablefish longline gear. The entangled sperm whale came up to the boat as the line was retrieved. The line was cut and the vessel began hauling the gear from the other end, but the observer reported the whale was found to still be entangled in the gear and parted the line as the vessel approached. The whale was reported to escape trailing gear. The outcome of this interaction is prorated using criteria L10 due to the unknown final configuration of the entanglement.	PRORATE	Entangled / entrapped	Fishery gear	AK GOA sablefish longline	Commercial	Hook and line	L10	0.75	0.75
NPGOP	7/25/2012	SCAK	Sperm Whale	North Pacific	PRORATE	A sperm whale was reported to be entangled in AK GOA sablefish longline gear. The whale was entangled in the line for ten minutes before the crew was able to retrieve the maximum amount of line possible and cut the line. The whale then swam away, and there is no description of the severity of the remaining entanglement. The observer reported that a substantial amount of gear was lost during the haul in which the entanglement occurred. The outcome of this interaction is prorated using criteria L10 due to the unknown final configuration of the entanglement.	PRORATE	Entangled / entrapped	Fishery gear	AK GOA sablefish longline	Commercial	Hook and line	L10	0.75	0.75
NPGOP	6/22/2013	GOA	Sperm Whale	North Pacific	PRORATE	A sperm whale became entangled in AK GOA sablefish longline gear. The observer reported the whale surfaced within 30 m of the vessel, then dove, which broke the line. The observer reported that the entanglement could not be seen, but that the whale was definitely caught, and escaped trailing gear. A substantial amount of gear was lost during the haul in which the entanglement occurred. The outcome of this interaction is prorated at L10 due to the unknown final configuration of the entanglement.	PRORATE	Entangled / entrapped	Fishery gear	AK GOA sablefish longline	Commercial	Hook and line	L10	0.75	0.75
NPGOP	8/12/2013	GOA	Sperm Whale	North Pacific	PRORATE	A sperm whale became entangled in AK GOA Sablefish longline gear. The observer reported that the whale surfaced as the line broke. The observer did not see the entanglement, but noted that the line tugged toward the surfacing whale as it broke off. 8.2 segments of gear and an anchor were lost as a result of the interaction. The outcome of this interaction is prorated at L10 due to the unknown final configuration of the entanglement.	PRORATE	Entangled / entrapped	Fishery gear	AK GOA sablefish longline	Commercial	Hook and line	L10	0.75	0.75
NPGOP	6/5/2014	GOA	Sperm Whale	North Pacific	NSI	A sperm whale became entangled in AK GOA sablefish longline gear. The observer noted the whale had the line wrapped around its peduncle, and then began thrashing around and slapping the surface with its tail. The whale proceeded to pull the line from the block before the captain cut the groundline. The observer then reported the whale swam away free of gear. The report of the whale being free from gear is credible because the observer described the nature of the original entanglement and was in a position to state whether the whale was free of gear when released. Furthermore, no gear was reported missing on this haul. This interaction is considered a NSI because the whale was reported to be released free of gear.	NSI	Entangled / entrapped	Fishery gear	AK GOA sablefish longline	Commercial	Hook and line	L10	0	0
NPGOP	4/3/2015	GOA	Sperm Whale	North Pacific	NSI	A sperm whale was observed near the fishing vessel and entangled in AK GOA sablefish longline gear. The line parted when the whale dove. The fisherman then hauled the gear in from the other end. All gear was reported to be retrieved and the animal was reported to be free of any gear. This qualifies as a non-serious injury under criterion L3 because the animal is believed to be have become fully disentangled shortly after the initial entanglement as evidenced by recovery of all gear, and there is no additional evidence of injury.	NSI	Entangled / entrapped	Fishery gear	AK GOA sablefish longline	Commercial	Hook and line	L3	0	0

Appendix Table 1.10. -- Human / marine mammal interaction records reviewed for serious injury and mortality. Records are sorted by species, stock, and date.

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 Criterion	Suggested Value for PBR	Suggested Value for LOF
NPGOP	6/11/2015	WAK	Sperm Whale	North Pacific	PRORATE	One of four sperm whales observed in the vicinity of a fishing vessel was reported to be entangled in AK BSAI Pacific halibut longline gear. The observer reported that the whale was on the surface approximately 30 m from the vessel. The gear led straight to the whale, and began to get tighter as the distance between the vessel and the whale closed. In response, the captain cut the ground line. It was not reported how much gear was potentially attached to the whale, but the observer reported that the whale escaped trailing gear. This interaction is prorated under SI criterion L10 due to the unknown nature of the entanglement and unknown outcome.	PRORATE	Entangled / entrapped	Fishery gear	AK BSAI Pacific halibut longline	Commercial	Hook and line	L10	0.75	0.75
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	Hook and line	L10	0.75	0.75
NPGOP	2/21/2012	WAK	Spotted Seal	Alaska	DEAD	A 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	5/12/2012	WAK	Spotted Seal	Alaska	DEAD	A 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	5/23/2015	WAK	Spotted Seal	Alaska	DEAD	A 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	6/2/2015	WAK	Spotted Seal	Alaska	DEAD	A 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
NMFS OPR/HQ	8/18/2015	Arctic	Spotted Seal	Alaska	DEAD	A subadult female spotted seal died as a result of marine mammal research activities near Barrow, AK.	DEAD	Research related injury	MMPA authorized research	N/A	N/A	N/A	N/A	1	0
NPGOP	5/4/2016	BS	Spotted Seal	Alaska	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	Alaska	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
WCGOP	1/8/2012	WC	Steller Sea Lion	Eastern US	DEAD	An adult Steller sea lion was caught and killed in trawl gear.	DEAD	Entangled / entrapped	Fishery gear	Catch shares bottom trawl	Commercial	Trawl	N/A	1	1
NWRO	1/21/2012	WC	Steller Sea Lion	Eastern US	DEAD	An adult male Steller sea lion was found dead on the shore in Long Beach, WA. The body was in moderate decomposition. The animal was necropsied and was found to have been shot in the head and abdomen.	DEAD	Shot	Projectile weapon	N/A	N/A	N/A	N/A	1	0
NWRO	1/21/2012	WC	Steller Sea Lion	Eastern US	DEAD	A Steller sea lion was found dead in Long Beach, WA and necropsied. The animal had been shot, and a bullet was collected from its head.	DEAD	Shot	Projectile weapon	N/A	N/A	N/A	N/A	1	0
NWRO	2/4/2012	WC	Steller Sea Lion	Eastern US	DEAD	An adult female Steller sea lion was found dead on the shore in Ocean Shores, WA. The animal was fresh dead. A necropsy was conducted and a bullet tracking wound was found internally.	DEAD	Shot	Projectile weapon	N/A	N/A	N/A	N/A	1	0
AKRO	2/29/2012	SEAK	Steller Sea Lion	Eastern US	SI	An adult Steller sea lion was observed entangled in a crab pot line. An AK wildlife trooper responded and noted that the line was wrapped around the sea lion's mid-section twice. The animal did not appear to be struggling to stay afloat, and did not appear injured. Someone cut the buoy free and the sea lion was seen two weeks later at the cold storage building, an area frequented by this animal. It was free of gear with a small fresh wound under its flipper. Originally this injury would have been a P6, but the animal became disentangled. A small wound remained, hence the P9 rating.	NSI	Entangled / entrapped	Fishery gear	SEAK unknown pot	Unknown	Pot	P9	0	0
WCGOP	3/5/2012	WC	Steller Sea Lion	Eastern US	NSI	Two Steller sea lions were caught in trawl gear and were freed from the net unharmed. Sea lion one of two.	NSI	Entangled / entrapped	Fishery gear	Catch shares bottom trawl	Commercial	Trawl	P7b	0	0
WCGOP	3/5/2012	WC	Steller Sea Lion	Eastern US	NSI	Two Steller sea lions were caught in trawl gear and were freed from the net unharmed. Sea lion two of two.	NSI	Entangled / entrapped	Fishery gear	Catch shares bottom trawl	Commercial	Trawl	P7b	0	0
SWFSC	3/21/2012	WC	Steller Sea Lion	Eastern US	SI	A Steller sea lion was found freshly dead with a pellets and bullets in its facial tissue and jaw. This animal was a branded animal and was marked '67Y'.	DEAD	Shot	Projectile weapon	N/A	N/A	N/A	N/A	1	0
NWRO	3/23/2012	WC	Steller Sea Lion	Eastern US	DEAD	An adult female Steller sea lion was found dead on the shore in Long Beach, WA. The body was in advanced decomposition. The animal was emaciated. The animal was also very pregnant. A necropsy was conducted and the animal was found to be killed by gunshot.	DEAD	Shot	Projectile weapon	N/A	N/A	N/A	N/A	1	0
WCGOP	3/25/2012	WC	Steller Sea Lion	Eastern US	NSI	A Steller sea lion was caught in trawl gear and released alive.	NSI	Entangled / entrapped	Fishery gear	Catch shares bottom trawl	Commercial	Trawl	P7b	0	0
ADFG	3/31/2012	SEAK	Steller Sea Lion	Eastern US	SI	An adult male Steller sea lion was observed with a deep circumferential neck entanglement caused by unknown material / marine debris.	SI	Constricting entanglement	Marine debris (unidentified)	N/A	N/A	N/A	P8a	1	0
WCGOP	4/5/2012	WC	Steller Sea Lion	Eastern US	DEAD	A female Steller sea lion was caught and killed in trawl gear.	DEAD	Entangled / entrapped	Fishery gear	Catch shares bottom trawl	Commercial	Trawl	N/A	1	1
WCGOP	4/5/2012	WC	Steller Sea Lion	Eastern US	NSI	A Steller sea lion was caught in trawl gear. The animal was freed from the net and appeared to be uninjured.	NSI	Entangled / entrapped	Fishery gear	Catch shares bottom trawl	Commercial	Trawl	P7b	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 Criterion	Suggested Value for PBR	Suggested Value for LOF
WCGOP	4/6/2012	WC	Steller Sea Lion	Eastern US	NSI	Two Steller sea lions were caught in trawl gear, brought on deck, and reportedly released alive. Sea lion one of two.	NSI	Entangled / entrapped	Fishery gear	Catch shares bottom trawl	Commercial	Trawl	P4	0	0
WCGOP	4/6/2012	WC	Steller Sea Lion	Eastern US	NSI	Two Steller sea lions were caught in trawl gear, brought on deck, and reportedly released alive. Sea lion two of two.	NSI	Entangled / entrapped	Fishery gear	Catch shares bottom trawl	Commercial	Trawl	P4	0	0
ADFG	4/10/2012	SEAK	Steller Sea Lion	Eastern US	SI	An adult female Steller sea lion was observed with a deep 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	4/15/2012	WC	Steller Sea Lion	Eastern US	NSI	A Steller sea lion was caught in trawl gear and brought aboard the fishing vessel. The animal left the boat after being freed from the net.	NSI	Entangled / entrapped	Fishery gear	Catch shares bottom trawl	Commercial	Trawl	P4	0	0
WCGOP	4/16/2012	WC	Steller Sea Lion	Eastern US	DEAD	A female Steller sea lion was caught and killed in trawl gear.	DEAD	Entangled / entrapped	Fishery gear	Catch shares bottom trawl	Commercial	Trawl	N/A	1	1
NWRO	4/22/2012	WC	Steller Sea Lion	Eastern US	DEAD	An adult female Steller sea lion found dead on shore along the Columbia River, Oregon. The body was in moderate decomposition. A necropsy was conducted and the animal was found to be shot. There was a bullet found in its diaphragm.	DEAD	Shot	Projectile weapon	N/A	N/A	N/A	N/A	1	0
WCGOP	4/24/2012	WC	Steller Sea Lion	Eastern US	DEAD	A Steller sea lion was reported to be caught and killed in trawl gear.	DEAD	Entangled / entrapped	Fishery gear	Catch shares bottom trawl	Commercial	Trawl	N/A	1	1
NWRO	4/25/2012	WC	Steller Sea Lion	Eastern US	DEAD	An adult male Steller sea lion was found dead on the shore in Warrenton, OR. The body was in moderate decomposition. A necropsy was conducted and the animal was found to have been shot.	DEAD	Shot	Projectile weapon	N/A	N/A	N/A	N/A	1	0
WCGOP	4/25/2012	WC	Steller Sea Lion	Eastern US	DEAD	A Steller sea lion was reported to be caught and killed in trawl gear.	DEAD	Entangled / entrapped	Fishery gear	Catch shares bottom trawl	Commercial	Trawl	N/A	1	1
NWRO	4/28/2012	WC	Steller Sea Lion	Eastern US	DEAD	An adult male Steller sea lion was found dead on the shore in Gearhart, OR. The body was in moderate decomposition. A necropsy was conducted and the animal was found to have been shot. Bullet holes/tracks with associated hemorrhaging was found.	DEAD	Shot	Projectile weapon	N/A	N/A	N/A	N/A	1	0
NWRO	5/3/2012	WC	Steller Sea Lion	Eastern US	DEAD	An adult male Steller sea lion was found dead on shore in Long Beach, WA. The animal was in advanced decomposition. A necropsy was conducted and the animal was found to have been shot. A shotgun pellet was collected from its chest.	DEAD	Shot	Projectile weapon	N/A	N/A	N/A	N/A	1	0
ADFG	5/4/2012	SEAK	Steller Sea Lion	Eastern US	SI	A subadult male Steller sea lion was observed with a deep circumferential neck entanglement caused by unknown material / marine debris.	SI	Constricting entanglement	Marine debris (unidentified)	N/A	N/A	N/A	P8a	1	0
WCGOP	5/7/2012	WC	Steller Sea Lion	Eastern US	NSI	A Steller sea lion was caught in trawl gear and brought aboard the fishing vessel. The animal left the boat after being freed from the net.	NSI	Entangled / entrapped	Fishery gear	Catch shares bottom trawl	Commercial	Trawl	P4	0	0
AKRO	5/12/2012	SEAK	Steller Sea Lion	Eastern US	SI	A large adult male Steller sea lion was reported to have a deep circumferential neck entanglement. The animal was observed hauled out. The reporting fisherman felt the animal was going to die from its injuries. Determination: SI due to circumferential neck entanglement (P8a).	SI	Constricting entanglement	Marine debris (unidentified)	N/A	N/A	N/A	P8a	1	0
AKRO	5/14/2012	SEAK	Steller Sea Lion	Eastern US	DEAD	A dead adult male Steller sea lion was floating in Petersburg middle harbor and was recovered. Upon recovery it was thought that someone had tried to cut off the animals head off but later it was determined the cuts were caused by a circumferential neck entanglement caused by twine.	DEAD	Constricting entanglement	Marine debris (unidentified)	N/A	N/A	N/A	N/A	1	0
NWRO	5/19/2012	WC	Steller Sea Lion	Eastern US	DEAD	An adult female Steller sea lion was found dead on the shore in Cannon Beach, OR. The body was in moderate decomposition. A necropsy was conducted and the animal was evidently shot in the head.	DEAD	Shot	Projectile weapon	N/A	N/A	N/A	N/A	1	0
WCGOP	5/19/2012	WC	Steller Sea Lion	Eastern US	NSI	A Steller sea lion was caught in trawl gear and brought aboard the fishing vessel. The animal left the boat after being freed from the net.	NSI	Entangled / entrapped	Fishery gear	Catch shares bottom trawl	Commercial	Trawl	P4	0	0
WCGOP	5/21/2012	WC	Steller Sea Lion	Eastern US	NSI	A Steller sea lion was caught in trawl gear and brought aboard the fishing vessel. The animal left the boat after being freed from the net.	NSI	Entangled / entrapped	Fishery gear	Catch shares bottom trawl	Commercial	Trawl	P4	0	0
ADFG	5/24/2012	SEAK	Steller Sea Lion	Eastern US	SI	An adult male Steller sea lion was observed with a deep circumferential neck entanglement caused by unknown material / marine debris.	SI	Constricting entanglement	Marine debris (unidentified)	N/A	N/A	N/A	P8a	1	0
WCGOP	5/28/2012	WC	Steller Sea Lion	Eastern US	NSI	A Steller sea lion was caught in trawl gear and released alive.	NSI	Entangled / entrapped	Fishery gear	Catch shares bottom trawl	Commercial	Trawl	P4	0	0
NWRO	6/2/2012	WC	Steller Sea Lion	Eastern US	DEAD	An adult male Steller sea lion was found dead on the shore in Gearhart, OR. The animal was in moderate decomposition. A necropsy was conducted and the animal was found to be shot in the neck / scapula area.	DEAD	Shot	Projectile weapon	N/A	N/A	N/A	N/A	1	0
NWRO	6/3/2012	WC	Steller Sea Lion	Eastern US	DEAD	A subadult male Steller sea lion was found dead on the shore in Ocean City, WA. The animal was in moderate decomposition. A necropsy was conducted and the animal found to have been shot. A bullet entrance wound was found.	DEAD	Shot	Projectile weapon	N/A	N/A	N/A	N/A	1	0
WCGOP	6/5/2012	WC	Steller Sea Lion	Eastern US	NSI	A Steller sea lion was caught in trawl gear and brought aboard the fishing vessel. The animal left the boat after being freed from the net.	NSI	Entangled / entrapped	Fishery gear	Catch shares bottom trawl	Commercial	Trawl	P4	0	0
ADFG	6/9/2012	SEAK	Steller Sea Lion	Eastern US	SI	Subadult male Steller sea lion was observed with a deep circumferential neck entanglement caused by a packing band.	SI	Constricting entanglement	Marine debris (packing band)	N/A	N/A	N/A	P8a	1	0
NWRO	6/10/2012	WC	Steller Sea Lion	Eastern US	SI	A Steller sea lion ingested troll fishery gear and was observed with a flasher in its mouth and line wrapped around its flipper.	SI	Hooked	Fishery gear	Unknown troll	Unknown	Troll	P2	1	0

Appendix Table 1.10. -- Human / marine mammal interaction records reviewed for serious injury and mortality. Records are sorted by species, stock, and date.

