



NOAA Fisheries
Office of Protected Resources



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For more terms related to all of NOAA Fisheries, please refer to the [NOAA Fisheries Glossary](#) [pdf] [1.7 MB].

Anadromous: Species that live their adult lives in the ocean but move into freshwater streams to reproduce or spawn (e.g., salmon).

Animal and Plant Health Inspection Service (APHIS): Part of the U.S. Department of Agriculture ([USDA](#)) that is charged with regulating the treatment of marine mammals held in captivity. APHIS creates health standards such as tank size and water quality.

Animal Welfare Act (AWA): Federal statute ([7 U.S.C. 2131](#) *eq sep.*) created in 1966, to—

- insure that animals intended for use in research facilities or for exhibition purposes or for use as pets are provided humane care and treatment;
- assure the humane treatment of animals during transportation in commerce; and
- protect the owners of animals from the theft of their animals by preventing the sale or use of animals which have been stolen.

Antarctic Convergence: a line encircling Antarctica where cold, northward-flowing Antarctic waters sink beneath the relatively warmer waters of the sub-Antarctic. The convergence is a dynamic boundary, meaning it's precise location may shift, but is generally located between 48° S and 61° S latitude

Applicant/Holder: Person, institution, or agency who is ultimately responsible for all activities of any individual who is operating under the authority of a permit.

Arctic waters: Marine and estuarine waters north of 60° N. latitude.

Arribada: the Spanish word for "arrival"; massive synchronized nesting within the genus *Lepidochelys*

Baleen: Long, flat plates made of fingernail-like material called keratin that hang from a baleen whale's mouth in place of teeth.

Barbel: A fleshy sensory appendage, often arising from the head or chin area of a fish (e.g., catfish "whiskers").

Bathypelagic: ocean depths between about 2,000-12,000 feet (600-3,600 m)

Benthic: anything associated with or occurring on the bottom of a body of water

Benthopelagic: occurring on the bottom or midwaters of a body of water

Biological Opinion: Under ESA section 7, all Federal agencies are required, "in consultation with and with the assistance of the Secretary, to insure that any action authorized, funded, or carried out by such agency is not likely to jeopardize the continued existence of any threatened or endangered species or result in the destruction or adverse modification of designated critical habitat."

Thus, before a permit can be issued, "a written statement setting forth the Secretary's opinion and a summary of the information on which the opinion is based" that the issuance of the permit is not likely to jeopardize any protected species must be obtained.

Blackfish: a non-taxonomic grouping of predominantly small, dark cetaceans (e.g., pilot whales)

Bona fide scientific research: Scientific research conducted by qualified personnel, the results of which—

- likely would be accepted for publication in a refereed scientific journal;
- are likely to contribute to the basic knowledge of marine mammal biology or ecology (this includes, e.g., marine mammal parts in a properly curated, professionally accredited scientific collection); or
- are likely to identify, evaluate, or resolve conservation problems.

Boreal: of or pertaining to the north, north wind, or northern type of forest.

Bow riding: swimming near the front part of a ship

Brackish: Pertaining to waters with a salt concentration between that of pure ocean water and freshwater (i.e., bay water).

Breach: to leap out of water

Bycatch: Animals caught by fishing that were not the intended target of the fishing activity. Such unwanted catch is often wasted.

Candidate Species: any species being considered by the Secretary (of Commerce or Interior) for listing under the ESA as an endangered or a threatened species, but not yet the subject of a proposed rule (see 50 CFR 424.02). NMFS' candidate species also qualify as [species of concern](#). "Candidate species" specifically refers to—

- species that are the subject of a petition to list and for which NMFS has determined that listing may be warranted, pursuant to ESA section 4(b)(3)(A), and
- species that are not the subject of a petition but for which NMFS has announced the initiation of a status review in the *Federal Register*.

Carrying Capacity: The maximum number of animals an environment can support based on the available resources.

Catch Per Unit Effort (CPUE): A measure of the density or population size of an animal that is targeted by fishing. Large CPUEs indicate large populations since many individuals are caught for every unit of fishing effort.

