FOREST SERVICE HANDBOOK
NATIONAL HEADQUARTERS (WO)
WASHINGTON, DC

FSH 1909.12 - LAND MANAGEMENT PLANNING HANDBOOK

CHAPTER 20 - LAND MANAGEMENT PLAN

Directive No.: The Directive Manager completes this field.

Effective Date: The Directive Manager completes this field.

Duration: This directive expires on mm/dd/yyyy.

Approved: NAME OF APPROVING OFFICIAL
Title of Approving Official

Date Approved: mm/dd/yyyy

Posting Instructions: Directives are numbered consecutively by Handbook number and calendar year. Post by document at the end of the chapter. Retain this transmittal as the first page(s) of this document. The last directive was 1909.12-2005-3 20 to chapter 20.

New Document	1909.12_20	xx Pages
Superseded Document(s) (I Directive Number and Effective Date)	None	

Digest:

20 - Changes chapter caption from “Adaptive Planning Process” to “Land Management Plan.” Also, revises chapter in its entirety.

28 through 28.3 - Removes codes, captions, and obsolete direction.

29 through 29.2 - Removes codes, captions, and obsolete direction.

Table of Contents

This chapter describes the planning requirements of 36 CFR 219 ("2012 Planning Rule") and the procedures for developing, amending, and revising land management plans.

20.5 - Definitions

See the Zero Code chapter of this Handbook for definitions.

20.6 - Cited References

U.S. Department of Agriculture, Forest Service. 2011a. Watershed Condition Classification Technical Guide. FS-978. Washington, DC: U.S. Department of Agriculture, Forest Service. 49 p. Available at http://www.fs.fed.us/publications/watershed/watershed_classification_guide.pdf

U.S. Department of Agriculture, Forest Service. 2011b. Watershed Condition Framework. FS-977. Washington, DC: U.S. Department of Agriculture, Forest Service. 34 p. Available at http://www.fs.fed.us/publications/watershed/Watershed_Condition_Framework.pdf

U.S. Department of Agriculture. Forest Service. 2012a. National Best Management Practices for Water Quality Management on National Forest System Lands. Volume 1: National Core BMP Technical Guide. FS-990a. Washington, DC: U.S. Department of Agriculture, Forest Service. 177 p. Available online at http://www.fs.fed.us/biology/resources/pubs/watershed/index.html.

U.S. Department of Agriculture. Forest Service. [In prep]. National Best Management Practices for Water Quality Management on National Forest System Lands. Volume 2: National BMP Monitoring Protocols Technical Guide. FS-990b. Washington, DC: U.S. Department of Agriculture. Forest Service. [n.d.] p.

U.S. Department of Agriculture. Forest Service 2012b. National Riparian Vegetation Monitoring Technical Guide: Western United States. General Technical Report. Rocky Mountain Research Station-GTR-287. Fort Collins, CO: U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station. (In press).

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21 – DEVELOPING, REVISING, AMENDING, OR ADMINISTRATIVELY CHANGING A PLAN

The adaptive planning framework for the National Forest Service (NFS) system includes three general stages: assessment (ch. 10); developing, amending or revising a plan (ch. 20); and monitoring (ch. 30). Plan revisions and amendments may be initiated either to accommodate the 15-year planning cycle or to respond to needs or changing circumstances. If a need to change the plan is identified that cannot be made through administrative changes (36 CFR 219.13), or by changing management practices rather than plan components, an amendment or revision should be initiated, as appropriate.

This section describes the process for how to develop a new plan or revise an existing plan that reflects public and governmental participation and the use of the best available scientific information (BASI) to inform the planning process (FSH 1909.12, ch. 40). The planning process is iterative. The responsible official has the discretion to determine the scope, methods, forum, and timing of the process, subject to public notification requirements listed in 36 CFR 219.16 (see FSH 1909.12, ch. 40, sec. 43.2). However, the process is designed to be transparent and efficient, to reflect principles of adaptive management, and to engage the public through meaningful opportunities for participation early and throughout the process.

The planning process, which builds on public and governmental participation and information gathered during the assessment phase, may be conducted in many different ways, depending on the circumstances. The responsible official shall establish an interdisciplinary team (ID Team) to carry out the planning process (sec. 219.5(b)) and provide the team direction regarding the scope and nature of the new plan or plan revision. While a detailed approach to planning procedures is not specified, in general, the steps for conducting the planning process are as follows:

1. Continue outreach to the public that was initiated during development of the assessment (36 CFR 219.4). In particular, invite public input on the following:

   a. The preliminary need to change the plan (36 CFR 219.7(c)(2)(i), sec. 21.1);

   b. The plan area's distinctive roles and contributions in the broader landscape (36 CFR 219.7(f)(1)(ii), sec. 22.32); and

   c. The list of potential species of conservation concern (36 CFR 219.9(c)); FSH 1909.12, ch. 10, sec. 12.52).

2. Develop a proposed new plan or revised plan with public participation. There is flexibility in how a new or revised plan is developed, including the mechanisms and timing of public participation, beyond the minimum public participation and notification requirements of 36 CFR 219.4 and 219.16 (FSH1909.12, ch. 40).

3. Consider the environmental and social effects of the proposed plan and alternatives in the appropriate National Environmental Policy Act (NEPA) Procedures (36 CFR 220, FSM 1950, and FSH 1909.15).

4. Provide the required opportunity for the public to comment on the proposed new plan or plan revision and the NEPA document (36 CFR 219.16(a)(2)). The required comment period is at least 90 days when a draft environmental impact statement (EIS) is prepared and at least 30 days for other NEPA evaluations.

5. Consider the public comments and prepare a pre-decisional plan or plan revision.

6. Provide an opportunity to object to a plan, before approval (36 CFR 219.52; FSH 1909.12, ch. 50).

7. Approve the final plan or plan revision with documentation prepared according to NEPA procedures and notify the public (36 CFR 219.14(a) and 36 CFR 219.16(a)(4)). Forest Service NEPA procedures are found at 36 CFR 220 with additional guidance in FSM 1950 and FSH 1909.15.

21.1- Information Basis for Plan Development -- Assessment and Preliminary Identification of Need to Change the Plan

A well-supported and effective plan must be grounded in an adequate information base. Information developed during the assessment and other relevant information must be used to inform the development of a new plan or plan revision. The term “relevant” means the information must pertain to the topics under consideration at spatial and temporal scales appropriate to the plan area and to a land management plan. Relevance in the assessment phase is information that is relevant to the conditions and trends of the 15 topics in 36 CFR 219(b) or to the sustainability of social, economic, or ecological systems. Relevance in the planning phase is scientific information relevant to the plan area or issues being considered for the development of plan components or other plan content.

The term “available” means that the information is currently available in a form useful for the planning process without further data collection, modification, or validation. The responsible official shall focus on rapidly identifying and evaluating existing, available, relevant information (hereafter referred to as “available information”).

Relying on this information base, the responsible official for new and revised plans must identify a “preliminary need to change the plan” to give focus to the planning process (36 CFR 219.7(c)(2)(i)). Through public and governmental participation and consultation the topics and concerns considered can be broadened or reduced as needed. A clearly articulated need to change the plan will support the development of desired conditions as strong plan components of a NFS plan.

For plan amendments, an assessment is not required. The responsible official may rely on a monitoring report or other documentation of new information, changed conditions, or changed circumstances to inform the preliminary identification of the need to change the plan.

The need to change the plan should be written so that it is clear to the public and the responsible official which existing plan components will need to be revised and where new plan components need to be developed.. There are numerous sources of information available to the responsible official to help determine the need to change the plan including:

1. Biennial evaluations of monitoring information (36 CFR 219.12(d); FSH 1909.12, ch. 30, sec. 34)

2. An assessment for plan development or plan revision (36 CFR 219.6(a) and (b); FSH 1909.12, ch. 10, secs. 12, 13 and 14)

3. A focused assessment for plan amendments, if needed (36 CFR 219.6; FSH 1909.12, ch. 10, sec. 16)

4. Other documentation of new information, changed conditions, or changed circumstances on the plan area, from any source, that supports a need for a revision, amendment or administrative change to the plan (36 CFR 219.6(c)). See also the Forest Service NEPA procedures (FSH 1909.15, sec. 18).

For plan revision, to ensure that the planning process addresses ecological, social, and economic sustainability for the plan area, the responsible official should identify any needs to change the plan in each of these areas. For ecological sustainability, the need to change the plan should be predicated on the status of key ecosystem characteristics, the needs and opportunities for restoration or maintenance of these characteristics, and the potential for plan components to promote ecological integrity within the terrestrial, riparian, and aquatic ecosystems relevant to the plan area. The assessment of ecosystem integrity and status of at-risk species in the plan area should be reviewed to identify and evaluate opportunities for the plan area to maintain ecological sustainability and the diversity of plant and animal communities.

Similarly, the responsible official's identification of the need to change the plan should identify opportunities for the plan area to contribute to the social and economic sustainability of the plan area and affected communities. Other values and needs of communities related to the plan area include cultural and historic resources, traditional land uses, connection of people to the land, and general quality of life concerns for communities. For more information, examples, lessons learned and technical guidance for monitoring and evaluating contributions to ecological, social and economic sustainability visit the Technical Information for Planning Site (TIPS) at http://www.fs.fed.us/TIPS.

21.2 – Required Actions and Considerations when Developing or Revising Plans

The 2012 Planning Rule specifies resources to be identified and considered when developing a new plan or revising a plan (36 CFR 219.7(c)(2)). In addition to identifying a need to change the plan and reviewing the assessment, the responsible official shall identify and consider a number of resources and issues during the planning process. Exhibit 01 provides a list of requirements, along with references for guidance and information, noting that each consideration also may be informed by information generated during public participation or derived from some other source.

21.2 - Exhibit 01

Required Considerations when Preparing New or Revised Plans

Required Considerations (219.7(c)(2)(ii)-(xi))	Guidance/Information Source
"Consider the goals and objectives of the Forest Service strategic plan (§ 219.2(a))"	Refer to the current Forest Service Strategic Plan, available at www.fs.fed.us
"Identify the presence and consider the importance of various physical, biological, social, cultural, and historic resources on the plan area (§ 219.6), with respect to the requirements for plan components of §§ 219.8 through 219.11."	See chapter 10 of this handbook for guidance on development of the assessment and see section 23 of this chapter for guidance on consideration of the various resources of the plan area.
"Consider conditions, trends, and stressors (§ 219.6), with respect to the requirements for plan components of §§ 219.8 through 219.11."	See assessment prepared for the plan, pursuant to § 219.6 and additional relevant information.
"Identify and evaluate lands that may be suitable for inclusion in the National Wilderness Preservation System and determine whether to recommend any such lands for wilderness designation."	See assessment prepared for the plan, pursuant to § 219.6. See also section 23.22j of this chapter, chapter 70 of this handbook, and FSM 1923.
"Identify the eligibility of rivers for inclusion in the National Wild and Scenic Rivers System, unless a systematic inventory has been previously completed and documented and there are no changed circumstances that warrant additional review."	See assessment prepared for the plan, pursuant to § 219.6. See also section 23.22k of this chapter, chapter 80 of this handbook and FSM 1924.
"Identify existing designated areas other than the areas identified in paragraphs (c)(2)(v), [wilderness areas] and (c)(2)(vi), [wild and scenic rivers]of this section, and determine whether to recommend any additional areas for designation. If the responsible official has the delegated authority to designate a new area or modify an existing area, then the responsible official may designate such area when approving the plan, plan amendment, or plan revision."	See assessment prepared for the plan, pursuant to § 219.6. See also section 23.22l of this chapter.

21.2 - Exhibit 01–Continued

Required Considerations when Preparing New or Revised Plans

Required Considerations (219.7(c)(2)(ii)-(xi))	Guidance/Information Source
"Identify the suitability of areas for the appropriate integration of resource management and uses, with respect to the requirements for plan components of §§ 219.8 through 219.11, including identifying lands which are not suitable for timber production (§ 219.11)."	See section 22.15 of this chapter for general discussion of suitability of areas. For identification of lands as not suitable and suitable for timber production see chapter 60 of this handbook.
"Identify the maximum quantity of timber that may be removed from the plan area (§ 219.11(d)(6))."	See chapter 60 of the handbook.
"Identify questions and indicators for the plan monitoring program (§ 219.12)."	See chapter 30 of this handbook.
"Identify potential other content in the plan (paragraph (f) of 36 CFR 219.7)."	See sections 22.3, 22.4, and section 23 of this chapter.

(36 CFR 219.7(c)(2)(ii)-(xi))

21.21 - Outreach during Development or Revision of Plans

Guidance on a public and governmental outreach strategy, including tribal consultation, and on methods for giving notice is provided in FSH 1909.12, chapter 40, section 43. The 2012 Planning Rule requirements include 36 CFR 219.4, "Requirements for Public Participation," and 36 CFR 291.16, "Public Notifications."

For plan development or plan revision that may affect listed species or critical habitat, may jeopardize the continued existence of proposed species, may adversely modify proposed critical habitat, or may adversely affect essential fish habitat of managed fisheries, the responsible official shall follow procedures in FSM 2670 for working with NOAA-Fisheries and/or FWS (FSM 1920.3).

21.22 - Consultation with Federally Recognized Indian Tribes and Alaska Native Corporations

(36 CFR 219.4(a)(2); FSH 1909.12, chapter 40, sec. 44; FSH 1509.13, chapter 10)

The responsible official shall engage in formal, meaningful consultation and collaboration with Tribal officials on new plans or plan revisions as part of the Federal government-to-government

relationship and Executive Order 13175, Consultation and Coordination with Indian Tribal Governments. FSH 1509.13, chapter 10, and FSH 1909.12 and Chapter 40 - Key Processes Supporting Land Management Planning, provide guidance regarding consultation and coordination with Indian Tribes and Alaska Native Corporations.

21.3 - Amending a Plan

Plan amendments are intended to be an adaptive management tool to keep plans current, effective, and relevant between required revisions (every 15 years). Amendments help responsible officials adapt an existing plan to new information and changed conditions. Maintaining plans also reduces the workload for subsequent plan revisions.

Amendments may be broad or narrow in scope, depending on the need to change the plan. In addition, amendments may be project-specific. If a proposed project is not consistent with the plan, the responsible official has the option to initiate a plan amendment that, if approved, would accommodate the project. Whether an amendment is proposed in response to changing conditions or in relation to a specific project, the responsible official has a duty to keep the scope and scale of the process, including public participation, commensurate with the scope of the plan amendment (CFR 219.13(b)(2)). All plan amendments must meet the applicable requirements of 36 CFR 219. For example, the requirements for riparian areas (36 CFR 219.8(a)(3)) apply only if amending plan guidance for riparian areas.

An assessment for a plan amendment is at the discretion of the responsible official. Plan amendment assessments are discussed in the planning rule as follows:

> ***Plan amendment assessments*. Where the responsible official determines that a new assessment is needed to inform an amendment, the responsible official has the discretion to determine the scope, scale, process, and content for the assessment depending on the topic or topics to be addressed.** (36 CFR 219.6(c))

A plan amendment process relies on the responsible official's identification of the need to change a plan.

> ***Amendment process*. The responsible official shall…[b]ase an amendment on a preliminary identification of the need to change the plan. The preliminary identification of the need to change the plan may be based on a new assessment; a monitoring report; or other documentation of new information, changed conditions, or changed circumstances.** (36 CFR 219.13(b))

In general, the steps for conducting a plan amendment process, recognizing that the scope and scale will be tailored to the proposal, are as follows:

1. Make a preliminary identification of the need to change the plan (see sec. 21.1).

2. Begin outreach to the public and governmental entities. In particular, invite input on the need to change the plan identified by the responsible official. (See 36 CFR 219.4 and FSH 1909.12, ch. 40).

3. Develop a proposed amendment.

4. Consider the environmental and social effects of the proposed amendment and develop the appropriate NEPA document (FSH 1909.15, ch. 10).

5. Provide opportunity for the public and governmental entities to comment on the proposed amendment and the environmental document. The comment period is at least 90 days when an EIS is prepared and at least 30 days otherwise (36 CFR 219.16(a)(2)).

6. Provide an opportunity to object to the plan amendment before approval (36 CFR 219.52) (see FSH 1909.12, ch. 50).

7. Approve the final plan amendment and notify the public (36 CFR 219.14(a) and 36 CFR 219.16(a)(4)).

For plans developed, revised, or amended under a previous planning rule, changes to plan content that correspond to plan components (desired conditions, goals, guidelines, objectives, standards, or suitability of lands for uses) must be made by plan amendment or plan revision. All other changes to these plans may be made by administrative change, unless the responsible official determines that the plan amendment is more appropriate. Requirements for administrative changes are found at 36 CFR 219.13 (c); see also section 21.5.

21.31 – Project-specific Plan Amendments and Pre-Decisional Administrative Review

The administrative review process for plan amendments varies based upon whether the amendment applies to one project or to future projects as well. If the plan amendment applies only to a single project, the amendment would be subject to the project review process. If, however, the plan amendment would apply to future projects as well, the objections process of the 2012 Planning Rule (36 CFR 219, Subpart B) would apply. The project itself will always be subject to the applicable project review process of 36 CFR 215 or 218 (see 36 CFR 219.59(b)).

When a plan amendment is approved in the same decision document with a project, the responsible official for both decisions must be a forest supervisor or higher-level official,

regardless of whether the district ranger could have authorized the project in the absence of a plan amendment. The decision document for the project and amendment must include the rationale for amending the plan.

Multiple or frequent project specific plan amendments may suggest a need to change a plan component across all or part of the plan area. The responsible official should recognize project specific plan amendments and evaluate the presence of any systemic need to change the plan that could be addressed by a plan amendment.

21.32 – Plan Amendment Outreach and Consultation

Outreach and consultation during a plan amendment is similar to outreach and consultation for a plan outreach (sec. 21.21 and 21.22). See FSH 1909.12, chapter 40, sections 43 and 44 for additional guidance on outreach.

21.4 - Concluding the Plan Development, Revision or Amendment Process: Required Decision Document

The responsible official approves plans, plan amendments, and revised plans with a decision document developed according to the NEPA procedures. New and revised plans are the subject of an EIS for which a record of decision (ROD) is the appropriate decision document. Plan amendments, often more modest in scope, can also be the subject of an environmental assessment (EA), which are concluded, if no significant environmental impacts are identified, with a decision notice, or a categorical exclusion (CE), which are concluded with a decision memo. If a significant impact is identified during the EA or CE analysis, an EIS is required. NEPA document templates are available online at http://www.fs.fed.us/emc/nepa/.

Additional information regarding completed plans must be included in the required Forest Service NEPA decision documentation. Exhibit 01 indicates the material that must be included in a decision document in accordance with 36 CFR 219.14(a), *in addition* to that required by Forest Service NEPA procedures.

21.4 - Exhibit 01

Contents of Decision Documents

Decision Document Requirement (36 CFR 219.14(a))	New or Revised Plan	Plan Amendment
The rationale for approval.	Yes	Yes
An explanation of how the plan components meet the sustainability requirements of § 219.8, the diversity requirements of § 219.9, the multiple use requirements of § 219.10, and the timber requirements of § 219.11;	Yes	If Applicable
A statement of how the plan, plan amendment, or plan revision applies to approved projects and activities (§ 219.15);	Yes	Yes
The documentation of how the BASI was used to inform planning, the plan components, and other plan content, including the plan monitoring program (§ 219.3);	Yes	Yes
The concurrence by the appropriate research station director with any part of the plan applicable to any experimental forests or experimental ranges (§ 219.2(b)(4));	If Applicable	If Applicable
The effective date of the plan, plan amendment, or plan revision.	Yes	Yes

For RODs which conclude a new or revised plan, six specific items listed in exhibit 01 must be addressed where applicable. The public and the responsible official are well-served, however, by inclusion of a summary of how the plan and the planning process meet all the requirements of the planning rule. This summary augments the required elements of the decision document to include a clear and transparent description of how the plan decision is responsive to public and governmental participation. The scope of the summary should be commensurate with the complexity of the decision made.

For plan amendments, the need to change the plan should be clearly documented in the "purpose and need" section of the EA associated with the proposed plan amendment. The decision document must discuss only those requirements of 36 CFR 219.8 through 219.11 that are applicable to the plan components that are being changed or added. For example, the requirements for wilderness management (36 CFR 219.10(b)(1)(v)) apply only if amending land management plan guidance for wilderness management.

21.41 - Documentation of Plan Revision and the Planning Record

> **(b) *Planning records*. (1) The responsible official shall keep the following documents readily accessible to the public by posting them online and through other means: assessment reports (§ 219.6); the plan, including the monitoring program; the proposed plan, plan amendment, or plan revision; public notices and environmental documents associated with a plan; plan decision documents; and monitoring evaluation reports (§ 219.12).**
>
> **(2) The planning record includes documents that support analytical conclusions made and alternatives considered throughout the planning process. The responsible official shall make the planning record available at the office where the plan, plan amendment, or plan revision was developed.** (36 CFR 219.14)

Throughout the planning process, the ID Team shall document key steps of the public and governmental participation process related to the need to change the plan and to develop any alternatives (sec. 21.1, 43, and 44). In addition to meeting regulatory requirements above, the ID Team should document the "who, what, where, when, and how" of public and governmental participation in a "participation process" document (sections 21.15 and 21.24). The ID Team should document how the public involvement contributed to the development of the proposed plan and document the response to comments received during the NEPA process (FSH 1909.15, ch. 10, sec. 12.6).

21.5 - Administrative Changes

> ***Administrative changes*. An administrative change is any change to a plan that is not a plan amendment or plan revision. Administrative changes include corrections of clerical errors to any part of the plan, conformance of the plan to new statutory or regulatory requirements, or changes to other content in the plan (§ 219.7(f)).**
>
> **(1) A substantive change to the monitoring program made outside of the process for plan revision or amendment may be made only after notice to the public of the intended change and consideration of public comment (§ 219.16(c)(6)).**
>
> **(2) All other administrative changes may be made following public notice (§ 219.16(c)(6)).** (36 CFR 219.13(c))

Administrative changes include corrections of clerical errors to plan components. Administrative changes may NOT include substantive change to plan components or the location

in the plan area where plan components apply, except to ensure the plan conforms to new statutory or regulatory requirements which do not allow for the exercise of discretion. Administrative changes may be used to change other content of the plan (36 CFR 219.7(f); sec. 22.3–22.4 of this chapter).

The responsible official shall give public notice before issuing an administrative change (36 CFR 219.13(c)(2)). The public notice may be made in any way the responsible official deems appropriate, except for that, at a minimum, the notice needs to be posted online on the administrative unit's planning website. Responsible officials shall explain in the planning record how they considered any comments received. The administrative change is effective upon posting the change online. Administrative changes are not subject to the objection process, because they are not used to approve plans, plan amendments, or plan revisions (36 CFR 219.50).

The responsible official should be transparent with the public and governmental entities, reach out to the public early, and involve the public when changing the other plan content in the plan. When considering public and governmental participation, the responsible official should consider the urgency of the need to change the plan and conduct appropriate outreach that is commensurate with the change to be made and the level of public and governmental interest.

21.51 - Making Administrative Changes to the Monitoring Program

Existing plan monitoring programs may be changed by administrative change, and also as a part of a plan revision or a plan amendment. The responsible official shall provide opportunities for public and governmental participation when considering changes to the monitoring program. Any change to the monitoring program may be made only after notice to the public of the intended change and consideration of public comment (36 CFR 219.16(c)(6)). The public comment period to respond to a proposed change to the monitoring program should be at least 30 days.

