

**Forest Service Manual
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**Forest Service Manual 2600 – Wildlife, Fish, And Sensitive Plant Habitat Management
Chapter 2620 - Habitat Planning and Evaluation**

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Approved by: F. Dale Robertson, Chief

Date approved:

Responsible Staff:

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Superseded Document(s):

Digest: Following is an explanation of the changes throughout the directive by section.

2620: Changes title from "Habitat Planning and Program Administration" to "Habitat Planning and Evaluation".

2620.3: Adds policy for assessing of sensitive species populations, evaluating cumulative effects of proposed management on habitat capability, and monitoring trends of management indicators.

2620.4: Adds responsibility of Director, Wildlife and Fisheries. Clarifies responsibility of Regional Forester, Forest Supervisor, and District Ranger for selecting management indicators and assessing sensitive species populations.

2620.5: Adds definitions for management indicators and ecological indicators.

2621: Adds a new section devoted to management indicator habitat planning and evaluation.

2621.1: Adds requirements for selecting and documenting management indicators in land management plans and projects.

2621.2: Clarifies requirements for assessing endangered, threatened, and sensitive populations in land management plans and projects.

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2621.3: Adds guidelines for evaluating and displaying in land management plans and projects the cumulative effects of proposed management on management indicators.

2621.4: Clarifies how requirements for management indicators must be provided for in land management and project plans.

2621.5: Adds monitoring requirements for management indicators in land management plans and projects. Provides direction for conduct of compliance, effectiveness, and validation monitoring in the course of plan implementation.

2622: Adds requirements for providing for and evaluating diversity in forest planning.

2623: Adds the reporting elements to be used in expressing habitat objectives, outputs, and effects in land management plans and projects.

2624: Clarifies direction for coordinating Sikes Act planning with Forest land and resource management planning.

2626: Clarifies requirement to minimize collection of new data, and to coordinate data management with Forest, Regional, and National information management programs. Adds direction for obtaining information to support habitat evaluations, population assessments, and legal requirements for endangered and threatened species.

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2625 - Inventory and Data Management

2620.1 - Authority

FSM 2600 Zero Code contains the general authorities related to the management of wildlife, fish, and threatened and endangered species habitat. Specific authorities for direction in this chapter are the Fish and Wildlife Conservation Act of September 15, 1960, also known as the Sikes Act (FSM 2601.1), and Part 219 of the Code of Federal Regulations (FSM 2601.1). In addition to these authorities relevant to habitat planning and evaluation, the Secretary of Agriculture's Policy on Fish and Wildlife, Department Regulation 9500-4 (DR 9500-4), directs the Forest Service to:

1. Manage "habitats for all existing native and desired non-native plants, fish, and wildlife species in order to maintain at least viable populations of such species."
2. Habitat must be provided for the number and distribution of reproductive individuals to ensure the continued existence of a species generally throughout its current geographic range.

2620.2 - Objectives

The broad objective of habitat planning and evaluation is to provide habitats to meet goals and objectives for wildlife and fish, including endangered, threatened, and sensitive animal and plant species set forth in land and resource management plans.

Specific objectives are to:

1. Integrate habitat planning into land management and project plans to meet National, Regional, and local objectives for wildlife and fish, including threatened, and endangered and sensitive animal and plant species.
2. Provide a sound base of information to support management decision-making affecting wildlife and fish, including endangered, threatened, and sensitive animal and plant species, and their habitats.
3. Identify opportunities and management strategies to maintain and improve habitats throughout the National Forest System.
4. Coordinate forest planning for wildlife and fish with State comprehensive planning conducted pursuant to the Fish and Wildlife Conservation Act, as amended by the Sikes Act (FSM 2601, item 6). Include in Forest plans and projects objectives required by the Act.
5. Achieve Service-wide consistency in how habitats of wildlife, fish, sensitive, and threatened and endangered species are evaluated and considered in land and resource management planning.

2620.3 - Policy

1. Use management indicators to address issues, concerns and opportunities for plants, wildlife, fish, and sensitive species habitats through all planning levels.
2. Provide habitat management direction to support recovery of Federally-listed species. Provide habitat management direction to ensure maintenance of viable populations generally well-distributed throughout their current range.
3. Evaluate the cumulative effects of proposed management activities on habitat capability for management indicators.
4. Specify in forest plans and project plans the standards, guidelines, and prescriptions needed to meet identified habitat goals and objectives for wildlife and fish, including endangered, threatened, and sensitive animal and plant species.
5. Monitor management indicators to evaluate compliance of management activities with plan direction, effectiveness of prescribed management, and validity of information used in habitat evaluation and planning.