Caudal Peduncle: the portion of a cetacean's body between the dorsal fin and the fluke (tail). See: [tailstock](#)

Code of Federal Regulations (CFR): Regulations created by various Federal agencies to support and explain Federal statutes. For purposes of this document, USFWS and NMFS have created wildlife and fisheries regulations to support and clarify sections of the MMPA and ESA. The wildlife and fisheries regulations pertaining to marine mammals and endangered species can be found in [50 CFR 1 - 599](#).

Co-investigator (CI): The on-site representative(s) of the Primary Investigator (PI) who conducts or directly supervises the conduct of the taking, importing, and exporting activities authorized under the permit.

Critical habitat:

1. Specific areas within the geographical area occupied by the species at the time

of listing, if they contain physical or biological features essential to conservation, and those features may require special management considerations or protection; and

2. Specific areas outside the geographical area occupied by the species if the agency determines that the area itself is essential for conservation.

Delisted: When a species is no longer listed under the ESA. See also [Recovered Species](#).

Depleted: Defined by the MMPA as any case in which—

- the Secretary, after consultation with the Marine Mammal Commission and the Committee of Scientific Advisors on Marine Mammals established under MMPA title II, determines that a species or population stock is below its optimum sustainable population;
- a State, to which authority for the conservation and management of a species or population stock is transferred under section 109, determines that such species or stock is below its optimum sustainable population; or
- a species or population stock is listed as an endangered species or a threatened species under the ESA.

Diatoms: minute planktonic unicellular or colonial algae

Dimorphism (sexual): males and females appear visually different

Distinct Population Segment (DPS): A DPS, or a distinct population segment, is a vertebrate population or group of populations that is discrete from other populations of the species and significant in relation to the entire species. The ESA provides for listing species, subspecies, or distinct population segments of vertebrate species.

Dorsal: relating to or situated near or on the back

Elasmobranch: Elasmobranchii is the subclass of cartilaginous (with skeleton made of cartilage rather than bone) fishes (class chondrichthyes) that includes skates, rays and sharks. Elasmobranchs have an upper jaw that is not fused to the braincase and separate slitted gill openings.

Endangered: Defined under the ESA as "any species which is in danger of extinction throughout all or a significant portion of its range."

Endemic: Native to a certain area, usually a relatively small area.

Endothermic: Animals that generate body heat above ambient temperatures through various physiological and anatomical specializations.

Enhancement permits: As defined in the MMPA, they are, "permits issued for the recovery of a species or stock where taking or importation—

- is likely to contribute significantly to maintaining or increasing distribution or numbers necessary to ensure the survival or recovery of the species or stock; and
- is consistent with any conservation plan adopted by the Secretary for the species or stock, or if there is no conservation or recovery plan in place, with the Secretary's evaluation of action required to enhance the survival or recovery of the species or stock..."

Epipelagic: waters from the surface to depths generally not exceeding around 650 feet (200 m).

Estuary: A semi-enclosed body of water having connections to the ocean at the downstream end and freshwater streams at the upstream end. Water in estuaries thus tends to be at an intermediate and variable salinity and temperature

Euryhaline: Tolerant to a wide-range of salinities.

Evolutionarily Significant Unit (ESU): An ESU, or evolutionarily significant unit, is a Pacific salmon population or group of populations that is substantially reproductively isolated from other conspecific populations and that represents an important component of the evolutionary legacy of the species. The [ESU policy](#) [pdf] (56 FR 58612) for Pacific salmon defines the criteria for identifying a Pacific salmon population as a distinct population segment (DPS), which can be listed under the ESA.

Exclusive Economic Zone (EEZ): In the U.S., the EEZ extends up to 200 nautical miles from the coastline. [Presidential Proclamation 5030](#) created the Exclusive Economic Zone in 1983.

Extirpate: to remove or destroy totally.

Falcate: hooked, curved, sickle-shaped; often referring to the shape of a dorsal fin.

Fall Line: A line connecting the waterfalls of nearly parallel rivers that marks a drop in land level.

Flipper Slapping: Flipper or fluke slapping is when a cetacean slaps the water with its flipper or fluke. This action sometimes creates a very loud sound that has been described as sounding like a gun shot.

Fluke: the tail of a whale

Fluking: When the fluke (tail) is raised vertically out of the water

Foot: in gastropod mollusks, such as black abalone, the foot is a muscular appendage used for movement and adhering to substrates

Foreign Species: Foreign species are those that occur entirely outside of U.S. territory. NMFS does not, and is not obligated to, designate critical habitat or develop recovery plans for foreign species.