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 Criterion	Suggested Value for PBR	Suggested Value for LOF
ADFG	6/12/2012	SEAK	Steller Sea Lion	Eastern US	SI	An adult female Steller sea lion with a scar presumed to be from a circumferential neck entanglement was observed. The wound appeared to be healed.	NSI	Constricting entanglement	Marine debris (unidentified)	N/A	N/A	N/A	P7b	0	0
ADFG	6/14/2012	SEAK	Steller Sea Lion	Eastern US	SI	An adult female Steller sea lion was observed with a deep circumferential neck entanglement possibly caused by a packing band.	SI	Constricting entanglement	Marine debris (unidentified)	N/A	N/A	N/A	P8a	1	0
AKRO	6/19/2012	SEAK	Steller Sea Lion	Eastern US	DEAD	A Steller sea lion that had ingested troll fishery gear was found dead. A necropsy was conducted and the animal was found to have died from pneumonia and septicemia due to a fishing hook which was embedded in the animal's esophagus.	DEAD	Hooked	Fishery gear	SEAK unknown troll	Unknown	Troll	N/A	1	0
ADFG	6/25/2012	SEAK	Steller Sea Lion	Eastern US	SI	A Steller sea lion was observed with a deep circumferential neck entanglement caused by unknown material / marine debris.	SI	Constricting entanglement	Marine debris (unidentified)	N/A	N/A	N/A	P8a	1	0
ADFG	6/27/2012	SEAK	Steller Sea Lion	Eastern US	SI	A subadult male Steller sea lion ingested troll fishery gear and a flasher was observed tight to the right side of its mouth.	SI	Hooked	Fishery gear	SEAK unknown troll	Unknown	Troll	P2	1	0
ADFG	6/28/2012	SEAK	Steller Sea Lion	Eastern US	SI	A subadult male Steller sea lion ingested troll fishery gear and a flasher was observed protruding from the animal's mouth.	SI	Hooked	Fishery gear	SEAK unknown troll	Unknown	Troll	P2	1	0
AKRO	6/29/2012	SEAK	Steller Sea Lion	Eastern US	SI	A Steller sea lion was observed in a photo with a circumferential neck injury caused by unidentified material.	SI	Constricting entanglement	Marine debris (unidentified)	N/A	N/A	N/A	P8a	1	0
ADFG	6/29/2012	SEAK	Steller Sea Lion	Eastern US	SI	A subadult Steller sea lion ingested troll fishery gear and a flasher was observed hanging from the animal's mouth.	SI	Hooked	Fishery gear	SEAK unknown troll	Unknown	Troll	P2	1	0
ADFG	6/29/2012	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	6/30/2012	SEAK	Steller Sea Lion	Eastern US	SI	An adult female Steller sea lion was observed with a flasher hanging from its mouth.	SI	Hooked	Fishery gear	SEAK unknown troll	Unknown	Troll	P2	1	0
ADFG	6/30/2012	SEAK	Steller Sea Lion	Eastern US	SI	A subadult Steller sea lion ingested troll fishery gear and a flasher was observed tight to the animal's mouth. Blood was observed on flasher.	SI	Hooked	Fishery gear	SEAK unknown troll	Unknown	Troll	P2	1	0
ADFG	7/1/2012	SEAK	Steller Sea Lion	Eastern US	SI	An adult female Steller sea lion was observed 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
ADFG	7/2/2012	SEAK	Steller Sea Lion	Eastern US	SI	A Steller sea lion ingested troll fishery gear and was observed with a flasher hanging from its mouth.	SI	Hooked	Fishery gear	SEAK unknown troll	Unknown	Troll	P2	1	0
ADFG	7/2/2012	SEAK	Steller Sea Lion	Eastern US	SI	A male Steller sea lion ingested troll fishery gear and a silver and orange flasher was observed tight to the animal's left lip.	SI	Hooked	Fishery gear	SEAK unknown troll	Unknown	Troll	P2	1	0
ADFG	7/2/2012	SEAK	Steller Sea Lion	Eastern US	SI	An adult male Steller sea lion was observed with a deep circumferential neck entanglement caused by unknown material / marine debris.	SI	Constricting entanglement	Marine debris (unidentified)	N/A	N/A	N/A	P8a	1	0
ADFG	7/3/2012	SEAK	Steller Sea Lion	Eastern US	SI	An adult female Steller sea lion ingested troll fishery gear and was observed with a silver and green flasher hanging from its mouth. The animal had a nursing pup. This record represents the mother.	SI	Hooked	Fishery gear	SEAK unknown troll	Unknown	Troll	P2	1	0
ADFG	7/3/2012	SEAK	Steller Sea Lion	Eastern US	SI	An adult female Steller sea lion ingested troll fishery gear and was observed with a silver and green flasher hanging from its mouth. The animal had a nursing pup. This record represents the pup.	SI	Dependent animal with mother seriously injured	Fishery gear	SEAK unknown troll	Unknown	Troll	P14	1	0
ADFG	7/3/2012	SEAK	Steller Sea Lion	Eastern US	SI	An adult female Steller sea lion ingested troll fishery gear and was observed with a green rimmed flasher hanging close to the left side of its mouth.	SI	Hooked	Fishery gear	SEAK unknown troll	Unknown	Troll	P2	1	0
ADFG	7/3/2012	SEAK	Steller Sea Lion	Eastern US	SI	An adult female Steller sea lion ingested troll fishery gear and a flasher was observed tight to the right side of the animal's mouth. The animal was observed with a nursing juvenile.	SI	Hooked	Fishery gear	SEAK unknown troll	Unknown	Troll	P2	1	0
ADFG	7/3/2012	SEAK	Steller Sea Lion	Eastern US	SI	An adult male Steller sea lion ingested troll fishery gear and a silver flasher was observed close to the animal's right lip.	SI	Hooked	Fishery gear	SEAK unknown troll	Unknown	Troll	P2	1	0
ADFG	7/3/2012	SEAK	Steller Sea Lion	Eastern US	SI	A subadult male Steller sea lion ingested troll fishery gear.	SI	Hooked	Fishery gear	SEAK unknown troll	Unknown	Troll	P2	1	0
ADFG	7/3/2012	SEAK	Steller Sea Lion	Eastern US	SI	A subadult male Steller sea lion ingested troll fishery gear and an orange rimmed flasher was observed hanging close to the right side of its mouth.	SI	Hooked	Fishery gear	SEAK unknown troll	Unknown	Troll	P2	1	0
ADFG	7/3/2012	SEAK	Steller Sea Lion	Eastern US	SI	An adult male Steller sea lion ingested troll fishery gear and a silver and red flasher was observed tight to the right side of its mouth. This animal was seen on multiple surveys.	SI	Hooked	Fishery gear	SEAK unknown troll	Unknown	Troll	P2	1	0
ADFG	7/3/2012	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	7/4/2012	SEAK	Steller Sea Lion	Eastern US	SI	A subadult Steller sea lion ingested troll fishery gear and a green flasher was observed hanging from the animal's mouth.	SI	Hooked	Fishery gear	SEAK unknown troll	Unknown	Troll	P2	1	0
ADFG	7/4/2012	SEAK	Steller Sea Lion	Eastern US	SI	An adult female Steller sea lion was observed with a deep circumferential neck entanglement caused by unknown material / marine debris.	SI	Constricting entanglement	Marine debris (unidentified)	N/A	N/A	N/A	P8a	1	0

Appendix Table 1.10. -- Human / marine mammal interaction records reviewed for serious injury and mortality. Records are sorted by species, stock, and date.

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 Criterion	Suggested Value for PBR	Suggested Value for LOF
ADFG	7/4/2012	SEAK	Steller Sea Lion	Eastern US	SI	An adult female Steller sea lion was observed with a deep circumferential neck entanglement caused by a packing band. Animal was observed with a nursing juvenile.	SI	Constricting entanglement	Marine debris (packing band)	N/A	N/A	N/A	P8a	1	0
ADFG	7/4/2012	SEAK	Steller Sea Lion	Eastern US	SI	A juvenile female Steller sea lion was observed with a circumferential neck entanglement caused by a braided yellow rope.	SI	Constricting entanglement	Marine debris (rope)	N/A	N/A	N/A	P8a	1	0
NWRO	7/5/2012	WC	Steller Sea Lion	Eastern US	DEAD	An adult female Steller sea lion was found dead on shore in Gearhart, OR. The animal was in advanced decomposition. A necropsy was conducted and the animal was found to have numerous bullet holes with associated hemorrhaging.	DEAD	Shot	Projectile weapon	N/A	N/A	N/A	N/A	1	0
ADFG	7/5/2012	SEAK	Steller Sea Lion	Eastern US	SI	A subadult male Steller sea lion ingested troll fishery gear and was observed with a silver flasher with blue trim hanging from its mouth.	SI	Hooked	Fishery gear	SEAK unknown troll	Unknown	Troll	P2	1	0
ADFG	7/6/2012	SEAK	Steller Sea Lion	Eastern US	SI	An adult female Steller sea lion ingested troll fishery gear and a silver flasher with a green rim was observed hanging from its mouth.	SI	Hooked	Fishery gear	SEAK unknown troll	Unknown	Troll	P2	1	0
ADFG	7/6/2012	SEAK	Steller Sea Lion	Eastern US	SI	A subadult male Steller sea lion ingested troll fishery gear and a silver and green flasher was observed hanging from the animal's mouth.	SI	Hooked	Fishery gear	SEAK unknown troll	Unknown	Troll	P2	1	0
ADFG	7/6/2012	SEAK	Steller Sea Lion	Eastern US	SI	An adult female Steller sea lion was observed with a deep circumferential neck entanglement caused by unknown material / marine debris.	SI	Constricting entanglement	Marine debris (unidentified)	N/A	N/A	N/A	P8a	1	0
ADFG	7/7/2012	SEAK	Steller Sea Lion	Eastern US	SI	A subadult male Steller sea lion ingested troll fishery gear and a silver flasher with an orange rim was observed hanging from the animal's mouth.	SI	Hooked	Fishery gear	SEAK unknown troll	Unknown	Troll	P2	1	0
ADFG	7/7/2012	SEAK	Steller Sea Lion	Eastern US	SI	An adult male Steller sea lion was observed with a deep circumferential neck entanglement caused by unknown material / marine debris.	SI	Constricting entanglement	Marine debris (unidentified)	N/A	N/A	N/A	P8a	1	0
ADFG	7/8/2012	SEAK	Steller Sea Lion	Eastern US	SI	A subadult male Steller sea lion ingested troll fishery gear and a holographic flasher was observed hanging from the animal's mouth.	SI	Hooked	Fishery gear	SEAK unknown troll	Unknown	Troll	P2	1	0
ADFG	7/8/2012	SEAK	Steller Sea Lion	Eastern US	SI	An adult female Steller sea lion was observed with a deep circumferential neck entanglement caused by unknown material / marine debris.	SI	Constricting entanglement	Marine debris (unidentified)	N/A	N/A	N/A	P8a	1	0
ADFG	7/13/2012	SEAK	Steller Sea Lion	Eastern US	SI	A subadult Steller sea lion ingested troll fishery gear and a silver and green flasher was observed hanging from the right side of the animal's mouth.	SI	Hooked	Fishery gear	SEAK unknown troll	Unknown	Troll	P2	1	0
ADFG	7/13/2012	SEAK	Steller Sea Lion	Eastern US	SI	A Steller sea lion pup was observed with a circumferential neck entanglement caused by multiple wraps of rope around its neck.	SI	Constricting entanglement	Marine debris (rope)	N/A	N/A	N/A	P8a	1	0
AKRO	8/5/2012	SEAK	Steller Sea Lion	Eastern US	SI	A Steller sea lion entangled in ghost gillnet gear was reported to be hung up on a rock. The reporter was able to disentangle the Steller sea lion but was unable to collect the net. Final outcome is a NSI.	NSI	Entangled / entrapped	Fishery gear	SEAK salmon drift gillnet	Commercial	Gillnet	P7b	0	1
WCGOP	8/5/2012	WC	Steller Sea Lion	Eastern US	NSI	A Steller sea lion was caught in trawl gear and reportedly released alive.	NSI	Entangled / entrapped	Fishery gear	Catch shares bottom trawl	Commercial	Trawl	P7b	0	0
AKRO	8/9/2012	SEAK	Steller Sea Lion	Eastern US	SI	An adult male Steller sea lion was observed with an orange flasher hanging from its mouth. The animal appeared alert and active and was hauled out.	SI	Hooked	Fishery gear	SEAK unknown troll	Unknown	Troll	P2	1	0
WCGOP	8/17/2012	WC	Steller Sea Lion	Eastern US	NSI	Gunshots were used to deter Steller sea lions from feeding on the catch.	NSI	Shot	Projectile weapon	Catch shares bottom trawl	Commercial	Trawl	P9	0	0
WCGOP	8/19/2012	WC	Steller Sea Lion	Eastern US	DEAD	A Steller sea lion was caught and killed in trawl gear.	DEAD	Entangled / entrapped	Fishery gear	Catch shares bottom trawl	Commercial	Trawl	N/A	1	1
AKRO	8/24/2012	SEAK	Steller Sea Lion	Eastern US	SI	An adult male Steller sea lion ingested troll fishery gear and was observed to have a flasher hanging from its mouth.	SI	Hooked	Fishery gear	SEAK unknown troll	Unknown	Troll	P2	1	0
ADFG	8/24/2012	SEAK	Steller Sea Lion	Eastern US	SI	A male Steller sea lion ingested troll fishery gear and a silver flasher with a vertical stripe was observed hanging from the animal's mouth.	SI	Hooked	Fishery gear	SEAK unknown troll	Unknown	Troll	P2	1	0
WCGOP	8/31/2012	WC	Steller Sea Lion	Eastern US	NSI	Gunshots were used to deter Steller sea lions.	NSI	Shot	Projectile weapon	Catch shares bottom trawl	Commercial	Trawl	P9	0	0
NWRO	9/6/2012	WC	Steller Sea Lion	Eastern US	DEAD	An adult female Steller sea lion was found dead on the shore in Gearhart, OR. The animal was in advanced decomposition. A necropsy was conducted and a shotgun pellet was recovered from the animal's head.	DEAD	Shot	Projectile weapon	N/A	N/A	N/A	N/A	1	0
ADFG	9/10/2012	SEAK	Steller Sea Lion	Eastern US	SI	An adult male Steller sea lion ingested troll fishery gear and a dark pink flasher was observed hanging from the right side of the animal's mouth.	SI	Hooked	Fishery gear	SEAK unknown troll	Commercial	Troll	P2	1	0
ADFG	9/10/2012	SEAK	Steller Sea Lion	Eastern US	SI	An adult male Steller sea lion ingested troll fishery gear and a white and red flasher was observed hanging from its mouth.	SI	Hooked	Fishery gear	SEAK unknown troll	Unknown	Troll	P2	1	0
ADFG	9/10/2012	SEAK	Steller Sea Lion	Eastern US	SI	Adult female Steller sea lion was observed with a deep circumferential neck entanglement caused by unknown material / marine debris.	SI	Constricting entanglement	Marine debris (unidentified)	N/A	N/A	N/A	P8a	1	0
ADFG	9/10/2012	SEAK	Steller Sea Lion	Eastern US	SI	A subadult male Steller sea lion was observed with a deep 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	9/15/2012	SEAK	Steller Sea Lion	Eastern US	SI	A Steller sea lion was observed with a packing band around its neck.	SI	Constricting entanglement	Marine debris (packing band)	N/A	N/A	N/A	P8a	1	0
A-SHOP	9/29/2012	WC	Steller Sea Lion	Eastern US	DEAD	An adult female Steller sea lion was caught and killed in trawl gear.	DEAD	Entangled / entrapped	Fishery gear	At-Sea hake pelagic trawl	Commercial	Trawl	N/A	1	1

Appendix Table 1.10. -- Human / marine mammal interaction records reviewed for serious injury and mortality. Records are sorted by species, stock, and date.