2620.4 - Responsibility

2620.41 - Chief

The Chief reserves the authority to approve National supply and demand forecasts for fish and wildlife resources in the Resources Program Assessment (RPA).

2620.42 - Director, Wildlife and Fisheries

The Director provides advice to field units to ensure Service-wide consistency in how habitats of wildlife and fish, including endangered, threatened and sensitive animal and plant species are evaluated and considered in land management plans and projects.

2620.43 - Regional Forester

Each Regional Forester has the authority and responsibility to:

1. Approve schedules for 3 to 5-year implementation plans prepared under the Sikes Act (FSM 2601, para. 6) in those States containing more than one Forest Supervisor's Office.
2. Approve selection of management indicators for use and evaluation in forest land and resource management plans.
3. Approve Regional guidelines for evaluating and displaying wildlife and fisheries program results and values in Regional guides and Forest plans.

4. Ensure Region-wide consistency in standards, technologies, and methods used in habitat planning and evaluation and monitoring of wildlife and fish resources.
5. Coordinate conservation strategies and habitat planning for those species distributed over more than one Forest and coordinate these activities with the States, other Federal agencies, and others.
6. Coordinate with adjacent Station Directors to ensure that habitat planning needs, such as testing and refinement of habitat models and development of monitoring techniques, are included in programs of research.

2620.44 - Forest Supervisor

Each Forest Supervisor has the authority and responsibility to:

1. In those States containing only one Forest Supervisor's office, incorporate Sikes Act projects in the 3 to 5 year implementation schedule in the forest land and resource management plan and inform the State(s) of progress toward accomplishment of Sikes Act schedules (FSM 2604.21, item 3).
2. Recommend selection of management indicators for use and evaluation in forest land and resource management plans.
3. Coordinate conservation strategies and habitat planning for species limited in distribution to the forest with the States, other Federal agencies, and others.
4. Evaluate the cumulative effects of proposed management on habitat capability for wildlife and fish, including endangered, threatened, and sensitive animal and plant species.
5. Approve monitoring and evaluation programs for management indicators and ensure that the programs are carried out.
6. Use monitoring results to determine the need to adjust resource management activities through forest land and resource plan amendments, as needed.

2620.45 - District Ranger

Each District Ranger has the authority and responsibility to:

1. Approve evaluation of management indicators in project plans and accompanying environmental analyses.
2. Implement management direction and ensure that standards and objectives for wildlife and fish, including endangered, threatened, and sensitive animal and plant species are met.

3. Conduct monitoring and evaluation of management indicators on the District.

2620.5 - Definitions

1. Management Indicators. Plant and animal species, communities, or special habitats selected for emphasis in planning, and which are monitored during forest plan implementation in order to assess the effects of management activities on their populations and the populations of other species with similar habitat needs which they may represent.

2. Ecological Indicators. Plant or animal species, communities, or special habitats with a narrow range of ecological tolerance. Such indicators are selected for emphasis and monitored during forest plan implementation because their presence and relative abundance serve as a barometer of ecological conditions within a management unit.

2621 - Management Indicators

2621.1 - Selection of Management Indicators

Select management indicators for a forest plan or project that best represent the issues, concerns, and opportunities to support recovery of Federally-listed species, provide continued viability of sensitive species, and enhance management of wildlife and fish for commercial, recreational, scientific, subsistence, or aesthetic values or uses. Management indicators representing overall objectives for wildlife, fish, and plants may include species, groups of species with similar habitat relationships, or habitats that are of high concern.

In selecting management indicators, meet the following requirements:

1. Involve State wildlife and fish agencies, other Federal agencies, and appropriate experts from universities and private organizations.
2. Select Federally-listed endangered or threatened species as management indicators if the forest or project plan potentially impacts those species, or if opportunities exist to enhance recovery efforts. Consider for selection all sensitive species in the plan or project area (FSM 2672). Also, consider for selection those species in demand for recreational, commercial, or subsistence use; and indicators representing special habitats, habitat components, or plant and animal communities.
3. Select ecological indicators (species or groups) only if scientific evidence exists confirming that measurable changes in these species or groups would indicate trends in the abundance of other species or conditions of biological communities they are selected to represent.
4. Document, in the permanent planning records for a forest plan or project-level plan, the rationale, assumptions, and procedures used in selecting management indicators.

