Ecology
Protected Species Assessment and Coordination

Overview
Federal Species Coordination
State Species Coordination

OVERVIEW
This guidebook describes GDOT procedures for assessing project effects to protected species and coordinating with appropriate agencies. The major federal law governing these procedures is the Endangered Species Act (ESA) (16 USC 1531-1544), and the major state laws governing these procedures are the Georgia Wildflower Preservation Act (OCGA 12–6–170) and the Georgia Endangered Wildlife Act (OCGA 27–3–130).

FEDERAL SPECIES COORDINATION

Effect Determination
Listed species should be evaluated using the US Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPaC) web portal whenever determination keys are available. If determination keys are not available for a particular species or group of species in IPaC, the Effect Determination Guidance for Endangered and Threatened Species (EDGES) should be followed (See Programmatic Agreement Toolkit) or technical assistance should be requested from USFWS. The Effect Determination Keys for federally listed species (See Figure 1) and critical habitat (See Figure 2) may also be reviewed prior to proposing a biological determination. The determination keys should be used as a guide when agency-developed keys are unavailable, but the Ecologist is responsible for identifying potential stressors to listed species associated with a proposed GDOT project, determining species exposure (i.e., when, where, and how a species may encounter a stressor), and how the species is expected to react upon exposure.

The following definitions are taken from the ESA Section 7 Consultation Handbook which should also be consulted regarding effect determinations for federally listed species, species proposed (not petitioned) for listing, designated or proposed critical habitat. Project impacts to protected species populations and/or suitable habitat, as well as impact avoidance and minimization measures (AMMs), should be considered when proposing a biological determination for a federally listed species.
GDOT assesses effects for species that are candidates for listing under the ESA; however, Section 7 consultation is not required and the following effect determinations, other than “no effect”, do not apply to candidate species. Refer to the State Species Coordination section of this guidebook for appropriate effect determinations for candidate species that are also state listed.

- No effect - the appropriate conclusion when a proposed action will not affect a listed species or designated critical habitat, or species or critical habitat proposed for listing. This includes when suitable habitat or designated/proposed critical habitat for a listed/proposed species is present within the Environmental Survey Boundary (ESB), but there is not a plausible, reasonably foreseeable path of effect that could elicit a response from a listed/proposed species or designated/proposed critical habitat. If a “no effect” determination is appropriate, required project documentation should be uploaded into IPaC, shared with USFWS and the lead Federal Agency, and submitted via IPaC. No agency response is required. Refer to the Joint Coordination Procedures (JCP) Standard Operating Procedure (SOP) for No Effect Determinations and Informal Consultation pursuant to Section 7 of the ESA for more information.

- May affect - the appropriate conclusion when a proposed action may pose any effects on listed species or designated critical habitat. When project actions "may affect" federally protected species, then formal consultation is required unless it is determined that a project is “not likely to adversely affect” a species/critical habitat and GDOT receives concurrence (i.e., informal consultation) from USFWS and/or National Oceanic and Atmospheric Administration (NOAA) Fisheries.

- Not likely to adversely affect - the appropriate conclusion when effects on listed species or designated critical habitat are expected to be discountable, insignificant, or completely beneficial. **Beneficial effects** are contemporaneous positive effects without any adverse effects to the species. **Insignificant effects** relate to the size of the impact and should never reach the scale where “take” occurs. **Take** is defined as harassment, harm, pursuing, hunting, shooting, wounding, killing, trapping, capturing or collecting, or attempting to engage in such conduct. **Harm** includes habitat modification or degradation that results in death or injury by significantly impairing behavioral patterns, including breeding, feeding, and sheltering. **Harass** includes actions that create the likelihood of injury by annoying to an extent as to significantly disrupt normal behavioral patterns. **Discountable effects** are those extremely unlikely to occur. Based on best judgment, a person would not: (1) be able to meaningfully measure, detect, or evaluate insignificant effects; or (2) expect discountable effects to occur.
> Likely to adversely affect - the appropriate finding or conclusion if any adverse effect to listed species or designated critical habitat may occur as a direct or indirect result of the proposed action or its interrelated or interdependent actions, and the effect is not: discountable, insignificant, or completely beneficial (see definition of "Not likely to adversely affect"). In the event the overall effect of the proposed action is beneficial to the listed species, but is also likely to cause some adverse effects, then the proposed action "is likely to adversely affect" the listed species. If an incidental take is anticipated to occur as a result of the proposed action, then a "Likely to adversely affect" determination should be made. *Incidental take* is defined as taking that "is incidental to, and not the purpose of, the carrying out of an otherwise lawful activity." A "Likely to adversely affect" determination requires the initiation of formal Section 7 consultation and development of a Biological Assessment (BA).

