



Mark Twain National Forest Notice of Intent

CAT
Content
Analysis
Team

Summary of Public Comment

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September 16, 2002

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Executive Summary

Introduction

The following is a summary of public comment received by the Mark Twain National Forest (MTNF) regarding its Notice of Intent to revise the MTNF Land and Resource Management Plan (forest plan). The comment period was April 16 to August 2, 2002. The MTNF received 605 responses, including letters, e-mails, and public meeting comment forms. These responses have been analyzed using a process called content analysis, described below.

Although this summary and accompanying list of public concerns attempts to capture the full range of public issues and concerns, it should be used with caution. Respondents are self-selected; therefore their comments do not necessarily represent the sentiments of the public as a whole. However, this summary does attempt to provide fair representation of the wide range of views submitted. In considering these views, it is important for the public and decision makers to understand that this process makes no attempt to treat input as if it were a vote. Instead, the content analysis process ensures that every comment is considered at some point in the decision process.

Content Analysis Process

Content analysis is a method developed by a specialized Forest Service unit, the Content Analysis Team (CAT), for analyzing public comment. This method employs both qualitative and quantitative approaches. It is a systematic process designed to provide a mailing list of respondents, isolate specific comments by topic in each response,¹ evaluate similar comments from different responses, and summarize like comments as specific concern statements. The process also provides a relational database capable of reporting various types of information while linking comments to original letters.

Through the content analysis process CAT analysts strive to identify all relevant issues, not just those represented by the majority of respondents. The breadth, depth, and rationale of each comment are especially important. In addition to capturing relevant factual input, analysts try to capture the relative emotion and strength of public sentiment behind particular viewpoints in order to represent the public's viewpoints and concerns as fairly as possible. CAT analysts organize the concern statements to facilitate systematic review and response by decision makers.

Document Overview

The Executive Summary begins with general background information on the MTNF Notice of Intent, proceeds with a general overview of public comment on the Notice of Intent, and follows with a discussion of respondents' comments on specific topics. This summary is not intended to provide an exhaustive account of public concerns; it is intended only to give a general discussion of the main themes running through public comment. For detailed concerns and site-specific comments, see the public concerns chapters.

¹ Responses refer to single, whole submissions from respondents—e.g., letters, e-mails, faxes, presentations at public meetings, etc. Comments refer to identifiable expressions of concern made within responses.

Following this summary is a formal list of public concerns identified during the content analysis process, organized topically into five chapters: **Chapter 1, Process and Planning**, includes general comments on the forest plan revision process, including public involvement; **Chapter 2, Forest Management**, includes comments on forest management in general, as well as comments on forest health management, fire management, management areas, and land use; **Chapter 3, Forest Activities**, includes comments on transportation system management and recreation management; **Chapter 4, Forest Natural Resources**, includes comments on natural resource management in general, as well as comments directed specifically to management of timber resources, mineral resources, and rangeland resources; and **Chapter 5, Forest Values**, includes comments on environmental values and heritage resources.

Each of these chapters is subdivided into sections. Some of the section headings are preceded by parentheses in which appear the initials RT, followed by the number 1, 2, 3, 4, or 5—(RT1), (RT2), (RT3) (RT4), or (RT5). RT stands for revision topic, and the numbers refer to the five revision topics identified by the MTNF in the Notice of Intent (see the following section, Project Background).

Within each section, each formal statement of concern is accompanied by one or more sample comments which provide respondents' specific perspectives and rationales regarding that concern. For each sample comment a letter number is provided, enabling the reader to track and review the original response, if necessary. This formal list is intended to capture the full range of concerns regarding this project; however, it is not intended to obviate the need for decision makers to review the database report and original responses separately. Its primary purpose is to provide a topical review of voluminous comment in a format that aids in careful consideration and agency response.

Project Background

The MTNF proposes in its Notice of Intent to prepare an environmental impact statement (EIS) to revise its existing forest plan to meet legal and regulatory requirements, and to reflect the changed conditions and new information that has emerged since adoption of the current forest plan in 1986.

Based upon review of the existing forest plan in conjunction with changed land conditions and public demands, changed agency policies and strategic priorities, results of monitoring and evaluation, new information, and suggested changes by those interested in management of the MTNF, the MTNF proposes that the forest plan revision will focus on improving management in the following areas, referred to as revision topics: RT1) vegetation and timber management; RT2) ecological sustainability and ecosystem health; RT3) fire management; RT4) management area boundaries and prescriptions; and RT5) riparian management.

These topics are addressed in the accompanying chapters as follows: ecological sustainability and ecosystem health, fire management, and management area boundaries and prescriptions are all covered in Chapter 2; timber management is covered in Chapter 4; and vegetation and riparian management are covered in Chapter 5.

General Overview of Public Comment

Public comment on the MTNF Notice of Intent is far-reaching, often highly detailed, and represents a wide range of values and perspectives with respect to public land management in general and management of the MTNF in particular. Given this wide range of values and perspectives, only broad generalizations are possible.

In general, those who comment fall roughly into two groups: those who tend to emphasize preservation and protection of forest natural resources, and so request greater restrictions on various human uses; and those who tend to emphasize motorized access to and traditional use of forest lands, and so request either fewer or at least no additional restrictions. The distinction between these two groups is not absolute. The former group also values access and use; while the latter group also expresses concern for forest protection. Virtually everyone who comments on the MTNF Notice of Intent cares about the condition of the MTNF and about the value it has to users of all types. The difference is one of emphasis, and this often revolves around each group's perception of the nature and degree of effects caused by human activities.

This difference in emphasis is reflected in the preferences people voice regarding the general management philosophy that ought to guide the MTNF. The preservation-oriented group favors ecosystem/restoration management: they stress preservation of natural processes and landscapes, ecosystem protection, and restoration of degraded areas. The use-oriented group favors multiple use management which, under their interpretation, allows much more active management of forest resources, allows traditional levels of commodity development and grazing, and allows widespread motorized recreation.

These different perspectives drive the comments people offer on virtually every topic. The single most frequently mentioned topic in public comment, however, is off-road motorized recreation. Preservation-oriented respondents frequently request that off-road motorized recreation either be restricted or prohibited; these requests comprise the majority of comments on this topic. Use-oriented respondents request that motorized recreation either be allowed or at least not be further restricted.

Those who ask that off-road motorized recreation be restricted appeal primarily to environmental and social considerations. According to these respondents, motorized recreation causes erosion and degrades the environment, damages watersheds, produces noise and air pollution, and disrupts wildlife. The noise and exhaust, they say, also disrupts non-motorized recreationists who go to the forest to escape from urban life and find solitude in quiet, pristine landscapes—and so leads to significant user conflicts. These respondents also say that restrictions will not negatively affect motorized users inasmuch as there are already so many areas open to them.

Those who ask that off-road motorized recreation not be restricted argue that it does not harm the environment. While some people violate motorized boundaries and engage in behavior that is harmful to resources, they say, that is no reason to restrict all users. Beyond that, these respondents appeal primarily to social and economic considerations. They say that motorized recreation has become a much loved family tradition, one that family members of all ages and physical abilities can enjoy. They argue, moreover, that this is public land and that as taxpaying citizens they have a right to use it; and that in fact more areas should be opened up to relieve congestion. Further, they maintain, motorized recreation contributes significantly to local economies.

Other frequently discussed topics in public comment are timber and mineral management, wildlife, and water resources. Comment on these topics mirror that on off-road vehicle recreation in that the majority of respondents request that forest management emphasize greater protection of resources. With respect to timber and mineral management, most respondents express the general sentiment that these activities should be reevaluated and restricted due to their effects on other resources. Some assert, however, that these activities are not harmful if carried out wisely and that timber harvest, in particular, is an essential component of forest management. With respect to wildlife and water resources, virtually all who comment on these topics believe these resources should be protected; the difference of opinion lies in the perceived effects of various activities on these resources.

As noted above, public comment on the MTNF Notice of Intent is far-reaching and represents a wide range of values and perspectives. All in all, respondents are bound by their desire to see the forest maintained and preserved in a healthy state. They all want clean water, healthy vegetation, and secure, productive habitat for both aquatic and terrestrial species. They all value the forest for the recreational opportunities it affords them and for the legacy it represents to future generations. They are divided, however, in their perception of how developed activities of every sort affect these values, and thus in their perception of the type of management best suited to preserve them. These different perceptions inform respondents' comments on virtually every topic.

Overview of Comment on Specific Topics

Revision Process General

Several respondents write that they agree it is time to revise the forest plan for the MTNF. Some, however, express concern over how the MTNF has been managed in the past and specifically ask the ID team to "put together a management plan that truly reflects the public interest," not one that just serves political or corporate interests.

Numerous people urge the MTNF not to exclude certain topics from consideration. As one respondent puts it, "No issue relevant to forest management should be excluded from consideration in the revision process." Respondents charge that limiting the scope of revision violates National Forest Management Act (NFMA) and National Environmental Policy Act (NEPA) requirements to revise the whole forest plan, not just part of it; to openly and fairly review all issues; and to present a reasonable range of alternatives. People argue as well that the MTNF has too often deferred consideration of publicly raised concerns; that the present forest plan has actually expired, thereby necessitating consideration of all relevant topics; and that the MTNF should consider recent data and public concerns regarding the topics it has identified for exclusion. Among the specific topics respondents say should be considered are cultural and historical resources, transportation, monitoring, scenery management, mining, and threatened and endangered species. On the other hand, a few respondents state that the MTNF is correct in not including mining and threatened and endangered species as revision topics as they feel these topics have already been adequately addressed.

Public Involvement

A few respondents express concern over the incorrect e-mail address posted in the Notice of Intent. According to one writer, “we asked the Forest Service to send out a revised Notice of Intent to correct the error in the Notice of Intent. The Forest Service has not done this. This has prevented adequate public participation.” Another asks the MTNF to “please explain your agency’s inaction on this issue.”

Aside from that point, most who address public involvement ask the MTNF to pay serious attention to public input into the forest plan revision process. One individual comments, “I understand you are very busy, but it is necessary for you as a public servant to listen and respond to public concerns and suggestions.” Another writes, “We suggest that the team take a conscientious look at the original purposes of the agency when Congress set National Forest Lands aside for the people of the United States. We caution the team against forgetting that the citizens own the public lands—not the Forest Service, not industry and not the current political administration—the National Forests belong to all of the citizens of the country. Citizen input and democratic process should be paramount in the task of revising the LRMP.”

Forest Management General

One request relevant to general forest management is that the MTNF provide the public with a forest acreage summary “listing the current total acreages of MT Forests in each of the varied management prescriptions.” Others ask the MTNF to protect and increase the size of the larger tracts of forested areas in order to prevent fragmentation and to provide habitat for species requiring large tracts.

Forest Health Management

(RT 2) Ecological Sustainability and Ecosystem Health

Numerous respondents assert that the MTNF should promote forest ecosystem health and sustainability. Notes one respondent, “The Forest Service should adopt techniques and policy that seek to assist in the recovery of the natural integrity of the ecosystem to the point where natural processes can function unencumbered and without negative effects outside the natural range of variability.” Many argue simply that “emphasis should be to restore forest habitats to their historically native species.” Several suggest in particular that “Missouri has few pristine areas left, and the forest, wildlife, and public could best be served by ecological restoration of glades and savannas.”

(RT 3) Fire Management

Fire Management General

General concerns regarding fire management are varied. One individual asserts that “the Forest Service takes contradictory attitudes toward fire, considering it a hazard that must be mitigated by logging (such as with the recent tornado blow-down) and as a necessary part of the environment that must be applied by humans. This contradiction is of concern, and opens the Forest Service to criticism that it is more interested in ‘management’ than in achieving a healthy

ecosystem.” Other respondents urge the MTNF to address issues surrounding fire fighting, and to work with adjacent landowners and communities in promoting fire safety measures.

Adequacy of Analysis

A number of respondents raise concerns over the adequacy of analysis regarding fire management. Some state that the MTNF should scientifically assess the history, scope, and ecological role of fire inasmuch as there is presently “little data . . . available to understand the impacts of fire on the forest.” Others urge the MTNF to present all studies and other information it is using in the application of fire on the forest inasmuch, some argue, as “there is wide discrepancy in the literature on the effects and necessity of fire in the Ozark region.” Likewise, say some, the MTNF should base the frequency and seasonal scheduling of prescribed fire on ongoing scientific studies.

(RT 3a) Prescribed Fire

The use of prescribed fire is a topic of concern to numerous respondents. People urge the MTNF to use fire to “emulate historic natural disturbance regimes as described under Major Revision Topic 3a;” to “restore and maintain [the] Ozark’s ecosystems” and thereby to restore biodiversity; to “restore some of the large scale communities that benefit from periodic fire;” and to “maintain healthy glades, forests, wildlife habitat, and to reduce fuel loads.” Some, however, caution the MTNF to use fire only on a limited basis, while a few say fire should not be used at all “since we in the Ozarks do not have the catastrophic fires of the northwest.”

(RT 4) Management Areas

Management Areas General

A number of respondents request that the MTNF protect special areas in the forest. Some ask the MTNF to set aside more land for special area designation—because over the last 16 years only one out of a list of 56 candidates has been elevated to special status, and because the public desires that more land be preserved in protective management designations.

(RT 4a) Boundaries and New Land-Type Associations

Several writers comment on boundaries and new land-type associations. Suggestions include basing management boundaries on national, regional, and local considerations; using the revised land-type association boundaries to delineate management areas; revising management unit area descriptions and boundaries according to the latest ecosystem based classifications; and describing a new management unit category for restoring significant native landscapes, one that “[targets] several areas where the best opportunity is presented for restoring the health and vitality of native natural landscapes (including sustainable timber practices)”

(RT 4b) Special Area Allocations

With respect to special area allocations, a number of respondents express specific concern over the management of roadless areas. Some urge the MTNF to inventory roadless and contiguous areas. Others argue that the MTNF should not inventory roadless areas at all as part of the forest plan revision process; these respondents assert that when the court enjoined the Roadless Area

Conservation Rule it also enjoined the section of the planning rule which the Forest Service is relying on in requiring roadless area inventories. Still others assert that the MTNF should inventory only those roadless areas identified during the original roadless area review, not those identified since.

Many respondents ask the MTNF to protect roadless areas. Some say simply that the MTNF “should strive to maintain the integrity of all unroaded areas, no matter how small in size.” Others point to characteristics of roadless areas as justification for their protection—e.g. that they serve as models of habitat restoration, are resistant to fire and invasive pests, provide refuge for endangered species, and are important both for recreation and their existence value. A number of people also urge the MTNF to manage roadless areas as wilderness areas and to recommend roadless areas to Congress for wilderness designation.

Some also advise the MTNF to recommend more areas in general for wilderness designation—some suggest recommending greater amounts of contiguous acreage, others suggest recommending the entire forest.

Finally, respondents also offer comment regarding wild and scenic river designations. Some ask the MTNF to review standards and guidelines for managing wild and scenic rivers to see whether they should be tightened based on past implementation; other ask the MTNF to recommend high quality rivers for inclusion in the wild and scenic river system. Several respondents express particular concern over the need to protect the Eleven Point River. Notes one individual, “I have been on many wonderful rivers in the state, but this remote, scenic, and wild river surpasses them all in natural beauty and ruggedness. With this in front of us, I know no one would purposely or intentionally destroy or damage it. We must protect what we cannot re-create!”

Land Exchanges

Of those who address land exchanges, most ask that they be carried out with a view toward enhancing the forest ecosystem. Respondents urge the MTNF to base its acquisition and exchange of tracts on the need to protect the long-term viability of ecosystems—by “[accelerating] the acquisition of inholdings, with priority given to ecologically sensitive areas;” and by “[acquiring] additional public lands that either provide a buffer to sensitive resources or establish habitat corridors between isolated tracts.” To that end, some suggest that “the Forest Service should be more aggressive in seeking out federal money for acquisition of lands that would help protect large areas of habitat or would establish corridors between such areas. Sources of funds such as the Land and Water Conservation Fund should be used and promoted to their fullest extent.”

Transportation System Management

Adequacy of Analysis

Several respondents request that the MTNF further analyze the effects of the road system on other resources. One suggestion is that the MTNF “[analyze] land capabilities, erosion, sediment, traffic levels, all-terrain vehicles, off-road vehicle use, enforcement, road use, road management, and maintenance in related fashion.” Another specific suggestion is that the MTNF “[study] and [evaluate] the economic and biological impacts of the current road pattern on the flora and fauna of Mark Twain National Forest”

Road Construction/Maintenance/Closure

Of those respondents who address the construction, maintenance, or closure of roads, the majority ask the MTNF either to restrict or prohibit any more road construction or to close roads. These writers assert that the current backlog of needed road maintenance and the negative effects roads have on other resources are sufficient grounds for foregoing more construction. A typical comment is that “roads . . . have a negative impact on water quality and wildlife habitat [and] have a negative impact on many aspects of forest ecology, contributing to mud slides and soil erosion. The erosion dumps silt into streams, degrading water quality, killing fish. . . . The Forest Service should not build any more roads; it should avoid road construction in both inventoried and un-inventoried roadless areas.”

Likewise, some urge the MTNF to close roads, particularly unclassified or non-essential roads. One suggestion is that the MTNF “attempt to provide budgetary emphasis on the installation and placement of physical closures (gates or berms) on unclassified roads.”

On the other hand, a few respondents ask the MTNF to upgrade main entrance roads to wilderness areas, and to keep roads open as they provide access for fire fighting.

Transportation Management

A number of respondents offer comment on such transportation management topics as road density standards and use of “closed unless posted open” signs. To a large extent, these remarks parallel those offered in connection with road construction/maintenance/closure. Some respondents assert that the MTNF should develop road density standards “because road densities and placement can have a significant impact on wildlife, recreation, water quality, and scenic beauty.” Likewise, others request that the MTNF reduce road density in sensitive areas both because of the maintenance backlog and because of attendant erosion.

Of those who address the use of “closed unless posted open” signs, the consensus is that they should be changed to “open unless posted closed.” Respondents argue that the use of these signs is counterproductive inasmuch as more dispersed riding areas are needed; that many roads that were once open have not been posted as open; that the current policy is unenforceable; that it is “inappropriate and or confusing as it contradicts all other normal and traditional marking of travel ways across the country;” and that the reversal of this policy would be more workable and acceptable to user groups.

Recreation Management General

Most general comments directed to recreation management stress the need to maintain access to the public and to place a high priority on recreation in the forest. “Recreation on the Mark Twain,” notes one individual in a typical comment, “is more important economically and more compatible ecologically to maintaining the forest health. Logging and recreation are not compatible and as such, weight should be given to recreation as a management priority on the Mark Twain National Forest.” Some caution, however, that “we must treat the land gently, with an emphasis on low-impact activities, so that wild inhabitants may survive.” Respondents also request that recreation fees not be increased, and suggest that volunteers be enlisted to maintain recreation areas.

Motorized Recreation

Motorized Recreation General

Respondents offer more comment on motorized recreation than on any other topic. Some offer general comments on this topic, without specific reference to off-road or other particular types of motorized vehicles. A few assert that the MTNF should “standardize the policy toward motorized recreation. This could be enhanced by a linked system of forest roads and trails that would allow non-street legal or younger riders.” Some say that semi-primitive non-motorized designations should be changed to semi-primitive motorized designations—because exclusion of motorized recreation from these areas is not justified, and because a changed designation is needed to alleviate congestion. Some respondents request that the MTNF continue to allow motorized events in the forest. In connection with this request, some specifically ask that the MTNF remove the speed restrictions attached to motor sports within the forest boundaries and instead assign such restrictions on a case-by-case basis.

