

CHAPTER 20

BIOLOGICAL RESOURCES



CONTENT

- 20.1 Summary of Key Legislation, Regulations, and Guidance
- 20.2 Agency Roles
- 20.3 General Methodology
- 20.4 Identification of Appropriate Mitigation Measures
- 20.5 Post-NEPA Commitments
- 20.6 Additional Information

BIOLOGICAL RESOURCES

This chapter focuses on the inventory and assessment of impacts to fish and wildlife. This assessment extends the studies of wetlands and streams (see Chapter 19, Wetlands and Waters of the United States) to terrestrial habitats, such as woodlands. This chapter also discusses impacts to threatened and endangered species.

As a largely developed area, all natural habitats in the District of Columbia are important to maintaining the diversity of wildlife. Therefore, impacts to natural areas should be avoided and minimized to the extent possible.

20.1 Summary of Key Legislation, Regulations, and Guidance

Fish, wildlife, and threatened and endangered species in the District of Columbia are primarily protected under federal laws and regulations. The preservation of trees is addressed by District of Columbia law.

Federal Laws and Regulations

- Fish and Wildlife Coordination Act (16 United States Code [USC] 661–667d)
- Migratory Bird Treaty Act of 1976 (16 USC 703 and 50 Code of Federal Regulations [CFR] Part 21)
- Endangered Species Act of 1973 (ESA), 16 USC Section 1531 et seq.
- 50 CFR, Part 200, Wildlife and Fisheries
- 50 CFR, Part 402, ESA

District of Columbia Laws and Regulations

- District of Columbia Urban Forest Preservation Act (District of Columbia Register, Volume 50, Page 888)

Guidance Documents

- United States Fish and Wildlife Service (USFWS). Section 7, Endangered Species Coordination Handbook.
- Federal Highway Administration (FHWA). 2006. Eco-Logical: An Ecosystem Approach to Developing Infrastructure Projects.
- FHWA. 1987. Guidance for Preparing and Processing Environmental and Section 4(f) Documents. Technical Advisory (TA) T6640.8A

20.2 Agency Roles

The federal and District of Columbia agencies share responsibilities for protecting the natural environment. The following discussion focuses on the roles of these agencies in the review and regulation, if applicable, of highway projects.

Federal Agencies

- USFWS, United States Department of the Interior (USDOI), and National Marine Fisheries Service (NMFS, National Oceanographic and Atmospheric Administration, Department of Commerce) share responsibilities regarding overall evaluation of a project on natural habitats, fish and wildlife, and threatened and endangered species. The Fish and Wildlife Coordination Act requires proponents to coordinate the impacts of federally funded projects with these agencies. These agencies maintain records of species that are protected under the ESA and oversee compliance with the Act. Through a cooperative agreement with the Virginia Institute of Marine Sciences, NMFS also monitors the annual extent of submerged aquatic vegetation (SAV), a type of plant

community that occurs in permanent waters and is an important habitat feature for fish and water quality. SAV beds are protected as a special aquatic habitat (like wetlands) under Section 404, as well as under District of Columbia regulations, as noted above (District of Columbia Municipal Regulations [DCMR] Title 21, Chapter 14).

The Chesapeake Bay Field Office of USFWS in Annapolis and the northeast regional office of the NMFS in Gloucester, Massachusetts, oversee activities in the District of Columbia.

- National Park Service (NPS), National Capital Region Center for Urban Ecology, has particular interest in designated national parks, but also maintains records and provides protection for federally listed and state-listed rare species.

Local Agencies

- District of Columbia Department of the Environment, Fisheries and Wildlife Division (DDOE) provides fish and wildlife research and management, aquatic education, and fishing license administration. The Fisheries and Wildlife Division conducts annual surveys and maintains a database of fish and other aquatic populations in the waters of the District of Columbia and provides aquatic habitat monitoring and evaluation. The Fisheries and Wildlife Division has also developed the District of Columbia Comprehensive Wildlife Conservation Strategy, a plan for conserving wildlife and their habitats, with particular emphasis on preserving wildlife and habitats in the urban environment. Coordination with the Fisheries and Wildlife Division could provide existing conditions information, rare species data, and impact assessment for projects.