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 Criterion	Suggested Value for PBR	Suggested Value for LOF
NWRO	10/16/2012	WC	Steller Sea Lion	Eastern US	DEAD	A subadult male Steller sea lion was found dead on the shore in Pacific Beach, WA. The animal was freshly dead. A necropsy was conducted and the animal was found to be shot. The bullet entrance wound was on the left side of skull and the exit wound was on the right side of the skull.	DEAD	Shot	Projectile weapon	N/A	N/A	N/A	N/A	1	0
WCGOP	10/25/2012	WC	Steller Sea Lion	Eastern US	DEAD	A Steller sea lion was caught and killed in trawl gear.	DEAD	Entangled / entrapped	Fishery gear	Catch shares bottom trawl	Commercial	Trawl	N/A	1	1
NWRO	12/27/2012	WC	Steller Sea Lion	Eastern US	DEAD	A subadult male Steller sea lion was found dead floating in the Nisqually Delta, near Lacey. The animal was freshly dead. A necropsy was conducted and the animal was found to be shot. A penetrating tracking wound was found and bullet fragments were recovered.	DEAD	Shot	Projectile weapon	N/A	N/A	N/A	N/A	1	0
NWRO	1/26/2013	WC	Steller Sea Lion	Eastern US	DEAD	A dead adult female Steller sea lion was found in Ocean Shores, WA. A necropsy confirmed that the animal was shot.	DEAD	Shot	Projectile weapon	N/A	N/A	N/A	N/A	1	0
NWRO	2/6/2013	WC	Steller Sea Lion	Eastern US	DEAD	A dead adult female Steller sea lion was found in Moclipis, WA. A necropsy confirmed that the animal was shot.	DEAD	Shot	Projectile weapon	N/A	N/A	N/A	N/A	1	0
NWRO	2/20/2013	WC	Steller Sea Lion	Eastern US	DEAD	A dead adult male Steller sea lion was found in Longview, WA. A necropsy confirmed that the animal was shot.	DEAD	Shot	Projectile weapon	N/A	N/A	N/A	N/A	1	0
WCGOP	2/27/2013	WC	Steller Sea Lion	Eastern US	DEAD	A Steller sea lion was caught and killed in trawl gear.	DEAD	Entangled / entrapped	Fishery gear	Catch shares bottom trawl	Commercial	Trawl	N/A	1	1
WCGOP	2/27/2013	WC	Steller Sea Lion	Eastern US	NSI	A Steller sea lion was caught in trawl gear and brought aboard the fishing vessel. The animal left the boat after being freed from the net.	NSI	Entangled / entrapped	Fishery gear	Catch shares bottom trawl	Commercial	Trawl	P4	0	0
NWRO	3/7/2013	WC	Steller Sea Lion	Eastern US	DEAD	A dead adult male Steller sea lion was found in Portland, OR. A necropsy confirmed that the animal was shot.	DEAD	Shot	Projectile weapon	N/A	N/A	N/A	N/A	1	0
WCGOP	3/15/2013	WC	Steller Sea Lion	Eastern US	NSI	Gunshots were used to deter Steller sea lions.	NSI	Shot	Projectile weapon	Catch shares bottom trawl	Commercial	Trawl	P9	0	0
WCGOP	3/15/2013	WC	Steller Sea Lion	Eastern US	NSI	A Steller sea lion was caught in trawl gear and brought aboard the fishing vessel. The animal left the boat after being freed from the net.	NSI	Entangled / entrapped	Fishery gear	Catch shares bottom trawl	Commercial	Trawl	P4	0	0
WCGOP	3/16/2013	WC	Steller Sea Lion	Eastern US	NSI	A Steller sea lion was caught in trawl gear and reportedly released alive.	NSI	Entangled / entrapped	Fishery gear	Catch shares bottom trawl	Commercial	Trawl	P7b	0	0
WCGOP	3/23/2013	WC	Steller Sea Lion	Eastern US	NSI	A Steller sea lion was caught in trawl gear and brought aboard the fishing vessel. The animal left the boat after being freed from the net.	NSI	Entangled / entrapped	Fishery gear	Catch shares bottom trawl	Commercial	Trawl	P4	0	0
NWRO	3/24/2013	WC	Steller Sea Lion	Eastern US	DEAD	A dead subadult male Steller sea lion was found in Gearhart, OR. A necropsy confirmed that the animal was shot.	DEAD	Shot	Projectile weapon	N/A	N/A	N/A	N/A	1	0
WCGOP	3/27/2013	WC	Steller Sea Lion	Eastern US	NSI	Seal bombs were used to deter Steller sea lions from feeding on the catch.	NSI	Percussion	Seal bomb	Catch shares hook & line	Commercial	Hook and line	P9	0	0
NWRO	3/28/2013	WC	Steller Sea Lion	Eastern US	DEAD	A dead subadult Steller sea lion was found in Warrenton, OR. A necropsy confirmed that the animal was shot.	DEAD	Shot	Projectile weapon	N/A	N/A	N/A	N/A	1	0
NWRO	4/5/2013	WC	Steller Sea Lion	Eastern US	DEAD	A dead subadult male Steller sea lion was found in Westport, WA. A necropsy confirmed that the animal was shot.	DEAD	Shot	Projectile weapon	N/A	N/A	N/A	N/A	1	0
NWRO	4/11/2013	WC	Steller Sea Lion	Eastern US	SI	An adult female Steller sea lion ingested troll fishery gear and was observed with a flasher hanging from its mouth.	SI	Hooked	Fishery gear	Unknown troll	Unknown	Troll	P2	1	0
WCGOP	4/13/2013	WC	Steller Sea Lion	Eastern US	NSI	A Steller sea lion was caught in trawl gear and reportedly released alive unharmed.	NSI	Entangled / entrapped	Fishery gear	Catch shares bottom trawl	Commercial	Trawl	P7b	0	0
NWRO	4/29/2013	WC	Steller Sea Lion	Eastern US	DEAD	A dead male Steller sea lion pup was found in Seaview, WA. A necropsy confirmed that the animal was shot.	DEAD	Shot	Projectile weapon	N/A	N/A	N/A	N/A	1	0
NWRO	5/7/2013	WC	Steller Sea Lion	Eastern US	DEAD	A dead subadult female Steller sea lion was found in Seaside, OR. A necropsy confirmed that the animal was shot.	DEAD	Shot	Projectile weapon	N/A	N/A	N/A	N/A	1	0
NWRO	5/17/2013	WC	Steller Sea Lion	Eastern US	DEAD	A dead adult female Steller sea lion was found in Gearhart, OR. A necropsy confirmed that the animal was shot.	DEAD	Shot	Projectile weapon	N/A	N/A	N/A	N/A	1	0
NWRO	6/9/2013	WC	Steller Sea Lion	Eastern US	DEAD	A dead adult male Steller sea lion was found in Warrenton, OR. A necropsy confirmed that the animal was shot.	DEAD	Shot	Projectile weapon	N/A	N/A	N/A	N/A	1	0
AKRO	6/11/2013	SEAK	Steller Sea Lion	Eastern US	SI	A Steller sea lion ingested troll fishery gear and a solid silver and red striped flasher was observed hanging from the animal's mouth. The animal was observed on 6/11/2013 and at the same location on 6/13/2013. The animal was reported to look lethargic.	SI	Hooked	Fishery gear	SEAK unknown salmon troll	Unknown	Troll	P2	1	0
NWRO	6/17/2013	WC	Steller Sea Lion	Eastern US	DEAD	A dead adult male Steller sea lion was found in Milwaukie, OR. A necropsy confirmed that the animal was shot.	DEAD	Shot	Projectile weapon	N/A	N/A	N/A	N/A	1	0
AKRO	7/10/2013	SEAK	Steller Sea Lion	Eastern US	SI	A park ranger saw a Steller sea lion with a flasher hanging from its mouth hauled out on South Marble Island. The flasher was close to the animal's mouth and monofilament was hanging down over the animal's chest.	SI	Hooked	Fishery gear	SEAK unknown salmon troll	Unknown	Troll	P2	1	0
AKRO	7/11/2013	SEAK	Steller Sea Lion	Eastern US	SI	An adult Steller sea lion ingested troll fishery gear and a flasher was observed hanging from its mouth. The reporting party mentioned the animal appeared to be in 'bad shape'.	SI	Hooked	Fishery gear	SEAK unknown salmon troll	Unknown	Troll	P2	1	0
NWRO	8/7/2013	WC	Steller Sea Lion	Eastern US	DEAD	A dead adult male Steller sea lion was found in Seaview, WA. A necropsy confirmed that the animal shot.	DEAD	Shot	Projectile weapon	N/A	N/A	N/A	N/A	1	0
NWRO	8/18/2013	WC	Steller Sea Lion	Eastern US	DEAD	A dead adult male Steller sea lion was found in Manzanita, OR. A necropsy confirmed that animal was shot.	DEAD	Shot	Projectile weapon	N/A	N/A	N/A	N/A	1	0
WCGOP	8/24/2013	WC	Steller Sea Lion	Eastern US	NSI	A Steller sea lion was caught in trawl gear and reportedly released alive.	NSI	Entangled / entrapped	Fishery gear	Catch shares bottom trawl	Commercial	Trawl	P4	0	0
NWRO	8/26/2013	WC	Steller Sea Lion	Eastern US	DEAD	A dead adult male Steller sea lion was found in Seaside, OR. A necropsy confirmed that the animal was shot.	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 Criterion	Suggested Value for PBR	Suggested Value for LOF
NWRO	9/7/2013	WC	Steller Sea Lion	Eastern US	DEAD	A dead male Steller sea lion pup was found in Long Beach, WA. A necropsy confirmed that animal was shot.	DEAD	Shot	Projectile weapon	N/A	N/A	N/A	N/A	1	0
NWRO	9/8/2013	WC	Steller Sea Lion	Eastern US	DEAD	A dead adult male Steller sea lion was found in Neah Bay, WA. The animal was badly decomposed and no necropsy was conducted, however, the reporting party noted a fishing line coming out of the animal's mouth and found a fish hook that appeared to be from a troll fishery embedded in the animal's tongue.	DEAD	Hooked	Fishery gear	Unknown troll	Unknown	Troll	N/A	1	0
NWRO	9/9/2013	WC	Steller Sea Lion	Eastern US	SI	An adult female Steller sea lion was observed hauled out on rock for five consecutive days. The animal had ingested troll fishery gear and a salmon flasher was observed hanging from the animal's mouth.	SI	Hooked	Fishery gear	Unknown troll	Unknown	Troll	P2	1	0
A-SHOP	9/13/2013	WC	Steller Sea Lion	Eastern US	DEAD	An adult female Steller sea lion was caught and killed in trawl gear.	DEAD	Entangled / entrapped	Fishery gear	At-Sea hake pelagic trawl	Commercial	Trawl	N/A	1	1
WCGOP	9/17/2013	WC	Steller Sea Lion	Eastern US	SI	A Steller sea lion was caught in trawl gear and brought aboard the fishing vessel. The animal appeared distressed, confused, and laid down, appearing exhausted. It was then coaxed off the vessel with a deck hose. Due to the animal's behavior following entanglement this interaction is considered a serious injury.	SI	Entangled / entrapped	Fishery gear	Catch shares bottom trawl	Commercial	Trawl	P4	1	1
WCGOP	9/18/2013	WC	Steller Sea Lion	Eastern US	DEAD	A female Steller sea lion was caught and killed in trawl gear.	DEAD	Entangled / entrapped	Fishery gear	Catch shares bottom trawl	Commercial	Trawl	N/A	1	1
NWRO	9/30/2013	WC	Steller Sea Lion	Eastern US	DEAD	A dead adult female Steller sea lion was found in Yachats, OR. No necropsy was conducted, but the reporting party noted an apparent bullet wound in right shoulder penetrating into dorsal thorax.	DEAD	Shot	Projectile weapon	N/A	N/A	N/A	N/A	1	0
WCGOP	10/14/2013	WC	Steller Sea Lion	Eastern US	NSI	A Steller sea lion was caught in trawl gear and brought aboard the fishing vessel. The animal left the boat after being freed from the net.	NSI	Entangled / entrapped	Fishery gear	Catch shares bottom trawl	Commercial	Trawl	P4	0	0
WCGOP	10/21/2013	WC	Steller Sea Lion	Eastern US	NSI	A Steller sea lion was caught in trawl gear and brought aboard the fishing vessel. The animal left the boat after being freed from the net.	NSI	Entangled / entrapped	Fishery gear	Catch shares bottom trawl	Commercial	Trawl	P7b	0	0
WCGOP	10/25/2013	WC	Steller Sea Lion	Eastern US	NSI	A Steller sea lion was caught in trawl gear and reportedly released alive.	NSI	Entangled / entrapped	Fishery gear	Catch shares bottom trawl	Commercial	Trawl	P4	0	0
WCGOP	10/30/2013	WC	Steller Sea Lion	Eastern US	NSI	A Steller sea lion was caught in trawl gear and reportedly released alive.	NSI	Entangled / entrapped	Fishery gear	Catch shares bottom trawl	Commercial	Trawl	P4	0	0
WCGOP	10/31/2013	WC	Steller Sea Lion	Eastern US	DEAD	A Steller sea lion was caught and killed in trawl gear.	DEAD	Entangled / entrapped	Fishery gear	Catch shares bottom trawl	Commercial	Trawl	N/A	1	1
A-SHOP	11/7/2013	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 pelagic trawl	Commercial	Trawl	N/A	1	1
WCGOP	12/11/2013	WC	Steller Sea Lion	Eastern US	DEAD	A female Steller sea lion was caught and killed in trawl gear.	DEAD	Entangled / entrapped	Fishery gear	Catch shares bottom trawl	Commercial	Trawl	N/A	1	1
NWRO	1/2/2014	WC	Steller Sea Lion	Eastern US	DEAD	An adult female Steller sea lion reported to be in good body condition was found dead in a state of moderate decomposition, in Ilwaco, WA. A necropsy confirmed the animal was shot.	DEAD	Shot	Projectile weapon	N/A	N/A	N/A	N/A	1	0
NWRO	1/3/2014	WC	Steller Sea Lion	Eastern US	DEAD	An adult female Steller sea lion reported to be in excellent body condition was found fresh dead in Seaside, OR. A necropsy confirmed the animal was shot.	DEAD	Shot	Projectile weapon	N/A	N/A	N/A	N/A	1	0
WCGOP	1/14/2014	WC	Steller Sea Lion	Eastern US	NSI	A Steller sea lion was caught in trawl gear and brought aboard the fishing vessel. The animal was reported to safely leave the boat after being freed from the net.	NSI	Entangled / entrapped	Fishery gear	Catch shares bottom trawl	Commercial	Trawl	P4	0	0
WCGOP	1/14/2014	WC	Steller Sea Lion	Eastern US	NSI	A Steller sea lion was caught in trawl gear and brought aboard the fishing vessel. The animal was reported to be very active, vigorous, and left the boat in excellent condition after being freed from the net.	NSI	Entangled / entrapped	Fishery gear	Catch shares bottom trawl	Commercial	Trawl	P4	0	0
WCGOP	1/17/2014	WC	Steller Sea Lion	Eastern US	NSI	A Steller sea lion was caught in trawl gear and brought aboard the fishing vessel. The animal was reported to be very active, vigorous, and left the boat in excellent condition after being freed from the net.	NSI	Entangled / entrapped	Fishery gear	Catch shares bottom trawl	Commercial	Trawl	P4	0	0
WCGOP	1/29/2014	WC	Steller Sea Lion	Eastern US	NSI	A Steller sea lion was caught in trawl gear. The animal was freed from the net and released alive. The observer did not mention any sign of injury to the animal.	NSI	Entangled / entrapped	Fishery gear	Catch shares bottom trawl	Commercial	Trawl	P7b	0	0
NWRO	1/30/2014	WC	Steller Sea Lion	Eastern US	DEAD	An adult male Steller sea lion found in a state of advanced decomposition in Gearhart, OR. A necropsy confirmed the animal was shot. The carcass was then scavenged by sharks.	DEAD	Shot	Projectile weapon	N/A	N/A	N/A	N/A	1	0
WCGOP	2/22/2014	WC	Steller Sea Lion	Eastern US	NSI	A Steller sea lion was caught in trawl gear and brought aboard the fishing vessel. The animal was reported by the observer to be unharmed, climbed overboard, and swam away uninjured.	NSI	Entangled / entrapped	Fishery gear	Catch shares bottom trawl	Commercial	Trawl	P4	0	0
WCGOP	3/11/2014	WC	Steller Sea Lion	Eastern US	NSI	A Steller sea lion was caught in trawl gear and brought aboard the fishing vessel. The animal was reported to be 'very much alive' and left the vessel via the stern ramp. The observer did not mention any sign of injury to the animal.	NSI	Entangled / entrapped	Fishery gear	Catch shares bottom trawl	Commercial	Trawl	P4	0	0
NWRO	3/13/2014	WC	Steller Sea Lion	Eastern US	DEAD	An adult female Steller sea lion was found in a state of moderate decomposition in Arcadi, OR. A necropsy was conducted which confirmed animal had been shot.	DEAD	Shot	Projectile weapon	N/A	N/A	N/A	N/A	1	0
NWRO	3/18/2014	WC	Steller Sea Lion	Eastern US	DEAD	A juvenile female Steller sea lion was found in a state of advanced decomposition in Newport, OR. No necropsy was conducted but an experienced stranding examiner reports the animal was shot.	DEAD	Shot	Projectile weapon	N/A	N/A	N/A	N/A	1	0

