National Marine Fisheries Service

Marine Mammal Scientific Research and Enhancement Permit Application

OMB No. 0648-0084
Expires: MM/DD/YYYY

Marine Mammal Scientific Research and Enhancement Permit Application

TABLE OF CONTENTS

Introduction

What is this application for?

- This application is for requesting a Marine Mammal Protection Act (MMPA) and Endangered Species Act (ESA) scientific research or enhancement permit to take[1], import, or export National Marine Fisheries Service (NMFS) protected marine mammals, including:
  - Cetaceans (dolphins, porpoises, and whales)
  - Pinnipeds (seals and sea lions)

What is this application <u>not</u> for?

- *Bona fide*[2] scientific research on non-ESA listed marine mammals for activities involving only Level B harassment[3] under the General Authorization
- Commercial or educational photography/filming of marine mammals
- Only importing, exporting, or receiving marine mammal parts
- Public display of marine mammals
- To apply for one of these permits, visit: http://www.nmfs.noaa.gov/pr/permits/types.html

When should I apply?

- ESA-MMPA permits: at least 1 year before your project will begin
- MMPA permits: at least 6 months before your project will begin

---

[1] A take under the MMPA means to harass, hunt, capture, collect, or kill, or attempt to harass, hunt, capture, collect, or kill any marine mammal. This includes, without limitation, any of the following: the collection of dead animals, or parts thereof; the restraint or detention of a marine mammal, no matter how temporary; tagging a marine mammal; the negligent or intentional operation of an aircraft or vessel, or the doing of any other negligent or intentional act which results in disturbing or molesting a marine mammal; and feeding or attempting to feed a marine mammal in the wild.

Under the ESA, a take means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to do any of the preceding.

[2] Bona fide scientific research means research on marine mammals, conducted by qualified individuals, the results of which:

- are likely to be accepted for publication in a refereed scientific journal;
- are likely to contribute to the basic knowledge of the species biology or ecology; or
- are likely to identify, evaluate, or resolve conservation problems.

3 Harassment means 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.

What is the process for getting a permit?

1. Follow these instructions and contact the Permits and Conservation Division at 301-427-8401 with any questions.
2. Submit your application via APPS (https://apps.nmfs.noaa.gov/).
    a. An assigned permit analyst will contact you and review the application.
3. Address any questions on the application. To facilitate processing, reference the application File No. in all correspondence.
    a. Once complete, we will publish a notice in the *Federal Register*, which starts a mandatory 30-day public comment period.
    b. Concurrently, we will send your application to the Marine Mammal Commission and other subject matter experts in partner institutions and federal and state agencies for review.
    c. If needed, we will also request consultation under section 7 of the ESA to assess impacts to ESA-listed species. The ESA consultation can take up to 6 months.
4. Address any questions received during the comment period and consultation.
    a. We will then draft the permit and supporting documentation (including National Environmental Policy Act analyses and documentation of MMPA and ESA issuance criteria), which will be reviewed by various NMFS offices including a legal review by General Counsel.
    b. A Biological Opinion will be issued if ESA-listed species may be taken and adversely affected to determine if the activity will jeopardize the species or adversely modify critical habitat.
    c. The Office Director will make a final decision.

Important information

- If you do not follow these instructions, your application will be withdrawn and you will be asked to resubmit a new application that includes the information required.

- If we request additional information and do not receive it within 60 days, we may withdraw your application.

- Your permit may only authorize what is in your application; therefore, it must be a stand-alone document that describes all proposed activities even when you reference previous permits or published literature.

- When a question does not apply (i.e., N/A), explain why.

- Your application should be free of grammatical errors and readable to a lay person.

- Permit reports for current or previous permits must be up-to-date. Outstanding reports will delay processing of your new application.

- You are highly encouraged to contact us at 301-427-8401 with questions in advance of submitting your application.

How do I use APPS?

- Refer to Chapter 2 ("How to Use the System").

- When starting from your portfolio, click on the link of your file number under the File Number column to take you to the application.

- **Save your application every 20 minutes or you will lose information!**

- You do not have to complete an application in one session. Your application will remain in draft mode until you submit.

- An * means it is a required field.

- If you cut and paste from Word, special characters and formatting may be lost.

- Attachments cannot be larger than 10MB – contact us if you have larger files.

Questions?

- Contact the Permits and Conservation Division at 301-427-8401.

Application Instructions

Project Information

File Number

- This number is automatically generated and cannot be changed. To facilitate processing, reference this File No. in correspondence with our office.

****Project Title*** (up to 255 characters)

- Provide a concise title to include the activity, species (or taxa if multiple species), location, and purpose of the study. For example:
    - *Vessel surveys, sampling, and tagging cetaceans in the Gulf of Mexico to characterize population structure, forging ecology, and movement patterns.*

****Project Status***

- The project status (New or Renewal) is automatically selected based on your answers in the pre-application guide (PAG). Do not change this field.

Previous Federal or State Permit #

- If applicable, enter your most recent and closely related NMFS permit number. Otherwise leave blank. State permit numbers are not applicable.

Permits Requested

- One or more permit will be listed based on your answers in the PAG. If the options listed are incorrect, please call us at 301-427-8401 for assistance.

Where Will the Activities Occur?