21.6 - Plan development, Plan Revision, or Plan Amendments started under Previous Planning Rules

> ***Plan development, plan amendments, or plan revisions initiated before this part.*** **For plan development, plan amendments, or plan revisions that were initiated before May 9, 2012, the responsible official may complete and approve the plan, plan amendment, or plan revision in conformance with the provisions of the prior planning regulation, including its transition provisions (36 CFR part 219, published at 36 CFR parts 200 to 299, revised as of July 1, 2010), or may conform the plan, plan amendment, or plan revision to the requirements of this part. If the responsible official chooses to complete an ongoing planning process under the provisions of the prior planning**

> **regulation, but chooses to allow for an objection rather than an administrative appeal, the objection process in subpart B of this part shall apply. When the responsible official chooses to conform an ongoing planning process to this part, public notice must be made (§ 219.16(a)(5)). An objection process may be chosen only if the public is provided the opportunity to comment on a proposed plan, plan amendment, or plan revision, and associated environmental analysis.** (36 CFR 219.17((b)(3))

The responsible official for the ongoing planning process may choose to conform the ongoing planning process to the 2012 Planning Rule, if it is feasible and appropriate to do so (see 36 CFR 219.17(b)(3)). If the responsible official so chooses, the responsible official evaluates the ongoing planning process to determine if it meets the requirements of the new rule and adjust the ongoing process to meet any requirements if necessary. The responsible official then must issue a formal public notification to announce and describe how a plan revision or plan amendment process started under the provisions of a previous planning regulation will conform to meet the provisions of the 2012 Planning Rule. For ongoing plan revisions the responsible official is the regional forester. For plan amendments the responsible official may be a regional forester or forest supervisor.

22 - REQUIREMENTS FOR PLAN CONTENT

The land management plan must include plan components and other plan content (36 CFR 219.7). Plan components should be directed to the resources and issues for the plan area, and should reflect the unit's distinctive roles and contributions (36 CFR 219.7(f)(1)(ii)). The responsible official shall ensure that the plan components are integrated so that the plan is internally consistent and workable for the plan area. Land management plans should not have a set of unique plan components for every resource. Plans should have an integrated set of plan components to provide for social, economic, and ecological sustainability and multiple uses. The requirements for an integrated planning framework include the following sections from 36 CFR 219:

> **§ 219.1 Purpose and Applicability. …**
> **(b) … and management plans guide sustainable, integrated resource management of the resources with the plan area . . .**
>
> **§ 219.2 Levels of planning and responsible officials. …**
> **(b) National Forest System unit planning. (1) … A land management plan provides a framework for integrated resource management and for guiding project and activity decisionmaking on a national forest, grassland, prairie, or other administrative unit.**
>
> **§ 219.5 Planning framework.**

> **(a) …The intent of this framework is to create a responsive planning process that informs integrated resource management . . .**
>
> **§ 219.10 Multiple Use. …**
> **(a) Integrated resource management for multiple use. The plan must include plan components, including standards or guidelines, for integrated resource management to provide for ecosystem services and multiple uses in the plan area.** (36 CFR 219.10(a))
>
> **§ 219.19 Definitions. . . .**
> **Integrated resource management. Multiple use management that recognizes the interdependence of ecological resources and is based on the need for integrate consideration of ecological, social, and economic factors.**

The responsible official shall use an interdisciplinary process to achieve integration of resource concerns into a set of plan components, take into account a wide range of resource conditions and values, strive to achieve multiple benefits, and manage the risk of adverse effects to interconnected systems. The interdisciplinary process requires an ID Team (36 CFR 219.5(b)). The responsible official should consider the applicable goals, outcomes, objectives, and performance measures of the Forest Service Strategic Plan so that the plan components contribute to the strategic priorities of the Agency. Finally, the responsible official shall base the plan on likely budgets and other assumptions that are realistic as required by 36 CFR 219.1(g):

> **(g) The responsible official shall ensure that the planning process, plan components, and other plan content are within Forest Service authority, the inherent capability of the plan area, and the fiscal capability of the unit.**

The recommended layout for plan components and other plan content is illustrated by the plan model, described in the technical guide “Foundations of Forest Planning” available on the Ecosystem Management Coordination Web site at http://www.fs.fed.us/emc/nfma/index.htm.

22.1 - Plan Components

> **(e) *Plan components*. Plan components guide future project and activity decisionmaking. The plan must indicate whether specific plan components apply to the entire plan area, to specific management areas or geographic areas, or to other areas as identified in the plan.** (36 CFR 219.7(e))

This section and sections 22.11 through 22.16 describe the required plan components for every plan and provide guidance for developing plan components. Plans must include the following plan components (36 CFR 219.7): desired conditions (sec. 22.11), objectives (sec. 22.12), standards (sec. 22.13), guidelines (sec. 22.14), and suitability of lands (sec. 22.15). Goals may be included as an optional plan component (sec. 22.16).

When revising a plan, the ID Team should address issues from comments on the need to change the plan and any other relevant public comment (sec.21.1). Plan components may be used to carry out laws, regulations, or policies, but should not merely repeat existing direction from laws, regulations, or directives. Notwithstanding, plans must include plan components that apply the specific National Forest Management Act of 1976 (NFMA) timber requirements of 36 CFR 219.11(d) and may, in some instances, need to repeat the words of the law. See FSH 1909.12, chapter 60 for further guidance on NFMA timber requirements.

Plan components must meet the following:

1. Are written so that they are in accord with Agency authorities, and the inherent capability of the plan area.

2. May apply to the entire plan area, to a specific management or geographic area, or to land of specific character.

3. Are not commitments or final decisions approving projects and activities.

4. Guide the development of future projects and activities and the plan-monitoring program.

5. Are informed by the assessment, monitoring, public and governmental participation, and the BASI. (For more information on BASI see FSH 1909.12, ch. 40).

6. Guide and constrain Forest Service personnel; not the public.

7. Meet the requirements of the 2012 Planning Rule (36 CFR 219, subpart A).

8. Give direction for integrated resource management for multiple uses (36 CFR 219.10(a)).

See exhibit 01, Example Plan Components, for examples of desired conditions, objectives, standards, and guidelines. Plans should be written clearly and concisely, see http://www.plainlanguage.gov/. Plan components should not include explanatory narrative; see section 22.4 of this Handbook for direction on how to include explanatory narrative as other plan content.

22.1 - Exhibit 01

Example of Plan Components (Oak-grasslands example)

Desired Condition for a Management Area:
Oak-grasslands dominate watersheds in this management area (See Appendix Maps). On upper slopes and ridges across this area, grasslands (less than 10 percent tree canopy closure) and open oak woodlands (10-60 percent tree canopy closure) are interspersed in variable mixtures. In general, tree density increases as one moves down slope, but densities are variable and transitions gradual. Snag and den tree density averages three stems per acre on a watershed basis (10-digit hydrologic unit code (HUC)). Native grasses and forbs dominate understories. Most mid and lower slopes have open oak forests (60-80 percent tree canopy closure), with understories containing oak regeneration in sufficient numbers to provide for sustaining oak on these sites over time. Multi-layered mixed hardwood mesophytic and riparian forests occur on lower slopes, where, because of topography and moisture, understory fires burn at low intensities or not at all. Within riparian areas, vegetative filter strips have at least 80 percent total ground cover comprised of grasses, or forbs. In riparian areas, flooding is the primary disturbance factor.

In grasslands and open oak woodlands of this management area, diverse grass and grass-forb understories provide diverse and abundant herbage, seeds, and insects. Open canopies and a periodic fire frequency of x-y years create this understory condition. This understory condition also supports a diverse assemblage of wildlife. Rare species that are adapted to open forests and grasslands are present and distributed in numbers that will provide for self-sustaining populations. These include Henslow's sparrow, whip-poor-will, southern prairie aster, barbed rattlesnake-root, buffalo clover, and prairie parsley. Small mammals, such as deer mice (*Peromyscus* species), voles (*Microtus* species), and rabbits (*Sylvilagus* species) are abundant, supporting increased populations of predators, such as raptors, foxes, and bobcats.

Generally natural environments characterize this management area and users have the opportunity to experience a moderate degree of independence, closeness to nature, solitude, and remoteness, with areas generally suitable for motorized opportunities. Satisfactory recreational experience is provided for forest visitors. This area contributes to economic sustainability by providing areas for birders who frequently use quality outfitter guides for birding tours.

Objectives:
- X snags per acre within Y years of plan revision approval.
- Add 5 thousand acres of Henslow's sparrow habitat to the current XX acres by 2020.
- X rehabilitated high-impact dispersed camping areas within X years of plan revision approval.
- At least 80 percent of forest visitors who respond to annual visitor satisfaction survey, report their recreational experiences rated as "satisfactory."

Standards:
- Timber harvest must not occur in riparian buffers except to maintain or restore the riparian ecosystem. Riparian buffers at least 100 feet on either side of the tops of perennial stream banks. Riparian buffers along intermittent streams must be 50 to 75 feet or more measured from bankfull stage.

Guidelines:
-On sustained slopes greater than 35 percent, heavy equipment should not be used for mechanical site preparation treatments to reduce erosion of soil.
-Artificial regeneration should use native plant material (FSM 2070, glossary) in restoration activities to provide suitable habitat for native species of butterflies, birds, and other wildlife.
-Trail construction should not occur in riparian buffers except for designated stream crossings to prevent soil erosion and sediment deposition in waterways.

Suitability of lands: This management area is suitable for motorized recreation on designated roads and trails.

22.11 - Desired Conditions

> ***Desired conditions*. A desired condition is a description of specific social, economic, and/or ecological characteristics of the plan area, or a portion of the plan area, toward which management of the land and resources should be directed. Desired conditions must be described in terms that are specific enough to allow progress toward their achievement to be determined, but do not include completion dates.** (36 CFR 219.7(e)(1)(i))

Desired conditions should reflect an overall vision for the future of the plan area as a whole. The set of desired conditions are the focus of the plan and are the basis for developing all other plan components and other plan content. The plan's set of desired conditions describe a picture of the desired social, cultural, economic, and ecological attributes that characterize the desired outcome of land management in the plan area. It is important that managers and the public and governmental entities share a common understanding of the desired conditions, since desired conditions drive the development of other components.

All aspects of the desired conditions must be integrated within the plan so the overall desired condition is feasible. In addition, the five plan components must be integrated with each other and should be tied back to desired conditions.

Desired conditions, together with the other plan components, must be designed to move toward ecological and social and economic sustainability (36 CFR 219.8) and should clearly articulate management's intent over the life of the plan. Responsible officials should include sufficiently detailed descriptions of desired conditions so that long lists of standards, guidelines, and suitability determinations are not needed to determine the "purpose and need" for future projects and activities .

When designing desired conditions, the responsible officials should take into account the uses on land adjacent to the plan area and the larger surrounding landscape. The desired conditions developed or expressed by adjacent agencies, landowners, interested and affected individuals, or communities should be considered when designing desired conditions for the plan area.

An individual desired condition:

1. May be the same as an existing condition, so that efforts to achieve the desired condition would focus on maintenance;

2. May be described in a way that is achievable in any time frame – short, medium, or long term;

3. Must not direct taking action or prohibit taking action, or indicate specific agency actions or tools (for example, prescribed fire and thinning) to be used for its attainment or maintenance;

4. Should be expressed in a way that helps managers determine the uses that are suitable and the possible management actions that may be proposed during the planning period;

5. Must be written with enough detail so that the intent is clear and progress toward their achievement can be measured;

6. May be stated in comparative terms such as "more," or "less," or "increased," or "decreased" if the baseline is clearly stated;

7. May be stated in terms of a range of conditions; and

8. May be described by a photograph or illustration.

22.12 - Land Management Plan Objectives

> ***Objectives*. An objective is a concise, measurable, and time-specific statement of a desired rate of progress toward a desired condition or conditions. Objectives should be based on reasonably foreseeable budgets.** (36 CFR 219.9(e)(1)(ii))

Objectives are each linked to desired conditions and reflect the responsible official's priorities. Objectives must be attainable within the fiscal capability of the unit. The fiscal capability should be based on a trend analysis of the recent past budget obligations for the unit (3 to 5 years).

Plan objectives:

1. Describe the focus of management in the plan area within the plan period;

2. Must be based on making progress toward attaining desired conditions;

3. Must be stated in measurable terms with specific reasonable time frames;

4. Help set the basis for priority areas or activities, with a timing expectation that near-term objectives would be completed first, depending on funding;

5. Must be based on likely budgets and other assumptions that are realistic expectations for the selected period of time;

6. Should be expressed in terms of outcomes, not actions; and

7. Are neither actions nor commands to take action and are not to be written as such.

22.13 - Standards

> ***Standards*. A standard is a mandatory constraint on project and activity decisionmaking, established to help achieve or maintain the desired condition or conditions, to avoid or mitigate undesirable effects, or to meet applicable legal requirements.**
> (36 CFR 219.7(e)(1) (iii))

Standards are required criteria for the design of projects and activities. Design criteria are the technical design details to ensure that projects and activities maintain or move toward the desired conditions, or at least to ensure that projects and activities do not preclude their maintenance or attainment. Design criteria provide the sideboards for projects and activities. Examples of other sources of constraints on the design of projects and activities include congressional direction, oil and gas leasing stipulations, regulations, timber sale contract clauses, and special use authorization standard clauses. In addition, the responsible official may develop project-specific design criteria to constrain a project. A standard differs from a guideline in that a standard is a strict design criterion, allowing no variation, whereas a guideline allows variation if the result would be equally effective.

Standards are useful when the requirement is absolute such as to ensure compliance with laws such as the timber requirements of sections 6(g)(3)(E) and (F) of the NFMA (16 U.S.C. 1604(g)(3)(E) and (F)), or to protect threatened or endangered species under the Endangered Species Act of 1973 as amended (16 U.S.C. 1531-1544). The responsible official should be judicious in establishing standards and generally limit them to situations where certainty is important or where the practice is generally accepted as best management.

Standards:

1. Place definitive design constraints on projects and activities by using mandatory wording, such as “must.”

2. Are stated in a way that clearly shows a connection between the standard and achieving or maintaining a desired condition or objective.

3. Are written clearly and without ambiguity so that consistency of a project or activity with a standard can be easily determined. (For definition of consistency see 36 CFR 219.15 and sec. 23.5).

4. Should not restate direction from other sources such as laws, regulations, and Forest Service directives, but may cite other sources. A standard may be the Forest Service interpretation of how laws, regulations, or policies are to be carried out.

5. Should not direct or compel processes such as analysis, assessment, inventory, or monitoring.

6. Must not restate other plan components.

7. Should not be included if another plan component, such as desired conditions or suitability of uses, would better express the intent.

8. Guide the design of projects and activities. If standards guide the design of projects they should not mandate conditions outside of project areas. Any guidance meant to apply more broadly than to project areas, such as, "Snag density in XX watershed must average at least four snags per acre," should be written in the form of desired conditions or objectives.

9. May be used to provide limitations or direction on whether or how a specific tool is appropriate.

Standards that require that certain conditions be met in a project area should provide for situations where those conditions do not currently exist in the project area. For example, "When authorizing timber harvest, require the retention of an average of four snags per acre on forested acres of the project area, unless fewer than four snags per acre exist. When fewer than four snags exist, require the retention of an average of four of the largest live trees per acre. The retained snags or live trees need not be distributed on every acre, but may occur in clumps throughout the project area."

22.14 - Guidelines

> **Guidelines. A guideline is a constraint on project and activity decisionmaking that allows for departure from its terms, so long as the purpose of the guideline is met. (§ 219.15(d)(3)). Guidelines are established to help achieve or maintain a desired condition or conditions, to avoid or mitigate undesirable effects, or to meet applicable legal requirements.**
> (36 CFR 219.7(e)(1)(iv))

Guidelines are similar to standards in that they are design criteria for projects and activities to help achieve the desired conditions and objectives, or at least to ensure that projects or activities do not foreclose their maintenance or attainment. Guidelines differ from standards in that they provide flexibility for compliance, while standards are concrete limitations.

Guidelines should not be written in terms of a mandatory command or prohibition, but in terms of project design criteria that "should" or "should not" be employed. They should be written so

that the purpose for the guideline is clear. Projects and activities need not be designed in exact accord with a guideline's wording, as long as the design is effective in meeting the guideline's purpose. The wording of guidelines and their organization in a plan should clearly describe the circumstances and manner in which the guidelines apply so that other options may be carried out if they meet the purposes of the guidelines.

Guidelines:

1. Must not use words that would compel or prohibit projects or activities.

2. Must be stated in a way that clearly shows a connection between the guidelines and achieving or maintaining desired conditions.

3. Must be written clearly and without ambiguity so that their purposes are apparent, so that consistency of a project or activity with a guideline can be easily determined.

4. Should not restate direction from other sources such as legal requirements, directives, rules, or regulations (references to other sources are preferred).

5. Should not direct or compel processes such as analysis, assessment, inventory, or monitoring.

6. Must not restate other plan components.

7. Should not be included if another plan component, such as desired conditions or suitability of uses, would better express the intent.

8. Guidelines guide the design of projects and activities. If guidelines guide the design of projects, they should not apply to conditions outside project areas. (see enumerated paragraph 8 of sec. 22.13 for an example).

9. If a guideline describes conditions to be retained in a project area, it should provide for situations where the conditions do not currently exist in an area. (See last paragraph of sec. 22.13 for an example of a standard addressing this issue).

10. May be used to provide limitations or direction on whether or how a specific tool is appropriate.

22.15 - Suitability of Lands

(v) *Suitability of lands*. Specific lands within a plan area will be identified as suitable for various multiple uses or activities based on the desired conditions applicable to those lands. The plan will also identify lands within the plan area as not suitable for uses that are not

compatible with desired conditions for those lands. The suitability of lands need not be identified for every use or activity. Suitability identifications may be made after consideration of historic uses and of issues that have arisen in the planning process. Every plan must identify those lands that are not suitable for timber production (§ 219.11). (36 CFR 219.7(e)(1)(v))

NFS lands are generally suitable for a variety of uses such as outdoor recreation, viewing scenery, livestock grazing, timber production, providing habitat for fisheries and wildlife, cultural resource interpretation, and protecting watersheds. The identification of the suitability of lands in a plan area for various uses involves social, economic, and ecological considerations.

As part of the land management plan, the identification of suitability of lands helps achieve the desired social, cultural, economic, and ecological conditions—which reflect public and governmental participation and the distinctive role and contributions of the plan area. The identification of suitability helps the responsible official determine if projects and activities are consistent with the desired conditions. The identification of land that may be suitable for particular uses involves interpretation of social, economic, and resource tradeoffs—not just an inventory. The identification of suitability, or non-suitability, of lands is based upon the desired condition for those lands and the inherent capability of the land to support the use.

Responsible officials should not make suitability of lands identifications for the use of any resource, such as minerals if an entity other than the U.S. Department of Agriculture (USDA) has authority over the disposal or leasing of minerals. Congress has given the Secretary of the Interior authority over the disposal of locatable minerals (gold, silver, lead, and so forth) and leasable minerals (oil, gas, coal, geothermal, among others). The Secretary of Agriculture has authority over saleable minerals (sand, gravel, pumice, among others). The Forest Service regulation for minerals is detailed at Title 36 CFR 228, "Minerals." For example, analysis of the availability of lands for oil and gas leasing is at 36 CFR 228.102 and is a project decision that may be made at the same time as a plan revision.

Identifying lands as suitable for a use is notably different from identifying lands as not suitable for a use when deciding whether a project or activity is appropriate on those lands. The difference is discussed in the following enumerated paragraphs.

1. Lands identified as suitable for certain uses or activities. Identification in a plan of the suitability of lands for a use is an indication that the use might be appropriate. It is not a commitment to allow such uses.

   a. A specific use or activity may be approved or may be disapproved in an area identified as suitable for such types of use.

b. A plan, for instance, may identify a management area as suitable for utility corridors; however, that suitability determination does not imply that any application for pipeline construction would be approved. All applications would be subject to special use authorization requirements, standard permit clauses, standards and guidelines, NEPA procedures, public and governmental participation, and project and activity decisionmaking.

2. Lands not suitable for uses or activities. If the plan identifies an area as not suitable for a use or activity, then that use or activity may not be authorized. Such identification in a plan does not affect any unregulated public use (sec. 22.5). See FSH 1909.12, chapter 60 for identification of lands not suitable for timber production.

A plan may not identify a use or activity as being suitable in the plan area or relevant part of the plan area, and should identify the area as not suitable for that use or activity, if any of the following conditions apply:

a. The use would not likely be compatible with the desired conditions and objectives;

b. Law, regulation, Executive order, or Forest Service directive prohibit the use; or

c. The use would result in substantial and permanent impairment of the productivity of the land or renewable resources.

Plans may include suitability or non-suitability statements for the purposes of outdoor recreation, range, timber, watershed, and wildlife and fish (36 CFR 219.12(a); Multiple-Use Sustained-Yield Act of 1960 (16 U.S.C. 528-531)). Plans may also include suitability or non-suitability statements for more narrowly defined uses such as: administrative or commercial communication sites, commercial use of non-timber forest products, cross-country over-snow vehicle use, educational use, existing range structures, helicopter skiing, mechanized travel, motorized travel, non-commercial uses, non-mechanized travel, non-motorized travel, range structures, recreational trails, research activities, tethering and grazing of recreational stock, utility corridors, and wheeled motorized travel.

Plans should not include any suitability or non-suitability statements for the use of management tools, such as prescribed fire, clearcutting, or use of chemicals. A guideline or standard may be used to provide limitations or direction on whether or how a specific tool is appropriate.

There are many approaches for identifying suitable or not suitable lands for uses, including: mapped areas; layers of maps, each layer showing a different use; narrative descriptions of types of physical, ecological, or economic conditions; photos showing types of conditions; and specific uses tied to suitability tables of management areas. An example of a narrative description of identifying not suitable lands is “Timber production is not suitable on soil types B-2 and C-5 as

defined in the Forest Soil Handbook." If maps are used to show where plan components apply, substantive changes to such maps require a plan amendment.

22.16 - Goals (Optional Plan Component)

> ***Optional plan component: goals*. A plan may include goals as plan components. Goals are broad statements of intent, other than desired conditions, usually related to process or interaction with the public. Goals are expressed in broad, general terms, but do not include completion dates.** (36 CFR 219.7(e)(2))

The responsible official may choose to include goals as optional plan components. Goals may be used to organize plan components similar to the Forest Service Strategic Plan. Goals should not simply repeat agency policies applicable to all NFS units. Goals for resource conditions may be appropriate if scientific information is not adequate to provide sufficient specificity to establish desired condition. However, using goals in lieu of desired conditions should be avoided.

Goals instead of objectives may be appropriate if the responsible official is not sure a concise, measurable, and time-specific statement of a desired rate of progress is within the control of the unit; however, using goals in lieu of objectives should be avoided. Examples are:

1. If the outcome is necessarily the result of a partnership among the Forest Service and other land owners within the broader landscape.

2. If the outcome is uncertain, because it is likely beyond the fiscal capability of the unit.

22.2 – Identification of Management Areas and Geographic Areas and Designated Areas

The public, governmental entities, and Forest Service employees need to know where plan components apply. The plan must state where each plan component applies. Some plan components apply forest-wide. Some plan components apply to a specific characteristic of the land (such as springs, wetlands, or riparian ecosystems). Some plan components apply to specific parcels of land. The terms "management area" and "geographic area" may be used to describe how plan components apply to specific parcels of NFS land by the use of maps.