Appendix Table 1.10. -- Human / marine mammal interaction records reviewed for serious injury and mortality. Records are sorted by species, stock, and date.

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 Criterion	Suggested Value for PBR	Suggested Value for LOF
WCGOP	3/26/2014	WC	Steller Sea Lion	Eastern US	NSI	A Steller sea lion was caught in was trawl gear. The animal was freed from the net and released alive. The observer did not note any sign of injury to the animal and the sea lion was observed proposing following release.	NSI	Entangled / entrapped	Fishery gear	Catch shares bottom trawl	Commercial	Trawl	P7b	0	0
SWFSC	4/1/2014	WC	Steller Sea Lion	Eastern US	DEAD	A Steller sea lion was found dead in Fort Bragg, CA. 5 bullet fragments were discovered during a post-mortem exam, indicating the animal had been shot.	DEAD	Shot	Projectile weapon	N/A	N/A	N/A	N/A	1	0
NWRO	4/6/2014	WC	Steller Sea Lion	Eastern US	DEAD	An adult male Steller sea lion reported to be in excellent body condition was found dead on beach in Pacific County, WA. A necropsy confirmed the animal had been shot.	DEAD	Shot	Projectile weapon	N/A	N/A	N/A	N/A	1	0
NWRO	4/22/2014	WC	Steller Sea Lion	Eastern US	DEAD	An adult female Steller sea lion reported to be in good body condition was found dead on beach in Seaside, OR. Necropsy conducted which confirms animal had been shot.	DEAD	Shot	Projectile weapon	N/A	N/A	N/A	N/A	1	0
ADFG	5/9/2014	SEAK	Steller Sea Lion	Eastern US	SI	A subadult male Steller sea lion ingested troll fishery gear and was observed with a flasher in its mouth.	SI	Hooked	Fishery gear	Unknown troll	Unknown	Troll	P2	1	0
WCGOP	5/16/2014	WC	Steller Sea Lion	Eastern US	NSI	A Steller sea lion was caught in trawl gear and brought aboard the fishing vessel. The animal was reported by the observer to be uninjured, healthy, and alert.	NSI	Entangled / entrapped	Fishery gear	Catch shares bottom trawl	Commercial	Trawl	P4	0	0
AKRO	5/18/2014	SEAK	Steller Sea Lion	Eastern US	SI	An adult Steller sea lion was observed with a circumferential neck entanglement.	SI	Constricting entanglement	Marine debris (rope)	N/A	N/A	N/A	P8a	1	0
WCGOP	5/22/2014	WC	Steller Sea Lion	Eastern US	DEAD	A Steller sea lion was caught and killed in trawl gear.	DEAD	Entangled / entrapped	Fishery gear	Catcher processor midwater trawl	Commercial	Trawl	N/A	1	1
NWRO	5/26/2014	WC	Steller Sea Lion	Eastern US	DEAD	An adult female Steller sea lion was found in a state of moderate decomposition in Del Rey, OR. A necropsy was conducted which confirmed animal had been shot.	DEAD	Shot	Projectile weapon	N/A	N/A	N/A	N/A	1	0
NWRO	5/26/2014	WC	Steller Sea Lion	Eastern US	SI	An adult female Steller sea lion was observed alive with a bullet wound on the left shoulder at Sea Lion Caves - Florence, OR. The animal was observed by a trained observer considered to be credible to be moving with difficulty and was associated with a dependent pup. This record represents the seriously injured mother. This is a serious injury under criteria P9.	SI	Shot	Projectile weapon	N/A	N/A	N/A	P9	1	0
NWRO	5/26/2014	WC	Steller Sea Lion	Eastern US	SI	An adult female Steller sea lion was observed alive with a bullet wound on the left shoulder at Sea Lion Caves - Florence, OR. The animal was observed by a trained observer considered to be credible to be moving with difficulty and was associated with a dependent pup. This record represents the dependent animal. This is a serious injury under criteria P14.	SI	Shot	Projectile weapon	N/A	N/A	N/A	P14	1	0
WCGOP	5/30/2014	WC	Steller Sea Lion	Eastern US	DEAD	A Steller sea lion was caught and killed in trawl gear.	DEAD	Entangled / entrapped	Fishery gear	Catcher processor midwater trawl	Commercial	Trawl	N/A	1	1
AKRO	6/1/2014	SEAK	Steller Sea Lion	Eastern US	SI	A Steller sea lion ingested troll fishery gear and was observed with a silver flasher hanging from its mouth.	SI	Hooked	Fishery gear	SEAK salmon troll	Unknown	Troll	P2	1	0
AKRO	6/3/2014	SEAK	Steller Sea Lion	Eastern US	SI	A Steller sea lion ingested troll fishery gear and a flasher was observed hanging from the animal's mouth.	SI	Hooked	Fishery gear	SEAK salmon troll	Unknown	Troll	P2	1	0
ADFG	6/3/2014	SEAK	Steller Sea Lion	Eastern US	SI	An adult female Steller sea lion was observed with a circumferential neck entanglement.	SI	Constricting entanglement	Marine debris (unidentified)	N/A	N/A	N/A	P8a	1	0
ADFG	6/3/2014	SEAK	Steller Sea Lion	Eastern US	SI	A Steller sea lion was observed with a circumferential neck entanglement.	SI	Constricting entanglement	Marine debris (unidentified)	N/A	N/A	N/A	P8a	1	0
ADFG	6/4/2014	SEAK	Steller Sea Lion	Eastern US	SI	An adult female Steller sea lion was observed with a circumferential neck entanglement caused by a green net.	SI	Constricting entanglement	Fishery gear	Unknown trawl	Unknown	Trawl	P8a	1	0
ADFG	6/5/2014	SEAK	Steller Sea Lion	Eastern US	SI	An adult male Steller sea lion was observed with a circumferential neck entanglement.	SI	Constricting entanglement	Marine debris (unidentified)	N/A	N/A	N/A	P8a	1	0
ADFG	6/8/2014	SEAK	Steller Sea Lion	Eastern US	SI	An adult female Steller sea lion was observed with a circumferential neck entanglement.	SI	Constricting entanglement	Marine debris (unidentified)	N/A	N/A	N/A	P8a	1	0
AKRO	6/11/2014	SEAK	Steller Sea Lion	Eastern US	SI	A Steller sea lion ingested troll fishery gear and was observed at South Marble Island with a flasher hanging from its mouth.	SI	Hooked	Fishery gear	SEAK salmon troll	Unknown	Troll	P2	1	0
NWRO	6/17/2014	WC	Steller Sea Lion	Eastern US	DEAD	Adult female Steller sea lion was found in a state of moderate decomposition in Tillamook, OR. No necropsy was conducted but an experienced stranding examiner reports animal was shot.	DEAD	Shot	Projectile weapon	N/A	N/A	N/A	N/A	1	0
ADFG	6/19/2014	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 reported to have a pup. This record represents the mother.	SI	Constricting entanglement	Marine debris (packing band)	N/A	N/A	N/A	P8a	1	0
ADFG	6/19/2014	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 reported to have a pup. This record represents the pup.	SI	Dependent animal with mother seriously injured	Marine debris (packing band)	N/A	N/A	N/A	P14	1	0

Appendix Table 1.10. -- Human / marine mammal interaction records reviewed for serious injury and mortality. Records are sorted by species, stock, and date.