- Metropolitan Washington Council of Governments (MWCOG) maintains water quality and fisheries data on a regional basis. MWCOG also monitors fish habitat conditions and areas in need of restoration.

20.3 General Methodology

20.3.1 Definitions

Endangered species: An animal or plant species in danger of extinction throughout all or a significant portion of its range.

Threatened species: An animal or plant species likely to become endangered within the foreseeable future throughout all or a significant portion of its range.

20.3.2 ESA Section 7 Process

In the event that there is a potential of an endangered species in the project area, Endangered Species Act (ESA) Section 7 consultation is required. This consultation may lead to the determination by the lead federal agency that there are no endangered species present in the area or some kind of assessment (including a formal biological assessment [BA]) is required. Any project requiring work in Potomac or Anacostia River has to undergo this process due to the short nose sturgeon, which is a listed endangered species. National Marine Fisheries (NMF) or U.S. Fish and Wildlife Service (USFWS) should be consulted to determine which species (including short nose sturgeon) is listed or not as the endangered species list is updated routinely.

For a project that requires construction in Potomac River, Anacostia River, any tributaries to these waters, or any work in Anacostia Park, Rock Creek Park, or other parks where there is a potential of fish and wildlife, coordination

should be conducted with NMF, USFWS, and DDOE to ensure no threatened or endangered species exist in the area. If the coordination indicates there is an endangered species in the project area, then the Section 7 consultation shall be formally initiated by either a letter from FHWA (or the lead federal agency) to NMF or USFWS requesting the formal initiation of consultation; or by a letter from FHWA (or the lead federal agency) delegating DDOE as the “Non Federal Representative” for the consultation. Please see “14th Street Bridges Rehab Sec 7 BA” in the appendices for reference. After this letter is sent, formal consultation is started, which may include meetings (in-person or by phone) and written correspondence. NMF or USFWS may require a simple assessment or a BA for this project. This assessment should include a determination of “effects’ on the endangered species due to this project. After this assessment is submitted, NMF or USFWS may issue a concurrence with the determination of effects finding or may require more information. A written determination of effects (or concurrence with the federal agency determination) by NMF or USFWS is required to complete the Section 7 consultation process. In case of multiple federal agency actions (e.g., when FHWA is the lead agency, and the project requires a Section 404 permit needed from the U.S. Army Corps of Engineers and a permit from NPS as well), then joint agency consultation should be used rather than individual consultation.

20.3.3 Existing Conditions/Affected Environment

An inventory of the biological resources in the project area begins with the identification of natural and manmade environments. Developed areas, parks, greenways, stream corridors, brushy areas, woodlands and other natural or seminatural areas should be identified.

Office Analysis

Various published and Internet resources are available for identifying potential natural habitats in the project area.

Examples of these data sources are listed below:

District of Columbia Geographic Information System (GIS). The District of Columbia GIS is a good starting point for the natural resources inventory search. It contains information such as wetlands, streams, and topography. A map of wetlands in the District of Columbia is available as a download from the DDOE Water Quality Division website.

- Aerial Photography. Several online sources for aerial photography exist, although the photos may not be recent. Some areas may be blacked out if they are too close to the Capitol or other government buildings. The aerials can show vegetated areas and land use that may not be available from other sources.
- District of Columbia Soil Survey. The soil survey, assembled by the Natural Resources Conservation Service, contains maps and descriptions of the soils throughout the District of Columbia. The soil survey describes the soil characteristics, such as drainage and texture, which can determine plant community composition.
- Casey Trees Endowment – Street Trees. Street trees may be the only natural resource in the project area. Casey Tree Endowment has inventoried many street trees throughout the District of Columbia, recording species, sizes, and condition. The Endowment maintains an online GIS of the trees that have been inventoried.

The inventory of habitats should also include wetlands and streams (see Chapter 19, Wetlands and Waters of the United States).

Agency Coordination

To satisfy the requirement of the Fish and Wildlife Coordination Act and Section 7 of the ESA, early coordination letters should be forwarded to each of the resource agencies with a map of the project area, requesting information regarding fish and wildlife species known in the project area, specifically records of rare species or potential habitats and other issues that the agency may consider important.