5. Document, within the forest or project plan, how management indicators collectively address issues, concerns, and opportunities for meeting overall wildlife and fish, including endangered, threatened, and sensitive species goals for the plan or project area.

2621.2 - Determination of Conservation Strategies

To preclude trends toward endangerment that would result in the need for Federal listing, units must develop conservation strategies for those sensitive species whose continued existence may be negatively affected by the forest plan or a proposed project. To devise conservation strategies, first conduct biological assessments of identified sensitive species. In each assessment, meet these requirements:

1. Base the assessment on the current geographic range of the species and the area affected by the plan or project. If the entire range of the species is contained within the plan or project area, limit the area of analysis to the immediate plan or project area. If the geographic range of the species is beyond the plan or project area, expand the area of analysis accordingly.
2. Identify and consider, as appropriate for the species and area, factors that may affect the continued downward trend of the population, including such factors as: distribution of habitats, genetics, demographics, habitat fragmentation, and risk associated with catastrophic events.
3. Display findings under the various management alternatives considered in the plan or project (including the no-action alternative).

Biological assessments may also be needed for endangered or threatened species for which recovery plans are not available. See FSM 2670 for direction on biological assessments for endangered and threatened species.

2621.3 - Analysis of Habitat Capability

In analyzing proposed actions, conduct habitat analyses to determine the cumulative effects of each alternative on management indicators selected in the plan or project area. Follow these guidelines for the analyses:

1. Define analysis areas of sufficient size to allow adequate evaluation of the cumulative effects on management indicators.
2. Use models, coefficients, and other components of the Wildlife and Fish Habitat Relationships System (FSM 2603, para. 6) to quantify conditions, trends, and responses of management indicators to each management alternative being considered, and the desired future condition.
3. Include in the analysis all management activities proposed for the current planning period, their interactions and collective effects on the distribution and abundance of habitat in space and time, on vegetation succession, and on natural disturbance regimes.

2621.4 - Determination of Standards, Guidelines, and Objectives

The forest plan must identify habitat components required by management indicators; determine goals and objectives for management indicators; specify standards, guidelines, and prescriptions needed to meet management requirements, goals, and objectives for management indicators. Prescribe mitigation measures, as appropriate, to ensure that requirements, goals, and objectives for each management indicator will be sufficiently met during plan implementation at the project level.

2621.5 - Monitoring and Evaluation of Management Indicators

Conduct monitoring of plans and projects to determine whether standards, guidelines, and management prescriptions for management indicators are being met and are effective in achieving expected results. Use monitoring and evaluation to guide adjustments in management and to revise or refine habitat relationships information and analysis tools used in planning. Follow direction in FSM 1922.7 and FSH 1909.12, chapter 6, in conducting monitoring and evaluation of management indicators.

Involve Research Stations, universities, and other research entities in monitoring to ensure that appropriate sampling methods are employed and statistically valid results are obtained.

2622 - Biological Diversity Requirements

2622.01 - Authority

In the USDA Decision of Review of Administrative Appeals of the Beaverhead National Forest Land and Resource Management Plan of August 17, 1989, the Office of the Secretary interpreted the requirements of 36 CFR 219.19 and DR 9500-4 (sec. 2620.1) to require that plans should identify or be amended to identify known sensitive species and provide forest standards and guidelines that ensure conservation when an activity or project is proposed that would affect the habitat of a sensitive species. A forest plan must address biological diversity through consideration of the distribution and abundance of plant and animal species, and communities to meet overall multiple-use objectives.

1. Management direction in a forest plan shall contribute to the recovery of Federally listed threatened or endangered species (Endangered Species Act, 36 CFR 219.19).

2. Management of habitat provides for the maintenance of viable populations of existing native and desired non-native, wildlife, fish (36 CFR 219.19), and plant species (USDA Regulation 9500-4) generally well distributed throughout their current geographic range (sec. 2620.01).

3. Management of those plant and animal communities identified in Regional Guides or Forest Plans as issues that warrant special measures achieves overall multiple-use objectives (36 CFR 219.8, 219.12(b), 219.27).

