



Environmental Handbook

Endangered Species Act

This handbook provides regulatory background and guidance for complying with the Endangered Species Act (16 USC 1531-1544).

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1.0 Introduction

This handbook provides a high-level overview of the requirements necessary to comply with sections 7, 9, and 10 of the Endangered Species Act (ESA) for federal and non-federal transportation projects. Project sponsors may use this handbook to identify potential ESA requirements to appropriately scope environmental obligations.

Federal, state, or local compliance requirements that do not pertain to the ESA are not addressed in this handbook (e.g., public involvement as required by the National Environmental Policy Act [NEPA]). Although this handbook does discuss types of documentation required for ESA compliance, it does not go into detail on how to write such reports/documents. For information on how to prepare the “Threatened, Endangered, and Candidate Species” section of an environmental assessment or environmental impact statement, please refer to **ENV’s Environmental Handbook: Preparing an Environmental Assessment**. **Appendix A** provides an overview of handbook’s revisions. An abbreviated ESA glossary is provided as **Appendix B**, and abbreviations and acronyms used in this handbook are provided in **Appendix C**.

The U.S. Fish and Wildlife Service (USFWS) and the National Marine Fisheries Service (NMFS) are the regulatory and enforcement agencies for the ESA. USFWS has jurisdiction over threatened and endangered terrestrial species, the manatee, and nesting sea turtles, while the NMFS has jurisdiction over all other threatened or endangered marine wildlife, including seaward sea turtles. Under the ESA, federal agencies are directed to work to conserve federally listed species, to use their authority to further the purpose of the ESA, and consult with USFWS or NMFS to ensure that any federal action is not likely to jeopardize the continued existence of federally listed species or adversely modify or destroy critical habitat (see **Section 2.1**). Very rarely is consultation conducted with both USFWS and NMFS for the same project; therefore, the remainder of this document will refer to either the USFWS or NMFS with the understanding that there may be rare instances where the consultation will involve both agencies.

1.1 TxDOT Policy

TxDOT shall meet compliance obligations for the ESA by following the requirements in this handbook and appropriate laws and regulations. For federal aid projects, related guidance, procedures, and policies apply.

1.2 Responsible Party

Various documentation, compliance, coordination, and approval responsibilities are assigned to the project sponsor and TxDOT ENV for each project. The project sponsor may be a TxDOT district, TxDOT division, or local/regional public agency. The project sponsor is responsible for pursuing approval of the project, providing project file materials, and managing the project file. ENV is responsible for conducting consultation with USFWS or NMFS for all applicable TxDOT projects.

1.3 FHWA Assignment

Under Section 3.2.1 of the Memorandum of Understanding (MOU) between the Federal Highway Administration (FHWA) and TxDOT Concerning the State of Texas' Participation in the Project Delivery Program Pursuant to 23 U.S. Code (USC) 327, the FHWA assigned TxDOT the responsibility for ensuring compliance with the ESA for projects with FHWA as the funding agency. As such, on an FHWA project, TxDOT is the delegated representative of the federal action agency for purposes of ESA compliance.

1.4 Applicable Project Types

Compliance with the ESA is required for any federal project that has the potential to affect a federally listed threatened or endangered species or designated critical habitat. Evaluation of the effects of a federal action on federally listed species is also required to be included in any environmental assessment (EA), or environmental impact statement (EIS) prepared under NEPA. ESA compliance is also required for any non-federal project that has the potential to cause take of a federally listed threatened or endangered species as defined by the ESA.

2.0 Regulatory Overview

2.1 ESA Protection

The ESA was enacted in 1973 to provide a program for the conservation of threatened and endangered species and the ecosystems upon which these species depend. The ESA is codified at [16 USC 1531-1544](#).

Section 4 – Determination of Endangered Species and Threatened Species The ESA, at 16 USC 1533, defines the criteria for when a species may be determined as threatened or endangered as well as criteria for designating critical habitat. The basis for a determination is solely based on the best scientific and commercial data available. This section also requires the issuance of protective regulations that are deemed necessary and advisable to provide for the conservation of a threatened or endangered species (section 4[d]), and describes the required recovery plan content (section 4[f]).

Section 7– Interagency Cooperation section 7(a)(1) of the ESA (16 USC 1536) directs all federal agencies to work to conserve endangered and threatened species and to use their authorities to further the purposes of the ESA. Section 7(a)(2) requires federal agencies to consult with USFWS or NMFS to ensure that any federal action authorized, funded, or carried out is not likely to jeopardize the continued existence of any threatened or endangered species or result in the destruction or adverse modification of critical habitat, unless granted an exemption for such action. In fulfilling section 7(a)(2) obligations, federal agencies shall use the best scientific and commercial data available when assessing potential effects of an action on federally listed species. The Code of Federal Regulations (CFR) at [50 CFR 402](#) provides the implementing regulations for interagency cooperation with respect to section 7.

Section 9 – Prohibited Acts (The ESA, at 16 USC 1538, defines prohibited actions, including the take of animal species listed as federally endangered. For species listed as threatened prior to August 27, 2019, the full protection of endangered species (section 9 of the ESA) are extended by regulation [50 CFR 17.21](#), unless the USFWS issues a special regulation pursuant to section 4(d) of the ESA. For species listed as threatened after August 27, 2019, protection will be made on a case-by-case basis tailored to what is necessary and advisable for that species (i.e., via a species-specific section 4(d) rule). A section 4(d) rule is a special regulation that modifies the normal protective regulations for a particular threatened species when it is determined that such a rule is necessary and advisable to provide for the conservation of that species.