On the other hand, a few respondents say the MTNF should restrict or prohibit all recreational vehicles on the grounds that they are “inherently destructive to unspoiled environments and aesthetically at odds with any natural place.”

Off-Road Vehicles

Of the respondents who address motorized recreation, most specifically address use of off-road vehicles; and public response on this topic is very divided. Some say simply that the MTNF should include off-road vehicle use as a major revision topic—because its inclusion is necessary to comply with NFMA and NEPA; because it meets the criteria for inclusion; and because off-road vehicle users pay taxes and license fees and therefore deserve to have their voices heard on this topic.

Beyond that, a number of respondents urge the MTNF to allow off-road vehicle use, and to open more trails for this use. According to one respondent, “The current amount of designated off road vehicle trails in the Mark Twain National Forest is not adequate. . . . It is time to document and provide additional trails for off road vehicles.” Another expresses “[disappointment] that with a metropolitan area of over 2.5 million people, there are only 26 miles of legal off road vehicle trails within a 200-mile radius of the St. Louis Metro area. The Mark Twain National Forest is falling woefully short on providing motorized recreation to a large number of tax paying citizens.”

The majority of those who address this topic, however, view off-road vehicle use differently. These writers say the MTNF should restrict or prohibit this use, and as justification for their view they often cite studies indicating the negative effects of these vehicles on the environment. According to one respondent, for example, “off road vehicle use in wetland ecosystems can affect substrates, water movement patterns, water depth, hydro-period, which, in turn, can impact the area’s fauna and flora (Duever 1995).” Another notes that “while . . . case studies provide an alarming picture of the adverse impacts of off-road vehicles on many wildlife species, off-road vehicles have also been documented to directly, indirectly, and cumulatively impact federally protected species.” Others cite their effects on vegetation and their role in spreading noxious weeds and exotic species.

These respondents ask the MTNF to impose strict limitations on off-road vehicle use—such as limiting use to authorized areas; not expanding or designating new off-road vehicle trails; and closing existing off-road vehicle trails. They also suggest restricting the use of these vehicles at higher elevations and in sensitive and roadless areas.

Off-Road Vehicles – Adequacy of Analysis

Several respondents request that the MTNF conduct further analysis on the effects of off-road vehicles. Suggestions include more careful monitoring; reassessing off-road vehicle areas; analyzing the effects on wildlife; providing a relative value analysis; and including the flow chart in the article “Hard Trails in Alaska” in the revised forest plan.

Snowmobiles

Although snowmobiling is not an activity that occurs on the MTNF, as winter conditions do not allow it, a few respondents address their remarks to that activity. These respondents assert that snowmobiles should be restricted or prohibited due to their negative environmental effects. Most frequently, respondents argue that snowmobile exhaust pollutes the air and disrupts normal biological functions in animals; and that snow compaction disrupts normal winter range patterns. As one respondent puts it, “Snowmobile use, other off-road vehicle use on snow, or trail grooming, which compacts the snow surface effectively limits the winter range of the animals, including subnivean wildlife, thereby fragmenting the animal’s habitat and adversely affecting the animal’s survival.”

Other Types of Motorized Recreation

Concerns expressed regarding other types of motorized recreation parallel those for off-road vehicle recreation. Some respondents encourage the MTNF to be more supportive of sport utility vehicles, saying they do not have the same effects as off-road vehicles and they are a means of family recreation in the forest. Other respondents request that the MTNF impose restrictions on other types of motorized recreation—that motorized watercraft be restricted or prohibited, particularly on wild and scenic rivers; and that mudding activities and swampbuggies be restricted due to their environmental effects (these are also activities which do not occur on the MTNF due to inappropriate conditions).

Other Types of Recreation

Camping and Equestrian Use

A few respondents ask the MTNF to facilitate camping by expanding and improving campground facilities. Additionally, several writers encourage the MTNF to keep equestrian trails open—because equestrian use is quieter than other types of permitted use; it benefits the economy; and keeping trails open will stop equestrians from accessing old paths and trails.

User Conflicts

Some respondents express the view that “one of the most contentious and controversial impacts of off-road vehicle use documented on many National Forests is the conflict created between off-road vehicle users and non-motorized recreationists,” and therefore the MTNF should directly

address this conflict. Some suggest that the MTNF should mitigate this conflict by allowing all uses on the forest and encouraging trail sharing, notwithstanding the demands of “extremists that do not want anyone except themselves in the Mark Twain National Forest.”

Trails Management

Some respondents comment generally that the MTNF should adequately maintain trails, and encourage the MTNF to cooperate with such agencies as the Missouri Department of Natural Resources as well as local and regional groups in constructing and maintaining trails. People comment specifically on the Ozark Trail—suggesting construction of more connecting trails and establishing hiker only sections in sensitive areas.

Natural Resources General

A number of respondents suggest that “a ‘non-commercial’ alternative option for the Forest should be developed. This option should explore the economic and ecological impacts of the non-commercial approach. The role of Forest Service management then becomes to adopt policies and techniques of assisting in the recovery of the natural integrity of the Forest to the point where natural processes can function unencumbered.” Others advise the MTNF to restrict or prohibit commercial development of natural resources. A typical comment is that “commercial exploitation of forests, through timber sales, and mineral, oil, and gas leasing, unavoidably lead to erosion and habitat destruction, and should be minimized as much as possible, if they cannot be eliminated.” Others encourage the MTNF to implement and/or encourage recycling programs as an alternative to natural resource development.

(RT 1) Timber Resources

Timber Resources General

The subject of timber management elicits a great deal of comment on the MTNF Notice of Intent. A number of respondents comment in general that the MTNF should end commercial timber sales. As one individual explains, “Commercial logging is not an appropriate use of the Mark Twain. It is a waste of taxpayer money, increases forest fire risk, and is a source of habitat destruction, water quality degradation for downstream human communities, and it adds complication to climate change issues through removing cooling tree cover, eliminating biomass that holds moisture in the local climate, and exacerbating local floods and droughts by eliminating the hydrological flow regulation provided by mature forests. No commercial logging should be allowed on the Mark Twain.” Some argue moreover that timber is not needed from public land inasmuch as private landowners are capable of meeting the country’s timber needs; and that foreign exportation of timber from the MTNF should be banned.

Adequacy of Analysis

Adequacy of analysis with respect to timber management is also a prominent topic among respondents to the MTNF Notice of Intent. Most commonly, people request that the MTNF analyze the effects of timber harvest on various resources. According to one writer, for example, “Forest Service research indicates dead and decaying wood accounts for about 25% of a forest’s biodiversity. The impacts of removing trees on this component of the forest ecosystem needs to

be considered.” Other resources respondents suggest should be scrutinized in relation to timber harvest include biodiversity, water resources, soil moisture as it affects climate, wildlife, interdependent species, bird species, the Indiana bat, the nutritional values of plants, the herbaceous understory, wood fiber waste, microorganisms, recreation and tourism, and taxpayer funds.

Respondents also express concern over costs associated with timber sales. Writers assert that “the Forest Service needs to include all costs and calculations [associated with timber sales] in the EIS and in its calculations,” and that it should “disclose how much of the income from the sale will go to pay the Deciding Officer’s and other Forest Service employees’ salaries and other administrative overhead.” Others argue that the MTNF should “consider [the] economic values of a standing forest such as carbon storage, flood prevention, watershed protection, tourism, recreation, mushroom gathering etc. and compare it to the economic value of stumpland for these factors.”

Timber Harvest

With respect to timber harvest per se, suggestions include using best management practices, using selective timber harvest techniques, using horses in timber harvest, and cutting timber back 70 to 80 feet from the highway for safety reasons.

(RT 1a) Suitable Lands and Allowable Sale Quantity

Several respondents agree that lands suitable for timber production should be reevaluated. A common remark is that “the reevaluation of timber suitability must consider the impact on local economies as well as any environmental impacts.” Others, however, stress that the reevaluation should consider environmental effects. People also encourage the MTNF to take intermediate and long-range projections of timber harvest levels into account in the forest plan revision. Notes one individual, “If the Forest Service manages the Mark Twain for early seral habitat, and as even-aged forests today, then it cannot be a reserve of mature, uneven aged habitat should management of private lands proceed as has been projected.” Additionally, some suggest reducing the allowable sale quantity by excluding riparian, roadless, and recreation areas from consideration.

(RT 1b) Even-Aged and Uneven-Aged Management

The commenting public expresses considerably different viewpoints regarding the topics of even-aged and uneven-aged management. A number of writers support even-aged management—for mast production, for purposes of measuring specific habitat conditions, and for the benefit of early-successional wildlife. One respondent explains, “While group-selection harvests can provide suitable habitats for some early-successional wildlife, they are typically of insufficient size to meet the needs of still other species (Thompson and Dessecker 1997).” Some caution, however, that “even-aged management should be reserved solely for area habitat conversions or other landscape management objectives.”

Others are adamant that “no clear-cutting or even-aged management should be allowed in the Mark Twain. Only low-impact, selective logging that protects the environment should be allowed;” and that even-aged management “should be abandoned entirely for commercial/commodity market operations.” These respondents advise uneven-aged

management, primarily through the use of selective harvesting. Several writers mention the Pioneer Forest “[as] a model of sustainability using the single-tree selection model.”

Mineral Resources

Mineral Resources General

A number of respondents assert that the MTNF should include the topic of mineral exploration and development in the forest plan revision. One respondent notes, for example, “We . . . do not believe that the current management direction is adequate, and we believe this amounts to a predecision without public involvement to continue current mining activities which are damaging the forest.” Others, however, state that “the Forest Service correctly determined that no changes are necessary to the minerals exploration management program outlined in the current Forest Plan. As the NOI states, the responsibility of the Forest Service in regards to mining is limited to the surface activities. Protection of the surface during mineral entry is adequately addressed by the existing plan.”

Others state that the MTNF “should remove forest-lands from consideration for mineral, oil and gas leasing,” at least in sensitive and roadless areas or until a cost assessment “of the true costs of the impact of minerals exploration and extraction of minerals” is completed.

Adequacy of Analysis

Most respondents who address the adequacy of analysis in relation to mineral exploration and development claim that more research is needed. One individual writes, “The agency has suggested that it need not look at the issue in the planning process because adequate protections exist for surface resources. We submit that evidence shows otherwise and we urge the team to: do their homework—look at the research; make field trips to witness the effects of mining; listen to the stories of the nearby residents—to reassess the ‘adequacy of protections’ to surface values of soil, water, wildlife, scenery and other resources.” People assert that more research is needed to foster public trust, to address karst topography, and to address the scenic rivers in the forest. Respondents also say more research is needed because the effects of mineral exploration were not adequately addressed in the past

Mineral Exploration and Development

A few respondents assert that “mining of all types should be allowed in the National Forests. They belong to all of us not just the environmentalists who make the most noise;” and that continued mining is needed to decrease foreign dependence.

The majority of those who address this topic, however, maintain that the MTNF should restrict or prohibit mineral exploration and development—primarily to protect water resources, in particular the water resources associated with Greer Springs and the Eleven Point District. A number of respondents specifically argue that the MTNF should restrict or prohibit lead mining. A typical comment reads, “Due to resultant degradation of water quality, wildlife habitat, and recreation opportunities, lead mining is not an appropriate use of the Mark Twain. Expansion of lead mining should be strictly prohibited.” Many are especially adamant that the Doe Run Company should not be allowed to operate in the forest. These people assert that the company’s

practices and history of pollution, particularly in Herculaneum, make it unfit to operate in the forest.

Rangeland Resources

Only a few respondents address rangeland resources. Suggestions include restricting or prohibiting livestock grazing in sensitive riparian areas and encouraging native grazers over traditional livestock grazers.

Environmental Values General

Environmental Values General

Numerous respondents comment that the MTNF should, in general, protect the forest environment—above the short-term profit of special interests and without consideration of political pressure. People stress that such protection is needed to accommodate the recreational needs of a growing population and to leave a legacy for future generations. Some assert that the MTNF should give more areas management prescriptions that favor preservation over timber commodity production, and that it should provide more emphasis and direction to encourage biodiversity. People also suggest that the MTNF should carry out restoration activities—to restore the forest to the condition it was in prior to commercial development, and to restore fragmented landscapes for the benefit of bird species.

Adequacy of Analysis

The adequacy of analysis with respect to environmental values in general is a frequent topic of comment. Specific types of analyses suggested by the public include regional landscape analyses, community-ecosystem analyses, population-species analyses, and genetic analyses. Some ask the MTNF to more adequately analyze biodiversity and forest fragmentation. According to one writer, “The analysis must define and measure biodiversity both in terms of the existing condition and the condition that would result if each of the alternatives is implemented. The analysis must consider the vulnerability, reduction from historical abundance, and the regional importance of all species in the project area. The analysis must use the pre-settlement condition of the project area as a benchmark for comparison with the existing condition and proposed changes to the project area. The analysis must consider the functional, structural, and compositional attributes of biodiversity. The analysis needs to evaluate the existing condition of biodiversity, and compare it with the natural range of variability.” Another respondent suggests that the MTNF collaborate with the Nature Conservancy in incorporating the Ozark Ecoregional Assessment data into the forest plan revision.

Climate and Air

Several respondents ask that the MTNF “include a thorough analysis of the effects of forest management on local, regional and global climate;” and that it analyze the effects of forest management on air—particularly with respect to air masses and to the forest’s carbon holding capacity.

Water Resources

Water Resources General

A number of respondents say the MTNF is right to include water resources as a revision topic in the forest plan revision. According to one individual, “Even though the Forest Service document, Assessment of the Need for Change . . . states that recent amendments to goals and management direction is adequate to protect and restore high quality waters and aquatic ecosystems, they do not. The amended goals and management directions are not adequate to protect or restore water quality, as evidenced by the continued degradation of water resources in Ozark streams administered by the MTNF. These waters are the most precious natural resource of the bioregion, and one of the most valuable public resources.”

Adequacy of Analysis

Suggested topics for further analysis in relation to water resources include cumulative effects, non-point source pollution, water migration, land-surface hydrology, and hydroclimatology. Additionally, some assert that the MTNF “has not seriously considered impacts from the current land use practices in the surrounding region. Conversion of private forested land to pasture land is increasing at an alarming rate. Increased cutting of trees on surrounding non-public lands to feed chip mills is of great concern. Existing burden of chemical and nutrient additions to the springs and streams of MTNF lands is already a threat to water quality. All of these impacts must be factored into any management alternative developed by the agency.”

(RT 5) Water Quality and Riparian Areas

Numerous respondents advise the MTNF to manage the forest with water quality in mind. Notes one individual, “It seems to me that the number one priority we should have in regard to this national forest is to minimize degradation of the forest environment as much as possible. One especially important aspect of this degradation is damage to streams and loss of water quality.” Several writers ask the MTNF to protect water quality by restricting certain activities, particularly road construction, timber harvest, mining, grazing, and use of herbicides. Respondents also ask the MTNF to revise the riparian guidelines—to allow flexible site-specific management, to protect surface and subsurface waters, and to protect karst lands.

Fisheries and Wildlife

Fisheries and Wildlife General

Some comment that the MTNF should include fish and aquatic resources in the forest plan revision. One respondent asks, “How are you going to deal with any new information about fish and aquatic resources that may come forth either internally or from the public? How can you leave such a huge portion of the plan out? This seems to us to be a predecision without public involvement.” Others request that “the Songbird Species of High Management, identified by the US Fish and Wildlife Service’s Partners in Flight Program, be incorporated into any management planning decisions.”

Adequacy of Analysis

Respondents offer specific suggestions for further analysis with respect to fisheries and wildlife. Some request that the MTNF “should provide the public with all of Mark Twain’s species monitoring data from the last 20 years” as “any analysis should reflect whether past management land practices are either beneficial or detrimental in the recovery of known sites that may contain federally listed or candidate species.” Other suggestions include analyzing and disclosing baseline and population trend site-specific species data; analyzing the factors that would impede the movement and dispersal of closed canopy forest wildlife species between stands and larger regions; and including the science-based Important Bird Areas in management considerations.

Threatened, Endangered, and Sensitive Species

Many respondents assert that the MTNF should address threatened and endangered species in the forest plan revision in order to comply with the Endangered Species Act and to reflect recent data. Respondents say, moreover, that recent amendments to the plan addressing threatened, endangered, and sensitive species are inadequate in that they “concerned only three species; the Indiana bat, gray bat, and bald eagle. The amendment ignored other species which are rapidly declining in population and are not sufficiently protected.”

Others, however, disagree. According to one writer, the recent amendments “made several significant changes to the way that the Forest Service would manage the Mark Twain Forest for those species identified in consultation with the US Fish and Wildlife Service. This amendment adequately covers the present need and any unforeseen need can be addressed with future amendments.”

Aside from the question of whether this topic should be formally addressed in the forest plan revision, numerous respondents write that the MTNF should make a special effort to protect threatened, endangered, and sensitive species. Particular species mentioned include mountain lions, endangered reptile and amphibian populations, the Ozark hellbender, bats, eagles, and various rare butterflies.

Wildlife Reintroductions

A few writers comment that the MTNF should reintroduce the cougar to the forest in order to cull deer herds, and that it should collaborate with the Wild Canid Survival and Research Center regarding potential red wolf recovery in the forest.

(RT 2c) Wildlife Habitat Management Direction

A number of people urge the MTNF to protect and restore wildlife habitat, particularly for native species and for species requiring large tracts of contiguous forest. Some stress the particular need to preserve bird habitat. That will result, some point out, in increased bird populations, which will in turn feed on the insects which otherwise cause so much forest damage. Others ask that bird habitat be preserved in order to enhance ruffed grouse populations.

(RT 2d) Management Indicator Species

Numerous respondents urge the MTNF to revise the management indicator species list as part of the forest plan revision. Writers suggest that a revised list should include early successional species, various endangered species, large predators, the Indiana bat, mussels, and amphibians.

(RT 1) Vegetation and Botanical Resources

Of those who comment on vegetation and botanical resources, most address early successional conditions, old growth conditions, and native plants; and voice species-specific concerns.

Some urge the MTNF to aggressively promote early successional conditions—in order to promote population growth in early successional bird species, and to comply with NFMA’s requirement to maintain viable populations of all native wildlife. Others express an interest in old growth conditions. According to one respondent, the MTNF should evaluate old growth opportunities “independently of potential timber stands. Opportunities must be based on both landscape and structural characteristics. Any stand that meets either or both characteristics should be designated old growth.” Some say priority should be given to riparian areas for inclusion in old growth designations.

Some respondents ask the MTNF to address native plants in the forest plan revision. Specifically, some urge the MTNF to maintain natural forest types, aggressively restore natural vegetation and native terrestrial communities on large regional scales, and to identify and protect all unique plant communities.

Finally, some express concerns relative to certain species. Specifically, people ask the MTNF to explain the basis for its decision to maintain oak-hickory, shortleaf pine, and oak-pine communities by silvicultural techniques; to continue restoration of the shortleaf pine forests of southern Missouri; and to continue to delineate the land-type associations and ecological land types on which pine planting is allowed.

Heritage Resources

A few respondents ask the MTNF to protect heritage resources. One writer specifically requests greater protection for the Greer Spring Mill. “What is left [of the mill],” notes this respondent, “should be shielded from the elements and secured in some fashion so that it [does] not continue to deteriorate. . . . We ask that your planning and budgeting here include such an endeavor.”

Conclusion

In summary, respondents voice a number of concerns relative to the revision process itself and to virtually every aspect of forest management. As mentioned earlier, the most frequently discussed topics in public comment are off-road vehicle recreation, timber and mineral management, and wildlife and water.