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 Criterion	Suggested Value for PBR	Suggested Value for LOF
ADFG	6/19/2014	SEAK	Steller Sea Lion	Eastern US	SI	A subadult female Steller sea lion ingested troll fishery gear and was observed with an orange flasher hanging from its mouth.	SI	Hooked	Fishery gear	Unknown troll	Unknown	Troll	P2	1	0
ADFG	6/20/2014	SEAK	Steller Sea Lion	Eastern US	SI	An adult female Steller sea lion was observed with a circumferential neck entanglement.	SI	Constricting entanglement	Marine debris (unidentified)	N/A	N/A	N/A	P8a	1	0
ADFG	6/20/2014	SEAK	Steller Sea Lion	Eastern US	SI	An adult female Steller sea lion was observed with a circumferential neck entanglement possibly caused by a packing band.	SI	Constricting entanglement	Marine debris (unidentified)	N/A	N/A	N/A	P8a	1	0
ADFG	6/24/2014	SEAK	Steller Sea Lion	Eastern US	SI	A subadult Steller sea lion was observed with a circumferential neck entanglement possibly caused by a packing band.	SI	Constricting entanglement	Marine debris (unidentified)	N/A	N/A	N/A	P8a	1	0
ADFG	6/24/2014	SEAK	Steller Sea Lion	Eastern US	SI	An adult female Steller sea lion was observed with a circumferential neck entanglement.	SI	Constricting entanglement	Marine debris (unidentified)	N/A	N/A	N/A	P8a	1	0
MMAF	6/24/2014	SEAK	Steller Sea Lion	Eastern US	SI	A Steller sea lion was reported to have become entangled in a gillnet. The animal was released with a wounded flipper and loose webbing around its neck.	SI	Entangled / entrapped	Fishery gear	AK Southeast salmon drift gillnet	Commercial	Gillnet	P8a	1	1
ADFG	6/25/2014	SEAK	Steller Sea Lion	Eastern US	SI	An adult male Steller sea lion ingested troll fishery gear and a flasher was observed hanging from the animal's mouth.	SI	Hooked	Fishery gear	Unknown troll	Unknown	Troll	P2	1	0
ADFG	6/25/2014	SEAK	Steller Sea Lion	Eastern US	SI	A subadult male Steller sea lion was observed with a circumferential neck entanglement.	SI	Constricting entanglement	Marine debris (unidentified)	N/A	N/A	N/A	P8a	1	0
ADFG	6/25/2014	SEAK	Steller Sea Lion	Eastern US	SI	An adult female Steller sea lion was observed with a circumferential neck entanglement.	SI	Constricting entanglement	Marine debris (unidentified)	N/A	N/A	N/A	P8a	1	0
ADFG	6/25/2014	SEAK	Steller Sea Lion	Eastern US	SI	An adult female Steller sea lion ingested troll fishery gear and was observed with a green flasher hanging from its mouth.	SI	Hooked	Fishery gear	Unknown troll	Unknown	Troll	P2	1	0
ADFG	6/25/2014	SEAK	Steller Sea Lion	Eastern US	SI	A subadult male Steller sea lion ingested troll fishery gear and was observed with a silver and green flasher hanging from its mouth.	SI	Hooked	Fishery gear	Unknown troll	Unknown	Troll	P2	1	0
ADFG	6/26/2014	SEAK	Steller Sea Lion	Eastern US	SI	An adult female Steller sea lion was observed with a circumferential neck entanglement. The animal was also reported to have a pup. This record represents the mother.	SI	Constricting entanglement	Marine debris (unidentified)	N/A	N/A	N/A	P8a	1	0
ADFG	6/26/2014	SEAK	Steller Sea Lion	Eastern US	SI	An adult female Steller sea lion was observed with a circumferential neck entanglement. 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	6/26/2014	SEAK	Steller Sea Lion	Eastern US	SI	An adult female Steller sea lion was observed with a circumferential neck entanglement.	SI	Constricting entanglement	Marine debris (unidentified)	N/A	N/A	N/A	P8a	1	0
ADFG	6/26/2014	SEAK	Steller Sea Lion	Eastern US	SI	An adult female Steller sea lion ingested troll fishery gear and was observed with a flasher tight to its mouth.	SI	Hooked	Fishery gear	Unknown troll	Unknown	Troll	P2	1	0
ADFG	6/27/2014	SEAK	Steller Sea Lion	Eastern US	SI	A subadult male Steller sea lion was observed with a circumferential neck entanglement caused by a white band.	SI	Constricting entanglement	Marine debris (packing band)	N/A	N/A	N/A	P8a	1	0
ADFG	6/27/2014	SEAK	Steller Sea Lion	Eastern US	SI	An adult female Steller sea lion was observed with a circumferential neck entanglement.	SI	Constricting entanglement	Marine debris (unidentified)	N/A	N/A	N/A	P8a	1	0
ADFG	6/28/2014	SEAK	Steller Sea Lion	Eastern US	SI	An adult male Steller sea lion ingested troll fishery gear and was observed with a flasher fully in its mouth.	SI	Hooked	Fishery gear	Unknown troll	Unknown	Troll	P2	1	0
ADFG	6/29/2014	SEAK	Steller Sea Lion	Eastern US	SI	A subadult female Steller sea lion was observed with a circumferential neck entanglement caused by a black band.	SI	Constricting entanglement	Marine debris (unidentified)	N/A	N/A	N/A	P8a	1	0
ADFG	6/30/2014	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. The animal was successfully disentangled.	NSI	Constricting entanglement	Marine debris (packing band)	N/A	N/A	N/A	P7b	0	0
ADFG	7/1/2014	SEAK	Steller Sea Lion	Eastern US	SI	A subadult male Steller sea lion ingested troll fishery gear and was observed with a flasher hanging from its mouth.	SI	Hooked	Fishery gear	Unknown troll	Unknown	Troll	P2	1	0
ADFG	7/1/2014	SEAK	Steller Sea Lion	Eastern US	SI	An adult male Steller sea lion ingested troll fishery gear and was observed with a green flasher tight to its mouth.	SI	Hooked	Fishery gear	Unknown troll	Unknown	Troll	P2	1	0
ADFG	7/1/2014	SEAK	Steller Sea Lion	Eastern US	SI	An adult male Steller sea lion ingested troll fishery gear and was observed with an orange flasher hanging from its mouth.	SI	Hooked	Fishery gear	Unknown troll	Unknown	Troll	P2	1	0
ADFG	7/2/2014	SEAK	Steller Sea Lion	Eastern US	SI	A subadult male Steller sea lion was observed 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
ADFG	7/2/2014	SEAK	Steller Sea Lion	Eastern US	SI	A subadult male Steller sea lion ingested troll fishery gear and was observed with a silver and blue flasher hanging from its mouth.	SI	Hooked	Fishery gear	Unknown troll	Unknown	Troll	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 Criterion	Suggested Value for PBR	Suggested Value for LOF
ADFG	7/3/2014	SEAK	Steller Sea Lion	Eastern US	SI	A subadult male Steller sea lion was observed with a 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
ADFG	7/3/2014	SEAK	Steller Sea Lion	Eastern US	SI	A subadult female Steller sea lion ingested troll fishery gear and was observed with a green flasher hanging from its mouth.	SI	Hooked	Fishery gear	Unknown troll	Unknown	Troll	P2	1	0
ADFG	7/3/2014	SEAK	Steller Sea Lion	Eastern US	SI	A subadult male Steller sea lion ingested troll fishery gear and was observed with a silver and blue flasher hanging from its mouth.	SI	Hooked	Fishery gear	Unknown troll	Unknown	Troll	P2	1	0
ADFG	7/3/2014	SEAK	Steller Sea Lion	Eastern US	SI	A subadult male Steller sea lion ingested troll fishery gear and was observed with an orange flasher hanging from its mouth.	SI	Hooked	Fishery gear	Unknown troll	Unknown	Troll	P2	1	0
ADFG	7/4/2014	SEAK	Steller Sea Lion	Eastern US	SI	A subadult male Steller sea lion was observed 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
ADFG	7/4/2014	SEAK	Steller Sea Lion	Eastern US	SI	A subadult male Steller sea lion ingested troll fishery gear and was observed with a red, blue, and silver flasher hanging from its mouth.	SI	Hooked	Fishery gear	Unknown troll	Unknown	Troll	P2	1	0
ADFG	7/4/2014	SEAK	Steller Sea Lion	Eastern US	SI	A subadult male Steller sea lion ingested troll fishery gear and was observed with an orange flasher hanging from its mouth.	SI	Hooked	Fishery gear	Unknown troll	Unknown	Troll	P2	1	0
ADFG	7/4/2014	SEAK	Steller Sea Lion	Eastern US	SI	A subadult male Steller sea lion ingested troll fishery gear and was observed with an orange flasher hanging from its mouth.	SI	Hooked	Fishery gear	Unknown troll	Unknown	Troll	P2	1	0
ADFG	7/4/2014	SEAK	Steller Sea Lion	Eastern US	SI	A subadult male Steller sea lion ingested troll fishery gear and was observed with an orange flasher hanging from its mouth.	SI	Hooked	Fishery gear	Unknown troll	Unknown	Troll	P2	1	0
ADFG	7/4/2014	SEAK	Steller Sea Lion	Eastern US	SI	A subadult male Steller sea lion ingested troll fishery gear and was observed with a green flasher hanging from its mouth.	SI	Hooked	Fishery gear	Unknown troll	Unknown	Troll	P2	1	0
ADFG	7/5/2014	SEAK	Steller Sea Lion	Eastern US	SI	An adult female Steller sea lion ingested troll fishery gear and was observed with a silver and green flasher hanging from its mouth.	SI	Hooked	Fishery gear	Unknown troll	Unknown	Troll	P2	1	0
ADFG	7/5/2014	SEAK	Steller Sea Lion	Eastern US	SI	An adult male Steller sea lion ingested troll fishery gear and was observed with a silver and orange flasher hanging from its mouth.	SI	Hooked	Fishery gear	Unknown troll	Unknown	Troll	P2	1	0
ADFG	7/5/2014	SEAK	Steller Sea Lion	Eastern US	SI	A subadult male Steller sea lion ingested troll fishery gear and was observed with a silver and green flasher hanging from its mouth.	SI	Hooked	Fishery gear	Unknown troll	Unknown	Troll	P2	1	0
ADFG	7/5/2014	SEAK	Steller Sea Lion	Eastern US	SI	A subadult Steller sea lion ingested troll fishery gear and was observed with a silver and orange flasher tight to its mouth. A response team was able to cut the flasher free, but the ingested hook was left in place.	SI	Hooked	Fishery gear	Unknown troll	Unknown	Troll	P2	1	0
ADFG	7/5/2014	SEAK	Steller Sea Lion	Eastern US	SI	A subadult male Steller sea lion ingested troll fishery gear and was observed with a silver and white flasher hanging from its mouth.	SI	Hooked	Fishery gear	Unknown troll	Unknown	Troll	P2	1	0
ADFG	7/6/2014	SEAK	Steller Sea Lion	Eastern US	SI	A subadult Steller sea lion was observed 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
ADFG	7/6/2014	SEAK	Steller Sea Lion	Eastern US	SI	A subadult male Steller sea lion was observed with a circumferential neck entanglement.	SI	Constricting entanglement	Marine debris (unidentified)	N/A	N/A	N/A	P8a	1	0
ADFG	7/6/2014	SEAK	Steller Sea Lion	Eastern US	SI	A subadult male Steller sea lion ingested troll fishery gear and was observed with a silver and green flasher tight to its mouth. There was blood observed on the flasher.	SI	Hooked	Fishery gear	Unknown troll	Unknown	Troll	P2	1	0
ADFG	7/6/2014	SEAK	Steller Sea Lion	Eastern US	SI	A subadult male Steller sea lion ingested troll fishery gear and was observed with a silver and blue flasher tight to its mouth.	SI	Hooked	Fishery gear	Unknown troll	Unknown	Troll	P2	1	0
ADFG	7/6/2014	SEAK	Steller Sea Lion	Eastern US	SI	A subadult Steller sea lion ingested troll fishery gear and was observed with an orange and silver flasher hanging from its mouth.	SI	Hooked	Fishery gear	Unknown troll	Unknown	Troll	P2	1	0
ADFG	7/6/2014	SEAK	Steller Sea Lion	Eastern US	SI	A subadult male Steller sea lion ingested troll fishery gear and was observed with a green flasher hanging from its mouth.	SI	Hooked	Fishery gear	Unknown troll	Unknown	Troll	P2	1	0
ADFG	7/6/2014	SEAK	Steller Sea Lion	Eastern US	SI	A subadult male Steller sea lion ingested troll fishery gear and was observed with a silver and orange flasher hanging from its mouth.	SI	Hooked	Fishery gear	Unknown troll	Unknown	Troll	P2	1	0
ADFG	7/6/2014	SEAK	Steller Sea Lion	Eastern US	SI	A subadult male Steller sea lion ingested troll fishery gear and was observed with a silver and orange flasher hanging from its mouth.	SI	Hooked	Fishery gear	Unknown troll	Unknown	Troll	P2	1	0
ADFG	7/6/2014	SEAK	Steller Sea Lion	Eastern US	SI	An adult female Steller sea lion ingested troll fishery gear and was observed with a silver flasher tight to its mouth.	SI	Hooked	Fishery gear	Unknown troll	Unknown	Troll	P2	1	0
ADFG	7/7/2014	SEAK	Steller Sea Lion	Eastern US	SI	An adult female Steller sea lion ingested troll fishery gear and was observed with a silver and green flasher tight to its mouth.	SI	Hooked	Fishery gear	Unknown troll	Unknown	Troll	P2	1	0
ADFG	7/7/2014	SEAK	Steller Sea Lion	Eastern US	SI	A subadult male Steller sea lion ingested troll fishery gear and was observed with a silver and blue flasher tight to its mouth.	SI	Hooked	Fishery gear	Unknown troll	Unknown	Troll	P2	1	0
ADFG	7/7/2014	SEAK	Steller Sea Lion	Eastern US	SI	A subadult male Steller sea lion ingested troll fishery gear and was observed with a gold and orange flasher hanging from its mouth.	SI	Hooked	Fishery gear	Unknown troll	Unknown	Troll	P2	1	0
ADFG	7/7/2014	SEAK	Steller Sea Lion	Eastern US	SI	A subadult male Steller sea lion ingested troll fishery gear and was observed with a green holographic flasher tight to its mouth.	SI	Hooked	Fishery gear	Unknown troll	Unknown	Troll	P2	1	0
ADFG	7/7/2014	SEAK	Steller Sea Lion	Eastern US	SI	A subadult male Steller sea lion ingested troll fishery gear and was observed with a silver and blue flasher hanging from its mouth.	SI	Hooked	Fishery gear	Unknown troll	Unknown	Troll	P2	1	0
AKRO	7/8/2014	SEAK	Steller Sea Lion	Eastern US	SI	A Steller sea lion was observed hauled out near Gustavus. The animal had ingested troll fishery gear and a flasher was observed hanging from its mouth.	SI	Hooked	Fishery gear	SEAK salmon troll	Recreational	Troll	P2	1	0

Appendix Table 1.10. -- Human / marine mammal interaction records reviewed for serious injury and mortality. Records are sorted by species, stock, and date.

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 Criterion	Suggested Value for PBR	Suggested Value for LOF
AKRO	7/8/2014	SEAK	Steller Sea Lion	Eastern US	SI	A Steller sea lion was observed hauled out near Gustavus. The animal had ingested troll fishery gear and a flasher was observed hanging from its mouth.	SI	Hooked	Fishery gear	SEAK salmon troll	Unknown	Troll	P2	1	0
ADFG	7/8/2014	SEAK	Steller Sea Lion	Eastern US	SI	A subadult Steller sea lion ingested troll fishery gear and was observed with an orange flasher hanging from its mouth.	SI	Hooked	Fishery gear	Unknown troll	Unknown	Troll	P2	1	0
ADFG	7/8/2014	SEAK	Steller Sea Lion	Eastern US	SI	A subadult male Steller sea lion ingested troll fishery gear and was observed with a green flasher hanging from its mouth.	SI	Hooked	Fishery gear	Unknown troll	Unknown	Troll	P2	1	0
ADFG	7/8/2014	SEAK	Steller Sea Lion	Eastern US	SI	A subadult Steller sea lion ingested troll fishery gear and was observed with a pale green flasher hanging from its mouth.	SI	Hooked	Fishery gear	Unknown troll	Unknown	Troll	P2	1	0
ADFG	7/8/2014	SEAK	Steller Sea Lion	Eastern US	SI	A subadult Steller sea lion ingested troll fishery gear and was observed with a silver and orange flasher hanging from its mouth.	SI	Hooked	Fishery gear	Unknown troll	Unknown	Troll	P2	1	0
ADFG	7/9/2014	SEAK	Steller Sea Lion	Eastern US	SI	An adult female Steller sea lion was observed with a circumferential neck entanglement caused by a 'thin white strap'. This animal was also reported to have 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	7/9/2014	SEAK	Steller Sea Lion	Eastern US	SI	An adult female Steller sea lion was observed with a circumferential neck entanglement caused by a 'thin white strap'. This animal was also reported to have a pup. This record represents the mother.	SI	Constricting entanglement	Marine debris (unidentified)	N/A	N/A	N/A	P8a	1	0
NWRO	7/10/2014	WC	Steller Sea Lion	Eastern US	DEAD	An adult female Steller sea lion reported to be in good body condition was found in a state of advanced decomposition in Del Rey, OR. A necropsy confirmed the animal was shot.	DEAD	Shot	Projectile weapon	N/A	N/A	N/A	N/A	1	0
AKRO	7/24/2014	SEAK	Steller Sea Lion	Eastern US	SI	A Steller sea lion was reported to be hauled out on Faust Rock near Juneau. The animal was observed with a flasher hanging from its mouth.	SI	Hooked	Fishery gear	SEAK salmon troll	Unknown	Troll	P2	1	0
NWRO	8/15/2014	WC	Steller Sea Lion	Eastern US	DEAD	An adult female Steller sea lion was found dead, in a state of advanced decomposition, in Lincoln City, OR. An external review showed a profound wound across neck from a previous entanglement. No necropsy was conducted. The injury appeared to be a circumferential neck entanglement caused by unknown material / marine debris.	DEAD	Constricting entanglement	Marine debris (unidentified)	N/A	N/A	N/A	N/A	1	0
NWRO	8/21/2014	WC	Steller Sea Lion	Eastern US	DEAD	An adult male Steller sea lion was found dead, in a state of advanced decomposition, in Fort Stevens, OR. A necropsy confirmed the animal was shot multiple times. This animal also had what appeared to be propeller injuries.	DEAD	Shot	Projectile weapon	N/A	N/A	N/A	N/A	1	0
AKRO	8/31/2014	SEAK	Steller Sea Lion	Eastern US	SI	A large and emaciated Steller sea lion was observed above the tideline from the water and reported to be potentially dead. The animal had ingested troll fishery gear and a flasher led from its mouth.	SI	Hooked	Fishery gear	SEAK salmon troll	Unknown	Troll	P2	1	0
AKRO	8/31/2014	SEAK	Steller Sea Lion	Eastern US	SI	A robust looking adult male Steller sea lion was hauled out and observed with a flasher hanging from its mouth.	SI	Hooked	Fishery gear	SEAK salmon troll	Unknown	Troll	P2	1	0
WCGOP	9/17/2014	WC	Steller Sea Lion	Eastern US	DEAD	A female Steller sea lion was caught and killed in trawl gear.	DEAD	Entangled / entrapped	Fishery gear	Catch shares bottom trawl	Commercial	Trawl	N/A	1	1
NWRO	9/24/2014	WC	Steller Sea Lion	Eastern US	SI	An adult female Steller sea lion was found alive in Warrenton, OR. The animal's eyes and lower jaw were dislocated. The animal was euthanized and a necropsy was conducted. The examiner suspected the cause of injury was a seal bomb.	DEAD	Body trauma	Explosive	N/A	N/A	N/A	N/A	1	0
AKRO	10/3/2014	SEAK	Steller Sea Lion	Eastern US	SI	A 5 year old male Steller sea lion branded "729" was observed hauled out at Cannery Point. The animal had ingested troll fishery gear and a flasher hung from its mouth. The animal was originally reported on 10/3/2014 and legally harvested for subsistence purposes on 10/4/2014.	DEAD	Hooked	Fishery gear	SEAK salmon troll	Unknown	Troll	N/A	1	0
NWRO	10/3/2014	WC	Steller Sea Lion	Eastern US	SI	A thin Steller sea lion pup was found alive on the beach on Ocean Shores, WA. Tourists had dragged the pup into the surf before a law enforcement officer arrived and was able to pull it from the surf. After the pup was removed from the surf it was limp and unable to move, but was still alive. It was transferred to a facility for long-term rehab. The sea lion was rehabilitated and released.	NSI	Harassment	Members of the public	N/A	N/A	N/A	P9	0	0
ADFG	10/4/2014	SEAK	Steller Sea Lion	Eastern US	SI	A Steller sea lion ingested troll fishery gear and was observed with a flasher hanging from its mouth.	SI	Hooked	Fishery gear	Unknown troll	Unknown	Troll	P2	1	0
WCGOP	10/5/2014	WC	Steller Sea Lion	Eastern US	DEAD	A Steller sea lion was found dead during processing. The animal had been caught and killed by trawl gear.	DEAD	Entangled / entrapped	Fishery gear	Catcher processor midwater trawl	Commercial	Trawl	N/A	1	1
WCGOP	10/6/2014	WC	Steller Sea Lion	Eastern US	DEAD	A juvenile male Steller sea lion was caught and killed in trawl gear.	DEAD	Entangled / entrapped	Fishery gear	Catch shares bottom trawl	Commercial	Trawl	N/A	1	1
A-SHOP	10/11/2014	WC	Steller Sea Lion	Eastern US	DEAD	A female Steller sea lion was caught and killed in trawl gear.	DEAD	Entangled / entrapped	Fishery gear	At-Sea hake pelagic trawl	Commercial	Trawl	N/A	1	1
AKRO	10/14/2014	SEAK	Steller Sea Lion	Eastern US	SI	An adult male Steller sea lion was observed hauled out on a buoy near Petersburg. The animal had a circumferential neck entanglement caused by rope and possibly fishing line.	SI	Constricting entanglement	Marine debris (rope)	N/A	N/A	N/A	P8a	1	0
AKRO	10/14/2014	SEAK	Steller Sea Lion	Eastern US	SI	A Steller sea lion was observed hauled out on the south side of South Marble Island. The animal had a circumferential neck entanglement.	SI	Constricting entanglement	Marine debris (packing band)	N/A	N/A	N/A	P8a	1	0

Appendix Table 1.10. -- Human / marine mammal interaction records reviewed for serious injury and mortality. Records are sorted by species, stock, and date.