Section 9(a) of the ESA defines additional general prohibited acts with respect to federally listed **fish and wildlife species**. Prohibited acts include:

- Import or export of any such species into or from the U.S.;
- Take of any such species within the U.S. or the territorial sea of the U.S.;

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- Take any such species upon the high seas;
- Possess, sell, deliver, carry, transport, or ship, by any means whatsoever, of any such species in violation of the 2nd and 3rd bullets above;
- Deliver, receive, carry, transport, or ship in interstate or foreign commerce, by any means whatsoever, and in the course of a commercial activity, any such species;
- Sell or offer for sale in interstate or foreign commerce any such species; and
- Violate any regulation pertaining to such species or to any threatened species of fish or wildlife listed pursuant to section 4 (determination of endangered species and threatened species) ([16 USC 1533](#)) of the ESA.

Section 9(a) of the ESA also defines prohibited acts with respect to federally listed **plant species**. Prohibited acts include:

- Import or export of any such species into or from the U.S.;
- Remove and reduce to possession any such species from areas under federal jurisdiction; maliciously damage or destroy any such species on any such area; or remove, cut, dig up, damage, or destroy any such species on any other area in knowing violation of any law or regulation of any state or in the course of any violation of a state criminal trespass law;
- Deliver, receive, carry, transport, or ship in interstate or foreign commerce, by any means whatsoever and in the course of a commercial activity, any such species;
- Sell or offer for sale in interstate or foreign commerce any such species; and
- Violate any regulation pertaining to such species or to any threatened species of fish or wildlife listed pursuant to section 4 of the ESA.

The ESA does not prohibit incidental take of plant species. However, there are prohibitions against certain deliberate removal or disturbance of plants as noted above. Additionally, consultation under section 7 for federal projects is required to account for potential effects on listed plant species. Therefore, the USFWS can complete a jeopardy analysis that evaluates potential impacts to plant populations and not individual plants.

Section 10 – Exceptions ([16 USC 1539](#)) of the ESA defines exceptions and allows for permits to authorize takings that would otherwise be prohibited by section 9. This section establishes a species protection process for non-federal actions. An incidental take permit may be issued for non-federal actions when the “taking is incidental to, and not the purpose of, the carrying out of an otherwise lawful activity.” Applications for incidental take permits must be accompanied by a Habitat Conservation Plan (HCP) that describes how the effects of a proposed action would be adequately minimized and mitigated.

2.2 ESA Effect Determinations

TxDOT's Environmental Conservation Online System (ECOS) is used to track files for all projects that require federal authorization or approval. The ECOS file must include an effect determination of the project on federally listed species and critical habitat, unless the project falls under an expedited CE process for which it has been previously determined that there is no potential for effects on listed species or critical habitat. Projects without a federal nexus are only required to assess the potential

for take (i.e., no take or take and do not include an effect determination). The following provides an overview of the types of effect determinations as well as the definition of take.

2.2.1 No Effect

A “no effect” determination is appropriate if the proposed action will not affect federally listed species or critical habitat (USFWS 2020). Generally, this means no federally listed species will be exposed to any potentially harmful or beneficial elements of the action (USFWS and NMFS 1998).

A no effect determination for a **federally listed species** may be if any of the following conditions are met, but is not limited to these conditions:

- The action area is not within the range of any federally listed species, or
- The action area is within the range of a federally listed species, but there is no suitable habitat, including stop-over habitat for migrating species, or the action area is within the range of a federally listed species and there is suitable habitat within the action area, but potential effects to a federally listed species by the proposed action are not reasonably certain to occur (e.g., if the path of affect would require a series of exceedingly rare events to occur in a particular sequence in order to impact individuals of a protected species), then it should not be considered plausible and reasonably foreseeable.

Note that the action area is different than the project area and both are defined in **Section 3.3** and **Appendix B**.

A *no effect* determination for **designated critical habitat** may be appropriate if any of the following conditions are met, but is not limited to these conditions:

- The action area is not within designated critical habitat, or
- The action area is within designated critical habitat, but there is not a plausible, reasonably foreseeable path of affect to the critical habitat (i.e., the path of affect would require a series of exceedingly rare events to occur in a particular sequence to impact critical habitat).

2.2.2 May Affect, but is Not Likely to Adversely Affect

This effect determination means that the project may affect listed species and/or critical habitat; however, the effects are expected to be discountable, insignificant, or completely beneficial. No take of individuals may occur under this determination. Certain avoidance and minimization measures may need to be implemented to reach this level of effect (USFWS 2020).

Beneficial effects have an immediate positive effect without any adverse effects to the species or their habitat. Beneficial effects are usually discussed when the project has a clear link to the federally listed species, or its specific habitat needs, and consultation is required because the species may be affected (USFWS and NMFS 1998).

Insignificant effects relate to the size or severity of the impact and include those effects that are undetectable, not measurable, or are so minor that they cannot be meaningfully evaluated.

