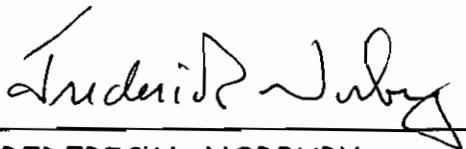


Daniel Boone National Forest
Revised Land and Resource Management Plan
Appeal Decision



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Reviewing Officer for the Chief

JUL 25 2006

Date

Daniel Boone National Forest LRMP Revision Appeals Decision

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PROCEDURAL BACKGROUND

Appellants and Record of Decision

This is my decision on the appeals of the Record of Decision (ROD) for the Daniel Boone National Forest (NF) Revised Land and Resource Management Plan (RLRMP). All appeals of the Daniel Boone NF RLRMP have been consolidated into one set of contentions and one decision is being issued. The issues were sufficiently similar to allow consolidation (36 CFR 217.13(b)). The appeal reference numbers are abbreviated throughout this decision document by the last four digits of the notice of appeal (NOA).

Two individual appeals were submitted under 36 CFR 217. A listing of the appellants is included as an Addendum. Each appellant will receive notification of my decision. The final appeal decision is available via the internet on the World Wide Web at: <http://www.fs.fed.us/emc/applit/nhappdec.htm> or in hard copy, upon request.

Former Regional Forester Robert Jacobs signed the ROD for the RLRMP on April 16, 2004, replacing the 1985 Plan. The RLRMP conforms to the 1982 planning regulations at 36 CFR 219 [1982, as amended] (ROD, p. 31). The 1982 planning regulations referenced by the Regional Forester were last published in the Code of Federal Regulations (CFR) on July 1, 2000. The Regional Forester transmitted the records for the appeal to the Chief of the Forest Service in conformance with the regulations at 36 CFR 217.15(a).

DECISION SUMMARY

Summary of Issues

This appeal decision is the outcome of a deliberative and extensive review process. My review of the appellants' concerns provides a focused response to contentions involving complex regulatory and management issues. Although not every contention made in the appeals is cited in the same order or format in this decision, all appellants' concerns have been considered. My appeal review focused mainly on compliance of the ROD, RLRMP, and Final Environmental Impact Statement (FEIS) with applicable law, regulation, and policy as cited by appellants.

Appellants raised appeal issues concerning procedural and planning requirements, as well as a wide range of natural resource issues, which included wildlife and plant species, roads, mining, wild and scenic rivers, air quality, soils and wilderness. Appellants contend the decision violates, among others, the National Environmental Policy Act (NEPA), National Forest Management Act (NFMA), Multiple-Use Sustained-Yield Act (MUSYA), Organic Act, Endangered Species Act (ESA), Wilderness Act, Wild and Scenic Rivers Act.

Decision

The Regional Forester's decision meets the requirements of applicable Federal Law, Regulations, and Policy. I affirm the former Regional Forester's decision to select Alternative C-1 from the FEIS and approve the Daniel Boone NF RLRMP.

This decision is the final administrative determination of the Department of Agriculture, unless the Secretary, on his own initiative, elects to review the decision within 15 days of receipt (36 CFR 217.17(d)). By copy of this letter and notification of availability on the World Wide Web, I am notifying all parties to this appeal.

Daniel Boone NF RLRMP

The April 16, 2004 RLRMP replaces all previous land and resource management plans in their entirety for National Forest System lands on the Daniel Boone NF.¹ It does not apply to other Federal, Tribal, State, county, municipal, or private lands, although the effects of this decision on those other lands were considered (ROD, p. 4).

The decision addresses the long-term health of the land by striking a balance between active timber harvest, fire, and wildlife management practices while addressing biological diversity at both the site and landscape levels (ROD, p. 9). The ROD provides broad management goals and strategies for addressing the revision issue areas described in detail in the FEIS (forest vegetation, wildlife habitat, timber, the role of fire, watershed health, special designations, recreation, and economic and social sustainability) (ROD, pp. 4-8).

The RLRMP provides goals and objectives to identify the desired conditions managers will try to attain. The management prescriptions, standards, and guidelines contained in the RLRMP provide guidance for projects and activities that will be proposed and considered during the life of the plan. Approval of any project or activity must be consistent with the plan (16 U.S.C. 1604(i)). If a project or activity cannot be conducted consistent with this guidance, it cannot go forward unless the plan is amended. The RLRMP is permissive in that it allows, but does not mandate, certain activities. Approval of the RLRMP does not mandate any project decisions.

Finally, the ROD addresses adaptive management and monitoring at the landscape scale as well as including monitoring requirements (ROD, pp. 4, 8, 17, 35-38). The Regional Forester states, “[I]n making the decision on the revised Plan, I am also deciding that this plan will be adaptive and subject to change as we monitor, learn, and gain new information” (ROD, p. 38). By adopting a landscape-scale adaptive approach to management, the Regional Forester is committed to the continuing cycle of implementing projects, monitoring results, and adjusting management accordingly. In summary, the Daniel Boone NF RLRMP establishes a framework for decisionmaking and uses programmatic direction as a gateway for compliance with environmental laws at the project level.

¹ The Daniel Boone NF RLRMP was prepared under the Multiple-Use Sustained-Yield Act (MUSYA) (16 U.S.C. 528 et seq.), the Forest and Rangeland Renewable Resources Planning Act (RPA) of 1974 as amended by the National Forest Management Act (NFMA) (16 U.S.C. 1600 et seq.), the September 30, 1982 implementing regulations of the NFMA (36 CFR 219, as amended September 7, 1983), and the National Environmental Policy Act (NEPA) (42 U.S.C. 4321 et seq.) and its implementing regulations (40 CFR 1500-1508).

NATIONAL ENVIRONMENTAL POLICY ACT

Range of Alternatives

Contentions

Appellant contends the Forest Service failed to consider a reasonable range of alternatives, in violation of NEPA (NOA #2108, pp. 3-13). Appellant contends the Forest Service failed to consider viable alternatives submitted by the public, including a no-extraction alternative, or an alternative of restoring the forests to their natural dynamics (NOA #2108, pp. 11-12, 68). Appellant further contends that a reasonable number or range of alternatives was not considered for the following (NOA #2108, pp. 7-10, 12-13, 23-24, 86, 95, 102-106, 114, 137, 169):

- addressing public concerns
- commercial logging (a no-logging alternative)
- Wilderness (including a maximum-Wilderness alternative)
- prescribed burning (including a no-burning alternative)
- Management Indicator Species
- oil and gas leasing (including a no-leasing alternative)
- Research Natural Areas

Discussion

The NEPA implementing regulations direct federal agencies preparing an FEIS to: “Rigorously explore and objectively evaluate all reasonable alternatives, and for alternatives which were eliminated from detailed study, briefly discuss the reasons for their having been eliminated” (40 CFR 1502.14(a)). The regulations do not define “reasonable” alternative, but do state that “the alternatives including the proposed action” are proposed to respond to “the underlying purpose and need” for the project (40 CFR 1502.13). The range of alternatives for a project proposal is thus normally limited to alternatives that meet the identified purpose and need.

The regulations and forest service directives (FSM 1950 and FSH 1909.15) give the Regional Forester discretion to determine the appropriate range of alternatives and to select the alternative that best meets the purpose and need. Within the range of alternatives for the Daniel Boone NF RLRMP, several alternatives were developed to address various resource management themes, and the significant issues (Daniel Boone RLRMP FEIS, Chapter 2, p. 2-1). For example, Alternative B-1 was developed to consider resource management with minimal human intervention (FEIS, p. 2-6) and Alternative C emphasizes ecological processes and functions (p. 2-7). Six alternatives were considered in detail, and two others were considered but eliminated from detailed study (pp. 2-2 to 2-10).

Alternative B was developed specifically in response to public input requesting that no management take place on the Forest (FEIS, pp. 2-2 to 2-3). Alternative B incorporated many of the management emphases cited by appellant, including “no extraction” of resources such as timber, and responds to many of the items identified by appellant as “public concerns” (NOA #2108, pp. 7-12). The alternative was not considered in detail because its implementation would not satisfy a number of legal requirements, including the

ability of the Forest to maintain habitat for viable wildlife populations (p. 2-3). Alternative B-1 was developed to provide a similar emphasis while meeting legal requirements, providing for natural processes and disturbances with minimal human influence. I find these two alternatives address most of the specific points appellant contends were not provided in the range of alternatives. For instance, Alternative B would have no commercial timber harvest and no prescribed burning, and Alternative B-1 has a minimal amount of timber management (5.3 MMCF per decade; 70,000 acres of suitable timberlands) and prescribed burning (1,546 acres annually) (FEIS, pp. 2-2 and 2-36; see NOA #2108, pp. 8-9, 23-24 and 169).

Appellants contend that the agency did not adequately consider a maximum wilderness alternative, or an adequate range of wilderness recommendations (NOA #2108, pp. 12-13 and 114). The NFMA regulations state that “[r]oadless areas including those previously inventoried in the second roadless area review and evaluation (RARE II), in a unit plan, or in a forest plan, which remain essentially roadless and undeveloped” are subject to evaluation as proposed wilderness areas at the discretion of the line officer (36 CFR 219.17). The Daniel Boone NF evaluated 12 areas for inventoried roadless area status during the LRMP revision; only one area, Wolfpen Creek, met the minimum roadless area criteria (FEIS Appendix C, p. C-1; ROD, pp. 17-18). For meeting the NFMA regulatory requirement, RLRMP alternatives therefore had just one roadless area to consider for wilderness. Wolfpen is included in Alternative B-1 as a Wilderness Study Area. In the RLRMP (Alternative C-1), Wolfpen is part of the Red River Gorge Geological Area, which has an objective of retaining the roadless characteristics of the Wolfpen Inventoried Roadless Area (Objective 7.A. of Prescription Area 3.E.; RLRMP, p. 3-68).

Appellants contend the range of MIS is the same for all alternatives (NOA #2108, pp. 86 and 95). The regulatory requirements for the designation of Management Indicator Species (MIS) are found in 36 CFR 219.19(a)(1) which state, “In order to estimate the effects of each alternative on fish and wildlife populations, certain vertebrate and/or invertebrate species present in the area shall be identified and selected as management indicator species and the reasons for their selection will be stated. These species shall be selected because their population changes are believed to indicate the effects of management activities.” There is no specific requirement under NEPA or NFMA, or their implementing regulations, to vary MIS across the alternatives. MIS are not actions or outputs; they are planning tools, used to indicate and compare management effects by alternative.