For projects that are reasonably expected to result in take (reach a may affect, likely to adversely affect determination) for manatee, please coordinate with USFWS to determine appropriate avoidance and minimization measures to reduce impacts. Because manatees are also protected under the Marine Mammal Protection Act, there is currently no legal method for the USFWS to issue a take statement for the manatee under Section 7 of the ESA.

**Figure 1 – Effect Determination Key – Federally Listed Species**

*Impacts through implementation of avoidance measures and/or Special Provision 107.23H

Note: The likelihood of the species using suitable habitat in the action area should be assessed, as habitat modification or degradation that could impact essential life history stages of listed species is considered “take” under the ESA and should result in a likely to adversely affect determination.
Defining the project action area is fundamental to completing an effect determination for a federally listed species or critical habitat. Action area is defined at 50 CFR 402.02 as all areas to be affected directly or indirectly by the federal action and not merely the immediate area involved in the action. For GDOT projects, the action area used to make an effect determination for federally listed/proposed or designated/proposed critical habitat will typically be the same as the ESB used to generate a species list in IPaC during early coordination plus a one mile buffer. This action area, comprising the ESB plus one-mile buffer, should encompass all potential direct and indirect effects from a typical GDOT project including, but not limited to sedimentation, lighting, and noise during (i.e., temporary) and post-construction (i.e., permanent).

There may be projects for which the action area used to make an effect determination may need to be expanded further. For example, in coastal counties where federally listed sea turtles are present, effects from lighting can extend many miles, as the turtles use the moon for navigation and the use of lighting during nighttime hours can disrupt that navigation. Any project that substantially increases the lighting from current conditions, may need to include a larger action area than ESB plus one mile. The Ecologist should request technical assistance from the agencies regarding the action area extent and potentially affected species with transmittal of the Ecology Resources Survey Report (ERSR), but may also request technical assistance before or after that stage.

**Figure 2 – Effect Determination Key – Critical Habitat**

- *Is Critical Habitat Present in the Action Area?*
  - YES
  - NO

- *Can Impacts to Critical Habitat be Avoided*?
  - YES
  - NO

- *Will Physical or Biological Features** be Altered?*
  - YES
  - NO

- *May Affect, Not Likely to Adversely Affect*
  - YES

- *May Affect, Likely to Adversely Affect*
  - YES

*Impacts through direct and/or indirect effects can be avoided through implementation of avoidance measures and/or Special Provision 107.23H.

**The features that occur in specific areas and that are essential to support the life-history needs of the species including but not limited to water, characteristics, soil type, geological features, sites, prey, vegetation, symbiotic species, or other features (50 CFR 424.02).
freshwater aquatic species, sea turtles, eastern indigo snake (*Drymarchon corais couperi*), and bats. Therefore, when transmitting an ERSR, the Ecologist should request technical assistance to identify agency concerns for species that may be affected by project actions that have not otherwise been identified in the action area. For all listed species that may be affected by project actions in the action area, as identified through GNAHRGIS or technical assistance, the Ecologist must include an assessment of effects and determination in the Ecology Resource Survey and Assessment of Effects Report (ERS AOE) and/or Addendum (ADDM).

When assessing effects on species within the action area, the Ecologist must consider both the immediate effects of project construction, as well as those that are reasonably certain to occur post-construction. For example, a bridge replacement involving in-stream construction is likely to have adverse downstream sedimentation effects during construction, but may have beneficial post-construction effects by improving the passage of flood flows. An example of adverse post-construction effects to species includes noise and lighting effects from a new alignment project bisecting previously undisturbed habitat. Additional examples can be found in the *Ecology General Project Report Template and Guidance*.

**Agency Consultation**

If a federally funded or authorized project “may affect” federally listed species or designated critical habitat, then consultation with USFWS and/or NOAA Fisheries must be completed in accordance with Section 7 of the ESA. State aid projects for which there is no federal aid or authorization (i.e., no Section 404 Clean Water Act permit required) are considered non-federal actions and Section 7 ESA consultation does not apply. See ESA Section 10 permits below for more information.

Section 7 consultation is only required if a project “may affect” federally listed species or designated critical habitat on an IPaC early coordination list. Federally listed species included on a GNAHRGIS, but not an IPaC early coordination list, do not require USFWS consultation. USFWS should be notified if a species is listed for a project in GNAHRGIS, but not IPaC to verify that the species is outside of the consultation range. Federally listed species found within a project ESB, even if they are not found on either IPaC or GNAHRGIS list still require coordination under ESA. Please see requirements listed under re-initiation of Section 7.