Insignificant is the appropriate effect conclusion when plausible effects are going to happen, but they would not rise to the level of constituting an adverse effect, and insignificant effects should never rise to a level where take occurs. That means the federally listed species may be expected to be affected, but not harmed, harassed, or benefitted (USFWS and NMFS 1998).

Discountable effects are those effects 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 (USFWS and NMFS 1998).

2.2.3 May Affect and is Likely to Adversely Affect

This effect determination means that adverse effects to listed species may occur as a direct or indirect result of the proposed action. For this determination, the effect of the action is neither discountable nor insignificant. If the overall effect of the proposed action is beneficial to the listed species but the action is also likely to cause some adverse effects to individuals of that species, then the proposed action “is likely to adversely affect” the listed species (USFWS 2020). If the project is not likely to jeopardize the continued existence of any listed species, reasonable and prudent measures to minimize impacts to federally listed species may be required. If the project is likely to jeopardize the continued existence of a federally listed species, the project may not go forward unless a “reasonable and prudent alternative” that would avoid jeopardy is proposed and approved by the USFWS or NMFS (USFWS and NMFS 1998).

2.2.4 Take

Take is defined as actions that harass, harm, pursue, hunt, shoot, wound, trap, capture, collect or attempt to engage in any such conduct. “Harm” includes any action that kills or injures fish or wildlife. This includes habitat modification or degradation that results in death or injury to a federally listed species by significantly impairing essential behavioral patterns such as breeding, spawning, rearing, migrating, feeding, or sheltering (USFWS and NMFS 1998). The USFWS defines “harass” as “to intentionally or negligently, through act or omission, create the likelihood of injury to wildlife by annoying it to such an extent as to significantly disrupt normal behavior patterns such as breeding, feeding, and sheltering” (USFWS and NMFS 1998).

Take of a federally threatened or endangered species is a violation of the ESA, even when it is unintentional. Therefore, if adverse effects including the potential for take are reasonably certain to occur, formal consultation with USFWS or NMFS is required.

Note that the ESA does not prohibit incidental take of plant species. However, projects that are federally authorized, funded, or carried out must also evaluate the potential effects of a project on federally listed plant species. Further guidance on informal and formal consultation with USFWS or NMFS is provided in **Section 3.0**.

3.0 Coordination and Consultation Process

If a project is not reasonably certain to affect (adversely or beneficially) a federally listed threatened or endangered species, or designated critical habitat, then coordination with USFWS or NMFS is not required. Additionally, no internal coordination is required beyond completing and documenting the Species Analysis. For additional information on how to perform and document a Species Analysis, see [Perform Species Analysis Activity Instructions in ENV's Environmental Guide: Volume 2 Activity Instructions](#).

If a project has the potential to affect a federally listed threatened or endangered species, designated critical habitat, proposed critical habitat, or candidate or proposed species early internal coordination with ENV-NRM and external coordination with USFWS or NMFS is strongly recommended and consultation with USFWS or NMFS is required. Those processes are described in detail below.

3.1 Internal Coordination

Internal coordination among a project sponsor, district environmental staff, and ENV-NRM should occur as soon as possible in project planning/development when a federally listed species, candidate or proposed species, and/or designated or proposed critical habitat may be impacted by a project. ENV-NRM staff can assist with: (1) contracting for the preparation of consultation documents or biological studies (if needed); (2) coordinating communication with USFWS or NMFS; (3) providing recent consultation documents and subsequent USFWS or NMFS responses (e.g., biological opinions or concurrence letters); and (4) developing conservation, or avoidance, minimization, and mitigation measures based on the project, species, and area. ENV-NRM can also assist with the consideration and use of programmatic consultation agreements (PCAs) with USFWS or NMFS for specific species to expedite consultation. ENV-NRM should be involved throughout the coordination and consultation, as ENV is responsible for conducting consultation with USFWS or NMFS for all TxDOT projects, including those with local government project sponsors. Early internal coordination is the best way to assess and discuss avoidance and conservation measures or alternatives to the project, potential permitting requirements, and potential mitigation for unavoidable impacts.

3.2 Early Coordination with USFWS/NMFS

Early coordination is an informal process involving early discussions, site visits, review of plans, and other activities with USFWS or NMFS staff to receive their initial input on potential ESA issues and potential permitting requirements. Early coordination should be used to discuss and vet avoidance, minimization, and voluntary conservation measures. Early coordination can also allow the consultation process to proceed more efficiently because input from USFWS or NMFS can be incorporated into the consultation packages. TxDOT and USFWS have an agreement for expedited coordination and review through the USFWS transportation liaisons. Early coordination with USFWS should be communicated through the USFWS transportation liaisons and should always include or be initiated by ENV-NRM. The USFWS transportation liaisons will engage USFWS species experts, as needed, to assist with coordination and expedite internal communication with USFWS. Early coordination does not need to be tracked in ECOS under the “Obtain Endangered Species Act (ESA) Consultation” Activity.

3.3 Section 7 Consultation Process (Federal-nexus Projects)

For projects that are federally authorized or approved and where project actions may affect a federally listed species or critical habitat in any way (even beneficially), consultation must be conducted with USFWS or NMFS under section 7 of the ESA. Consultation under section 7 may be informal or formal depending on the construction activity. Informal consultation is appropriate if the project actions are not a major construction activity (i.e., EA or CE) and may affect, but are not likely to adversely affect a federally listed species or critical habitat. Formal consultation is appropriate for a major construction activity (e.g., EIS) and/or if an adverse effect to federally listed species or critical habitat or take of a species is expected to occur as a result of the project.