- One or more general locations will be listed based on your answers in the PAG. If a location is incorrect, please call us at 301-427-8401 for assistance.

Research Timeframe

- Enter the desired start and end dates of the entire project in the following format: MM/DD/YYYY. The start date must not be prior to the date you submit the application and should be at least 6 months (MMPA) or 1 year (MMPA-ESA) after the date you submit. The end date must be within five years of the start date because permits are valid for a maximum of five years.

Sampling Season/Project Duration (up to 1,000 characters)

- Describe the annual field season(s) including the months and frequency of fieldwork (i.e., when and how many times per year/how frequently will you conduct your activities?). If this includes year-round research, indicate when activities are most likely to occur and how frequently.

Abstract (up to 2,000 characters)

- Federal regulations require the following information be published in the *Federal Register* Notice of Receipt that initiates a mandatory 30-day public comment period:
    - Purpose of the research or enhancement
    - Target and non-target species (common and scientific names)
    - Proposed take activities (e.g., vessel based surveys, remote biopsy sampling, tagging), import, or export
    - Numbers of animals to be taken or imported/exported or number of animals from which specimens will be imported/exported, by species or taxa, annually
    - Specific geographic locations of take and locations from which animals or samples will be imported or to where they will be exported, if applicable
    - Requested duration of the permit (the maximum is five years)

Project Description Page

Project Purpose: Hypothesis/Objectives and Justification (up to 64,000 characters)

- Discuss the **purpose** of your project including your hypotheses and/or objectives.

- Briefly **summarize published findings** related to your objectives. If you previously held or worked under a permit, use literature citations from that work to show how you previously met your objectives; or, use other published literature on the subject. Describe how this study is different from, builds upon, or duplicates past research.

- If proposing **novel procedures**, include a discussion on results from pilot studies or studies on other species, if available.

- Explain how you determined your **sample size/take numbers**. For example, did you base your numbers on previous encounter rates or abundance estimates for your study area? If appropriate for your study, include a power analysis or other sample size estimation to show whether the sample size is sufficient to provide statistically significant or otherwise robust results appropriate for your study.

- The information above should **support how your proposed research is *bona fide***, including how the results of your research:
  - are likely to be accepted for publication in a refereed scientific journal;
  - are likely to contribute to the basic knowledge of the species biology or ecology; or
  - are likely to identify, evaluate, or resolve conservation problems.

For **ESA-listed and MMPA-depleted** species, also:

- Discuss why your project must involve ESA-listed or MMPA-depleted species.

- Discuss how your project will, as applicable:
  - contribute to the objectives identified in the species' recovery or conservation plan or otherwise respond to recommendations of a scientific body charged with management of the species;
  - contribute significantly to understanding the basic biology or ecology of the species; and/or
  - contribute significantly to identifying, evaluating, or resolving conservation problems.

- If your goals are to directly enhance the survival or propagation of an ESA-listed or MMPA-depleted species:
    - Explain how the project will:
      - contribute to maintaining or increasing distribution or abundance,
      - enhance the health or welfare of the species, and/or
      - ensure the recovery of the species in the wild.

    - If captive maintenance for enhancement is proposed, explain how you will:
      - maintain a viable gene pool,
      - increase productivity,
      - provide necessary biological information, or
      - establish animal reserves.

    - How does the benefit of removing animals from the wild into captivity outweigh alternatives that do not require removal from the wild? What

plans are in place for returning animals and any offspring to the wild? Justify maintaining animals in permanent captivity.

Project Description (up to 64,000 characters)

- **Your permit may only authorize what you describe in your application**.

- Provide a **brief overview** of a day in the field and the suite of activities you intend to perform on each animal during an encounter or capture event including where your work will happen, especially if different projects occur in different locations.

- **Methods**: Provide **clear descriptions of all methods** for each species, by MMPA stock or ESA Distinct Population Segment (DPS) where applicable, and the **number of animals by age class[4] and sex** you expect to take by each method/procedure **annually**.

- The **methods must match what is in the take table**.
  - There should be a narrative description for each Take Action[5], Observe/Collect Method[6,] and Procedure[7] in the take table, and the take numbers and procedures in the narrative must match the table.
  - Reference take table lines that correspond to the methods, as needed.
  - If you have multiple projects, it is helpful to name them by project number or title and include project names in the Details column of the take table.

- Indicate the **number of times known individuals will be intentionally taken** in a year (e.g., recapture for instrument retrieval or multiple biopsy samples per year). If recapturing animals, indicate whether they will be immediately released without processing or fully or partially processed (i.e., what will be done to them on recapture).

- Indicate if some animals may be **unintentionally recaptured** in a year, and if so, how many and whether they will be immediately released without processing or fully or partially processed.

- If some animals will only get a **subset of procedures**, list them on separate rows in the take table and make sure it is clear in the narrative. Explain how you decide which animals receive which procedures.

---

[4] Define how age classes (e.g., neonate, calf/pup, juvenile, subadult, adult) are differentiated, by taxa or species.

5 The Take Action is a generalized overview of how animals will be taken. You may only have one Take Action for each Take Row. Examples: Capture/handle release; Harass.

[6] The Observe/Collect Method is the method of observation (e.g., survey, vessel) or capture (e.g., net). Select only one observe/collect method per take table row.

