

Endangered Species Act Section 7 Effects Determination Guidance
National Marine Fisheries Service
Southeast Regional Office, Protected Resources Division
March 2014

The purpose of this document is to provide general guidance on considerations for making effects determinations for Endangered Species Act (ESA) Section 7 consultations.

Effect Determination Definitions

In order to fulfill their ESA Section 7 duties for an action they propose to implement, fund or authorize, federal action agencies must make one of the following preliminary determinations with respect to threatened or endangered species¹ or designated critical habitat:

- 1. No effect;**
- 2. May affect, but is not likely to adversely affect; or**
- 3. May affect, and is likely to adversely affect**

These effects determinations must be based on all direct and indirect effects of the agency action, as well as the effects of activities that are interrelated to or interdependent with the federal agency's proposed action.

- 1) **“No effect”** means ESA-listed species or critical habitat will not be affected, directly or indirectly. Generally, this means no ESA-listed species or critical habitat will be exposed to any potentially harmful/beneficial elements of the action
 - a) Some examples of when a “no effect” conclusion would be reached are:
 - i) The species doesn't occur at all in the action area, meaning not just the immediate project area but it will also be absent from all areas where the project will have direct or indirect environmental effects.
 - ii) The species occurs in the action area seasonally, and the project will be timed to avoid their presence. For example, a project in the South Atlantic that will be completed in the summertime and has no lasting environmental effects will not affect right whales, which would only potentially occur there from November – April.
 - iii) The species occurs in the action area and may be present at the time of the project, but there are no plausible (i.e., no credible) routes of effects (beneficial or adverse) to the species. A route of effect could be implausible if it would require a series of exceedingly rare events to occur in a particular sequence, in order to impact individuals of a listed species or habitats. A single event could also be in this category if the route of effect is so unrealistic its occurrence would be implausible.

¹ These determinations are at the individual scale, not the population or species scales.

- b) For critical habitat, some examples of reasons to reach a “no effect” conclusion would be:
- i) The project and its direct and indirect environmental effects don’t occur in any designated critical habitat area.
 - ii) The project occurs inside designated critical habitat, but no “essential features” of critical habitat are present or will be affected.
 - (1) *Important exception*: “Essential features” do not necessarily have to be present at the time of the project to be affected. Some essential features are seasonal or temporary (e.g., mobile prey) or are the product of certain natural processes. An action that would interrupt the natural development or occurrence of the essential feature is still adversely affecting that feature, even if the feature is not present. An example might be a fish that requires spawning habitat of a certain water depth and a project with water control features that is preventing those depths from periodically occurring, as they would from natural water level variations.
 - (2) While this example considers effects to the essential features of CH, effects to habitat in general could also result in harm to the species, if the habitat impacts result in actual injury or death of individuals of a listed species.
 - iii) The project occurs inside designated critical habitat, and the essential features are present, but the project presents no plausible route of effect (beneficial or adverse) to the features. For example, the essential feature of *unobstructed migratory pathways for sturgeon through a waterbody* would not be affected by a proposed seawall replacement project that is parallel to the shoreline. Or, the essential feature of *settlement substrate* for corals would not be affected by a project that only involves surface activities with no plausible routes of effects to the sea floor.
 - (1) *Important exception*: An adverse effect to (or prevention of) the conservation function the features provide to the species is an adverse effect on the critical habitat, even if the feature itself is not directly affected. For example, a project that creates a barrier that prevents species from accessing areas of critical habitat containing the features may eliminate the conservation value of those features to the species by preventing access.

The National Marine Fisheries Service (NMFS) is required to make its own determinations relative to the potential effects of all aspects of a proposed federal action subject to consultation, including aspects that are believed to have no effect. However, NMFS does not provide concurrence on an action agency’s no effect determination. It is prudent to document in project records the rationale behind your ‘no effect’ decisions as it will act as the official ESA consultation Agency’s no-effect determination.

“May affect, but not likely to adversely affect” means that all effects are *beneficial, insignificant, or discountable*. These conclusions are not made on the “net” effects of the action. Any adverse impact to an individual animal of an ESA-listed species, whether interim or short-term, regardless of any beneficial conservation measures or mitigation activities, requires ESA Section 7 consultation.