The remainder of this section provides the major steps and time required for both informal and formal section 7 consultation. These steps should be taken in coordination with the project sponsor, district environmental staff, and ENV-NRM. Required project file documentation is discussed in **Section 4.0**.

- 1. Identify federally listed species and obtain species list** – If a Species Analysis Spreadsheet has not yet been completed as part of the Species Analysis Activity, access the USFWS Information, Planning, and Consultation (IPaC) system to determine what federally protected

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species and critical habitat may occur in the area. IPaC provides information on what federally protected species and resources may be impacted by the project. The person accessing the IPaC can request an official species list or save a working copy of the list. An official list can also be obtained by contacting the appropriate USFWS Ecological Services Field Office. For species that fall solely under the jurisdiction of NMFS, contact NMFS directly for a species list.

If preparation of the Biological Evaluation (BE) or Biological Assessment (BA) has not begun within 90 days of completion of the “Perform Species Analysis” Activity in ECOS, a new IPaC species list must be obtained and reviewed. If submission of the BE or BA to the USFWS has not occurred within 180 days (6 months) of the completion of the “Perform Species Analysis” Activity in ECOS, a new IPaC species list must be obtained and reviewed.

- 2. Analyze and document species that may be impacted** – ENV’s [Species Analysis Spreadsheet](#) should be completed to analyze potential impacts to the species identified in Step 1 considering the actions involved in the proposed project. The completed Species Analysis Spreadsheet will include federally listed and candidate or proposed species with the potential to occur within the county, a summary of their habitat requirements, an effect determination, and a justification of the effect determination. Note that effect determinations may be revised after surveys have been completed and would occur during Step 4.

The following information is applicable when either plant or candidate or proposed species are included in the Species Analysis Spreadsheet:

The ESA does not prohibit incidental take of plant species. However, there are prohibitions against certain deliberate removal, maliciously damaging or destroying of federally listed plants. Considering candidate and proposed species can help ensure TxDOT actions do not increase the probability of a species being listed. It can also accelerate obtaining USFWS or NMFS concurrence or a biological opinion (BO) if the proposed or candidate species were ultimately listed before or during construction.

For additional information on how to prepare a Species Analysis Spreadsheet see [Perform Species Analysis Activity Instructions in ENV’s Environmental Guide: Volume 2 Activity Instructions](#). If the Species Analysis Spreadsheet indicates a may affect for any species, then proceed to Step 3.

- 3. Define the action area** – The action area includes all areas to be affected directly or indirectly by the federal action and not merely the immediate area involved in the action (project area) ([50 CFR §402.02](#)). To understand these potential affected areas, the project description and project actions need to be defined in sufficient detail to understand the potential effects of the project on federally listed species and their habitat, as well as those effects that occur outside of the project area, (e.g., downstream effects, fragmentation of a larger habitat area, etc.). This step may be adapted as project elements change. The defined action area must address all effects to federally listed species included in the consultation. The action area should be vetted by ENV-NRM before continuing to Step 4. If the project is complex and/or it may be difficult to determine whether the project may affect and is likely to adversely affect or may affect and is not likely to adversely affect a federally listed species, then reviewing the action area with USFWS or NMFS is highly recommended before continuing to Step 4. For additional information on defining an action area see ENV’s [Documentation Standard for a Biological Assessment or a Biological Evaluation](#).

- 4. Determine the effects of the action on federally listed and/or candidate and proposed species and designated/proposed critical habitat** – It is necessary to assess the potential for a project to affect federally listed, candidate, and proposed species, or designated or proposed critical habitat. These effects include beneficial effects, effects that would not otherwise occur but for the proposed action, and effects that could occur within the action area determined in Step 3, even if they are later in time. Effects need to be analyzed for all life cycles of each species and for habitat the species occupies. The effects to the physical and biological features of designated/proposed critical habitat should be analyzed to determine potential effects to critical habitat. Information for effects analysis can be found in species listings, critical habitat designations, species status assessments, five-year reviews, and any other best available scientific and commercial data. The effects analysis should also include consideration of any voluntary conservation, avoidance, minimization, and mitigation measures proposed as part of the action.

If the effects analysis indicates the possibility for take of a listed species, with a may affect, likely to adversely affect determination, the effects analysis will also need to include an estimate of take. Take estimates are specific to each species included in the consultation. Take estimates may be individuals (e.g., number of adults/juveniles) or may be a surrogate for individuals such as acres of habitat. The methods for determining an estimate of take should be discussed and vetted with ENV-NRM and USFWS or NMFS.

Previous consultation documents and USFWS/NMFS BOs are good sources of information for take assessments and effects analysis. ENV-NRM and USFWS or NMFS can provide examples at any point, but acquiring these during early internal and external coordination is a recommended best practice. Where appropriate, PCAs should also be considered and used, if possible.