7 Procedures are the individual activities you conduct on animals that have been captured/taken by a certain Take Action and Observe/Collect Method. Examples: sample, blood; external tagging.

- If working with **lactating females and dependent calves or pups**, indicate their minimum age (e.g., pups greater than five days of age without an umbilicus attached, calves greater than six months of age, females with calves less than six months of age). Indicate if working with pregnant females, and if so, estimated trimester. These life stages should be on separate rows in the take table.

- **Figures and photographs** are useful to illustrate your methods (e.g., tags and instrument attachments, nets and net deployment), especially for ESA consultations. You can attach them on the Supplemental Information page.

- Cite **references** for the methods where applicable, but do not substitute a literature citation for a complete description of the methods.

- Include a brief statement of the **purpose** of each procedure/how it relates to meeting your objectives.

- **Mitigation** measures that are standard protocols may be included in this section or in the Humane Take and Measures to Minimize Impacts section below.

- See table below for examples of information to include when describing your procedures/methods.

Take action/ procedures	**Details to include in methods**
Active acoustics	-Sound source (e.g., sidescan sonar, underwater speaker, acoustic deterrent device) -Source depth in water column -Frequency (bandwidth) -Maximum source level -Maximum received level -Distance to target and non-target animals -Signal duration and duty cycle -Duration of exposure -Ambient sound level, when known -Propagation loss model results, when available -Post playback monitoring
Administer drugs or other substances (e.g., stable isotopes)	-Name of each drug/chemical and its purpose -Name of any drug reversal -Emergency response drugs and protocols -Dosage of each drug/chemical -Delivery method and route (e.g., dart gun, inhalation, intramuscular, intravenous, subcutaneous, topical); if dart gun, distance of animal to water -Location of administration on body -Duration of drug -Personnel that would administer drug (e.g., veterinarian or veterinary technician; state license requirements) -Post drug administration monitoring

Take action/ procedures	Details to include in methods
Aerial and vessel surveys (manned)	-Type of survey craft and vessel -Type of survey (e.g., line transect, photogrammetry) -Number of surveys per year -Minimum and maximum altitude/approach distance -Air/vessel speed -Protocols for breaking track to ID species -Duration spent with group or individual/day
Aerial surveys using unmanned aircraft systems (UAS)	Same general questions above for aerial surveys and also the following: -Type of UAS – fixed wing or vertical takeoff and landing (VTOL) -Payload components – what is the UAS carrying and for what purpose? -Size and mass of UAS -Will the UAS ever be beyond the line of sight? -Does the device have an auto-return feature should the device fail? -Ground control station description (what it is, where it will be located - on shore or on vessel, number of stations, and how close the station will be to animals) -Spotter roles (e.g., one spotter monitoring the UAS, another for monitoring the ground control station) -Battery life -Do you have the appropriate FAA permits/authorizations (including pilot licenses)?
Auditory brainstem response or evoked potential	-Type of measurement equipment (suction cup or needle electrodes) -Emitted sounds -Handling/restraint methods (including anesthesia/sedation, see above) -Handling duration -Data collection and analysis method -Whether animal will be transported to a facility (complete the Transport Section in Take Table)
Capture and restraint	-Type of capture (e.g., hand, hoop net, trap) and gear description (e.g., net dimensions and mesh size) -Deployment methods (e.g., on foot or boat approach and net deployment) -Configuration, duration, and monitoring of net sets (how often net set is checked) -Number of animals captured at a time -Number of animals processed at a time -Anesthesia/sedation (see Administer Drugs above) -Dimensions and type of holding container -Number and roles of personnel (must be adequate to perform all activities without harming excess captured animals; else they must be released immediately) -Additional equipment or personnel necessary for capturing and handling excess numbers -Duration of restraint/holding from capture to release -If capturing females with calves/pups, describe how calves/pups would be held, whether procedures would be conducted on them, duration separated, and how they would be reunited -Release

Take action/ procedures	Details to include in methods
Export/import samples	-Type of sample (e.g., blood, muscle) -Country sending samples to, country of origin, or high seas -Designated port of entry/import or export -How sample/animal is taken in country of origin or high seas and legal take authority -Type of storage/shipping, including preservatives, etc. -Sample preservation and analysis -Re-import/export if samples remain after analysis
External instruments (a table is helpful for multiple tag types)	-Type of instrument -Location on body -Dimensions -Mass in air or water -Percentage of body mass -Size/age class of animals to receive each tag type -Maximum footprint/maximum number of tags/animal -Method of attachment (e.g., remote suction cup or dart barb fired from cross bow; restraint and epoxy or harness) -For remote deployment: • minimum approach distance and angle • number of attempts per animal/day (include total number of attempts needed for all work if requesting multiple procedures [e.g., tag and biopsy] on same animal during same encounter) -Dart or tag penetration depth -Will it be coated with antifouling paint? -Duration of attachment procedure -Duration of instrument retention on animal -Release mechanism or recapture to remove -Type of data collection (e.g., archival requiring retrieval) -How will you determine which animals receive which tags or more than one tag? -Post-tag monitoring
Internal instruments	-Type of instrument -Dimensions -Mass in air or water -Percentage of body mass -Size/age class of animals to receive an internal instrument -Location within body -Cleaning/sterile preparation -Insertion method (e.g., surgical implant, injection, stomach tube) -Local anesthetic or anesthesia/sedation (see Administer drugs) if applicable -Personnel that would implant tag (e.g., veterinarian or vet tech – see Personnel section below) -Prophylactic antibiotic use (see Administer drugs above) -Duration of insertion procedure -Duration of instrument retention -How stomach pills are voided -Type of data collection