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 Criterion	Suggested Value for PBR	Suggested Value for LOF
WCGOP	10/14/2014	WC	Steller Sea Lion	Eastern US	DEAD	A Steller sea lion was caught and killed in trawl gear.	DEAD	Entangled / entrapped	Fishery gear	Shoreside hake midwater trawl	Commercial	Trawl	N/A	1	1
MMAP	10/29/2014	WC	Steller Sea Lion	Eastern US	DEAD	A Steller sea lion was caught and killed in Pacific Whiting fishery gear.	DEAD	Entangled / entrapped	Fishery gear	WA/OR/CA groundfish trawl	Commercial	Trawl	N/A	1	1
MMAP	11/3/2014	WC	Steller Sea Lion	Eastern US	DEAD	A Steller sea lion was caught and killed in Pacific Whiting fishery gear.	DEAD	Entangled / entrapped	Fishery gear	WA/OR/CA groundfish trawl	Commercial	Trawl	N/A	1	1
NWRO	1/12/2015	WC	Steller Sea Lion	Eastern US	SI	A subadult male Steller sea lion was observed at Sea Lion Caves that had ingested troll fishery gear. A red salmon flasher was hanging from its mouth.	SI	Hooked	Fishery gear	Unknown troll	Unknown	Troll	P2	1	0
WCGOP	1/29/2015	WC	Steller Sea Lion	Eastern US	DEAD	Two Steller sea lions were caught and killed by OA CA halibut bottom 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
WCGOP	1/29/2015	WC	Steller Sea Lion	Eastern US	DEAD	Two Steller sea lions were caught and killed by OA CA halibut bottom 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
SWFSC	1/31/2015	WC	Steller Sea Lion	Eastern US	DEAD	A Steller sea lion was found dead with multiple gunshot wounds.	DEAD	Shot	Projectile weapon	N/A	N/A	N/A	N/A	1	0
NWRO	2/12/2015	WC	Steller Sea Lion	Eastern US	SI	An adult male Steller sea lion was observed with some type of bright orange material with a small buoy attached to it. This gear was wrapped around the animal's neck. The animal was not sighted again.	SI	Constricting entanglement	Marine debris (rope and buoy)	N/A	N/A	N/A	P8a	1	0
WCGOP	2/12/2015	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
NWRO	2/25/2015	WC	Steller Sea Lion	Eastern US	DEAD	A robust subadult male Steller sea lion was found dead. Upon examination, pellets were found in the animal's body cavity and internal organs.	DEAD	Shot	Projectile weapon	N/A	N/A	N/A	N/A	1	0
WCGOP	3/8/2015	WC	Steller Sea Lion	Eastern US	NSI	A Steller sea lion was caught in trawl gear and brought aboard the fishing vessel. The animal left the boat after being freed from the net.	NSI	Entangled / entrapped	Fishery gear	Catch shares bottom trawl	Commercial	Trawl	P4	0	0
NWRO	4/4/2015	WC	Steller Sea Lion	Eastern US	DEAD	An adult female Steller sea lion was found dead with track-associated hemorrhages in various areas of its body. A projectile was recovered from the body.	DEAD	Shot	Projectile weapon	N/A	N/A	N/A	N/A	1	0
NWRO	4/8/2015	WC	Steller Sea Lion	Eastern US	DEAD	An adult female Steller sea lion was found dead with numerous areas of hemorrhage throughout its body. A projectile was recovered the body.	DEAD	Shot	Projectile weapon	N/A	N/A	N/A	N/A	1	0
NWRO	4/11/2015	WC	Steller Sea Lion	Eastern US	DEAD	A dead subadult female Steller sea lion was found with tracking wounds, hemorrhaging associated with the wound tracks, and bloody fluid in the abdomen. No projectiles were recovered.	DEAD	Shot	Projectile weapon	N/A	N/A	N/A	N/A	1	0
AKRO	4/14/2015	SEAK	Steller Sea Lion	Eastern US	SI	An adult female Steller sea lion was observed with a circumferential neck entanglement that was thought to be caused by a white packing band.	SI	Constricting entanglement	Marine debris (packing band)	N/A	N/A	N/A	P8a	1	0
NWRO	4/23/2015	WC	Steller Sea Lion	Eastern US	DEAD	An adult male Steller sea lion was found dead. There were several areas of hemorrhaging throughout the body and a projectile was recovered from the animal's head.	DEAD	Shot	Projectile weapon	N/A	N/A	N/A	N/A	1	0
ODFW	5/5/2015	WC	Steller Sea Lion	Eastern US	DEAD	A Steller sea lion was accidentally killed during pinniped research and management activities at the Bonneville Dam.	DEAD	Entangled / entrapped	Other	N/A	N/A	N/A	N/A	1	0
NWRO	5/9/2015	WC	Steller Sea Lion	Eastern US	SI	An adult female Steller sea lion was observed hauled out on an offshore rock with a large flasher hanging from its mouth.	SI	Hooked	Fishery gear	Unknown troll	Unknown	Troll	P2	1	0
NWRO	5/11/2015	WC	Steller Sea Lion	Eastern US	SI	An adult female Steller sea lion ingested troll fishery gear; a flasher was hanging from its mouth. The animal appeared to be thin and had a newborn pup with it. This record represents the mother.	SI	Hooked	Fishery gear	Unknown troll	Unknown	Troll	P2	1	0
NWRO	5/11/2015	WC	Steller Sea Lion	Eastern US	SI	An adult female Steller sea lion ingested troll fishery gear; a flasher was observed hanging from its mouth. The animal appeared to be thin and had a newborn pup with it. This record represents the pup.	SI	Hooked	Fishery gear	Unknown troll	Unknown	Troll	P14	1	0
NWRO	5/13/2015	WC	Steller Sea Lion	Eastern US	DEAD	A subadult male Steller sea lion was found dead with numerous hemorrhagic areas in the body that were associated with obvious tracks and holes. A projectile was recovered.	DEAD	Shot	Projectile weapon	N/A	N/A	N/A	N/A	1	0
AKRO	5/17/2015	SEAK	Steller Sea Lion	Eastern US	SI	A Steller sea lion was observed with a circumferential neck entanglement caused by some type of unidentified plastic.	SI	Constricting entanglement	Marine debris (unidentified)	N/A	N/A	N/A	P8a	1	0
WCGOP	5/18/2015	WC	Steller Sea Lion	Eastern US	SI	A fisher was reported to fire one shot of a rifle at a group of six sea lions. The observer was unsure if any were hit. Out of caution it is assumed a sea lion was injured by the gunshot.	SI	Shot	Projectile weapon	Catch shares bottom trawl	Commercial	Trawl	P9	1	0
NWRO	5/19/2015	WC	Steller Sea Lion	Eastern US	SI	A member of the public reported seeing someone shoot a Steller sea lion that was hauled out on a buoy. The reporting party indicated that the animal was "badly wounded."	SI	Shot	Projectile weapon	N/A	N/A	N/A	P9	1	0
AKRO	5/24/2015	SEAK	Steller Sea Lion	Eastern US	SI	A Steller sea lion was observed to have "trash around his neck" by a whale watch vessel naturalist at Admiralty Island, AK.	SI	Constricting entanglement	Marine debris (unidentified)	N/A	N/A	N/A	P8a	1	0
NWRO	6/9/2015	WC	Steller Sea Lion	Eastern US	DEAD	A robust adult female Steller sea lion was found dead. There were numerous areas of hemorrhage in the head and body. A projectile was recovered from the animal's head.	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 Criterion	Suggested Value for PBR	Suggested Value for LOF
AKRO	6/12/2015	SEAK	Steller Sea Lion	Eastern US	SI	A Steller sea lion was observed with a wound on its jaw and fishing line protruding from its mouth. It appeared that the sea lion ingested hook and line fishing gear of some type. The animal was very lethargic.	SI	Hooked	Fishery gear	AK SEAK unknown hook and line	Recreational	Hook and line	P2	1	0
WCGOP	6/15/2015	WC	Steller Sea Lion	Eastern US	NSI	A seal bomb was used to deter a Steller sea lion from feeding on the catch.	NSI	Percussion	Seal bomb	Nearshore hook and line	Commercial	Hook and line	P9	0	0
NWRO	6/28/2015	WC	Steller Sea Lion	Eastern US	DEAD	An adult female Steller sea lion carcass was found in Newport, OR, with multiple penetrating wounds; one on the right cheek, three on the dorsum at the level of the shoulders and two on the left lateral flank. The penetrating wounds were associated with a fractured zygomatic arch, an abscess in muscle, and 10 cm - 15 cm long tracts filled with fibrinous material.	DEAD	Shot	Projectile weapon	N/A	N/A	N/A	N/A	1	0
AKRO	7/6/2015	SEAK	Steller Sea Lion	Eastern US	SI	A Steller sea lion was reported to have ingested troll gear; a silver flasher was hanging from its mouth.	SI	Hooked	Fishery gear	AK SEAK salmon troll	Unknown	Troll	P2	1	0
WCGOP	7/8/2015	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	7/10/2015	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
AKRO	7/10/2015	SEAK	Steller Sea Lion	Eastern US	SI	A Steller sea lion was observed near Juneau that had ingested troll gear. A orange and silver flasher was observed hanging from its mouth.	SI	Hooked	Fishery gear	AK SEAK salmon troll	Unknown	Troll	P2	1	0
NPGOP	7/16/2015	GOA	Steller Sea Lion	Eastern US	DEAD	A Steller sea lion was caught and killed in AK GOA Pacific halibut longline gear.	DEAD	Hooked	Fishery gear	AK GOA halibut longline	Commercial	Hook and line	N/A	1	1
AKRO	7/22/2015	SEAK	Steller Sea Lion	Eastern US	SI	A subadult male Steller sea lion that had ingested troll gear was observed hauled out with a large flasher hanging from its mouth. Dried blood was observed on the flasher and the sea lion was reported to look "sickly." The sea lion was observed and reported by a tour boat naturalist.	SI	Hooked	Fishery gear	AK SEAK salmon troll	Unknown	Troll	P2	1	0
AKRO	7/22/2015	SEAK	Steller Sea Lion	Eastern US	SI	A large male Steller sea lion that had ingested troll gear was observed hauled out with a large flasher hanging from its mouth. The sea lion was observed and reported by a tour boat naturalist.	SI	Hooked	Fishery gear	AK SEAK salmon troll	Unknown	Troll	P2	1	0
AKRO	7/26/2015	SEAK	Steller Sea Lion	Eastern US	SI	A Steller sea lion was observed with a circumferential neck entanglement caused by what appeared to be monofilament.	SI	Constricting entanglement	Marine debris (unidentified)	N/A	N/A	N/A	P8a	1	0
AKRO	7/27/2015	SEAK	Steller Sea Lion	Eastern US	SI	A Steller sea lion was observed at the surface of the water with a silver flasher tight to its mouth. The animal was alive, but was reported to barely move for the ~30 minutes that it was observed.	SI	Hooked	Fishery gear	AK SEAK salmon troll	Unknown	Troll	P2	1	0
MMAP	7/30/2015	WC	Steller Sea Lion	Eastern US	DEAD	A Steller sea lion was caught and killed in groundfish trawl gear.	DEAD	Entangled / entrapped	Fishery gear	WA/OR/CA groundfish trawl	Commercial	Trawl	N/A	1	1
WCGOP	8/3/2015	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	8/6/2015	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	8/10/2015	WC	Steller Sea Lion	Eastern US	SI	A Steller sea lion was caught in trawl gear and brought aboard the fishing vessel. The observer stated the animal may have suffered injury from gear around its head and neck, and that the animal had difficulty exiting the vessel.	SI	Entangled / entrapped	Fishery gear	Catch shares bottom trawl	Commercial	Trawl	P4	1	1
WCGOP	8/20/2015	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
SWFSC	8/26/2015	WC	Steller Sea Lion	Eastern US	DEAD	A Steller sea lion was found dead with multiple gunshot wounds.	DEAD	Shot	Projectile weapon	N/A	N/A	N/A	N/A	1	0
SWFSC	8/30/2015	WC	Steller Sea Lion	Eastern US	DEAD	A Steller sea lion that had ingested troll fishery gear was found dead. The animal also had a shark bite on its right flank.	DEAD	Hooked	Fishery gear	Unknown troll	Unknown	Troll	N/A	1	0
AKRO	9/3/2015	SEAK	Steller Sea Lion	Eastern US	SI	A Steller sea lion was observed that had ingested troll fishery gear; a pink flasher was visible hanging from the animal's mouth. The sea lion was reported to be thin and lethargic.	SI	Hooked	Fishery gear	AK SEAK salmon troll	Unknown	Troll	P2	1	0
NPGOP	9/23/2015	GOA	Steller Sea Lion	Eastern US	DEAD	A Steller sea lion was caught and killed on AK GOA longline gear.	DEAD	Hooked	Fishery gear	AK GOA sablefish longline	Commercial	Hook and line	N/A	1	1
WCGOP	9/25/2015	WC	Steller Sea Lion	Eastern US	NSI	Seal bombs were used to deter a Steller sea lion from feeding on the catch.	NSI	Percussion	Seal bomb	Limited entry sablefish hook & line	Commercial	Hook and line	P9	0	0
SWFSC	9/27/2015	WC	Steller Sea Lion	Eastern US	DEAD	A Steller sea lion was found dead with a circumferential neck entanglement caused by monofilament.	DEAD	Constricting entanglement	Fishery gear	Unknown hook and line	Unknown	Hook and line	N/A	1	0
NWRO	10/4/2015	WC	Steller Sea Lion	Eastern US	DEAD	A Steller sea lion was found dead and was suspected of being shot. A portion of the animal's skull was reported to be "blown away," and there was a hole in the animal's abdomen associated with hemorrhage. The animal was in excellent body condition.	DEAD	Shot	Projectile weapon	N/A	N/A	N/A	N/A	1	0
WCGOP	10/4/2015	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
NWRO	10/17/2015	WC	Steller Sea Lion	Eastern US	SI	A subadult male Steller sea lion was observed with a circumferential neck entanglement that appeared to be caused by a packing band. The animal was thin, but appeared to be exhibiting normal behavior.	SI	Constricting entanglement	Marine debris (packing band)	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 Criterion	Suggested Value for PBR	Suggested Value for LOF
NWRO	11/2/2015	WC	Steller Sea Lion	Eastern US	DEAD	A Steller sea lion was found dead. Multiple perforations and 4 shotgun pellet projectiles were found inside the animal.	DEAD	Shot	Projectile weapon	N/A	N/A	N/A	N/A	1	0
NWRO	11/15/2015	WC	Steller Sea Lion	Eastern US	DEAD	A Steller sea lion was found with a bullet wound in the abdomen and through the stomach. Stomach contents filled the abdominal cavity, and there was hemorrhage throughout the body.	DEAD	Shot	Projectile weapon	N/A	N/A	N/A	N/A	1	0
NWRO	12/29/2015	WC	Steller Sea Lion	Eastern US	DEAD	An adult male Steller sea lion was found dead and a necropsy was conducted. A bullet was found in its skull.	DEAD	Shot	Projectile weapon	N/A	N/A	N/A	N/A	1	0
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.	DEAD	Entangled / entrapped	Fishery gear	OA CA halibut bottom trawl	Commercial	Trawl	N/A	1	1
NWRO	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
NWRO	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
NWRO	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
NWRO	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 in longline gear.	DEAD	Entangled / entrapped	Fishery gear	Limited Entry Sablefish Longline	Commercial	Hook and line	N/A	1	1
NWRO	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
NWRO	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
NWRO	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
NWRO	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
WCGOP	4/19/2016	WC	Steller Sea Lion	Eastern US	DEAD	A Steller sea lion was caught and killed in longline gear.	DEAD	Entangled / entrapped	Fishery gear	Limited Entry Sablefish Longline	Commercial	Hook and line	N/A	1	1
NWRO	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	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.	NSI	Entangled / entrapped	Fishery gear	AK GOA Pacific halibut longline	Commercial	Hook and line	P7b	0	0
NWRO	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 troll gear that consisted of a white hoochie and green flasher.	SI	Entangled / entrapped	Fishery gear	Unknown troll	Unknown	Troll	P8a	1	0
NWRO	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 troll	Unknown	Troll	N/A	1	0

Appendix Table 1.10. -- Human / marine mammal interaction records reviewed for serious injury and mortality. Records are sorted by species, stock, and date.