Appellant contends the Daniel Boone NF failed to analyze the alternative of not allowing oil and gas leasing required by 36 CFR 228.102 (NOA #2108, p. 106). The Forest Service minerals regulations (36 CFR 228) include requirements for “leasing analyses and decisions” (§ 102). The leasing analysis consists of identifying areas open to leasing, open with restrictions, and closed (§ 102(c)(1)), and then identifying alternatives to those areas, “including that of not allowing leasing” (§ 102(c)(2)). Alternative B in the Daniel Boone NF RLRMP FEIS, which emphasizes no management of natural resources, represents such an alternative, in that “development of federally owned minerals on the Forest would cease” (FEIS, p. 2-2).

Appellant contends the Forest Service did not consider a reasonable range of alternatives for Research Natural Areas (NOA #2108, p. 137). As noted previously, the NEPA regulations state that alternatives including the proposed action are developed to respond to

“the underlying purpose and need” for the project (40 CFR 1502.13), which here is the revision of a programmatic LRMP. The alternatives for the Daniel Boone NF LRMP revision represent broad overall themes for resource management, which address the major public issues in different ways (see FEIS, Chapter 2). Issue 14 – “Specially designated areas,” included concerns about areas with special biological or ecological significance. The discussion of this issue notes that a number of land designations can serve to protect the values of such areas (FEIS, p. 1-27). Research Natural Areas have a narrowly-defined purpose and proposals for such areas, made in conjunction with Forest Service Research (early in the plan revision process), are generally limited to areas that meet an established need (FEIS, Appendix I, p. I-92). Proposals for Research Natural Areas are too specific a topic to require alternative treatment for a programmatic LRMP.

Decision

The NEPA regulations provide that fully-developed alternatives may be considered in detail, or may be considered but eliminated from detailed study as long as the rationale is provided (40 CFR 1502.14(a)). Alternatives must meet the purpose and need for revising the LRMP, and may or may not include a measurable range for a given resource, depending on the identified public issues, the ways in which a particular resource is managed, and for other reasons, as discussed above. I find that for all contentions raised by appellant, alternatives and/or alternative ranges were considered as appropriate under the NEPA and NFMA regulations or other relevant direction. I find no violation of law, regulation or policy.

Impact Analysis

Contentions

Appellants variously contend the FEIS does not adequately address, analyze, or disclose the potential impacts (environmental consequences) of the alternatives on specific resources, in violation of NEPA. Contentions raised by appellants include inadequate effects analyses pertaining to:

- soil, water and riparian resources (NOA #2108, pp. 45-46 and 58; NOA #2110, p. 3)
- wildlife habitat fragmentation and proposed, endangered, threatened and sensitive (PETS) species (NOA #2108, pp. 90-91, 203-213 and 233-236)
- herbicide use (NOA #2108, pp. 112-113)
- temporary roads and OHV trails systems (NOA #2108, pp. 157-161)
- air quality (prescribed burning, oil and gas, mining) (NOA #2108, pp. 168-170)
- site-specific effects of a lodge at Cave Run Lake (NOA #2108, pp. 162-164)

Discussion

The NEPA implementing regulations specify that the discussion of environmental consequences in a NEPA document “will include the environmental impacts of the alternatives including the proposed action, any adverse environmental effects which cannot be avoided should the proposal be implemented, the relationship between short-term uses of man’s environment and the maintenance and enhancement of long-term productivity”

and will “include discussions of (a) direct effects and their significance; (b) indirect effects and their significance [and] (d) the environmental effects of alternatives” (40 CFR 1502.16). The NEPA regulations also state: “NEPA documents must concentrate on the issues that are truly significant to the action in question, rather than amassing needless detail” (40 CFR 1500.1(b)).

Soil, Water, Riparian

The appellant contends the agency has failed to adequately evaluate the effectiveness of standards within the Riparian Prescription for mitigating adverse effects of management activities (NOA #2108, pp. 45-46 and 49-51).

Regional guidance pertaining to specific forest-wide and riparian prescriptions was issued to enhance region-wide consistency and effectiveness among the respective national forests involved in LRMP revisions (Riparian Management Prescription for the Southern Appalachian Draft Revised Forest Plans, November 9, 2001). Forest-wide standards (e.g., DB-VEG27 and DB-VEG29, RLRMP, p. 2-27) and the Riparian Corridor Management Prescription goals, objectives, and standards (RLRMP, pp. 3-12 to 3-16) reflect the overall regional goal of managing the forest riparian ecosystems to retain, enhance, or restore their inherent functions and values.

Soil and water resources are discussed in detail in FEIS Chapter 3 (pp. 3-23 to 3-47 and 3-193 to 3-199). Current watershed/hydrologic conditions, stream sedimentation, water quality and water uses are described (pp. 3-13 to 3-30), and the direct and indirect effects to aquatic resources, by alternative, are disclosed (pp. 3-31 to 3-47).

Forest-wide standard DB-VEG27 requires resource management activities that may affect soil and/or water quality to follow applicable Kentucky Rules and Regulations for Water Quality Control and Kentucky’s Best Management Practices for Forestry (BMPs), at a minimum, to achieve soil and water quality objectives (p. 2-27). The FEIS explains that “[i]mplementation of BMPs can safeguard long-term soil productivity and the hydrologic functions of soils as susceptible to erosion” (FEIS, p. 3-24).

Evaluating the effectiveness of standards also occurs during LRMP implementation using information gathered during monitoring and evaluation. Answering the monitoring questions developed for the RLRMP will help determine if the desired conditions, goals and objectives of the LRMP are being met and if LRMP standards are effective (RLRMP, Chapter 5, p. 5-2). For example, question 16 asks: “What are the conditions and trends of riparian area, wetland and floodplain functions and values?” and indicates that “[r]iparian management practices and Standards . . . will be monitored” (RLRMP, p. 5-9). For question 19, “[p]eriodic review of objectives and standards established in the Forest Plan is called for to assure that desired condition[s] are being achieved and that these requirements will stay current given Forest Plan modifications, changed conditions and new information that accumulate over time” (RLRMP, p. 5-10).

Another appellant contends the FEIS lacks an analysis of “the eventual dominance of shade tolerant forest species created by the Riparian Corridor Management Prescription and impacts of associated aquatic resources” (NOA #2110, p. 3). The effects of forest management under the various scenarios and the potential effects to riparian dependent

terrestrial and aquatic species and their respective habitats are documented in the FEIS (pp. 3-193 to 3-199). As the FEIS notes, under the RLRMP “[v]egetation manipulation would take place for the purpose of attaining and sustaining a high diversity of riparian habitats” (p. 3-196) (see RLRMP, p. 3-12, Objectives under Riparian Corridor Goal 2).

The FEIS discusses forest succession, that is, conversion of shade intolerant species to shade tolerant species in the discussion of old growth where it acknowledges “[a]s the Forest ages, species that are found in old-age mesic stands in general, or old-growth mixed mesophytic forest in particular, will increasingly benefit as shade-tolerant species become more prevalent across the landscape” (FEIS, p. 3-92). The FEIS also states: “fire exclusion could favor a buildup of fire-intolerant, shade-tolerant, species that could eventually replace the original old growth type” (FEIS, p. 1-19).

Wildlife habitat fragmentation and PETS species

Habitat fragmentation was identified as a key issue for the revision process (FEIS, p. 1-17). A detailed discussion of potential causes of fragmentation, edge effects, and forest interior dependent species is included in the FEIS (pp. 2-13, 3-236 to 3-249). Table 3-236 provides a comparison of management parameters affecting within-forest fragmentation, evaluated by alternative (FEIS, p. 3-245). The FEIS discloses that, for the selected alternative, “about half the Forest would be actively managed to provide a diversity of forest age class structure. Such activities would result in a relatively moderate level of within-forest habitat fragmentation . . . Large blocks of mature forest would be distributed across the planning area, supporting interior forest dependent species” (FEIS, p. 3-248). The RLRMP includes direction for maintaining large blocks of relatively closed canopy conditions required for interior habitat species, such as the objective of creating and maintaining at least three 7,400-acre blocks of cerulean warbler habitat (RLRMP, pp. 2-5 to 2-6).

The FEIS includes a discussion of effects to PETS species (pp. 3-200 to 3-208). For each PETS species, a list of prescription areas important to that species is provided, along with acreages by alternative (FEIS, 3-200 to 3-203). The FEIS summarizes the effects of each alternative on the habitat elements used by PETS species; these species are also included in the viability evaluation (FEIS, pp. 3-152 to 3-175). As part of the viability evaluation, the risk to viability for each PETS species was assessed, based on current species abundance, and expected habitat abundance and distribution in 50 years. Ratings of risk by alternative are shown in FEIS Appendix H, Table H-2 (pp. H-8 to H-29). Additional analysis for species listed as threatened or endangered is included in the Biological Assessment (BA). Effects to Indiana bat, the only species specifically mentioned by the appellant, are discussed in both the BA and the FEIS (e.g., FEIS, pp. 3-170 to 3-171). Determinations of effects to sensitive species are included in Table 4 of the Biological Evaluation (February 25, 2004).

Herbicides

Appellant contends the FEIS fails to discuss the environmental consequences of “authorized” herbicide use (NOA #2108, pp. 112-113). ‘Integrated pest management’ is the term used for the variety of methods available to deal with vegetation, insect and disease control (see RLRMP, Glossary, p. A-16). Herbicides and pesticides are usually among the methods, or tools, to choose from. However, although the RLRMP includes

standards for the use of herbicides (pp. 2-24 to 2-26), it does not authorize such use: this is a project-level decision (FEIS, Appendix I, p. I-126). If herbicide use is being considered for a specific project, the effects of such use will be analyzed in the project-level environmental analysis before a decision on use is made.

Roads and OHV trails

Appellant contends the FEIS failed to adequately discuss or disclose the effects of existing temporary roads and failed to analyze the impacts of existing (legal and illegal) OHV trail systems (NOA #2108, pp. 157-161). Under the NEPA regulations, existing effects are described as part of the discussion of the affected environment in an EIS (40 CFR 1502.15). As noted there, this information “shall be commensurate with the importance of the impact, with less important material summarized, consolidated, or simply referenced.” The current condition with respect to effects from the existing road system is discussed under “Current Conditions” for soil and water (pp. 3-18 to 3-21), with Table 3-5 displaying the current conditions by watershed. Watershed condition “reflects accumulations from disturbances across the entire watershed” (p. 3-20) and would presumably include any measurable effects caused by temporary roads and OHV trails, legal or illegal. The general nature of effects from OHV trails is also discussed (p. 3-29). This information adequately meets the requirement of 40 CFR 1502.15.

Air Quality

The direct, indirect and cumulative effects of prescribed fire, including air quality effects, are discussed in the FEIS (pp. 3-6 to 3-9). Also, FEIS Table 2-22 (p. 2-31) displays by alternative the estimated particulate matter emissions that would result from prescribed burning. The programmatic effects of oil and gas leasing are discussed and displayed (pp. 3-10 to 3-12); however, the effects of the combustion of oil and gas “extracted from wells on National Forest lands” (NOA #2108, pp. 168-170) are outside the scope of an LRMP. Air quality benefits of forests, and the effects of the removal of vegetation on those benefits, are not discussed since such benefits and impacts are at such a scale that there is no discernable difference between the alternatives.