Take action/ procedures	Details to include in methods
Intrusive sampling (e.g., blood, blubber, muscle, skin); remote or under restraint	-Type of tissues -Size or volume of sample (diameter and depth or total volume) -Location on body -Number of samples per animal per capture event and per year -Sampling intervals (e.g., for serial blood or biopsy samples) -Equipment (e.g., dart and stopper depth, needle, punch, scalpel) -Equipment disinfection -If restrained: cleansing site; left open or wound closure -If remote: • collection method (e.g., dart fired from rifle) • minimum approach distance • number of attempts per animal/day (include total number of attempts needed for all work if requesting multiple procedures [e.g., tag and biopsy] on same animal during same encounter) -Sample preservation and analysis
Marking (e.g., bleach, flipper tag, freeze brand, hot brand, paint, PIT tag)	-Type of mark -Location on body -Method of application -Disinfection procedures -Duration of mark (e.g., until molt) -Dimensions of tag or mark -Total number and combination of tags or marks on each animal
Non-intrusive sampling (e.g., behavioral observations via focal follows and ground surveys, breath sampling, collecting scat/spew, passive acoustic monitoring, photo-ID, photogrammetry, remote video monitoring, underwater photography)	-Approach method -Sampling method -Minimum and maximum approach distance -Within sight of animals or not (e.g., from a blind)? -Frequency of observations/sampling -Number of approaches/attempts per animal/day -Duration of observations/sampling/day -Data or sample collection and analysis -If conducting underwater photography/videography, specify the method (e.g., snorkeling, underwater pole cam, or divers that could use typical gear or rebreathers) and number of individuals in the water at a given time

- **Non-target species and conspecifics**: Indicate the estimated number and type of non-target species that may be encountered in your study area annually, and whether and how they may be incidentally harassed, captured, or otherwise affected. This includes but is not limited to conspecifics as well as other marine mammals and ESA-listed species such as sea birds and sea turtles.
    - Explain how you will avoid them or minimize impacts to them (e.g., not in area during time of study; would not approach closer than 100 meters; would halt operations until non-target species moved out of study area).

- For ESA species designated by DPS, specify the DPSs that are likely to be encountered.
- If takes to non-target animals may occur, include these on separate rows in the Take Table to include incidental take (e.g., harassment or capture) of non-target conspecifics or other species.

Project Supplemental Information

Attach a Supplemental Information File

- You may attach supplemental files here.

****Status of the Affected Species*** (up to 2,000 characters)

- As applicable, indicate the status of the species or stock as follows:
  - ESA - threatened or endangered;
  - MMPA - depleted or strategic; and
  - Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) - Appendix I, I, or III

  Species information is available at the following web sites:
  http://www.nmfs.noaa.gov/pr/species/
  http://www.fws.gov/
  http://www.cites.org/

****Lethal Take*** (up to 2,000 characters)

- If authorization for serious injury[8] or mortality[9] (euthanasia/intentional[10] or accidental/unintentional) is proposed:
  - What activities could result in mortality?
  - Explain why it's not feasible to use other methods that won't result in mortality.
  - If authorization for mortalities of ESA-listed or MMPA-depleted species is proposed, explain how the research will directly benefit the species or fulfill a critically important research need.
  - What is the maximum number of animals of each species/DPS and age class that could be seriously injured, unintentionally die, or be euthanized annually? Over the life of the permit?

[8] A serious injury is an injury that will more likely than not result in mortality.

[9] Caused by the presence or actions of researchers including but not limited to deaths or serious injuries sustained during capture and handling, while attempting to avoid researchers or escape capture, or resulting from infections related to intrusive procedures such as sampling or tagging. This does **not** include a fetus if a pregnant female dies.

[10] This includes unintentional euthanasia for humane reasons (e.g., due to serious injury during research).

- Justify the number of mortalities.

- How is euthanasia decided, conducted, and who conducts it?

- What are the protocols for necropsy and carcass disposal?

- What are the protocols for disposition of dependent pups or calves if lactating females may die as a result of your actions?

Anticipated Effects on Animals (up to 64,000 characters)

- Using the **best available science** (i.e., literature citations or other cited data sources) and your experience (e.g., personal communication), discuss how each take action and procedure listed in the take table (e.g., tissue sampling, marking, and instrumentation) will affect target and non-target animals (short-term and long-term).

- Include such things as typical **behavioral and physiological responses**, worst-case responses, % of animals that normally respond, how long it takes for animals to recover, and the time it takes wounds to heal.

- Also include an assessment of such things as:
  - condition of animals on recapture/resight
  - recovery from sedation and handling
  - post-release behavior (immediate and long-term)
  - repopulating rookeries/haul outs after flushing
  - healing from intrusive sampling
  - healing from intrusive tag deployments
  - tag retention
  - effects to lactating females and their dependent young

- For **novel procedures**, discuss the most likely anticipated responses based on literature from studies on other species, if available.

- Briefly summarize any **mortalities** that have occurred during the previous ten years of your permitted research using the same or similar techniques; include circumstances and cause of death.

