



Documentation Standard for a Biological Assessment or a Biological Evaluation

This documentation standard (DS) will be used by project sponsors for the preparation of a biological assessment (BA) for section 7 formal consultation or a biological evaluation (BE) for informal consultation with the U.S. Fish and Wildlife Service (USFWS). A BA must be prepared for all major construction activities (i.e., those for which an environmental impact statement is prepared—see 50 Code of Federal Regulations (CFR) 402.02), and for any other project likely to adversely affect a proposed or listed species or critical habitat under the Endangered Species Act (ESA). A BA must include sufficient detail to provide all information necessary to complete formal consultation with USFWS as required under section 7 of the ESA [[16 USC 1531](#) et seq. and [50 CFR 402.12](#)]. A BE should be prepared for construction activities for which an environmental impact statement is not required, and that “may affect but are not likely to adversely affect” a federally listed species or critical habitat. A BE follows the same format as a BA but does not include several sections that are specific to formal consultations (as noted in this DS).

All Texas Department of Transportation (TxDOT) BAs/BEs should be written using the *TxDOT Template for a BE or BA* found on TxDOT’s Environmental Compliance Toolkit website and guidance outlined in this DS. If the consultation document will be prepared by a third party, document style/consistency should be discussed at the consultation document kick-off meeting. The *TxDOT Writers Style Guide* may be available upon request from ENV NRM. For questions about or assistance applying these standards, contact the TxDOT district representative or ENV NRM at ENV-Bio@txdot.gov. The BE/BA is a TxDOT product and should not include references to individuals or consultants or consultant logos except as indicated on the final page.

The text of a BA/BE (Sections 1 through 5) should be clear and concise and provide only the information that is relative to and supports the consultation. Avoid the duplication of information from technical reports or the inclusion of irrelevant NEPA document information. Always provide an MS Word version of the document for review and when needed for figures and attachments, provide an Adobe Acrobat (.pdf) version for review. All deliverables should undergo thorough reviews for grammar, formatting, style, consistency, and content prior to submission to TxDOT for review. The preparer should retain the following information in the project files: field notes, photographs, and other supporting data/documents that were produced in support of the BA/BE.

Cover Page, Contact Information, and Table of Contents

First Page - Cover Page

- A.** Use TxDOT logo/branding
- B.** Add the document type, i.e., “Biological Evaluation (BE) for Informal Consultation with the USFWS” or “Biological Assessment (BA) for Formal Consultation with USFWS”
- C.** Add project name
- D.** Add project limits including County(ies), State
- E.** Add Control-Section-Job (CSJ) number(s). If there are multiple CSJs, always list the main CSJ used in TxDOT’s Environmental Compliance and Oversight System (ECOS) first.
- F.** Add Document Date (Month and Year)
- G.** Add “Prepared for the Texas Department of Transportation”
- H.** Add the following certification as a footnote “The environmental review, consultation, and other actions required by applicable federal environmental laws for this project are being, or have been, carried-out by TxDOT pursuant to 23 USC 327 and a memorandum of understanding dated December 9, 2019 (or the most recent MOU date), and executed by the Federal Highway Administration and Texas Department of Transportation.”

Second Page - Contact Information

- A.** Add phone and email contact information for the TxDOT ENV contact and TxDOT District Environmental contact
- B.** Add Footer throughout document with Document Title, Project Name, and CSJ(s)

Third Page – Table of Contents

- A.** Create Table of Contents – this includes a list of appendices, figures, and tables, as applicable (Note: for consistency and to help streamline the document preparation and review processes, all letter sized figures of one page or less should be imbedded in the text of the consultation document and on the next page after its first reference. However, any oversized figures or figures that are more than one page should be grouped in an appendix).

1.0 Introduction

The BA/BE must include an Introduction that includes each of the labeled subsections below. The introduction should be brief and concise.

1.1 Purpose

Provide the project name, limits, project length, City(ies), County(ies), and State and a short description of the project (e.g., adding shoulders, operational improvements, direct connectors, etc.). Reference the location map in the document unless it is oversized, otherwise reference the appropriate appendix. State the purpose of the project in a single sentence (e.g., to upgrade the existing highway to meet current design standards, to improve mobility, and to meet future projected traffic demands). If the NEPA classification of the project is an EA or EIS, confirm that the purpose statement matches the one in the EA or EIS. Do not include the “need” or “supporting facts and/or data” components of a Purpose and Need statement from an EA or EIS.