Site-specific Effects

The appellant contends that the RLRMP objective of providing an opportunity for a lodge at Cave Run Lake advocates implementing a site-specific, project-level activity as part of the LRMP without the required analysis under NEPA (NOA #2108, pp. 162-164). This RLRMP objective reads: “Provide an opportunity for development of a lodge at Cave Run Lake (Objective 7.0.A., RLRMP p. 2-15). Cave Run Lake and its shore area are included in Prescription Area 3.B. – “Large Reservoirs.” This prescription includes comparable language as part of the desired future condition: “Developed access and recreation sites along trash free shoreline are provided” (RLRMP, p. 3-50). Objective 7.0.A. is thus consistent with the desired future condition of Prescription Area 3.B.

Providing an opportunity for development of a lodge is not the same as the approval of a particular site-specific project or activity (in this case, permitted construction of the lodge). This is explained in FEIS Appendix I in response to public comments: “Disclosure of this ‘opportunity’ in the Revised Forest Plan does not negate the need for site-specific analysis

and public involvement if a corresponding development is proposed. There is no guarantee that a resort lodge will ever be built” (Appendix I, p. I-89). Further clarification is provided by the Regional Forester: “Forest Plans are permissive in that they allow, but do not mandate, the occurrence of certain activities. Site-specific analysis of proposed activities will determine what can be accomplished” (ROD, p. 30). It would be premature to require site-specific environmental analysis at this time.

Decision

I find that the FEIS adequately disclosed and analyzed the potential environmental consequences of the RLRMP alternatives on soil, water and riparian resources, habitat fragmentation, PETS species and air quality, and was not required to analyze at the programmatic level other effects as noted by the appellant. I find no violation of law, regulation or policy.

Cumulative Effects

Contentions

Appellant contends the analysis of cumulative effects on water and soil resources, and aquatic species, is inadequate under NEPA (NOA #2108, pp. 26-38 and 55-56), in part due to unreliable modeling of effects (NOA #2108, pp. 40-44). Appellant also contends the cumulative effects of mining are not adequately disclosed (2108, pp. 107-112).

Discussion

Cumulative impact is defined as “the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions” (40 CFR 1508.7). Forest Service NEPA procedures further elaborate by stating: “Individual actions when considered alone may not have a significant impact on the quality of the human environment. Groups of actions, when added together, may have collective or cumulative impacts which are significant . . . Consideration must be given to the incremental effects of past, present, and reasonably foreseeable related future actions of the Forest Service, as well as those of other agencies and individuals” (FSH 1909.15, sec. 15.1). Actions that have no direct or indirect effects on a particular program will not result in cumulative effects.

Water and soil resources

Appellant contends that the cumulative effects analysis for the soil resource is inadequate, because it does not consider the impacts of roads and because it is limited to Federal lands (NOA #2108, pp. 30-31).

As noted in the FEIS, effects at the programmatic LRMP level of planning for the soil resource are analyzed more in qualitative terms than quantitatively (p. 3-24). Management activities (i.e., roads and trails, vegetation management, mineral exploration, and fire management) that affect the soil resource are described (p. 3-23), and the potential impacts associated with these activities are disclosed (pp. 3-23 to 3-32). Direct and indirect impacts such as soil erosion, sedimentation, soil compaction, soil displacement and slope stability

along with ground and/or vegetation disturbance associated with management or resource activities are specifically discussed (pp. 3-25 to 3-27): many impacts identified as long-term actually represent the cumulative effects of RLRMP implementation. On pages 3-29 to 3-30, general cumulative effects related to soil resources are discussed, and a more detailed cumulative effects analysis of the soil resource, including effects on soil productivity, is provided for each alternative (FEIS, pp. 3-33 to 3-35, 3-37 to 3-39, 3-41 to 43 and 3-45 to 3-47). Additional analyses of cumulative effects and soil erosion coefficients are presented in FEIS Appendix B (pp. B-32 to B-33).

Appellant contends the effects analysis of soil productivity does not consider the impacts of roads (NOA #2108, p. 31). Short- and long-term (cumulative) effects of roads on soil productivity are discussed (FEIS, p. 3-29). Table 3-10 (p. 3-31) depicts estimated long-term impacts to soils from classified and temporary roads (acres impacted). During LRMP implementation, additional environmental analysis of proposed management activities is required. At the project level, potential impacts to soils resulting from proposed activities including road construction will be determined.

The rationale for generally limiting the effects analysis to National Forest System lands is explained in the FEIS, which notes that the “management of private lands has little direct or indirect influence on long-term soil productivity on National Forest System lands” (p. 3-30). Nevertheless, the discussion of cumulative effects on erosion and sedimentation includes estimated sediment increases from private and public lands for each alternative, and these are also displayed on maps by watershed (FEIS, pp. 3-34, 3-38, 3-42 and 3-46).

Aquatic habitats and species viability are examined in FEIS Chapter 3 (pp. 3-176 to 3-192). Direct, indirect and cumulative effects of each alternative are disclosed (pp. 3-181 to 3-192). The effects analysis for water and aquatic resources is based on a sediment yield/cumulative effects model developed by Clingenpeel (2002) to estimate sediment yields and analyze the cumulative effects of proposed management actions on water quality at the 5th level watershed scale (FEIS Appendix B, p. B-32). The Forest used a scientific, reasoned approach in the development and use of sediment delivery coefficients, GPS data layers, and local watershed data (Appendix B, p. B-32).

The assumptions associated with the sediment model and Watershed Condition Ranking (WCR) are acknowledged in the FEIS (pp. 3-19 to 3-20; Appendix B, pp. B-32 to B-33). The FEIS states:

“The sediment model and the WCR both rely on numerous assumptions. To minimize any misunderstanding, every effort has been made to acknowledge assumptions and describe them clearly. In light of these assumptions, however, neither the sediment model nor associated WCR should be regarded as absolutes. At the forest plan level, they are useful in comparing the outcomes that would likely result from the various alternatives” (pp. 3-19 to 3-20).

Because of “natural variability, geography, climatic conditions, and some of the assumptions on which stream sediment values are based, it is important to view these numbers as comparative rather than absolute values” (FEIS, p. 3-27). The technical assumptions associated with the model are discussed by Clingenpeel (2002); analysis assumptions and data limitations are disclosed (Sediment Yields and Cumulative Effects

for Water Quality and Associated Beneficial Uses, Endemism Sediment Profile, p. 31). Methods, references, and assumptions and limitations associated with the watershed analysis process, sediment model, and endemism sediment profile are also documented in "A Watershed Analysis for the Daniel Boone National Forest" (January 2001).

The record makes clear that the watershed analysis procedure is a relatively new concept and the watershed analysis procedure should be seen as a "starting point for determining and ranking watershed health" (A Watershed Analysis for the Daniel Boone National Forest, January 2001, p. 2, 3). As stated in FEIS Appendix I, the RLRMP watershed analyses were completed "to assess watershed condition and vulnerability" (p. I-43). More specific and detailed analyses will be completed at the project level.

Mining

Appellant contends the cumulative effects of coal mining are not adequately disclosed "except in the most broad and vague terms" (NOA #2108, pp. 107), and asserts there was no cumulative effects analysis "for the approved mining and oil and gas exploration, drilling and production allowed" (NOA #2108, p. 112). The Daniel Boone NF RLRMP FEIS includes a brief discussion of cumulative effects and a projection of the possible number of oil and gas wells (unidentified as to location at this time) likely to be developed over the next ten years. The analysis discloses that "[w]hen looking at potential cumulative impacts to air quality, water quality (hydrology), aquatic habitat, wildlife, threatened and endangered species, soils, and visual qualities over the life of this plan, the impacts should be negligible" (FEIS, p. 3-81). Possible coal mining is not included since coal can only be developed by underground methods and therefore is "largely unaffected by restrictions in any alternative" (p. 3-81). FEIS Appendix I explains that only broad programmatic-level effects are discussed in the FEIS and that specific and cumulative effects will be analyzed and disclosed in project level decisions (p. I-134). The RLRMP does not project or propose any specific mining or oil and gas projects. I find this appropriate for a programmatic plan and in conformance with NEPA.

In addition, in the ROD the Regional Forester notes that he is making two decisions pertaining to oil and gas leasing: administrative availability, and authorize the Bureau of Land Management to offer those available lands for lease (ROD, p. 5). Neither of these decisions approves any actual development of oil and gas resources.

Decision

I find the cumulative effects analysis for soil, water and aquatic resources, and for oil and gas leasing, appropriate for a programmatic LRMP and in compliance with NEPA. I find no violation of law, regulation or policy.

Public Disclosure

Contentions

Appellant contends the Forest Service did not analyze, disclose, or fairly discuss specific reports [Quinton Bass; Lynch and Clark] related to historical fire regimes and forest conditions (NOA #2108, pp. 13-26 and 66-68). Appellant contends the Forest Service

“presented only one side of the controversy” concerning the role of fire, the side supporting large amounts of prescribed burning (NOA #2108, p. 22). Appellant also contends that a standard for the proposed Marsh Creek Wild and Scenic River was removed between draft and final with no explanation or opportunity for comment (NOA #2108, p. 118).

Discussion

In defining the purpose of an environmental impact statement, NEPA regulations state, “It shall provide full and fair discussion of significant environmental impacts” (40 CFR 1502.1). The NEPA regulations require an agency to make every effort to disclose and discuss at appropriate points in the DEIS all major points of view on the environmental impacts of the alternatives including the proposed action (40 CFR 1502.9(a)).

In a discussion of the prehistoric (pre-1700 AD) vegetative conditions in the area of the Forest, the Daniel Boone NF RLRMP FEIS notes the scarcity and anecdotal nature of the evidence, and provides several citations to the scientific literature (pp. 3-157 to 3-158). The discussion states that the “reference period may have included a wide variety of conditions as a result of growing aboriginal populations and accompanying use of agriculture and fire during the early portion of this period, and their subsequent dramatic decline due to disease epidemics following early European contact. Nevertheless, the precision required to assign the categorical values for this variable is not high, and may be supported by general positions described in mainstream conservation literature” (FEIS, p. 3-158). Additional information on fire-dependant plant communities and fire history, with additional references, is found in the discussion of “prescribed fire” in FEIS Chapter 3 (pp. 3-299 to 3-304).

One of the public concerns (#569) addressed in FEIS Appendix I reads: “The Forest Service should not create a patchwork of disturbance-maintained habitats because according to a Forest Service archeologist [Quentin Bass], the region used to be characterized by large tracts of mature interior forest” (Appendix I, p. I-106). The Daniel Boone NF responds: “Scientific evidence also exists that forests in this region were indeed influenced by disturbance that resulted in a patchwork of stem densities, crown covers, and species composition. Specific provisions for mature interior forest habitat have been made in the 1K-Prescription Area (1K-Objective-1C)” (p. I-106).