While respondents express a wide range of views, they agree in their desire to see the forest maintained and preserved in a healthy state. What divides them is a difference in perspective on what is needed to best preserve that state. These different perspectives inform respondents’ comments on virtually every topic, and reflect as well the serious consideration respondents give to management of the MTNF.

Chapter 1

Process and Planning

The Revision Process

The Revision Process General

1. Public Concern: The Mark Twain National Forest should revise the forest plan.

We (the NPS) have read and agree with the assessment for the need for change and the focus on revision rather than starting a whole new plan. (National Park Service, Omaha, NE - #150.1.10000.003)

TO REFLECT THE PUBLIC INTEREST

NFMA charges the Forest Service with developing Land Resource and Management Plans to be based on, and focused toward, the public benefit. We would very much like to see the team put together a management plan that truly reflects the public interest. A plan not designed to please the current political structure—nor one that puts the corporate needs of extractive industry as priority. Rather, a plan that serves the greatest public good by respecting the processes of nature, one that promotes a real compatibility with the concepts of “forest health”: intact forests, watershed protections, and rich diversity of species. We would very much like to see the team put together a management plan that would require the team to examine with open mind and due diligence, the best available, most accurate, current scientific information. It will ask of the team, to put aside preconceived notions of forest management: to question current policy and management prescriptions; to delve into options that have not been seriously considered by the agency yet; and to draw upon courage to implement a management plan that reflects the long-term public benefit. (Individual, Doniphan, MO - #103.1-2.14400.500)

The MTNF doesn't have a good track record on truthfulness, accuracy and fairness when it comes to policies and actions related to timber sales, ORV use, mineral exploration/extraction, water preservation/conservation and endangered species. The current revision proposal of the MTNF is a “white wash job” that would put the “world-renowned white washers-Huck Finn and Mark Twain of Hannibal, MO” to shame! The public deserves better treatment and performance from the MTNF. (Individual, Viburnum, MO - #126.5.10010.103)

TO ONLY COVER APPROPRIATE TIME PERIODS

It appears the Forest Service is attempting to extend many provisions of the Plan to cover a time period they were never intended to cover. (Preservation/Conservation Organization, Wood River, IL - #2.3.10000.000)

2. Public Concern: The Mark Twain National Forest should revise language in the forest plan.

We would like to see a removal of wording in the Comprehensive Plan regarding the statement, “speed being the determining factor . . .” (Individual, Salem, MO - #120.1.11000.701)

Topics Included/Excluded from the Revision Process

3. Public Concern: The Mark Twain National Forest should consider all relevant topics in the forest plan revision.

Recommend that all sections of the plan remain open for public comment for the following reasons, an enormous document the size of an LRMP has no part that is mutually exclusive to the degree that

changes made in one major area may not have implications for other related sections. To expect the public, who does not spend their daily endeavors dealing directly with these complex intricacies, to be able to fashion general comments that will pass screening such as proposed is not reasonable. (2) Closure from the announcement date in the federal register, i.e., 16 April 2002, until the predicted completion date of the Final EIS, i.e., October 2005, would mean that MTNF would deny public participation/input in a variety of subject areas for a period of about 42 months. This is roughly one-third of the "design-life" of a Forest plan. (Individual, Saint Louis, MO - #124.10.13000.108)

I note that the Mark Twain National Forest staff has removed several key issues from their "Land and Resource Management Plan." There are issues in which I have much interest. I oppose allowing lead mining and ATV use and encourage the protection of endangered species. (Individual, Saint Charles, MO - #22.1.10010.001)

The Forest Service should consider all issues brought up in the scoping process and all issues included in the existing Forest plan, as amended. No issue relevant to forest management should be excluded from consideration in the revision process. Issues that appear to be excluded at this time are endangered species, off-road motorized usage, and lead mining. We believe they should be evaluated along with all other issues included in the Notice of Intent. (Preservation/Conservation Organization, Saint Louis, MO - #97.1.10010.001)

The Forest Service must consider all issues brought up in scoping and included in the existing forest plan. No issues are "off the table". (Individual, Columbia, MO - #29.1.10010.003)

The Forest Service must consider and address all issues that are brought to their attention. This effort should review all relevant issues affecting management of the Mark Twain. (Individual, Jefferson City, MO - #110.1.10010.003)

BECAUSE EXCLUSION OF TOPICS VIOLATES NATIONAL ENVIRONMENTAL POLICY ACT AND NATIONAL FOREST MANAGEMENT ACT REQUIREMENTS

It appears the Forest Service is trying to end the inquiry of what needs to be revised at the beginning instead of taking a "hard look" at what needs to be revised. Could you please explain how the Forest Service believes this complies with NEPA? Could you also explain the basis of the Forest Service's belief that the Need for Change can be done outside the NEPA process? (Integrate the requirements of NEPA with other planning and environmental review procedures required by law or by agency practice so that all such procedures run concurrently rather than consecutively.) If the Forest Service limits the scope of revision, how does the Forest Service plan on complying with NEPA's requirement to consider reasonable alternatives? For example, an alternative to not allow lead mining and prospecting would be a reasonable alternative. If the Forest Service limits the scope of the revision, how does the Forest Service plan on complying with NEPA for the provisions of the 1986 Plan the Forest Service plans to shield from the revision process? The 1986 FEIS is certainly not legally adequate to continue to support these parts of the Plan. The Notice of Intent indicates some issues will be addressed in latter amendments. Even if this were legal, why would the Forest Service propose to do this? Why would not it make more sense to take care of it all at once? Would not doing it in the revision be less work for the Forest Service and the public? The Forest Service has been complaining about claimed "analysis paralysis". So why is the Forest Service proposing to do more analysis than is needed? (Preservation/Conservation Organization, Wood River, IL - #2.4.10010.300)

Notice of Intent outlined the development of a Need for Change statement and 5 topics that "were identified for plan revision". Those 5 are worthy topics but not inclusive. In particular mining issues were not listed. The Need for Change was supposedly informed in part by a series of public meetings. Our members participated in some of those public meetings and more than a few individuals brought up the issue of mining. Forest Service employees indicated publicly that a need for mining designation revision and other mining related issues were not considered appropriate for review. These comments

and the Notice of Intent itself are not in compliance with NEPA requirements or the planning process regulations in general. A forest plan revision is required to be an open process and all issues should be open for review. The agency should not seek in writing or public comment to restrict the scope of review. Although the MTNF has backtracked on this some in later oral presentations and belatedly on its web site, the Notice of Intent is still deceptive and not in compliance with NEPA. The language in the Notice of Intent under "Need for Change" clearly is intended to misinform and limit the public's response. Mining is not the only issue that the public might assume is "off the table" by reading the Notice of Intent. The Notice of Intent should be reissued and the scoping process extended. (Preservation/Conservation Organization, Columbia, MO - #77.1.10010.001)

The Notice of Intent is unclear on what the Forest Service is proposing to do. Could you please provide a better explanation? The Notice of Intent makes it sound like the Forest Service is going to do significant and non-significant amendments to the Forest plan instead of "revising" the Plan as required by NFMA and the NFMA regulations. When amendments are done, the Forest Service picks and chooses which parts should be amended. The definition for "revise" is "to reconsider and change or modify." American Heritage Dictionary. Thus, by definition, the whole Plan must be on the table. Furthermore, NFMA and its regulations require the Forest Service to revise the Forest plan, not parts of it. While the Forest Service certainly could decide to keep parts of the Plan as is after completing the process to revise a Forest plan, could you please explain why the Forest Service apparently believes limiting the scope of the revision before going through the revision process is legal? The 1986 Forest plan states: This document represents one integrated plan for the Mark Twain National Forest which will guide all natural resources management activities. The purpose of the Forest plan is to provide direction for multiple use management and the sustained yield of goods and services from National Forest System lands in an environmentally sound manner. The Forest plan covers management actions for the next 10-year period. The Plan will be revised at that time or earlier if the Forest Supervisor determines that planning area conditions have changed. Forest plan at i. (Emphasis added.) The FEIS (FEIS at I-2) and ROD (ROD at 1) have similar statements. They all specify the Plan, not parts of it, will be revised. Since the Forest Service appears to be trying to shield part of the Plan from revision, how does the Forest Service square this attempt with the statements in the Plan, FEIS, and ROD? (Preservation/Conservation Organization, Wood River, IL - #2.2.10010.001)

BECAUSE VARIOUS ISSUES HAVE BEEN DEFERRED IN THE PAST

Countless times, the Mark Twain has said issues we raised in comments were forest planning issues and beyond the scope of the analysis. The Forest Service needs to now consider all of these issues. (Preservation/Conservation Organization, Wood River, IL - #147.3.10010.108)

BECAUSE THE OLD FOREST PLAN HAS EXPIRED

The Webster Grove Nature Study Society, which has approximately 500 members in the metropolitan St. Louis area, would like the issues of mineral exploration and endangered species included in the Forest plan revision process. The Forest Service stated in its Notice of Intent that those two issues will not be addressed in the new Forest plan. It is our understanding that the most recent Forest plan, adopted in the mid 1980s, has expired. Any attempted reliance on the current Forest plan to "fill in the gaps" for these two issues is not only illogical but bad policy, since the current Forest plan has in fact expired, and therefore, there is nothing to fall back on. (Preservation/Conservation Organization, Saint Louis, MO - #1.1.10010.001)

TO REFLECT RECENT DATA AND PUBLIC CONCERN

I am alarmed that during the revision of the Forest plan, the Forest Service has chosen to eliminate several pertinent issues from consideration without public input. Since the 1986 Forest plan public interest has intensified in the environment and scientific data gathering has improved. Legally and professionally, Forest Service staff cannot neglect the impacts on the forest of pressing issues such as mining and endangered species. Because agency priorities should be adapting to recent data and public concern, I request that you open the entire plan to scrutiny. (Individual, Saint Louis, MO - #5.1.10010.108)

In the fifteen years that have passed since the original plan was prepared, many changes have occurred. New technology and techniques have enabled better data gathering on ecological processes, species populations, and other forest resources. The public's interest in natural resources has heightened. New problems have emerged. These new realities suggest that the entire plan must be open for discussion during the revision process. (Individual, Boulder, CO - #31.2.10010.809)

INCLUDING CULTURAL AND HISTORICAL RESOURCES

A cultural and historical resource assessment and plan must be included in the plan. Why is this outside the plan revision process? (Preservation/Conservation Organization, Brookport, IL - #142.12.10010.003)

INCLUDING TRANSPORTATION, MONITORING, AND SCENERY MANAGEMENT

Again, it appears that the forest is making internal, pre-process decisions to eliminate relevant parts of the planning process before the public even has a chance to weigh in, and that concerns us greatly. These issues are huge issues. Transportation, monitoring, and scenery management are some of the biggest issues that the forest faces in developing new up to date guidelines. How can they be denigrated before the planning process even begins? (Preservation/Conservation Organization, Brookport, IL - #142.9.60200.003)

INCLUDING MINING AND THREATENED AND ENDANGERED SPECIES

At the public meeting held in St. Louis on February 5, 2002, members of the public, including members of WGNSS [Webster Grove Nature Study Society], expressed concern about mineral exploration and about endangered species and the overall decline of bird species. No person attending that public meeting spoke in favor of ignoring these issues in the revision process. We encourage the Forest Service to consider the public input on those two issues. We are, therefore, requesting that the Forest Service put the issues of mineral exploration and endangered species on the table for review, comment, analysis, evaluation and consideration during the Forest plan review process. (Preservation/Conservation Organization, Saint Louis, MO - #1.4.10010.108)

4. Public Concern: The Mark Twain National Forest should exclude certain topics in the forest plan revision.

MINING AND THREATENED AND ENDANGERED SPECIES

The decision by the Forest Service not to revise the Forest plan in areas concerning mineral management and threatened and endangered species is the correct decision and I strongly support the decision made on both of these issues. (Individual, Viburnum, MO - #62.5.10010.003)

Use of Science

5. Public Concern: The Mark Twain National Forest should use a scientific approach to the National Environmental Policy Act process.

TO ENSURE PROPER INFORMATION GATHERING

A scientific approach to research and EAs and NGPS must be adopted to ensure proper information gathering. (Individual, Metropolis, IL - #136.1.14400.002)

Relation to Other Planning Processes

6. Public Concern: The Mark Twain National Forest should address the forest plan revision's effects on other national forests.

I am deeply concerned about the Forest Service's proposal and how it could impact the management of other forests, including the Wayne N.F. in my home state. (Individual, Columbus, OH - #10.6.10430.101)

7. Public Concern: The Mark Twain National Forest should explain how language is determined for different national forests' Notices of Intent.

We note some National Forests in the Eastern Region (Wayne and Monongahela) have similar language in their Notice of Intent. Shawnee's does not. What is the explanation for this? Is there any regional or national guidance on this? If so, please provide us a copy. (Preservation/Conservation Organization, Wood River, IL - #2.1.10430.101)

Public Involvement

Public Involvement General

8. Public Concern: The Mark Twain National Forest should recognize that its failure to correct the error in its Notice of Intent prevented adequate public participation.

At the Columbia meeting, we asked the Forest Service to send out a revised Notice of Intent to correct the error in the Notice Of Intent. The Forest Service has not done this. This has prevented adequate public participation. (Preservation/Conservation Organization, Wood River, IL - #147.1.10010.108)

SHOULD EXPLAIN ITS FAILURE TO CORRECT THE ERROR

I have found participating in the Forest plan revision process rather frustrating and am convinced that the MTNF is less than fully interested in public comment. My latest frustration was with your e-mail address, which was wrong on the paper Notice of Intent mailed out in May and wrong on the Notice of Intent on the web site. Although it appears correct on the web, using it for a reply results in failed messages. This is especially frustrating since I have learned that you were made aware of the problem some time ago via contacts from the Missouri Coalition for the Environment. Yet apparently no attempt was made to correct it. At minimum a simple alert easily visible on the Plan Revision section of the web would have been helpful. Please explain your agency's inaction on this issue. (Individual, Saint Louis, MO - #83.1.13220.102)

9. Public Concern: The Mark Twain National Forest should explain its failure to hold public meetings in the St. Louis area.

We also wish to officially protest the Forest Service's failure to hold a public meeting in the St. Louis area. Many people in the St. Louis area use and have an interest in the Mark Twain. We have members who live in the St. Louis area that would have attended a meeting in St. Louis and were unable to attend one in other parts of the state. (Preservation/Conservation Organization, Wood River, IL - #147.2.13400.108)

10. Public Concern: The Mark Twain National Forest should explain what public involvement was utilized in the Ozark-Ouachita Highlands Assessment.

What public involvement was there in the highlands assessments? If it's like the other assessments that have been completed or are being done, they had little or no public involvement and were not released for any public involvement until they were deemed completed. Such assessments are subject to criticism from the get-go for their lack of public involvement. (Preservation/Conservation Organization, Brookport, IL - #142.15.10310.108)

11. Public Concern: The Mark Twain National Forest should make the 1986 forest plan more accessible to the public.

I failed to find any of the actual amendments on the 1986 plan as available for download. This seems to indicate that the current plan as amended does not exist as a basis for a fair understanding or appropriate responses from the public. (Individual, Scott City, MO - #115.2.13100.102)

12. Public Concern: The Mark Twain National Forest should inform the public of management plans in the Pine Knot Area.

We own a small parcel within this management unit [Pineknott Area]. We do not have an interest in selling or trading but would be interested in continuing to hear more about your plans and possibly participating or at least serving as a cooperator. (Timber or Wood Products Industry, Salem, MO - #129.4.60300.400)

13. Public Concern: The Mark Twain National Forest should consider using volunteers in the forest.

Several of the projects we suggest be revised in the forest plan could be aided by volunteer help. We hope the plan encourages the participation of the assistance where practicable. Thank you for consideration of our comments. We encourage that the MTNF keep the forest planning process open. (Preservation/Conservation Organization, Columbia, MO - #77.18.13000.108)

Use of Public Involvement/Comment

14. Public Concern: The Mark Twain National Forest should consider the public's input in the forest plan revision process.

The responsibility before you is a very great one, and I trust that you will take into account the perspectives of many, as you strive to protect the Wilderness and forest in your care. (Individual, Richmond, IN - #88.2.13300.108)

I was shocked to read about the attempt by some to stop consulting the public, who happens to own the lands, regarding decisions about National Forest Land use. It is all the more disturbing to notice the destruction intent for our public lands. (Individual, Saint Charles, MO - #7.1.13300.400)

I feel that the Forest Service should recognize the public's right to input on how public lands should be used. I urge you to use your influence on the staff to remedy their decision. (Individual, Saint Charles, MO - #22.2.13300.500)

I understand you are very busy, but it is necessary for you as a public servant to listen and respond to public concern and suggestions. The public should have a say in the managing of PUBLIC lands. (Individual, Redding, CA - #25.13.13300.500)

In an interview, former Chief Thomas, referring to public opinion, stated: "For example, it was just about evenly split about whether we should harvest timber from national forests or not. That's an interesting fact for us to have at our disposal. The Forest Service should consider public opinion in its analysis as the National Forests belong to U.S. citizens, not the logging corporations." What do the words, "government of the people, by the people, and for the people" mean to the Forest Service? As former Chief Thomas stated on May 21, 1996, "These lands belong to the people and must be managed by democracy. If we don't have the people with us, we fail." (Preservation/Conservation Organization, Wood River, IL - #147.73.13000.002)

TO FOSTER PUBLIC TRUST

We suggest that the adversarial atmosphere that exists between the agency and the public (lawsuits, failures to comply with Endangered Species Act, Clean Water Act, National Scenic Rivers Act, NEPA, etc), would be considerably remedied with the implementation of a plan that would end exploitation and abuses of the unique and irreplaceable ecosystems on MTNF lands. The Forest Service holds these lands in trust for the public, yet the processes by which these lands are administered fail to respond to public needs. The policies of recent decades have done anything but engender the "trust" of the public. Surveys of the public, as recent as the year 2000, clearly indicate that the public overwhelmingly supports

priorities of: clean water/air, plant and wildlife diversity, ecosystem values and recreational uses. Polls of the public indicate without a doubt that the agency suffers from an all time low in credibility and stewardship ratings. The agency policies implemented in the most recent LRMP in the Mark Twain National Forest, and it's disdain for the concerns of the public, have set the stage for conflict and the agency. We suggest that the team take a conscientious look at the original purposes of the agency when Congress set National Forest Lands aside, for the people of the United States. We caution the team against forgetting that the citizens own the public lands—not the Forest Service, not industry and not the current political administration—the National Forests belong to all of the citizens of the country. Citizen input, and democratic process should be paramount in the task of revising the LRMP. The agency exists in its administrative capacity to do the work of stewarding the land and water resources for the citizenry, not to assist resource-extraction industries to profit. Taxes, paid by citizens, enable the employees of the agency to be paid, to manage its natural resources in the interest of long-term benefit of sustaining the public commons. The citizens of the country have a reasoned, highly educated and informed voice. We encourage the team to hear that voice: to welcome that voice in the discussion; to make a genuine effort to encourage public participation; to give weighty consideration to the input of the citizen's voice—in its modification to policy and implementation of a new LRMP. This revision process could be an opportunity to create a management approach that achieves true "forest health". It is an opportunity to model cooperation between the agency and the public—a successful example of the democratic process to the management of public lands. (Individual, Doniphan, MO - #103.34.12300.103)

TO REFLECT RECENT DATA AND PUBLIC CONCERN

The Mark Twain National Forest (MTNF) needs to do a full and complete review/revision of its Forest plan (FP) not a partial half-hearted continuation of "business as usual" as has been proposed. Announcing to the public at MTNF organized meetings that MTNF is unwilling to discuss timber policy, ORV restrictions/enforcement, mineral exploration/extraction of endangered species tells the public "MTNF's mind is already made up on these issues and we don't give a fig what you think!" Your job is to give a "fig" about what we think! (Individual, Viburnum, MO - #126.1.10010.001)

The issues that the Forest Service has removed from consideration should be put back on the table for public comment and discussion. The Forest Service has tried to take great liberties with the management of our national forest by suggesting that it can remove entire items from consideration without even consulting the public. We request that the entire Forest plan be considered during the revision process. (Individual, Boulder, CO - #31.5.10010.108)

Role of Interest Groups

15. Public Concern: The Mark Twain National Forest should not cater to corporate interests.

It is impossible to please everyone, but we don't think it is the Forest Service's responsibility to please Doe Run, lumber and paper companies, and Honda Motors. We can only ruin things once, but we can save things on a daily basis. We urge you—in your planning for our forests—to do the right thing. (Individual, Salem, MO - #118.6.12230.103)

I think the FP process is a sham and an orchestrated attempt by the MTNF to bulldoze the public into going along with the continued mismanagement and abuse of the public land, water, flora and fauna entrusted to MTNF by the public. It is irresponsible to continue to "sellout" to corporate interests directly or indirectly under the guise of "Multiple-Use" management tactics that deplete, destroy and endanger the public resources MTNF is supposed to conserve/protect for public use not corporate abuse. (Individual, Viburnum, MO - #126.2.12230.103)

Agency Staffing

16. Public Concern: The Mark Twain National Forest should employ staff biologists.

TO PROTECT WILDLIFE

We are seeing a decline in some of our songbirds, also bat and frog population. We hope Winona can have a biologist on staff again. (Individual, Winona, MO - #93.6.14500.420)

Chapter 2

Forest Management

Forest management General

Forest Management General

17. Public Concern: The Mark Twain National Forest should address the potential biological, economic, and social effects of forest management activities.