State the purpose of the BE/BA (e.g., to assess the effects of the proposed action on federally protected resources and obtain either a Biological Opinion (BO) with an incidental take statement for a BA, or concurrence for a BE. Include what federally protected resources are being assessed (e.g., list the federally listed species that may be affected, critical habitat, etc.).

1.2 Federal Nexus

Briefly describe how the proposed action is connected to a federal action. Typically, this is the use of federal funds to plan or construct the project and would be stated as follows. “The project would be partially funded with federal resources and, therefore, constitutes a federal action.” If applicable, include descriptions of any other federal action anticipated (e.g., issuance of Clean Water Act [CWA] section 404 permit, etc.).

2.0 Project Description

The BA/BE must include a Project Description section that includes each of the labeled subsections below. The project description must include both the description of the planned action and all avoidance, minimization and voluntary conservation measures that have been or will be implemented throughout the planning, design, construction, and operation of the project.

2.1 Project Elements

Describe the existing facility (if applicable), the proposed action, and how the proposed action will be conducted. For design build projects, provide as much pertinent information about the project as possible, and supplement missing information with general information on similar construction activities. Subdivide the proposed action into the following subsections:

- 2.1.1 Existing Facility,
- 2.1.2 Proposed Facility,
 - 2.1.2.1 Timeline and Sequence,
 - 2.1.2.2. Construction Equipment, Access, and Staging,
 - 2.1.2.3 Post-Project Site Restoration, and
- 2.1.3 Operation and Maintenance.

If the project has multiple CSJ numbers, provide the project length for each CSJ and construction timeframe, if applicable to the consultation. The project elements should include the following information and refer to specific pages or sheets of typical sections and plans in appendices as available and applicable to support discussion:

1. Where the proposed action will occur
2. When each element of the proposed action will occur (e.g., construction phasing)
3. How each action will be carried out (e.g., Project Specific Locations [PSLs] associated with construction such as staging areas and borrow sites, construction equipment, etc.)
4. Whether there will be actions by TxDOT or others, such as utility relocation, that should be described as part of the effects.

2.2 Project Area, Action Area, and Setting

The project area is where all activities described as part of the action will occur. Include a description of the general area of the proposed project and a map delineating the location of the project area, or all areas where project activities within the scope of the BE/BA occur. The size of the project area should be described by number of acres. The project area and location should be shown on Figure 1 and must follow the *TxDOT Template for BE or BA* found on TxDOT's Environmental Compliance Toolkit website. The project area does not include project-specific locations (PSLs) such as borrow pits and equipment staging areas selected by the contractor outside the right-of-way and not dictated by TxDOT.

The action area extends beyond the project area and includes the area where all physical, chemical, and biotic effects are reasonably certain to occur and could potentially affect a federally protected species. It must include locations where the effects of the action are reasonably certain to occur and consequences that are reasonably certain to occur later in time and outside of the project area involved in the action. The action area for a BA/BE is not the same as the area studied in an EA or Environmental Impact Statement (EIS), in that a BA/BE action area should only include the area specifically related to the species addressed in the consultation.

The action area must be clearly defined in the BA/BE and should include appropriate references for distances used to delineate the action area for each species and critical habitat as appropriate. ENV-NRM should be consulted for guidance and examples of action areas for each species in the consultation. The size of the action area should also be described in total number of acres. The action area should be shown on Figure 2. Refer to the [Environmental Handbook: Endangered Species Act](#) on the TxDOT's Environmental Compliance Toolkit website for a definition and guidance defining an action area. The action area should be reviewed and approved by ENV-NRM before conducting analysis or preparing the BE/BA.

Any regularly occurring, ongoing activities that may affect listed species or habitat within the action area should be identified and described in the consultation document. These are not cumulative effects but do include routine maintenance activities or utility corridor use within the project area (e.g., standard maintenance mowing of right-of-way [ROW], dredging, rail operations, etc.).