Forage: to wander in search of food

Fork Length: measurement from the tip of the snout to the fork of the tail. [Fork length - total length comparison](#).

Founder Effect: When a population is very small after the movement of some individuals to a new area that is unoccupied, the genetic makeup of that new group will differ from the makeup of their original source area just by random chance depending on the genetic structure of the founding individuals.

Gametes: eggs and sperm

Gene Flow: The movement of genes from one population to the other through movement of individuals between those populations.

Harassment: Under the 1994 Amendments to the MMPA, harassment is statutorily defined as, any act of pursuit, torment, or annoyance which—

- **(Level A Harassment)** has the potential to injure a marine mammal or marine mammal stock in the wild; or,
- **(Level B Harassment)** has the potential to disturb a marine mammal or marine mammal stock in the wild by causing disruption of behavioral patterns, including, but not limited to, migration, breathing, nursing, breeding, feeding, or sheltering but which does not have the potential to injure a marine mammal or marine mammal stock in the wild.

Haul Out: the place or the act of an animal crawling or pulling themselves out of the water and onto land, ice, or other object, such as a buoy

Import: to land on, bring into, or introduce into, or attempt to land on, bring into,

or introduce into, any place subject to the jurisdiction of the United States, whether or not such landing, bringing, or introduction constitutes an importation within the Customs Laws of the U.S., except that, for the purpose of any ban issued under [16 U.S.C. 1371\(a\)\(2\)](#) on the importation of fish or fish products, the definition of "import" in [50 CFR §216.24\(e\)\(1\)\(ii\)](#) shall apply.

Incidental Taking: An unintentional, but not unexpected, taking.

Intrusive Research: any procedure conducted for *bona fide* scientific research, that involves—

- a break in or cutting of the skin or equivalent,
- insertion of an instrument or material into an orifice,
- introduction of a substance or object into the animal's immediate environment that is likely either to be ingested or to contact and directly affect animal tissues (i.e., chemical substances), or
- a stimulus directed at animals that may involve a risk to health or welfare or that may have an impact on normal function or behavior (e.g., audio broadcasts directed at animals that may affect behavior, or attachment of instruments to an animal using suction-cups or by penetration of the animal's skin).

Keel: a deepening or thickening of the body, particularly near the tail of some cetaceans.

Lobtailing: when a cetacean lifts its fluke (tail) out of the water and slaps it on the surface of the water

Lanugo: the thick fur of a pinniped shed after birth

Logging: floating motionless

Mantle: as in mollusks, such as the black abalone, the mantle is a thin layer of tissue that covers most of the organs and produces the shell

Marine Mammal Commission: A three-member panel appointed by the President to oversee implementation of the MMPA, and provide scientific advice to the Secretaries of Commerce and Interior. All permit applications for scientific research must be reviewed by the Commission and its 10-member Committee of Scientific Advisors on Marine Mammals.

Maximum Sustainable Yield (MSY): The long-term yield of fish to a fishery that can be sustained indefinitely.

Melon: the often bulging, fatty forehead of a toothed cetacean

Mesopelagic: ocean depths extending from 200 m (650 ft.) down to around 1000 m (3280 ft.) below sea level

Minimum Population Estimate: Defined by the MMPA as an estimate of the number of animals in a stock that—

- is based on the best available scientific information on abundance, incorporating the precision and variability associated with such information; and
- provides reasonable assurance that the stock size is equal to or greater than the estimate.

Molt: the process of shedding hair, skin, or an outer layer periodically to be later replaced by new growth

Morbillivirus: A highly contagious and lethal genus of virus (Family Paramyxoviridae) that has been responsible for more significant marine mammal die-offs due to infectious disease than any other pathogen to date.

Mottling: spots or blotches of different color or shades of color, as if stained

Myctophids: small, deep sea fish found worldwide. They are also known as lanternfishes, named for their ability to emit light

Natal: Pertaining to birth, usually in the context of animals that return to their place of birth to spawn or give birth themselves (e.g., many salmon).