Appellant contends that a standard for the proposed Marsh Creek Wild and Scenic River (to adhere to guidance of the Interagency Wild and Scenic Rivers Coordinating Council) was removed between draft and final with no explanation or opportunity for comment (NOA #2108, p. 118). The standard in question, included under “Roads/Engineering,” was for the evaluation of projects that could directly affect river values or invade river corridors. This standard is included for proposed river segments for which motorized access is allowed (see RLRMP, p. 3-63). The Marsh Creek river segment is to be managed as a “wild” river within which no motorized uses are permitted (RLRMP, pp. 3-55 to 3-56), thus this particular direction was not necessary.

Decision

The Daniel Boone NF RLRMP and FEIS meet the public disclosure requirements of NEPA. I find no violation of law or regulation.

Scientific Basis

Contentions

Appellant contends that the small allocation of areas to the Rare Communities Prescription is not informed by the best science (NOA #2108, pp. 136). Another appellant contends that certain Forest Service experts or their research findings were not considered (NOA #2110, p. 2).

Discussion

NEPA regulations address the use of science primarily in the context of estimating the effects (environmental consequences) of proposed actions and alternatives (see for instance Sections 1501.2(a) and (b), and 1502.6), and in making decisions which may affect the environment. The analysis of environmental consequences “forms the scientific and analytic basis” for the comparison of alternatives (Section 1502.16). The regulations encourage brevity in presenting scientific analysis and data in the environmental impact statement, focusing on “the issues that are truly significant” (Section 1500.1(b)) and “based upon the analysis and supporting data” (Section 1502.8). This may be done in part through referencing appendix material or documents contained in the planning record (Section 1502.18).

The FEIS describes the criteria used for defining rare communities, and states that cooperative rare-species inventories were conducted, resulting in the discovery of many rare communities (FEIS, p. 3-103). FEIS Appendix I notes that the forest used multiple scientific information sources including the Kentucky State Nature Preserves Commission and The Nature Conservancy, along with information from other sources, to develop the Rare Community prescription, and that at times opinions differed on what constitutes a rare community (Appendix I, p. I-61). Management Prescription 1.G. (RLRMP, pp. 3-17 to 3-25) addresses the conservation of specific types of rare communities. These communities, usually occurring in small areas of a few hundred square feet to a few acres, are located within larger management areas and currently total an estimated 1,200 acres. This acreage will change as all occurrences of these communities are mapped during RLRMP implementation (RLRMP, p. 3-24). The Regional Forester provides rationale for the selected alternative stating it “provides a good balance between the need to protect rare communities of plants and animals from undesirable or unintended disturbances, and the need to sometimes apply management actions that would enhance species welfare and the functioning of the communities” (ROD, p. 8).

The appellant claims that the forest did not utilize personnel or consider the findings of the Forest Service Coweeta Hydrologic and Fernow Timber and Watershed Laboratories (NOA #2110, p. 2). However, appellant does not specify what riparian-related research findings they believe the Daniel Boone National Forest failed to consider. As required by 36 CFR 219.5(b), the FEIS Chapter 4, List of Preparers demonstrates that interdisciplinary team members, the leadership team, and other specialists involved in the LRMP revision represented diverse specialized areas of professional and technical knowledge applicable to the planning area. An assessment of aquatic resources conducted for the Daniel Boone National Forest in 2001 contains extensive research findings, data, and current literature

related to recommended riparian area management direction (see also FEIS, p. 7-17 reference to USDA-FS 2001a: Aquatic Assessment). Response to Public Concern #179 also indicates that riparian corridor widths were based on the assessment of aquatic resources, input from specialists in the Forest Service Southern Region, research findings, monitoring data, current literature recommendations, and Daniel Boone National Forest professional expertise (Appendix I, p. I-70).

One appellant (NOA #2108) also raised contentions pertaining to the scientific basis of the sediment yield model and WCR. These are discussed under “Cumulative Effects” elsewhere in this appeal decision.

Decision

I find that the FEIS used the available scientific information on rare communities and riparian area management consistent with NEPA regulatory requirements. I find no violation of law or regulation.

Response to Comments

Contentions

Appellant generally contends that Forest Service responses to comments are inadequate; that many of the “responses” are not responsive, and many comments were not even listed (NOA #2108, p. 44). Appellant specifically contends that responses to comments pertaining to riparian standards, old growth, special uses, and PETS species were inadequate (NOA #2108, pp. 45-51, 135-136, 163, 165-167 and 209-212).

Discussion

Note: Some of appellant’s specific contentions pertaining to how particular public comments were responded to or used are discussed in other places in this appeal decision pertaining to that specific topic. For PETS species, see Viability.

The NEPA regulations state: “An agency preparing a final environmental impact statement shall assess and consider comments both individually and collectively, and shall respond by one or more of the means listed below, stating its response in the final statement” (40 CFR 1503.4(a)). An agency may respond in several ways, including modifying alternatives, and supplementing, improving, or modifying its analyses. The NEPA regulations recognize the need to summarize comments and responses when voluminous, but require that substantive comments be attached to an FEIS whether or not they are thought to merit individual discussion by the agency in the text of the statement (40 CFR 1503.4(b)). The regulations also require that an agency “shall discuss at appropriate points in the final statement any responsible opposing view which was not adequately discussed in the draft statement and shall indicate the agency’s response to the issues raised” (40 CFR 1502.9 (b)).

For the Daniel Boone RLRMP FEIS, public comments on the DEIS and Forest Service responses are included in Appendix I –Responses to Public Comments. This appendix, after an introduction, overview of the types of comments and demographic information, includes 120 pages of summarized public comments and agency responses. The responses

vary from one sentence to several paragraphs, and based on a random reading of dozens of responses appear to meet the substantive requirements of 40 CFR 1503.4(a) by describing how and where (as relevant) each comment has been addressed in the FEIS.

Appellants contend the Forest Service did not adequately respond to comments concerning riparian standards, the riparian corridor, and ephemeral streams (NOA #2108, pp. 44-51). Public comments about riparian standards and management, including concerns over stream buffers (corridor widths) and the management of ephemeral streams, may be found in Appendix I, Public Concerns 170-184 and 198-200. I find the responses to these comments adequately address the specific concerns raised.

Appellant contends the FEIS fails to adequately “address or analyze” comments and information regarding old-growth (NOA #2108, pp. 135-136). Comments received regarding old growth and late-successional habitat and responses to those comments are found on pages I-108 to I-111 of FEIS Appendix I. Appellant offers no specifics as to why these responses are inadequate.

Appellant contends the Forest Service failed to adequately address comments by EPA concerning special uses (NOA #2108, pp. 165-167). Appellant includes these comments, which EPA characterizes as recommendations, in their appeal. Appellant contends the response provided (Public Concern #486, Appendix I, p. I-94) “fails to address” the comments (NOA #2108, p. 167). The response reads in part: “The Plan, along with Forest Service handbooks and manuals, provide adequate guidance for issuing special use permits and provide for the recommended goals and standards.” The response cites specific regulations and policies, and notes that other management direction also applies.

For responding to public comments, NEPA regulations provide the option of explaining “why the comments do not warrant further agency response, citing the sources, authorities, or reasons” (40 CFR 1503.4(a)(5)). This is what the response to comment #486 does. For instance, several of EPA’s specific recommendations are covered by RLRMP direction, such as: Standard LAND-2 (p. 2-20); Standard VEG-12 (p. 2-25); Standards LAND-1 for Prescription Areas 2.A., 2.B., 3.A. and 3.C. (Chapter 3); and the Goals, Objectives and Standards of Prescription Area 5.A. (Communication Sites). Some of the more general recommendations are covered by Forest Service policy (e.g., EPA’s Goals 17.1 and 18, and Standard DB-SU-7). I find the response is adequate to address these recommendations.

Decision

The Daniel Boone NF RLRMP FEIS contains ample evidence that the public comment requirements of the NEPA regulations (at 40 CFR 1503.4) have been followed. Comment responses are of sufficient substance and detail to meet NEPA requirements at 40 CFR 1502.9(b). I find no violation of law or regulation.

NATIONAL FOREST MANAGEMENT ACT

Viability

Contentions

Appellant generally contends that the combination of approaches used in the LRMP and FEIS do not assure terrestrial species viability (NOA #2108, pp. 62-82, 99-101), and that the approach to aquatic diversity does not assure viability of aquatic species (NOA #2108, pp. 56-58, 79-82). Appellant contends the FEIS fails to establish adequate “fine filter” analysis of species viability (NOA #2108, pp. 62-65, 71-77, 79-80), and that “coarse filters” are inadequate since forest community types such as rare or old-growth communities are not well represented (NOA #2108, pp. 65-70).

Discussion

Providing for the viability and diversity of wildlife species is addressed in the 1982 NFMA implementing regulations (36 CFR 219.19, 219.26 and 219.27). 36 CFR 219.19 requires fish and wildlife habitat to be managed “to maintain viable populations of existing native and desired non-native vertebrate species in the planning area.” Sec. 219.19 also states: “to insure that viable populations will be maintained, habitat must be provided to support, at least, a minimum number of reproductive individuals and that habitat must be well distributed so that those individuals can interact with others in the planning area.” 36 CFR 219.27(a)(1) requires all management prescriptions to “conserve soil and water resources and not allow significant or permanent impairment of the productivity of the land.” Additional management requirements are provided at 36 CFR 219.27.

Terrestrial Species

There is no specific procedure required by applicable law, regulation or policy for evaluating or providing for species viability. Whatever process is used must comply with the general requirements in the NFMA regulations listed above, use the best available information, and be scientifically sound. The NFMA regulations do not specify the use of a coarse filter – fine filter approach, or of any other approach: they do require that factors such as habitat abundance and habitat distribution be evaluated.

The species viability evaluation used for the Daniel Boone NF was patterned after a Regional effort that assessed five National Forests in the Southern Appalachian region that were undergoing simultaneous plan revisions. The terrestrial species viability evaluation process is described in FEIS Chapter 3 (pp. 3-154 to 3-160). The goals of the terrestrial species viability evaluation are “to use a clearly defined, transparent process to identify species for which there are substantive risks to maintenance of viable populations, and to ensure consideration of appropriate habitat management strategies to reduce those risk to acceptable levels where feasible” (FEIS, p. 3-153). Detailed species viability evaluation tables summarizing effects for each species and habitat element are included in FEIS Appendix H.. NatureServe provided much of the information on species status, habitat relationships, and threats to viability (FEIS, pp.3-153 to 3-154).