The 2.2 Project Area, Action Area, and Setting subsection should include subsections that are directly relevant to the species in consultation such as:

- 2.2.1 Existing Land Use,
- 2.2.2 Water Resources (surface and groundwater),
- 2.2.3 Geology,
- 2.2.4 Soils, and
- 2.2.5 Vegetation.

Existing land use, vegetation, and water resources are important subsections to include for most species. These subsections support discussion of species or taxa for which TxDOT frequently prepares consultation documents including:

- karst species - geology and vegetation,
- aquatic species - water resources,
- salamander species – geology, water resources
- plant species - geology, soils, and vegetation,

- avian species - surface water and vegetation,
- Houston toad (*Anaxyrus houstonensis*) – water resources, geology, soils, and vegetation.

Note that the Ecological Mapping Systems of Texas (EMST) vegetation types should not be used for vegetation analysis unless those EMST vegetation types can be described and associated with vegetation types that are habitat for listed species and are verified as being present within or adjacent to the action area. If these resources are adequately covered by technical reports that are included as appendices to the BE/BA, they should be concisely summarized in the BA/BE and/or a reference made to the technical report where this information can be found. If any of these subsections are not germane to the species in the consultation or do not directly support the consultation, then they may be left out of the consultation document. The contents of this section should be discussed with and confirmed by ENV-NRM and the project team based on the species in the consultation before preparing the draft deliverable.

In addition to Figures 1 and 2, any figures corresponding to and supporting the information in the subsections above should be included when helpful. Note that any geographical information provided in this section should be limited to what is relevant in understanding potential impacts of the proposed project and the species addressed in the consultation.

2.3 Consultation History

This section should include the date, type of meeting or correspondence (e.g., in-person, e-mail, letter, etc.), location of the meeting, any consultation reference number(s) (if applicable), and a summary of what was discussed. The USFWS may have assigned a project reference number(s) when referring to past consultations that may be associated with the proposed project. For multiple meetings or correspondences, a table is recommended. See the *TxDOT Template for BE or BA* found on TxDOT's Environmental Compliance Toolkit website for an example table. If there were no pre-submission meetings or correspondence, this section can be removed from a BE. Pre-submission meetings are standard practice for BAs; therefore, this section should appear in all BAs.

2.4 Conservation Measures

Conservation measures that will be incorporated into the project design to avoid, minimize, and/or mitigate impacts to federally protected resources will be identified in this section. Voluntary conservation measures (VCMs) used to offset potential effects to federally listed species include best management practices (BMPs), buying conservation bank credits, contributing to regional Habitat Conservation Plans, seasonal restrictions on activities, building wildlife crossings, and any project design elements that avoid and minimize impacts (e.g., building on fill versus excavation, bottomless culverts that serve as wildlife crossings, enhanced water quality protection, etc.). BMPs and conservation measures should be listed in a bullet format and not described in paragraphs. Where applicable, these VCMs should be described in a logical order that corresponds with the project sequence or, can be divided into subsections by measures related to design, those implemented prior to construction, those that will occur during construction, and those that will be implemented after construction is complete. If mitigation is proposed, all mitigation information (e.g., total mitigation acreage, species studies, monitoring, genetic studies, cost, etc.) should be included in this section. Monitoring and reporting are typically required for BAs where incidental take is anticipated; therefore, proposing them within the conservation measures allows TxDOT to specify monitoring and reporting parameters.

3.0 Species and Critical Habitat

The BA/BE must include a Species and Critical Habitat section that includes each of the subsections below. Even if there is no critical habitat designated for a species or no critical habitat within the action area, this must be clearly and concisely stated.

3.1 Species Potentially Occurring in the Action Area

The BA/BE must discuss the number of federally listed and proposed species with the potential to occur in the action area as identified by the USFWS Information, Planning, and Conservation (IPaC) system, and should include a completed *TxDOT Species Analysis Spreadsheet* of those federally listed species as an appendix. A template *TxDOT Species Analysis Spreadsheet* can be found on TxDOT's Environmental Compliance Toolkit website. Note that if the reasoning is that the species is "not known to occur in the action area" then it must be justified by explaining the methods used to reach that determination. Information provided in the *Species Analysis Spreadsheet* is necessary to support a no effect determination as this is the only place these species are discussed.