- Discuss the anticipated **effects on the species or stock**, especially if mortalities or reproductive effects are possible. On what is your determination based?

Humane[11] Take and Measures to Minimize Negative Effects (up to 64,000 characters)

- **Humane determination**: Explain how you determined your methods involve the least possible degree of pain and suffering possible and why there are no feasible alternative methods to obtain the desired data or results.

[11] Humane means using the method that involves the least possible degree of pain and suffering possible.

- Where an IACUC (Institutional Animal Care and Use Committee) review is required[12], to support a humane determination under the MMPA and compliance with the Animal Welfare Act, attach
  - the IACUC protocols submitted
  - any IACUC comments or recommendations
  - the signed IACUC approval (or status of approval)

- **Mitigation and monitoring**: You may include mitigation and monitoring protocols here, or in the Project Description section or Anticipated Effects section above. If included in another section, simply reference the section where the following information is found:

- For each Take Action, Observe/Collect Method, and Procedure, describe your standard **mitigation to avoid or minimize the potential for adverse impacts** identified above.

- Describe your short- and long-term **post-procedure monitoring** protocols.

- If monitoring or mitigation is not feasible for specific procedures, species, situations, etc., explain why.

- **Research Coordination**: Describe how you collaborate or coordinate with other researchers in your action area. Who are they? Explain how this will occur and how it will minimize impacts. For example, will it involve sharing resources, samples or data; timing surveys to minimize disturbance, etc.?

Attach a References File

- Attach a **bibliography** of references cited in this application. Referenced materials must be made available upon request, as needed for evaluation of the application, or preparation of any necessary ESA or NEPA analyses.

****Resources Needed to Accomplish Objectives*** (up to 2,000 characters and attach files if necessary)

- Explain how your expertise, facilities, and resources are adequate to accomplish your proposed objectives and activities.

- Attach copies of any relevant formal research proposals, contracts, grant awards, or letters of agreement that would demonstrate financial or logistical resources.

- Indicate the status of any other international, federal, state, or local authorizations you have applied for, secured, or will apply for.

---

[12] Any marine mammal research that involves an invasive procedure, and which can harm or materially alter the behavior of the animals under study **requires an IACUC review and approval.** If an applicant does not have an IACUC, an alternate IACUC (e.g., of a Co-investigator or a local university/research institution) may be used.

Disposition of Tissue Samples (up to 2,000 characters)

- Indicate the disposition of any remaining samples after your project is complete.
    - State whether samples will be consumed in analysis, destroyed, or exported back to facility/researcher
    - If applicable, list the name and location of the person or institution that will store/curate samples. Indicate if you will retain legal custody of the archived samples or if you wish to permanently transfer the samples once your project is complete.

Public Availability of Product/Publications (up to 800 characters)

- Describe the end products of your proposed project and how they will be made available to the public.

Captive Information

If you will be working with animals in captivity (permanent or temporary), including removing animals from the wild into captivity and research or enhancement on captive or rehabilitating animals**,** address the following ***as applicable*** (explain if not applicable):

a) If removing animals from the wild, explain why removal is necessary and why you cannot obtain suitable animals from captive or rehabilitated stock.

b) If the source stock is to be beached/stranded marine mammals undergoing rehabilitation, indicate the name and location of the rehabilitation facility.

c) If the source stock is from animals already in captivity (other than animals in rehabilitation) indicate the name and location of the facility and, where possible, identify the specific animals (by NOAA ID number if applicable) to be involved in the proposed activity.

d) Attach a copy of any license or registration issued by the Animal and Plant Health Inspection Service (APHIS) of the U.S. Department of Agriculture, any outstanding variances granted, and the most recent APHIS inspection report.

e) Attach the protocol forms submitted to the appropriate Institutional Animal Care and Use Committee (IACUC) established under the Animal Welfare Act (AWA), the IACUC approval, and any comments and recommendations of the IACUC.

f) Attach a written statement from the responsible veterinarian or expert certifying that the facilities, methods of care and maintenance, and methods of transport will be adequate to ensure the well-being of the animals and will comply with all care and transport standards established under the AWA.

g) Describe the care and maintenance of the animals, including a complete description of the facilities where they will be maintained. This includes but is not limited to:

- dimensions of the pools or other holding facilities

- number, sex, and age of animals by species to be held in each
- water supply, amount, and quality
- diet, amount and type
- sanitation practices.

h) Indicate whether a captive breeding program will be established and, if so, provide justification in accordance with the species conservation or recovery plan as applicable for enhancement activities. *For ESA-listed species*, indicate if you are willing to participate in a captive breeding program if requested by NMFS.

i) Indicate the disposition of captive animals at the termination of research or enhancement activities.

j) If release of captive animals to the wild is proposed, state the length of time the animals will be held, no matter how temporary, and describe the protocols for the release, including post-release monitoring protocols. Include in the release protocol mitigation for the following:
- disease transmission between released animals and the wild population
- potential genetic exchanges between introduced and endemic stocks
- ability of the released animals to forage and protect themselves from predators
- elimination of behavioral patterns acquired during captivity that could prove detrimental to the released animals or the social structure of local populations.

Project Locations

- You will first describe where you plan to work. Then, for each location, you will use the Take Table to list the species you expect to encounter and the take procedures you will conduct.