A comprehensive list of species with potential viability concerns was compiled from five identified categories, including PETS species, species identified as locally rare on the Forest, birds of conservation concern as identified by the U.S. Fish and Wildlife Service (FWS), and declining species of high public interest. Species selected from these categories were included in the viability evaluation based on their abundance rank on the Forest as assigned by NatureServe. Risk to viability for each species, over the next 50 years, was assessed in relation to each of its principle habitat relationships, based on current species abundance, expected habitat abundance in 50 years, and expected habitat distribution in 50 years. Ratings of risk to viability for each species/habitat relationship by alternative are shown in FEIS Appendix H, Table H-2 (pp. H-8 to H-29). The record demonstrates that the Forest followed a reasonable, scientifically-based approach suitable to the scale of the analysis and for the development of programmatic direction for an LRMP.

Although the FEIS does not describe the terrestrial species viability evaluation as a coarse filter-fine filter analysis, the evaluation did provide more than just a “coarse filter” type of evaluation, as risk to viability for individual species was assessed. The monitoring program outlined in RLRMP Chapter 5 contains elements related to diversity and species viability that could be characterized as fine filter; more detailed, specific, and measurable monitoring elements will be developed during LRMP implementation (RLRMP, p. 5-3). Terrestrial species for which viability is a concern will be monitored at the LRMP level if a need is identified through periodic review of each species status and conservation priority (RLRMP, Appendix D, p. D-6).

Appellant contends that the viability methodology was inadequate because it “fails to even show any real difference between alternatives” (NOA #2108, pp. 77-78). The FEIS explains that the “relatively small differences among alternatives relative to effects on species viability . . . results from planning efforts to include provision in all alternatives for species viability in compliance with NFMA regulation . . . and from the influence of external forest health threats” (FEIS, p. 3-160). Nevertheless, there are differences in the risk ratings between alternatives for some habitat elements (Appendix H, Tables H-1 and H-2).

Appellant contends that the viability evaluation was flawed because it did not include actual numbers of individuals of each species (NOA #2108, pp. 99-101). Contrary to appellant’s contention, 36 CFR 219.19 does not require an actual as opposed to estimated determination of population size: “For planning purposes, a viable population shall be regarded as one which has the estimated numbers and distribution of reproductive individuals to insure its continued existence is well distributed in the planning area.” Consistent with this direction, the species viability evaluation in the FEIS uses Forest rankings (F-Ranks) as an estimate of each species’ current abundance, along with an estimate of future habitat abundance and distribution (FEIS, p. 3-154). F-Ranks were developed by NatureServe and reviewed by Forest biologists, and reflect the numbers of occurrences of individuals of species within the Forest (i.e., populations) plus other factors influencing conservation status.

Appellant also contends that regional decisions to change the sensitive species definition wrongfully eliminated alternatives or standards to monitor locally rare species (NOA #2108, pp. 63-65 and 78-79). The process used by the Region to designate sensitive

species is outside the scope of the development of this LRMP.

Aquatic Species

A review of the goals and objectives and management direction of the RLRMP (e.g., Goal 3 and 3.1 and associated objectives, pp. 2-12; Prescription 1.E, Riparian Corridor, pp. 3-9 to 3-16; and Prescription 5.C., Source Water Protection, pp. 3-77 to 3-79), and its monitoring requirements (e.g., Monitoring Question 15 and 16, p. 5-9), demonstrates the RLRMP complies with NFMA regulatory requirements to conserve and protect water resources. Additional management direction for the water resource is incorporated into the forest-wide standards for other planning categories (e.g., Lands, Roads/Engineering, Recreation, Minerals and Vegetation).

The Daniel Boone NF assessed 37 fish and aquatic invertebrate PETS species (FEIS, pp. 3-177, and 3-180 to 3-181; An Assessment and Strategy for Conservation of Aquatic Resources on the Daniel Boone National Forest, April 2001, pp. 27-31 and 37-41). The FEIS states: "Viability outcomes for each species by watershed were determined by incorporating elements of species distribution, abundance, and sensitivities to environmental factors; watershed condition relative to the species' environmental sensitivities; and the amount of National Forest ownership in the watershed" (p. 3-179). Additional evaluations by species and habitat type are included in the BA (pp. 1-53).

The Daniel Boone NF assessed aquatic habitat using water quality, physical stream condition and Watershed Condition classes (FEIS, pp. 3-19 to 3-21). Within the Watershed Condition assessment, four factors were used: sedimentation, point source pollutants, temperature and altered stream flow (FEIS, p. 3-178). A species-sediment load relationship index (SSI) was developed to characterize the condition of 5th order watersheds with respect to current sediment load increases and to serve as a measure of potential effects (FEIS, p. 3-178).

Decision

I find that the process used to evaluate and provide for species viability, as outlined in the FEIS and supporting documentation, meets the viability and diversity requirements of 36 CFR 219 for terrestrial vertebrate species and aquatic species. I find no violation of law, regulation or policy.

Management Indicator Species

Contentions

Appellant contends the RLRMP does not have MIS that adequately provide for indicating the full range of management impacts and does not monitor for all MIS species (2108, pp. 58 and 82-95).

Discussion

The NFMA regulations require that for estimating the effects of each alternative on fish and wildlife populations, "certain vertebrate and/or invertebrate species present in the area

shall be identified and selected as management indicator species and the reasons for their selection will be stated. These species shall be selected because their population changes are believed to indicate the effects of management activities” (36 CFR 219.19(a)(1)). The regulations have no requirement that MIS be selected to reflect the effects of every management activity proposed within a planning unit, or every habitat type.

The appellant contends that MIS have been given only cursory attention, that the RLRMP fails to identify the species for which each MIS was selected to represent, and that the selected MIS are linked only to forest or habitat types (NOA #2108, pp. 84-90). The NFMA regulations require only that the reasons for selection of a species as MIS be stated (36 CFR 219.19 (a)(1)); there is no requirement to identify the species for which each MIS is thought to be representative. The record demonstrates that a well-documented process for selection of MIS was followed, and the reasons for selection of each species are clearly stated (FEIS Appendix B, pp. B-18 to B-32).

The Daniel Boone NF considered selecting species from each of the five categories listed in the regulations at 36 CFR 219.19 (a)(1), including threatened and endangered species. The regulations do not require that species must be selected from each category. As explained in Appendix B, “of the five categories of MIS listed in the regulations, only one category is to be selected because they are believed ‘to indicate effects of management activities on other species of selected biological communities’” (p. B-29). The Forest reasonably interpreted this category to be those species where “a) changes in the species’ population should primarily reflect the effects of national forest management activities” and “b) population trends of the species must be capable of being effectively and efficiently monitored and evaluated” (p. B-19). For example, the cerulean warbler was selected as an MIS “to help indicate effects of canopy gap creation on species associated with mid- to late-successional mesic deciduous forests” (p. B-26). Table 2 of Appendix B lists each of the selected MIS and provides the reason for their selection.

The appellant contends that monitoring of MIS species is not adequate and that baselines are not established (NOA #2108, pp. 84 and 94). NFMA regulations do not require a specific methodology for establishing baselines or monitoring MIS. The regulation requires that population trends of MIS be monitored and relationships to habitat changes be determined (36 CFR 219.19 (a)(6)). Chapter 5 of the RLRMP includes requirements for plan-level monitoring of MIS population trends and habitats, with the objective of answering a series of questions to determine if desired conditions, goal, and objectives of the RLRMP are being achieved and if standards are effective, consistent with 36 CFR 219.11 (monitoring questions 2, 3, 7 and 8, pp. 5-5 to 5-8). The reasons that specific MIS are selected for a specific question are clearly presented.

The appellant also claims there are no aquatic MIS and that monitoring of aquatic indices will only be done once every 10 years, and contends: “This is a violation of the requirements that MIS represent the effects of management activities because it leaves aquatic species totally unrepresented” (NOA 2108, p. 58). In lieu of designating individual MIS for aquatic species, the Daniel Boone NF used a community-based monitoring approach to assess aquatic habitats (FEIS Appendix B, p. B-28). Indices based on aquatic macro-invertebrate assemblages that reflect community structure and function, combined with physical and chemical parameters of the aquatic system, will be monitored (FEIS, p. 3-189). The use of indices based on aquatic macro-invertebrate assemblages to

assess aquatic habitats and the effects of management activities is supported in FEIS Appendix B (p. B-32).

Decision

I find that the selection process for MIS is adequately documented and the monitoring identified complies with NFMA regulatory requirements. I find no violation of law or regulation.

Management Direction

Contentions

One appellant contends that there are no standards for restoring watersheds, and riparian standards are inadequate to protect riparian values and function (NOA #2108, pp. 38-39 and 45-51). Another appellant contends the cliffline community habitat strategy is flawed, and that rationale and justification for this management area prescription is lacking (NOA #2110, p. 3).

Discussion

The NFMA regulations define “management direction” as: “A statement of multiple-use and other goals and objectives, the associated management prescriptions, and standards and guidelines for attaining them” (36 CFR 219.3). Definitions are also provided for the terms goal, objective, and management prescription, but standard and guideline are not defined. One of the basic principles of the NFMA regulations is the “[e]stablishment of quantitative and qualitative standards and guidelines for land and resource planning and management” (36 CFR 219.1(12)). The NFMA regulations require that LRMPs contain: “Forest multiple-use goals and objectives that include a description of the desired future condition of the forest,” and “Multiple-use prescriptions and associated standards and guidelines for each management area” (36 CFR 219.11(b) and (c)).

The NFMA regulations also specify “management requirements” for accomplishing National Forest goals and objectives (36 CFR 219.27). The management requirements “guide the development, analysis, approval, implementation, monitoring and evaluation of forest plans” (§ 219.27). Management requirements for LRMP implementation, based on those specified in § 219.27, are usually given the names standard or guideline. While some of the management requirements imply a measurable quantity, most can be achieved by the use of either quantitative or qualitative activities or practices (or limitations thereon).

The RLRMP contains 24 forest-wide standards that apply specifically to riparian areas and watershed restoration efforts (RLRMP, pp. 3-14 to 3-16). It is not clear why appellant (NOA #2108) finds these standards to be inadequate. I find them adequate based on the development of watershed and riparian standards consistent with regional guidance, adoption of State BMPs, and scheduled monitoring (see Impact Analysis, *Soil, Water, Riparian*, p. 8).

Another appellant contends that the cliffline community habitat strategy is flawed “because of the failure to incorporate known techniques to improve the habitat for T&E bats” (NOA

#2110, p. 3). Appellant refers to studies which are claimed to reveal areas preferred by bats where removal of a portion of trees had occurred. Appellant does not refer to specific studies or provide sufficient detail for me to be able to evaluate the merits of this claim.