> **(d) *Management areas or geographic areas*. Every plan must have management areas or geographic areas or both. The plan may identify designated or recommended designated areas as management areas or geographic areas.** (36 CFR 219.7(d))

The definitions of geographic area and management area are defined at 36 CFR 219 as:

***Geographic area*. A spatially contiguous land area identified within the planning area. A geographic area may overlap with a management area.**

***Management area*. A land area identified within the planning area that has the same set of applicable plan components. A management area does not have to be spatially contiguous.** (36 CFR 219.19)

22.21 – Identification of Management Areas and Geographic Areas

Geographic areas are based on place, while management areas are usually based on purpose. The following paragraphs discuss management areas and geographic areas:

1. Management areas. The typical management area (MA) map in existing plans often represents the potential future land uses on landscape basis. MA maps often show lands with integrated packages of compatible resource direction. For example, traditional MA maps might be labeled as follows: MA 1-areas emphasizing developed recreation use, MA 2–areas that are suitable for timber production, MA 3–areas providing for off highway vehicle trails, MA 4–areas designated by Congress as Wilderness, MA 5–areas emphasizing primitive backcountry recreation experiences, and so forth.

2. Geographic areas. The typical geographic area (GA) of existing plans often represents larger areas that have desired conditions with a range of possible resource management emphasis. Rather than a management emphasis map, a geographic area map tends to focus on a place (Red Rock Canyon, Mount Whitney, or perhaps a specific watershed).

A geographic-based approach is based on the idea that the plan serves as a long-range vision for an area. However, the boundaries for different suitable uses within a geographic area may be displayed by using multiple overlays of maps. For example, overlays of maps could identify how suitability for non-motorized use, winter motorized use, and timber production differs across one geographic area.

Desired conditions, suitability of land for uses, and standards for uses could be identified by using a description of the specific character of the land or by describing the circumstances under which different land uses may occur. For example, timber harvest or motorized vehicle use may be limited to within a certain distance from an existing road.

A hybrid of GA and MA approaches may be useful. Above all, the approach must fit the plan area and people need to understand where each plan component applies and what type of areas and maps you are using and why.

The following names should not be used as a "management area" or "geographic area" name unless the area has been so designated or unless the responsible official is designating or recommending the area as an administratively designed area under FSM 2372-Areas Designated Administratively:

1. Botanical Area,
2. Geological Area,
3. Historical Area,
4. Paleontological Area,
5. Recreational Area,
6. Scenic Area, or
7. Zoological Area.

22.22 – Identification of Designated Areas

A designated area is defined at 36 CFR 219.19 as:

> **An area or feature identified and managed to maintain its unique special character or purpose. Some categories of designated areas may be designated only by statute and some categories may be established administratively in the land management planning process or by other administrative processes of the Federal executive branch. Examples of statutorily designated areas are national heritage areas, national recreational areas, national scenic trails, wild and scenic rivers, wilderness areas, and wilderness study areas. Examples of administratively designated areas are experimental forests, research natural areas, scenic byways, botanical areas, and significant caves.**

Identification of designated areas is limited to areas or features actually designated by the appropriate person or entity. The appropriate person or entity is designated in laws, regulations, and Federal agency policies. Exhibit 01 lists some types of designated areas that the responsible official may consider, the designating official for each type of designated area, and the location of existing guidance for their designation. The list in exhibit 01 is not comprehensive. If a land area does not qualify as a designated area or has not been designated, but needs specific guidance, the responsible official may identify the area as a management area or as a geographic area and apply specific guidance.

22.22 - Exhibit 01

Designated Areas - Designating Official and Guidance Cross-Reference

Designated Areas	Designation Authority	Additional Guidance Location
Statutorily Designated Areas		
National Heritage Area	Congressional act designates.	http://www.nps.gov/history/heritageareas/
National Monument	Presidential Executive order or Congressional act designates.	FSM 2371
National Recreation Area	Congressional act designates.	FSM 2371
National Scenic Area	Congressional act designates.	FSM 2371
National Trails National Scenic Trails National Historic Trails	Congressional act designates.	FSM 2353.4
Wild and Scenic River	Congressional act designates.	FSM 1924 & FSM 2354 FSH 1909.12
Wilderness, or Wilderness Study Areas	Congressional act designates.	FSM 1923 & 2320 FSH 1909.12
Highway Systems, Interstate and National	Congressional act established process. Secretary of the Department of Transportation approves.	23 CFR part 470
Administratively Designated Areas		
Botanical Area, Geological Area, Historical Area, Paleontological Area, Recreational Area, Scenic Area, or Zoological Area	Responsible official recommends. Forest supervisor may designate areas less than 160 acres. Regional forester may designate areas less than 100,000 acres. Secretary of Agriculture designates areas of 100,000 acres or larger.	36 CFR 294.1 FSM 2372
Designated Critical Habitat	Director of FWS	ESA
Designated Inventoried Roadless Areas	Secretary of Agriculture	36 CFR Part 294--Special Areas Subpart B, Subpart C, and Subpart D,
Experimental Forest or Range	Responsible official recommends with concurrence of station director Chief designates.	FSM 4062
National Historic Landmark National Natural Landmark	Responsible official recommends. Secretary of the Interior designates.	FSM 2373 36 CFR 751, FSM 2364.4
Research Natural Area	Responsible official recommends. Regional forester designates, with concurrence of station directors.	FSM 4063
Scenic Byway - Forest Service	Responsible official recommends. Chief designates.	None
Scenic Byway - National	Responsible official recommends. Federal Highway Administration designates.	23 CFR part 162 program guides.
Significant Caves National Recreation Trails	Responsible official recommends. Regional forester designates.	36 CFR part 290 FSM 2353.4

Recommendations for designated areas are limited to areas that meet the distinctive qualifications for designation that varies by category or type. See section 23.21 for guidance on plan components for recommended areas.

The term designated area is defined at FSH 1909.12, zero code, section 05. The 2012 Planning Rule requires the responsible official to identify existing designated areas and determine whether to recommend any areas:

> (**2) In developing a proposed new plan or proposed plan revision, the responsible official shall:**
>
> *** * ***
>
> **(vii) Identify existing designated areas other than the areas identified in paragraphs (c)(2)(v) and (c)(2)(vi) of this section, and determine whether to recommend any additional areas for designation. If the responsible official has the delegated authority to designate a new area or modify an existing area, then the responsible official may designate such area when approving the plan, plan amendment, or plan revision**. (36 CFR 219.7(c)(2))

Under 36 CFR 219.10(b) the responsible officials must ensure designated areas have appropriate plan components when developing a new plan or revising a plan:

> **(b) Requirements for plan components for a new plan or plan revision. (1) The plan must include plan components, including standards or guidelines, to provide for:**
>
> * * *
>
> **(vi) Appropriate management of other designated areas or recommended designated areas in the plan area, including research natural areas.**

The intent behind identifying designated areas in plans and recommending or designating new areas and providing appropriate management direction for them in the plan is to:

1. Assure that plans identify previously existing areas that Congress, the Department, the Agency, or other Federal agencies has established; and

2. Recommend areas where doing so would help to carry out the distinctive role and contributions of the plan area in the broader landscape or contribute to achieving desired conditions for the plan area.

Responsible officials must identify in plans the designated areas that have been previously designated by statute or through a separate administrative process. Plans may also include designated areas designated by the responsible official at the time of plan approval. If a responsible official lacks authority to designate an area, the official may recommend designation using appropriate procedures.

Plans must identify designated areas. Designated areas may be identified on a map or identified by the use of a narrative. A plan may identify a designated area (or designated areas of the same type) as a management area or geographic area, but need not do so, because some designations do not need unique plan components. Other designations may have plan specific components applied without the concept of a unique management area by including the designated area within a management area or several management areas where the plan components are compatible with the designation, or including plan component direction within forest-wide direction that apply to the special character of the designated area.

When a designated area is placed on multiple plan areas, the responsible official should coordinate with the other responsible officials in developing plan components that are compatible across the multiple plan areas. See FSM 2370 for further guidance on special recreation designated areas and authorities for botanical area, geological area, and others.

The Chief must be notified if the plan development, plan amendment, or plan revision makes preliminary recommendations that ultimately require Congressional action. The responsible official, through the regional forester, shall notify the Chief by letter of tentative preliminary administrative recommendations. Examples of preliminary recommendations for Congressional action include additions to or deletions from the National Wilderness Preservation System, National Trails, National Recreation Areas; studies or changes to the National Wild and Scenic River System; and proposed adjustments in national forest, grassland, prairie, or other comparable administrative unit's boundaries.

Designated inventoried roadless areas governed by the Roadless Area Conservation Rule (36 CFR 294 Subpart B) or State roadless areas governed by State roadless rules such as: Idaho Roadless Rule (36 CFR 219 Subpart C) or Colorado Roadless Rule (36 CFR 219 Subpart D) are administratively designated areas in many NFS plan areas. Responsible officials do not have the authority to recommend additional designated roadless areas or to modify the boundaries of designated roadless areas covered by such rules in the planning process. The spatial information for the boundaries of designated roadless areas is available at Roadless Area Conservation website: http://fs.usda.gov/roadless/.

Designated roadless areas under a roadless rule may be, but are not required to be, identified as unique management areas in a plan. Responsible officials, when developing plan components that apply to designated roadless areas, must acknowledge and ensure that plan components are compatible with the management restrictions associated with the designated roadless areas. The

responsible official can have other management direction apply to these areas as long as the plan components are compatible with the restrictions of the applicable roadless rule.

For evaluation of areas for potential wilderness recommendations, see FSM 1923 and FSH 1909.12, chapter 70. For evaluation of rivers for potential wild and scenic river recommendations, see FSM 1924 and FSH 1909.12, chapter 80.

22.3 - Other Required Content in the Plan

22.31 - Priority Watersheds

Land management plan decisions must:

> **(i) Identify watershed(s) that are a priority for maintenance or restoration;** (36 CFR 219.7(f)(1))

The responsible official should consider the Forest Service national watershed condition framework (WCF) approach or another approach with similar purpose when identifying watersheds that are a priority for maintenance or restoration. The WCF publication is available at http://www.fs.fed.us/publications/watershed/Watershed_Condition_Framework.pdf. WCF priority watersheds are mapped online at the USDA Forest Service Watershed Condition and Prioritization Interactive map at http://apps.fs.usda.gov/WCFmapviewer/.

The responsible official should develop plan components that address concerns identified for priority watersheds during the planning process. The identification of a priority watershed in the plan does not by itself guide management activities. For example, if a plan objective is that the top three priority watersheds are fully restored by year 10, the identification of the priority watersheds would determine which specific watershed is the subject of the objective.

The intent of identifying priority watersheds for maintenance or restoration is to focus effort on the integrated restoration of watershed conditions in these areas. Setting priorities helps ensure that investments provide the greatest possible benefits. Priority areas for potential restoration activities could change quickly due to events such as wildfire, hurricanes, drought, insect outbreaks, or the presence of invasive species. Therefore, this requirement is included as "other required content" in plans rather than as a required plan component, allowing an administrative change (sec. 21.5) to be used to change priority.

22.32 – Describe Distinctive Roles and Contributions of the Plan Area

The requirement that every plan describe the plan area's distinctive roles and contributions within the broader landscape is as follows:

> **(f) Other content in the plan. (1) Other required content in the plan. Every plan must: …**
>
> **(ii) Describe the plan area's distinctive roles and contributions within the broader landscape; (**36 CFR 219.7(f))

The planning rule (36 CFR 219.2(b)) explains the types of things the responsible official considers when describing distinctive roles and contributions within the broader landscape:

> **. . . A plan reflects the unit's expected distinctive roles and contributions to the local area, region, and Nation, and the roles for which the plan area is best suited, considering the Agency's mission, the unit's unique capabilities, and the resources and management of other lands in the vicinity. . . .**

Once described, the plan area's roles and contributions within the broader landscape can serve as a focused foundation or context that should be a unifying concept helping to define the vision for the plan area within the broader landscape. This description is important because it is a source of motivation or reasons behind desired conditions.

The development of the description of the distinctive roles and contribution of the plan area within the broader landscape should occur in the new plan development or plan revision phase. The responsible official should consider the information collected during the assessment phase on multiple uses and ecosystem services as a starting point for developing the distinctive roles and contributions.

The description of the plan area's distinctive roles and contribution within the broader landscape must not be a list of all the roles of the plan area. Rather, it should reflect those things that are truly unique and distinctive. Consider the following when describing the plan area's distinctive roles and contributions within the broader landscape:

1. The plan area's distinctive roles and contributions within the broader landscape:

   a. Are truly unique attributes of the plan area, or are unique benefits (uses, values, products, and services) provided by the plan area to the broader landscape;

   b. Are important and relevant at the local, regional, and/or national level; and

   c. Contribute toward social, economic, and ecological sustainability.

2. Descriptions of a plan area's roles and contributions may reflect the:

   a. Ecological role of the plan area in the broader landscape;

b. Public input on plan area description of conditions, contributions, unique capabilities, and how the plan area provides for multiple uses and ecosystem services;

c. Economic benefits of uses, products, and services provided by the plan area;

d. Resources and management of other lands in the vicinity of the plan area in terms of social, cultural, economic, and ecological conditions; and

e. Role of the plan area in providing multiple uses including sustainable recreation and ecosystem services.

3. Examples of distinctive roles and contributions of a plan area within the broader landscape include:

a. A downhill skiing designation;

b. Recharge areas for water supplies for large communities;

c. Major source of supply for local timber industry;

d. A primary conservation area for grizzly bear;

e. A designated area for high volume backpacking; and

f. Location of a specific river, protected under the Wild and Scenic Rivers Act, nationally known for white water rafting.

4. Outreach and context considerations include:

a. Engagement of communities, individuals, Indian Tribes, and others early in the participation process, to define existing and desired roles and contributions of the plan area;

b. Outreach to engage underserved populations (FSH 1909.12, ch. 40, sec. 40);

c. Collaborative processes to achieve understanding of the communities' lifestyle, values, attitudes, beliefs, and other conditions, as appropriate;

d. Consideration of the areas and populations to which plan area contributions apply at a local, regional, and national scale, as appropriate;

e. Consideration of the context of local, tribal, regional, and national perspectives;

f. Consideration of the context to the Agency's mission and strategic plan goals; and

g. Consideration of current, emerging, and projected program output and ecosystem services.

22.33 - Plan Monitoring Program

A land management plan must contain a plan monitoring program (36 CFR 219.12). Plan monitoring is described in FSH 1909.12, chapter 30.

22.34 - Proposed and Possible Actions

(f) Other content in the plan. (1) Other required content in the plan. Every plan must: …

(iv) Contain information reflecting proposed and possible actions that may occur on the plan area during the life of the plan, including: the planned timber sale program; timber harvesting levels; and the proportion of probable methods of forest vegetation management practices expected to be used (16 U.S.C. 1604(e)(2) and (f)(2)). Such information is not a commitment to take any action and is not a "proposal" as defined by the Council on Environmental Quality regulations for implementing NEPA (40 CFR 1508.23, 42 U.S.C. 4322(2)(C)). (36 CFR 219.7(f))

The land management plan must include a list of types of possible projects for the next 3 to 5 years. The possible actions may be displayed in an appendix. A plan amendment is not required to change the list. The list should be presented as a brief summary of the types of possible projects expected to maintain or move toward the desired conditions in the next 3 to 5 years. In addition, the possible actions listed should include exhibits of the possible timber sale program if applicable; see examples of such exhibits in FSH 1909.12, chapter 60.

The plan's discussion of possible actions must explicitly say that the type of actions described do not commit the Agency to perform that work, but are provided as possible actions that would likely be consistent with plan components, particularly the desired conditions and objectives.

The identification of possible actions should include an estimate of timber harvesting level, but should not include speculation about the specific amount, frequency, location, magnitude, or quantities of actions during the plan period. Do not place a "to do" list of projects and expected dates in the plan. If management approaches are included as optional content in the plan (sec. 22.4); they may be used to inform future proposed and possible actions.

22.35 - Description of Project Consistency Requirements

The plan must include an explanation of the requirements for project consistency with a plan, as set out in sections 22.35a through 22.35d.

22.35a - Determining Consistency with Desired Conditions, Objectives, and Goals

A project is consistent with plan desired conditions, objectives, or goals if the project:

1. Maintains or makes progress toward attaining one or more plan desired conditions, objectives, or goals without adversely affecting progress toward maintenance of other desired conditions, objectives, or goals;

2. Is neutral with regard to progress toward attaining the plan's desired conditions, objectives, or goals;

3. Maintains or makes progress toward attaining one or more of the desired conditions, objectives, or goals over the long-term even if the project or activity would have an adverse but short-term effect on progress toward attaining, or maintenance of, one or more desired conditions, objectives, or goals; or

4. Maintains or makes progress toward attaining one or more of the plan's desired conditions, objectives, or goals even if the project or activity would have an adverse but negligible long term effect on progress toward attaining, or maintenance of, other desired conditions, objectives, or goals.

The project decision document must include a finding that the project is consistent with the plan's desired conditions, objectives, or goals, and briefly explain the basis for that finding. When a CE applies and there is no project decision document, the finding and explanation must be in the project record.

22.35b - Determining Project Consistency with Standards

The project documentation must confirm that the project or activity is designed in exact accord with all applicable plan standards.

22.35c - Determining Project Consistency with Guidelines

The project documentation must briefly explain how the project is consistent with the applicable plan guidelines. When the project is designed in exact accord with a guideline, the project documentation must simply confirm that fact. When the project varies from the exact words of the guideline, the project documentation must specifically explain how the project design is as effective in meeting the purpose of the guideline.

22.35d - Determining Project Consistency with Suitability of Land Determinations

The project documentation should confirm that the project or activity is either:

1. A use for which the area is specifically identified in the plan as suitable, or

2. Not a use for which the area is specifically identified in the plan as suitable, but is not a use precluded by a "not suitable" determination.

22.4 - Optional Content in the Plan

Optional content in the plan is discussed at 36 CFR 219.7(f)(2):

> **(2) *Optional content in the plan*. A plan may include additional content, such as potential management approaches or strategies and partnership opportunities or coordination activities.**

Plans may include information other than the plan components, such as an explanatory narrative, general management principles, management approaches, management challenges, performance history, performance risks, or referenced material. This optional other information must not be labeled or worded in a way that suggests it is a plan component. Also, other information must not include, nor appear to include, a "to do" list of tasks or actions.

The intent of including an optional explanatory narrative on performance history, management approaches, and so on is to show the public how planned outcomes are built on trends from the recent past, while also reflecting movement toward the desired condition. A discussion of performance risks could give the public a realistic expectation regarding the plan area's ability to achieve the objectives. The responsible official should consider whether adding optional content to the plan could facilitate transparency and give the public and governmental entities a clear understanding of the plan area's purpose and how outcomes would likely be delivered. As things change the optional plan content can be updated with administrative changes.

If management approaches are included, management approaches should briefly describe the principal management approaches the responsible official is inclined to take during the plan period. The approaches should come from and respond to the desired conditions and the objectives. They may convey a sense of priority and focus among objectives so that the public knows the likely management emphasis. When appropriate, management approaches may indicate the future course or direction of change, recognizing past trends of budget and program accomplishments, without making precise estimates of quantities. Management approaches may discuss potential processes such as analysis, assessment, inventory, or monitoring. This optional section must avoid making predictions or any statements that appear to be commitments or that may create unrealistic expectations among the public on the delivery of programs.

Optional content in the plan may also describe partnership opportunities and collaboration arrangements that support the achievement of desired conditions and objectives.

22.5 – Public Use Prohibitions, Project and Activity Decisions, and Plan Components

Plan components may not include "prohibitions" of unregulated public uses such as camping, picnicking, hiking, fishing, boating, hunting, or horseback riding. Plan components (such as standards or identifying lands as not suitable for a particular use in a plan) apply only to the Forest Service when making project and activity decisions. The identification of suitable or not suitable does not apply to the public. Public use prohibitions and project and activity decisions are actions but not plan components.

1. Project or activity decisions may be made in conjunction with the decision to approve a land management plan, but they do not thereby become plan components. Examples of project decisions are:

a. A final decision authorizing a project or activity, even if approved with the land management plan. An example of a decision that authorizes a project or activity includes: "The XXX project is hereby authorized." This type of decision is a separate action that must independently comply with NEPA. In addition to typical projects, such a final project decision could include designation of roads, trails, and areas for motor vehicle use under 36 CFR 212.50. Any environmental analysis necessary for these actions may be included with the plan development analysis and reflected in the plan decision document or conducted and documented separately. Another example is that an oil-gas leasing decision is not a plan decision, but may be included with the plan decision with a separate record of decision. See 36 CFR 228.102 (d).

b. Any public use prohibition. A plan component guides actions taken by the Agency, but a plan component such as a standard does not directly or automatically prohibit public uses. Any constraint on the public's use of NFS lands, not otherwise imposed by law or regulation or subject to a permit, requires the issuance of an order under 36 CFR part 261, subpart B. An example of such an order is : "The following act is prohibited on XXX National Forest: possessing or using a bicycle except on forest roads open to highway legal vehicles, trails designated for bicycle use, developed recreation areas, and trailheads (36 CFR 261.55(c))."

2. For plan components, it may be best to deal with these public use prohibition situations by identifying not suitable land uses and establishing objectives to have such uses controlled in a specified time, for example:

a. Place the following words in suitability section of plan: "Forest roads open to highway legal vehicles, trails designated for bicycle use, developed recreation areas, and trailheads are suitable for mountain bicycle use."

b. Place the following words in the objective section of the plan: "Issue a closure order prohibiting the use of mountain bicycles except on forest roads open to highway legal vehicles, trails designated for bicycle use, developed recreation areas, and trailheads within 1 year of plan approval."

c. Prepare appropriate NEPA documentation, project decision, and issue the relevant closure order within 1 year of approving the plan decision.

When an order is issued simultaneously with a plan, such orders may be authorized in the plan decision document. The NEPA analysis for the order may be included with the plan development analysis and is outside the scope of the planning categorical exclusion (36 CFR 220.6(e)(16)).

See exhibit 01 for a demonstration of how designation of land not suitable for a public use affects land management**.**

22.5 - Exhibit 01

Example of how suitability of lands for a particular use affects on-the-ground management

- A plan may identify an area as not suitable for equestrian riding.
- There is no immediate effect of the plan decision. People may still ride horses in this area.
- Because of the plan decision, officials responsible for Agency projects may not issue authorizations for equestrian events, or approve equestrian trail construction, or maintenance.
- An appropriate responsible official may issue a closure order to carry out the plan, but is not required to do so (even if there is an objective in the plan to close the area).
- If a closure order is issued, then an Agency law enforcement official may issue a citation to people who may be riding in the area.

23 – RESOURCE REQUIREMENTS FOR INTEGRATED PLAN COMPONENTS

This section provides a framework for the development of an integrated set of plan components that provides for ecological sustainability (ecosystem diversity and ecosystem integrity) and contributes to social and economic sustainability, including providing for ecosystem services and multiple uses in the plan area, and addressing the relevant requirements of the 2012 Planning Rule at 36 CFR 219.7–219.10.

§ 219.8 Sustainability.

The plan must provide for social, economic, and ecological sustainability within Forest Service authority and consistent with the inherent capability of the plan area, as follows: . . . .