What are the potential biological, economic and social impacts of forest management activities? (Individual, Pine Bush, NY - #3.3.60200.001)

18. Public Concern: The Mark Twain National Forest should provide a forest acreage summary to the public.

Could you please provide a concerned citizen with what I would call a "Mark Twain Forest Acreage Summary" listing the current total acreages of MT Forests in each of the varied "management prescriptions?" And could you also send me a current list of these varied management prescriptions by their titles and definitions? (Individual, Saint Louis, MO - #19.1.13300.109)

19. Public Concern: The Mark Twain National Forest should protect and increase the size of the larger tracts of forested areas.

Large, intact tracts of forest should be preserved. Fragmentation of the forest canopy, even small openings, should be avoided as much as possible. (Preservation/Conservation Organization, Saint Louis, MO - #97.3.60300.602)

WITH A GOAL OF PROVIDING HABITAT FOR THOSE SPECIES THAT REQUIRE SUCH FORESTED HABITAT

Management emphasis on the Mark Twain should be to protect and increase the size of the larger tracts of mostly intact-forested areas, [and] with a goal of providing habitat for those species that require such forested habitat. (Individual, Jefferson City, MO - #110.8.60100.411)

BECAUSE SOME NEOTROPICAL MIGRATORY BIRD SPECIES THAT BREED IN THE OZARKS REQUIRE LARGE UNBROKEN FOREST CANOPY

Large, intact tracts of forest should be preserved. Fragmentation of the forest canopy, even small opening, should be avoided as much as possible. Some neo-tropical migratory bird species that breed in the Ozarks require large unbroken forest canopy. The Cerulean Warbler is one such specie. A petition to list the Cerulean Warbler as "threatened" is pending with the United States. Fish and Wildlife Service. (Preservation/Conservation Organization, Saint Louis, MO - #102.3.60300.413)

20. Public Concern: The Mark Twain National Forest should define certain terms.

PRIMITIVE OR NATURAL FOREST

I believe a clear definition of what a primitive or natural forest is should be stated in writing so all will know what your goals are for the National Forests. West Plains was prairie 150 years ago, hence the name West Plains, no trees. (Individual, West Plains, MO - #37.2.60200.111)

OPEN WOODLAND VERSUS NON-OPEN WOODLAND

Define the phrase . . . "open woodland" vs. a "non-open woodland?" (Preservation/Conservation Organization, Brookport, IL - #142.3.60310.809)

ADAPTIVE MANAGEMENT

What [is] meant by the term “adaptive management” . . . ?” (Preservation/Conservation Organization, Brookport, IL - #142.2.55210.809)

GREATER FLEXIBILITY OF SILVICULTURAL TECHNIQUES

What [is] meant by the term . . . “greater flexibility of silvicultural techniques?” (Preservation/Conservation Organization, Brookport, IL - #142.2.55210.809)

Illegal Activities**21. Public Concern: The Mark Twain National Forest should crackdown on illegal activities.****TO INCREASE VISITOR SAFETY**

Better policing of [the] forest and increase visitor safety—crackdown on illegal off road vehicle (ORV) use, meth-amphetamine labs, dumping, as well as harmful illegal activity in the parking areas, and campgrounds. (Individual, Waterloo, IL - #73.10.60600.752)

Forest Health Management**Forest Health Management General****22. Public Concern: The Mark Twain National Forest should consider the effects on forest health in development of management alternatives.**

Conversion of private forested land to pasture land is increasing at an alarming rate. Increased cutting of trees on surrounding non-public lands, to feed chip mills, is of great concern. Existing burdens of chemical and nutrient additions to the springs and streams of Mark Twain National Forest lands is already a threat to water quality. All of these impacts must be factored into any management alternative developed by the agency, and should strongly influence policy and practices implemented for the future forests. (Individual, Doniphan, MO - #103.11.60200.420)

23. Public Concern: The Mark Twain National Forest should define the phrase “healthier balance.”

Define the phrase “healthier balance” (Preservation/Conservation Organization, Brookport, IL - #142.3.60310.809)

(RT 2) Ecological Sustainability and Ecosystem Health**24. Public Concern: The Mark Twain National Forest should emphasize ecosystem management.**

Use ecosystem management as your guiding philosophy. (Individual, No Address - #148.9.60220.100)

TO ENSURE PRODUCTIVE, HEALTHY ECOSYSTEMS BY BLENDING SOCIAL, ECONOMIC, PHYSICAL, AND BIOLOGICAL NEEDS AND VALUES

Since the last revision of the Mark Twain National Forest plan ecosystem management has increasingly become the approach used in national forest plans. Ecosystem management is an ecological approach to natural resource management to assure productive, healthy ecosystems by blending social, economic, physical, and biological needs and values. We urge the Mark Twain National Forest to use this approach. (Preservation/Conservation Organization, Columbia, MO - #112.6.60220.001)

TO PROMOTE BIOLOGICAL DIVERSITY

Protection and enhancement of biological diversity—use ecosystem management for restoration and maintenance of native plant and animal communities. (Preservation/Conservation Organization, Columbia, MO - #6.2.60220.410)

25. Public Concern: The Mark Twain National Forest should promote forest ecosystem health and sustainability.

One reads on page 12 of the Shawnee National Forest Need for Change, March 12, 2002 that: “The revised forest plan would remove one of the opportunities, goals, and objectives providing for timber products and replace it with an opportunity, goal and objective for promoting forest ecosystem health and sustainability. This would result in changes to plan opportunities, goals and objectives related to timber resource management.”

Here are those “pretty words”. And this is what should be aggressively incorporated into the Mark Twain National Forest Plan. Then we will see if some “substance” is added to them or if they just remain “pretty” words. (Individual, Saint Louis, MO - #111.4.60200.101)

BY PROTECTING THE INTEGRITY OF EXISTING ECOLOGICAL COMMUNITIES

Habitat management to preserve ecological balance and protect the integrity of existing ecological communities should be a priority. (Preservation/Conservation Organization, Saint Louis, MO - #97.2.60220.411)

The Forest Service should adopt techniques and policy that seek to assist in the recovery of the natural integrity of the ecosystem to the point where natural processes can function unencumbered and without negative effects outside the natural range of variability. The Forest Service should not seek to implement management techniques in the name of ecological restoration that necessitate permanent or semi-permanent management to maintain particular conditions. (Preservation/Conservation Organization, Wood River, IL - #147.47.60300.420)

BY RESTORING SUSTAINABLE NATIVE ECOSYSTEMS

The organizing principle for the Forest Plan should be the support and restoration of sustainable native ecosystems within the Mark Twain National Forest. This would mean a focus on biodiversity and native plant communities. Additional survey information regarding the distribution of pre European terrestrial communities would be helpful in this regard. Any consideration of lands suitable for timber production should first address the question of what was the pre settlement character of the area. If timber production is part of the plan, no lands that did not historically include native forest species should be considered. Focusing on promoting native forests within their historical range will help address “problems” such as oak decline which are largely the result of past management practices.

The plan should provide special protection to rare habitats such as fens, bottomland forests, old growth, prairies etc. Related to this is an aggressive approach to eradication and/or control of exotic species.

This approach also requires a landscape perspective and consideration of land uses and development of adjacent private lands. Growth of population and the growth of certain industries, such as chip mills, will likely have an impact on the ecological services available from neighboring lands. (Preservation/Conservation Organization, Columbia, MO - #77.7.60300.001)

Emphasis should be to restore forest habitats to their historically native species. To document and specify timber products (hardwood -versus- softwood, etc.) in the plan tends to channel the main theme of forest policy towards response to commodity markets rather than the desired objective of a self-sustaining, healthy ecosystem. (Individual, Saint Louis, MO - #124.6.60320.602)

The highest and best use of Mark Twain National Forest public lands is to strive to protect existing undisturbed biota, natural processes and landscapes (refugia, etc.), and optimize the restoration and protection of the processes and biodiversity (flora and Fauna) of our native natural heritage as it can best be determined to have existed in pre-European culture exposure in North America.

As native species richness in an area increases, it becomes more resilient and resistant to undesirable invasions by harmful exotic species or external threats (chemical and biological/genetically modified organisms, and drought, e.g.) and reinforces the capacity of native biota for recovery and sustainability. This tends to minimize the scarce resources of dollars, labor, and material that may be needed to manage a natural heritage landscape on a sustainable basis. (Individual, Saint Louis, MO - #124.3.60310.420)

BY MAKING CHANGES FOUNDED ON SUSTAINING THE COMPOSITION, STRUCTURE AND DYNAMICS OF NATIVE FOREST ECOSYSTEMS

We especially favor the changes founded on sustaining the composition, structure and dynamics of native forest ecosystems. This includes timber management strategies and oak-pine natural communities; restoring more of the naturally open woodland habitats; and encouraging the natural vegetation most suited to Missouri's landscape associations and natural communities. (Missouri Department of Natural Resources, Jefferson City, MO - #151.3.60330.420)

BY CHANGING THE MANAGEMENT STANDARDS AND GUIDELINES TO THE EQUIVALENT OF THOSE PROVIDED IN THE "TERRESTRIAL NATURAL COMMUNITIES OF MISSOURI"

We also strongly support the concept of managing for ecological sustainability. As a means of achieving the ecosystem approach, we also suggest that the management standards and guides should be changed to the equivalent of those provided in the Terrestrial Natural Communities of Missouri (Nelson, 1985). (Missouri Department of Natural Resources, Jefferson City, MO - #151.6.60310.401)

OVER TIMBER SUSTAINABILITY

The National Forest Service spent how many years and how many dollars to produce the "New Planning Rule" adopted in November 2000 which is now pushed to the side in this planning process. If there is to be any value to this next Forest Plan it should aggressively incorporate the ideas of "Ecological Sustainability" over those of mere "timber sustainability". (Individual, Saint Louis, MO - #111.3.60310.602)

26. Public Concern: The Mark Twain National Forest should ecologically restore glades and savannas.

There is a need for more ecological restoration of areas such as glades and savannas. (Individual, Maryville, MO - #34.2.60200.001)

Missouri has few pristine areas left, and the forest, wildlife, and public could best be served by ecological restoration of glades and savannas. (Individual, Scott City, MO - #114.2.60300.001)

We applaud your emphasis on ecosystem management in these documents and we wish to encourage establishment of a clear priority for management of Mark Twain lands to enhance long-term ecosystem health. This would entail not only greater use of prescribed fire and other techniques to restore and maintain diverse, healthy ecosystems but also coordination with other land-managing agencies to manage lands on a landscape scale. For example, we believe there is an important opportunity to restore and maintain glade habitat in the White River Hills Eco-region in that vicinity of Roaring River State Park. While we understand the Forest Service has already undertaken some cooperative work along these lines, we believe it should be significantly extended. (Placed-Based Group, Columbia, MO - #94.1.60300.401)

27. Public Concern: The Mark Twain National Forest should use the full array of silvicultural tools to achieve forest health and ecosystem composition objectives.

The Ruffed Grouse Society support the use of the full array of silvicultural tools including the use of prescribed fire and timber harvest to achieve forest health and ecosystem composition objectives. (Preservation/Conservation Organization, Laona, WI - #130.9.60000.400)

(RT 3) Fire Management

Fire Management General

28. Public Concern: The Mark Twain National Forest should address its contradictory attitude toward fire.

The Forest Service takes contradictory attitudes toward fire, considering it a hazard that must be mitigated by logging (such as with the recent tornado blow-down) and as a necessary part of the environment that must be applied by humans. This contradiction is of concern, and opens the Forest Service to criticism that it is more interested in “management” than in achieving a healthy ecosystem. (Individual, Doniphan, MO - #103.29.60400.109)

29. Public Concern: The Mark Twain National Forest should recognize that fire is not a natural component in eastern forests.

BECAUSE IT IS USUALLY THE RESULT OF ARSON

Fire is not a natural component in eastern forests, it’s usually the result of arson. (Individual, Boonville, MO - #98.6.60400.420)

30. Public Concern: The Mark Twain National Forest should address effects of fire fighting in the EIS.

The EIS needs to address the impacts of fire fighting. (Preservation/Conservation Organization, Wood River, IL - #147.75.60400.002)

31. Public Concern: The Mark Twain National Forest should develop standards and guidelines for fire fighting.

The forest plan also needs to develop Standards and Guidelines for fire fighting. (Preservation/Conservation Organization, Wood River, IL - #147.75.60400.002)

32. Public Concern: The Mark Twain National Forest should work with adjacent landowners and communities in promoting fire safety measures.

Some wildfires are also a natural process but pose special problems for a forest like the Mark Twain given its fragmented nature and surrounding rural communities. We encourage the agency to address in the plan its commitment to proactive involvement with adjacent landowners and communities. Through education, the agency should promote fire safety measures and impress upon neighboring landowners the special responsibilities of living near a National Forest. Of course all forest users bear a responsibility for fire safety as well. (Preservation/Conservation Organization, Columbia, MO - #77.8.60410.002)

Adequacy of Analysis

33. Public Concern: The Mark Twain National Forest should scientifically assess the history, scope, and ecological role of fire.

The Forest Service should scientifically assess the history, scope, and ecological role of fire in the Mark Twain. (Individual, Olympia, KY - #48.12.60400.002)

BECAUSE LITTLE DATA IS AVAILABLE TO UNDERSTAND THE EFFECTS OF FIRE IN THE FOREST

Openly reassess the history, scope, and ecological necessity of fire in the Mark Twain. The Forest Service is increasingly using fire as a management tool on the Mark Twain. As little data is apparently available to understand the impacts of fire on the forest, a precautionary bias should be taken in its

application. There seems little doubt that fire was a part of the Ozarks at various times in the past. However, we believe that its prescribed use should be carefully considered and it should only be used in appropriate circumstances. (Preservation/Conservation Organization, Saint Louis, MO - #87.52.60400.002)

34. Public Concern: The Mark Twain National Forest should present all studies and other information it is using in the application of fire on the forest.

The Forest Service is increasingly using fire as a management tool on the Mark Twain. As little data is apparently available to understand the impacts of fire on the forest, a precautionary bias should be taken in its application. The Forest Service should make evident all studies and other information that it is using in the application of fire on the forest. (Individual, Doniphan, MO - #103.29.60400.109)

BECAUSE THERE IS WIDE DESCREPANCY IN THE LITERATURE ON THE EFFECTS AND NECESSITY OF FIRE IN THE OZARK REGION

The Forest Service is increasingly using fire as a management tool on the Mark Twain National Forest. The Forest Service should take a precautionary stance in its application. There is wide discrepancy in the literature on the effects and necessity of fire in the Ozark region. There is a substantial body of literature arguing that the use of fire, over varying spatial and temporal scales, may be extremely damaging to our native forests. The Forest Service should make evident all studies and other information that it is using in the application of fire on the forest. (Individual, Alton, MO - #108.31.60400.109)

The Forest Service is increasingly using fire as a management tool on the Mark Twain. As little data is apparently available to understand the impacts of fire on the Forest, a precautionary bias should be taken in its application. The Forest Service should make evident all studies and other information that it is using in the application of fire on the Forest. (Individual, Boonville, MO - #98.6.60400.420)

35. Public Concern: The Mark Twain National Forest should assign studies and long-term operational fire regimes to special areas.

It is particularly important for the revised plan to assign studies and long-term operational fire regimes for Wilderness areas, research natural areas, riparian areas, and other sensitive areas that may qualify for future designation for the special management in order to maintain or restore their special ecological character. (Individual, Saint Louis, MO - #124.7.60410.001)

36. Public Concern: The Mark Twain National Forest should base the frequency and seasonal scheduling of prescribed fire on ongoing scientific studies.

Prescribed fire is a useful tool that can be used to mimic natural fire processes. Its use, however, should carefully accompany further study of its effect and appropriate use in the terrestrial communities of Missouri. (Preservation/Conservation Organization, Columbia, MO - #77.8.60410.002)

WITH THE OBJECT OF SUSTAINING NATIVE SPECIES RICHNESS

In varying degrees for each terrestrial natural community, prescribed fire is a key factor in achieving and maintaining a restored and sustainable native flora and fauna of our natural heritage. In most communities, but perhaps not all—the absence of fire interferes with the ecological processes and associations that have evolved over the recent millennia. In some cases the artificial interruption of the natural fire regime may pose a threat to the continued existence of a species in the State.