- a) *Beneficial* effects have an immediate positive effect without any adverse effects to the species or habitat. Beneficial effects are usually discussed when the project has a clear link to the listed species or its specific habitat needs and consultation is required because the species may be affected.
 - i) Example: Removing a man-made barrier that once blocked upstream spawning habitat, during a time of year when no ESA-listed species are likely to be present.

- b) *Discountable* effects are those that are extremely unlikely to occur. For an effect to be discountable, there must be a plausible adverse effect (i.e., a credible effect that could result from the action and that would be an adverse effect if it did impact a listed species), but it is very unlikely to occur.
 - i) Example: The risk of a slow-moving vessel, such as sailboats, striking a sea turtle is extremely unlikely to occur.
 - (1) One thing to keep in mind with discountable is that the chance of adverse effects increases with the frequency and duration of the action. Discountable may be the proper determination if the action is one-time or infrequent; it may not be if the action is frequent, or continuous.
 - (a) Example: If a military exercise with in-water explosions is repeated many times a year, the probability of an individual animal being injured will increase correspondingly. For this reason the action agency must not separate what is truly a single program or action into a series of individual actions for the purposes of consultation.
 - (2) Whether an effect is discountable is primarily a question of risk. Including well-thought-out risk management measures to avoid injuring listed species can be an effective way to ensure that an effect is discountable.

- c) *Insignificant* effects relate to the size or severity of the impact and include those effects that are undetectable, not measurable, or so minor that they cannot be meaningfully evaluated. Insignificant is the appropriate effect conclusion when plausible effects are going to happen, but will not rise to the level of constituting an adverse effect. That means the ESA-listed species may be expected to be affected, but not harmed or harassed.
 - i) Example: A sea turtle avoids an area because of construction, and thereby avoids being injured directly by project equipment. However, you have still predicted that sea turtles will be affected, by evidence of their avoidance. If the effect of the avoidance does not rise to the level of disturbance, and has no realistic potential to lead to harm or harassment of the animal, the effect is insignificant.

- d) For critical habitat, you need to first assess the potential effects to each of the essential features and determine whether the effects are beneficial, discountable, or insignificant. In the context of critical habitat, “take” is not an issue so we define insignificant effects slightly differently. Insignificant effects are when there is an actual possibility of an effect to the essential feature and the effect is temporary, minor, or both, so that there is

no discernible impact on the conservation function of that essential feature in that designated critical habitat unit.

- i) Example: The water and sediment quality essential feature of Gulf sturgeon critical habitat may be affected by a pile-installation project that temporarily increases turbidity. However, we would anticipate those effects to be temporary and minimal because suspended particles will settle out within a short time frame without measurable effects on water quality.

Action agencies must request and receive written concurrence from NMFS on a “not likely to adversely affect” determination. The request for concurrence should clearly identify the different potential effects that the project may pose to listed species or critical habitat. For each potentially adverse effect, you should explain why the effect is either discountable or insignificant. If there are no plausible routes of effect to listed species or critical habitat, “no effect” may be the proper conclusion.

- 2) "**May affect, and is likely to adversely affect**" means that one or more individuals of an ESA-listed species or one or more essential features of critical habitats are likely to be exposed to the actions and are likely to result in “take” or adverse effects, respectively (the definition of take is discussed below).

If you conclude that a listed species or its critical habitat is likely to be adversely affected, formal consultation will be required. NMFS issues a biological opinion at the conclusion of formal consultation. If we conclude in the opinion that the project is not likely to jeopardize the continued existence of any listed species or destroy or adversely modify critical habitat, we will include terms and conditions to minimize and monitor impacts to listed species. If we conclude in the opinion that the project is likely to jeopardize the continued existence of any listed species or destroy or adversely modify critical habitat, the project may not go forward unless we provide a “reasonable and prudent alternative” that would avoid jeopardy and destruction or adverse modification. (Note: “Adversely affect” and “destroy or adversely modify” critical habitat are two separate and very different standards, but they are sometimes confused because they sound similar.)

The Definition of Take

Take is defined as to harass, harm, pursue, hunt, shoot, wound, trap, capture, collect or attempt to engage in any such conduct. “Harm” includes any act that actually kills or injures fish or wildlife. This includes habitat modification or degradation that results in death or injury to listed species by significantly impairing essential behavioral patterns such as breeding, spawning, rearing, migrating, feeding, or sheltering. The U.S. Fish and Wildlife Service defines “harass” as “an intentional or negligent act which creates the likelihood of injury to wildlife by annoying it to such an extent as to significantly disrupt normal behavioral patterns....”