**US Fish and Wildlife Service**

*Informal Section 7 Consultation*

If federally listed/proposed species or designated/proposed critical habitat under USFWS jurisdiction may be affected by a project, then informal Section 7 consultation with USFWS may be required. A “may affect, not likely to adversely affect” determination and informal Section 7 consultation may be appropriate if the action area contains suitable habitat that cannot be avoided, but no individuals are identified during a species-specific survey. The GDOT Ecologist should initiate informal Section 7 consultation on behalf of the lead Federal
Agency during the development of the ERS AOE, requesting concurrence with the proposed biological determinations. Refer to the *JCP SOP for No Effect Determinations and Informal Consultation pursuant to Section 7 of the ESA* for agency consultation procedures and timelines.

**Formal Section 7 Consultation**

When a proposed project action “may affect, and is likely to adversely affect” a proposed or listed species or proposed or designated critical habitat, the Ecologist must submit a BA to the lead Federal Agency and USFWS for review. The BA should be transmitted as a section of the ERS AOE or ADDM. Refer to the *Ecology General Project Report Template and Guidance* for BA reporting requirements.

The GDOT Ecologist should recommend biological determinations and request initiation of Formal Section 7 consultation with USFWS by the lead Federal Agency. The consultation process will conclude with the USFWS issuing a Biological Opinion (BO) and an incidental take statement. Incidental Take Statements will be issued for all species except plants when they do not occur on federal lands and for manatees. Refer to the *JCP SOP for Formal Consultation and Conference pursuant to Section 7 of the ESA* for agency consultation procedures and timelines.

**National Oceanic and Atmospheric Administration Fisheries**

For projects that may affect species or critical habitat under NOAA Fisheries jurisdiction, NOAA Fisheries should be consulted through technical assistance to discuss construction methodology and potential impacts to species and/or designated critical habitat. The Ecologist should consult the *ESA Section 7: Interagency Consultation in the Southeast US* available on the NOAA Fisheries Southeast website prior to completing an effect determination.

**Informal Section 7 Consultation**

For projects that are minor (i.e., do not meet the definition of “major federal actions”, as defined in 50 CFR § 404.02), NOAA Fisheries created a *Section 7 Checklist* and accompanying *Section 7 Checklist Procedures* available on the NOAA Fisheries Southeast website that lists essential information needed by NOAA Fisheries biologists to respond timely to a consultation request. The *Section 7 Checklist* is intended to be used for small-scale projects that are not likely to adversely affect listed species and/or critical habitat. The NOAA Fisheries *Section 7 Checklist* and appropriate supplemental information should be completed and transmitted to NOAA Fisheries with the ERS AOE or ADDM. The GDOT Ecologist should initiate informal Section 7 consultation with NOAA Fisheries on behalf of the lead Federal Agency with transmittal of the ERS AOE, requesting concurrence with the proposed biological determinations.

**Formal Section 7 Consultation**

For “major federal actions” or projects that are likely to adversely affect species or critical habitat under NOAA Fisheries jurisdiction, a BA is required. The BA should be transmitted as a section of the ERS AOE or ADDM (See *Ecology General Project Report Template and Guidance* for BA reporting requirements).
Guidance to the lead Federal Agency and NOAA Fisheries. The GDOT Ecologist should recommend biological determinations and request initiation of formal Section 7 consultation with NOAA Fisheries by the lead Federal Agency. The consultation process will conclude with NOAA Fisheries issuing a Biological Opinion (BO) and an incidental take statement.

Re-Initiation of Section 7 Consultation
Re-initiation of Section 7 consultation is required:

1. If the amount or extent of the taking specified in the incidental take statement is exceeded;
2. If new information reveals that the effect of the action may affect listed species or critical habitat in a manner or to an extent not previously considered;
3. If the identified action is subsequently modified in a manner that may cause an effect to the listed species or critical habitat that was not previously considered; or
4. If a new species is listed or critical habitat designated that may be affected by the identified action.

Refer to the JCP SOP for Re-initiation of Section 7 Consultation and Conference Under the ESA for GDOT re-initiation procedures and timelines. GDOT conducts re-initiation of informal Section 7 consultation on behalf of the lead Federal Agency with transmittal of an ADDM to the ERS AOE to USFWS. Re-initiation of formal Section 7 consultation is completed by the lead Federal Agency and requires submittal of a revised BA with the ADDM.

Programmatic Agreements
Both USFWS and NOAA Fisheries have entered into programmatic agreements with the Federal Highway Administration (FHWA) to streamline Section 7 consultation for federally funded projects. Similarly, USFWS and US Army Corps of Engineers (USACE) have developed guidance for Section 7 consultation on projects for which USACE is the lead Federal Agency (i.e., projects that require a Section 404 Clean Water Act permit and do not receive federal funds). The Ecologist should refer to the Programmatic Agreement Toolkit for more information regarding Section 7 consultation options available for specific species/activities.