Federal Threatened and Endangered Species Known to Occur in the District of Columbia

Common Name	Scientific Name	Federal Status	Potential Habitat
Shortnose Sturgeon	<i>Acipenser brevirostrum</i>	Endangered	Potomac River and tributaries
Hay's Spring Amphipod	<i>Stygobromus hayi</i>	Endangered	Rock Creek

This information should be requested from:

- USFWS
- NMFS
- NPS
- DDOE Fisheries and Wildlife Division
- MWCOG

See additional information regarding agency coordination in Chapter 12, Agency Coordination Process.

Field Studies

Field studies must be performed to confirm secondary data and to add detail to the biological resource inventory.

Granted, a large portion of the District of Columbia is densely developed, and, therefore, natural resources may be limited. On the other hand, projects near Rock Creek, the Anacostia River, the Potomac River, any of their tributaries, parks, or greenways may contain appreciable natural areas.

The project manager should coordinate with the resource agencies to establish the appropriate level of detail for the field studies. In most cases, a field biologist familiar with the local vegetation and wildlife should perform the survey. In addition, an aquatic biologist may be needed if any streams will be affected. Occasionally, a specialist, such as an expert on a particular rare species, may also be needed. Field studies should encompass the following areas of investigation:

- Terrestrial habitat characterization. Any areas supporting natural vegetation should be described. The type and relative amounts of plant community types (such as woodland or open field) should be described, including the plant species and wildlife observed in each community type. If woodlands are in the project area, the general sizes (diameter) and species of trees present should be described.
- Potential habitats for threatened and endangered species. Based on the records of species in the project vicinity supplied by the resource agencies during early coordination, the habitats that would be potentially affected should be compared to the habitat requirements of the rare species.

Field studies should be summarized in a technical memorandum that includes:

- Study methods
- Dates of field surveys

- Background data (such as soil survey, District of Columbia GIS, or aerial photos)
- Number, sizes, and types of habitats in the project area
- Wildlife encountered
- Special rare species studies (if any)
- Maps of the habitats
- Representative photos of the habitats
- Copies of agency coordination letters

The Affected Environment section of the National Environmental Policy Act (NEPA) document should include a map and discussion of the habitats in the project area. It should also include discussion of coordination efforts with state and federal agencies concerning potential presence of listed species, the habitat requirements of listed species and the presence or absence of such habitat within the project area. Much of these data can be summarized in tabular form.

20.3.4 Determination of Impacts

The alternatives should be evaluated for their impacts to any natural resources identified. Impacts should be quantified whenever possible. For many terrestrial habitat impacts, the area of each habitat within each alternative footprint should be quantified (such as woodland, mowed lawn, or brushy areas). This information can typically be summarized for all alternatives in a table.

An assessment of the impact to wildlife from the direct loss of habitats and indirect impacts to remaining habitats should also be made.

As discussed in Chapter 19, Wetlands and Waters of the United States, potential impacts to aquatic species or

wetland dependent species adjacent to the project should be examined because of the potential for peripheral impacts to these habitats beyond the project footprint. Further, potential impacts to aquatic species from water quality impacts should be examined (see also Chapter 17, Water Quality Policy and Regulations).

Threatened and Endangered Species. Special attention should be paid to impacts to known or potential habitats of threatened, endangered, or special interest species. If no listed species are known from the area, and the habitat is unsuitable, then a statement to that effect is sufficient.

If a protected species is potentially present in the project area, additional detailed correspondence with the USFWS or the NMFS may be needed in accordance with Section 7 of the ESA. Whenever possible, this coordination should begin as an “informal” coordination because that allows for a more casual conversation among DDOT, FHWA, and the resource agency regarding the details of the project and potential impacts.

Additional information regarding the habitat conditions at the site are submitted as a Biological Evaluation (BE). This document summarizes the habitat conditions from field studies and other documentation, the habitat requirements of the listed species, and detailed information on potential impacts to the listed species. Most often, an agreement can be reached during informal consultation that includes design modifications and mitigation measures to minimize impacts to the species, and the USFWS or NMFS can complete the Section 7 coordination process with a biological opinion that the project is “not likely to adversely affect” the species.