Negligible Impact: An impact resulting from the specified activity that cannot be reasonably expected to, and is not reasonably likely to, adversely affect the species or stock through effects on annual rates of recruitment or survival.

Neritic Zone: nearshore area

Optimum Sustainable Population: defined by the MMPA section 3(9), with respect to any population stock, the number of animals which will result in the maximum productivity of the population or the species, keeping in mind the carrying capacity of the habitat and the health of the ecosystem of which they form a constituent element. (16 U.S.C. 1362(3)(9))

Optimum Sustainable Population is further defined by Federal regulations (50 CFR 216.3) as is a population size which falls within a range from the population level of a given species or stock which is the largest supportable within the ecosystem to the population level that results in maximum net productivity. Maximum net productivity is the greatest net annual increment in population numbers or biomass resulting from additions to the population due to reproduction and/or growth less losses due to natural mortality.

Overfished: When the size of a fish stock is smaller than the sustainable target set by the National Marine Fisheries Service.

Overfishing: When a fish stock is being fished at a fishing mortality rate that exceeds the overfishing threshold set by the National Marine Fisheries Service.

Panmictic: Random mating of individuals within a population, the breeding individuals showing no tendency to choose partners with particular traits.

Parts: Hard parts are any bone, tooth, baleen, treated pelt, or other part of a marine mammal that are relatively solid or durable. Soft parts are any marine mammal part that is not a hard part (e.g. blood, muscle, blubber, skin, tissue-derived parts such as cell lines and DNA), excluding urine or fecal material.

Pectoral flippers: forelimbs of whales and dolphins that are used for stability and steering; they are generally flattened and paddle-like.

Pelagic: Pertaining to the part of the open sea or ocean comprising the water column, i.e., all of the sea other than that near the coast or the sea floor.

Pitch-pole: to turn end over end

Plan of Cooperation: Required where the proposed activity would take place in or near a traditional Arctic subsistence hunting area and/or may affect the availability of a species or stock of marine mammal for Arctic subsistence uses. The plan must include—

- statement that the applicant has notified and provided the affected subsistence community with a draft plan of cooperation;
- schedule for meeting with the affected subsistence communities to discuss proposed activities and to resolve potential conflicts regarding any aspects of either the operation or the plan of cooperation;
- description of what measures the applicant has taken and/or will take to ensure that proposed activities will not interfere with subsistence whaling or sealing; and,
- plans the applicant has to continue to meet with the affected communities,

both prior to and while conducting the activity, to resolve conflicts and to notify the communities of any changes in the operation.

Plankton: Passively drifting or weakly swimming organisms that occur in swarms near the surface of open water

Polygamy: the tendency for one male to mate with two or more females

Porpoising: when an animal moves in and out of the water in a series of high speed leaps, much like a porpoise. Dolphins, whales, seals, and even penguins have been observed porpoising.

Potential Biological Removal (PBR) Level: defined by the MMPA as the maximum number of animals, not including natural mortalities, that may be removed from a marine mammal stock while allowing that stock to reach or maintain its optimum sustainable population. The PBR level is the product of the following factors—

- the minimum population estimate of the stock;
- one-half the maximum theoretical or estimated net productivity rate of the stock at a small population size; and
- a recovery factor of between 0.1 and 1.0.

Principal Investigator (PI): The individual primarily responsible for the taking, importation, export, and any related activities conducted under a permit issued for scientific research or enhancement.

Proposed species: Those "[candidate species](#)" that were found to warrant listing as either threatened or endangered and were officially proposed as such in a *Federal Register* notice after the completion of a status review and consideration of other protective conservation measures. Public comment is always sought on a proposal to list species under the ESA. NMFS generally has one year after a species is proposed for listing under the ESA to make a final determination whether to list a species as threatened or endangered.

Pupping Season: The time of year that seals give birth.

Recovered Species: Under the ESA, a species is "recovered" when it is no longer requires protection under the ESA and thus is *delisted*. In practice, a species or stock is widely regarded as recovered only once it is delisted under both the ESA and the MMPA (i.e., it is no longer "depleted" under the MMPA).

Rehabilitation: treatment of beached and stranded marine mammals taken under MMPA section 109(h)(1) or imported under MMPA section 109(h)(2) with the intent of restoring a marine mammal's health and, if necessary, behavioral patterns.