The frequency and seasonal scheduling of prescribed fire (for each different community) should be determined through on going scientific studies with the object of sustaining the highest native species richness (flora and fauna). (Individual, Saint Louis, MO - #124.7.60410.001)

(RT 3a) Prescribed Fire

37. Public Concern: The Mark Twain National Forest Service should use fire as a necessary natural process.

TO EMULATE HISTORIC NATURAL DISTURBANCE REGIMES

We agree with the recommendation that fire is a necessary natural process that should be used to emulate historic natural disturbance regimes as described under Major Revision Topic 3a. We suggest that fire must be used much more frequently and cover much greater areas if the goals of maintaining native forest types and encouraging native vegetation are to be met, including the Hercules Glades Wilderness Area. Compared to Missouri's state agencies with responsibilities for far less land, the Mark Twain National Forest has a proportionately tiny fraction covered by such management. (Missouri Department of Natural Resources, Jefferson City, MO - #151.9.60400.602)

TO PROTECT AND RESTORE BIOLOGICAL DIVERSITY

The protection and restoration of biological diversity is another fundamental aspect of sustainable forestry. We support the increased use of prescribed fire to restore and maintain [the] Ozark's ecosystems. (Preservation/Conservation Organization, Columbia, MO - #112.3.60410.401)

TO RESTORE LARGE SCALE COMMUNITIES THAT BENEFIT FROM PERIODIC FIRE

Some communities, such as glades, are already well understood to benefit from some prescribed burning. We recommend that the plan include a commitment to restore these ecosystems with fire as one tool and to work with adjoining landowners, especially state owned lands, to restore some of the large scale communities that benefit from periodic fire. (Preservation/Conservation Organization, Columbia, MO - #77.8.60410.002)

TO MAINTAIN HEALTHY GLADES, FORESTS, WILDLIFE HABITAT, AND TO REDUCE FUEL LOADS

We agree that the fire management should be used to restore ecosystems in order to maintain healthy glades, forests, wildlife habitat, and to reduce fuel loads. We are especially interested in more fire management in glade habitat. (Preservation/Conservation Organization, Columbia, MO - #112.8.60400.400)

38. Public Concern: The Mark Twain National Forest should use fire on a limited basis.

Fire should only be used on a very limited basis, i.e. the eradication of exotic species. (Individual, Boonville, MO - #98.6.60400.420)

BECAUSE OF RIPARIAN AND HABITAT AREAS THAT ARE FEDERALLY LISTED, AND DURING TIMES OF THE YEAR WHEN FIRE MIGHT IMPERIL WILDLIFE

Fire should not be used in riparian areas, near federally listed species' habitat, or during times of the year when fire might imperil reptiles, amphibians, or ground nesting birds. (Individual, Boonville, MO - #98.6.60400.420)

39. Public Concern: The Mark Twain National Forest should not use prescribed fire.

BECAUSE THE OZARKS DO NOT HAVE THE CATASTROPHIC FIRES OF THE NORTHWEST

Since we in the Ozarks do not have the catastrophic fires of the northwest, I do not believe in prescribed burn for the Mark Twain National Forest. (Individual, Alton, MO - #108.33.60410.401)

(RT 4) Management Areas

Management Areas General

40. Public Concern: The Mark Twain National Forest should protect special areas.

I would ask that your plan consider the following for incorporation in the plan: protection of wilderness, roadless, and natural areas. (Individual, Saint Louis, MO - #44.2.60300.400)

Protect all wilderness resources, officially designated wilderness, sensitive areas, roadless areas and natural areas. (Individual, Saint Louis, MO - #105.2.60500.420)

TO PRESERVE THE FOREST FOR FUTURE GENERATIONS

The integrity of roadless wilderness and natural areas needs to be maintained. We need a policy that will preserve the forest for future generations. (Individual, Saint Louis, MO - #109.3.60500.754)

41. Public Concern: The Mark Twain National Forest should set aside more land for wilderness and special area designation.

BECAUSE OVER THE LAST 16 YEARS ONLY ONE OUT OF A LIST OF 56 CANDIDATES HAS BEEN ELEVATED TO SPECIAL STATUS

After viewing some of the outdated 1986 Mark Twain Forest Plan it is sadly noticeable that only 5.4 percent of the Mark Twain National Forest is in management prescriptions of a somewhat "preservation" category; i.e., 4.5 percent is in wilderness (Presc. 5.1) and 1.1 percent is in "special areas" (Presc. 8.1).

You forestry folks sure are stingy with setting aside areas outside the reach of timbering and mining.

Pages IV-186 and 187 of the old Forest Plan list 56 "candidate areas" in prescription 6.3, which is apparently a "holding area" for potential special areas. Your Forest Plan says: "As of January 1, 1986 the following candidate areas are recognized:" And then the list of 56 areas follows.

I am told by Forest Service staff that only one area, Scotia/Little Scotia Ponds, has been "elevated" to special status in these past 16 years. Could you please tell a bureaucratically illiterate citizen what is going on here? Do you only review this list every 20 years or so? Are there areas just too lacking in bio-diverse elements to meet Forest Service criteria? Sell them to the Nature Conservancy. It is apparent that out of the whole Mark Twain Forested pie only 1.1 percent of it is in "special areas". You could add all these 55 candidate areas and it would probably still raise that figure to 2.5 percent? Wow!!

I believe a lot of concerned citizens and me would like to know why all of the "foot dragging" here. That 1.1 percent figure is deplorable! So is the 4.5 percent "wilderness" figure! I do hope State Department of Natural Resource people and Department of Conservation people take an active interest in the upcoming revision of your outdated Forest Plan. (Individual, Saint Louis, MO - #662.1.60500.001)

BECAUSE THE PUBLIC DESIRES MORE WILDERNESS PRESERVATION

This less than six percent figure is rather pathetic. . . . That six percent figure should approach 20 percent. One hears millions of Americans clamoring for more "wilderness". Yet [some people] are apparently preventing the concerned public from getting their more preserved, more natural and more bio-diverse forested acreage. Less than six percent preserved areas; forest service planners and supervisors should be ashamed! (Individual, Saint Louis, MO - #111.6.60500.104)

42. Public Concern: The Mark Twain National Forest should reexamine all existing ecological land type designations.

TO ENSURE THAT PREVIOUS DETERMINATIONS ARE CONSISTENT WITH UP-TO-DATE SCIENTIFIC INFORMATION

As to the ecological land-types, it also seems that those designations that have already been made on the Mark Twain should be re-examined during the planning process. We believe that any determination made during the original planning process and or incorporated later into the plan through amendments should be re-examined during the plan revision. That is the only way that it can be insured that all previous determinations are consistent with up to date scientific information, and this critical for the success of the plan overall. (Preservation/Conservation Organization, Brookport, IL - #142.6.60510.002)

43. Public Concern: The Mark Twain National Forest should differentiate between roadless, wilderness, and wild and scenic river designations, and the restrictions and conditions that go with them.

BECAUSE IT WOULD BE VERY HELPFUL IN ALLOWING THE PUBLIC TO UNDERSTAND THE NEED FOR CHANGE

The land-type designations and what they bring with them are very unclear and confusing to the general public. Addressing the difference between roadless, wilderness, wild, and scenic river and what restrictions and conditions go with them, would be very helpful in allowing the public to understand the need for change. (Placed-Based Group, Republic, MO - #122.4.60510.111)

(RT 4a) Boundaries and New Land-Type Associations

44. Public Concern: The Mark Twain National Forest should base management boundaries on national, regional, and local considerations.

BECAUSE IT IS A PUBLIC INVOLVEMENT REQUIREMENT

We are especially curious as to how you are going to determine what the current social demands and management practicalities are on the Mark Twain. Is that going to be based on national, regional, or local considerations? Why aren't these determinations being made as part of the planning process? If you are going to be basing a substantive part of the plan, for example, adjustment of management boundaries, which, lets face it, is the heart of the planning process, on factors that you are going to predetermine outside of the planning process, that seems very inconsistent with the public involvement requirements for the forest planning process. (Preservation/Conservation Organization, Brookport, IL - #142.5.60510.002)

45. Public Concern: The Mark Twain National Forest should use the revised land-type association boundaries to delineate management areas.

We endorse the use of revised land-type association boundaries as an ecologically sound basis to delineate Management Areas. (Preservation/Conservation Organization, Columbia, MO - #112.4.60510.400)

46. Public Concern: The Mark Twain National Forest should revise management unit area descriptions and boundaries according to the latest ecosystem based classifications.

We agree with the assessment provided under item 4a of the Assessment document that management unit area descriptions and boundaries do not relate well to natural communities, and therefore, need to be revised according to the latest ecosystem-based classification. (Missouri Department of Natural Resources, Jefferson City, MO - #151.10.60510.602)

47. Public Concern: The Mark Twain National Forest should describe a new management unit category for restoring significant native landscapes.

We suggest that a new management unit category be described for restoring significant native landscapes, such as that currently being accomplished at the Pine Knot project. The EIS should target several areas where the best opportunity is presented for restoring the health and vitality of native natural landscapes (including sustainable timber practices) for inclusion in this category. (Missouri Department of Natural Resources, Jefferson City, MO - #151.10.60510.602)

(RT 4b) Special Area Allocations

Roadless Areas

48. Public Concern: The Mark Twain National Forest should inventory roadless and contiguous areas.

Other land and resource management matters that may have particular consequences for state parks and other nearby landholdings include inventory of Mark Twain National Forest roadless areas that together with other contiguous non-Mark Twain National Forest lands may afford opportunity for management as de-facto wilderness. (Placed-Based Group, Columbia, MO - #94.2.50340.001)

49. Public Concern: The Mark Twain National Forest should not evaluate roadless areas during the forest plan revision.

The Notice of Intent indicates that use and management of inventoried roadless areas will be evaluated during the review process. NMA (National Mining Association) believes that the Forest Service should reconsider undertaking this evaluation at this time. When the court in *Kootenai Tribe of Idaho v Veneman*, CV01-10-N-EJL (D. Idaho, 2001), enjoined implementation of the Forest Service final roadless rule, it also specifically enjoined section 219.9(b)(8) of the final Forest Service planning rule, the section of the Forest Service planning regulations that the Forest Service apparently is relying on for the evaluation of inventoried roadless areas. Indeed, the entire planning regulations have been suspended until a new final planning rule is adopted. In addition, the Mark Twain Forest is somewhat unique in that some of the roadless areas were not part of the initial roadless area review. When it becomes appropriate to conduct an evaluation of the use and management of inventoried roadless areas, such an evaluation should be limited to only those areas within the original roadless area review. (Mining Industry, Washington, DC - #61.3.10410.101)

50. Public Concern: The Mark Twain National Forest should evaluate only the originally designated roadless areas during the forest plan revision, not those identified in the Roadless Area Conservation Rule.

The Roadless Area Initiative requires that inventoried roadless areas must be studied during forest plan revision to comply with the requirements of the initiative. The Mark Twain is somewhat unique in that some of the Initiative areas were not part of the initial roadless area review. I do ask that the area identified for study be only those areas within the original roadless area review. (Individual, Potosi, MO - #67.2.10410.101)

The Roadless Area Initiative requires that inventoried roadless areas must be studied during forest plan revision. Only those initial (original) roadless areas should be reviewed (not the ones that were added later). (Individual, Viburnum, MO - #62.2.10410.101)

The Roadless Area Initiative requires study of inventoried roadless areas during Forest plan revision. However, the Mark Twain has had Initiative areas added which were not contained within the original areas, and should not be included in the areas required by law. Unless I am mistaken, the original law

indicated that no new areas would be added. I believe that only the areas within the original roadless area should be included in the review. (Individual, Viburnum, MO - #128.1.10410.101)

51. Public Concern: The Mark Twain National Forest should protect roadless areas.

The Forest Service should provide protective status and designation to all roadless areas, both inventoried and those that were not inventoried, but have been identified in previous planning efforts as having significant wilderness values. These areas are also known as the "sensitive areas". (Individual, Jefferson City, MO - #110.2.60500.500)

The revised Forest Plan should strive to maintain the integrity of all unroaded areas, no matter how small in size, including those that are located adjacent to existing Wilderness Areas, equivalent National Forest Service holdings and state park wild areas. In addition, we believe the Mark Twain National Forest to have an extraordinarily small percentage of lands designated as state natural areas through the Missouri Natural Areas Committee. The updated forest plan needs to emphasize the need to accomplish and increase the designation of these areas. (Missouri Department of Natural Resources, Jefferson City, MO - #151.11.60520.400)

Roadless areas should be preserved. (Preservation/Conservation Organization, Saint Louis, MO - #97.8.60530.000)

Seven areas on the Mark Twain have been identified as having significant qualities as roadless areas. We would like to see that aspect of your management continue. These large, mostly roadless areas of the Mark Twain National Forest represent an important and vanishing resource for recreation and landscape restoration. In particular, two of these areas, Big Spring in Carter County and Lower Rock Creek in Madison and Iron Counties we know from firsthand experience.

In May of 2000 we wrote to the District Ranger in Doniphan to express these concerns regarding the Big Springs area. This is an approximately 60,000-acre area within the Chilton Creek watershed. One area of Pioneer Forest is nearby. Here we practice conservative forest management and would hope the Forest Service would maintain the primitive nature of their lands in this area.

In addition, our owner has acquired several parcels of land within the Lower Rock Creek watershed (in Madison County) and within your sensitive or roadless management zone.

For both of these areas, but for the five others as well, we continue to feel that your protective management should continue, that you pursue acquisitions as they become available, and that you keep in mind the strong wildland/wilderness qualities for each area and, especially for Lower Rock Creek, the potential Missouri Natural Area Qualities as you undertake your management. (Timber or Wood Products Industry, Salem, MO - #129.2.60530.400)

BECAUSE THESE AREAS SERVE AS MODELS OF HABITAT RESTORATION, ARE RESISTANT TO FIRE AND INVASIVE PESTS, PROVIDE REFUGE FOR ENDANGERED SPECIES, AND ARE IMPORTANT BOTH FOR RECREATION AND THEIR EXISTENCE VALUE

It is of special importance to avoid road construction in both inventoried and un-inventoried roadless areas. These areas serve as models of habitat restoration, are resistant to fire and invasive pests, provide refuge for endangered species and are important both for recreation and for their existence value. On this last point it is worth noting that in a January poll conducted by American Viewpoint, 76 percent of the American people supported the protection of roadless areas within the national forests from logging, road construction and other development. In addition, Forest Service economists assessed the economic importance of different goods and services derived from federal lands in the Columbia River Basin and found that recreationists placed twice the value on wilderness areas over similar activity on other federal land. Furthermore, they estimated the existence value of roadless areas to be equal to the value of recreation on all federal lands. (Preservation/Conservation Organization, Saint Louis, MO - #87.46.60530.807)

INCLUDING UNINVENTORIED ROADLESS AREAS

What about un-inventoried roadless areas? Research has indicated that truly un-fragmented forests of 500 acres can be important ecologically in the midwest. Considering that there is evidence that the Mark Twain is a source area, which is accounting for the abundance of some forest interior songbirds on other forests like the Shawnee. Therefore, all potential source areas for these species need to be identified and set aside for non-fragmentation management. (Preservation/Conservation Organization, Brookport, IL - #142.7.60500.400)

52. Public Concern: The Mark Twain National Forest should manage roadless areas as wilderness areas.

One set of such resources is the roadless lands adjacent to designated wilderness areas, which have become Forest Service property since their designation. An example of this is the roadless land at the north end of Rockpile Mountain around the access parking area. Virtually every wilderness has similar lands on the periphery. Although not extensive in acreage, these lands are important and should be protected as part of the wilderness resource.

Another set of wilderness type resources is the designated roadless areas of the Mark Twain. Two of these are included above, Spring Creek and Swan Creek. But two others, Big Creek and Anderson Mountain, have not been so listed as yet and deserve at least interim protection while their values can be more fully assessed. (Preservation/Conservation Organization, Saint Louis, MO - #87.9.60500.400)

Under the Federal Land Policy and Management Act of 1976, and 36 CRF section 219.27, the Forest Service may recommend federally owned roadless areas to Congress for Wilderness designation. We ask that you protect all existing roadless areas in the Mark Twain as if they were designated Wilderness. (Preservation/Conservation Organization, Saint Louis, MO - #87.8.60500.420)

Roadless areas should be inventoried to assess whether they should be recommended for wilderness designation. All roadless areas should be managed as de-facto wilderness areas so that wilderness values are not compromised prior to a final decision being made. (Preservation/Conservation Organization, Columbia, MO - #112.9.60540.002)

53. Public Concern: The Mark Twain National Forest should recommend roadless areas to Congress for wilderness designation.

All roadless areas on the Mark Twain—including, but not limited to—Spring Creek, Swan Creek, North Fork, Big Spring, Van East Mountain, and Lower Rock Creek should be recommended for and protected as wilderness. All roadless land (of any size) adjacent to existing wilderness also needs to be recommended for and protected as Wilderness. (Individual, Olympia, KY - #48.4.60540.400)

Complete Missouri's wilderness system. Propose designation of roadless areas as wilderness areas - meanwhile manage as wilderness areas. (Preservation/Conservation Organization, Columbia, MO - #6.4.60540.400)

[We] officially recommend to Congress that at least the following areas be given legal protection as Wilderness: Spring Creek, Swan Creek, North Fork, Big Spring, Van East Mountain, Lower Rock Creek, and Smith Creek. Areas that have wilderness qualities are becoming extremely rare in Missouri as the landscape is subdivided and developed. There are only a handful of privately held areas in the entire state that might meet these criteria. It is therefore exceedingly important that the Forest Service protect all wilderness values that still exist within the Mark Twain. (Preservation/Conservation Organization, Saint Louis, MO - #87.8.60500.420)

Wilderness Areas

54. Public Concern: The Mark Twain National Forest should recommend more areas for wilderness designation.

The Forest Service should also pursue opportunities to add adjacent lands to existing federal Wilderness Areas on the forest by managing them so they qualify as wilderness and by recommending them for Wilderness Designation by Congress. (Individual, Jefferson City, MO - #110.2.60500.500)

SHOULD RECOMMEND GREATER AMOUNTS OF CONTIGUOUS ACREAGE

If there is to be any sincere hope of Mark Twain National Forest and the Fish and Wildlife Service one day teaming up to return the extirpated and endangered red wolf to Missouri—as has occurred in North Carolina, then it is obviously necessary to begin now, in this forest plan, to set the stage by beginning to set aside more contiguous National Forest for wilderness designation (Management Prescription 5.1) Certainly, Mark Twain National Forest is not currently rated high on the list of twenty-six potential sites because its current Management Prescription 5.1 areas are so small (4.3 percent). However, we believe that it is in the interest of many animals, and the people of Missouri—not just potential recovery of the red wolf, to increase the contiguous acreage of less human populated National Forest. (Preservation/Conservation Organization, Eureka, MO - #42.3.60540.413)

SHOULD RECOMMEND THE ENTIRE FOREST

Logging is not needed to maintain the health of the Mark Twain National Forest. This is an erroneous concept. We should have old growth, un-fragmented forests, such as in wilderness areas. It is, therefore, my opinion that the entire Mark Twain National Forest should be transitioned into wilderness areas status and there should be no commercial logging. (Individual, Alton, MO - #108.17.60540.603)

Recreationists, I think will contribute more money to the Mark Twain National Forest and its environs than logging, like wilderness areas.

I would like to see the entire Mark Twain National Forest become a wilderness area. It is one of the most unique forests in the world, as well as the United States. (Individual, Alton, MO - #108.4.60540.603)

Other Designations

55. Public Concern: The Mark Twain National Forest should review standards and guidelines for managing wild and scenic rivers.

TO SEE IF THEY SHOULD BE TIGHTENED BASED ON PAST IMPLEMENTATION

Standards and guidelines for managing existing Wild and Scenic Rivers need to be reviewed in light of monitoring and evaluation from the past implementation of current plan guidelines to see if they need to be tightened. (Preservation/Conservation Organization, Brookport, IL - #142.7.60500.400)

56. Public Concern: The Mark Twain National Forest should recommend high quality rivers for inclusion in the wild and scenic river system.

High quality rivers such as the North Fork, Gasconade, Courtois, Huzzah, and lower Current should be recommended for inclusion in the Wild and Scenic River system. (Individual, Saint Louis, MO - #56.5.60550.003)

BECAUSE THEY PROVIDE CRITICAL RIPARIAN HABITAT

Designate the following rivers as wild and scenic; Eleven Point, North Fork, Gasconade, Courtois, Huzzah, and Lower Current. Do this because they provide critical riparian habitat. (Individual, No Address - #148.4.60550.405)

The Forest Service should protect and provide some protective designation for rivers flowing through the Mark Twain that have qualities that would enable them to be designated by Congress as federal Wild and Scenic rivers. No management activities should be proposed or undertaken that would threaten or destroy these characteristics. The following rivers have such qualities: Gasconade and its tributaries the Big and Little Piney, North Fork, Courtois, Huzzah, lower Current, and possibly others. (Individual, Jefferson City, MO - #110.3.60550.402)

57. Public Concern: The Mark Twain National Forest should protect the Eleven Point River.

The natural beauty of the area in my opinion is far above that of much of Missouri, which is in and of itself a beautiful state. I may be biased, but the government also believes it too for the Eleven Point River to be designated as a National Scenic River. I have been on many wonderful rivers in the state, but this remote, scenic, and wild river surpasses them all in natural beauty and ruggedness. With this in front of us, I know no one would purposely or intentionally destroy or damage it. We must protect what we cannot re-create! (Individual, No Address - #55.1.60551.750)

BY REDUCING ACCESS TO THE RIVER

The Forest Service should give better protection to the Eleven Point River such as reducing the number of accesses to the river, and thus reducing the amount of vehicular traffic. (Individual, Alton, MO - #108.6.70300.403)

FOR FUTURE GENERATIONS

My heart belongs to the Eleven Point River and its surrounding area. Many generations of Connors have lived, worked, hunted, fished, giggered, and relaxed on the Eleven Point River. There are generations just beginning to appreciate this area including my nephews and niece. I want to ensure this is the same for them as it was for me.