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 Criterion	Suggested Value for PBR	Suggested Value for LOF
MMAP	6/19/2016	WC	Steller Sea Lion	Eastern US	DEAD	A Steller sea lion was caught and killed in trawl gear.	DEAD	Entangled / entrapped	Fishery gear	WA/OR/CA groundfish trawl	Commercial	Trawl	N/A	1	1
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
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
MMAP	7/5/2016	WC	Steller Sea Lion	Eastern US	DEAD	A Steller sea lion was caught and killed by longline gear.	DEAD	Entangled / entrapped	Fishery gear	WA/OR/CA groundfish, bottomfish longline/set line	Commercial	Hook and line	N/A	1	1
NWRO	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
AKRO	7/14/2016	SEAK	Steller Sea Lion	Eastern US	SI	A Steller sea lion ingested troll fishery gear and a flasher was observed tight to its right lip.	SI	Hooked	Fishery gear	Unknown troll	Unknown	Troll	P2	1	0
NWRO	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 troll fishery gear and a flasher was observed hanging from its mouth.	SI	Hooked	Fishery gear	Unknown troll	Unknown	Troll	P2	1	0
NWRO	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
NWRO	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
NWRO	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 troll	Unknown	Troll	P14	1	0
NWRO	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 troll	Unknown	Troll	P2	1	0
AKRO	7/26/2016	SEAK	Steller Sea Lion	Eastern US	SI	A Steller sea lion ingested troll fishery gear, and a flasher and pink hoochie were observed hanging from its mouth.	SI	Hooked	Fishery gear	Unknown troll	Recreational	Troll	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	Unknown troll	Unknown	Troll	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 halibut circle hook attached to a ganjon line in its lip.	NSI	Hooked	Fishery gear	Unknown longline	Unknown	Hook and line	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 troll 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	Unknown troll	Unknown	Troll	P2	1	0
AKRO	8/15/2016	SEAK	Steller Sea Lion	Eastern US	SI	A Steller sea lion ingested troll fishery gear and a flasher was observed hanging from its mouth.	SI	Hooked	Fishery gear	Unknown troll	Unknown	Troll	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 troll fishing gear, and a black and white flasher was observed hanging from its mouth.	SI	Hooked	Fishery gear	Unknown troll	Unknown	Troll	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
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 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

Appendix Table 1.10. -- Human / marine mammal interaction records reviewed for serious injury and mortality. Records are sorted by species, stock, and date.

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 Criterion	Suggested Value for PBR	Suggested Value for LOF
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	10/14/2016	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	10/19/2016	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 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
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. 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	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	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

Appendix Table 1.10. -- Human / marine mammal interaction records reviewed for serious injury and mortality. Records are sorted by species, stock, and date.

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 Criterion	Suggested Value for PBR	Suggested Value for LOF
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	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	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 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	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 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
NPGOP	1/29/2012	WAK	Steller Sea Lion	Western US	DEAD	A 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	2/19/2012	WAK	Steller Sea Lion	Western US	DEAD	A 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	2/23/2012	WAK	Steller Sea Lion	Western US	DEAD	A Steller sea lion was caught in an AK BSAI flatfish trawl. The observer noted it was foaming at the mouth and freshly dead.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI flatfish trawl	Commercial	Trawl	N/A	1	1
NPGOP	3/12/2012	WAK	Steller Sea Lion	Western US	DEAD	A Steller sea lion was reported to be freshly killed by AK BSAI pollock trawl gear.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI pollock trawl	Commercial	Trawl	N/A	1	1
NPGOP	3/29/2012	WAK	Steller Sea Lion	Western US	DEAD	A Steller sea lion was reported to be freshly killed by AK BSAI pollock trawl gear.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI pollock trawl	Commercial	Trawl	N/A	1	1
AKRO	4/28/2012	SCAK	Steller Sea Lion	Western US	SI	A subadult female Steller sea lion was reported with a circumferential neck injury.	SI	Constricting entanglement	Marine debris (unidentified)	N/A	N/A	N/A	P8a	1	0
NPGOP	5/27/2012	WAK	Steller Sea Lion	Western US	DEAD	A Steller sea lion was reported to be 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	5/29/2012	WAK	Steller Sea Lion	Western US	DEAD	A Steller sea lion was reported to be 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	6/8/2012	WAK	Steller Sea Lion	Western US	DEAD	A Steller sea lion was reported to be 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	6/14/2012	WAK	Steller Sea Lion	Western US	DEAD	A Steller sea lion was reported to be 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	6/16/2012	WAK	Steller Sea Lion	Western US	DEAD	A Steller sea lion was caught in an AK BSAI flatfish trawl.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI flatfish trawl	Commercial	Trawl	N/A	1	1
NPGOP	6/21/2012	WAK	Steller Sea Lion	Western US	DEAD	A Steller sea lion was reported to be 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	7/8/2012	WAK	Steller Sea Lion	Western US	DEAD	A Steller sea lion was reported to be 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	7/23/2012	SCAK	Steller Sea Lion	Western US	SI	A subadult Steller sea lion was observed hauled out with a flasher hanging from its mouth.	SI	Hooked	Fishery gear	AK peninsula unknown troll	Unknown	Troll	P2	1	0
NPGOP	7/30/2012	WAK	Steller Sea Lion	Western US	DEAD	A Steller sea lion was reported to be 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	8/22/2012	SCAK	Steller Sea Lion	Western US	DEAD	A Steller sea lion was caught in the AK GOA sablefish longline fishery. The animal ingested a gangion and appeared to have drowned.	DEAD	Hooked	Fishery gear	AK GOA sablefish longline	Commercial	Hook and line	N/A	1	1
AKRO	8/26/2012	SCAK	Steller Sea Lion	Western US	SI	An adult female Steller sea lion that was branded 'E75' was reported to have a flasher hanging from its mouth. The animal was nursing a pup, and when resighted at a later date the animal was noted as 'skinny'. This record represents the mother.	SI	Hooked	Fishery gear	Unknown troll	Unknown	Troll	P2	1	0

Appendix Table 1.10. -- Human / marine mammal interaction records reviewed for serious injury and mortality. Records are sorted by species, stock, and date.

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 Criterion	Suggested Value for PBR	Suggested Value for LOF
AKRO	8/26/2012	SCAK	Steller Sea Lion	Western US	SI	An adult female Steller sea lion that was branded 'E75' was reported to have a flasher hanging from its mouth. The animal was nursing a pup, and when resighted at a later date the animal was noted as 'skinny'. This record represents the dependent pup.	SI	Hooked	Fishery gear	Unknown troll	Unknown	Troll	P14	1	0
NPGOP	9/7/2012	WAK	Steller Sea Lion	Western US	DEAD	A 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	9/9/2012	WAK	Steller Sea Lion	Western US	SI	A subadult 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
NPGOP	10/8/2012	WAK	Steller Sea Lion	Western US	DEAD	A Steller sea lion was caught and killed in AK GOA Pacific cod trawl gear.	DEAD	Entangled / entrapped	Fishery gear	AK GOA Pacific cod trawl	Commercial	Trawl	N/A	1	1
NPGOP	1/22/2013	WAK	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	2/2/2013	WAK	Steller Sea Lion	Western US	DEAD	A 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	2/6/2013	WAK	Steller Sea Lion	Western US	DEAD	A 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	2/20/2013	WAK	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	5/28/2013	WAK	Steller Sea Lion	Western US	DEAD	A 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	5/28/2013	WAK	Steller Sea Lion	Western US	DEAD	A 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	5/31/2013	WAK	Steller Sea Lion	Western US	DEAD	A 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	6/12/2013	WAK	Steller Sea Lion	Western US	DEAD	A 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	6/13/2013	WAK	Steller Sea Lion	Western US	DEAD	A 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	6/18/2013	SCAK	Steller Sea Lion	Western US	SI	An adult Steller sea lion was reported to be hauled out on a buoy in Prince William Sound with an arrow in its muzzle. The wound was reported to be possibly infected. No response was mounted. Injury considered serious using criteria P9.	SI	Shot	Projectile weapon	N/A	N/A	N/A	P9	1	0
NPGOP	6/28/2013	WAK	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	8/15/2013	WAK	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
AKRO	8/29/2013	GOA	Steller Sea Lion	Western US	DEAD	An adult female Steller sea lion was found dead in an aquaculture facility's egg-take barrier net.	DEAD	Entangled / entrapped	Fishery gear	Kodiak salmon hatchery	Commercial	Aquaculture	N/A	1	0
NPGOP	9/5/2013	WAK	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	11/3/2013	WAK	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	2/13/2014	WAK	Steller Sea Lion	Western US	DEAD	A Steller sea lion was caught in an AK BSAI pollock trawl. The observer reported there were no external injuries or bleeding. The observer collected the snout and took numerous pictures.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI pollock trawl	Commercial	Trawl	N/A	1	1
NPGOP	2/26/2014	WAK	Steller Sea Lion	Western US	DEAD	A freshly dead Steller sea lion was found dead and entangled in AK BSAI Pacific cod longline gear.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI Pacific cod longline	Commercial	Hook and line	N/A	1	1
NPGOP	2/27/2014	WAK	Steller Sea Lion	Western US	DEAD	A Steller sea lion was caught in an AK BSAI pollock trawl gear. The observer reported the animal was freshly dead, with no visible signs of injury except for frothy foam emanating from its mouth.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI pollock trawl	Commercial	Trawl	N/A	1	1
NPGOP	5/2/2014	WAK	Steller Sea Lion	Western US	DEAD	A Steller sea lion was caught in an AK BSAI flatfish trawl. The observer noted the animal had foam emanating from its mouth and collected the snout and took several photos.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI flatfish trawl	Commercial	Trawl	N/A	1	1
NPGOP	5/18/2014	WAK	Steller Sea Lion	Western US	DEAD	A Steller sea lion was found in the vessel's fish hold following an AK BSAI flatfish trawl. The observer noted the animal displayed no signs of trauma and also observed blood ooze from an incision when cut. The observer took numerous samples, including the snout, lengths, sex, and photos.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI flatfish trawl	Commercial	Trawl	N/A	1	1
ADFG	5/23/2014	WAK	Steller Sea Lion	Western US	SI	An adult male Steller sea lion was observed with a circumferential neck entanglement.	SI	Constricting entanglement	Marine debris (unidentified)	N/A	N/A	N/A	P8a	1	0
NPGOP	5/24/2014	WAK	Steller Sea Lion	Western US	DEAD	A Steller sea lion was discovered in the vessel's live tank following an AK BSAI flatfish trawl. The observer reported taking photos, the length, and the snout.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI flatfish trawl	Commercial	Trawl	N/A	1	1
NPGOP	5/30/2014	WAK	Steller Sea Lion	Western US	DEAD	A male Steller sea lion was discovered in the vessel's fish trough following an AK BSAI flatfish trawl. The observer reported collecting the snout and taking pictures.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI flatfish trawl	Commercial	Trawl	N/A	1	1

Appendix Table 1.10. -- Human / marine mammal interaction records reviewed for serious injury and mortality. Records are sorted by species, stock, and date.

NPGOP	6/21/2014	WAK	Steller Sea Lion	Western US	DEAD	A Steller sea lion was caught in an AK BSAI flatfish trawl. The observer reported taking the animal's snout, length, and photos.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI flatfish trawl	Commercial	Trawl	N/A	1	1	
AKRO	6/30/2014	GOA	Steller Sea Lion	Western US	SI	An adult female Steller sea lion ingested troll fishery gear and a flasher was observed hanging from the animal's mouth.	SI	Hooked	Fishery gear	SCAK salmon troll	Unknown	Troll	P2	1	0	
ADFG	7/16/2014	PWS	Steller Sea Lion	Western US	SI	A subadult male Steller sea lion was observed with a circumferential neck entanglement caused by a white band.	SI	Constricting entanglement	Marine debris (unidentified)	N/A	N/A	N/A	P8a	1	0	
ADFG	7/18/2014	GOA	Steller Sea Lion	Western US	SI	A Steller sea lion pup was observed with a monofilament line draped over the pup's body and wrapped around the pup's chest and shoulder.	SI	Entangled / entrapped	Fishery gear	Unknown hook and line	Unknown	Hook and line	P8a	1	0	
ADFG	8/23/2014	WAK	Steller Sea Lion	Western US	SI	A subadult Steller sea lion was observed with a circumferential neck entanglement possibly caused by a packing band.	SI	Constricting entanglement	Marine debris (unidentified)	N/A	N/A	N/A	P8a	1	0	
NPGOP	1/14/2015	WAK	Steller Sea Lion	Western US	DEAD	A Steller sea lion was caught and killed by AK BSAI pollock trawl gear.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI Pacific cod longline	Commercial	Trawl	N/A	1	1	
NPGOP	2/23/2015	WAK	Steller Sea Lion	Western US	NSI	A live Steller sea lion was caught in trawl gear and brought up in the codend of the net. The observer reported that the animal was immediately released and in good, lively condition. This interaction is considered a non-serious injury due to the lack of apparent injuries, and the animal's reported good condition.	NSI	Entangled / entrapped	Fishery gear	AK BSAI flatfish trawl	Commercial	Trawl	P7b	0	0	
NPGOP	3/17/2015	WAK	Steller Sea Lion	Western US	DEAD	A Steller sea lion was entangled and killed in AK BSAI Pacific cod longline gear.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI Pacific cod longline	Commercial	Hook and line	N/A	1	1	
NPGOP	4/22/2015	WAK	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	
AKRO	5/28/2015	SCAK	Steller Sea Lion	Western US	DEAD	This is one of many Steller sea lion carcasses that were examined on the Copper River Delta. A 1/4 inch round full-thickness hole surrounded by a halo of blood tinged hair was found on the right lateral neck, and a metal fragment was recovered under the skin on the opposite side of hole.	DEAD	Shot	Projectile weapon	N/A	N/A	N/A	N/A	1	0	
AKRO	5/28/2015	SCAK	Steller Sea Lion	Western US	DEAD	This is one of many Steller sea lion carcasses that were examined on the Copper River Delta. When the carcass was turned over a previously unexposed blood tinged circle of hair was apparent associated with a full-thickness hole. A tract led to an area deeper into the neck that was surrounded by soft tissue injury and hemorrhage.	DEAD	Shot	Projectile weapon	N/A	N/A	N/A	N/A	1	0	
AKRO	5/28/2015	SCAK	Steller Sea Lion	Western US	DEAD	This is one of many Steller sea lion carcasses that were examined on the Copper River Delta. When the carcass was turned over, a 1.5" round hole was found on the right dorsal neck and another hole through the left eye revealing a fractured orbit.	DEAD	Shot	Projectile weapon	N/A	N/A	N/A	N/A	1	0	
NPGOP	6/2/2015	WAK	Steller Sea Lion	Western US	DEAD	A 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	6/2/2015	GOA	Steller Sea Lion	Western 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	6/2/2015	SCAK	Steller Sea Lion	Western US	DEAD	This is one of many Steller sea lion carcasses that were examined on the Copper River Delta. The animal was fresh dead and it was suspected that it had died within the last 24 hours. There were seven 1/8 inch full thickness holes within a 4 inch - 6 inch circle on the right lateral neck with tracts leading into the soft tissue where there was tissue damage and hemorrhage.	DEAD	Shot	Projectile weapon	N/A	N/A	N/A	N/A	1	0	
AKRO	6/2/2015	SCAK	Steller Sea Lion	Western US	DEAD	This is one of many Steller sea lion carcasses that were examined on the Copper River Delta. Eight small holes were noted on the right upper chest when the carcass was flipped over, consistent with shotgun injury. Tracts from these holes extended into deeper tissues with surrounding hemorrhage and soft tissue injury. There were also large blood clots and blood in the pleural cavity.	DEAD	Shot	Projectile weapon	N/A	N/A	N/A	N/A	1	0	
AKRO	6/2/2015	SCAK	Steller Sea Lion	Western US	DEAD	This is one of many Steller sea lion carcasses that were examined on the Copper River Delta. A 2 cm round hole was discovered when the carcass was flipped over. Associated with the hole was a large cavity with disorganized tissue, necrotic tissue, hemorrhage, and sand. The pleural cavity contained large blood clots and blood.	DEAD	Shot	Projectile weapon	N/A	N/A	N/A	N/A	1	0	
AKRO	6/5/2015	SCAK	Steller Sea Lion	Western US	DEAD	This is one of many Steller sea lion carcasses that were examined on the Copper River Delta. There were six small holes consistent with shotgun injury on the animal's right neck.	DEAD	Shot	Projectile weapon	N/A	N/A	N/A	N/A	1	0	
NPGOP	6/14/2015	WAK	Steller Sea Lion	Western US	DEAD	A 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	6/15/2015	SCAK	Steller Sea Lion	Western US	DEAD	A Steller sea lion was observed floating dead, with what appeared to be heavy monofilament wrapped around its body. The carcass also displayed abrasions and marks that appeared to be caused by a net.	DEAD	Entangled / entrapped	Fishery gear	AK PWS salmon drift gillnet	Commercial	Gillnet	N/A	1	1	
AKRO	6/30/2015	GOA	Steller Sea Lion	Western 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	