Provide a list of the federally listed and proposed species that are reasonably certain not to be affected by the proposed project based on the justifications in the *Species Analysis Spreadsheet*. Indicate that these species will not be discussed further in this document. List the federally listed and proposed species that may be affected by the project and are the subject of the remainder of the consultation document.

The BA/BE must provide a subsection for each federally listed and proposed species that may be affected by the proposed project and should: document how they were identified (e.g., surveys conducted and protocols used, the Texas Natural Diversity Database [TXNDD], etc.); describe when they were listed; describe threats to the species; describe their overall range; and describe their current population status, population trends, and habitat conditions in the action area. Information provided should be limited to that which is pertinent to the project and potential effects. Only the information that is specifically relevant to the consultation should be presented in this subsection. As a result, lengthy background information provided in species descriptions, listing documents, critical habitat designations, recovery plans, or species status assessments should not be repeated in this subsection.

Where surveys or other studies were conducted to support the consultation, concisely summarize the survey or study and its findings and include the full technical report as an appendix to the BA/BE. This may include, but is not limited to habitat assessments, presence/absence surveys, genetic studies, or any other technical documents that support the consultation. It should be stated if surveys were completed using USFWS protocols or methodology, as well as a reference to the version or year of the protocols.

3.2 Critical Habitat

The BA/BE must identify any designated or proposed critical habitat that is present within a reasonable distance of the action area. The determination of a reasonable distance is dependent on the species involved in the consultation and should be discussed and agreed upon by the project team and ENV-NRM before conducting analysis of impacts to critical habitat. In addition, the BA/BE must include the following: a figure indicating for which species the critical habitat is designated or proposed; the boundary of the critical habitat or individual critical habitat units (CHUs) in relation to the action area and project area; and a discussion of the critical habitat that is closest to the action area, if none occurs within the action area. The BA/BE must also identify and explain the physical or biological features (PBFs; previously called primary constituent elements [PCEs]) that support each species' life-history

process and are essential to the conservation of that species. The PBFs will be identified by USFWS in a recovery plan. If no critical habitat has been designated or proposed for a species, then the B/BE should state: *No critical habitat has been designated or proposed for any federally listed or proposed species in or in proximity to the action area.*

4.0 Effects Analysis

The BA/BE must include an Effects Analysis section that includes each of the labeled subsections below; however, a BE does not need to include section 4.2 Cumulative Effects. The Effects Analysis section should include a full discussion, figures, and tables as may be appropriate to describe and quantify each project element that may cause consequences to federally listed or proposed species or designated or proposed critical habitat. This section must be clear, concise and logical so that effects are described appropriately for the actions and species in the consultation. ENV-NRM can provide examples and guidance for effects analyses for most species.

4.1 Effects of the Action on Federally Listed Species

The BA/BE should explain how the proposed project may affect federally listed species, including the consequences of other activities that are caused by the proposed action. A consequence is caused by the proposed action if it would not occur **but for** the proposed action, **and** it is reasonably certain to occur. Effects of the action may occur later in time and should be considered for all portions of the action area. The effects should be described as to whether they occur inside or outside of the project area, and if they will occur prior to, during or after construction. The effects to all life stages of each species in the consultation should be analyzed and described in the consultation document. Some key information that should be addressed in the effects analysis follows:

1. The anticipated response of the species (e.g., none, abandon the area, decrease foraging success, reduced fecundity, injury, death, etc.) from any likely impacts to the PBFs.
2. If effects are determined to be beneficial, insignificant or discountable, explain how that conclusion was reached and provide any resources used in that determination.
3. If the effects are determined to be adverse, explain how that conclusion was reached and provide any resources used in that determination.
4. The description of effects must fully support and align with the effect determination for each species and it must be clear how effects are mitigated by any conservation measures described with the action.

4.2 Cumulative Effects [remove if not applicable]

A cumulative effects analysis should only be conducted for species with a may affect likely to adversely affect determination; therefore, if a BA is being prepared in support of an EIS project, this section is not required. This section is also not required for BEs.

A cumulative effects analysis for a BA is not the same as cumulative effects considered in an EA or Environmental Impact Statement (EIS), because the cumulative effects addressed in a BA should only include the effects specifically related to the species addressed in the consultation. The Cumulative Effects section of a BA must:

1. identify all effects of future State or private activities, not involving federal activities, that are reasonably certain to occur within the action area for each species being evaluated ([50 CFR 402.02](#));
2. describe how such activities have or have not affected these species, and;
3. identify any known incidental take authorized for each action.