Section 9
Section 9 of the ESA makes it unlawful for any person subject to the jurisdiction of the US to “take” endangered species or violate any such regulation pertaining to such species or to any threatened species pursuant to Section 4 of the ESA. For threatened species, any species with a species-specific 4(d) rule will be subject to exemptions or provisions provided in each rule. Threatened species without 4(d) rules and that were listed before September 26, 2019 will be treated similar to endangered species and their prohibition of take. Any species listed as threatened or reclassified as threatened after September 26, 2019 and without a 4(d) rule will not have prohibitions of take.
For state funded projects, typically if a Section 404 permit is not required, GDOT serves as the lead agency responsible for ESA compliance. However, project impacts to federal lands or resources may result in another entity serving as the lead Federal Agency, which would result in Section 7 consultation. If a project would avoid “take” of federally listed species, as defined by the ESA, then the ERS AOE shall include the following statement: “no potential for take under Section 9 of the Endangered Species Act”. The ERS AOE is prepared for the project file and a clearance email is sent to the Environmental Analyst. If the project would result in “take” as defined by the ESA, then a Section 10 ESA permit would be required.

Section 10

Section 10 (a) of the ESA defines exceptions and allows for permits to authorize take that would otherwise be prohibited by Section 9. This section establishes a species protection process for non-federal actions including provisions for an incidental take permit (ITP). For non-federal actions determined by GDOT to adversely affect federally listed species or critical habitat, an ITP must be obtained from USFWS and/or NOAA Fisheries. Applications for an ITP must be accompanied by a Habitat Conservation Plan (HCP) that describes how the effects of a proposed action would be adequately minimized and mitigated. For non-federal actions determined by GDOT to adversely affect federally listed species or critical habitat, an ITP must be obtained from USFWS and/or NOAA Fisheries in accordance with ESA Section 10(a)(1)(B) and include an HCP. The USFWS ESA Document Library website provides guidance on when to seek an ITP. The joint USFWS and NOAA Fisheries Habitat Conservation Planning and Incidental Take Permit Processing Handbook should be consulted for development of an HCP/ITP application.

STATE SPECIES COORDINATION

Effect Determination

The Effect Determination Key (Figure 3) should be consulted prior to proposing a biological determination for state protected or federal candidate species listed during early coordination with the Georgia Department of Natural Resources (GADNR), Wildlife Resources Division (WRD). The following definitions are provided for guidance when developing effect determinations for state listed or federal candidate species. Factors to consider in making the below effect determinations include the size of the impact, its duration, the potential for avoidance measures to reduce the impact, and the sensitivity of the species to the impact. If the Ecologist is unsure of the appropriate effect determination, WRD should be consulted by requesting technical assistance.

> No effect - the appropriate conclusion if no suitable habitat for a state listed species is identified in the ESB or when a proposed action will avoid impacts to suitable habitat and listed species when present.

> No significant adverse effect - the appropriate conclusion when a state listed species or suitable habitat for a state listed species is present and negative impacts cannot be avoided. However, impacts are considered negligible because they are
unlikely to result in lasting impacts to population size or population persistence after the conclusion of the project and are not likely to prevent the species from meeting its life history needs.

> **Significant adverse effect** - the appropriate conclusion when negative impacts to a state listed species or suitable habitat are unavoidable and would likely result in lasting impacts to population size or population persistence or are likely to prevent the species from meeting its life history needs. If this effect determination is reached, coordination with WRD to determine the potential for appropriate mitigation measures is required.

**Wildlife Resources Division Coordination**

If state listed species or suitable habitat may be affected, the Ecologist should request technical assistance from WRD to develop appropriate AMMs to protect state listed species and/or suitable habitat. If upon completion of the Avoidance and Minimization Measures Meeting, the project may cause a “significant adverse effect” to a state listed species, the Ecologist should request WRD technical assistance to develop a species relocation plan or other measures to minimize adverse effects.

**Figure 3 – Effect Determination Key – State Listed Species**

- **Is Suitable Habitat Present in the ESB?**
  - **NO**: No Effect
  - **YES**: Can the Species be Avoided?
    - **NO**: Significant Adverse Effect
    - **YES**: Would species life history need be impacted?**
      - **NO**: Significant Adverse Effect
      - **YES**: Is the Species Present in the ESB or Presence Assumed?
        - **NO**: Can Suitable Habitat be Avoided?**
          - **NO**: Significant Adverse Effect
          - **YES**: Is Suitable Habitat Present in the ESB?**
            - **NO**: No Effect
            - **YES**: Can Species Impacts be Avoided?**
              - **NO**: Significant Adverse Effect
              - **YES**: **NO**

ESB – Environmental Survey Boundary

*Impacts are avoidable through implementation of avoidance measures and/or Special Provision 107.23H

**Life history needs include feeding, breeding, and sheltering.
### Guidebook Revision History

<table>
<thead>
<tr>
<th>Revision Description</th>
<th>Relevant Sections</th>
<th>Revision Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Initial Publication</td>
<td>All</td>
<td>4/30/2021</td>
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</tbody>
</table>