In general, “take” is a violation of the ESA, even when it’s unintentional. The Section 7 consultation process provides a way to exempt federal activities from the ESA’s take prohibitions, if the take is incidental to an otherwise lawful activity and it doesn’t jeopardize the species.

Questions to Ask when Beginning Your Effects Analysis

To determine the effect of your project on an ESA-listed species and/or its critical habitat, think through and document the following steps:

1. **What is the action area (the area where effects from the project can be found)?**

The action area is defined as “all areas to be affected directly or indirectly by the federal action and not merely the immediate area involved in the action.” This area will experience measurable or detectable changes in land, air, and water, or other measurable factors that result from the full scope of the proposed action and all interrelated or interdependent actions.

- Interrelated actions are those that are part of a larger action and depend on the larger action for their justification. An example of this would be if a request is made for consultation for the construction of a new marina. New vessel traffic originating from the marina is interrelated to the proposed marina development and must be considered as part of the action.
- Interdependent actions are those that have no independent utility apart from the action under consideration. An example of this would be constructing the pilings for a dock or bridge and then coming back for another consultation for the decking for the bridge or dock.

To determine the action area, we recommend that you first break the action down into its components including pre-construction preparation (e.g., vegetation clearing, construction actions such as the installation of cofferdams, placement of pipelines, intake structures, turbidity areas, dredging, dredge spoil storage areas, borrow areas, operations, maintenance, pile driving, etc.), and post-construction site cleanup. Determine the stressors that are expected to result from each project component. For example, sound levels from machinery or pile driving may be detectable hundreds of feet, thousands of feet, or even miles away. Calculate these distances when delineating the extent of your action area.

Remember, in addition to direct project effects, you must consider effects that may occur later in time and the effects of an interdependent/interrelated activity, regardless of whether they are under your agency’s legal control or jurisdiction. Depending on the agency action at issue, fishing activities from a fishing pier, or marina usage/vessel operations after construction of a new or expanded marina, or changes in water quality/quantity after constructing an in-stream culvert, can be either indirect effects or interdependent/interrelated effects to the federal agency’s proposed action.

2. **Once you have determined the action area, identify which species or critical habitats are found in the action area.**

Refer to the general species lists for ESA-listed species and critical habitat under NMFS purview: <http://sero.nmfs.noaa.gov/pr/esa/specieslst.htm>

Is the action area is located behind some kind of barrier that could be man-made or ecologically based (e.g., bridge, dam, salinity) that would prevent the species from being there? Are the

species likely to be absent at the time of the action? For example, your project is located in a bay that is used by Gulf sturgeon for feeding but the project will be completed during the summer when sturgeon have migrated up river. In this case you should also consider whether the project results in impacts to the habitat that could affect the species from using this area in the future.

3. After identifying which ESA-listed species or critical habitat may be present in or near the action area, determine how they may be affected by the project.

To conduct the analysis of your project's effects, consider these sorts of questions when determining potential routes of effects to ESA-listed species or habitat:

- What are the specific stressors (e.g., construction, dredging, blasting, vessel traffic, fishing activities, pile driving, noise, changes in water flow) that might impact each species or critical habitat?
- Are critical habitat essential features found in the action area?
- What are the life history patterns/behavior of the ESA-listed species that could be affected in relationship to the location of your project and timing of work associated with your project?
- Where, when, how frequently, for how long, and at what intensity will the stressors occur, and how will it impact the species or critical habitat?
- Will the project effects be permanent?
- Is there a way to minimize/avoid exposure? For example, can the work be carried out at low tide, behind a construction barrier, or when the species is not seasonally present? Can noise impacts be minimized/avoided by use of sound dampening equipment?
- Will the habitat in the action area or affected outside the action area still be beneficial to the species or converted to another type of habitat as a result of the project? For example, will mangroves (a habitat feature important to sawfish) be removed and replaced with a seawall?

Once you've thought through these questions, you should be able to make the appropriate effects determination and transmit your rationale to NMFS.

If you have any questions, please contact the Protected Resources Division at 727-824-5312 and ask for the Interagency Cooperation Branch Chief or Section 7 Coordinator.