

Fish and Wildlife Service  
Arizona Ecological Service Field Office  
Recommendations for  
Contents of Biological Evaluations and Biological Assessments

When you prepare a Biological Evaluation (BE) or Biological Assessment (BA), keep in mind that the people who read or review this document may not be familiar with the project area or what you are proposing. Your BE or BA should present a clear line of reasoning that explains the proposed project and how you determined the effects of the project on each threatened or endangered species in the project area. Try to avoid technical jargon that is not readily understandable to people outside your agency or area of expertise. Remember, this is a **public document**. Some things to consider and include (if appropriate) in your BE or BA follow.

**1. What is the difference between a Biological Assessment and a Biological Evaluation.**

By regulation, a Biological Assessment is prepared for "major construction activities" considered to be Federal actions significantly affecting the quality of the human environment as referred to in the National Environmental Policy Act of 1969 (NEPA) (42 U.S.C. 4321 et seq.). A Biological Assessment is required if listed species or critical habitat may be present in the action area, and is optional if only proposed species or proposed critical habitat is involved. A Biological Assessment also may be recommended for other activities to ensure the agency's early involvement and increase the chances for resolution during informal consultation.

Biological Evaluation is a generic term for all other types of analyses. Agencies are not required to prepare a Biological Assessment for non-construction activities. If a listed species or critical habitat is likely to be affected, the agency must provide the Service with an evaluation on the likely effects of the action [50 CFR 402.14(c)]. Often this information is referred to as a BE. The Service uses this documentation along with any other available information to assess the effects of the proposed action on listed species and designated critical habitat. For projects not involving major construction nor requiring an assessment, the Service still wishes to work informally with the agencies to eliminate adverse effects.

BAs and BEs should not be confused with Environmental Assessments (EA) or Environmental Impact Statements (EIS) which may be required for NEPA projects. EISs and EAs are designed to provide an analysis of multiple possible alternative actions on a variety of environmental resources, and often use different definitions or standards.

**2. What are you proposing to do?**

- Describe the project. A project description can be very short or very long. For example, describing the placement and construction of a new microwave tower would probably be short, but describing an alternative for improving range management may be long. Include

sketches if they will help others understand your proposed action and its relationship with the species habitat.

- How are you (or the project proponent) planning on carrying out the project? What tools or methods may be used? How will the site be accessed? What time of year will the project be conducted?

### **3. Describe the project area.**

- Always include a map (topographic maps are particularly helpful). Provide photographs including aerials, if available. What does the project area look like now (topography, vegetation, condition/trend, recreation use, etc.)?
- Describe current management or activities relevant to the project area. How will your project change the area?
- Supporting documents are very helpful. If you have a mining plan, research proposal, NEPA or other planning document or any other documents regarding the project, attach them to the BE or BA.

### **4. What threatened or endangered species or critical habitat may occur in the project area?**

The only time you are required to contact the Service for a species list is when your project qualifies as a major construction action (see the section 7 regulations). For all other projects, you can either generate a list of threatened or endangered species yourself or submit a written request to the Service. If you want to make your own list, sources of information you can include (but are not limited to): Forest Service or Bureau of Land Management biologists, the Arizona Game and Fish Department, members of the public or academic community; and books and various informational booklets. Due to budget and staffing constraints, this office only provides general, county wide species lists.

**Use your familiarity** with the project area when you develop your species lists. Sometimes a species may occur in the larger regional area near your project but the habitat necessary to support the species is not in the project area. If, for example, you know that the endangered Festering Bogslime lives around the edges of eutrophic lakes, and you also know that this type of habitat does not occur in the project area, it does not need to appear on the species list for the project. However, documentation of your reasoning is helpful and can protect you against lawsuits or appeals, so many biologists routinely include this information in the BE or BA.

### **5. Have you surveyed for species that are known to occur or have potential habitat in the proposed project area?**

The "Not Known To Occur Here" Approach is a common flaw in many BA/BEs. The operative word here is "known." Unless adequate surveys have been conducted or adequate information sources have been referenced, this statement is difficult to interpret. It begs the questions "Have

you looked?" and "how have you looked?"- especially if suitable habitat is present on the project site. Always reference your information sources.

Include a clear description of your survey methods so that the reader can have confidence in your results. Answer questions such as:

- How intensive was the survey? Did you look for suitable habitat or did you look for individuals? Did the survey cover the entire project area or only part of it? Include maps of areas surveyed if appropriate.
- Who did the surveys and when? Was the survey done during the time of year/day when the plant is growing or when the animal can be found (its active period)? Did the survey follow accepted protocols?
- If you are not sure how to do a good survey for the species, consider contacting species experts. If you talk with someone about special survey techniques or if you read about them, cite your reference section in the BE or BA.

**6. Provide some background information on the threatened or endangered species (and critical habitat if designated) in the project area.**

Describe the species in terms of overall range and population status. How many populations are known? How many occur in the project area? Will the population's viability be affected? What is the current habitat condition and population size and status? Describe the related items of past management for the species, such as stocking programs, habitat improvements, or loss of habitat or individuals caused by previous projects.