Appellant also contends that the prescription for the cliffline community is “basically benign management” and that rationale and justification for this prescription is “lacking in the ROD” (NOA #2110, p. 3). Two of the fourteen significant issues for the LRMP revision were: management needs related to rare communities (i.e., caves, clifflines, glades, small bogs and wetlands), and endangered, threatened, and sensitive species (FEIS, pp. 1-19 to 1-20). “Cliffline community” is defined in the RLRMP (p. 3-5). The desired future condition for the cliffline community prescription is to manage the area “to protect, maintain, or enhance habitat conditions for cliffline associated PETS and Conservation species” (RLRMP, p. 3-5). Cliffline community prescription areas are classified as unsuitable for timber production, which means that the land that is not managed for timber production. Lands unsuitable for timber production may be further divided into two subcategories: lands where tree cutting, tree removal, or timber harvest may occur on an unscheduled basis to attain desired future conditions; and lands where timber harvest is not allowed (p. A-40). Thus while cliffline communities are not managed for timber production, certain management activities, which may include timber harvest on an unscheduled basis to attain desired future conditions, are allowed.

Concerning appellants’ claim that the ROD lacks justification and rationale for establishing a cliffline community prescription, I find that the Regional Forester clearly explains and supports his reasons for establishing this prescription area (ROD, pp. 8-9). The Regional Forester’s explanation is consistent with the focus of the two revision issues mentioned above.

Decision

Adequate management direction for riparian areas and watershed restoration is provided in the Daniel Boone RLRMP. The requirements for cliffline community management and the rationale provided are reasonable. I find no violation of law, regulation or policy

Economic Analysis

Contentions

Appellant contends the economic analysis in the FEIS disregards NEPA and NFMA regulations, ignores economic values other than commodity values, does not reflect suggestions for using amenity valuation techniques, and fails to examine quantitative and qualitative differences in present net value (PNV) between alternatives (NOA #2108, pp. 171-192). Appellant contends the Forest Service is in violation of the Improving Economy and Efficiency Act by including a program (the timber program) that has a negative PNV (NOA #2108, pp. 172-173).

Discussion

NEPA and its implementing regulations, and the NFMA implementing regulations, provide the basic context for LRMP economic analysis. Section 102(2)(B) of the National

Environmental Policy Act (NEPA) requires federal agencies to develop methods and procedures “which will insure that presently unquantified environmental amenities and values may be given appropriate consideration in decisionmaking along with economic and technical considerations.”

The NEPA implementing regulations (at 40 CFR 1502.23) clarify the intent of this requirement:

“To assess the adequacy of compliance with section 102(2)(B) of the Act the [EIS] shall, when a cost-benefit analysis is prepared, discuss the relationship between that analysis and any analyses of unquantified environmental impacts, values, and amenities. For purposes of complying with the Act, the weighing of the merits and drawbacks of the various alternatives need not be displayed in a monetary cost-benefit analysis and should not be when there are important qualitative considerations.”

The NEPA regulations thus require that unquantified amenities and values “be given appropriate consideration in decisionmaking *along with* economic and technical considerations” (italics added), and make it clear that when an economic cost-benefit analysis is used, the relationship between that and any analysis of unquantified values and amenities must be discussed, and that “important qualitative considerations” should not be assigned monetary values. The NEPA regulations do not otherwise clarify what types of economic analysis may be appropriate, only including “economic” as one of several categories of effects (40 CFR 1508.8).

The NFMA regulations provide the primary method or procedure for the Forest Service to accomplishing the comparison of quantified and unquantified resources in forest planning: “net public benefits” (36 CFR 219.12(f)). Net public benefits are defined as: “the overall long-term value to the nation of all outputs and positive effects (benefits) less all associated inputs and negative effects (costs) whether they can be quantitatively valued or not” (36 CFR 219.3).

The primary use of economic analysis under the NFMA regulations is in comparing the effects of alternatives (along with the physical, biological and social effects). The general process is explained at 36 CFR 219.12(g) – *Estimated effects of alternatives*. Pertinent to economic effects, the major components of an economic analysis used to compare alternatives include direct and indirect benefits and costs, PNV, receipt shares to State and local governments, and monetary opportunity costs (36 CFR 219.12(g)(3)).

To summarize, there are basically two kinds of economic analyses required for LRMPs: the identification of net public benefits, and the estimation, by alternative, of economic benefits and costs (following 36 CFR 219.12(g)(3)).

In the Daniel Boone NF FEIS, economic effects are discussed on pages 3-342 to 3-355. FEIS Appendix B, pages B-35 to B-41, provides basic information on the models used to estimate employment and income and to calculate present net value (PNV), and on how resource values were estimated. As noted in the the introduction to this section of the appendix, the intent is to provide additional information regarding the economic analyses,

but not to provide complete details. Details are included in specialist reports contained in the administrative record (Appendix B, p. B-35).

The information provided on pages 3-342 to 3-355 of the FEIS generally meets the economic effects requirements of the NFMA regulations outlined above. Table 3-109 (p. 3-344) includes the costs and values of outputs (expressed as program costs and program benefits), by alternative, and calculates the PNV for each alternative. The table only includes direct costs and direct monetary returns (benefits): a footnote explains that all programs also provide non-monetary services (p. 3-344). Although not displayed as a separate number, the monetary opportunity costs can easily be seen in the differences in cumulative PNVs. The major components of PNV by alternative are discussed on FEIS pages 3-347 to 3-355. Effects on employment and income by alternative, broken out by both forest resource programs and industry sectors, are displayed in Tables 3-111 to 3-122 with accompanying discussions (FEIS pp. 3-346 to 3-355).

Net public benefits is a determination made by the Regional Forester in the Daniel Boone RLRMP ROD. It indicates consideration of both economic benefits and unquantified amenities and values. As he states:

“the Selected Alternative does not have the least impact on the environment nor does it generate as many market valued commodities as other alternatives considered in the FEIS. However, I believe the Selected Alternative achieves a balance between the economic benefits and environmental issues and concerns voiced by the citizens that we have heard from. I believe the Selected Alternative will increase public benefits by moving the Forest towards improved forest health” (ROD, p. 20).

The Daniel Boone NF LRMP Revision FEIS and ROD thus meet the basic requirements of both NEPA and NFMA, and their implementing regulations, as outlined above. I find appellant’s primary contention, that the LRMP and FEIS do not comply with NFMA and NEPA requirements to identify and consider economic issues and impacts, to be without merit.

Appellant also contends the Forest Service is in violation of the Improving Economy and Efficiency Act by including a program (the timber program) that has a negative PNV (NOA #2108, pp. 172-173). NFMA requires that land management plans “identify lands within the management area which are not suited for timber production, considering physical, economic, and other pertinent factors” (16 U.S.C. 1604 (k)). The NFMA implementing regulations specify that land shall be identified as not appropriate for timber production if the lands are not cost-efficient over the planning horizon in meeting forest objectives (36 CFR 219.14 (c)). Cost efficiency is defined and discussed in Forest Service Manual 1900 as “[t]he usefulness of specified inputs (costs) to produce specified outputs (benefits). In measuring cost efficiency, some outputs including environmental, economic, or social impacts, are not assigned monetary values but are achieved at specified levels in the least cost manner” (FSM 1905.17).

As explained in the Daniel Boone NF RLRMP FEIS, economic examination of the tentatively suitable timberland takes place in the “Stage 2” timberland suitability analysis.

No decisions are made at the conclusion of the Stage 2 analysis about the management of the land; instead, the results are used in a Stage 3 analysis, which determines land allocations for each alternative. The Stage 2 analysis for the Daniel Boone National Forest “was accomplished by dividing areas of Forest that are potentially available for timber production (tentatively suitable timberland) into analysis areas based on forest community types, stand-age, slope, and accessibility” (FEIS, p. 3-279). “Lands determined to be not cost-efficient were removed from the Tentatively Suitable Timberland classification” (FEIS, p. 3-279).

The present net values (PNVs) of various forest programs are displayed in the FEIS, Table 3-109, by alternative (p. 3-344). Although the PNV for the timber program is sometimes negative, a table footnote explains that all programs provide services that do not generate a monetary return, including the timber program, which is modified to provide benefits for wildlife and plants that do not generate direct monetary returns (FEIS, p. 3-344).

Decision

I find the Daniel Boone NF RLRMP FEIS and ROD meet the basic requirements of NEPA, and the NEPA and NFMA implementing regulations, in the comparison of quantified and unquantified resources (identification of net public benefits), and in the estimation of the economic effects of the alternatives. I find no violation of law or regulation.

MULTIPLE-USE SUSTAINED-YIELD ACT and ORGANIC ACT

Contentions

Appellant contends the RLRMP relegates timber management to a “secondary objective” and does not make a commitment to provide the needed level of timber products from the forest, in violation of the Organic Act, MUSYA and NFMA (NOA #2110, pp. 1-2).

Discussion

The Organic Act and MUSYA generally guide the direction of national forest management, but they and their implementing regulations contain little in the way of specific requirements for land and resource management plans. The Organic Act establishes that, “as far as practicable,” national forests shall be controlled and administered for “securing favorable conditions of water flows, and to furnish a continuous supply of timber for the use and necessities of citizens of the United States” (16 U.S.C. 475).

MUSYA describes multiple use as “the management of all the various renewable surface resources of the National Forests so that they are utilized in the combination that will best meet the needs of the American People” (16 U.S.C. 531(a)). MUSYA recognizes that some of the land will be used for less than all of the resources, while considering the relative values of all resources. Multiple-uses include outdoor recreation, range, timber, watershed, wildlife, and fish (MUSYA), and wilderness (NFMA).

While MUSYA provides for multiple uses on National Forest land, it does not require that all uses occur on or come from all acres, nor does it establish any particular priority of uses.

The RLRMP has an allowable sale quantity and long-term sustained yield for management of the timber resource (e.g., FEIS, pp. 2-35 to 2-36), satisfying the requirement for a continuous supply of timber. The ROD documents that the Regional Forester considered the various multiple uses of the Forest, and selected Alternative C-1 for implementation because he felt it best meets the needs of the American people (ROD, pp. 5-20).

Decision

The Regional Forester considered all Daniel Boone NF resources, the values of those resources, and the needs of the American people in reaching his decision. I find no violation of law or regulation.

ENDANGERED SPECIES ACT

Contentions

Appellant contends the Biological Assessment (BA) does not adequately consider the impacts to aquatic threatened and endangered (T&E) species (NOA #2108, pp. 55-56), and fails to address the effects on listed species of oil and gas leasing decisions, the riparian prescription, and coal mining (NOA #2108, p. 200). Appellant contends that the lack of quality or necessary information renders PETS findings and direction in the FEIS and BA inadequate (NOA #2108, pp. 195-196, 209-212, 227). Related contentions pertain to FWS consultation requirements (NOA #2108, pp. 56, 232). Appellant also contends that both the analysis of, and direction for, Indiana bats is inadequate and violates the ESA (NOA #2108, pp. 200, 203-209, 213). Appellant contends the Forest Service failed to give “top priority” to the Indiana bat (NOA #2108, pp. 233-234).