*** ***

(b) Social and economic sustainability. The plan must include plan components, including standards or guidelines, to guide the plan area's contribution to social and economic sustainability, taking into account: . . . .

*** ***

§ 219.9 Diversity of plant and animal communities. This section adopts a complementary ecosystem and species-specific approach to maintaining the diversity of plant and animal communities and the persistence of native species in the plan area. Compliance with the ecosystem requirements of paragraph (a) is intended to provide the ecological conditions to both maintain the diversity of plant and animal communities and support the persistence of most native species in the plan area. Compliance with the requirements of paragraph (b) is intended to provide for additional ecological conditions not otherwise provided by compliance with paragraph (a) for individual species as set forth in paragraph (b). The plan must provide for the diversity of plant and animal communities, within Forest Service authority and consistent with the inherent capability of the plan area.

*** ***

§ 219.10 Multiple use.

While meeting the requirements of §§ 219.8 and 219.9, the plan must provide for ecosystem services and multiple uses, including outdoor recreation, range, timber, watershed, wildlife, and fish, within Forest Service authority and the inherent capability of the plan area as follows: . . . .

This opening section discusses the intent of the directives. The following sections (sec. 23.1 through 23.22q) gives additional direction to the responsible official to carry out the 2012 Planning Rule requirements to develop plan components that contribute to social and economic sustainability, provide for ecological sustainability, and provide for ecosystem services and multiple uses. While plans cannot guarantee sustainability, plan components are more likely to be successful if they reflect the general context in which the plan operates as well as constraints of the inherent capability of the plan area, the Agency's authority, and the fiscal capability of the unit (36 CFR 219.1(g)). It is also important to note that plan components themselves do not compel Agency action or guarantee specific results. Instead, they provide the vision, strategy, guidance, and constraints needed to move the plan area toward sustainability.

The following sections (sec. 23.1 through 23.22q) discuss how to build integrated plan components, based on relevant information from the assessment and the information from public and governmental participation opportunities. The requirements related to various elements of sustainability are provided in the following order: ecological integrity; ecosystem diversity; air, soil, and water; additional species-specific plan components for at-risk species; social and economic sustainability, ecosystem services, and multiple uses.

1. Ecological integrity and Ecosystem Diversity. The following terms and concepts form the basis of plan components for ecological integrity and ecosystem diversity:

a. Ecosystem diversity. Ecosystem is defined at 36 CFR 219.19 as "a spatially explicit, relatively homogeneous unit of the Earth that includes all interacting organisms and elements of the abiotic environment within its boundaries." Ecosystem diversity is defined at 36 CFR 219.19 as "the variety and relative extent of ecosystems." The plan must include plan components to maintain the diversity of ecosystems and habitat types in the plan area (36 CFR 219.9(a)(2)). Ecosystems include terrestrial, aquatic, and riparian ecosystems.

b. Ecological integrity. "The quality or condition of an ecosystem when its dominant ecological characteristics (for example, composition, structure, function, connectivity, and species composition and diversity) occur within the natural range of variation and can withstand and recover from most perturbations imposed by natural environmental dynamics or human influence" (36 CFR 219.19). The intent of the directives is that plan components be designed to maintain or restore the ecological integrity of ecosystems and the benefits that people obtain from those ecosystems (ecosystem services). Ecological integrity includes the structure, function, composition, and connectivity of these ecosystems as a whole and the key characteristics within each ecosystem (36 CFR 219.9(a)(2)).

c. Maintain or restore. The intent of the directives is that plan components be designed to maintain resources that have ecological integrity and to restore conditions where they are degraded, damaged, or destroyed.

Maintain is defined as "to keep in existence or continuance of the desired ecological condition in terms of its desired composition, structure, and processes. Depending upon the circumstance, ecological conditions may be maintained by active or passive management or both." (See 36 CFR 219.19).

Restore is defined as to renew by "assisting the recovery of an ecosystem that has been degraded, damaged, or destroyed. Ecological restoration focuses on reestablishing the composition, structure, pattern, and ecological processes necessary to facilitate terrestrial and aquatic ecosystems sustainability, resilience, and health under current and future conditions." (See 36 CFR 219.19).

The intent of the directives is for plan components to be designed to maintain existing conditions when they are the desired conditions, and restore conditions where they are degraded. In some instances, however, it may be impracticable or impossible to restore degraded, damaged, or destroyed ecological systems in a plan area because of cost or unacceptable tradeoffs between other resource and restoration needs, or because restoration is outside the capability of the land or Forest Service authority. There are also degraded areas on NFS lands where the tools or methods are not currently available to effectively restore them to desired conditions.

At such times, plan components to maintain existing, less than desirable conditions in the short-term may be critical to preventing further degradation and for successful restoration towards desired conditions over the long-term. For example, the primary management emphasis in some areas may be reducing the spread of invasive species when eradication is not currently feasible.

d. Structure, function, composition, and connectivity. These four characteristics are commonly used to describe an ecosystem. They are interdependent and must be considered together when designing plan components. The intent is for the responsible official to use the information about key ecosystem characteristics from the assessment to design plan components to maintain or restore structure, function, composition, and connectivity so the plan area has: (1) functional ecosystems that sustain the diversity of plant and animals communities; and (2) ecosystems can withstand and recover from most perturbations imposed by the natural environmental dynamics or human influences.

These four terms are defined at 36 CFR 219.19:

(1) Composition. "The biological elements within the different levels of biological organization, from genes and species to communities and ecosystems."

(2) Structure. "The organization and physical arrangement of biological elements such as, snags and down woody debris, vertical and horizontal distribution of vegetation, stream habitat complexity, landscape pattern, and connectivity."

(3) Function. "Ecological processes that sustain composition and structure, such as energy flow, nutrient cycling and retention, soil development and retention, predation and herbivory, and natural disturbances such as wind, fire, and floods."

(4) Connectivity. "Ecological conditions that exist at several spatial and temporal scales that provide landscape linkages that permit the exchange of flow, sediments, and nutrients; the daily and seasonal movements of animals within home ranges; the dispersal and genetic interchange between populations; and the long distance range shifts of species, such as in response to climate change."

e. Natural range of variation(NRV). The natural range of variation (NRV) defined in FSH 1909.12, Zero Code, Section 05 describes the variation in physical and biological conditions exhibited by ecosystems as a consequence of climatic fluctuations and disturbance regimes. NRV is a useful tool for understanding past ecological processes and the resulting biological diversity that persisted under those conditions.

The coarse-filter approach uses NRV as a framework, because native species evolved and adapted within the limits established by natural landforms, vegetation, and disturbance patterns before extensive human alteration. NRV is a tool, because maintaining or restoring ecological conditions similar to those under which native species have evolved would offer good assurance against losses of biological diversity and would maintain habitats for the vast majority of species in an area, subject to factors outside of the Agency's control, such as climate change.

NRV can also be a fundamental tool in strategic thinking and planning, even if restoration to historical conditions is not the management goal or possible. NRV evaluation provides the ecological understanding of temporal dynamics of systems and its consequences for management understanding of the specific geographic location under consideration, its existing ecological conditions, and projections of various climate regimes that might characterize the area in the future.

f. Scientific understanding of ecological integrity factors. When it is not appropriate, practical, or possible to restore key ecosystem characteristics within the NRV, responsible officials may choose to design plan components based on a general scientific and ecological understanding of the conditions that would sustain key ecosystem characteristics and sustain at-risk species such as the following:

(1) Representativeness of ecosystem types. Maintaining the integrity of representative examples of major ecosystem types or unique or pristine ecosystems is one way of maintaining ecosystem diversity. For example, the research natural area program of the National Forest System has been established to maintain a wide spectrum of high quality representative areas that represent the major forms of variability found in forest, shrubland, grassland, alpine, and natural situations that have scientific interest and importance that, in combination, form a national network of ecological areas for research, education, and maintenance of biological diversity (FSM 4063.02).

(2) Redundancy. Redundancy in ecosystem functionality is supported when key ecosystem characteristics that perform the same or similar functions in that system can replace those that are lost. Diverse ecosystems tend to possess higher degrees of functional redundancy and have the ability to continue ecological functions (such as production) even when the species providing those functions change. An example of functional redundancy occurred when the introduction of chestnut blight led to the decimation of American chestnut, a dominant tree species and important mast source of the southeastern forests of the United States. With the demise of chestnut, other species (such as oaks and hickories) attained greater prominence and continued to provide a source of food for a variety of animals.

(3) Habitat associations of particular species. Plan components could be designed to provide the structure, function, composition, and connectivity needed by a particular species such as: at-risk species, ecological engineers (for example, beavers), keystone species (species having a strong influence on kinds and abundances of other species), link species (have strong influence on ecosystem functioning), or umbrella species (one whose minimum requirements are at least as comprehensive as those needed by the rest of the species associated with the ecosystem (for example, the northern spotted owl)).

2. Air, soil, and water. In designing plan components for ecological sustainability the responsible official shall ensure integration with plan components to maintain or restore the basic physical elements of air, soil, and water. These elements include air resources; clean, abundant water supplies (both surface and groundwater sources including groundwater, public water supplies, sole source aquifers, and source water protection areas), riparian areas, lakes, streams, wetlands; and soils and soil productivity; recognizing the importance of these elements as fundamental for maintaining the health and resilience of the overall ecosystems.

3. Additional species-specific plan components for at-risk species.

a. Coarse-filter/fine filter approach. The coarse-filter/fine-filter approach used in this directive is a complementary ecosystem and species-specific approach to provide for

the diversity of plant and animal communities in the plan area and the long-term persistence of native species in the plan area. The ecosystem integrity and ecosystem diversity requirements provide the coarse-filter. These requirements should support the abundance, distribution, and long-term persistence of most native species within a plan area, as well as provide for diversity of plant and animal communities. The fine-filter provisions for at-risk species are intended to provide a safety net for those species whose specific habitat needs or other influences on their life requirements may not be fully met under the coarse-filter provisions.

b. At-risk species. At-risk species are federally recognized species under ESA (threatened, endangered, proposed, and candidate species) and species of conservation concern (SCC). A SCC is a "species, other than federally recognized threatened, endangered, proposed, or candidate species, that is known to occur in the plan area and for which the regional forester has determined that the best available scientific information indicates substantial concern about the species' capability to persist over the long-term in the plan area" (36 CFR 219.9(c)).

This directive requires the responsible official to develop coarse-filter plan components, and fine-filter plan components if necessary, to contribute to the recovery of listed species and conserve proposed and candidate species.

In addition, the directive requires the development of coarse-filter plan components, and fine-filter plan components if necessary, to provide the desired ecological conditions necessary to maintain viable populations of SCC within the plan area, or to contribute to maintaining a viable population of a SCC across its range where it is not within the Agency's authority or is beyond the inherent capability of the plan area to provide the ecological conditions to maintain a viable population of that species within the plan area.

4. Social and economic sustainability. The directives require plan components to guide the plan area's contribution to social and economic sustainability (employment, income, community wellbeing, culture, and so on). In developing these plan components, the responsible official is to take into account, through the collaborative planning process and the results of the assessment—the social, cultural, and economic conditions relevant to the area influenced by the plan, the distinctive roles and contributions of the unit within the broader landscape; sustainable recreational opportunities and uses; multiple uses, including ecosystem services, that contribute to local, regional, and national economies in a sustainable manner; and cultural and historic resources and uses.

23.1 - Ecological Sustainability and Diversity of Plant and Animal Communities

To develop the land management plan consistent with maintaining ecological sustainability, the plan must include plan components designed to maintain, restore, or promote the ecological

integrity of terrestrial, riparian, and aquatic ecosystems; maintain the diversity of plant and animal communities; and support the persistence of native species within the plan area, subject to the extent of Forest Service authority and the inherent capability of the plan area.

This section (sec. 23.1) gives direction for developing plan components for ecological sustainability and diversity of plant and animal communities. It consists of three subsections. The first two subsections, Plan Components for Ecosystem Integrity and Ecosystem Diversity (sec. 23.11-23.11d) and Plan Components for Air, Soil, and Water (sec. 23.12-23.12c) provide direction for design of plan components for the ecosystem and watershed level of the plan area.

The third subsection, Additional Species-Specific Plan Components (sec. 23.13-23.13c), gives direction for when the plan components developed under sections 23.11 and 23.12 would not provide for the ecological conditions necessary to contribute to the recovery of federally listed threatened and endangered species, conserve species that are proposed or candidates for Federal listing, and maintain viable populations of species of conservation concern within the plan area (36 CFR 219.9(b)(1)).

The plan development process for ecological sustainability and diversity of plant and animal communities should first and foremost focus on the ecosystem and watershed level plan components, especially those that also support ecological conditions for at-risk species. The combination of plan components developed for these three sections must incorporate a complementary ecosystem (coarse-filter) and species-specific (fine-filter) approach, and be designed to maintain ecological sustainability, the diversity of plant and animal communities, and the persistence of native species within the plan area. See section 22.1, exhibit 01 for hypothetical examples of plan components for ecological sustainability and ecosystem diversity.

When developing integrated plan components for ecological sustainability and diversity of plant and animal communities, based on the need to change (sec. 21.1), the responsible official should consider the following:

1. Plan components related to:

   a. Major vegetation types and their successional stages, patch sizes, spatial arrangement, and connectivity;

   b. Dominant ecological processes and disturbance regimes for the plan area;

   c. Ecosystems and unique habitat types including those that are rare or at risk;

   d. Invasive species;

   e. Soil resources and soil productivity;

   f. Air resources; and

g. Water quality and quantity, stream and other natural water flows, stream and lake morphology, wetlands, riparian areas, floodplains, and other groundwater-dependent ecosystems.

2. Plan components for maintenance or restoration of the key ecosystem characteristics including those that are rare or at risk (FSH 1909.12, ch. 10, sec. 12.15d) in the plan area. Whether plan components are designed to maintain or restore key ecosystem characteristics depends upon:

a. The distribution and abundance of the key ecosystem characteristic within the planning area.

b. The social and economic factors related to the maintenance or restoration of the key ecosystem characteristic, if applicable.

c. The opportunities and potential for maintenance or restoration of the key ecosystem characteristics.

d. The level of risk (as determined in FSH 1909.12, ch. 10, secs. 12.15d and 12.55) and the specific threats to the key ecosystem characteristic, and the ability to affect these.

3. The range of ecological conditions established within the limits of the natural landforms, vegetation, and disturbance processes that existed prior to extensive human alteration (FSH 1909.12, ch. 10, sec. 12.15a).

4. The variation in physical and biological conditions exhibited by ecosystems as a consequence of climatic fluctuations and disturbance regimes (FSH 1909.12, ch. 10, sec. 12.3).

5. The concept that the environmental conditions that sustained species and other ecosystem components in the past are likely to sustain them, at least over the short term, in the future (Weins et al, 2012).

6. The potential influences of threats and stressors on key ecosystem characteristics including those that are beyond the control of the agency that are likely to affect ecological conditions on the plan area during the life of the proposed plan (15 years) (FSH 1909.12, ch. 10, sec. 12.32). The term stressor is defined at FSH 1909.12, zero code, section 05.

The development of these ecosystem scale plan components is an iterative process as emerging plan components are evaluated and adjusted to meet the ecological conditions of at-risk species within the plan area (sec. 23.13).

23.11 - Plan Components for Ecosystem Integrity and Ecosystem Diversity

23.11a – Natural Range of Variation

The plan components designed to maintain or restore the ecosystem integrity of the diversity of terrestrial, riparian, and aquatic ecosystems and habitat types throughout the plan area provide the ecosystem (coarse-filter) approach to maintaining the persistence of native species. When developing such plan components, the responsible official shall consider the role of the natural range of variation as follows:

1. NRV should be used to design plan components if appropriate. If appropriate, the responsible official should design plan components to facilitate maintenance or restoration of specific key ecosystem characteristics needed to restore ecosystem integrity by moving conditions towards those created under ecological processes and landscape disturbance regimes that occurred before extensive human alteration.

2. Exceptions. In some situations, the responsible official may determine that certain key ecosystem characteristics are outside the NRV and that it is not appropriate, practical, or possible to contribute to the restoration of NRV conditions. Examples of situations when restoring conditions is not appropriate, practical, or possible include when:

   a. The system is so degraded that restoration is not possible.

   b. Restoration needs are either socially unacceptable or are not economically feasible.

   c. The system is no longer capable of sustaining key ecosystem characteristics relative to NRV based upon likely future environments.

   d. The ability to restore the desired ecological conditions or key ecosystem characteristics is beyond the authority of the Agency or the inherent capability of the plan area.

3. If NRV is not appropriate, use Best Available Scientific Information (BASI) to inform design of plan components. In these situations the responsible official should:

   a. Design for ecosystem integrity based on a general scientific and ecological understanding of the conditions that would sustain key ecosystem characteristics and sustain at-risk species using factors such as: representativeness, redundancy, habitat associations of particular species, or other factors (FSH 1909.12, ch. 10, sec. 12.15b and sec. 23); and

b. Explain in the plan decision document the rationale for NOT designing plan components to maintain or restore certain key ecosystem characteristics to within the NRV.

23.11b - Landscape Design Considerations

The responsible official should take into account landscape design considerations when designing plan components for ecosystem integrity and ecosystem diversity. When doing so, the responsible official should consider the following:

1. Multiple spatial and temporal scales. The arrangement of ecological conditions and key ecosystem characteristics at multiple spatial and temporal scales are important.

2. At-risk species. The responsible official should base the design of plan components on the key ecosystem characteristics related to the composition, structure, ecological processes, and connectivity of plan area ecosystems and ecological conditions necessary to sustain the at-risk species that were identified in the assessment phase (FSH 1909.12, ch. 10, sec. 12) or brought forward during the public and governmental participation process.

3. Landscape patterns that promote long-term ecological integrity and ecosystem diversity. Landscape pattern is defined as the arrangement, connectivity, composition, size, and relative abundance of ecosystem patches that occur within an area of land at a given time. Patches can be characterized by vegetation type, seral stage, habitat type, or other features relevant to a management question. The responsible official should consider plan components for landscape patterns that promote long-term ecological integrity and ecosystem diversity. Examples ways of providing plan components for such patterns include:

a. Designing ecosystem (coarse-filter) connectivity through a conservation design based on landscape patterns created under ecological processes and landscape disturbance regimes that occurred before extensive human alteration if appropriate considering the influence of climate change.

b. Designing spatial configuration of desired conditions relative to the NRV conditions, including the scale, frequency, and intensity of system drivers of temporal ecosystem change. (FSH 1909.12, ch. 10, sec. 12.15a; Weins et al, 2012).

c. Designing for ecosystem integrity based on a general scientific and ecological understanding of the conditions that would sustain key ecosystem characteristics and sustain at-risk species using factors such as: representativeness, redundancy, habitat associations of particular species, or other factors (FSH 1909.12, ch. 10, sec. 12.15b and sec. 23).

d. Maintaining a representative range of successional states for all ecosystems and in patch configurations similar to those that occurred under historical conditions, at a scale resilient to natural disturbances.

e. Maintaining the integrity of scarce or unique smaller areas through compatible desired conditions and levels of disturbance for areas around them.

23.11c - Ecosystem Integrity

219.8 Sustainability

(a) Ecological sustainability. (1) Ecosystem Integrity. The plan must include plan components, including standards or guidelines, to maintain or restore the ecological integrity of terrestrial and aquatic ecosystems and watersheds in the plan area, including plan components to maintain or restore structure, function, composition, and connectivity, taking into account:

(i) Interdependence of terrestrial and aquatic ecosystems in the plan area.

(ii) Contributions of the plan area to ecological conditions within the broader landscape influenced by the plan area.

(iii) Conditions in the broader landscape that may influence the sustainability of resources and ecosystems within the plan area.

(iv) System drivers, including dominant ecological processes, disturbance regimes, and stressors, such as natural succession, wildland fire, invasive species, and climate change; and the ability of terrestrial and aquatic ecosystems on the plan area to adapt to change.)

(v) Wildland fire and opportunities to restore fire adapted ecosystems.

(vi) Opportunities for landscape scale restoration.

…

§ 219.9 Diversity of plant and animal communities.

. . . (a) Ecosystem plan components. (1) Ecosystem integrity. As required by § 219.8(a), the plan must include plan components, including standards or guidelines, to maintain or restore the ecological integrity of terrestrial and aquatic ecosystems and watersheds in the plan area, including plan components to maintain or restore their structure, function, composition, and connectivity. …

Plans must contain plan components that address the composition, structure, ecological processes, and connectivity of plan area ecosystems in a manner that promotes their ecological integrity (36 CFR 219.8(a) and 219.9(a)(1). Ecological integrity is defined in FSH 1909.12, zero code, section 05.

Plan components for ecosystem integrity should be based on ecological conditions and key ecosystem characteristics related to the composition, structure, function, and connectivity of plan area ecosystems that were identified in the assessment phase (FSH 1909.12, ch. 10, sec. 12.14) or brought forward during the public and governmental participation process. The responsible official shall take into account:

1. Interdependence of terrestrial and aquatic ecosystems in the plan area. Develop plan components in an integrated manner reflecting the interaction and interdependence of terrestrial, aquatic, and riparian ecosystems in the plan area.

2. Contributions of the plan area to ecological conditions within the broader landscape influenced by the plan area. When developing plan components under sections 23.11-23.11d, the ID Team should consider the following:

a. Ecological conditions within the broader landscape and how those conditions may be influenced by resources or management within the plan area.

b. Ecological conditions, habitats, or key ecosystem characteristics in the plan area that are unique, under-represented, or rare across the broader landscape (FSH 1909.12, ch. 10, sec. 12.15d).

c. Ecological connectivity at multiple temporal and spatial scales that would provide landscape linkages facilitating the exchange of resources and the movements of species across the broader landscape (FSH 1909.12, ch. 10, sec. 12.15c).

3. Conditions in the broader landscape that may influence the sustainability of resources and ecosystems within the plan area. When developing plan components under sections 23.11-23.11d, the ID team should consider the ecological conditions in the broader landscape that may influence the sustainability of the plan area and should consider the following:

a. Existing conditions on adjacent non-NFS lands of the broader landscape that may influence the plan area's ability to maintain or restore ecological integrity of plan area ecosystems, such as habitat fragmentation, land use patterns, natural resource management, or urbanization (FSH 1909.12, ch. 10, sec. 12.15d).

b. Facilitating or mimicking dominant ecological processes and system drivers of the broader landscape, especially those related to fire adapted ecosystems (FSH 1909.12, ch. 10, sec. 12.3).

c. Collaborating with other land managers across the broader landscape in developing an all-lands approach to managing ecological resources in a manner that

promotes the ecological integrity of terrestrial, riparian, and aquatic ecosystems in the plan area (FSH 1909.12, ch. 40).

4. System drivers, including dominant ecological processes, disturbance regimes, and stressors. When developing plan components under sections 23.11-23.11d, the responsible official should consider dominant ecological processes, disturbance regimes, and stressors (FSH 1909.12, ch. 10, sec. 12.32) and should:

a. Consider plan components designed to facilitate ecosystem adaptation to the effects of stressors, if restoration is not feasible.

b. Consider developing plan components designed to limit the ability of stressors to impact ecosystem integrity, and to mitigate the effects of stressors that cannot be excluded. In doing so, consider the following:

(1) Providing protection for areas of high ecosystem integrity, or areas of social, cultural, or economic importance.

(2) Mitigating stressors associated with management, such as equipment impacts on soils and water, or movement of invasive species via vehicles and foot travel.