Appendix Table 1.10. -- Human / marine mammal interaction records reviewed for serious injury and mortality. Records are sorted by species, stock, and date.

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 Criterion	Suggested Value for PBR	Suggested Value for LOF
AKRO	7/3/2015	SCAK	Steller Sea Lion	Western US	DEAD	A Steller sea lion was found dead, in an advanced state of decomposition. The animal had a hole in the back of its skull that appeared to be a bullet entry or exit wound and a broken bone around the top of the left eye socket.	DEAD	Shot	Projectile weapon	N/A	N/A	N/A	N/A	1	0
NPGOP	7/12/2015	WAK	Steller Sea Lion	Western US	DEAD	A Steller sea lion was caught and killed on AK BSAI Pacific cod longline.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI Pacific cod longline	Commercial	Hook and line	N/A	1	1
NPGOP	7/13/2015	WAK	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
NMFS OPR/HQ	7/14/2015	WAK	Steller Sea Lion	Western US	DEAD	A Steller sea lion pup died as a result of marine mammal research activities at Ulak Island, AK.	DEAD	Research related injury	MMPA authorized research	N/A	N/A	N/A	N/A	1	0
AKRO	7/24/2015	GOA	Steller Sea Lion	Western US	SI	A Steller sea lion was observed with a circumferential neck entanglement that appeared to be caused by a twine like material. The twine was cutting into the animal's flesh.	SI	Constricting entanglement	Marine debris (unidentified)	N/A	N/A	N/A	P8a	1	0
NPGOP	8/3/2015	BS	Steller Sea Lion	Western US	DEAD	A Steller sea lion was caught and killed in an AK BSAI flatfish trawl.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI flatfish trawl	Commercial	Trawl	N/A	1	1
NPGOP	8/14/2015	GOA	Steller Sea Lion	Western US	DEAD	A Steller sea lion was caught and killed in AK GOA rockfish trawl gear.	DEAD	Entangled / entrapped	Fishery gear	AK GOA rockfish trawl	Commercial	Trawl	N/A	1	1
NPGOP	9/6/2015	GOA	Steller Sea Lion	Western US	DEAD	A Steller sea lion was caught and killed in AK GOA flatfish trawl fishery gear.	DEAD	Entangled / entrapped	Fishery gear	AK GOA flatfish trawl	Commercial	Trawl	N/A	1	1
AKRO	9/8/2015	WAK	Steller Sea Lion	Western US	SI	A subadult male Steller sea lion was observed with a circumferential neck entanglement caused by what appeared to be a blue packing band.	SI	Constricting entanglement	Marine debris (packing band)	N/A	N/A	N/A	P8a	1	0
NPGOP	9/15/2015	WAK	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
NPGOP	10/4/2015	GOA	Steller Sea Lion	Western US	DEAD	A Steller sea lion was caught and killed by AK GOA pollock trawl gear.	DEAD	Entangled / entrapped	Fishery gear	AK GOA pollock trawl	Commercial	Trawl	N/A	1	1
NPGOP	10/4/2015	GOA	Steller Sea Lion	Western US	DEAD	A Steller sea lion was caught and killed on AK GOA Pacific cod longline gear.	DEAD	Hooked	Fishery gear	AK GOA Pacific cod longline	Commercial	Hook and line	N/A	1	1
NPGOP	10/15/2015	GOA	Steller Sea Lion	Western US	DEAD	Two Steller sea lions were caught and killed in AK GOA pollock trawl gear. This record represents sea lion 1 of 2.	DEAD	Entangled / entrapped	Fishery gear	AK GOA pollock trawl	Commercial	Trawl	N/A	1	1
NPGOP	10/15/2015	GOA	Steller Sea Lion	Western US	DEAD	Two Steller sea lions were caught and killed in AK GOA pollock trawl gear. This record represents sea lion 2 of 2.	DEAD	Entangled / entrapped	Fishery gear	AK GOA pollock trawl	Commercial	Trawl	N/A	1	1
NPGOP	10/16/2015	GOA	Steller Sea Lion	Western US	DEAD	A Steller sea lion was caught and killed by AK GOA pollock trawl fishery gear. This record represents sea lion 1 of 2.	DEAD	Entangled / entrapped	Fishery gear	AK GOA pollock trawl	Commercial	Trawl	N/A	1	1
NPGOP	10/16/2015	GOA	Steller Sea Lion	Western US	DEAD	A Steller sea lion was caught and killed by AK GOA pollock trawl fishery gear. This record represents sea lion 2 of 2.	DEAD	Entangled / entrapped	Fishery gear	AK GOA pollock trawl	Commercial	Trawl	N/A	1	1
AKRO	10/23/2015	GOA	Steller Sea Lion	Western US	SI	A subadult male Steller sea lion was observed with a circumferential neck entanglement caused by what appeared to be AK halibut longline or AK GOA Pacific cod longline.	SI	Constricting entanglement	Fishery gear	AK GOA Pacific cod longline or AK halibut longline	Commercial	Hook and line	P8a	1	0
NPGOP	11/20/2015	WAK	Steller Sea Lion	Western US	NSI	A Steller sea lion was observed feeding on discarded halibut. The animal had a hook in its right lip. This is considered a non-serious injury under criterion P5b due to the observer's comments that the animal was feeding and behaving normally.	NSI	Hooked	Fishery gear	Unknown hook and line	Unknown	Hook and line	P5b	0	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	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	2/8/2016	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	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	2/12/2016	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	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	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
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

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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 Criterion	Suggested Value for PBR	Suggested Value for LOF
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
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
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 fishery	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	2/23/2012	AK	Steller Sea Lion	Western US, Eastern US	DEAD	An observer reported spotting a dead Steller sea lion in a fishing vessel's tank following offload. This mortality cannot be applied to a specific fishery due to how and when the Steller sea lion was discovered.	DEAD	Entangled / entrapped	Fishery gear	Unknown trawl	Commercial	Trawl	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
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
NPGOP	1/8/2014	WAK	Unidentified Phocid	Unknown	DEAD	An unidentified seal (originally reported as a harbor seal by the observer) was caught on an AK BSAI Pacific cod longline. The observer reported the animal appeared to be hooked in the mouth. The seal fell off the longline before it could be brought aboard.	DEAD	Hooked	Fishery gear	AK BSAI Pacific cod longline	Commercial	Hook and line	N/A	1	0
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	0
MMAP	6/26/2012	WAK	Unidentified Pinniped	Unknown	DEAD	An unidentified pinniped was caught and killed in trawl gear.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI pollock trawl	Commercial	Trawl	N/A	1	0
NPGOP	2/23/2013	WAK	Unidentified Pinniped	Unknown	DEAD	An unidentified pinniped was caught and killed by an AK BSAI Pacific cod trawl gear.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI Pacific cod trawl	Commercial	Trawl	N/A	1	0
NPGOP	8/26/2015	WAK	Unidentified Pinniped	Unknown	DEAD	An unidentified pinniped was caught and killed in AK BSAI flatfish trawl gear.	DEAD	Entangled / entrapped	Fishery gear	AK BSAI flatfish trawl	Commercial	Trawl	N/A	1	0
NPGOP	8/12/2016	BS	Unidentified Pinniped	Unknown	DEAD	An unidentified pinniped was hooked on and killed by longline gear.	DEAD	Hooked	Fishery gear	AK BSAI Pacific cod longline	Commercial	Hook and line	N/A	1	0
MMAP	6/24/2014	GOA	Unidentified Small cetacean	Unknown	DEAD	Two unidentified small cetaceans were caught and killed by gillnet gear. This record represents porpoise 2 of 2.	DEAD	Entangled / entrapped	Fishery gear	AK Kodiak salmon set gillnet	Commercial	Gillnet	N/A	1	0
MMAP	6/24/2014	GOA	Unidentified Small cetacean	Unknown	DEAD	Two unidentified small cetaceans were caught and killed by gillnet gear. This record represents porpoise 1 of 2.	DEAD	Entangled / entrapped	Fishery gear	AK Kodiak salmon set gillnet	Commercial	Gillnet	N/A	1	0
MMAP	7/22/2014	SEAK	Unidentified Small cetacean	Unknown	DEAD	Two unidentified small cetaceans (likely harbor porpoise) were caught and killed by gillnet. This record represents cetacean 1 of 2.	DEAD	Entangled / entrapped	Fishery gear	Drift gillnet - cost recovery king salmon	N/A	Gillnet	N/A	1	0
MMAP	7/22/2014	SEAK	Unidentified Small cetacean	Unknown	DEAD	Two unidentified small cetaceans (likely harbor porpoise) were caught and killed by gillnet. This record represents cetacean 2 of 2.	DEAD	Entangled / entrapped	Fishery gear	Drift gillnet - cost recovery king salmon	N/A	Gillnet	N/A	1	0

Appendix Table 1.10. -- Human / marine mammal interaction records reviewed for serious injury and mortality. Records are sorted by species, stock, and date.

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 Criterion	Suggested Value for PBR	Suggested Value for LOF
MMAP	7/22/2014	GOA	Unidentified Small cetacean	Unknown	DEAD	An unidentified small cetacean was caught and killed by gillnet.	DEAD	Entangled / entrapped	Fishery gear	AK Kodiak salmon set gillnet	Commercial	Gillnet	N/A	1	0
MMAP	3/23/2012	WAK	Unidentified Whale	Unknown	DEAD	An unidentified baleen whale was reported to have ingested and been killed by sablefish longline pot gear.	DEAD	Entangled / entrapped	Fishery gear	AK Bering Sea sablefish pot	Commercial	Pot	N/A	1	0
AKRO	6/4/2012	GOA	Unidentified Whale	Unknown	NSI	A news story reported that a man sailing across the Gulf of Alaska was hit by a whale. The news story indicates the sailboat was 24 ft long. There is no reason to believe the collision caused injury to the whale. The vessel's speed is unknown, although the vessel's calculated hull speed is 6.5 knots. It is unlikely the vessel was sailing fast enough to injure the whale.	NSI	Ship strike	Vessel	N/A	N/A	N/A	L6c	0	0
AKRO	7/19/2012	SCAK	Unidentified Whale	Unknown	PRORATE	A ship struck an unknown large whale and the vessel operator observed the animal following the strike. There was blood in the water and after the animal dove it was not seen again. This interaction will be prorated using criteria L11 because of a number of unknowns, including vessel specifics and severity of the laceration.	PRORATE	Ship strike	Vessel	N/A	N/A	N/A	L11	0.52	0
AKRO	8/13/2012	SEAK	Unidentified Whale	Unknown	NSI	A small anchored charter fishing boat was struck by an unknown whale's flukes. The boat was 28 ft long.	NSI	Ship strike	Vessel	N/A	N/A	N/A	L6c	0	0
AKRO	6/14/2013	WAK	Unidentified Whale	Unknown	DEAD	A container ship reported discovering an unidentified dead whale on the ship's bulbous bow. The reporter believed the strike occurred during the night. The whale was removed by maneuvering the ship. It could not be determined whether the ship killed whale. The report indicated the whale was probably a fin or sei whale.	DEAD	Ship strike	Vessel	N/A	N/A	N/A	N/A	0	0
AKRO	5/28/2014	SEAK	Unidentified Whale	Unknown	PRORATE	An unidentified whale was reported to be entangled in unidentified marine debris / gear and was observed dragging a buoy. The whale was observed once and was not seen again. Due to the unknown nature of entanglement or outcome this interaction will be prorated using criterion L10.	PRORATE	Entangled / entrapped	Marine debris (rope and buoy)	N/A	N/A	N/A	L10	0.75	0
AKRO	7/27/2014	PWS	Unidentified Whale	Unknown	PRORATE	An unidentified whale was observed entangled in "shrimp mesh netting." The entanglement was reported to be around the animal's tailstock and trailed 20 to 30 ft behind the animal. This interaction will be prorated at L10 due to the unknown nature of the entanglement and unknown outcome.	PRORATE	Entangled / entrapped	Fishery gear	PWS unknown shrimp gear	Unknown	Trawl	L10	0.75	0
NPGOP	9/26/2014	WAK	Unidentified Whale	Unknown	PRORATE	An unidentified whale was observed to be entangled in pot fishery gear. Due to the unknown nature of entanglement or outcome this interaction will be prorated using criterion L10.	PRORATE	Entangled / entrapped	Fishery gear	AK BSAI Pacific cod pot	Commercial	Pot	L10	0.75	0
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.	PRORATE	Ship strike	Vessel	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

Appendix 2

Appendix Tables 2-1 through 2-3 summarize the large cetacean, small cetacean, and pinniped injury categories and criteria, which are copied from Tables 1-3 in the ‘Guidelines for Distinguishing Serious from Non-Serious Injury of Marine Mammals Pursuant to the Marine Mammal Protection Act’ (NMFS 2012b). (Available at: <http://www.nmfs.noaa.gov/op/pds/documents/02/238/02-238-01.pdf>)

Appendix Table 2-1: Summary of Large Cetacean Injury Categories and Criteria

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

Appendix Table 2-3: Summary of Pinniped Injury Categories and Criteria

Appendix Table 2-1: 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 $\geq 65'$ 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 2-1. -- 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 $\geq 65'$ 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 2-2. -- 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 2-2. -- 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 2-2. -- 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 dependant 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 2-3. -- Summary of Pinniped¹ Injury Categories and Criteria

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.			
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 2-3. -- 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 2-3. -- 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 dependant 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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