If there were a survey of individuals that have seen much of Missouri, I'm sure this area would be at the top of their favorite outdoor and or wild places list. Please take this letter to heart and make changes to the current plan so that we can ensure this magnificent creation remains intact in its entirety. (Individual, No Address - #55.4.60551.754)

Land Use

Land Use General

58. Public Concern: The Mark Twain National Forest should provide an accurate survey of the forest's ownership.

BECAUSE RELIANCE ON OLD AND INACCURATE SURVEY LINES HAS LED TO PROBLEMS WITH PRIVATE BUILDINGS AND FOREST MANAGEMENT ACTIVITIES

[One] issue is the accurate survey of lands owned by the Mark Twain National Forest. Reliance on old and inaccurate survey lines has at times led to problems with private buildings and forest management activities. We recommend that the revised forest plan include a schedule for an accurate survey of the Mark Twain National Forest ownership. (Preservation/Conservation Organization, Columbia, MO - #77.14.50000.108)

59. Public Concern: The Mark Twain National Forest should clarify in writing that some lands inside the forest boundaries are privately owned, and that private ownership should be respected.

I believe your literature for the public about the National Forests should state that not all land inside the National Forest boundaries is federally owned, [and] that the private ownership should be respected when in the National Forests. (Individual, West Plains, MO - #37.1.50200.501)

Land Exchanges

60. Public Concern: The Mark Twain National Forest should make plans for land exchanges and acquisitions available for public comment.

Land exchanges and land acquisitions should be focused first on the protection and enhancement of ecologically important lands and second on reducing the fragmented ownership pattern of the Mark Twain National Forest. Plans for land exchanges and acquisitions should be available for public comment. (Preservation/Conservation Organization, Columbia, MO - #77.14.50000.108)

61. Public Concern: The Mark Twain National Forest should collaborate with private and public agencies to coordinate land acquisitions.

The Forest Service should work closely with non-profit land protection organizations and state agencies to coordinate land acquisition and protection strategies. (Preservation/Conservation Organization, Saint Louis, MO - #87.50.13700.500)

62. Public Concern: The Mark Twain National Forest should develop stringent standards and guidelines that prohibit land exchanges for purely economic or administrative reasons.

BECAUSE LAND EXCHANGES ARE ACCEPTABLE ONLY IF THEY INVOLVE LANDS OF EQUAL VALUE, ARE CARRIED OUT TO PROTECT ONE OR MORE NATURAL RESOURCE, AND DO NOT FACILITATE ENVIRONMENTALLY DEGRADING ACTIVITIES ON THE FOREST PERIPHERY

Land exchanges are an acceptable practice only if they involve lands of equal value, are carried out to protect one or more natural resources, and do not facilitate environmentally degrading activities on the forest periphery. For example, the past practice of exchanging lands to allow the expansion of lead mining should be ended. Lead mining has had tremendous negative consequences for the Ozark region and the Forest Service should not encourage its further expansion. Similarly, the Forest Service should not trade healthy forests [for] cut-over lands. The Forest Plan should contain stringent standards and guidelines that prohibit land exchanges for purely economic or administrative reasons. (Preservation/Conservation Organization, Saint Louis, MO - #87.51.50000.101)

63. Public Concern: The Mark Twain National Forest should base its acquisition and exchange of tracts on the need to protect the long-term viability of ecosystems.

BECAUSE CONSOLIDATION FOR THE SAKE OF ECONOMIC OPERATION AND MAINTENANCE IS NOT SOUND PUBLIC POLICY

The current plan states that “[t]he acquisition and exchange of tracts will be based on analysis that emphasizes the economic operation and maintenance of national forest resources.” Land Revision Management Plan III-1. This policy should be revised to state that: “The acquisition and exchange of tracts will be based on an analysis that emphasizes the protection and long-term viability of ecosystems.” Consolidation for the sake of “economic operation and maintenance” is not sound public policy because it overlooks many other important considerations. (Preservation/Conservation Organization, Saint Louis, MO - #87.48.50000.101)

BY ACCELERATING THE ACQUISITION OF INHOLDINGS WITH PRIORITY GIVEN TO ECOLOGICALLY SENSITIVE AREAS

Accelerate the acquisition of inholdings, with priority given to ecologically sensitive areas. (Individual, Saint Louis, MO - #56.10.50000.003)

The Forest Service should continue land acquisition of inholdings and other critical lands, especially in ecologically unique and fragile areas. Land exchanges that result in acquisition of degraded lands should

not generally be allowed, unless some significant environmental benefit will result. (Individual, Jefferson City, MO - #110.12.50000.101)

Accelerate the acquisition of inholdings, with priority given to ecologically sensitive areas. However, every effort should be made to work with, not against, the landowner. Special accommodations should be considered for non-commercial, family-held lands and farms that have non-absentee owners. In non-ecologically sensitive areas the issue should not be forced. (Individual, Waterloo, IL - #73.14.50000.101)

BY ACQUIRING ADDITIONAL PUBLIC LANDS THAT EITHER PROVIDE A BUFFER TO SENSITIVE RESOURCES OR ESTABLISH HABITAT CORRIDORS BETWEEN ISOLATED TRACTS

The Forest Service should incorporate an ecologically sound land acquisition and exchange policy in the forest plan. The highly fragmented nature of the Mark Twain makes it essential that external threats to public land be addressed. One method of reducing external threats is to acquire additional public lands that either provide a buffer to sensitive resources or establish habitat corridors between isolated tracts. Small, isolated tracts of natural habitat rarely protect the full range of biodiversity native to a region. Such tracts should be assessed to determine their biological value and protected, or could be connected with nearby areas to allow for wildlife migration and genetic exchange. (Preservation/Conservation Organization, Saint Louis, MO - #87.48.50000.101)

64. Public Concern: The Mark Twain National Forest should not allow land exchanges for degraded land.

Land swaps for degraded land should be disallowed. (Individual, Saint Louis, MO - #56.10.50000.003)

65. Public Concern: The Mark Twain National Forest should define and clarify land exchanges in the context of mineral development.

BECAUSE THE PRACTICE OF TRADING LAND TO MINING CORPORATIONS IN ORDER TO AVOID CULPABILITY AND ACCOUNTABILITY IS NOT A LEGITIMATE METHOD

Land exchanges are another questionable practice that needs to be defined and clarified, especially in the context of mineral development. When land exchanges take place they must not be done as an excuse to escape responsibility to the public trust. The practice of trading real estate to mining corporations in order to avoid culpability and accountability is not a legitimate method of either acquiring new lands or of escaping regulation. (Preservation/Conservation Organization, Saint Louis, MO - #87.23.50000.104)

66. Public Concern: The Mark Twain National Forest should not exchange lands lying within the proclamation boundary for development.

BECAUSE THESE LANDS WILL ONE DAY BE PART OF THE FOREST

The Mark Twain's new forest plan should operate with a vision towards filling out the entire area of the forest's proclamation boundary. From this perspective, there is never a reason to give away lands lying within the proclamation boundary for development, since it will all [one] day be a part of the forest. (Individual, Olympia, KY - #48.11.50000.500)

67. Public Concern: The Mark Twain National Forest should exchange unwooded areas with private landowners and farmers willing to raise industrial hemp.

TO BENEFIT LOCAL ECONOMIES

If the Forest Service used some of its land or its clout to get private landowners and farmers to raise industrial hemp, there would be no need to cut any trees, for industrial hemp would provide more than enough paper, cloth fabric, rope, sails, car bodies, hemp cement from the hurds, bible paper, cigarette rolling papers, food, (ice cream) cosmetics, (there are at least 125 uses), to provide for all the needs of the people in the Ozarks, as well as help these people earn a decent living and keep the family farms. We

might need them some day. The Forest Service could exchange some of its not wooded areas for land for this purpose. (Individual, Alton, MO - #108.18.50000.601)

68. Public Concern: The Mark Twain National Forest should pursue federal funding for land acquisition.

The Forest Service should be more aggressive in seeking out federal money for acquisition of lands that would help protect large areas of habitat or would establish corridors between such areas. Sources of funds such as the Land and Water Conservation Fund should be used and promoted to their fullest extent. (Preservation/Conservation Organization, Saint Louis, MO - #87.49.14000.500)

TO HELP PROTECT LARGE AREAS OF HABITAT OR ESTABLISH CORRIDORS BETWEEN SUCH AREAS

The Forest Service should be more aggressive in seeking out federal money for acquisition of lands that would help protect large areas of habitat or would establish corridors between such areas. Sources of funds such as the Land and Water Conservation Fund should be used and promoted to their fullest extent (Preservation/Conservation Organization, Saint Louis, MO - #97.15.50000.101)

Chapter 3

Forest Activities

Transportation System Management

Roads Management

Roads Management General

69. Public Concern: The Mark Twain National Forest should develop a roads inventory.

Regarding the transportation management, there is a rule that is in effect that says that the forest needs to come up with a roads inventory. (Preservation/Conservation Organization, Brookport, IL - #142.10.50410.001)

70. Public Concern: The Mark Twain National Forest should only designate roads that are hardened and sited for vehicle use.

We recommend that only roads that are appropriately sited and hardened be designated for use by any type of vehicle, including all-terrain vehicles of all designs and types. (Preservation/Conservation Organization, Pratt, KS - #96.4.70311.701)

71. Public Concern: The Mark Twain National Forest should clarify road term reclassifications.

A general area of concern is with the reclassification of road terms that may eliminate previously used roads from the Forest Plan Transportation Map. (Placed-Based Group, Republic, MO - #122.6.50420.703)

72. Public Concern: The Mark Twain National Forest should clarify the term “woods road.”

BECAUSE THE PUBLIC USES IT FOR ANY ROAD

The following statement is of concern. “The term ‘woods road’ has led to confusion because the public commonly uses it to mean any road in the Forest, including old roads that are not part of the Forest’s road system and are to be closed.” (Placed-Based Group, Republic, MO - #122.6.50420.703)

Adequacy of Analysis

73. Public Concern: The Mark Twain National Forest should analyze aspects of road management.

INCLUDING LAND CAPABILITIES, EROSION, SEDIMENT, TRAFFIC LEVELS, OFF ROAD VEHICLE USE, ENFORCEMENT, ROAD USE, ROAD MANAGEMENT, AND MAINTENANCE

The assessment of the need for change also stated all-terrain vehicles (ATV) and off-road vehicle (ORV) use has increased “exponentially” in recent years, and the forest has significant problem managing roads and vehicle use. However, the Notice of Intent proposes no changes to the all-terrain vehicles and off-road vehicle portion of the plan are necessary, and the Forest will defer aspects of road management to project level planning. We suggest analyzing land capabilities, erosion, sediment, traffic levels, all-

terrain vehicles, off-road vehicle use, enforcement, road use, road management, and maintenance in related fashion. The current plan should include significant measures to minimize erosion and sediment. (National Park Service, Omaha, NE - #150.9.70311.002)

74. Public Concern: The Mark Twain National Forest should analyze the effects of roads on wildlife.

FROM ROADKILLS AND FROM FRAGMENTATION

The issue of the impacts of roads needs to be addressed. The analysis needs to address the impacts of increased mortality due to road kills. The analysis needs to address the impacts from fragmentation and isolation of species with an aversion to roads. (Preservation/Conservation Organization, Wood River, IL - #147.89.50300.420)

75. Public Concern: The Mark Twain National Forest should analyze the economic and biological effects of the current road pattern on the flora and fauna.

BECAUSE FEWER ROADS HAVE LESS EFFECT ON THE ECOLOGY OF THE FORESTS AND REQUIRE LESS FINANCIAL AND HUMAN RESOURCES NEEDED TO MAINTAIN THOSE ROADS

Roadless areas should be preserved. In addition, we urge the Forest Service to develop an alternative which studies and evaluates the economic and biological impacts of the current road pattern on the flora and fauna of Mark Twain National Forest. Roads cause habitat fragmentation, which then leads to the introduction of non-forest interior species, such as Cowbirds, and the introduction of harmful exotic species such as kudzu, the gypsy moth, and more. Attempts to eliminate exotic species of plants and animals require the expenditure of large amounts of economic and staff resources, often with little success. Therefore, the fewer roads, the less impact to the ecology of the Forest and the less financial and human resources needed to maintain those roads. (Preservation/Conservation Organization, Saint Louis, MO - #102.6.50300.408)

Road Construction/Reconstruction

76. Public Concern: The Mark Twain National Forest should restrict or prohibit road construction.

I believe the overall goal of the Mark Twain National Forest should be forest health. This means that there should be a good policy on roadless designation and on wilderness.

Since the Forest Service only has enough funding to maintain 20 percent of the roads that exist in national forests, and that there is an \$8.5 billion backlog on road maintenance, the whole road system may deteriorate badly by the time that the new Forest Plan expires in about 2015. Therefore, the Forest Service should reduce road density, particularly in sensitive areas. Roads obviously have a negative impact on water quality and wildlife habitat, as I will explain in more detail later. Roads have a negative impact on many aspects of forest ecology, contributing to mud slides and soil erosion. The erosion dumps silt into streams, degrading water quality, killing fish.

Roads also have a negative impact on wildlife by fragmenting habitat, so that we don't have the large intact areas we need to sustain umbrella species like cougar and bear as well as species which need large intact areas like pileated woodpecker. The Forest Service should not build any more roads; it should avoid road construction in both inventoried and un-inventoried roadless areas. (Individual, Alton, MO - #108.3.50300.001)

Roads and associated human activities may impact the behavior and survival of many populations of large mammalian carnivores (Thiel 1985, Thurber et al. 1994, Carbyn 1974, Jensen et al. 1986, Van Dyke et al. 1986, McLellan and Shackleton 1988, Mech et al. 1988, Brody and Pelton 1989, Lovallo and Anderson 1996). Wide-ranging species are particularly impacted by increased road densities that often accompany human-cause forest fragmentation (Litvaitis 1993). Many species respond to road density

and human use of roads by altering movement or activity patterns or shifting home ranges. In black bears in North Carolina, Brody and Pelton (1989) determined that the bears shifted home ranges to avoid heavily roaded areas. (Preservation/Conservation Organization, Wood River, IL - #147.175.50300.420)

Road building should be limited. (Individual, Mountain View, MO - #21.3.50320.000)

No more roads of any type should be built into the forest. (Individual, Bonne Terre, MO - #43.2.50320.000)

BECAUSE OF THE NEGATIVE EFFECTS OF HABITAT FRAGMENTATION

The ecological impact or zone of influence of a trail or road may extend up to 100 meters or more on each side (Tyser and Worley 1992, Miller 1996, Miller and Knight 1995). The principal impact of a trail or road is habitat fragmentation. Fragmentation reduces the overall suitability and availability of habitat for plants and animals and, therefore, is considered a major threat to the conservation of biodiversity (Miller and Knight 1996, Talbert 1997). Habitat fragmentation impacts animal populations in many ways including decreasing species diversity and a reduction in density of some animal species in the resulting smaller patches (Arnold et al. 1995, McIntyre 1995). According to Muller et al. (1992), habitat fragmentation has been implicated as the primary factor jeopardizing populations of black-footed ferrets, Abert's squirrels, black-tailed prairie dogs, boreal owls, flammulated owls, and other sensitive animal species. (Preservation/Conservation Organization, Wood River, IL - #147.180.50300.411)

BECAUSE OF THE NEGATIVE EFFECTS ON WATER QUALITY, SOIL, AND HABITATS SERVING AS CORRIDORS

The existing road system extracts more than a simple budgetary cost. Roads also extract tremendous ecological costs and these costs will escalate as the condition of the roads deteriorates. Roads have a negative impact on many aspects of forest ecology. Roads, particularly deteriorating roads, contribute to soil erosion and mudslides. The erosion in turn dumps silt into streams, degrading water quality. Roads also have a highly negative impact upon wildlife by fragmenting habitat and serving as corridors for the introduction of invasive species. (Preservation/Conservation Organization, Saint Louis, MO - #87.45.50300.420)

BECAUSE OF THE MAINTENANCE BACKLOG

According to an analysis done by the Taxpayers For Common Sense, there is a Forest Service road maintenance backlog of \$10,166,227.00 in Missouri. This includes a critical backlog of \$1,546,493 in deferred costs and \$2,290,41 in capital costs. At a time when the Forest Service needs to reduce this backlog by decommissioning unneeded roads, it clearly makes no sense to be building new ones. Some may argue that the policy may curtail timber sales, but it was the subsidized timber program that was the major cause of the problem in the first place. (Preservation/Conservation Organization, Saint Louis, MO - #87.44.50330.113)

TO PROTECT AND RESTORE WATER RESOURCES

To protect and restore water resources, the Land Revision Management Plan should stop building roads. (Individual, Doniphan, MO - #103.13.50320.403)

TO MANAGE THE PUBLIC LANDS FOR THE GREATEST GOOD OF THE PUBLIC

To manage the public lands for the greatest good of the public, the forest plan should stop building roads . . . (Preservation/Conservation Organization, Wood River, IL - #147.35.50320.403)

Road Maintenance

77. Public Concern: The Mark Twain National Forest should upgrade main entrance roads to wilderness areas.

Upgrade main entrance roads to more wilderness parts that used to be used for recreation (Chadwick - Bark roads are becoming unusable to get to parking areas). Horse trailer areas, to turn trailers, [are] too dangerous. (Individual, No Address - #52.1.50320.700)

Road Closure/Obliteration

78. Public Concern: The Mark Twain National Forest should close roads.

BECAUSE THEY PROVIDE ACCESS FOR ILLEGAL ACTIVITY

Roads provide access for arsonists, illegal chemical dumping from meth-amphetamine laboratories, access to those illegally dumping trash, garbage, old furniture and appliances, and illegal off road vehicle use. The reality is that if roads are not closed, then these illegal activities will continue unchecked. (Individual, Boonville, MO - #98.31.50300.420)

CLOSE UNCLASSIFIED ROADS AND TRAILS

We . . . recommend that only those roads and trails that are essential to transportation and management within the forest be maintained open. All unclassified roads and trails should be appropriately blocked, obliterated and re-vegetated to preclude further use. (Preservation/Conservation Organization, Pratt, KS - #96.4.70311.701)

CLOSE NON-ESSENTIAL ROADS

In general, we support the closing of non-essential roads after analysis that considers non-Mark Twain National Forest as well as forest roads. (Placed-Based Group, Columbia, MO - #94.2.50340.001)

79. Public Concern: The Mark Twain National Forest should budget money for installation of physical closures on unclassified roads.