Note: A number of “Endangered Species/Indiana Bat” contentions from NOA #2108 are directed at the FWS, not the Forest Service, and aren’t summarized here. These are found on all or part of pages 200-202, 213-225, and 228-232 of that appeal.

Discussion

Section 7(a)(1) of the Endangered Species Act (ESA) requires that “[a]ll other Federal agencies shall, in consultation with and with the assistance of the Secretary, utilize their authorities in furtherance of the purposes of this chapter by carrying out programs for the conservation of endangered species and threatened species.” Section 7(a)(2) of the Act requires that “[e]ach Federal agency shall, in consultation with and with the assistance of the Secretary, insure that any action authorized, funded, or carried out by such agency . . . is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of habitat of such species.” The implementing regulations of ESA provide direction to agencies on the consultation procedures that must be followed when dealing with listed or proposed species, and designated or proposed critical habitat (50 CFR 402). Requirements for biological assessments (BAs) are listed in 50 CFR 402.12.

The appellant contends that “despite the fact that the Daniel Boone has 32 Threatened and Endangered Species and 71 Regionally Sensitive species . . . the Plan includes objectives

and standards for only two species, the Indiana bat and white-haired goldenrod” (NOA #2108, pp. 227). Forest Service manual direction requires only that standards, guidelines and prescriptions be specified to meet habitat goals and objectives for endangered, threatened, and sensitive animal and plant species, not that each species have its own standards and guidelines (FSM 2670.21). As noted in the RLRMP “some resource areas, such as . . . Threatened and Endangered species, receive very specific direction from law, regulation, policy, Forest Service directives, and other sources such as recovery plans. If a particular resource does not appear to be fully addressed in this plan further direction will most likely be found in the above sources. Reference to many of these may be found in Appendix B” (RLRMP p. 2-1). The RLRMP includes goals, objectives and prescriptions for the benefit of endangered species (pp. 2-5 to 2-10, 2-20 to 2-25, 3-6 to 3-14 and 3-25).

The appellant contends that the RLRMP should incorporate a commitment to consult with the FWS at the project level (NOA #2108, pp. 56). However, project level consultations are already required by Section 7 (a)(2) of the ESA and by 50 CFR 402; the FEIS notes that “consultation with the [FWS] is conducted prior to project implementation (p. 3-201). The BA states that “the direction in the DBNF Revised Forest Plan is general and does not preclude or replace the requirement for site-specific, project level consideration of threatened, endangered, or proposed species or their proposed habitat and further consultation, as necessary, with the [FWS]” (BA, p. 4).

The appellant claims that the BA does not adequately consider the impacts to T & E species. They further claim that the BA fails to address the effects on listed species of: oil and gas lease-availability decisions, the riparian prescription, and coal mining (NOA #2108, p. 200). The BA for the Daniel Boone RLRMP “addresses expected programmatic effects associated with the revised Forest Plan under the preferred alternative (Alternative C-1) only. Relative effects of alternatives on federally listed species can be found in the Revised Forest Plan FEIS.” (BA, p. 4) The contents of a BA are at the discretion of the Federal Agency (50 CFR 402.12f). Further, there is no requirement that a BA disclose the effects of every management activity that could occur upon implementation of a revised LRMP.

A review of the BA (pp. 7-48) demonstrates that the direct and indirect potential effects for each species including effects of mining, riparian prescriptions, and prescribed fire where appropriate were disclosed. Effects related to proposed, endangered and threatened species from general management of minerals (which includes oil and gas leasing) are displayed in Table 3-59 of the FEIS (p. 3-204).

The general effects of oil and gas leasing availability decision are discussed in the *Minerals* section in Chapter 3 of the FEIS (p. 3-80), which states: “The designation of acres as available for oil and gas leasing does not cause a direct effect to those acres. That decision only authorizes the BLM to issue leases for those acres under standard lease terms and subject to additional constraints.” Before any subsequent oil and gas exploration or drilling can occur, project level environmental analysis and site-specific Section 7 consultation is required. As stated in the BA “All actions authorized and proposed under the Revised Forest Plan are subject to second level, site-specific analysis and subsequent ESA Section 7 consultation with the [FWS] through the BA/BE process” (BA, pp. 7-48).

The appellant claims that the analysis of, and direction for, Indiana bat is inadequate and in violation of the ESA (NOA #2108, pp. 200, 203-209 and 213). An analysis for the Indiana bat is included in the BA (pp. 7-12). The ESA determination for the Indiana bat was “may effect—likely to adversely affect” (BA, p.12). The Forest Service issued supplemental information to the BA with regards to effects on the Indiana Bat from green tree cutting activities, prescribed burning, and salvage and sanitation (Supplemental Information Reports, 23 January 2003, 15 January 2003 and 23 January 2004). The FWS issued a BO for the RLRMP and its effects on the Indiana bat and concluded that implementation was not likely to jeopardize the continued existence of the species.

The appellant also contends the Forest Service failed to give “top priority” to the Indiana bat (NOA #2108, pp. 233-234). One of the significant planning issues (Issue 4) of the RLRMP addressed the recovery and protection of endangered, threatened and sensitive species (FEIS, p. 1-20). Consistent with this focus, the Regional Forester emphasized the importance of federally proposed, endangered and threatened species in the ROD. Concerning the Indiana bat, the Regional Forester stated:

Even with an emphasis on protection of PET and Sensitive species, conflicts can still occur. Such is the case with Indiana bat. Some of the management activities, specifically cutting certain trees and using managed fire during particular times of the year, that are necessary for achieving other important objectives carry some small potential to harm individual bats. For this reason, we entered into formal consultation with the U.S. Fish and Wildlife Service so that they could provide us with their opinion on the potential to do harm and provide us with any other measures that might be necessary to ensure that the continued existence of the species is not jeopardized. Those measures are described in the Biological Opinion for the Revised Forest Plan (ROD, pp. 9-10).

Decision

The BA for the Daniel Boone RLRMP complies with ESA regulations, and the Forest has met its Section 7 obligations for the Indiana bat. I find no violation of law, regulation or policy regarding endangered and threatened species.

WILD AND SCENIC RIVERS ACT

Contentions

Appellant contends that the FEIS does not demonstrate how mining activity in four proposed wild and scenic river corridors or the Red Wild and Scenic River (WSR) may be compatible with wild and scenic river attributes (NOA #2108, p. 118).

Discussion

Section 5(d)(1) of the Wild and Scenic Rivers Act requires federal agencies to “give consideration . . . to potential national wild, scenic and recreational river areas” in their planning processes. Protection of these agency-identified study rivers is through agency policy (FSH 1909.12, 8.12 and 8.2) and not by the Act. This policy requires, to the extent

the Forest Service is authorized under other laws, that the free-flowing character, outstandingly remarkable values and classification be protected through direction in the RLMRP.

Forest Service regulations (36 CFR 228) govern new mineral activity or existing mining operations. Mineral activity within an agency-identified study river corridor “must be conducted in a manner that minimizes surface disturbance, sedimentation and pollution, and visual impairment” (FSH 1909.12, 8.2). The desired future condition, goals and objectives established in the RLMRP for these rivers includes direction to protect and enhance their free-flowing character, water quality and outstandingly remarkable values (RLRMP, pp. 3-55 to 3-56, 3-61 to 3-62, and 3-64 to 3-65). In addition, development of federally owned oil and gas on the wild segment of Marsh Creek is subject to a “no surface occupancy stipulation” to prevent occupancy and thereby protect river values (RLRMP, pp. 3-51 and 3-57). Federally owned oil and gas on the scenic and recreational segments of these rivers is subject to a “controlled surface use stipulation” to resolve potential conflicting uses or meet visual quality objectives (RLRMP, pp. 3-51, 3-63 and 3-66).

Protection for the Red WSR, which was added to the National Wild and Scenic Rivers System in 1993, is directed by the Wild and Scenic Rivers Act. Specific to mineral activity, Section 9(a) directs that, subject to valid existing rights, the minerals located on federal lands within the bed or banks or 1/4 mile of the banks of any designated *wild* river are withdrawn from all forms of appropriation under the mining laws and from the operation of the mineral leasing laws. The RLRMP identifies the wild segment of the Red WSR as “lands statutorily unavailable for mineral leasing or permit” and proposes to manage the wild segment of Marsh Creek similarly – by restricting surface disturbance during mineral exploration or prohibiting surface occupancy if developed (RLRMP, pp. 3-48 to 3-49, and 3-57). The Wild and Scenic Rivers Act does not withdraw river segments classified as scenic or recreational from mineral activity. Mineral leasing in the recreational segment of the Red WSR is regulated by various mineral leasing acts and 36 CFR 228 to meet, to the extent possible, the nondegradation policy of Section 10(a) of the Wild and Scenic Rivers Act. For the recreational segment, the RLRMP directs that “the surface is not to be disturbed during any federal mineral exploration or development activity” and includes a “no surface occupancy stipulation” (RLRMP, pp. 3-60).

Decision

I find the RLRMP provides specific direction for agency-identified study rivers and the designated Red WSR for protecting river values from the potential adverse effects of mineral activities. I find no violation of law, regulation or policy.

USDA AND FOREST SERVICE MANUALS AND HANDBOOKS

FSM 7710 – Transportation Atlas, Records, and Analysis

Contentions

Appellant contends the Roads Analysis Process (RAP) for the Daniel Boone LRMP was not conducted according to the Forest Service Transportation Policy (NOA #2108, pp. 149-

153), and was not used as intended by that policy (NOA #2108, pp. 153-157). Appellant also contends that some issues concerning roads, such as road densities, have not been addressed, and that the RAP was not subject to public participation, as directed by the policy (NOA #2108, pp. 147-150).

Discussion

The Forest Service “Road Management Policy” is contained in regulation, 36 CFR 212 – Administration of the Forest Transportation System, and Forest Service policy, FSM 7710 – Transportation Atlas, Records, and Analysis. 36 CFR 212.5 includes requirements for identifying “the minimum road system needed for safe and efficient travel and for administration, utilization, and protection of [NFS] lands” through the incorporation of “a science-based roads analysis” (§ 212.5(b)(1)). Identification of the minimum road system is a multi-level analysis process which requires additional project scale analysis following the forest plan level RAP. FSM 7712.13 discusses the multiple scales at which roads analysis may be conducted to inform road management decisions. FSM 7712 provides more detail on conducting and documenting the transportation analysis, which for an LRMP revision is done at a forest-wide scale (FSM7712.12a).

The RAP for the Daniel Boone NF is consistent with this direction. The RAP states: “Since this is a broad forest-scale analysis, specific roads or units are not analyzed. The road system as a whole was reviewed. Site-specific improvements will be identified at a more appropriate scale” (p. v). Site specific information may include standards for decommissioning, specific construction or maintenance costs, and road density information (FSM 712.13c).

