

# **Habitat Evaluation Procedures (HEP)**

**ESM 102**



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U.S. Fish and Wildlife Service  
Department of the Interior  
Washington, D.C.

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Preface

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Since 1974 the U.S. Fish and Wildlife Service (USFWS) has been developing a habitat-based evaluation methodology entitled the Habitat Evaluation Procedures (USFWS 1976) for use in impact assessment and project planning. This work has culminated in the development of three documents. The first document, entitled "Habitat as a Basis for Environmental Assessment" (101 ESM), addresses the justification for a habitat-based technique and discusses the conceptual approach to habitat assessment.

This document, the "Habitat Evaluation Procedures" (102 ESM), is the second of the three documents and serves as a further refinement of the Habitat Evaluation Procedures (HEP) first developed in 1976. This document describes how the concepts outlined in the first document can be implemented in a standardized procedure for conducting habitat evaluations in the field. The Procedures provide a quantification of wildlife habitat that is based on two primary variables: 1) the Habitat Suitability Index (HSI); and 2) the total area of available habitat.

Two major changes have occurred in the Procedures since 1976 and are presented in this document. The first involves determining an HSI by use of documented habitat models. The second major change involves analyses of individual evaluation species, rather than habitat types (cover types) throughout the analysis. Concepts discussed in "Habitat as a Basis for Environmental Assessment" provide a rationale for this change.

The third document, "Standards for the Development of Habitat Suitability Index Models for Use with the Habitat Evaluation Procedures" (103 ESM), provides guidance in the development of habitat models. Together, the three documents provide the user with a useful tool for habitat evaluations.

The current HEP methodology has been developed primarily for application to terrestrial and inland aquatic habitats. HEP has not been extensively applied to estuarine systems. However, the concepts of habitat evaluation may be equally applicable in those systems. The USFWS is conducting further tests and research to determine what changes may be necessary to fully apply HEP to estuarine systems.

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