- 5. Prepare the appropriate consultation document or documentation** – All consultations are based on documents containing information required for USFWS to conduct their analysis on the project and its potential effects to federally listed, proposed and candidate species, and designated or proposed critical habitat. Effects analysis conducted in Step 4 must support the effect determination for each species as it will determine the level of required consultation documentation. Preparation of consultation documents must follow ENV's [Documentation Standard for a Biological Assessment or a Biological Evaluation](#) and use the associated templates for each document type found on TxDOT's Environmental Compliance Toolkit website. All consultation documents should be brief, concise, and should only include information that contributes to USFWS or NMFS being able to complete consultation. Consultation documents or documentation may take one or a combination of the three forms listed below.

Biological Evaluation – Preparation of a BE is appropriate if all of the following conditions are met: the project actions do not include a major construction activity (i.e., a CE or EA), the project may affect, but is not likely to adversely affect federally listed species or critical habitat (i.e., effects on federally listed species or designated critical habitat are expected to be discountable, insignificant, or beneficial as described in **Section 2.2.2**), and the project is not likely to be controversial or include unusual actions. Note that a BE is TxDOT's version of an abbreviated Biological Assessment (BA) developed for informal consultation and is not an official document type recognized by USFWS or NMFS. Drafting of a BE typically takes between two weeks and three months.

Biological Assessment – If a project may affect and is likely to adversely affect a federally listed species or designated critical habitat, or if the project is a major construction activity (e.g., the

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project is an EIS) and the project may affect a federally listed species or designated critical habitat, the development of a BA and formal section 7 consultation with USFWS or NMFS is required. For a CE or EA project, this determination is appropriate if effects on federally listed species or designated critical habitat are not discountable, insignificant, or beneficial, and/or if take is anticipated to occur as a result of the action as described in **Section 2.2.3**. A BA and formal consultation may also be appropriate for projects that may be controversial or where legal challenges or public opposition is anticipated, or to secure incidental take coverage to maintain a project schedule that cannot accommodate a work stoppage if there is a need to re-initiate (see Step 9).

Programmatic Consultation Agreement – TxDOT has developed and is continuing to develop PCAs for activities that are frequently conducted by TxDOT and are expected to “may affect but are not likely to adversely affect” federally listed species. PCAs only cover specific activities and include specific conservation measures that must be followed to be eligible for use on a project. The benefit of developing and using a PCA is that consultation for individual projects is not necessary, thereby saving time and money. Additionally, because PCAs have already completed section 7 consultation with USFWS; they can be referenced in other consultation documents that include multiple species including those covered by a PCA, if the action is eligible. For more information on PCAs, see [Obtain Endangered Species Act \(ESA\) Consultation Activity Instructions in ENV's Environmental Guide: Volume 2 Activity Instructions](#). Completed PCAs are also available on TxDOT's Environmental Compliance Toolkits website.

6. **Internal Review** – All consultations will undergo internal review with ENV-NRM prior to submittal to USFWS or NMFS. The goal of internal review is to determine if the document is prepared in accordance with ENV's [Documentation Standard for a Biological Assessment or a Biological Evaluation](#), provides sufficient detail, thoroughly considers best available science, commercial data, and the effects of the action on listed species. Internal review timelines are dependent on workload and the sufficiency of the document. Internal reviews will be prioritized based on proposed letting dates and/or district priorities considering all TxDOT districts. ENV-NRM will determine when the consultation document is complete and proceed to Step 7.
7. **Consult with USFWS or NMFS** – Once the consultation document is complete, ENV-NRM will initiate consultation with the USFWS or NMFS. Informal and formal consultation processes and timing are explained below. Note that timeframes may be longer if USFWS or NMFS require additional information to complete their analysis. Review timeframes are paused until the information is received and USFWS or NMFS analysis can proceed.

Informal Consultation – The informal section 7 consultation provides a process for USFWS or NMFS to analyze the federal actions described in the consultation and either agree or disagree that the actions are not likely to adversely affect listed species or designated critical habitat. The informal section 7 process will conclude with USFWS or NMFS issuing a letter of concurrence, if their assessment agrees with the not likely to adversely affect determination. If USFWS or NMFS do not concur with the not likely to adversely affect determination, they may issue a letter stating they do not concur or suggest rescinding the request for informal consultation and instead proceeding with formal consultation.

The USFWS or NMFS must respond within 60 days of their receipt of the BE and a written request to initiate informal consultation, exclusive of any pauses due to requests for additional information (50 CFR §402.13). If mutually agreed upon by TxDOT and USFWS or NMFS, the

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timeline may be extended to a maximum of 120 days total. Typically, informal consultation with USFWS under the agreement for expedited services is completed in 30 days or less.

Formal Consultation – During formal consultation, USFWS or NMFS will conduct a thorough analysis of the status of species in the consultation in conjunction with the project, including any voluntary conservation measures. If the USFWS or NMFS determines there will be no jeopardy to the continued existence of species or destruction or adverse modification of critical habitat, the formal section 7 consultation process will conclude with the USFWS or NMFS issuing a BO and an incidental take statement (if take is anticipated). If the consultation includes plants, the USFWS will complete a jeopardy analysis that evaluates potential impacts to plant populations and not individual plants.

The formal consultation process has a 135-day timeframe including 90 days for consultation and 45 days to deliver a BO (50 CFR §402.14). Formal consultation may be expedited or extended up to 60 days upon mutual agreement between TxDOT and USFWS or NMFS within the initial 90-day period. Typically, formal consultation with USFWS under the agreement for expedited services is completed, including receipt of the BO, in 90 days or less.