- Add New Location: provide information about one (or more) study areas
  - General area (ocean basin)
  - State(s), as applicable.

- Enter Location Details, as applicable:
    - Waterbody: enter names of rivers, estuaries, bays, etc.
    - Latitude and longitude of your study area
    - River miles (Begin Mile and End Mile)
    - Limits of your study area (e.g., to the U.S. EEZ, to the edge of the continental shelf, to 50m depth)
    - Names of land masses where research will occur (e.g., islands, rookeries).

- Attach File: Attach a high quality map(s) with the correct scale that clearly shows the location of your proposed activity and any environmental aspects of interest. If possible, include a shapefile, Google Earth kmz/kml, or ASCII text file with lat/long data and the associated basic metadata with your electronic application submission.

Take Table

The take table represents the **estimated** number of animals you may take **annually** during your research.

The options that appear in the dropdown menus in the take table are based on the species group you indicated in the Pre-application Guide and the location that you have selected. If you are having difficulties, please first check that the previous fields were entered correctly.

Columns you will fill out in the take table:

1) **Select**: Leave this box blank unless you need to copy, move, or delete the line following the instructions above.

2) **Species**: Use the drop down list to select. Species are listed alphabetically by common name and/or category (e.g., dolphin, bottlenose). If the species you are looking for is not on the drop-down menu, double check your location (species are populated based on location). If you are still having problems, contact us at 301-427-8401.

3) **Listing Unit/Stock**: Select the applicable ESA listing unit/stock. Choose Range-wide if, for example, your location has multiple stocks of the same species and you cannot distinguish between them while in the field.

4) **Production/Origin**: Select from the drop-down list. Categories include Wild, Captive, Rehabilitation Facility (for marine mammals only), or All.

5) **Life Stage**: Select from the drop-down list. You may enter take information for more than one life stage (e.g., adult versus juvenile) on separate rows or select a combination of life stages for one take category. Include specified ages (including minimum mass/age of pups and calves) if they differ for each procedure in the Details column.

6) **Sex**: Select from the drop-down list. If your activity targets only one sex, indicate which. If it targets both and they can be targeted separately, enter separate rows for male and female; otherwise select Male and Female.

7) **Expected Take**: This represents a reasonable estimate of the maximum number of individuals you will take, import, or export, annually.

   For cetaceans, you will count every animal you approach[13] within a certain distance, regardless of whether a behavioral reaction has occurred.

[13] An "approach" is defined as a continuous sequence of maneuvers involving a vessel, including drifting, directed toward a cetacean or group of cetaceans closer than 100 yards for baleen and sperm whales and 50 yards for all other cetaceans.

- Only count 1 take per cetacean per day including all approaches in water and attempts to remotely sample (e.g., biopsy, breath sample, photograph, tag, or ultrasound).
- Count 1 take per cetacean per day for animals observed during sound playback trials.
- During manned aerial surveys flown at an altitude lower than 1,000 ft, count 1 take per cetacean observed per day, regardless of the number of passes over the same animal.
- During Unmanned Aircraft System (UAS) surveys, count 1 take per cetacean approached per day, regardless of the number of passes.

For pinnipeds, you will only count and report 1 take per pinniped per day for those that show movement[14] or flushing[15] (excluding alert[16]) to an approach or other permitted activity, regardless of the number of approaches and behavioral responses of the same individual in a day.

8) **Takes Per Animal**: Estimate the number of times the same individual will be taken annually, if known.

9) **Take Action**: The "take action" is a generalized overview of how animals will be taken. If more than one action is proposed, you must enter the takes on separate rows.

10) **Observe/Collect Method**: Select the method of observation (e.g., survey, vessel) or collection/capture. Select only one observe/collect method per row. If various methods will be used, you must provide take information in separate rows for each observe method.

11) **Procedures**: Provide specific information on the research activities that will be conducted. A separate pop-up window will appear with a species-specific list of activities. Hold down the Control key to select all activities to be performed concurrently. Choose Other if your proposed activity is not listed. In the Details box (see below), briefly describe what the Other means.

12) **Transport**: If you chose transport as a Procedure, enter information about the transport.

[14] Movements in response to the source of disturbance, ranging from short withdrawals at least twice the animal's body length to longer retreats over the beach, or if already moving a change of direction of greater than 90 degrees.

[15] All retreats (flushes) to the water.

[16] Seal head orientation or brief movement in response to disturbance, which may include turning head towards the disturbance, craning head and neck while holding the body rigid in a u-shaped position, changing from a lying to a sitting position, or brief movement of less than twice the animal's body length.

a) **Mode(s) of transportation**: Describe the mode of transportation. Include a description of the vehicle or other platform used to transport animals.

b) **The name of the transportation company, if applicable, and the qualifications of the common carrier to transport live animals**: If a contractor or other entity will do the transportation, enter information in the box. Otherwise, click on N/A.

c) **Maximum length of time from capture to arrival at destination**: How long will the animals be in transport?

d) **Description of the container (e.g., cage, tank) used to hold the animal during transit**: Include the material of the container and its dimensions.

e) **Any special care procedures (e.g., moisture, medicines) to be administered during transport**: How will the animals be cared for during transport?

f) **A statement as to whether the animals will be accompanied by a veterinarian or some similarly qualified person**: If so, give the name, affiliation, contact information for each person.

g) **Destination**: Use the drop down list to select the destination. If your destination is not on the list, click on the "New Facility" button to add it. If the animals will be taken to a laboratory or aquarium, provide details of the location. If the animals will be released in another waterbody, provide details of the location.

h) **How will the animals be contained at the destination facility?**: Describe the containment system for the animals, quarantine procedures, and effluent treatment.

i) **The final disposition of the animals**: Describe, for example, whether the animal will be released or retained in permanent captivity.