Figures that support cumulative effects analysis, especially those that illustrate where cumulative impacts may occur in relationship to species or species habitat considered in the consultation, should be included in the BA.

4.3 Effects of the Action to Critical Habitat

The BA/BE should explain how the project will or will not affect the PBFs of designated or proposed critical habitat or CHUs within the action area. This section should also indicate if the project may or may not affect designated or proposed critical habitat **asa whole**, if multiple CHUs are designated or proposed.

5.0 Conclusion and Determination

The BA/BE must include a Conclusion and Determination section that summarizes the potential effects of the project on the federally listed and proposed species and any other federally protected resources discussed in the consultation and explains how they lead to the associated effects determinations.

If no proposed or designated critical habitat is present in the action area, then repeat the statement made in **Section 3.2** under this Section 5.0 and do not include **Section 5.3** below. Applicable subsections listed below must be labeled as such in the BA/BE. This section should be brief and concise.

5.1 May Affect, Not Likely to Adversely Affect Determination for Listed Species [remove if not applicable]

For each protected resource with this effect determination, the consultation document should include the rationale for this determination and reference the Conservation Measures section (**Section 2.4**) as needed to support the justification for this call.

5.2 May Affect, Likely to Adversely Affect Determination for Listed Species (This section only applies to a BA) [remove if not applicable]

The BA should: include the rationale for each federally listed or proposed species with this effect determination, quantify the requested take amount for each species; explain the justification for each amount, and reference the Conservation Measures section (**Section 2.4**) as needed to support the justification for this determination and the requested amount of take. If surrogates are used when estimating take, such as acres of impacted habitat, then a reasonable explanation of why that surrogate is appropriate must be included.

5.3 Adverse Modification to Critical Habitat [remove if not applicable]

The consultation document should provide determination discussion and justification for any impacts to proposed or designated critical habitat in relation to the PBFs of critical habitat for each species, as appropriate. This must also include a statement as to whether adverse modification to critical habitat as a whole is anticipated, when multiple CHUs are designated. The document should not include a determination of Adverse Modification, as that is determined by USFWS during consultation.

6.0 Literature Cited

The BA/BE must include a list of all in-text citations. Please confirm all sources cited are provided in this section and that only those listed in this section are cited in the text.

7.0 Appendices

Appendix A should include all oversized (larger than letter size) figures and/or all figures that are more than one page (e.g., Vegetation Figures 3.1 through 3.4). As noted under the Table of Contents section, all letter sized figures of one page or less should be imbedded in the text of the consultation document and on the next page after its first reference.

Appendix B should include project design information, schematics, or plans as appropriate or available.

Appendix C should include the species analysis spreadsheet

Appendices D and beyond should include all relevant and studies/surveys, as applicable.

8.0 Consultation Package

When preparing to electronically transmit a final consultation package to TxDOT, the following information must be included:

1. The final BE/BA document as an MS Word (.docx) file.
2. The BE/BA document and all appendices as an Adobe Acrobat (.pdf) file. Any oversized appendices (larger than letter sized) should be provided as separate Adobe Acrobat (.pdf) files (e.g., plan sets, large format maps, etc.) and use file names that clearly identify the BE/BA document they support and the appropriate appendix letter.
3. Geographic Information System (GIS) files (.shp, et al.) including the project area, action area, and any other features or locations pertinent to the consultation developed during analysis and presented in the consultation document (e.g., habitat, territories, impacted areas, etc.).



The following table shows the revision history for this document.

Revision History		
Effective Date	Version	Reason for Change
January 2021	Version 4	Content was updated to reflect the August 27, 2019 ESA Revisions to the Implementing Regulations of the (50 CFR Parts 424, 402, and 17) and reference the <i>TxDOT Template for BE or BA</i> found on TxDOT's Environmental Compliance Toolkit website.
December 2019	Version 3	Updated NEPA assignment disclaimer language to reflect first renewed NEPA assignment Memorandum of Understanding (MOU) date of December 9, 2019.
August 2015	Version 2	Modified Pertinent Information section on the Example: Species Impact Table.
July 2015	Version 1	N/A