If a federally authorized or approved project is likely to jeopardize the continued existence of any proposed species or result in the destruction or adverse modification of proposed critical habitat, a conference must be conducted with USFWS or NMFS. If there are other federally listed species or designated critical habitat that are expected to be affected by the action, the conference is included as part of the formal consultation. In cases where the only effect may be to proposed species or proposed critical habitat, see section 7(a)(4) (16 USC 1536) of the ESA and contact ENV-NRM for assistance with conferencing.

- 8. Perform, Track, and Report Voluntary Conservation Measures** – Voluntary conservation measures included in both informal and formal consultations often require follow up activities beyond the completion of consultation. A BO may also include any additional reasonable and prudent measures that the USFWS or NMFS deems necessary and appropriate to minimize take as well as terms and conditions, which implement the reasonable and prudent measures and outline required reporting/monitoring requirements. These terms and conditions are nondiscretionary. Finally, a BO may include additional discretionary conservation recommendations to minimize or avoid adverse effects of a proposed action on listed species or critical habitat, to help implement recovery plans, or to develop information.

Both voluntary conservation measures and USFWS required measures must be tracked and completed in accordance with the concurrence letter or BO. Common activities include carry over of consultation requirements into plans, general notes and bid documents, contractor training, installation of project specific avoidance measures, monitoring before, during and/or after construction, and implementation or payment for mitigation. Responsibility to complete these items may fall to project sponsors, contractors, district environmental staff, TxDOT, or 3rd party inspectors, and/or ENV-NRM, but must be clarified and recounted at several stages including:

- At the conclusion of consultation;
- At environmental clearance;
- Prior to bidding the project;
- After the contractor is selected and prior to construction;

- During construction; and
- After construction is complete.

Constant communication between all parties will be required throughout all stages to emphasize the importance in performing and complying with conservation measures. The documentation of ESA consultation commitments is required in ECOS. For more information, see [Perform Endangered Species Act \(ESA\) Consultation Commitments Activity Instructions in ENV's Environmental Guide: Volume 2 Activity Instructions](#).

9. Re-initiation – Re-initiation of consultation is required if any of the following situations occur (50 CFR §402.16), and applies to both formal and informal consultation:

- take occurs on projects where informal consultation was completed;
- the amount or extent of incidental take in a BO for formal consultation is exceeded;
- new project information reveals that effects of the action may affect a federally listed species or critical habitat in a way not previously considered;
- the project/action is subsequently modified after consultation in a way that causes effects to federally listed species or critical habitat that was not considered in the biological opinion or concurrence; or
- a new species is listed, or critical habitat is designated that may be affected by the action

The need to re-initiate consultation should be considered for: (1) NEPA re-evaluations occurring after clearance and prior to construction; or (2) change orders during construction that cause effects to listed species or critical habitat differently than was considered during consultation. Review and consideration of re-initiation triggers should always be completed in coordination with ENV-NRM.

3.4 Section 10 Permitting (Non-Federal Projects)

For TxDOT projects that are not federally authorized or approved (i.e., State funded projects) and could result in take of a federally listed species, an application must be prepared for an Incidental Take Permit from USFWS or NMFS under section 10 of the ESA. The application packet requires the applicant to partner in a HCP or develop and submit an HCP where an existing one is not available. If an HCP must be developed, the process can take several years, and must be obtained prior to initiation of project activities that could result in take. Use of section 10 is not common for TxDOT projects. Contact ENV-NRM for additional guidance.

3.5 Timing Requirements

Any consultation under section 7 must be completed prior to a CE determination, finding of no significant impact (FONSI) for an EA project, or record of decision (ROD) for an EIS projects. For projects that are not federally funded or permitted and that could result in the incidental take of a listed species, a section 10 Incidental Take Permit must be obtained from USFWS or NMFS prior to construction (and preferably, prior to letter of authority (LOA) clearance).

3.6 TxDOT Project File Documentation Requirements

The required documentation and ECOS processes for ESA consultations can be found in the [Obtain Endangered Species Act \(ESA\) Consultation Activity Instructions in ENV's Environmental Guide](#):

[Volume 2 Activity Instructions](#). A list of the minimum required documentation for TxDOT's project file follows:

- A species list from the USFWS IPaC system, including the date it was accessed (all projects);
- A Species Analysis Spreadsheet and Species Analysis Form completed according to the [Perform Species Analysis Activity Instructions in ENV's Environmental Guide: Volume 2 Activity Instructions](#) (all projects);
- Any official documentation or records of consultation with USFWS or NMFS, including emails and other written correspondence (all projects);
- Technical reports and other supporting technical information, if prepared and if not appended to the environmental or consultation document (if applicable);
- The USFWS's or NMFS's concurrence letter on a not likely to adversely affect determination (if applicable), and/or;
- The USFWS's or NMFS's BO on a likely to adversely affect determination and associated Incidental Take Statement (if applicable).

4.0 Additional Consultation and Documentation Resources

The following resources provide additional background information, consultation guidance, and documentation requirements for ESA compliance. For questions or NMFS coordination contact ENV-NRM at env_bio@txdot.gov.