13) **Begin Date**: Populated with the Begin Date you entered on the Project Information page. You may change the date to coincide with a specific project time shorter than the overall duration of the project. You cannot enter a date that is earlier than your original Begin Date.

14) **End Date**: Populated with the End Date you entered on the Project Information page. You may change the date to coincide with a specific project time shorter than the overall duration of the project. You cannot enter a date that is later than the End Date you previously entered.

15) **Details**: Enter up to 255 characters in this text box to provide details on each take table row. This is especially useful for clarifying age class, takes, specific activities, or projects.

National Environmental Policy Act (NEPA) Considerations

In addition to providing information on effects to the target and non-target species in other sections of the application, provide information as requested below on potential environmental effects to determine if your activity may be categorically excluded from the requirement to prepare an environmental assessment or environmental impact statement under NEPA. If you believe any of the criteria are "not applicable" you must explain why.

1) If your activities will involve equipment (e.g., scientific instruments) or techniques that are new, untested, or otherwise have unknown or uncertain impacts on the biological or physical environment, please describe the equipment and techniques and provide any information about the use of these in the natural environment. In addition, please discuss the degree to which they are likely to be adopted by others for similar activities or applied more broadly.

2) Describe the physical characteristics of your project location, including:
   a. Whether you will be working in or near unique geographic areas including but not limited to Critical Habitat for endangered or threatened species, Essential Fish Habitat, National Marine Sanctuaries, Marine Protected Areas, State or National Parks, Wilderness Areas, Wildlife Refuges, Wild and Scenic Rivers, etc.

   b. Next, discuss how your activities could impact the physical environment in those locations, such as by direct alteration of substrate during use of anchoring vessels or buoys, erecting blinds or other structures, or ingress and egress of researchers, and measures you will take to minimize these impacts.

   c. Is there potential to cause direct or indirect physical, chemical or biological alterations of the waters or substrate, including loss of, or injury to, benthic organisms (e.g., sea grass, corals), prey species and their habitat, and other ecosystem components? Could your actions reduce the quality and/or quantity of Essential Fish Habitat? If so, please provide additional details below:
      - What is the degree of alteration (low, medium, high)?
      - Approximately how much area (square footage) of habitat/substrate (e.g., seafloor, estuary or river bed) will be disturbed?

3) Briefly describe important scientific, cultural, or historic resources (e.g., archeological resources, animals used for subsistence, sites listed in or eligible for listing in the National Register of Historic Places) in your project area and discuss measures you will take to ensure your work does not cause loss or destruction of such resources. If your activity will target animals in Alaska or Washington, discuss measures you will take to ensure your project does not adversely affect

the availability (e.g., distribution, abundance) or suitability (e.g., food safety) of these animals for subsistence uses.

4) Discuss whether your project involves activities known or suspected of introducing or spreading invasive species, intentionally or not, (e.g., transporting animals or tissues, discharging ballast water, use of boats/equipment at multiple sites). Describe measures you would take to prevent the possible introduction or spread of non-indigenous or invasive species, including plants, animals, microbes, or other biological agents.

Project Contacts

As the person entering the application, you will automatically be assigned the following roles: **Applicant/Permit Holder, Principal Investigator,** and **Primary Contact**. See Chapter 2 for directions on how to change who is assigned to these roles, and the table below.

Project Contact	Must be named in the permit application	Able to make changes to application, request changes to the permit, and submit reports; will receive automatic emails from APPS.	Description of qualifications required
Applicant/ Permit Holder	✓	✓	✓
Applicant or Responsible Party*	✓	✓	
Principal Investigator	✓	✓	✓
Primary Contact	✓	✓	
Co-Investigator	✓		✓
Authorized Recipients	✓		
Research Assistants			

* The Applicant or Responsible Party may also be the PI or a CI if participating in the research; therefore, the description of qualifications is required if they are listed as the PI or a CI.

To prevent duplicate entries, **you MUST ALWAYS SEARCH the database for the person before entering a new contact.** To facilitate the search, start with only putting the last name in APPS search box.

A project must have a **Responsible Party** if the Applicant/Permit Holder is an organization, institution, or agency. The Responsible Party or Applicant/Permit Holder is an official who has the legal authority to bind the organization, institution, or agency and is ultimately responsible for the activities of any individual operating under the authority of the permit.

The **Principal Investigator** (PI) is the individual primarily responsible for the take, import, export, and any related activities conducted under the permit. There can only be one PI on a permit. The PI:

- must have qualifications, knowledge and experience relevant to the activities authorized by the permit
- must be on site during activities conducted under the permit unless a Co-Investigator is present to act in place of the PI
- may also be the Applicant/Permit Holder and Primary Contact.