(3) Mitigating, if feasible, the effects of widespread environmental stressors such as air pollution and influence of changing climate.

5. Opportunities for landscape scale restoration. When considering opportunities for plan components for landscape-scale restoration of ecological integrity, and if feasible and appropriate, and, in keeping with the inherent capability of the land, the ID Team may consider:

a. The role of the plan area within the broader landscape, including capability and condition of terrestrial, aquatic, and riparian systems.

b. Complementing restoration goals for other lands adjacent to the plan area, if available.

c. Compensating for degraded conditions in the broader landscape.

d. The broad-scale context of scarcity and abundance, and ability to restore and maintain desired features or conditions that are scarce in the broader landscape (FSH 1909.12, ch. 10, sec. 12.15d).

e. Aligning desired ecological conditions with landscape-scale ecological units, such as the land-type association level of the National Hierarchical Framework of Ecological Units (FSM 2060.3), if feasible, to simplify analysis and management by

reducing the variability of vegetation types, land capability, and response to management.

f. Opportunities for partnerships to support restoring ecological conditions at the appropriate geographic scale.

6. Opportunities to restore fire-adapted ecosystems**.** The responsible official should consider and integrate plan components related to wildland fire, fuels management, and opportunities to restore fire-adapted ecosystems when developing plan components for ecological integrity. The development of such plan components should be based on the information such as community assessment and mitigation plans, fire's historic role in the plan area, local community wildfire protection plans, local risk assessments, trends in fire behavior, and wildland-urban interface (WUI) areas identified in the assessment phase (FSH 1909.12, ch. 10, sec. 12.3) or brought forward during the public and governmental participation process. When developing or revising a plan, plan components for fire or fuels management could include the following:

a. Desired Conditions. Desired conditions would be appropriate for fuel conditions, fire severity, fire frequency, and so on. These desired conditions should be integrated with the other vegetative and air desired conditions. Desired conditions must define and identify fire's role in the ecosystem. In addition, the following topics should be considered: current management strategies, hazardous fuels, prevention, public and firefighter safety, smoke management, values to be protected from or enhanced by wildland fire, and wildland-urban interface.

b. Objectives. If fuels conditions are an issue in WUI areas, the plan should include a plan objective that sets forth a projection of the number of fuel treatment acres meeting an integrated desired vegetative and fuel condition in a specific time to move toward (or maintain) the desired condition.

c. Standards or guidelines. The plan may include standards or guidelines related to basic smoke management practices, non-fire fuels treatments, post-fire rehabilitation, prescribed fire treatments, and wildland fire responses. A guideline or standard may be used to provide guidance on when or how a specific tool is appropriate.

23.11d - Ecosystem Diversity

The rule requirements for ecosystem diversity from 36 CFR 219.9(a)(2) are:

(2) *Ecosystem diversity*. The plan must include plan components, including standards or guidelines, to maintain or restore the diversity of ecosystems and habitat types throughout the plan area. In doing so, the plan must include plan components to maintain or restore:

(i) Key characteristics associated with terrestrial and aquatic ecosystem types;

(ii) Rare aquatic and terrestrial plant and animal communities; and

(iii) The diversity of native tree species similar to that existing in the plan area.

Plan components designed to maintain or restore the diversity of terrestrial, riparian, and aquatic ecosystems and habitats throughout the plan area are fundamental to providing ecological conditions which support the abundance, distribution, and long-term persistence of native species and the diversity of plant and animal communities. In addition, diversity of ecosystems within the unit is an important aspect of the coarse filter, supporting diversity as well as integrity of ecosystems supports the ability of the unit to provide for species diversity and the persistence of native species within the plan area. The intent is to maintain or restore the diversity and integrity of ecosystems throughout the plan area as a whole as well as maintain or restore key elements of the ecosystems.

See section 23 for a discussion of the intent of ecosystem diversity requirements.

The terms ecosystem diversity and habitat type are defined in FSH 1909.12, zero code, section 05. The terrestrial, riparian, and aquatic ecosystems to be addressed in the planning process are identified in the assessment phase (sec. 12.12) or brought forward during the public and governmental participation process. See sections 23.1–23.12c for direction on plan components related to maintaining or restoring these ecosystems. When developing plan components to maintain or restore the diversity of ecosystems and for these ecosystems and habitat types, consider the following:

1. The spatial extent and distribution of the ecosystem or habitat type and relationship to NRV (sec. 23.11).

2. The importance of the ecosystem or habitat type to providing ecological conditions that contribute to the recovery of threatened and endangered species, conserve proposed and candidate species, and maintain viable populations of species of conservation concern (sec. 23.13).

3. How plan components developed for large-scale ecosystems, like longleaf pine forests, would maintain or restore rare or unique embedded communities, like hillside bogs and longleaf savannahs (FSH 1909.12, ch. 10, sec. 12.15d).

4. How plan components developed for the ecosystems would contribute to maintaining the persistence of native tree species within the plan area.

5. How the plan components for key characteristics of the ecosystem or habitat types contribute to the broader biodiversity of ecosystems across the plan area.

23.11e - Riparian Areas

(a) Ecological sustainability.

****

(3) Riparian areas. (i) The plan must include plan components, including standards or guidelines, to maintain or restore the ecological integrity of riparian areas in the plan area, including plan components to maintain or restore structure, function, composition, and connectivity, taking into account:

(A) Water temperature and chemical composition;

(B) Blockages (uncharacteristic and characteristic) of water courses;

(C) Deposits of sediment;

(D) Aquatic and terrestrial habitats;

(E) Ecological connectivity;

(F) Restoration needs; and

(G) Floodplain values and risk of flood loss.

(ii) Plans must establish width(s) for riparian management zones around all lakes, perennial and intermittent streams, and open water wetlands, within which the plan components required by paragraph (a)(3)(i) of this section will apply, giving special attention to land and vegetation for approximately 100 feet from the edges of all perennial streams and lakes.

(A) Riparian management zone width(s) may vary based on ecological or geomorphic factors or type of water body; and will apply unless replaced by a site-specific delineation of the riparian area.

(B) Plan components must ensure that no management practices causing detrimental changes in water temperature or chemical composition, blockages of water courses, or deposits of sediment that seriously and adversely affect water conditions or fish habitat shall be permitted within the riparian management zones or the site-specific delineated riparian areas.

Guidance on how to maintain and restore riparian areas is found throughout sections 23.1 through 23.13c. Riparian areas are important elements of watersheds that provide critical transition zones linking terrestrial and aquatic ecosystems. Restoration of riparian areas may be accomplished through passive management or may require active management, particularly in areas where natural disturbance such as fire or flooding has been excluded.

The terms riparian area and riparian management zone are defined in FSH 1909.12, zero code, section 05. The National Core BMP Technical Guide (USDA Forest Service 2012a) discusses a similar concept; aquatic management zones. The riparian ecosystems to be addressed in the planning process were identified in the assessment phase (FSH 1909.12, ch. 10, sec. 13) or brought forward during the public and governmental participation process. See sections 23.1–23.12c for direction on plan components related to maintaining or restoring the ecological integrity of these ecosystems.

The plan must establish widths for riparian management zones for all lakes, perennial and intermittent streams, and open water wetlands.

When establishing riparian management zones, the responsible official should consider:

1. Available information on the location and extent of surface waterbodies, springs, wetlands, vegetation, soils, geomorphology, topography, and other relevant information.

2. Vegetation indicators of riparian areas that include regionally distinctive riparian vegetation or the potential to support regionally distinctive vegetation.

3. Fluvial geomorphic indicators of riparian areas such as break in slope or evidence of fluvial deposition.

4. Riparian area determined by 100 year recurrence interval flood stage. The water surface elevation corresponding to the 100 year recurrence interval flood may be preferable to some standard distance from the stream channel (for example, 100 foot buffer) because a set distance may overestimate actual riparian width along small streams and underestimate the extent of riparian vegetation along larger rivers.

5. Riparian management zones for individual waterbodies should be established based upon existing site-specific riparian area delineations if available.

6. The effects of climate change on stream flows that may affect the size of riparian areas.

In areas where available information on the distribution of riparian conditions within the plan area is too limited to determine appropriate riparian management zone dimensions, the responsible official should consider establishing a default distance from the edge, such as the ordinary high water mark or bank full flow, of all lakes, perennial and intermittent streams, and open water wetlands for the riparian management zone, with particular attention given to the first 100 feet.

Additionally, when developing plan components for each of these ecosystems, the responsible official should consider the following:

1. Designing plan components for restoring processes that support desirable riparian integrity including rooting access to groundwater.

2. Designing plan components with passive management or active management in mind. An example of passive management is restoration of elements of flow regimes, such as environmental flows and levels. Examples of active management include re-contouring, physical removal of structures or vegetation, and other mechanical means. Active management may be appropriate in areas if management has excluded natural disturbance such as fire or flooding or if past projects and activities have altered riparian functions, such as where roads are located within riparian areas.

3. Designing plan components that constrain projects and activities to comply with the requirements of the planning rule (36 CFR 219.8(a)(3)(ii)(B) while taking into account that some projects may have short-term adverse effects to water conditions and fish habitat, but will maintain or restore structure, function, composition, and connectivity of riparian areas over the long term.

For guidance on delineation of riparian areas associated with streams and rivers, see the guidelines in the National Riparian Vegetation Monitoring Technical Guide (Forest Service, 2012b) or other agency supported guidance.

For guidance on delineation of site-specific riparian areas for non-fluvial or palustrine areas (associated with wetlands, lakes and other standing bodies of water), see the USACE Wetland delineation manuals for the region of interest available online at http://el.erdc.usace.army.mil/wetlands/wlpubs.html.

23.12 - Plan components for Air, Soil, and Water

Air, soil, and water are the basic elements of all terrestrial, riparian, and aquatic ecosystems. The conditions of these resources are essential contributors to ecological sustainability and ecosystem integrity. The plan components designed to maintain or restore these ecosystem elements provide the basis for maintaining or restoring the ecological sustainability of the plan area.

The development of plan components for maintaining air quality, soil productivity, and water quality and water resources within the plan area should consider:

1. The range of ecological conditions established within the limits of the natural landforms, vegetation, and disturbance processes that existed prior to extensive human alteration.

2. The variation in physical and biological conditions exhibited by ecosystems as a consequence of climatic fluctuations and disturbance regimes.

3. The concept that the environmental conditions that sustained ecosystem components in the past are likely to sustain them, at least over the short term, in the future.

4. The potential influences of threats and stressors that are within and those beyond the control of the plan area that are likely to affect ecological conditions on the plan area during the life of the proposed plan (15 years).

23.12a - Air Quality

(2) Air, soil, and water. The plan must include plan components, including standards or guidelines, to maintain or restore:

(i) Air quality. (36 CFR 219.8(a))

The development of plan components for air quality should be based on the select set of ecological conditions and key ecosystem characteristics that were identified in the assessment phase (FSH 1909.12, ch. 10, sec. 13) or brought forward during the public and governmental participation process.

To address air quality issues when developing, amending, or revising a plan the responsible official should consider:

1. Visibility. As appropriate, consider developing plan components for visibility in Class I areas considering goals from relevant State, Federal, and, or, tribal implementation plans. As appropriate, consider developing plan components addressing emissions, such as fugitive dust, from management activities, for example from mining, prescribed fire, or oil and gas exploration and extraction.

2. Air Pollution Deposition and Exposure of Biophysical Resources. Where critical loads of air pollution to water, soils, flora, or fauna have been exceeded, the responsible official should develop plan components relevant to the plan area to help protect or restore key characteristics of relevant resources. The key characteristics may include aquatic chemistry, soil chemistry, soil productivity, and biogeochemical cycling. The plan components may include desired conditions and objectives for target loads for air pollution deposition and target levels of air pollution exposure.

3. Health and Safety. If objectives for prescribed fire are set forth in the plan, the responsible official should consider developing plan components for smoke management. If relevant and appropriate, the responsible official should consider State, Federal, or tribal smoke management plans when developing plan components for smoke management. Plan components may include basic smoke management practices applicable to NFS lands. Plan components may address:

a. Smoke dispersion conditions.

b. Effects on air quality.

c. Record keeping.

d. Communication.

e Emission reduction techniques.

f. Coordination of burning within the airshed.

23.12b - Soils and Soil Productivity

(a) Ecological sustainability.

(2) *Air, soil, and water*. The plan must include plan components, including standards or guidelines, to maintain or restore:

(ii) Soils and soil productivity, including guidance to reduce soil erosion and sedimentation. (36 CFR 219.8(a)(2)(ii))

The development of plan components for soils and soil productivity should be based on the select set of ecological conditions and key ecosystem characteristics that were identified in the assessment phase (FSH 1909.12, ch. 10, sec. 13) or brought forward during the public and governmental participation process.

1. In addition, the responsible official may consider the following information when developing plan components for soils and soil productivity:

a. Existing interpretations of soil surveys certified by the National Cooperative Soil Survey (NCSS).

b. Existing information on vegetation suitability and productivity, and NRV, in addition to the standard soil interpretations from a Terrestrial Ecological Unit Inventory from the assessment (FSH 1909.12, ch. 10, sec. 13.22).

c. Existing approximations of soil-landform units and attribute data derived from remotely sensed data or from expert opinion (FSH 1909.12, ch. 10, sec. 13.22).

d. Existing recommendations in Forest Service national best management practices guidance documents (USDA Forest Service 2012a). Additional information is found in FSM 2551.3.

2. The responsible official should design plan components for soils and soil productivity to sustain the productive capability of the land, its ecological resources, and watershed functions, considering the following:

a. Restoring degraded areas.

b. Maintaining the integrity of soils through managing vegetative communities and the type and amount of disturbance.

c. Maintaining biological properties of soils, such as, appropriate level of organic matter input to sustain biological cycling.

d. Maintaining organic matter inputs and avoiding losses, to contribute to maintaining or increasing net soil carbon storage.

e. Mitigating impacts for those soils that have been identified as vulnerable to stressors.

f. Mitigating potential impacts of changing climate, such as potential impacts in some parts of the country for more frequent extreme storm events, and considering how potential impacts may affect appropriate uses of soils.

g. Limiting potential impacts on soil physical properties, including compaction, rutting, puddling, displacement of the soil surface, and erosion.

h. Limiting potential effects on soil chemical properties, such as potential for nutrient depletion or acidification or both.

23.12c - Water Quality and Water Resources

219.8 …

a) Ecological sustainability.

…

(2) *Air, soil, and water*. The plan must include plan components, including standards or guidelines, to maintain or restore:

…

(iii)Water quality.

(iv) Water resources in the plan area, including lakes, streams, and wetlands; ground water; public water supplies; sole source aquifers; source water protection areas; and other sources of drinking water (including guidance to prevent or mitigate detrimental changes in quantity, quality, and availability).

…

(4) ***Best management practices for water quality*****. The Chief shall establish requirements for national best management practices for water quality in the Forest Service Directive System. Plan components must ensure implementation of these practices.** (36 CFR 219.8)

The development of plan components to maintain or restore water resources in the plan area, including lakes, streams, wetlands, and groundwater should be based on the select set of ecological conditions and key ecosystem characteristics that were identified in the assessment phase (FSH 1909.12, ch. 10, secs. 12.23 and 13.34) or brought forward during the public and governmental participation process. In addition, the responsible official should consider the surface and subsurface quality and the public water supplies associated with water quality from the plan area watersheds. The responsible official should develop desired conditions for water quality in the plan area and consider plan components to:

1. Maintain or restore the water quality, quantity, timing, and distribution necessary to sustain ecosystems into the future by:

   a. Including guidance to prevent or mitigate detrimental changes in quantity, quality, and availability, including temperature changes and inputs of sediment and other pollutants.

   b. Carrying out the national best management practices program (FSM 2532) (USDA Forest Service, 2012) (see sec. 20.4).

   c. Quantifying the water needs necessary to maintain and restore terrestrial, riparian, and aquatic ecosystems and associated dependent species, including groundwater dependent ecosystems, and specify the appropriate environmental flows and water levels, when appropriate and practical. Environmental flows and water levels describe the quantity, quality, timing, and range of variability of water flows and levels required to sustain or restore freshwater and estuarine ecosystems and the functions and services they provide. Environmental flows include instream flows for environmental purposes, geomorphic and flood flows, groundwater levels, and lake and wetland levels, and floodplain flows established for environmental purposes.

2. Support the restoration of designated impaired waters within or adjacent to NFS lands with primary or secondary impairments that have the potential to be influenced through Forest Service land management activities in the plan area.

3. Maintain or restore the integrity of public water supplies, sole source aquifers, source water protection areas, and other sources of drinking water in the plan area.

23.13 - Additional Species-Specific Plan Components for At-Risk Species

The set of at-risk species for developing plan components are the federally recognized threatened, endangered, proposed, and candidate species; and species of conservation concern. Under 36 CFR 219.9(b)(1) the responsible official shall develop plan components to provide the ecological conditions within the plan area necessary to:

> **…contribute to recovery of federally listed threatened and endangered species; conserve species that are proposed or candidate for federally listing; maintain a viable population of each species of conservation concern in the plan area.** 36 CFR 219.9(b)(1).

The plan components developed for ecosystem integrity and ecosystem diversity (sec. 23.11) are expected to provide the ecosystem (coarse-filter) approach to maintaining the persistence of native species within the plan area, including the at-risk species identified during the assessment. The responsible official shall evaluate the emerging ecosystem level plan components, along with those pertaining to other multiple uses, to determine whether or not they will provide the ecological conditions for at risk species necessary to meet the requirements under 36 CFR 219.9(b)(1). The term "ecological conditions" is defined in FSH 1909.12, zero code, section 05. Ecological conditions include habitat and the effects of human uses (for example, recreation, grazing, and mining).

When the evaluation reveals that plan components for ecosystem integrity and ecosystem diversity or other plan components would not provide the ecological conditions necessary for one or more at-risk species, the responsible official shall develop additional species-specific plan components for those individual species (fine filter). Examples of such plan components include a standard for protection of red-cockaded woodpecker nest cavity trees during prescribed burning activities, an objective related to food storage in occupied grizzly bear habitat, or a standard for size and placement of culverts on cutthroat trout streams.

The responsible official shall take into account the conclusions of the vulnerability status process for each at-risk species (as outlined in FSH 1909.12, ch.10, sec. 12.5). The evaluation process for the emerging set of plan components for each at-risk species is designed to determine the degree to which all emerging plan components meet the requirements of the planning rule for at-risk species. Ecological conditions that provide for ecosystem integrity and ecosystem diversity (sec. 23.11) are the primary context for the evaluation of at-risk species.

Plan components for ecological conditions that provide for ecosystem integrity and ecosystem diversity (sec. 23.11) are the primary context for the evaluation of at-risk species. However, plan components developed for multiple uses or social sustainability (for example, timber, grazing, recreation, wilderness, and so on) may contribute to, or detract from, ecological conditions needed for at-risk species. For example, on some forests or grasslands, a portion of the plan area may have a desired condition for undeveloped remote recreation. Such a desired condition should be taken into account when evaluating the ecological conditions for at-risk species,

because it would likely minimize or eliminate some stressors and would contribute to maintaining ecological conditions for some at-risk species.

When evaluating or developing plan components under 36 CFR 219.9(b)(1), the responsible official should consider the following:

1. The relevant information derived from the status of at-risk species identified in the assessment (sec. 12.55) or brought forward during the public and governmental participation process, such as:

   a. Amount, quality, and distribution of habitat.

   b. The dynamics of habitat over time (vegetation simulation modeling, climate change).

   c. Known species locations and overall species distribution.

   d. Information on species population trends and dynamics, if available.

   e. Biological interactions (for example, invasion of cheatgrass into sagebrush habitats).

   f. Other threats or limiting factors, such as wildland fire and other natural disturbances, roads, trails, dams, water withdrawal or storage, off-road use, hunting, and other human disturbances.

2. For most species, the only practical quantitative evaluation of their required ecological conditions is an assessment of habitat conditions.

3. When gaining an understanding of the key habitat relationships of the species, consider the following:

   a. Evaluating the connection between habitat conditions and population consequences.

   b. Using general ecological principles when there is a lack of knowledge of relationships between species and populations and habitats.

   c. Using existing spatially explicit habitat models, demographic models, and so on, when available,

   d. Using qualitative methods such as expert opinion or simple habitat assessments in the absence of adequate information or models,

e. Framing the evaluation in the context of risk and uncertainty, no matter what evaluation method is used,

4. Conducting the evaluations of the emerging plan components at the scale which biological populations of the species operate. Analysis at the scale of distinct population segments or evolutionary significant units may be appropriate.

5. Considering not only conditions that would be provided in the plan area, but also effects, influences, and contributions from other land ownerships and actions outside of the plan area.

6. Evaluating the potential plan components and their likely contribution to meeting requirements for at-risk species is an iterative process as the plan is being developed, amended, or revised. The process includes:

a. Developing the potential ecosystem integrity and ecosystem diversity plan components that address ecological, social, and economic sustainability.

b. Evaluating those potential plan components with species information to evaluate how well they would sustain the ecological conditions that support at-risk species.

c. Refining the potential plan components that do not adequately address species risk factors or do not sustain the ecological conditions that support at-risk species by:

(1). Making adjustments to the potential plan components for ecosystem integrity and/ecosystem diversity necessary to sustain the ecological conditions that support at-risk species; or

(2). Adding additional species-specific plan components necessary to sustain the ecological conditions that support at-risk species.

7. Repeating the steps of enumerated paragraphs 6b and 6c if other social, economic, or ecological considerations are added that alter plan components in a way that would affect an at-risk species.

23.13a - Threatened and Endangered Species

> **(b) *Additional, species-specific plan components.* (1) The responsible official shall determine whether or not the plan components required by paragraph (a) of this section provide the ecological conditions necessary to: contribute to the recovery of federally listed threatened and endangered species…within the plan area. If the responsible official determines that the plan components required in paragraph (a) are insufficient to provide such ecological conditions, then additional, species-specific plan components, including standards or guidelines, must be included in the plan to provide such ecological conditions in the plan area. (36 CFR 219.9(b)(1))**

The development of plan components for threatened and endangered (T&E) species should be based on the ecological conditions necessary to contribute to their recovery and maintaining or restoring critical habitats that were identified in the assessment phase (FSH 1909.12, ch. 10, sec. 13) or brought forward during the public and governmental participation process.

In developing plan components (ecosystem and species-specific) for threatened and endangered species, the responsible official should:

1. Be proactive in the conservation of federally listed threatened and endangered species to promote recovery and delisting.

2. Consider conservation measures and actions identified in recovery plans relevant to threatened and endangered species in the plan area.

3. Consider limiting factors and key threats to species identified in the assessment (sec. 12.55) for threatened and endangered species in the plan area.

4. Collaborate with the FWS and NOAA-Fisheries, as appropriate, in the evaluation of existing conditions for T&E species and in the development of plan components that contribute to their recovery.

5. Work beyond the plan area boundary to collaborate and cooperate with FWS, NMFS, States, Tribes, and other partners, landowners, and land managers in developing actions that contribute to an all-lands approach to species conservation and recovery.

6. Where appropriate, support the reintroduction of listed species into historical habitat on NFS lands, consistent with recovery plan objectives.

7. Collaborate with NOAA-Fisheries, as appropriate, in the evaluation of any effects to aquatic T & E species downstream of the plan area that could be affected by actions within the plan area.