**7. How will the project affect the threatened or endangered species or critical habitat that occurs in the project area?**

- If you believe the project will not affect the species, explain why.
- If you think the project may affect the species, explain what the effects might be. What part of the population will be affected by this project? The Endangered Species Act requires you to consider all effects when determining if an action funded, permitted, or carried out by a Federal agency may affect listed species. Effects you must consider include direct, indirect, and cumulative effects. Effects include those caused by interrelated and interdependent actions, not just the ones that are direct. Direct effects are those caused by the action and occur at the same time and place as the action. Indirect effects are caused by the action and are later in time but are reasonably certain to occur. Interrelated actions are those that are part of a larger action and depend on the larger action for their justification. Interdependent actions are those that have no significant independent utility apart from the action under consideration. Cumulative effects are those effects of future State or private activities, not involving Federal activities, that are reasonably certain to occur within the action area of the Federal action subject to consultation.

- Describe measures taken to avoid, reduce, or eliminate adverse effects or enhance beneficial effects to the species. Refer to conversations you had with species experts to achieve these results.
- Consider recovery potential if the project area contains historic range for a species.
- Evaluate critical habitats by reviewing the physical or biological features essential to the conservation of the species.

### **8. Provide relevant reports.**

- Attach any survey results, research proposals, or other planning documents.
- List the species experts you contacted when preparing the BE or BA but avoid statements that place the responsibility for the decision of "may affect" or "no effect" on the shoulders of the species experts. For example, avoid the following kind of statement: "I contacted Janice Smith, a biologist, who said the project would have no affect on this endangered species." Remember, this decision is made by the Federal action agency, which is accountable for its actions.

### **9. What is your decision? The Federal action agency must make a determination of effect.**

Quite frequently, effect determinations are not necessarily *wrong*; they simply are not justified in the assessment. The assessment should lead the reviewer through a discussion of effects to a logical, well-supported conclusion. Avoid the "Leap of Faith" Approach. This refers to the assumption of some biologists that the Fish and Wildlife Service reviewer is familiar with the project and/or its location, and there is no need to fully explain the impact the project may have on listed species. Usually, there is little or no connection or rationale provided to lead the reader from the project description to the effect determination. We cannot assume conditions that are not presented in the assessment. Doing so would leave both the project proponent and the Service at risk of challenge by third parties that do not necessarily share in or trust our good working relationship.

You have three choices for each listed species or area of critical habitat:

1. "No effect" means there are absolutely no effects of the project, positive or negative. "No effect" does not include a *small* effect or an effect that is *unlikely* to occur. If effects are insignificant (in size) or discountable (extremely unlikely), a "may affect, but not likely to adversely affect" determination is appropriate.
2. "May affect - is not likely to adversely affect" means that all effects are beneficial, significant, or discountable. Beneficial effects have contemporaneous positive effects without any adverse effects to the species or habitat. Insignificant effects relate to the size of the impact (and should never reach the scale where take occurs). Discountable effects are those extremely unlikely to occur. These determinations require written concurrence from the Service. Based on best judgement, a person would not: (1) be able to

meaningfully measure, detect, or evaluate insignificant effects; or (2) expect discountable effects to occur.

3. "May affect - is likely to adversely affect" means that there is at least one adverse effect. A combination of beneficial and adverse effects is still "likely to adversely affect," even if the net effect is neutral or positive. Adverse effects do not qualify as discountable simply because we are not certain they will occur. The probability of occurrence must be extremely small to achieve discountability. Likewise, adverse effects do not meet the definition of insignificant because they are less than major. If the adverse effect can be detected in any way or if it can be meaningfully articulated in a discussion of the results, then it is not insignificant, it is likely to adversely affect. This requires formal consultation with the Service.

A fourth finding is possible for proposed species or proposed critical habitat:

Is likely to jeopardize/adversely modify proposed species/critical habitat - the appropriate conclusion when the action agency or the Service identifies situations in which the proposed action is likely to jeopardize the proposed species, or destroy or adversely modify the proposed critical habitat. If this conclusion is reached, conference is required.

Prepared by:  
U.S. Fish and Wildlife Service  
Arizona Ecological Services Field Office  
2321 W. Royal Palm Road, Suite 103  
Phoenix, Arizona 85021  
phone (602) 242-0210  
fax (602) 242-2513

April 2000

**OUTLINE EXAMPLE  
FOR A  
BIOLOGICAL ASSESSMENT OR BIOLOGICAL EVALUATION**

- A. Cover letter - VERY IMPORTANT -Include purpose of consultation, project title, and consultation number (if available). A determination needs to be made for each species. You have three options: 1) a "no effect" determination; 2) requesting concurrence with an "is not likely to adversely affect" determination; 3) a "may affect is likely to adversely affect" determination, and a request for formal consultation. If proposed species or critical habitat are included, state whether the project is likely to result in jeopardy, or the destruction or adverse modification of proposed critical habitat.
- B. Project description - Describe the proposed action and the project area. Be specific and quantify whenever possible. Description of the affected environment for each species in the project area. (quantify whenever possible).
- C. For Each Species
  - 1. Description of species biology
  - 2. Describe current conditions for each species
    - a. Rangewide
    - b. In project area
    - c. Cumulative effects of state and private actions in project area
    - d. Other consultations of yours in area to date
  - 3. Describe critical habitat (if applicable)
  - 4. Describe effects of proposed action on each species and/or critical habitat.
    - a. Direct
    - b. Indirect, interrelated, and interdependent
    - c. Incidental take
- D. Conservation measures (mitigation recommended for each species)
- E. Conclusions (effects determination for each species)
- F. Literature Cited
- G. List of Contacts Made/Preparers
- H. Maps/ Photographs