TO ENSURE THAT ROADS ARE BLOCKED AND INACCESSIBLE

Regarding off-road vehicle use of the national forest, the management direction of the current Forest Plan specifies that all unclassified roads are considered "closed unless posted open" to motorized use. We agree with this position, whether or not a physical closure or sign exists. Due to the acknowledged difficulty in managing and enforcing this policy, we recommend that the Forest Service attempt to provide budgetary emphasis on the installation and placement of physical closures (gates or berms) on unclassified roads. (Missouri Department of Natural Resources, Jefferson City, MO - #151.15.70312.701)

80. Public Concern: The Mark Twain National Forest should not close roads.

BECAUSE THE ROADS NEED TO BE ACCESSED TO FIGHT FIRES

I believe no more roads need to be closed. If Colorado and the other western states had left some roads in the woods they could get in to fight fires they are watching burn now. We don't want that here. (Individual, West Plains, MO - #37.3.50340.703)

Transportation Management

Road Density Standards

81. Public Concern: The Mark Twain National Forest should develop road density standards.

BECAUSE ROADS AFFECT WILDLIFE, RECREATION, WATER QUALITY, AND SCENIC BEAUTY

In the previous plan there had to be road density standards. That is because road densities and placement can have a significant impact on wildlife, recreation, water quality, and scenic beauty. (Preservation/Conservation Organization, Brookport, IL - #142.10.50410.001)

82. Public Concern: The Mark Twain National Forest should reduce road density in sensitive areas.

Dramatic reduction of road density across the Forest, especially in sensitive areas such as Natural Areas, potential Wildernesses, potential Roadless Areas, and hiking/backpacking corridors. (Individual, Waterloo, IL - #73.8.50410.001)

BECAUSE THERE IS A \$8.5 BILLION BACKLOG ON ROAD MAINTENANCE AND THE ENTIRE ROAD SYSTEM MAY BE DETERIORATING

The Forest Service now has only enough funding to maintain 20 percent of the roads that exist in the National Forests. There is a whopping \$8.5 billion backlog on road maintenance and given the current level of funding, the entire road system may be deteriorating badly by the time that the new Forest Plan expires in about 2015. Clearly, the Forest Plan for the Mark Twain National Forest should move the policy on roads in a new direction. For these and other reasons we recommend that the Forest Service reduce road density, particularly in sensitive areas. (Preservation/Conservation Organization, Saint Louis, MO - #87.43.50300.810)

BECAUSE ROADS ARE SOURCES OF GULLY EROSION AND SEDIMENT

The assessment of the need for change proposed not to address transportation at the current plan level. It indicates there is not scientific research on road impacts on wildlife at the current plan level. The contribution of roads to sediment loads is widely recognized. Much of the bed load of Ozark streams has come from gully land riparian erosion. Roads can be major sources of gully erosion and are obvious sources of sediment. (National Park Service, Omaha, NE - #150.8.50400.405)

“Closed Unless Posted Open” Signs

83. Public Concern: The Mark Twain National Forest should change the “closed unless posted open” signs to “open unless posted closed.”

BECAUSE MORE DISPERSED RIDING AREAS ARE NEEDED

My kids and I are active off-road motorcycle riders and really appreciate the Chadwick riding area. But that place is getting over-run by the 4 wheel off road vehicle crowd. We need more dispersed riding areas instead of cramming everybody into one spot.

Therefore, I would request that the policy of “closed unless posted open” revert back to the original “open unless marked closed” and then selectively closing trails or roads that can be documented as destructive to the environment. (Individual, Olathe, KS - #53.1.70312.001)

BECAUSE MANY ROADS THAT WERE ONCE OPEN HAVE NOT BEEN POSTED AS OPEN

The current forestry plan stipulates off-road vehicles are only allowed on “closed unless posted open” policy. My concern is that over the years many roads that were once open have not been posted as open. Therefore, the available roads to off-road vehicles have continued to shrink. (Individual, Poplar Bluff, MO - #125.1.70312.701)

BECAUSE CURRENT MANAGEMENT GUIDELINES ARE UNENFORCEABLE

The management plan for off road vehicles of “closed unless posted open” has largely failed in its implementation phase. The current “plan direction” is deficient in its goals and to-date achievements. To begin with, clarification is needed to make the current management guidelines enforceable. Ambiguity exists regarding what vehicles are “licensed,” what classifications of roads are open to off road vehicle use, how the prohibited roads are delineated, and what constitutes “resource damage” due to off road vehicles. This information needs to be clearly laid out for both forest managers and for potential users. A more suitable plan direction might consist of constructing physical closures at all roads off-limits to off road vehicle use; eliminating the possibility to develop and designate additional off road vehicle trails and use areas; clearly defining road classifications and acceptable off road vehicle licensing; keeping forest officials up to date on off road vehicle regulations, so that implementation may be effective; and constructing a comprehensive monitoring and evaluation scheme for off road vehicle impact on the Mark Twain. (Preservation/Conservation Organization, Wood River, IL - #147.43.70312.002)

BECAUSE THE CURRENT POLICY IS INAPPROPRIATE AND CONFUSING AS IT CONTRADICTS ALL OTHER TRADITIONAL MARKING OF TRAVEL WAYS ACROSS THE COUNTRY

The Mid-west Trail Riders Association membership believes that the “Closed unless marked open” road and or trail policy needs to be reassessed. . . . The “Closed unless marked Open” policy is inappropriate and or confusing as it contradicts all other normal and traditional marking of travel ways across the country. (Recreational Motorized Organization, Maryland Heights, MO - #76.2.70312.001)

BECAUSE THIS APPROACH WOULD BE MORE WORKABLE AND ACCEPTABLE TO USER GROUPS

I believe that the “Closed unless marked open” road and or trail policy needs to be reassessed. The policy is not working and something needs to be done. Traditional past usage of the roads and trails by different user groups, the current lack of support from area residents, and very limited “marked open” trails and roads, has made the current policy unworkable! I would strongly support the return to the “Open unless marked Closed” with selective closing of trails and roads for sound documented environmental, wildlife or vegetation issues and or problems. I believe that this approach would be much more workable and acceptable to the various user groups. (Individual, Canton, IL - #60.5.70312.001)

Recreation Management

Recreation/Access Management General

84. Public Concern: The Mark Twain National Forest should maintain access.

Please keep the forest open and accessible to all its users—especially the ones who actually travel to and use it! (Individual, Saint Louis, MO - #135.1.70300.700)

Further closures or limits to forest access are not productive and should cease. (Individual, Viburnum, MO - #40.4.70300.703)

As an avid outdoor enthusiast and 4 wheeler I have seen land closure after land closure. All under the guise of protecting the land for prosperity. It seems the general idea is to close off all access (even to hikers) so several generations will forget how wonderful the outdoors and forest are in an effort to “protect” it for future generations. (Recreational Motorized Organization, No Address - #75.1.70310.754)

85. Public Concern: The Mark Twain National Forest should provide affordable and accessible recreation.

[The revised plan] should commit to affordable and accessible recreation. We opposed the increased use of recreation fees on National Forests, especially fees for low impact recreation. (Preservation/Conservation Organization, Columbia, MO - #77.13.70000.003)

86. Public Concern: The Mark Twain National Forest should give greater priority to recreation than to timber harvest.**BECAUSE RECREATION IS MORE IMPORTANT ECONOMICALLY AND MORE COMPATIBLE ECOLOGICALLY WITH MAINTAINING FOREST HEALTH**

Recreation on the Mark Twain is more important economically and more compatible ecologically to maintaining the forest health. Logging and recreation are not compatible and as such, weight should be given to recreation as a management priority on the Mark Twain National Forest. (Individual, Alton, MO - #108.19.70000.600)

Recreation on the Mark Twain is important economically and compatible ecologically with maintaining a healthy forest. While logging may contribute more than recreation to the overall economy of the Ozarks, it must be recognized that most logging occurs on private land, while most recreational opportunities exist, and can only exist, on public land. Recreation visitor days (RVDs) on the Mark Twain increased from 1,718,000 in Fiscal Year 1995 to 2,300,000 in FY 2000, a very significant increase over a period of time where logging on the forest decreased. To the extent that logging and recreation are not compatible, weight should be given to recreation as a management priority for the Mark Twain. (Preservation/Conservation Organization, Saint Louis, MO - #87.27.70000.800)

87. Public Concern: The Mark Twain National Forest should emphasize low impact recreation.

The revised plan should emphasis low impact recreation. (Preservation/Conservation Organization, Columbia, MO - #77.13.70000.003)

TO PRESERVE DIVERSE SPECIES

As natural habitat decreases around the country, especially near urban areas due to sprawling development, the Mark Twain National Forest takes on heightened importance for preservation of diverse species. We must treat the land gently, with an emphasis on low-impact activities, so that wild inhabitants may survive. (Individual, Saint Louis, MO - #100.1.60200.420)

88. Public Concern: The Mark Twain National Forest should not expand recreation fees.

No expansion of recreation fees. (Individual, Waterloo, IL - #73.15.70000.700)

FOR LOW IMPACT RECREATION

The Mark Twain National Forest should not increase its user fees for low impact recreation. (Individual, Saint Louis, MO - #82.2.70311.700)

BECAUSE PROMOTING FEES WILL ENCOURAGE MORE MOTORIZED FORMS OF RECREATION WHICH WOULD HARM OTHER POPULAR, LESS DAMAGING USES OF THE FOREST

There should be no expansion of recreation fees. There is concern that promoting fees would encourage highly developed, more motorized forms of recreation, which would harm other popular and less damaging uses of the forest. (Individual, Columbia, MO - #78.4.70000.701)

89. Public Concern: The Mark Twain National Forest should enlist the help of recreation groups to maintain recreation areas.

There are plenty of groups that have the same attitude and will work with the United States Forest Service to keep these areas open and maintained. Plenty of groups that have enjoyed the outdoors for many years that would gladly volunteer their time and efforts to help maintain these areas and trails. Many off road motorist enthusiasts are also involved in other types of outdoor recreation including hiking, fishing, hunting, bicycling, camping, and rock climbing to name a few. They are involved because they love the outdoors and are involved in saving the areas they love to frequent. These people

are law abiding citizens just like you and I. They have jobs, families, mortgages, and the same everyday problems shared by millions of Americans.

But, these people are different. They are different because they care about the outdoors and protecting it for our generation and our kids' generation, as well as future generations. These are the people that will do everything they can to pitch in and help in any way they can.

I urge you to work with and enlist these groups in your efforts to protect, maintain and keep open recreation areas and trails throughout the forest service lands. (Recreational Motorized Organization, No Address - #75.2.70310.105)

Motorized Recreation

Motorized Recreation General

90. Public Concern: The Mark Twain National Forest should standardize its policy on motorized recreation.

INCLUDING DEVELOPMENT OF A LINKED SYSTEM OF FOREST ROADS AND TRAILS FOR NON-STREET LEGAL OR YOUNGER RIDERS

I would like to recommend a state and forest wide plan to standardize the policy toward motorized recreation. This could be enhanced by a linked system of forest roads and trails that would allow non-street legal or younger riders. (Individual, Farmington, MO - #144.3.70310.101)

The Mid-west Trail Riders Association membership agrees that the current Mark Twain National Forest trail use permits, the various county all terrain vehicle stickers, and applicable Missouri State Laws create a very complicated and confusing policy for the Motorized Recreation Users. The current forest plan does not provide any kind of workable situation for riders less than 16 or those that might be on non-street legal motorcycles. (Recreational Motorized Organization, Maryland Heights, MO - #76.1.70310.111)

91. Public Concern: The Mark Twain National Forest should change semi-primitive non-motorized designations to semi-primitive motorized designations.

BECAUSE THE EXCLUSION OF MOTORIZED RECREATION FROM THESE AREAS IS NOT JUSTIFIED

The Mid-west Trail Riders Association membership also believes that the designation of "Semi-Primitive Non-Motorized" management areas in 1986 were not appropriate or justified. While the Mid-west Trail Riders Association strongly supports the past and future timber harvesting operations (via motorized means) in these areas, the exclusion of motorized recreation from these areas is not justified. Thus the Mid-west Trail Riders Association membership is asking that these designations be changed to "Semi-Primitive Motorized". (Recreational Motorized Organization, Maryland Heights, MO - #76.3.70310.700)

TO ALLEVIATE CONGESTION

I request that the "Semi-primitive non-motorized" management areas be reclassified as "Semi-primitive motorized" to alleviate some of the congestion at Chadwick (Individual, Olathe, KS - #53.2.70310.701)

92. Public Concern: The Mark Twain National Forest should maintain motorized access.

I feel that the current plan has greatly deprived me of much of the use and enjoyment of our national public land. Access has been increasingly denied by the closing of many of the old established roads to any type of motorized vehicles. This has limited my family and I from being able to see and use these areas. It has concentrated the use to limited spaces along the main county and forestry roads in the

forestry areas because the older population and families with small children are not able to walk back into these "Walk in Only" areas.

It would be my desire as an individual and as a member of the above organization, that you change the current plan so as to reopen the roads and areas to allow for easier access by the general public. To allow law-abiding citizens the privilege to access these areas by vehicle, including all terrain vehicles, for hunting and recreational purposes. I ask that you use your resources to enforce the rules on a few bad apples rather than ban the entire population of good, decent, law abiding citizens from land that rightfully belongs to and should be accessible to them. (Individual, Poplar Bluff, MO - #68.1.70300.703)

BECAUSE MOTORIZED RECREATION BENEFITS THE ECONOMY

There are dozens of lesser roads that were used as competitive sections back in the 1970s and 1980s within the boundaries of the Forest that are now off limits to our sport by virtue of the motorsport restriction. Given the concept that as we progress with this event in years to come we will always be applying for use permits, the specific roads and locations agreed upon would form a limitation (event by event) that became part of the use permit. The variety and technical offerings of the roads we're seeking to use will make the 100 Acre Wood all the more attractive to our competitors, helping to keep this economically stimulating event in the area year after year. (Recreational Motorized Organization, Saint Louis, MO - #127.2.70200.700)

93. Public Concern: The Mark Twain National Forest should allow motorized events in the forest.

BECAUSE IT BENEFITS THE ECONOMY

The reason for allowing use of the roads are many; increase of tourism to areas where people may not have had a reason to access before, the economic impact that the extra spectators will have on the area, along with increasing the awareness of what the area surrounding Rolla, Salem, et al have to offer.

Our region's goal is to host the best event possible, and that includes helping the local economy, promoting Missouri and all it has to offer. The more challenging the roads, the more competitors want to come and play. With more competitors come more spectators, as well as the people who work the event.

I see this as a win-win for us all. We gain access to roads that will draw more competitors, more competitors will draw more spectators, and they spend more money! Then it's all good! (Recreational Motorized Organization, Saint Louis, MO - #47.1.70310.802)

Last year, Salem Missouri hosted the Sports Car Club of America Road Rally. It was a real success. There were over 50 entries and many spectators. We had two full days of successful activities. We hope to extend that time to three full days in 2003.

The community benefited from this event in many ways. Participants and their crews and families stayed in our motels, shopped in our stores and ate in our restaurants. Sonic Drive-in said it was the biggest day of the year for them. Increased business in our community is important to our citizens and the people who hold jobs in local stores and motels.

The Sports Car Club representatives tell us they will continue to return to our community, if they have roads to travel for the rally. It would be very positive if they could use roads in Mark Twain National Forest. If you could allow a case-by-case decision made on use permit applicants in order to continue to provide the counties that are part of and contiguous with the Mark Twain National Forest roads to use, it would be much appreciated.

Please consider the economic impact to our community and allow this to happen. (Salem Office of Economic Development, City of Salem, Salem, MO - #117.1.70200.800)

94. Public Concern: The Mark Twain National Forest should remove the speed restrictions attached to motor sports within the forest boundaries.

We are petitioning for an even closer relationship with the Mark Twain National Forest, revolving around the removal of the 'speed' restriction attached to motor-sport within its boundaries, and our permission to use agreed upon Forest Roads and logging trails.

I'm told that parts of this revision may grind on through the conclusion of the allotted time period and some may be handled quickly and efficiently. I would hope that your investigation of these issues would allow you and your committee to work quickly and help us develop the 100 Acre Wood into the Regional crown it used to be in its former life by the 2003 event. We are well on our way. (Motorized Recreation, Saint Louis, MO - #127.5.70200.108)

WITH SPEED-BASED USAGE DETERMINED ON A CASE-BY-CASE BASIS

I would like to petition those responsible for the plan revision to remove the 'speed' restriction. I would like to see the revised plan allow speed based usage on a case-by-case basis allowing events such as the 100 Acre Wood to use roads mutually agreeable with the organizers and the Mark Twain National Forest.

Why you might not want to do this. I can see how, on the surface, the idea of cars going as quickly as they can on a lightly used forest road or logging road could appear to be something that doesn't fit in a National Forest scenario. And, your comprehensive plan constructed in 1986 currently forbids it. At that time some one or some group probably petitioned the Mark Twain National Forest against speed based events due to some bad experience they had with some group. I am not privy to why this came about. Perhaps even the 100 Acre Wood, but I'm not aware of any instances. Our relationship with the Forest through that period was very cooperative. We even received help in identifying and choosing roads that would be challenging for our competitors. Challenging does not necessarily mean 'fast'. Tight twisty roads on which the fastest cannot average 40 miles per hour are marvelously competitive. I know that at that time, the Rangers in Charge received requests for other speed based events that did not receive permits (mostly from non-sanctioned, non-insured events), and since the 100 Acre Wood was not running any more, perhaps this restriction seemed appropriate for the foreseeable future. Another possibility is that someone or some group perceived 'speed' as an environmental issue. Perhaps if we get to meet, you or someone from your staff can enlighten me as to how this came about. (Recreational Motorized Organization, Saint Louis, MO - #127.3.70200.700)

I would like to petition those responsible for the plan revision to remove the 'speed' restriction. I would like to see the revised plan allow speed based usage on a case-by-case basis allowing events such as the 100 Acre Wood to use roads mutually agreeable with the organizers and the Mark Twain National Forest.

Why you might want to do this. The 100 Acre Wood is a well managed motor-sport event that takes place in February (now) and brings tremendous amounts of capital into the counties that support it (either hosting the headquarters or one of the breaks en-route).

It is a tremendously popular event according to the accumulations of comments received by local newspapers and radio stations and officials post event.

Mark Twain Forest Rangers observing the event last February had a wonderful time I'm told, and the report from the Salem-Potosi District was positive with ideas for areas of improvement (Attached).

The Sports Car Club of America is a 65,000-member non-profit organization featuring the most active membership participation organization in motor sports today, with over 2,000 amateur and professional motor sports events each year. It carries multi-million dollar insurance on its events (Mark Twain National Forest was listed as an additional insured on last February's policy).

Salem, Bunker, and Ellington (and potentially Steelville, Viburnum, Potosi, Eminence) all stand to benefit from the economic fall out of inviting this event back year after year. It occurs within an economically depressed area of Missouri at a time of year that only exacerbates that issue. Filling every room within 40 miles of Salem in February is a tremendously positive thing.

The 100 Acre Wood has an Environmental Steward dedicated to the concept of leaving the roads used in better condition than when we arrived. Seven truck loads of trash (most not left by our spectators) was dropped at the Salem Ranger station Sunday afternoon after the February event. (Recreational Motorized Organization, Saint Louis, MO - #127.4.70200.800)

95. Public Concern: The Mark Twain National Forest should restrict or prohibit all recreational vehicles.

BECAUSE THEY ARE INHERENTLY DESTRUCTIVE TO UNSPOILED ENVIRONMENTS AND AESTHETICALLY AT ODDS WITH NATURAL PLACES

We . . . believe that recreational vehicles—motorized or not—are inherently destructive to unspoiled environments and aesthetically at odds with any natural place. (Individual, Salem, MO - #118.2.70310.001)

96. Public Concern: The Mark Twain National Forest should enforce roadless area vehicle restrictions.

All Mark Twain personnel should vigorously promote and enforce roadless area vehicle restrictions. (Preservation/Conservation Organization, Columbia, MO - #112.9.60540.002)

Off-Road Vehicles

97. Public Concern: The Mark Twain National Forest should include off-road vehicle use as a major revision topic.

TO COMPLY WITH THE NATIONAL FOREST MANAGEMENT ACT AND THE NATIONAL ENVIRONMENTAL POLICY ACT

Another controversial issue excluded from the Notice of Intent (NOI) is the management of off-road vehicles. Off road vehicles are notorious for the damage they inflict. Harmful effects include soil and vegetation damage, destruction of wildlife habitat, air, and noise pollution, water pollution, use conflicts, and threats to public safety. They also prevent and discourage recreation, hikers and bird watchers, and flower observation enthusiasts. Lack of enforcement personnel has ensured that many off road vehicle users commit trespass violations with impunity and without fear of citation. Off road vehicles should not be allowed in the Mark Twain National Forest.