23.13b - Proposed and Candidate Species

> **(b) Additional, species-specific plan components. (1) The responsible official shall determine whether or not the plan components required by paragraph (a) of this section provide the ecological conditions necessary to: … conserve proposed and candidate species…within the plan area. If the responsible official determines that the plan components required in paragraph (a) are insufficient to provide such ecological conditions, then additional, species-specific plan components, including standards or guidelines, must be included in the plan to provide such ecological conditions in the plan area.**
> (36 CFR 219.9(b)(1))

Development of plan components for proposed and candidate species should be based on the ecological conditions necessary to conserve proposed and candidate species that were identified in the assessment phase or brought forward during the public and governmental participation process and maintain or restore their habitats in the plan area to contribute to preventing them from being federally listed (FSH 1909.12, ch. 10, sec. 13).

In developing plan components (ecosystem and species-specific) for proposed and candidate species, the responsible official should:

1. Be proactive in the conservation of proposed and candidate species.

2. Consider conservation measures identified in existing conservation strategies and agreements relevant to proposed and candidate species in the plan area.

3. Consider the limiting factors and key threats to species identified in proposed rules from FWS or NOAA Fisheries for listing or candidate species assessments.

4. Collaborate with FWS and NMFS in the evaluation of existing conditions for proposed and candidate species and in the development of plan components designed to conserve these species.

5. Work beyond the plan area boundary to collaborate and cooperate with FWS, NOAA-Fisheries, States, Tribes, and other partners, landowners, and land managers in to support an all-lands approach to species conservation.

23.13c - Species of Conservation Concern (SCC)

(b) Additional, species-specific plan components. (1) The responsible official shall determine whether or not the plan components required by paragraph (a) of this section provide the ecological conditions necessary to:…maintain a viable population of each species of conservation concern within the plan area. If the responsible official determines that the plan components required in paragraph (a) are insufficient to provide such ecological conditions, then additional, species-specific plan components, including standards or guidelines, must be included in the plan to provide such ecological conditions in the plan area. (36 CFR 219.9(b)(1))

(2) If the responsible official determines that it is beyond the authority of the Forest Service or not within the inherent capability of the plan area to maintain or restore the ecological conditions to maintain a viable population of a species of conservation concern in the plan area, then the responsible official shall:

(i) Document the basis for that determination (§ 219.14(a)); and

(ii) Include plan components, including standards or guidelines, to maintain or restore ecological conditions within the plan area to contribute to maintaining a viable population of the species within its range. In providing such plan components, the responsible official shall coordinate to the extent practicable with other Federal, State, Tribal, and private land managers having management authority over lands relevant to that population.
(36 CFR 219.9(b)(2))

(c) Species of conservation concern. For purposes of this subpart, a species of conservation concern is a species, other than federally recognized threatened, endangered, proposed, or candidate species, that is known to occur in the plan area and for which the regional forester has determined that the best available scientific information indicates substantial concern about the species' capability to persist over the long-term in the plan area.
(36 CFR 219.9(b)(3))

Viable population. A population of a species that continues to persist over the long term with sufficient distribution to be resilient and adaptable to stressors and likely future environments.
(36 CFR 219.19)

The species of conservation concern (SCC) for the plan area to be used in the development of plan components is identified by the regional forester based on the BASI considering the

potential SCCs identified during the assessment phase (FSH 1909.12, ch. 10, sec. 12.52) and those brought forward during the public and governmental participation process that meet the criteria for identifying SCC.

The intent of these requirements is to require a robust and scientifically supported approach to providing for ecological conditions necessary to support SCCs within the plan area, while also acknowledging that there may be some circumstances outside of Agency control, allowing responsible officials to adjust, adapt, and work more collaboratively with other land managers to protect SCCs in the context of the broader landscape.

The development of plan components for SCC should be based on the ecological conditions necessary to maintain a viable population of each SCC in the plan area. These ecological conditions were identified in the assessment phase (FSH 1909.12, ch. 10, sec. 13) or brought forward during the public and governmental participation process.

In evaluating plan components (ecosystem and species-specific) for SCC, the responsible official shall determine whether the plan components would provide the ecological conditions (amount and distribution) necessary to maintain or restore a viable population of a SCC in the planning area (36 CFR 219.9(b)(1)). There are five aspects of the evaluation process that are clarified in the following enumerated paragraphs: (1) viable population, (2) three possible outcomes of evaluating plan components, (3) examples of circumstances not within the authority of the Forest Service, (4) examples of circumstances not within the inherent capability of the plan area, and (5) duties of the responsible official when maintenance of a viable population of SCC within the plan area is beyond the authority of the Forest Service or not within the inherent capability of the plan area.

1. Viable population. Consider the following principles with respect to terms used in the 2012 rule to define "viable population:"

a. For the purposes of the planning process, “the individuals of a species of conservation concern that exist in the plan area will be considered to be members of one population of that species” (77 FR 21217, April 9, 2012). In some situations, individuals or groups of individuals in the plan area may be known to be or highly suspected to be reproductively isolated and separate from the rest of the individuals. These individuals or groups may need to be considered as separate entities.

b. "Persist over the long-term" means the species continues to exist in the plan area over a sufficiently long period that encompasses multiple generations of the species, the time interval between major disturbance events, the time interval to develop all successional stages of major habitat types, or the time interval needed for the overall ecosystem to respond to management. Understand that confidence in the risk evaluations decreases rapidly as the timeframe of projections increases and that plan components may need to be periodically updated as plans are amended and revised.

c. Whether there is "sufficient distribution" of a species should be considered in the context of the species' natural history and historical distribution and on the potential distribution of the habitat within the plan area. Recognize that habitat and population distribution are dynamic over time. Sufficient distribution also implies a distribution that permits individuals to interact within the plan area within the constraints of the species' natural history. It should not be expected that management of NFS lands would provide broadly or evenly distributed habitat throughout a plan area for all species. Furthermore, except in rare instances, it is not expected that habitat to support all known individuals or the maximum number of individuals of a species must be available in the plan area through time.

d. "Resilient" suggests that individuals would be distributed with sufficient redundancy such that when disturbance events or stressors result in the local disappearance of individuals or extirpation from an area, that re-colonization of suitable habitat may occur in the future to facilitate long term persistence in the plan area.

e. The concept of "adaptable" implies that ecological conditions to support the species are distributed such that the species may be represented in a variety of locally adapted ecotypes for increased likelihood for survival and adaptation to unknown future environments.

f. Species distribution should also be provided for by the requirement that plan components must maintain or restore the diversity of ecosystems and habitat types throughout the plan area (36 CFR 219.9(a)(2), and by the requirement to maintain or restore connectivity.

2. The three possible outcomes of evaluating plan components. There are a variety of methods for conducting this evaluation, such as expert opinion, expert panels, Bayesian-belief models, habitat suitability models, and so on. The evaluation of the existing ecosystem and species-specific plan components may result in three outcomes:

a. The existing plan components, when carried out, would provide the necessary ecological conditions to maintain a viable population of the SCC in the plan area.

b. Adjustments to existing ecosystem plan components or additional species-specific plan components or both, when carried out, would provide the necessary ecological conditions to maintain a viable population of the SCC in the plan area.

c. Due to circumstances that are not within the authority of the Forest Service or consistent within the inherent capability of the land, the plan area is unable to maintain a viable population of a particular SCC within the plan area. The

responsible official shall document the basis for this determination in the planning record.

3. Examples of circumstances not within the authority of the Forest Service. Species-specific examples of circumstances that are not within the authority of the Forest Service and may affect a national forest or grassland's ability to provide ecological conditions that could maintain a viable population of a particular native species within a plan area includes:

a. Forest clearing in South America–These forests provide important wintering areas for many neotropical birds that nest in North America. The clearing of these forests for agricultural purposes poses a serious threat to the long-term viability of the Cerulean warbler and the ability of national forests in the southern Appalachian Mountains to maintain viable populations of this species.

b. Hydropower and flood control facilities in the Pacific Northwest and recreational and commercial fish harvest practices–These facilities and practices are primary downstream threats to anadromous fish populations whose spawning beds may occur on stream reaches within national forests in the intermountain west, thus affecting the ability of NFS units within these species' ranges to maintain viable populations on NFS lands.

c. Land use patterns on private lands within and adjacent to NFS units, such as the continuing agricultural uses and urbanization that is occurring east of the Rocky Mountains–Habitat fragmentation as a result of these changes reduces available habitat and further isolates existing swift fox populations, thereby affecting the ability of national grasslands in eastern Colorado to maintain viable populations of this species.

d. Domestic sheep grazing on private lands within or adjacent to NFS units–Domestic sheep can transmit diseases to bighorn sheep that can cause die-offs affecting herds on national forests in the west and the ability of those NFS units to maintain viable bighorn populations.

4. Examples of circumstances not within the inherent capability of the plan area, The inherent capability of the land is defined in FSH 1909.12, zero code, section 05. Examples of circumstances that are not within the inherent capability of the plan area to maintain or restore a viable population of a species within the plan area include:

a. A species that is inherently rare because its individuals naturally occur at low numbers and are wide ranging individuals, such as the wolverine. For example, the wolverine occurs at relatively low densities in the northern Rocky Mountains; and the

number of breeding individuals that may occur on an individual national forest are presumably too small to be considered a viable population.

b. A plan area that lacks sufficient land area with the ecological capacity to produce enough habitat to maintain a viable population. An example is the Kisatchie National Forest's inability to maintain a viable population of swallow-tailed kite on the Forest due to very limited amounts of land area ecologically capable of producing broad bottomland hardwood and cypress swamp habitats.

c. Current and projected changes in climate that may affect a national forest or grassland's ability to maintain or even contribute to viable populations of some species. An example is the warming trends of temperatures at higher elevations in the West which are altering the capability of national forests in California and other areas of the West to maintain viable populations of American pika on some NFS units.

d. Where water quality conditions in Appalachian Mountain streams that provide habitat for eastern brook trout have been altered through acid deposition, due to past and current acid rain, rendering many of them unsuitable for brook trout and compromising the ability of some Appalachian national forests to maintain viable populations of this species.

5. Duties of the responsible official. If the responsible official determines that it is beyond the authority of the Forest Service or not within the inherent capability of the plan area to maintain or restore the ecological conditions to maintain a viable population of a SCC in the plan area, then the responsible official shall do the following for that SCC:

a. Document the basis for the determination.

b. Include plan components, including standards or guidelines, to maintain or restore ecological conditions within the plan area to contribute to maintaining a viable population of the species within its range. For additional guidance see 36 CFR 219.9(b)(2) and the principles about viable populations at paragraph 1 of this section.

c. Coordinate, to the extent practicable, with Federal, State, tribal, and private land managers relevant to the species population. In doing so, consider:

(1) The range of the species beyond the plan area, and the ecological role of the plan area to contribute to a viable population across the broader landscape.

(2) Working towards an all-lands approach to species conservation with other land managers across the range of the species.

23.2 - Social and Economic Sustainability and Multiple Use

Plans are required to have plan components for social and economic sustainability and multiple use integrated with the plan components for ecological sustainability and species diversity described in section 23.1. The outcomes of ecological sustainability create a foundation to support contributions for social and economic sustainability.

The 2012 Planning Rule sections on social and economic sustainability (36 CFR 219.8(b) and multiple use (36 CFR 219.10) cover some of the same elements (or topics). This section presents these elements once; combining into a single section the applicable rule text and considerations pertinent to the identified element.

23.21 - Social, Cultural, and Economic Conditions

Plans must include plan components that guide the plan area's contribution to social and economic sustainability to provide people and communities with a range of social and economic benefits for present and future generations. Economic and social sustainability require that the needs of the present generation are met without compromising the ability of future generations to meet their needs. The ability to contribute to social and economic sustainability is built on the foundation provided by ecological sustainability. The general requirements for social and economic sustainability are set out at 36 CFR 219.8 as follows:

> **§ 219.8 Sustainability.**
> **The plan must provide for social, economic, and ecological sustainability within Forest Service authority and consistent with the inherent capability of the plan area, as follows:**
> ***
> **(b) Social and economic sustainability. The plan must include plan components, including standards or guidelines, to guide the plan area's contribution to social and economic sustainability, taking into account:**
> **(1) Social, cultural, and economic conditions relevant to the area influenced by the plan;**
> **(2) Sustainable recreation; including recreation settings, opportunities, and access; and scenic character;**
> **(3) Multiple uses that contribute to local, regional, and national economies in a sustainable manner;**
> **(4) Ecosystem services;**
> **(5) Cultural and historic resources and uses; and**
> **(6) Opportunities to connect people with nature. (**36 CFR 219.8)

This section on plan components for social and economic sustainability (sec. 23.21) expands on (b)(1) of the list above. The other elements (2-6) are addressed in the following respective

sections: 23.22b (sustainable recreation), 23.22 (multiple use), 23.22a (ecosystem services), 23.22h (cultural and historic resources), and 23.22b (opportunities to connect people with nature).

In addition to the guidance in this and the following sections, when developing plan components, the responsible official shall consider the following:

> **(7) Reasonably foreseeable risks to ecological, social, and economic sustainability.**
>
> **(8) System drivers, including dominant ecological processes, disturbance regimes, and stressors, such as natural succession, wildland fir, invasive species, and climate change; and the ability of the terrestrial and aquatic ecosystems on the plan areas to adapt to change (§ 219.8).**
> (36 CFR 219.10 (a))

In the definition of sustainability, the 2012 Planning Rule defines social and economic sustainability as follows:

> **. . . "social sustainability" refers to the capability of society to support the network of relationships, traditions, culture, and activities that connect people to the land and to one another and support vibrant communities.**
> **. . . "economic sustainability" refers to the capability of society to produce and consume or otherwise benefit from goods and services including contributions to jobs and market and nonmarket benefits. . .**
> (36 CFR 219.19)

Specific considerations related to social sustainability could include, for example, opportunities for the plan area to contribute to hunting and fishing opportunities, health, safety, education, social wellbeing, and quality of life of people and communities affected by the plan area. Cultural conditions such as traditions, history, art, and traditional uses can also be considered part of social sustainability, as can opportunities for service or civic engagement, and other activities that connect people to the land and to one another.

Specific considerations related to economic sustainability could include, for example, opportunities for the plan area to contribute to individual employment, small businesses, income, federal receipts shared with local governments, and the provision of economically significant benefits, products and services, including those with both market and non-market value. These social and economic considerations, along with ecological considerations, are often interrelated and mutually supportive.

The assessment (sec. 13.1) provides available information about the social, cultural, and economic conditions associated with the plan area, including those that influence or are influenced by the plan area. The assessment includes identifying the context of these conditions in the plan area and the area(s) of influence, the external social, cultural, and economic influences on the plan area, and the plan area's relationship to key social, cultural, and economic conditions that are influenced by the plan components.

In examining the trends related to social and economic sustainability, the assessment provides available information about reasonably foreseeable risks to social and economic sustainability, including the role of stressors as well as outside social, cultural, and economic influences on or related to the plan area.

Building on the information developed in the assessment, or identified through the planning process, the responsible official should consider the following in developing the plan components:

1. How key social, cultural, and economic conditions in the area(s) of influence and beyond the area(s) of influence are likely to be influenced by the plan components. This can include how plan components are likely to support community cohesiveness, support cultural traditions, and influence income and employment opportunities.

2. How external social, economic, or cultural influences are likely to affect the plan area.

In developing plan components, consider the contributions to social and economic sustainability that may come from multiple uses and ecosystem services described in sections 23.22a-23.22q. The desired conditions should include a description of the desired contributions for the plan area to contribute to social and economic sustainability, taking into account conditions relevant to the area influenced by the plan. Reasonably foreseeable risks to social and economic sustainability should be recognized so that the responsible official considers plan components that may reduce or mitigate these risks.

23.22 - Multiple Use

This section and sections 23.22a through 23.22q give additional guidance related to the multiple use section of the 2012 Planning Rule (36 CFR 219.10), and to 36 CFR 219.8(b) where these two sections of the rule overlap.

Sections 23.22a through 23.22q give guidance for the requirements identified in 36 CFR 219.10. Each of these sections generally present applicable rule text, summarize relevant assessment information, identify considerations or analysis, and suggest primary approaches to address the requirement of the element in plan components.

The general requirements for multiple use and ecosystem services from 36 CFR 219.10 are as follows:

> **§ 219.10 Multiple use.**
> **While meeting the requirements of §§ 219.8 and 219.9, the plan must provide for ecosystem services and multiple uses, including outdoor recreation, range, timber, watershed, wildlife, and fish, within Forest Service authority and the inherent capability of the plan area as follows:**
> **(a)** ***Integrated resource management for multiple use*****. The plan must include plan components, including standards or guidelines, for integrated resource management to provide for ecosystem services and multiple uses in the plan area. When developing plan components for integrated resource management, to the extent relevant to the plan area and the public participation process and the requirements of §§ 219.7, 219.8, 219.9, and 219.11, the responsible official shall consider** [*Specific elements are detailed at 36 CFR 219.10(a)(1)-(10)*]
> *****
> **(b)** ***Requirements for plan components for a new plan or plan revision.***
> **(1) The plan must include plan components, including standards or guidelines, to provide for** [*Specific elements are detailed at 36 CFR 219.10(b)(1)(i)-(vi)*]
> **(2) Other plan components for integrated resource management to provide for multiple use as necessary.** (36 CFR 219.10)

The 2012 Planning Rule requires that plan components must provide for multiple uses and ecosystem services within Agency authority and inherent capability of the plan area as described in the introductory paragraph. Paragraphs (a) and (b) of rule section 36 CFR 219.10 use different wording to describe their requirements. The introduction to 36 CFR 219.10(a) requires plan components for multiple uses and ecosystem services. 36 CFR 219.10 (a)(1-10) identify specific elements that the responsible official shall consider in developing the plan components. 36 CFR 219.10(b)(1) requires plan components for each identified element if applicable to the plan area. Individual plan components, including standards and guidelines, may meet more than one of these requirements. The intent is to develop an integrated set of plan components, including standards or guidelines, for integrated resource management.

23.22a - Ecosystem Services

The requirements for plan components for ecosystem services are found both in the section on social and economic sustainability and the section on multiple use:

> **§ 219.8 Sustainability.**

****

(b) The plan must include plan components, including the plan area's contribution to social and economic sustainability, taking into account:

****

(4) Ecosystem services

(36 CFR 219.8(b))

****

§ 219.10 Multiple use.

While meeting the requirements of §§ 219.8 and 219.9, the plan must provide for ecosystem services and multiple uses, including outdoor recreation, range, timber, watershed, wildlife, and fish, within Forest Service authority and the inherent capability of the plan area as follows:

(a) *Integrated resource management for multiple use*. The plan must include plan components, including standards or guidelines, for integrated resource management to provide for ecosystem services and multiple uses in the plan area.

*****

(36 CFR 219.10(a))

Ecosystem services are defined in the 2012 rule as:

> ***Ecosystem services.*** **Benefits people obtain from ecosystems, including:**
> **(1) *Provisioning services,* such as clean air and fresh water, energy, fuel, forage, fiber, and minerals;**
> **(2) *Regulating services,* such as long term storage of carbon; climate regulation; water filtration, purification, and storage; soil stabilization; flood control; and disease regulation;**
> **(3) *Supporting services,* such as pollination, seed dispersal, soil formation, and nutrient cycling; and**
> **(4) *Cultural services,* such as educational, aesthetic, spiritual and cultural heritage values, recreational experiences and tourism opportunities.**
> (36 CFR 219.19)

The assessment identifies the key ecosystem services provided by the plan area that may be influenced by the land management plan (FSH 1909.12, ch. 10, sec. 13.2). For each key ecosystem service the assessment provides available information on the spatial and temporal extent of the plan area's contribution, condition, trends, and drivers affecting the key ecosystem services, the stability and resiliency of the ecosystems, and the influences beyond the authority of the Forest Service that affect the ability of the plan area to deliver these services. This

information provides a framework to evaluate how potential plan components are likely to affect or provide for key ecosystem services.

The responsible official shall develop plan components to provide for key ecosystem services. The key ecosystem services may include services that are described elsewhere in this chapter. These include provisioning services such as air (sec. 23.12a), water (sec. 23.12c), energy (sec. 23.22n), fiber (sec. 23.22f and FSH 1909.12, ch. 60) and minerals (sec. 23.22m); regulating services such as soil stabilization (sec. 23.12b); and cultural services such as cultural heritage values (sec. 23.22h), and recreational experiences (sec. 23.22b). A plan may identify other key ecosystem services that are not covered in this chapter: for example, provisioning services such as food, and regulating services such as drought control. In such a case the plan should also have plan components that provide for those services. In addition, when developing plan components to provide for key ecosystem services, the responsible official should consider how those services support social and economic sustainability.

The plan should describe the desired conditions for the key ecosystem services. Desired conditions may describe different mixes of ecosystem services from different management or geographic areas. In developing objectives, the responsible official should consider the linkage between the key ecosystem services and how plan objectives contribute to the intended achievement of the level, quality, or delivery to the public of the key ecosystem services. There should be a linkage between each of the key ecosystem services and the plan components related to that key ecosystem service.

23.22b - Sustainable Recreation Resources and Opportunities to Connect People with Nature

The requirements for plan components for recreation in the rule are found both in the section on social and economic sustainability and in the section on multiple use:

> **§ 219.8. Sustainability.**
> ***
> **(b) Social and economic sustainability. The plan must include plan components, including the plan area's contribution to social and economic sustainability, taking into account:**
> ***
> **(2) Sustainable recreation including recreation settings, opportunities, and access; and scenic character;**
> ***
> **(6) Opportunities to connect people with nature**
> *****
> **§ 219.10 Multiple use.**
> ***

> **… The plan must provide for ecosystem services and multiple uses, including … outdoor recreation … as follows:**
> **(a) Integrated resource management for multiple use. The plan must include plan components, including standards or guidelines for integrated resource management to provide for ecosystem services and multiple uses in the plan area. When developing plan components … the responsible official shall consider:**
> **(1) … recreation settings and opportunities, …, trails, …**
> *******
> **(3) Appropriate placement and sustainable management of infrastructure, such as recreational facilities …**
> *******
> **(b) *Requirements for plan components for a new plan or plan revision.***
> **(1) The plan must include plan components, including standards or guidelines, to provide for:**
> **(i) Sustainable recreation; including recreation settings, opportunities, and access; and scenic character. Recreation opportunities may include non-motorized, motorized, developed, and dispersed recreation on land, water, and in the air.**
> (36 CFR 219.10)

The 2012 Planning Rule also provides definitions for several of these recreation terms:

> ***Recreation opportunity*. An opportunity to participate in a specific recreation activity in a particular recreation setting to enjoy desired recreation experiences and other benefits that accrue. Recreation opportunities include non-motorized, motorized, developed, and dispersed recreation on land, water, and in the air.**
>
> ***Recreation setting*. The social, managerial, and physical attributes of a place that, when combined, provide a distinct set of recreation opportunities. The Forest Service uses the recreation opportunity spectrum to define recreation settings and categorize them into six distinct classes: primitive, semi-primitive non-motorized, semi-primitive motorized, roaded natural, rural, and urban.**
>
> ***Sustainable Recreation*. The set of recreation settings and opportunities on the National Forest System that is ecologically, economically, and socially sustainable for present and future generations.** 36 CFR 219.19

Plan components must provide for sustainable recreational settings, opportunities, and access. Sustainable recreation opportunities and settings are those that are economically, socially, and ecologically sustainable for the future. To be sustainable, the set of recreational settings and opportunities must be within the fiscal capability of the planning unit, be designed to address

potential user conflicts among recreationists, and be compatible with other plan components including those components that provide for ecological sustainability.