Research Assistant (RA): Any individual working under the direct on-site supervision of the Principal Investigator (PI) and/or Co-Investigator (CI).

Recruitment: Time when a young fish enters a fishery (i.e., becomes large enough to be caught) or enters a specific habitat such as juvenile or adult habitat.

Rooster Tail: spray of water created as a porpoise or dolphin surfaces at high speed, especially characteristic of the Dall's porpoise

Rostrum: Any beaklike prolongation, especially of the head of an animal. In various marine mammals, the rostrum is commonly referred to as the "beak" or "snout."

Scutes: Horny plates or thorny scales, as on the shell of a sea turtle or body of a sturgeon, respectively.

Secretary: The MMPA establishes a Federal responsibility to conserve marine mammals, with management of all cetaceans and pinnipeds (except walrus) vested in the Department of Commerce (presided over by the Secretary of Commerce). The

Department of the Interior (under the supervision of the Secretary of the Interior) is responsible for all other marine mammals, including sea otter, walrus, polar bear, manatee, and dugong.

Serious Injury: Any injury that will likely result in mortality (50 CFR 216.3).

Sill: submerged ridge or vertical wall of relatively shallow depth separating two bodies of water

Smoltification: a complex developmental transformation, involving physiological, biochemical, morphological, and behavioral changes, that allows young salmon (parr) to transition from living in freshwater to living in saltwater

Species: Depending on how they were listed under the ESA, species is defined as species, subspecies, distinct population segment (DPS), or Evolutionarily Significant Unit (ESU).

Species of Concern: species about which NMFS has some concerns regarding status and threats, but for which insufficient information is available to indicate a need to list the species under the ESA. This may include species for which NMFS has determined, following a biological status review, that listing under the ESA is "not warranted," pursuant to ESA section 4(b)(3)(B)(i), but for which significant concerns or uncertainties remain regarding their status and/or threats. Species can qualify as both "species of concern" and "candidate species."

Spermaceti Organ: an organ inside a sperm whale's head that, historically, whalers believed produced sperm, but actually contains high quality oil.

Spyhopping: When whales and dolphins raise their heads vertically out of the water.

Stock: As defined by the MMPA, the term "stock" means a group of marine mammals of the same species or smaller taxa in a common spatial arrangement, that interbreed when mature.

Stranded marine mammal: a marine mammal specimen under the jurisdiction of the Secretary (Secretary of Commerce or authorized representatives) that is—

- dead, and is on a beach, shore, or is in the water within the Exclusive Economic Zone (EEZ) of the United States; or
- alive, and is on a beach or shore and is unable to return to the water, or is in the water of the EEZ of the United States where the water is so shallow that the specimen is unable to return to its habitat under its own power.

Strategic Stock: defined by the MMPA as a marine mammal stock—

- for which the level of direct human-caused mortality exceeds the potential biological removal level;
- which, based on the best available scientific information, is declining and is likely to be listed as a threatened species under the ESA within the foreseeable future; or
- which is listed as a threatened or endangered species under the ESA, or is designated as depleted under the MMPA.

Subsistence: The use of marine mammals taken by Alaskan Natives for food, clothing, shelter, heating, transportation, and other uses necessary to maintain the life of the taker or those who depend upon the taker to provide them with such subsistence.

Tailstock: the portion of a cetacean's body between the dorsal fin and the fluke (tail). See also: [caudal peduncle](#)

Take:

- Defined ***under the MMPA*** as "harass, hunt, capture, kill or collect, or attempt to harass, hunt, capture, kill or collect."
- Defined ***under the ESA*** as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct."

Thoracic: relating to the thorax, the part of a mammalian body between the neck and the abdomen

Threatened: Defined under the ESA as "any species which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range."

Unmitigable Adverse Impact: An impact resulting from the specified activity that—

- is likely to reduce the availability of the species to a level insufficient for a harvest to meet subsistence needs by
 - causing marine mammals to abandon or avoid hunting areas;
 - directly displacing subsistence users; or,
 - placing physical barriers between the marine mammals and the subsistence users; AND
- cannot be sufficiently mitigated by other measures to increase the availability of marine mammals to allow subsistence needs to be met.

Whelping: giving birth