- [TxDOT Documentation Standard for a Biological Assessment or Biological Evaluation](#)
- [TxDOT Obtain Endangered Species Act \(ESA\) Consultation Activity Instructions in ENV's Environmental Guide: Volume 2 Activity Instructions](#)
- [TxDOT Perform Species Analysis Activity Instructions in ENV's Environmental Guide: Volume 2 Activity Instructions](#)
- [TxDOT Template for Biological Evaluations and Biological Assessments on the Ecological Resources Toolkit](#)
- [USFWS Habitat Conservation Planning Handbook](#)
- [USFWS and NMFS Endangered Species Consultation Handbook, released March 1998](#)
- [USFWS Glossary of the ESA](#)

5.0 References

U.S. Fish and Wildlife Service and National Marine Fisheries Service (USFWS and NMFS). 1998. Endangered species consultation handbook. Procedures for conducting consultation and conference activities under Section 7 of the Endangered Species Act.

U.S. Fish and Wildlife Service (USFWS). 2020. Information for Planning and Consultation (IPaC). Available at <https://ecos.fws.gov/ipac/>. Accessed July 2020.

Appendix A: Environmental Handbook Revision History

The following table shows the revision history for this handbook.

Revision History		
Effective Date (Month, Year)	Version	Reason for Change
November 2020	Version 4	Content was updated to reflect the August 27, 2019 ESA Revisions to the Implementing Regulations (50 CFR Parts 424, 402, and 17) and updated to reflect 2019 updates to ECOS processes and documentation requirements.
April 2017	Version 3	Content was updated to enhance guidance on the section 7 consultation process and reflect new documentation guidance due to updates to ECOS.
August 2015	Version 2	Content was updated to reflect NEPA assignment. The project file documentation requirements were updated to reflect final requirements determined for FHWA assignment. Content was updated to reflect current USFWS guidance on using the IPaC website.
January 2014	Version 1	N/A

Appendix B: Abbreviated USFWS' ESA Glossary

Action area - All areas to be affected directly or indirectly by a federal action and not merely the immediate area involved in the action.

Biological assessment - A document prepared for the section 7 process to determine whether a proposed major construction activity under the authority of a federal action agency is likely to adversely affect listed species, proposed species, or designated critical habitat.

Biological opinion - A document that is the product of formal consultation, stating the opinion of the USFWS on whether a federal action is likely to jeopardize the continued existence of federally listed species or result in the destruction or adverse modification of critical habitat.

Candidate species - Plants and animals that have been studied and the USFWS has concluded that they should be proposed for addition to the federal endangered and threatened species list. These species have formerly been referred to as category 1 candidate species. From the February 28, 1996 Federal Register, page 7597: "those species for which the USFWS has on file sufficient information on biological vulnerability and threat(s) to support issuance of a proposed rule to list but issuance of the proposed rule is precluded."

Conservation - The terms "conserve," "conserving," and "conservation" mean to use and the use of all methods and procedures which are necessary to bring any endangered species or threatened species to the point at which the measures provided under the ESA are no longer necessary. Such methods and procedures include, but are not limited to, all activities associated with scientific resources management such as research, census, law enforcement, habitat acquisition and maintenance, propagation, live trapping, and transportation, and, in the extraordinary case where population pressures within a given ecosystem cannot be otherwise relieved, may include regulated taking.

Consultation - All federal agencies must consult with the USFWS or NMFS when any activity permitted, funded, or conducted by that agency may affect a federally listed species or designated critical habitat, or is likely to jeopardize proposed species or adversely modify proposed critical habitat. There are two stages of consultation: informal and formal.

Critical habitat - Specific geographic areas, whether occupied by federally listed species or not, that are determined to be essential for the conservation and management of listed species, and that have been formally described in the Federal Register.

Delist - The process of removing an animal or plant from the list of Endangered and Threatened Wildlife and Plants.

Destruction or Adverse Modification - A direct or indirect alteration that appreciably diminishes the value of critical habitat as a whole for the conservation of a listed species.

Effects of the Action - In reference to section 7, refers to all consequences to listed species or critical habitat that are caused by the proposed action, including the consequences that are caused by other activities of the proposed action. A consequence of the proposed action if it would not occur but for the proposed action and its reasonably certain to occur. Effects of the action may occur later in time and may include consequences occurring outside the immediate area involved in the action.

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Endangered - The classification provided to an animal or plant in danger of extinction within the foreseeable future throughout all or a significant portion of its range.

Endangered species permit - A document issued by the USFWS under authority of section 10 allowing an action otherwise prohibited under section 9 of the ESA.

Endemic species - A species native and confined to a certain region; having comparatively restricted distribution.

Environmental Baseline - refers to the condition of the listed species or its designated critical habitat in the action area, without the consequences to the listed species or designated critical habitat caused by the proposed action. The environmental baseline includes the past and present impacts of all Federal, State, or private actions and other human activities in the action area, the anticipated impacts of all proposed Federal projects in the action area that have already undergone formal or early section 7 consultation, and the impact of state or private actions which are contemporaneous with the consultation in process. The consequences to listed species or designated critical habitat from ongoing agency activities or existing agency facilities that are not within the agency's discretion to modify are part of the environmental baseline.

Extinct species - A species no longer in existence.

Extirpated species - A species no longer surviving in regions that were once part of their range.

Formal consultation - The consultation process conducted when a federal agency determines its action may affect a federally listed species or its critical habitat and is used to determine whether the proposed action may jeopardize the continued existence of federally listed species or adversely modify critical habitat. This determination is stated in the USFWS's biological opinion.