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4. Management direction in a forest plan shall include objectives for selected management indicators (36 CFR 219.19). Specify the following for plant and animal species, communities, and/or special habitats identified as major Forest Plan issues or as management indicators in the plan:

a. Standards and guidelines for protection, viability, recovery, or restoration as appropriate to meet overall multiple-use objectives (36 CFR 219.27);

b. The expected future conditions in terms of distribution and abundance of populations or habitats to meet overall multiple-use objectives (36 CFR 219.11; 219.26);

c. The schedule for monitoring and evaluation of standards, guidelines, and objectives for plant and animal species, communities (36 CFR 219.27); and

d. The discussion of any proposed type conversions. If any conversion results in a reduction in diversity, explanation must be provided as to why the conversion is necessary to achieve multiple use objectives (36 CFR 219.27).

2623 - Quantifying Outputs and Values

In all Forest plans and project level plans, express habitat objectives, outputs, and effects in quantitative terms using the following data elements:

1. Habitat Capability. Use habitat capability to specify habitat objectives and to project outputs and cumulative effects. Report habitat capability as the net change in potential numbers of animals (or biomass of fish) that can be supported within the area of evaluation.

2. Acres and Structures. Express planned or completed habitat improvements as the number of acres treated or structures installed. Accompany these reports with the outputs (changes in habitat capability for the management indicators) expected to result from the improvements.

3. Recovery Tasks. Establish objectives and report accomplishments for endangered or threatened species as the Forest Service share of recovery tasks achieved pursuant to species recovery plans in coordination with the States and the U.S. Fish and Wildlife Service (FSM 2671.1 and 2671.4) or in accordance with Forest Service conservation strategies.

4. Economic Value. Conduct economic analyses in compliance with guidelines in FSM 1970 and FSH 1909.17 (Economic and Social Analysis Handbook). For projects producing recreational outputs (user days), value these outputs based on prices established in Appendix B of the 1990 Renewable Resource Program (RPA). For proposals producing outputs of commercial value, such as anadromous fish, use market-clearing prices established in the 1990 RPA Program or local dockside values adjusted according to the methods in Appendix B of the 1990 Program.

2624 - Sikes Act Planning

2624.01 - Authority

The Sikes Act as amended (74 Stat. 1052; 88 Stat. 1369) 16 U.S.C. 670g) requires that the Secretaries of Agriculture, Defense and the Interior develop comprehensive plans for management and improvement of wildlife, fish, and threatened and endangered species habitat on lands under their control in cooperation with State wildlife and fisheries agencies.

2624.1 - Integration With Forest Planning

Meet requirements of the Sikes Act through the Forest planning process. Coordinate management and improvement of wildlife, fish, and endangered and threatened species habitat through implementation of Forest plans. Implement Sikes Act schedules as 5-year operating plans for accomplishing wildlife and fisheries goals identified in Forest plans. Link these operating plans with the program planning and budgeting process. Ensure Sikes Act agreements are consistent with Forest plans.

2625 - Inventory and Data Management

Avoid collecting unnecessary information. Be sure that collection, storage, or manipulation of data on wildlife, fish, and their habitats is needed to meet specific information needs and objectives. To the extent possible, obtain and manage information as follows to achieve integration with existing systems and to prevent collection and storage of non-essential data:

1. Identify the specific data items required to support habitat evaluations for management indicators within the plan or project area. Obtain these data from existing sources such as vegetation inventories, timber or soil surveys, or integrated resource databases. Collect additional field data if required items are not available or if field verification of existing data is needed.
2. Obtain information on actual occurrence and status of populations as required for assessments or to meet legal requirements for endangered and threatened species in plans and projects. Seek data first from existing sources such as State Heritage Databases or records of the U.S. Fish and Wildlife Service or State wildlife and fish agencies. Conduct field surveys as necessary to verify or supplement available information.
3. Coordinate collection of all of new data with Forest, Regional, and National information management programs (FSM 1390) including the Wildlife and Fish Habitat Relationships System (FS-2600-WLF).
4. Ensure that data acquisition and management occur in coordination with the Service-wide integrated data environment standards and implementation of geographic information systems (FSM 1390).

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5. Retain resource data, surveys, and inventories until superseded by new information on the same area.