Guidance on scenic character is described in section 23.22g.

The assessment identifies and evaluates available information about recreation (FSH 1909.12, ch. 10, sec. 13.4) related to:

1. Recreational settings, opportunities, and access in the plan area;

2. Demands of the public for recreation in the plan area;

3. The extent to which the plan area meets or does not meet the demand for recreation;

4. The ability of the plan area to sustain recreation settings, opportunities, and access in the future; and

5. The ability of recreation in the plan area to contribute to ecological, social, and economic sustainability.

The information identified in the assessment provides a starting point to determine the kinds of settings and opportunities to be provided in the plan components. Information on recreational demand, user preferences and user conflict; the sustainability of existing opportunities; the influence of other recreational suppliers; and the recreation goals of other governmental entities can help the responsible official determine if change in recreational settings and opportunities is needed.

The ability for sustainable recreation opportunities to contribute to social and economic sustainability and the distinctive role of the plan area as a provider of recreation should inform and create an overall context for adjusting existing recreational settings and opportunities in a new, revised, or amended plan.

Recreational settings and sustainable recreation opportunities may form the basis for applying certain plan components to management areas or geographic areas. Recreational settings are usually described by the recreational opportunity spectrum (ROS) (FSM 2310). The assessment of the plan area's infrastructure of recreational facilities, roads, sites, and access should be considered in designing the plan components for sustainable recreation and determining where they apply (FSH 1909.12, ch. 10, sec. 13.6). Plans can identify a specific set of locations or areas, such as dispersed recreational sites, for some specific plan components without creating management areas or geographic areas.

Plans should include desired conditions that describe the natural, built, social, and managerial environment for sustainable recreation. The desired conditions for the plan area should describe

the types of recreational settings, including the mix of desired ROS classes, specific kinds of recreation opportunities and desired infrastructure. Unique desired conditions that identify the types of recreation opportunities or settings may be applied to designated, management, or geographic areas.

Plans may have objectives that describe intended achievement to modify the conditions of lands from their inventoried ROS classes toward desired ROS classes. Objectives may also be designed to alter the condition of recreation areas, dispersed sites, infrastructure including trails, or services to achieve sustainable desired conditions for recreation in the plan area. Objectives should be based on the expected fiscal capability of the planning unit for the plan period.

Plans may identify suitable uses in a recreational context, usually associated with a desired ROS class or management area. Suitability is often described in terms of what types of mechanized, motorized, and non-motorized opportunities are suitable or not suitable within each management area, usually based on the desired ROS setting. Lands may be identified as suitable or not suitable for types of recreational facilities, infrastructure, or special uses. Suitability plan components alone cannot prohibit public recreational use without additional process (see sec. 22.5).

Plans may have standards or guidelines to ensure consistency of projects or activities with desired ROS classes or other desired conditions for recreation.

Other plan content may include the distinctive role and contribution of the plan area to recreational opportunities and the provision of social and economic sustainability in the broader landscape. Plans may describe management approaches to the development of collaborative capacity through volunteers or partnerships to accomplish recreation objectives for the plan area.

In providing plan components for social and economic sustainability, the responsible official shall take into account opportunities to connect people with nature. Recreational opportunities are one important way to accomplish connecting people with nature. For example, the plan could include desired conditions and objectives to better connect youth or underserved populations to recreation opportunities, to provide quality information to a diverse public that enables visitors to understand where to go for the recreation experience they are seeking, to address visitor safety through education and management actions, to enhance visitors' understanding of their natural and cultural environments, and to provide opportunities for members of the public to develop a sense of stewardship and appreciation of the plan area. Environmental study areas or visitor centers may be identified specifically to provide educational opportunities for local schools or the public.

23.22c - Fish and Wildlife and Plants

The requirements for plan components for fish and wildlife related to multiple use are found in 36 CFR 219.10 as follows:

…The plan must provide for ecosystem services and multiple uses, including … wildlife, and fish … as follows:
(a) *Integrated resource management for multiple use*. The plan must include plan components, including standards or guidelines for integrated resource management to provide for ecosystem services and multiple uses in the plan area. When developing plan components … the responsible official shall consider:
****
(1) … fish and wildlife species … habitat and habitat connectivity;
(5) Habitat conditions, subject to the requirements of §219.9 for wildlife, fish and plants commonly enjoyed and used by the public; for hunting, fishing, trapping, gathering, observing, subsistence and other activities (in collaboration with federally recognized Tribes, Alaska Native Corporations, other Federal agencies and State and local governments)

The responsible official should identify the contribution of fish and wildlife species to economic and social sustainability. Consider those contributions when developing plan components to provide for multiple use and contribute to social and economic sustainability, in addition to the plan components for fish and wildlife related to ecological sustainability (Section 23.1). The assessment identifies the species of fish, wildlife, and plants that are commonly used or enjoyed by the public, the conditions and trends associated with these species, and the contribution of the use and enjoyment of these species to social and economic sustainability (FSH 1909.12, ch. 10, sec. 13.54).

The responsible official should work with the relevant governmental entities and the public to design plan components for habitat conditions and sustainable recreation opportunities that provide for the use and enjoyment of fish, wildlife, and plants. As part of this process the responsible official shall work collaboratively with federally recognized Tribes, Alaska Native Corporations, other Federal agencies, and State and local governments. Plan components for ecological sustainability, habitat connectivity, species diversity, and recreation (see sec 23.1 and 23.13 on species at risk) are expected to contribute to the use and enjoyment of fish, wildlife, and plants.

Plans may consider public use and enjoyment of fish, wildlife, and plant species with desired conditions that describe the ecological conditions for the species desired by the public and how the public can enjoy these species. Desired conditions may highlight different species or different ways to enjoy the species for specific land areas of the plan area. Other plan components would be designed to support achieving this desired condition.

23.22d - Watershed

The multiple use requirements for plan components for watersheds and water resources are found at 36 CFR 219.10 as follows:

> **The plan must provide for ecosystem services and multiple uses, including ... watershed … as follows:**
> **(a) *Integrated resource management for multiple use*. The plan must include plan components, including standards or guidelines for integrated resource management to provide for ecosystem services and multiple uses in the plan area… When developing plan components … the responsible official shall consider:**
> **(1) ... surface and subsurface water quality…**
> ***
> **(9) Public water supplies and associated water quality.**
> ***

In addition to the elements above, water and watershed management may also play a role in providing for other multiple uses, for example, water-based recreation or energy. The assessment describes available information about the contributions of watersheds and water resources to the public, the conditions and trends related to water use, and the contribution of water use to social and economic sustainability (FSH 1909.12, ch.10, secs.12.23 and 13.34). The responsible official should identify the contribution of water and watersheds within the plan area to economic and social sustainability. Consider those contributions when developing plan components to provide for multiple use and to contribute to social and economic sustainability.

Guidance on the consideration of watershed, surface, and subsurface water quality and public water supplies and associated water quality is contained in 36 CFR 219.8 and section 23.12c, associated with ecological sustainability. Plan components developed to support ecological sustainability will likely also support the contributions of water and watersheds within the plan area to social and economic sustainability. The responsible official should review such plan components, and develop additional plan components as necessary to support the multiple use values of water and watersheds, to provide for or support other multiple uses, and to support the contribution of water and watersheds to social and economic sustainability. Consider water quality and public drinking supplies when doing the review.

23.22e - Rangelands, Forage, and Grazing

The 2012 Planning Rule at 36 CFR 219.10 requires the following:

> **The plan must provide for ecosystem services and multiple uses, including … range ... as follows:**
> **(a) *Integrated resource management for multiple use*. The plan must include plan components, including standards or guidelines for integrated resource management to provide for ecosystem services and multiple uses in the plan area… When developing plan components … the responsible official shall consider:**
> **(1) forage, … grazing and rangelands, …**
> (36 CFR 219.10)

The assessment has information about conditions and trends of rangelands, transitory range, and other grazing lands, sustainability of the ecological conditions that support grazing, and the contribution of grazing to sustainability (FSH 1909.12, ch. 10, sec. 13.32). In designing the plan components, the responsible official should use this evaluation of the conditions and trends, stressors, and the ability of the plan area to provide forage in the future. The evaluation should include consideration of the ability of the plan area to sustain both native ungulates and domestic livestock that depend on the forage produced in the plan area.

Where range allotments exist within the plan area, the responsible official should consider range management (FSM 2200) of these allotments in the development of plan components that apply to the allotments. Where wild horse-burro territory boundaries are present in the plan area, the responsible official should consider these territories and management for wild horses and burros in the development of plan components that apply to these territories.

The responsible official should also recognize potential adverse interactions between domestic livestock and native species and provide appropriate plan components to avoid or mitigate these risks.

Plans may include desired conditions for rangelands, transitory range and other grazing lands and the type and level of grazing anticipated in the plan area. Plans may have objectives that identify expected progress for indicators of rangeland health or other intended achievements such as acres or number of range improvements. Suitability may indicate management areas or other areas where livestock grazing or wild horse and burro management is, or is not, suitable, depending on physical and ecological considerations and the desired conditions for the areas. Standards or guidelines such as seasonal closures or restrictions based on forage condition may be needed to maintain the sustainability of the range resource. Other plan content may describe the approach to range management to provide for rangeland health, restoration, and grazing opportunities for domestic livestock.

Plan components should be designed to accommodate the range of site specific needs of individual areas, species, allotments, and plant communities. Allotment management plans for livestock and territory management plans for wild horse and burro populations provide specific operational guidance and are the most appropriate planning level to implement management tools such as minimum stubble height, multiple year mean utilization, or stream bank alteration limitations. The appropriate management level for wild horse and burro populations is established in the territory management plan.

When a plan is developed, amended, or revised allotment management plans and wild horse and burro territory plans should be evaluated for consistency with the new plan, as described at 36 CFR 219.15(a)) and sec. 22.35).

23.22f - Timber

The requirements for plan components for timber are found at 36 CFR 219.10 as follows:

> **The plan must provide for ecosystem services and multiple uses, including ... timber ... as follows:**
> **(a) *Integrated resource management for multiple use*. The plan must include plan components, including standards or guidelines for integrated resource management to provide for ecosystem services and multiple uses in the plan area … When developing plan components … the responsible official shall consider:**
> **(1) … timber, ... vegetation, ...**

The plan should identify the role of timber harvest within the plan area to maintain and restore desired vegetative conditions for ecological sustainability and species diversity along with the contribution of timber products and services to economic and social sustainability. Specific requirements needed to comply with 36 CFR 219.11 of the 2012 Planning Rule based on the NFMA are described in FSH 1909.12, chapter 60.

The assessment has information about the current condition of forests, levels of timber harvest activity, contribution of timber harvest to restoration and to resilience of vegetation to stressors such as insects, disease, and wildland fire (FSH 1909.12, ch. 10, sec. 13.33). The assessment also has information about levels of timber production and the contribution of timber production to social and economic sustainability. The assessment provides the responsible official with a context to determine the role of timber harvest and production and to develop the desired conditions and other plan components.

Management of forest vegetation for ecological sustainability, species diversity, and social and economic sustainability is a major focus of planning. In addition to the evaluation of information in the assessment, an evaluation of ecological processes and stressors with and without active timber harvest is often a central part of the planning process. This evaluation may be supported with GIS information and analysis models that explore desired mixes of plant communities and seral stages as well as paths to achieve these mixes. These paths may include timber harvests that result in timber sold that can contribute to mills or other businesses in support of local economies. Alternative approaches to identifying the desired conditions for vegetation and the paths to achieve them may be examined in detail in the EIS.

Plans may include desired conditions that describe the mix of specific vegetative conditions such as plant communities and seral stages. Desired conditions can also describe the desired nature of timber activity. Desired conditions may vary by management areas or geographic areas.

Plans must have plan content that describes the planned timber sale program, timber harvesting levels, and the proportion of probable methods of forest vegetation management practices (See FSH 1909.12, ch. 60, sec. 65.1). Plans may have objectives that describe intended achievement

of planned timber harvest activity by acres of vegetative management projects or timber sale program quantity. Objectives may also include timber harvest to restore conditions in the near term for lands where continued timber harvest or production is not compatible with the desired conditions.

Other plan content may discuss the general management approach intended for timber management or partnership strategies to improve markets for plan area timber. Chapter 60 describes required other plan content for timber.

FSH 1909.12, chapter 60 contains specific guidance on the requirements for timber, based on the 36 CFR 219.11). Chapter 60 includes specific guidance on suitability of lands for timber production, required standards or guidelines, and required display of the timber program.

23.22g - Scenery, Aesthetic Values, Viewsheds, and Geologic Features

The requirements for plan components for scenery are found with those for recreation in 36 CFR 219.8(b) on social and economic sustainability and in 36 CFR 219.10 on multiple use:

> **§ 219.8. Sustainability.**
> ***
> **(b) The plan must include plan components, including the plan area's contribution to social and economic sustainability, taking into account:**
> ***
> **(2) Sustainable recreation including recreation settings, opportunities, and access; and scenic character;**
> **********
> **§ 219.10 Multiple Use**
> ***
> **(a) *Integrated resource management for multiple use*. The plan must include plan components, including standards or guidelines for integrated resource management to provide for ecosystem services and multiple uses in the plan area. When developing plan components … the responsible official shall consider:**
> **(1) …, aesthetic values, ..., geologic features, ..., scenery, ... viewsheds,..**
> **…**
> **(b) *Requirements for plan components for a new plan or plan revision.***
> **(1) The plan must include plan components, including standards or guidelines, to provide for:**
> **(i) Sustainable recreation; including recreation settings, opportunities, and access; and scenic character…**

When developing plan components for scenic character, the responsible official is informed by the assessment that includes the evaluation of the existing and potential scenic character of the area and relevant trends. The scenic character of the plan area, or a portion of the plan area, may be identified as unique or distinct when viewed within a broader landscape. The responsible official may use the unit's distinctive roles and contribution as a foundation for plan components that provide for scenery.

The scenery management system (SMS) should be used when developing plan components related to scenic character. Viewsheds are specific elements to be considered in developing plan components within the SMS that describe areas seen from certain view locations such as roads, trails or campgrounds. Scenic character information, scenic classes, and constituent preferences all help determine scenic integrity and sustainability. Refer to FSM 2380 and Landscape Aesthetics - A Handbook for Scenery Management (Agriculture Handbook 701) for more information on SMS. Plan components for scenic character may be developed to include the

concepts of scenic integrity, stability, and sustainability at multiple scales (for example, forest-wide, by geographic area, by management area, by ROS setting, by corridor, by viewshed, by geologic or historic feature, or by place association).

In addition to the landscape aesthetics provided for by the application of the SMS, plan components may also provide for aesthetics in the design, construction and maintenance of infrastructure, facilities or other specific projects or activities that may be proposed under the plan. The Built Environment Guide ("The Built Environment Image Guide for the National Forests and Grasslands" United States Department of Agriculture, Forest Service, FS-210, September 2001) can be used as a resource to develop these plan components or a reference to be consulted in the development of plan components applicable to maintaining an attractive infrastructure.

Plans should include desired conditions which describe desired scenic character based on the SMS. Depending on the biophysical and cultural attributes of the plan area's landscape, there may be multiple desired scenic character descriptions that are associated with specific areas. Desired conditions may also include scenic integrity objectives (SIOs) that describe desired states of naturalness. When developed, SIOs should be comprehensively assigned to the entire plan area to recognize scenery throughout the plan area and be compatible with other desired conditions and other plan components. Note that scenery integrity objectives are not the plan component "objectives" under the planning rule. Desired conditions may also describe scenic stability, and other measures used in scenery management system. Desired conditions may include or reference visual material such as graphics, photographs, or visual simulations that provide a visual perspective of desired scenic character.

Plans may also include standards or guidelines to avoid or mitigate undesirable effects inconsistent with desired conditions. Standards or guidelines can also apply certain scenic integrity objectives to individual management areas or geographic areas. Standards and guidelines can be applied at multiple scales to specific management activities such as timber harvest, trail construction, facility development, or road construction.

Other plan content may describe the plan area's distinctive role and contribution to outstanding scenic values and the importance of scenery in the broader landscape.

Unique geologic features must also be considered in the planning process. These features are often unique scenic attractions and would likely be recognized in the SMS. Some geologic features may present safety hazards to the recreating public or other users. Plan components may recognize these unique geologic features. In some situations, there may be a need to apply a unique set of plan components for these features in a management, geographic or designated area.

23.22h - Cultural and Historic Resources

The requirements for plan components for cultural and historic resources in the rule are found both in 36 CFR 219.8 on social and economic sustainability and in 36 CFR 219.10 on multiple use:

> **§ 219.8. Sustainability.**
> ***
> **(b) The plan must include plan components, including the plan area's contribution to social and economic sustainability, taking into account:**
> ***
> **(5) Cultural and historic resources and uses; …**
> *****
> **§ 219.10 Multiple use.**
> ***
> **(a) ... When developing plan components … the responsible official shall consider:**
> **(1) ..., cultural and heritage resources...**
> ***
> **(b) *Requirements for plan components for a new plan or plan revision.***
> **(1) The plan must include plan components, including standards or guidelines, to provide for:**
> ***
> **(ii) Protection of cultural and historic resources.**

The assessment has information about the cultural and historical context of the plan area, the cultural and historical resources present in the plan area, the condition and trends affecting these resources, and how these resources contribute to social and economic sustainability (sec. 13.8). A cultural resource overview may also have similar information. The Forest Service also uses the term "cultural resources and heritage assets" to describe cultural and heritage resources. See FSH 2309.12, chapter 20, section 21.3 for more detail on priority heritage assets.

From this information and other information gathered in the plan process, the responsible official shall develop appropriate plan components for the protection of cultural and historic resources. A set of forest-wide plan components may be appropriate when cultural resources are distributed across the entire plan area. The responsible official should consider how to protect all currently identified historic properties and unevaluated cultural resources, and the potential for discovering other cultural resources during project planning, in the development of plan components. See FSH 2309.12, chapter 30 for more detail on the evaluation of cultural and historic resources.

In some situations, cultural or historic resources may be of such recognized value that unique plan components may be appropriate. Priority Heritage Assets may be an example of cultural or

historic resources that may be of such recognized value. Depending on the primary value of the resource (cultural, traditional, scientific, interpretative, or continued use) the area may be identified with a management, geographic, or designated area (Sec. 22.2 and 23.22l) to apply appropriate plan components. A geographic area may be used to identify a cultural landscape. In other situations, especially those of active cultural use, traditional cultural properties or sacred sites (Sec 23.22i), the responsible official may choose to avoid any mention in the plan of the ongoing use to maintain confidentiality of the sites. Where historic properties derive their integrity from their setting (scenery and viewshed), plan components should provide for scenic character that is in accord with the requirements of the National Historic Preservation Act (NHPA).

In developing plan components, the responsible official shall consult with appropriate entities according to section 106 of the NHPA. The consultation may include consultation with State Historic Preservation Officers, Tribal Historic Preservation Officer(s), federally recognized Tribes, and, if necessary, the Advisory Council on Historic Preservation. FSM 2361.2 contains detailed direction on this consultation process.

Plans may include desired conditions of cultural or historic resources in the plan area. For interpretive areas, priority heritage assets, or cultural landscapes a special set of desired conditions may be appropriate for the protection and use of the resource.

Standards or guidelines are appropriate for the protection and use of historic properties, unevaluated cultural resources, or undiscovered cultural resources and may distinguish between these situations. Standards or guidelines may be designed specifically for projects and activities to avoid unintentional damage or destruction to cultural resources. Use of federally recognized best management practices may greatly assist responsible officials with cultural resources or heritage assets that overlap with lands managed by other Federal agencies.

Other plan content may discuss a management approach for evaluating sites for listing on the National Register of Historic Places. Unique cultural and historic resources, cultural landscapes, national heritage areas, national monuments, national historic trails, national historic landmarks or historical areas, or unique cultural or historic management or geographic areas may be part of the plan's distinctive role and contribution.

23.22i - Areas of Tribal Importance

The requirements for plan components for areas of tribal importance are found at 36 CFR 219.10(b) as follows:

> **(b)** ***Requirements for plan components for a new plan or plan revision.*** **(1) The plan must include plan components, including standards or guidelines, to provide for:**
> ***

(iii) Management of areas of tribal importance.

The responsible official shall recognize the areas of tribal importance during tribal consultation and develop appropriate plan components for management of these areas. Areas of tribal importance may not always be recognized as cultural resources, as defined by the NHPA. In cases where these tribally important areas are the same as, or may overlap with, cultural resources, guidance in section 23.22h also applies. Some Tribes may not want these areas of tribal importance identified on a map. The responsible official shall consult with Indian Tribes and Alaska Native Corporations on the development of plan components for management of areas of tribal importance (FSH 1909.12, ch. 40, sec. 44).

The assessment provides information about areas of tribal importance, existing tribal rights, and the conditions and trends of these areas (FSH 1909.12, ch. 10, sec. 13.7).

In addition, the responsible official shall manage lands containing Indian sacred sites in accord with Executive Order 13007 of May 24, 1996. Sacred sites identified by Indian Tribes or Alaska Native Corporations during consultation with the responsible official should be treated as confidential by the Agency (25 U.S.C. 3056 and E.O. 13007). Provisions for the specific protection, management, or use of these areas are developed in consultation and collaboration with Indian Tribes or Alaska Native Corporations and the responsible official.

The plan may include desired conditions that clearly recognize Indian Tribe and Alaska Native Corporations' concerns associated with areas of tribal importance and access to these areas even if the locations of the areas are not identified. These desired conditions include providing for traditional uses of the plan area by Indian Tribes and Alaska Native Corporations. Standards, guidelines, or suitable uses should be used to place limits or conditions on projects or activities that may adversely affect areas of tribal importance. Other plan content may describe an ongoing collaborative strategy with specific Indian Tribes as partners in the accomplishment of the objectives.

23.22j - Wilderness

The requirements for plan components on wilderness are found at 36 CFR 219.10(b) as follows:

> **(b)** ***Requirements for plan components for a new plan or plan revision.***
> **(1) The plan must include plan components, including standards or guidelines, to provide for:**
> ***
> **(iv) Protection of congressionally designated wilderness areas as well as management of areas recommended for wilderness designation to protect and maintain the ecological and social characteristics that provide the basis for their suitability for wilderness designation.**

The assessment provides information about existing wilderness areas and wilderness study areas in the plan area, a general evaluation of the potential need and opportunity for additional wilderness areas, and the contribution of wilderness to social, economic, and ecological sustainability (FSH 1909.12, ch.10, sec. 14). From this information and other information gathered in the planning process, the responsible official shall develop appropriate plan components for the protection of designated wilderness areas and the management of areas recommended for wilderness designation.

FSH 1909.12, chapter 70 of this Handbook details the process to be followed to identify and evaluate lands that may be suitable for wilderness and identify any areas to be recommended for wilderness. This identification and evaluation of areas for wilderness recommendation must be included as an appendix in the draft and final EISs for a plan revision.

Plans that include designated wilderness areas must have plan components that provide for wilderness management in accord with the requirements of the Wilderness Act of 1964 (16 U.S.C. 1131–1136, 78 Stat 890), and the law that established the particular wilderness area and any other applicable laws.