Habitat - The location where a particular taxon of plant or animal lives and its surroundings (both living and nonliving) and includes the presence of a group of particular environmental conditions surrounding an organism including air, water, soil, mineral elements, moisture, temperature, and topography.

Habitat Conservation Plan (HCP) - A plan which outlines ways of maintaining, enhancing, and protecting a given habitat type needed to protect species. The plan usually includes measures to minimize impacts, and might include provisions for permanently protecting land, restoring habitat, and relocating plants or animals to another area. An HCP is required before an incidental take permit may be issued.

Harm - An act which kills or injures wildlife. Such acts may include significant habitat modification or degradation when it kills or injures wildlife by significantly impairing essential behavioral patterns including breeding, feeding, or sheltering.

Historic range - Those geographic areas the species was known or believed to occupy in the past.

Incidental take - Take that results from, but is not the purpose of, carrying out an otherwise lawful activity.

Incidental take permit - A permit issued under section 10 of the ESA to private parties undertaking otherwise lawful projects that might result in the take of an endangered or threatened species. Application for an incidental take permit is subject to certain requirements, including preparation by the permit applicant of a conservation plan, generally known as a Habitat Conservation Plan or HCP.

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Incidental take statement - A term referring to that part of a biological opinion that exempts incidental take of a federally listed species from the section 9 prohibitions.

Informal consultation - Informal consultation precedes formal consultation and includes any form of communication between the federal action agency, applicant, or designated non-federal representative and the USFWS to determine if federally listed species may occur in the action area and what the effects of the action may be to such species. This phase is often used to develop project modifications or alternatives to avoid adverse effects to listed species, which would then preclude the need for formal consultation.

Jeopardy biological opinion - A section 7 biological opinion that determines that a federal action is likely to jeopardize the continued existence of federally listed species or result in the destruction or adverse modification of critical habitat.

Listed species - A species, subspecies, or distinct vertebrate population segment that has been added to the federal lists of Endangered and Threatened Wildlife and Plants (50 CFR 17.11 and 17.12).

Listing - The formal process through which the USFWS adds species to the federal list of endangered and threatened wildlife and plants.

Listing priority - A number from 1 to 12 indicating the relative urgency for listing plants or animals as threatened or endangered. The criteria used to assign this number reflect the magnitude and immediacy of threat to the species, as well as the relative distinctiveness or isolation of the genetic material they possess. This latter criterion is applied by giving a higher priority number to species which are the only remaining species in their genus, and a lower priority number to subspecies and varieties. These listing priorities are described in detail in the Federal Register on September 21, 1983, as pages 43098-43105.

Proposed species - Any species of fish, wildlife, or plant that is proposed in the Federal Register to be listed under section 4 of the ESA.

Range - The geographic area a species is known or believed to occupy.

Reclassify - The process of changing a species' official threatened or endangered classification.

Recovery - The process by which the decline of an endangered or threatened species is arrested or reversed, or threats to its survival neutralized so that its long-term survival in nature can be ensured.

Recovery permit - Permits issued under section 10(a)(1)(A) of the federal ESA for scientific research and other activities benefitting the recovery of federal-listed species.

Recovery plan - A document drafted by the USFWS or other knowledgeable individual or group, that serves as a guide for activities to be undertaken by federal, state, or private entities in helping to recover and conserve endangered or threatened species.

Section 4 - The section of the ESA that deals with listing and recovery of species, and designation of critical habitat.

Section 4(d) rule - A special regulation developed by the USFWS under authority of section 4(d) modifying the normal protective regulations for a particular threatened species when it is determined that such a rule is necessary and advisable to provide for the conservation of that species.

Section 6 - The section of the ESA that authorizes the USFWS to provide financial assistance to States through cooperative agreements supporting the conservation of endangered and threatened species.

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Section 7 - The section of the ESA that requires all federal agencies, in consultation with the USFWS, to ensure that their actions are not likely to jeopardize the continued existence of federally listed species or result in destruction or adverse modification of critical habitat.

Section 9 - The section of the ESA that deals with prohibited actions, including the import and export, take, possession of illegally taken species, transport, or sale of endangered or threatened species.

Section 10 - The section of the ESA that lays out the guidelines under which a permit may be issued to authorize activities prohibited by section 9, such as take of endangered or threatened species.

Take - means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct (section 3[18] of the ESA).

Threatened species - means any species which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.

Appendix C: Abbreviations and Acronyms

BA	Biological Assessment
BE	Biological Evaluation
BO	Biological Opinion
CE	Categorical Exclusion
CFR	Code of Federal Regulations
EA	Environmental Assessment
ECOS	Environmental Conservation Online System
ENV	Environmental Affairs Division
EIS	Environmental Impact Statement
ESA	Endangered Species Act
FHWA	Federal Highway Administration
HCP	Habitat Conservation Plan
IPaC	Information, Planning, and Conservation System
LOA	Letter of Authorization
MOU	Memorandum of Understanding
NEPA	National Environmental Policy Act
NMFS	National Marine Fisheries Service
NRM	Natural Resource Management
PCA	Programmatic Consultation Agreement
TxDOT	Texas Department of Transportation
USC	U.S. Code
USFWS	U.S. Fish and Wildlife Service