Co-investigators (CIs) are individuals who are qualified and authorized to conduct or directly supervise activities conducted under a permit without the on-site supervision of the PI.

- You may add CIs to the application if the PI will not always be present during the permitted activities.
- CIs can also be added or removed once a permit has been issued.

Authorized Recipients (ARs) are persons or institutions authorized to receive samples for the purposes of analysis or curation related to the objectives of your permit. The PI and CIs may also be ARs. ARs should not be CIs if they are only performing the analysis and are not overseeing the study or publishing the results (i.e., they are only providing an analytical service).

Include a table listing the names of the PI and CIs, and the specific procedures they will oversee or conduct. **Attach the following table on the Supplemental Information page**.

Example Table Attachment: Personnel Roles

Name/Affiliation	Role	Activities
Researcher name, Affiliation, City, State	Principal Investigator, Co-investigator, or Authorized Recipient	Specific activities they will conduct under the permit and whether they are supervising
John Smith, Ph.D., University A, City, State	Principal Investigator and Authorized Recipient	Supervise and perform all activities under the permit
Jane Smith, Institution B, City, State	Co-investigator	All activities excluding anesthesia during captures and UAS
Jane Doe, Ph.D., Institution C, City, State	Co-investigator	Conduct photo-ID
John Doe, Ph.D., University D, City, State	Co-investigator and Authorized Recipient	Collect remote skin/blubber biopsy samples and create cell lines
Laboratory E, City, State	Authorized Recipient	Receive subset of skin/blubber samples for DNA sequencing

Qualifications and Experience
Federal Regulations require that persons authorized as the PI or CIs have qualifications commensurate with their duties. In addition, the names of the PI and CIs are sent to the NOAA Office of Law Enforcement to determine if any violations of the MMPA or ESA and other environmental laws have occurred.

The permit applicant is therefore required to submit the following information about the qualifications and experience of the PI and all CIs to demonstrate they have qualifications commensurate with their duties as stipulated in the Personnel Table. **A CV or resume must be up to date and contain all relevant information below**. If sufficient experience is not provided, additional information will be required and the personnel will not be authorized to conduct the proposed activities unless sufficient experience is demonstrated.

1) **Contact information -** All documentation submitted will be publicly available. **DO NOT include personal information** (e.g., social security number, date of birth, nationality, or home phone/ address-unless it is also the business phone/address).
   - Name (first middle last)
   - Business phone, e-mail, and mailing address

2) **Relevant education and training**
   - Degree, major, name of institution, year received
   - Applicable certificates or licenses, year received
   - Other relevant training or certification, year received

3) **Relevant experience**
   - Job title, affiliation/location, and dates of relevant experience
   - Detailed description of when and how the individual obtained training and experience in the methods they will be conducting and/or supervising as outlined in the Personnel Table. This should include objective metrics such as:
     - The specific level of training received and who trained them
     - The number of hours/months/years they have been performing the activities
     - Which and how many procedures they have performed successfully and on what species/age class (this is especially important for intrusive procedures such as blood and biopsy sampling, intrusive tagging, etc.)
     - Whether and to what extent they have performed the activities without supervision or supervised the proposed activities
     - What permits they have been PI or CI under and for what species and activities

4) **List of grants awarded demonstrating available resources relevant to the proposed activities or history of securing resources for similar work**

5) **Annotated publication history relevant to the activities being conducted under the permit**

Submit Application

See Chapter 2 for how to submit your application and check on its status.

Additional Information

Under section 104(c) of the MMPA and section 10(a)(1)(A) of the ESA, persons may be authorized to take marine mammals and threatened and endangered species, respectively, for purposes of scientific research or enhancing the survival of the species. Interested persons are required to submit an application in accordance with the Acts and the implementing regulations at 50 CFR part 216, subpart D, and 50 CFR part 222. These instructions for applying for a research or enhancement permit are drawn from, but do not substitute for, ESA regulations and MMPA regulations. These regulations are available at the following web site: http://www.gpo.gov/. MMPA section 104 is available at: http://www.nmfs.noaa.gov/pr/pdfs/laws/mmpa104.pdf. ESA section 10(a)(1)(A) is available at: http://www.nmfs.noaa.gov/pr/pdfs/laws/esa_section10.pdf. Under NEPA, Federal agencies must assess the effects of federal actions on the environment. Under section 7 of the ESA, Federal agencies must ensure that the permitted activities will not jeopardize the continued existence of the species or result in adverse modification of critical habitat.

Paperwork Reduction Act Statement

The information requested in this application is required and is used to determine whether the activities described in the application are consistent with the purposes and policies of the Acts and their implementing regulations.

Public reporting burden for this collection of information is estimated to average 50 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to the Chief, Permits and Conservation Division, Office of Protected Resources, F/PR1, NOAA/National Marine Fisheries Service, 1315 East-West Highway, Silver Spring, MD 20910.

All permit documentation, including the application, permit and amendments, reports, inventory information, and any other associated documents are considered public information and as such, are subject to the Freedom of Information Act. Notwithstanding any other provision of the law, no person is required to respond to, nor shall any person be subject to a penalty for failure to comply with, a collection of information subject to the requirements of the Paperwork Reduction Act, unless that collection of information displays a currently valid OMB Control Number.

OMB No. 0648-0084; Expires: MM/DD/YYYY