In developing plan components for designated or recommended wilderness areas, the responsible official should consider:

1. Measures to protect and enhance the wilderness characteristics of the areas;

2. Management on adjoining lands in other Federal or state ownership especially when adjoining other congressionally designated wilderness areas. If the adjoining lands are part of the same designated wilderness area, the responsible officials should coordinate with the responsible officials of the adjacent administrative units to ensure compatible management of the wilderness area in both plan areas.

3. Content of FSM 2320, which provides guidance for management of wilderness areas.

The plan must clearly identify existing wilderness, wilderness study, and recommended wilderness areas within the plan area. To organize plan components applicable to these areas, the responsible official may provide one or more management or geographic areas.

The decision document of the plan must describe any recommendations for wilderness (FSH 1909.12, ch. 70, sec. 71.4). If areas are recommended for wilderness, the responsible official shall include plan components that protect ecological and social characteristics so that the wilderness character of the recommended area is not reduced before congressional action regarding the recommendation.

The plan may include desired conditions that describe the desired wilderness character for existing, recommended, or wilderness study areas from an ecological and social perspective, recognizing the contribution of wilderness to ecological, social, and economic sustainability.

Standards or guidelines are appropriate for placing limits or conditions on projects or activities that may adversely affect the wilderness character of existing wilderness, wilderness study, or recommended wilderness areas. Certain uses may be identified as suitable or not suitable for these areas. Existing wilderness, recommended wilderness areas, or wilderness study areas are not suitable for timber production.

The plan must include maps showing location of all existing wilderness areas, recommended wilderness areas, and wilderness study areas. The contributions of wilderness may also be described as part of the plan area's distinctive role and contribution.

Designated wilderness areas may also have management plans for specific wilderness areas. These management plans must be consistent with the land management plan (36 CFR 219.15(e)) or one of the two plans must be amended to achieve this consistency. The wilderness plans often have more detailed management direction than the plan components of a land management plan. However, any plan components displayed in the wilderness plan must be identical to those in the land management plan.

23.22k - Wild and Scenic Rivers

The requirements for plan components on wild and scenic rivers are found at 36 CFR 219.10(b) as follows:

> **(b)** ***Requirements for plan components for a new plan or plan revision.***
> **(1) The plan must include plan components, including standards or guidelines, to provide for:**
> ***
> **(v) Protection of designated wild and scenic rivers as well as management of rivers found eligible or determined suitable for the National Wild and Scenic River system to protect the values that provide the basis for their suitability for inclusion in the system.**

The assessment has information about all existing wild and scenic river segments including their classification into wild, scenic, or recreational segments (FSH 1909.12, ch. 10, sec. 14). The assessment also provides a general evaluation of the potential need and opportunity for additional wild and scenic river segments and the contribution of wild and scenic rivers to social, economic, and ecological sustainability.

FSH 1909.12, chapter 80 details a river specific-assessment process to be followed to determine eligibility, potential classification (wild, scenic, or recreational), and suitability of river segments

for inclusion in the National Wild and Scenic River System (WSR). Note that a WSR assessment is not the same as the assessment described in FSH 1909.12, chapter 10 required in the land management planning process. The plan revision process must include a review of the rivers in the plan area to determine if any are eligible for inclusion in the WSR. If a systematic inventory of eligible rivers has been previously completed and documented, however, assessment and study at time of land management plan revision need only be done if changed circumstances warrant additional review of eligibility. See FSH 1909.12, chapter 80 for additional direction. A list of the river segments determined to be either eligible or suitable should be included as an appendix in the draft EIS.

Eligible river segments may be evaluated for their suitability for inclusion in the WSR system during the plan revision process. However, river segment suitability evaluation may be deferred for a separate evaluation outside the plan revision process.

Plan components for WSR segments must not interfere with the exercise of valid existing rights. In preparing plan components for designated wild and scenic rivers, rivers found eligible, or rivers determined suitable for the WSR, the responsible official should consider:

1. Measures to protect and enhance the free flow, water quality, and outstandingly remarkable values of the WSR;

2. Management on adjoining lands within the river corridor; and

3. Guidance on management of eligible and suitable river segments found in FSH 1909.12, chapter 80.

The plan must clearly identify designated, suitable, and eligible river segments within the plan area. To organize plan components applicable to existing, suitable, or eligible wild and scenic rivers, the responsible official may provide one or more management or geographic areas for wild and scenic rivers.

The plan may include desired conditions that describe the conditions expected for wild and scenic river segments and their surrounding corridors. These desired conditions should be based on the type of river segment (wild, scenic, or recreational). Desired conditions can vary for specific segment types and may vary for specific rivers or river segments recognizing their outstandingly remarkable values.

Standards or guidelines or suitability may place limits or conditions on projects or activities to ensure that adverse effects on the outstandingly remarkable values of an eligible or suitable wild and scenic river segment are avoided. Standards or guidelines may also protect the intended wild, scenic, or recreational character of a designated river segment to carry out the desired condition for that segment. Existing, suitable, or eligible wild river segments are not suitable for timber production.

Other plan content includes a map of the designated, suitable, and eligible river segments within the plan area. Other plan content may highlight the distinctive role and contribution of wild and scenic river segments. Other plan content may also describe the responsible official's management approach to completing suitability studies of an eligible river or complete wild and scenic river management plans for designated rivers.

The decision document for the plan must describe the status and any recommendations for wild and scenic rivers within the plan area.

Wild and scenic rivers must also have comprehensive river management plans (CRMPs). CRMPs must be consistent with the land management plan (36 CFR 219.15(e)) or the land management plan or CRMP must be amended to achieve this consistency. River plans often have more detailed management direction than the plan components of a land management plan. However, any plan components displayed in the CRMP must be identical to those in the land management plan.

23.22l - Other Designated Areas

The requirements for plan components for designated areas other than wilderness or wild and scenic rivers are found at 36 CFR 219.10(b) as follows:

> **(b) *Requirements for plan components for a new plan or plan revision.***
> **(1) The plan must include plan components, including standards or guidelines, to provide for:**
> ***
> **(vi) Appropriate management of other designated areas or recommended designated areas in the plan area, including research natural areas.**

The assessment has information about existing designated areas in the plan area, a general evaluation of the potential need and opportunity for additional designated areas, and the contribution of designated areas to social, economic, and ecological sustainability (FSH 1909.12, ch. 10, sec. 14). Each type of designated area has its own purposes and authorities (sec. 22.23). Some plan areas may have unique designations created by special legislation or other administrative action in addition to the types identified in section 22.23. Plans must recognize and identify existing designated areas and any areas recommended for designation.

Plan components must provide for appropriate management of designated areas for the specific purposes for which an area was designated or recommended for designation in the plan. Plan components must be compatible with the applicable authorities associated with the designation. In developing plan components, the responsible official should consider how designated areas contribute to other desired conditions or objectives for ecological, economic, or social sustainability. To organize plan components applicable to designated areas, the responsible

official may provide one or more management or geographic areas or use other means to clearly identify the plan components that apply to each designated area.

The plan may include desired conditions that describe the designated areas of the plan and highlight specific desired conditions for the designated areas. Standards, guidelines, or suitability may place limits or conditions on projects or activities that may adversely affect the purposes of designated areas.

The plan decision document may designate certain types of areas in the plan itself when the responsible official has the appropriate designation authority. When the responsible official does not have that authority, the decision document may include recommendation for the plan area's designation. Any recommendations for designated areas, or actual designation, must be described in the plan decision document.

National Trails designated under the National Trails System Act must also have comprehensive plans (U.S.C. 1241 sec. 5(e) and (f)). National Trail plans must be consistent with the land management plan (36 CFR 219.15(e)) or either the land management plan or National Trail plan must be amended to achieve this consistency. National Trail plans often have more detailed management direction than the plan components of a land management plan. However, any plan components displayed in the National Trail plan must be identical to those in the land management plan.

23.22m – Minerals

The requirements for plan components on minerals are found at 36 CFR 219.10(a) as follows:

> **(a) *Integrated resource management for multiple use*. When developing plan components for integrated resource management … the responsible official shall consider:**
> ***
> **(2) Renewable and nonrenewable energy and mineral resources.**

Mineral exploration and development on NFS lands are expected to proceed in accord with the laws and regulations governing Federal lands and federally owned minerals. The assessment has information about the current and potential future mineral activity in the plan area and how this activity relates to social, economic, and ecological sustainability. The assessment also provides information about abandoned mines and mining hazards in need of reclamation or restoration.

Each type of mineral development that may occur on NFS lands requires evaluation of applicable laws, jurisdiction of other Federal or State agencies, and recognition of valid existing rights including reserved and outstanding mineral rights. The Forest Service authority for the surface management of mineral resources varies by the class of mineral involved (locatable, leasable, or

salable), land status (public domain or acquired), and mineral ownership (federal or private). The Forest Service does not have authority for management of subsurface minerals.

Plan components that deal with minerals must be in accord with Agency jurisdiction, applicable law and Federal regulations, such as coal leasing (43 CFR part 3420), geothermal resources leasing (43 CFR part 3200), locatable minerals (36 CFR part 228, subpart A), disposal of mineral materials (36 CFR part 228, subpart C), and oil and gas leasing (36 CFR part 228, subpart E) and applicable agreements with other agencies and valid existing rights.

Mineral materials include common varieties of sand, gravel, stone, and other similar materials, that are managed by the Forest Service.

Leasable minerals include oil, natural gas, coal, geothermal, phosphate, and other mineral deposits where the subsurface is owned by the Federal Government. Management of the subsurface mineral resources is the responsibility of the BLM. The Forest Service responsibility for surface management varies depending on the leasable mineral involved.

For areas with high coal resource potential, the responsible official should obtain estimates of the amount of coal recoverable by surface or underground mining operations (or both) from the BLM. For areas under consideration for coal leasing, the land use planning requirements of 43 CFR 3420.1-4 (b)(1)–(4) shall be followed, including determination of lands unsuitable for all or certain stipulated methods of mining per the criteria contained in 43 CFR 3460.

In managing oil and gas resources, the Forest Service determines the availability of the plan area for oil and gas leasing through a leasing availability analysis and decision completed in coordination with the BLM. The leasing availability decision should be a separate decision from the land management plan.

Locatable minerals on public domain lands include gold, silver, copper, and other minerals with unique properties. Forest Service surface authority over locatable minerals must accommodate development of, and reasonable access to, lands open to mineral entry.

Where specific private mineral rights exist the private mineral owner has a legal right to develop those minerals and the Federal government cannot preclude such development.

The plan may include desired conditions that recognize the mineral uses that are likely to be long-term and identify the desired context for their operation. Desired conditions may also describe the desired condition of surface resources and, as appropriate, subsurface resources that may be affected by development of mineral resources. The plan may have objectives to identify intended achievement to maintain or restore the condition of surface and subsurface resources. Suitability may identify areas suitable or not suitable for minerals use in accord with the appropriate legal authorities, including valid existing rights. Suitability may include suitability

of surface lands for surface mineral developments associated with minerals in the federal estate. Standards and guidelines may identify restrictions on certain practices to minimize or avoid impacts on surface resources within appropriate legal authorities of the Forest Service. Plan components for minerals must be in accord with other plan components including those for ecological sustainability.

Other plan content may briefly describe the general management principles, management challenges, and management approach to ongoing mineral operations and likely future development. Mineral resources may represent a distinctive role and contribution of the plan area within the broader landscape.

23.22n - Energy

The requirements for plan components on energy are found at 36 CFR 219.10(a) as follows:

> **(a) *Integrated resource management for multiple use*. When developing plan components for integrated resource management … the responsible official shall consider:**
> ***
> **(2) Renewable and nonrenewable energy and mineral resources.**
> **(3) Appropriate placement and sustainable management of infrastructure, such as … utility corridors.**

Generation and transmission of energy from or across NFS lands must be considered during the development of plan components and ultimately integrated into those plan components. The assessment has information about the current and future potential energy developments in and around the plan area and information about existing and potential energy transmission corridors. The assessment also describes how energy developments contribute to social, economic, and ecological sustainability (FSH 1909.12, ch. 10, sec. 13.5).

National forests and grasslands are capable of producing energy through a variety of methods. Many energy sources such as wind, solar, biomass, geothermal, and hydroelectric can be considered sustainable as these forms are capable of producing energy without depleting the source of the energy. The extraction of fossil fuels (oil, natural gas, and coal) is described in the previous section on leasable minerals. Energy developed on or off of NFS lands often requires infrastructure to transfer electric power or fossil fuels through transmission corridors between producers and consumers.

Other Federal agencies, such as the FERC, BLM, USACE, or State or local government agencies may have jurisdiction of certain types of energy facilities on NFS lands. The BLM is the lead federal agency in permitting interagency pipelines. Additional laws and regulations may apply to these types of energy developments. Appropriate engagement with these other agencies and interests and recognition of applicable laws and regulations must be part of the planning process.

The plan may include desired conditions that identify long term energy developments or transmission corridors and the desired context for their operation. Plans may have objectives that identify measureable outcomes or intended achievement related to energy resource management, such as improving the condition of infrastructure developments, providing supply of material for energy generation such as fuelwood, or mitigation actions or outcomes related to energy developments, such as modification of fish passage at dams. Suitable uses may identify areas suitable or not suitable for certain types of energy developments in accord with the appropriate legal authorities. Standards or guidelines may identify restrictions on certain practices related to the use, development, or transmission of energy or fuels within the plan area, within appropriate legal authorities of the Forest Service. Provision of energy or transmission of energy across the plan area may be a distinct role and contribution of the plan area to social and economic sustainability.

23.22o - Infrastructure, Roads and Trails

The requirements for plan components on infrastructure are found at 36 CFR 219.10(a) as follows:

> **(a) *Integrated resource management for multiple use*. When developing plan components for integrated resource management … the responsible official shall consider:**
> ***
> **(1) …, trails,**
> ***
> **(3) Appropriate placement and sustainable management of infrastructure, such as recreational facilities and transportation and utility corridors.**

Infrastructure includes the road system, trail system, recreational facilities, administrative facilities, and other facilities needed in and near the plan area. The plan should provide for a realistic desired infrastructure that is sustainable and can be managed in accord with other plan components within the fiscal capability of the planning unit and its partners.

The assessment has information about the current infrastructure in and near the plan area; trends influencing infrastructure relevant to the plan area; the sustainability of that infrastructure; and the contribution of the infrastructure to social, economic, and ecological sustainability. The responsible official needs to understand the existing infrastructure to determine if it is adequate to support the desired conditions of the plan or if it is excessive either because the infrastructure is not needed to support the desired conditions or cannot be fiscally maintained in the future (FSH 1909.12, ch. 10, sec. 13.6).

Forest roads are a major part of the infrastructure within the landscape that provide important motor vehicle access for recreation, resource management activities, private landowners and

permittees, and emergency use. Trails today provide for various kinds of recreational use, but they can also provide access for management activities, permittees, or emergencies. Buildings and other facilities within the plan area may be important for recreation, administration, or other uses in the plan area. Infrastructure can also create various environmental problems. For example, roads may be a source of sediment or a vector for the spread of invasive species.

Most planning and design related to infrastructure occurs at the project or site level with a specificity that is not appropriate for a land management plan. For example, the design and construction, or reconstruction, of an individual trail segment is a project specific decision, as is the siting and design of a recreational facility. Travel management analysis is a separate process outside of land management planning to determine what roads are to be maintained for public use. The central consideration in land management planning for infrastructure is that the integrated desired conditions and other plan components set a framework for the management of the plan area's infrastructure. Plan components for infrastructure must be in accord with other plan components, including those for ecological sustainability.

For forest roads, the desired conditions should clarify the intended nature of the road system for the plan area and for management and geographic areas. The plan should identify the major arterial road system that provides primary access to, and within, the plan area. Determining the desired conditions, including the intended desired uses for management areas or geographic areas within the plan area, helps identify what type of road system is needed for access to and within these management areas or geographic areas. In accord with plan desired recreational settings and opportunities (sec. 23.22) the public's recreational use and need for roads is an important factor influencing the need for roads. Other uses such as grazing, timber harvest, and mineral and energy development also have needs for the road system.

Based on the desired conditions, other plan components can be developed for the road system. These include objectives either for modifying the road system such as decommissioning and restoring roads in areas where existing roads are no longer desired or improving roads in areas where the road system needs improvement. The objectives should recognize fiscal limitations and relative urgencies in determining objectives for the road system. Suitability can include identifying what types of roads are suitable or not suitable for certain management areas and geographic areas. Standards or guidelines for road management may restrict road management activities in certain situations such as in riparian zones or sensitive scenic areas.

For recreational trails, the desired condition of the recreational settings and opportunities should lead to determining plan components for recreational trails (sec. 23.22). The desired condition(s) for trails may include an overall design of the trail system for the plan area including nationally designated trails (sec. 22.23) and trails for various uses such as hiking, off road vehicles, mountain bicycles, equestrian use, or winter use such as skiing or snowmobiling. Conflicting recreational uses or other needs may lead to plan components that identify what types of trails and recreational use are suitable or not suitable in a specific management or geographic area.

Objectives that are developed, within the fiscal, and other, capabilities of the planning unit and its partners can identify intended outcomes or achievements for trail construction or maintenance. While the plan does not determine the use for each specific trail, it does establish desired conditions and other plan components that indicate what trails are appropriate in the plan area.

Trails for non-recreational use, infrastructure for recreational visitors, other transportation infrastructure, and utility corridors go through a similar evaluation process to identify the desired infrastructure for the plan area, management, or geographic areas. The evaluation of infrastructure must consider the fiscal capability, authority of the Forest Service, and inherent capability of the land. Once the desired infrastructure is identified objectives can indicate intended achievement to move the infrastructure towards the desired conditions, suitability components to identify suitable or not suitable kinds of infrastructures, and standards or guidelines can be developed.

Other plans specifically designed for management of the infrastructure, such as travel management plans, must be consistent with the plan components of the land management plan (36 CFR 219.15(e)).

23.22p - Land Status, Ownership, Use, Access and Linkage of Open Space with Other Ownerships

The requirements for plan components on land status and ownership, and use and access patterns are found at 36 CFR 219.10(a) as follows:

> **(a) *Integrated resource management for multiple use.* When developing plan components for integrated resource management … the responsible official shall consider:**
> **(1) …, habitat and habitat connectivity,**
> *******
> **(4) Opportunities to coordinate with neighboring landowners to link open spaces and take into account joint management objectives where feasible and appropriate.**
> *******
> **(6) Land status and ownership, use and access patterns, relevant to the plan area.**

In the development of plan components the responsible official needs to recognize and actively consider the nature of land status, ownership, and access within the plan area and surrounding the plan area. In particular, the resource and management influences related to land status, ownership, and use must be considered in the planning process. For example, consider the impacts of fragmentation of forest or key non-forest habitats, recognizing how development pressures may influence the plan area, access points for the public and specific authorized uses to the plan area, and the ability to manage cumulative impermeable surfaces within a watershed.

An additional important concern is the consideration of opportunities to create connectivity of habitat and open space across these ownerships.

The assessment identifies the NFS land status within the plan area, including public domain lands, acquired lands and the authority under which they were acquired, any split estate lands where the Federal Government does not hold clear, or fee simple, title such as severed rights (for example, minerals estates), and existing rights of way or other ownership issues. The assessment also evaluates the patterns and trends of land ownership, use, and access and the influences of these patterns relevant to the plan area. The assessment also identifies needs and opportunities for connectivity with adjacent lands to conserve open space. The assessment assists in identifying conditions and trends external to the plan areas that foster, restrict, or threaten sustainable management of the plan area (FSH 1909.12, ch. 10, sec. 13.9).

The responsible official shall use the information in the assessment and additional information provided through the planning process to inform plan components. At a minimum, the responsible official shall review and consider the plans, planning efforts, and land use policies of federally recognized Indian Tribes, Alaska Native Corporations, other Federal agencies, and State and local governments and document the review in the EIS (36 CFR 219.4(b)). As a result of the review, problems and opportunities affecting multiple ownerships can be recognized and collaborative approaches developed. Opportunities for collaboration with neighboring ownerships, and other Federal agencies, State, local, and tribal governments can support a landscape approach for sustainable management in which the plan area plays a role.

The responsible official should consider the following when designing plan components:

1. Indian treaty and other reserved rights on the plan area;

2. Valid existing rights associated with other ownerships within and adjacent to the plan area;

3. The status and ownership of the federal lands including federal surface with reserved and outstanding mineral estate within the plan area;

4. Changing ownership, uses, or fragmentation either underway or planned near the plan area and how these may affect the plan area’s resources;

5. Access points and areas accessed by the public for recreation and other uses of the plan area;

6. Open space commitments of adjacent landowners where connectivity with the plan area connects or could connect open space across boundaries; and

7. Risks to either the plan area or to adjacent ownerships along plan area boundaries.

8. Coordination with U.S. Border Patrol on issues relating to national security along any international border of the United States.

The responsible official may identify management or geographic areas where a specific set of plan components may be used to deal with important influences that cross ownership boundaries. Examples include wildland urban interface (WUI) areas or open space connections.

Plans may describe the desired nature of the land patterns, uses, and access of the plan area including unique desired conditions for specific areas based on their land status or adjacency to other ownerships. Plan objectives may identify intended achievements toward to improving land status or multiple land ownership patterns, connecting open space, improving access issues or conditions along the plan area boundary such as treatments in the WUI. Suitability of lands for uses and standards or guidelines may identify restrictions on NFS projects or activities while taking into account land ownership, status, and other influences that cross ownership boundaries.

Other plan content can describe management approaches to work with multiple governments and ownerships to accomplish common goals or objectives. This may include a description of partnerships, and coordination designed to achieve more sustainable land management approaches within the broader landscape. The other plan content could describe how the responsible official may work to establish collaborative agreements with joint objectives with other ownerships or jurisdictions.

23.22q - Other Considerations for Multiple Use

There are other considerations for multiple use such as air quality, fish and wildlife species, habitat and habitat connectivity, riparian areas, soil, risks to ecological sustainability, system drivers and stressors. The requirements for plan components for other considerations for multiple use are found at 36 CFR 219.10(b) as follows:

(a) *Integrated resource management for multiple use*. When developing plan components for integrated resource management … the responsible official shall consider:
(1) …, air quality, .., fish and wildlife species, habitat and habitat connectivity, riparian areas, soil, and other relevant resources and uses.
****
(7) Reasonably foreseeable risks to ecological, social, and economic sustainability, …
(8) System drivers, including dominant ecological processes, disturbance regimes, and stressors, such as natural succession, wildland fire, invasive species and climate change; and the ability of the terrestrial and aquatic ecosystems on the plan area to adapt to change [§ 219.8]
(36 CFR 219.10)

****

(b) ***Requirements for plan components for a new plan or plan revision***
****

(2) Other plan components for integrated resource management to provide for multiple use as necessary.

Exhibit 01 lists where each of these topics is covered in an earlier section of this chapter. as follows:

23.22q - Exhibit 01

Topics covered in an earlier section of this chapter.

Topic	Section
Air quality:	Section 23.12a
Fish and wildlife species	Section 23.1-23.13c
Habitat and habitat connectivity	Sections 23.11-23.11d, 23.22p
Riparian areas	Section 23.11c
Soil	Section 23.12b
Reasonably foreseeable risks to ecological sustainability	Section 23.1-23.13c
System drivers, disturbance regimes and stressors	Section 23.1-23.11d
Climate change and the ability of aquatic and terrestrial ecosystems to adapt to change	Section 23.1-23.13c

The responsible official is also required to provide other plan components that may be necessary for multiple use (36 CFR 219.10(b)(2)).