During Step 3 of the analysis process, “Identifying Issues,” the interdisciplinary team identified 14 issues relevant to the RAP. These included roads-related issues identified during scoping for the LRMP revision, input from public workshops (August 1998, November and December 2001), and correspondence (RAP, p. 14). The RAP is not a NEPA decision document and is not bound to NEPA public scoping requirements (FSM 7712.11). The issue-related recommendations and opportunities identified in the Daniel Boone RAP were incorporated into the Forest-wide Goals and Objectives of the RLRMP under Goal 12 (RLRMP, p. 2-16).

The RAP also explains that classified roads were inventoried and mapped in accordance with FSM 7713(b); this information is available at the local Forest Service office (see 36 CFR 212.2). The effects of temporary roads are discussed in several places in the FEIS (e.g., pp. 2-43, 3-25 and 3-31).

Appellant also contends the LRMP ignores “significant” economic findings of the RAP (that funding is insufficient to maintain the existing system roads) (NOA #2108, pp. 155-157). Program funding levels (e.g., engineering, timber, recreation, etc) for each alternative are displayed in FEIS Appendix B (p. B-5). Funding levels for specific activities under each program (such as road maintenance) are not addressed at the LRMP scale.

Decision

I find that the Daniel Boone conducted a roads analysis which adequately addressed the transportation system at the Forest scale, was appropriately used to inform the Land Resource Management Plan, and used a reasonable approach to identifying issues and involving the public in conformance with 36 CFR 212 and FSM 7710.

FSH 1909.12, Chapter 7 – Wilderness Evaluation

Contentions

Appellant contends the RLRMP roadless area evaluations and recommendations violate law, the NFMA regulations, and Forest Service Handbook direction (NOA #2108, pp. 113-118) Appellant specifically contends the LRMP allows activities that will negatively impact wilderness values in the Wolfpen roadless area, and that with the exception of Wolfpen, the evaluation of roadless areas falls short of the detail required by FSH 1909.12.17.

Discussion

The 1964 Wilderness Act (P.L. 88-577), NFMA Regulations, and FSH 1909.12 provide specific direction for the inventory and evaluation of roadless areas for identifying and evaluating potential wilderness. The Wilderness Act provides the detailed definition of wilderness. 36 CFR 219.17 (July 1, 1998) requires that roadless areas within the National Forest System be evaluated and considered for recommendation as potential wilderness during the forest planning process. This regulation states that areas subject to evaluation include those areas previously inventoried in RARE II, a unit plan, or in a forest plan, which remain essentially roadless and undeveloped. Other essentially roadless areas may be subject to evaluation at the discretion of the Forest Supervisor. This regulation also requires that for each area subject to evaluation, the determination of the significant resource issues shall be developed with public participation.

FSH 1909.12, Chapter 7-Wilderness Evaluation, specifies a multi-step process for identifying and evaluating potential wilderness. This includes criteria, consistent with the Wilderness Act, for identification of roadless areas qualifying for placement on the inventory of potential wilderness. Roadless areas qualify for placement on the inventory of potential wilderness if they meet the definition in section 2(c) of the Wilderness Act. Areas may contain less than 5,000 acres if they meet certain criteria. FSH 1909.12, 7.11b contains additional criteria by which roadless areas east of the 100th meridian not otherwise meeting the Wilderness Act definition may qualify for inventory as potential wilderness.

FEIS Appendix C, Roadless Evaluation, describes the process used for evaluating roadless and undeveloped areas for consideration as potential wilderness (pp. C-1 to C-15). Areas identified for consideration included all areas identified in the 1991 Recreation Opportunity Spectrum inventory as semi-primitive non-motorized and semi-primitive motorized, and areas with few roads as indicated by Forest Administrative Maps. This process identified 12 areas for analysis. Additionally, five areas which are part of the Beaver Creek and

Jellico Mountain areas and were recommended by the public as potential wilderness were analyzed.

As shown in tables C-1 and C-2 (pp. C-3 and C-12) in Appendix C, Wolfpen Creek was the only area that qualified for the inventory of potential wilderness, and that was in turn evaluated for capability, availability, and need as wilderness. The reasons all other areas did not meet the criteria set forth in FSH 1909.12 for placement on the inventory of potential wilderness are clearly documented. Since these areas did not meet the criteria for placement of the inventory, no further evaluation was necessary.

Appellant contends that the LRMP allows activities that will negatively impact wilderness values in the Wolfpen roadless area. In the ROD the Regional Forester explains that the prescription for the Red River Gorge Geological Area, which contains the Wolfpen area, includes an objective to retain its roadless character (p. 18). Red River Gorge Geological Area Goal 7, Objective 7.A. states: "Retain the roadless characteristics of the Wolfpen Inventoried Roadless Area between Clifty Wilderness and State Route 77" (p. 3-68). The FEIS discusses effects of not designating Wolfpen as a Wilderness Study area: rock climbing and rock bolted climbing routes would increase along with the potential for more trail construction to accommodate access for the various types of recreation use found in this area (p. 3-273).

Decision

I find the Regional Forest complied with law, regulation and policy in considering and identifying areas for inclusion on the inventory of potential wilderness, and evaluating for wilderness suitability.

USDA Handbook 701 – Landscape Aesthetics: A Handbook for Scenery Management

Contentions

Appellant generally contends the RLRMP does not adequately protect scenery and aesthetic resources, and fails to follow Handbook direction for scenery management (NOA #2108, pp. 138-147).

Discussion

The Forest Service uses the Scenery Management System (as described in "Landscape Aesthetics: A Handbook for Scenery Management," USDA Agriculture Handbook No. 701) to conduct scenery resource inventories for land and resource management plans. The NFMA regulations require that: "Management prescriptions for definitive land areas of the forest shall include visual quality objectives" (36 CFR 219.21(f)). Under the Scenery Management System (SMS), which has replaced the system in effect at the time the 1982 planning rule was written, visual quality objectives are now called scenery integrity objectives (SIOs) but carry a similar meaning. When an alternative is selected as the revised forest plan, the scenic integrity levels assigned to the various management areas become the SIOs. The FEIS discusses scenery and the scenery management system, and displays the assignment of SIOs by prescription, and the forest-wide results on scenery

management by the prescription allocations of each alternative (pp. 3-315 to 3-323). This discussion shows that the general Handbook requirements have been followed.

Appellant makes two specific contentions. The first is that “a disproportionately high percentage of the Daniel Boone NF is assigned to the ‘low’ scenic integrity objective (2108, pp. 138-140). Presumably appellant is referring to Alternative C-1, the Selected Alternative. In this alternative 395,375 acres, over 50 percent of the Forest, have a low SIO (FEIS, p. 3-320). This is not due to “assigning” the objective of low to large portions of the Forest, but results from the allocations of prescription areas. In fact, 383,741 of these acres are within Prescription Area 1.K. – Habitat Diversity Emphasis. Prescription Area 1.K. represents the “matrix of diverse habitats” that unites the Forest landscape, and “is managed for the purpose of maintaining biodiversity” (RLRMP, p. 3-31). The two goals of this prescription area are to maintain a variety of habitat conditions, and to develop and maintain over 100,000 acres of forest, woodland and wooded grassland in various mixtures “within a fire-mediated system” (RLRMP, pp. 3-35 to 3-36). A low SIO appears reasonable given these goals. Alternative C-1 also has 236,740 acres with a high SIO.

Appellant also contends that it is not demonstrated that prescriptions and mitigation measures adequately protect scenic and aesthetic values (NOA #2108, pp. 144-145). All forest areas are managed according to the SIOs assigned to particular prescription areas, following very specific and detailed guidelines from the Scenery Management Handbook. Evaluating the effectiveness of this USDA Handbook is outside the scope of the RLRMP.

Decision

The Daniel Boone NF has met the basic requirements for the Scenery Management System, and I find no violation of policy.

REGIONAL DIRECTION

Old-growth Guidance

Contentions

Appellant contends the LRMP and FEIS fail to comply with Regional Guidance for protecting and restoring old-growth forests (NOA #2108, pp. 119-136).

Discussion and Decision

There is no explicit requirement in NFMA, the NFMA regulations, or Forest Service policy that LRMPs address old growth. The Region 8 old growth guidelines (“Guidance for Conserving and Restoring Old-Growth Forest Communities on National Forests of the Southern Region,” 1997) provide a process for forests to consider when addressing old growth in forest planning. Guidelines are advisory only, and do not have the force of law, regulation or FSM direction.

The Daniel Boone NF RLRMP lists the guidance as one of the sources that helped guide its development (RLRMP, p. 1-2). The FEIS identifies old growth as one of the issues for the

LRMP revision process (FEIS, p. 1-18). The FEIS discusses old growth and the effects of various alternatives on old growth, including potential and future old growth and connectivity (FEIS, pp. 3-89 to 3-102). Areas identified as containing potential old growth will be field inventoried (FEIS, p. 3-93). The RLRMP establishes goals, objectives and standards for old growth (LRMP, pp. 2-7, 2-26 to 2-27, and 3-27), and; Prescription Area 1.I. is established and managed for designated old growth (LRMP, pp. 3-26 to 3-28). Forest RLRMP monitoring questions 2, 3 and 4 (pp. 5-5 to 5-6) address old growth related components of the ecosystem.

There are no requirements of law or regulation specifically pertaining to the management of old growth. The RLRMP includes vegetation management practices by vegetative type in accordance with regulation, and evaluates the old growth resource as appropriate for an identified planning issue.

Watershed and Riparian Area Guidance

Contentions

Appellant contends that Regional direction for watersheds and riparian areas has not been followed (NOA #2108, pp. 45-53, 194-195).

Discussion and Decision

The riparian management direction provided by the Region 8 Regional Office (“Riparian Management Prescription for the Southern Appalachian Draft Revised Forest Plans,” November 9, 2001) was the basis for much of the watershed and riparian management direction in the RLRMP. The Daniel Boone NF adopted several Prescription Areas and Forest-Wide Goals, Objectives and Standards proposed by the Region, including Riparian Corridor 1.E. and Source Water Protection 5.C., and Forest-wide Goals 3 (watershed restoration), 3.1 (instream flows) and 3.2 (ephemeral stream channels).

However, the intent of the Regional guidance was not to provide or dictate all possible prescriptions, and goals, objectives and standards, but for the forests to use what was relevant to the specific resource issues identified for individual forests. The forests were instructed to identify the various 5th order watersheds and to describe their existing settings, desired future condition, and goals, objectives and standards in the RLRMP. It is clear from a review of the RLRMP that the Daniel Boone NF complied with this direction.

ADDENDUM – LIST OF APPELLANTS

<u>Appeal #</u>	<u>Appellant</u>
#04-13-00-2108	Wildlaw Ray Vaughan
#04-13-00-2110	Kentucky Forest Industries Association et al. Feldman, Wonn, Henson and Wengart