If a known habitat cannot be avoided, sufficient mitigation measures cannot be found to minimize potential impacts,

and the agency concludes that the project may adversely affect the species, then the coordination process may be formalized to review in detail and justify the project and its impacts. A formal Biological Assessment (BA) is prepared that includes all of the information from the BE, plus interviews with recognized experts. Additional detailed studies of the species and its habitat may be required for the BA. Once the USFWS or NMFS accepts the BA as complete, they prepare a biological opinion on whether the proposed activity will jeopardize the continued existence of a listed species. If it is determined that species will not be jeopardized, the project may proceed, but likely with conditions. If individuals of the listed species could be unavoidably lost, the agency may issue a “take” permit. If it is determined that the species will be jeopardized, the project cannot proceed.

The draft NEPA document should make reference to the Section 7 consultation. The biological opinion should be obtained before the NEPA document can be signed.

20.4 Identification of Appropriate Mitigation Measures

Mitigation for the loss of natural habitats will vary by project. Revegetation of temporarily disturbed areas is standard practice in accordance with the DDOT Design Manual. Attempts to restore comparable vegetation should be considered to minimize project impacts.

- The District of Columbia Urban Forest Preservation Act requires a Special Tree Removal Permit for a person or nongovernmental agency that removes trees with a circumference of 55 inches (17.5 inches in diameter) or more. While the Urban Forest Preservation Act may not be applicable to DDOT projects, landscaping and replacement of trees is included in the DDOT Design and Engineering Manual.

Specific mitigation measures may also be dictated by regulatory agencies to satisfy regulatory requirements, such as wetlands and streams (Chapter 19, Wetlands and Waters of the United States) and floodplains (Chapter 18, Floodplains Policy and Regulations).

Very specific mitigation measures may be required in order to avoid or minimize impacts to threatened or endangered species. These measures would be identified in the Section 7 coordination with the USFWS and NMFS.

20.5 Post-NEPA Commitments

Any commitments to the restoration of habitats, such as from temporary disturbance, which are made in the NEPA document must be incorporated into the design documents. Particular design features to minimize peripheral impacts, such as wildlife or fish migration, must also be incorporated as agreed upon with the resource agencies.

Of particular importance is the incorporation of specific design or construction methods to avoid or minimize impacts to threatened or endangered species. If a “take” permit is issued, construction site monitoring and reporting may be required.

20.6 Additional Information

- USFWS
Chesapeake Bay Field Office
177 Admiral Cochrane Drive
Annapolis, MD 21401
410-573-4573
<http://www.fws.gov/chesapeakebay/>
- National Marine Fisheries Service (NMFS)
Northeast Regional Office
National Oceanic and Atmospheric Administration
One Blackburn Drive
Gloucester, MA 01930-2298
<http://www.nero.noaa.gov/nero/>
- National Park Service (NPS), National Capital Region
Center for Urban Ecology
District of Columbia Natural Heritage Program
4598 MacArthur Boulevard NW
Washington, DC 20007
202-342-1443, x209
<http://www.nps.gov/cue/tesm.htm>
- National Capital Parks East
1900 Anacostia Drive SE
Washington, DC 20020
202-690-5160
<http://www.nps.gov/nacel/>
- Division of Fisheries and Wildlife
District of Columbia
51 N Street NE, Suite 5002
Washington, DC 20002
Phone: 202-535-2266
Fax: 202-535-1373
http://ddoe.dc.gov/ddoe/cwp/view,a,1209,q,492187,ddoeNav_GID,1486,ddoeNav,/31375/313771.asp
- District of Columbia Urban Forest Preservation Act:
http://app.ddot.dc.gov/ufal/information/preservation_act.shtm

- USFWS. 1998. Endangered Species Act Consultation Handbook; Procedures for Conducting Section 7 Consultations and Conferences: *www.fws.gov/caribbean/es/PDF/Sec%207%20Handbook.pdf*
- FHWA. 2006. Eco-Logical: An Ecosystem Approach to Developing Infrastructure Projects: *http://www.environment.fhwa.dot.gov/ecological/eco_toc.asp*