In accordance with National Forest Management Act and National Environmental Policy Act, the issue of off road vehicles use in the Mark Twain National Forest should be open to public comment as an item still under consideration as a revision priority. (Individual, Alton, MO - #108.27.70311.003)

BECAUSE IT MEETS THE CRITERIA FOR INCLUSION

There are at least two critical reasons for the consideration of off-road vehicle use as a major revision topic: 1) inclusion is warranted based on the Forest Service's self-generated criteria and evaluation methodology for deciding which issues to address; and 2) the current plan direction is deficient in its goals and to-date achievements. The Need for Change document lists reasons for topic exclusion from the Forest Plan revision process. Specifically for off road vehicle use, the document states that despite motorists' expressed desires to open unclassified roads for motorized use, "[b]ased on monitoring results, interpretation of national policy trends, other Forests' experiences, and our own experiences trying to manage all terrain vehicle and off road vehicle use" no major change in plan direction is warranted." Factors cited in the Need for Change document as suggesting a revision need include: land conditions and public demands have changed; results of monitoring and evaluation suggest need for revision; and suggestions provided by stakeholders. Off road vehicle use satisfies all three of these stated conditions. (Preservation/Conservation Organization, Wood River, IL - #147.41.70311.003)

BECAUSE OFF-ROAD VEHICLE USERS PAY TAXES AND LICENSE FEES

We are concerned about the disappearance of public land use by all terrain vehicle riders. When public policy was established in the 1980s, our sport was fledgling and nobody asked the few who rode all terrain vehicles then what they thought. Now we are a large body of citizens—men, women, and children in all economic brackets and age categories—and we are very concerned that the sport we enjoy will cease to exist.

Let us tell you a little bit about the average all terrain vehicle riders. We ride safely and are courteous toward non-riders, horse trail riders, and one another. We care about conservation and our environment

and the wildlife we must share our woods with. Many of us volunteer our time to clean the trails we ride as well as other public lands. We are good citizens and not the “wild demons” some alarmists make us out to be. True, some bad apples are trying to spoil the whole barrel, but our organization works to make responsible use of nature a thought in every rider’s mind.

One other thing we might add about the average all terrain vehicle rider is that he or she pays taxes and license fees and, by right, should be considered in the overall conservation plan.

We ask you to consider this large body of taxpayers as you submit the upcoming forestry plan. We are most interested in having good, safe trails and in encouraging the legal use of all terrain vehicles on public lands. (Individual, Poplar Bluff, MO - #132.1.70311.105)

98. Public Concern: The Mark Twain National Forest should allow off-road vehicle use.

BECAUSE IT IS PUBLIC LAND

I feel the current plan should be revised because it has limited the use of the Mark Twain to much of the general public. The limited use of all terrain vehicles and other vehicles because of closed roads keep older people as I am, from being able to use anything but along county roads. I realize there are law-breakers out there. [There] always have been. But go after them and not the rest of us who are good law abiding, tax paying citizens who like to hunt and enjoy a outing on an off road vehicle with our family. This is “public” lands and should be treated as such. (Individual, Poplar Bluff, MO - #4.1.70311.703)

TO RECOVER HARVESTED GAME

I understand that the forest is public, and that the forestry service strives to balance usage with varied interest groups. Off-road riders of today are usually mature adults who are conscientious and environmentally aware.

I ask that in your plan you consider . . . during deer hunting season to allow vehicles on a direct path in and out of the forest to recover harvested game. (Individual, Poplar Bluff, MO - #125.2.70311.700)

99. Public Concern: The Mark Twain National Forest should open more trails for off-road vehicle use.

We need lots more miles of open off road vehicle trails! (Individual, Memphis, TN - #134.1.70311.703)

I am writing about the Forest Plan Revision for Mark Twain National Forest. I am a resident of St. Louis County and a member of the Flatland Rover Society, which is a Midwest off-roading club for Land Rovers. Our club has had a number of rallies in the park and I have also enjoyed the trout fishing in Montauk. I am writing in the hopes that the Forest Plan Revision includes keeping the existing trails for off-roading (OHVs) open and there is a plan to increase the number of trails. Our club follows the “tread lightly” philosophy to off-roading and would be more than happy to sponsor/volunteer to maintain or clean up the trails in hopes to continue to enjoy them. We always respect nature in our way of enjoying parts of nature many don’t see. (Individual, Wildwood, MO - #74.1.70310.001)

The Mid-west Trail Riders Association membership believes that the current amount of designated off road vehicle trails in the Mark Twain National Forest is not adequate. The approximate 100 miles of trail at Chadwick, and the 26 miles of trails at Sutton’s Bluff clearly fall short of meeting past usage or current needs of the various off road vehicles user groups. It is time to document and provide additional trails for off road vehicles. The revision of the Forest Plan should document the need for more off road vehicle trails and begin the process of providing them. (Recreational Motorized Organization, Maryland Heights, MO - #76.4.70310.001)

FOR THE TAX PAYING CITIZENS

I am also disappointed that with a metropolitan area of over 2.5 million people, there are only 26 miles of legal off road vehicle trails within a 200-mile radius of the St. Louis Metro area. The Mark Twain

National Forest is falling woefully short on providing motorized recreation to a large number of tax paying citizens. (Individual, Canton, IL - #60.7.70311.701)

TO DISPERSE RECREATION

This statement was taken from your document "Assessment of the Need for Change" - "The Forest Plan allows for the development and designation of additional trails and use areas." I respectfully ask that the Forest Service begin development of new trails within the National Forests of Missouri. Dilution is the solution to pollution, so please take steps to spread out the off road vehicle taxpayers (Individual, Olathe, KS - #53.3.70500.700)

100. Public Concern: The Mark Twain National Forest should maintain the special use areas designated for off-road vehicle use.

TO LESSEN EFFECT IN OTHER AREAS

I think all terrain vehicles and dirt bike needs are being addressed well with the special use areas and or trails at Chadwick and Sutton Bluff. Continued expansion and improvement of these areas should generate additional traffic there and increase revenue from use fees to fund further development. The more attractive these designated areas are to all terrain vehicle users the more pressure will be taken off of other areas in the forest by all terrain vehicle riders. (Individual, Kansas City, MO - #84.1.70311.701)

101. Public Concern: The Mark Twain National Forest should develop rigid standards and guidelines.

TO ENSURE THAT OFF-ROAD VEHICLE USE DOES NOT DESTROY NATURAL RESOURCES

We support closure of the entire Mark Twain to off road vehicle use. There are many areas on both public and private lands in Missouri that remain open to off road vehicles. It is unwise management of our federal lands to permit a small handful of users to despoil the environment for the rest of the public. At the very least, the Forest Service should develop much more rigid standards and guidelines to ensure that the existing off road vehicle use of the Mark Twain does not destroy natural resources. (Preservation/Conservation Organization, Saint Louis, MO - #87.41.70311.101)

102. Public Concern: The Mark Twain National Forest should restrict or prohibit off-road vehicles due to their effects.

BECAUSE THEIR EFFECTS ARE INCONSISTENT WITH THE CLEAN AIR ACT, THE CLEAN WATER ACT, APPLICABLE EXECUTIVE ORDERS, AND FOREST SERVICE REGULATIONS AND POLICIES

Permitting the virtually unregulated use of off road vehicles in National Forests fails to safeguard these areas from astonishing amounts of water and air pollution which threaten Forest resources, including wildlife, and Forest users. Such impacts are inconsistent with provisions set forth in the Clean Water Act, the Clean Air Act amendments of 1990, applicable Executives Orders, and United States Forest Service regulations and policies. (Preservation/Conservation Organization, Wood River, IL - #147.221.70310.412)

BECAUSE THEY NEGATIVELY AFFECT SOIL

There are several studies in the literature, which provide a detailed description of the collective impact of off road vehicle use on soil properties. . . . In some cases, the summary references several studies, which document similar impacts in the same habitat type or provides a brief explanation of a particular impact attributable to off road vehicle use. While many of these studies involve desert soils—soils, which are not representative of all soils on National Forest lands—the general impacts (i.e., soil compaction, reduced permeability, erosion) would apply to other soil types, though the degree of impact may be greater or less. The results of these studies provide compelling evidence that off road vehicles cause substantial adverse impact on soils, which will lead to greater impacts to the ecology of an area. (Preservation/Conservation Organization, Wood River, IL - #147.148.70311.002)

Surface crusting in areas used by off-road vehicles is another important process, which influences erosion and runoff. Rainfall in crusted areas can exacerbate the reduction in soil permeability caused by off road vehicle compaction by breakdown of the soil aggregates, redistribution of the fine particles into the Soil pores thereby further reducing soil conductivity, and compaction by raindrop impact (Hillet 1964, McIntyre 1958 a, 1958b, Epstein and Grant 1967, Tackett and Pearson 1965, Farres 1978). Soils react differently to this impact. Crust conductivity in a sandy loam soil was determined to be five times less than that measured in underlying soil (Tackett and Pearson 1965). This factor was even greater in a remolded sandy loam (100-1000) (Hillel 1964) and fine sandy loam (2000) (McIntyre 1958a). Lowdermilk (1930) determined that runoff from crusted, bare soil was three, nine, and 16.5 times the runoff from crusted, organic litter-covered soil for a fine sandy loam, a sandy clay loam, and a clay loam, respectively. Eckert et al. (1979) found that an infiltration rate in an off road vehicle trail was reduced from 2.1 to 1.1 centimeters per hour as a result of surface crusting in a Mojave Desert sandy loam yet sediment yield remained higher than that measured from undisturbed surfaces. (Preservation/Conservation Organization, Wood River, IL - #147.143.70311.404)

BECAUSE THEY NEGATIVELY AFFECT WATER RESOURCES

To protect and restore water resources, the Land Revision Management Plan should ban off road vehicles. (Individual, Doniphan, MO - #103.17.70311.403)

BECAUSE THEY NEGATIVELY AFFECT WETLAND ECOSYSTEMS

Wetland and similar ecosystems are also highly susceptible to off road vehicle impacts. Depending on the wetness of the area, traditional motorcycles and three or four-wheel all terrain vehicles may not be operable in such ecosystems. Airboats, swamp buggies, and other vehicles specially adapted for operation in such areas are used and have been determined to adversely impact soils, vegetation, and wildlife. Wetland areas are particularly susceptible to compaction, rutting, and puddling when used by wheeled or tracked vehicles (Aust 1994). Such impacts can result in alterations in soil strength and structure, decrease in the degree and duration of soil aeration, decreased site productivity, and disruption of the area's hydrology (Aust et al. 1992).

In general, off road vehicle use in wetland ecosystems can affect substrates, water movement patterns, water depth, hydro-period, which, in turn, can impact the area's fauna and flora (Duever 1995). Sediments churned up by the off road vehicles may impact bottom dwelling organisms which can effect the entire food chain. Off road vehicle use is likely to increase turbidity and suspended solids and decrease visibility which can affect photosynthesis and may result in damage to fish gills (Duever 1995). Aquatic plants, such as periphyton, may also be disturbed resulting in potential habitat changes for fish and invertebrates (Duever 1995). (Preservation/Conservation Organization, Wood River, IL - #147.152.70311.405)

The severity of off road vehicle impact can be particularly severe in important but uncommon habitats. Riparian habitats, for example, are needed by a large number of species for survival. As reported by Bury (1980), off road vehicle operation through streams or shallow pools destroys aquatic plants and disrupts the habitat of invertebrates, fish and amphibians, some reptiles, and birds. Off road vehicle use in such fragile areas can also damage stream banks initiating and facilitating erosion. These impacts, in turn, can influence the entire ecology of the area. In wetlands, off road vehicle use can alter hydrological patterns by creating ruts, which function to channel and hold water (Lodge 1994, Duever et al. 1981, Duever et al. 1986). Similarly, bogs and swamps are also susceptible to adverse damage caused by off road vehicles. Any rare species inhabiting such uncommon ecosystems may be in danger of local or total extinction as a result of off road vehicle use (Sheridan 1979). (Preservation/Conservation Organization, Wood River, IL - #147.186.70311.405)

Off road vehicle impacts to the aquatic sediment layer can impact invertebrates, aquatic plants, and fish, by increasing turbidity and suspended solids potentially resulting in damaged gills and impacts to the photosynthetic process (Duever 1995). (Preservation/Conservation Organization, Wood River, IL - #147.200.70311.405)

BECAUSE THEY NEGATIVELY AFFECT THREATENED AND ENDANGERED SPECIES

Off road vehicle impacts in riparian plant communities are believed to be at least partly responsible for the reduction, degradation, and elimination of nesting habitat for the willow flycatcher, a federally listed endangered species, and has curtailed the ranges and distribution of other western subspecies. 60 FR 38:10694-10715. (Preservation/Conservation Organization, Wood River, IL - #147.166.70311.413)

While . . . case studies provide an alarming picture of the adverse impacts of off road vehicles on many wildlife species, off road vehicles have also been documented to directly, indirectly, and cumulatively impact federally protected species. For imperiled species like the grizzly bear, gray wolf, and lynx, for example, off road vehicle use, including snowmobiles, can cause disturbance, adversely impact animal energetics, negatively impact prey and or carrion availability, can cause habitat abandonment, and can otherwise impact predator/prey interactions to the detriment of the species.

Off road vehicle-caused disturbance will not only uproot and/or kill imperiled plant species, but indirectly it can affect seed germination and propagation, plant structure, and plant abundance, composition, and productivity in violation of the Endangered Species Act (ESA). For animals, off road vehicles may displace imperiled species from important habitat and may also disrupt feeding, breeding, and other critical behaviors and alter predator/prey interaction, resulting in adverse impacts to animal energetics, which, as previously stated, may result in increased risk of mortality and/or impair productivity. Since the quality, quantity, and security of habitat is critical to the protection and recovery of imperiled species, these impacts are entirely unacceptable and clearly represent a “take” as defined in the Endangered Species Act. (Preservation/Conservation Organization, Wood River, IL - #147.206.70311.413)

Off-road vehicle use and human disturbance in general can also adversely impact Canada lynx survival and habitat use. (Preservation/Conservation Organization, Wood River, IL - #147.209.70311.413)

BECAUSE THEY NEGATIVELY AFFECT VEGETATION

Vegetation can also be adversely impacted by pollution. Pollution from vehicle exhaust contains a number of elements which are damaging to vegetation. While the amount of pollutants emitted by a two-stroke engine are greater than those emitted by a four-stroke engine, the elements in the emissions, except for the unburned fuel emitted by two-stroke engines, are similar and include: 1) carbon dioxide which may act as a fertilizer and cause changes in plant species composition (Bazzaz and Garbutt 1988, Hunt et al. 1991, Ferris and Taylor 1995); 2) sulphur dioxide which is taken up by vegetation and can cause changes in photosynthesis (Winner and Atkinson 1986, Iqbal 1988, Mooney et al. 1988); 3) oxides of nitrogen which may be harmful to vegetation or may act as a fertilizer, causing changes in plant species composition (Rogers et al. 1979, Falkengren-Grerup 1986, Iqbal 1990, Wellburn 1990); 4) organic gases such as ethylene, to which plants may be extremely sensitive (Gunderson and Taylor 1988, Taylor et al. 1988); and 5) heavy metals which may cause photo-toxic damage (Atkins et al. 1982). Ozone, which is formed by the photochemical reaction of released nitrogen and hydrocarbons, may also injure plants and affect plant species Composition (Reich and Amundson 1985, Becker et al. 1989, Ashmore and Ainsworth 1995, Warwick and Taylor 1995). (Preservation/Conservation Organization, Wood River, IL - #147.217.70310.406)

Off road vehicle impacts to vegetation can be both direct and indirect and can impact all plant species from grasses to trees. Such impacts may include crushing, breaking, trampling, and reduction of vegetative cover, damage to germinating seeds, and increased erosion forces which can alter the soil structure weakening the plant and its root structure resulting in impaired growth or death. These impacts can, in millimeters, increase the susceptibility of plants to disease and insect predation. (Preservation/Conservation Organization, Wood River, IL - #147.157.70311.406)

Desert vegetation is highly vulnerable to off-road vehicles (Stebbins 1974a). Off road vehicle destruction of macro-flora has been well documented (Keefe and Berry 1973, Wilshire et al. 1978). Off road vehicles also destroy smaller plants as a result of minimal impacts and larger, more resilient, deep-

rooted plants, like creosote, with repeated vehicular impacts (Wilshire 1983). Annual plants in the process of germination are highly susceptible to even a single off road vehicle pass and mature plants are uprooted and crushed even at low levels of use (Wilshire 1983). Larger shrubs and trees are not generally directly impacted by off road vehicles, but erosion and sedimentation attributable to off road vehicle use can destroy these plants (Wilshire 1983). The loss of protective cover of vegetative communities, results in decreased wildlife habitat, increased erosion, increased runoff, reduced soil moisture content, and associated cumulative and synergistic impacts. These impacts, in turn, will substantially impair the recovery of the area even if off road vehicle use was terminated. (Preservation/Conservation Organization, Wood River, IL - #147.162.70311.406)

Off road vehicle users may strike animals, intentionally or unintentionally, causing their death. Though consumptive activities (i.e., hunting) have a greater direct impact on animal mortality, so-called "non-consumptive activities" can also cause or facilitate animal mortality. Several researchers have documented deliberate harassment of wildlife by off road vehicles (Corbet 1970, Curtis 1974, Baldwin 1970, Stace-Smith 1975, Butcher 1972).

Collisions with wildlife often prove fatal to the animal. Predator populations are especially vulnerable to vehicle-caused mortality (Forman et al. 1996). Other wildlife can also suffer significant impacts (Foster and Humphrey 1992, Smith et al. 1996, Aaris-Sorensen 1995, Jenkins 1996). For instance, smaller animals (like small mammals and ground-nesting birds) can be crushed when run over by off road vehicles (Bury 1980). Wilkens (1982) and Rosen and Lowe (1994) observe that rodents can also be especially vulnerable. While many of these studies focus on paved roads and highways, it is indisputable that similar impacts can occur on unpaved travel ways used by off road vehicles. (Preservation/Conservation Organization, Wood River, IL - #147.170.70311.411)

BECAUSE THEY SPREAD NOXIOUS WEEDS AND EXOTIC SPECIES

While off road vehicle trails may directly and indirectly contribute to the spread of noxious, weedy, and exotic species to the detriment of the ecology of an area, off road vehicles also act to transport and facilitate the colonization of an area by noxious and non-native weeds and other plants (Cousens and Mortimer 1995, Stout 1992). In the Canaan Valley of West Virginia, for example, Stout (1992) documented that off road vehicles facilitated the invasion of barnyard grass, milkweed, and purple loosestrife. Similarly, knapweed, an exotic species which out competes native grasses, damages wildlife habitat, and leads to increased erosion (Lacey et al. 1997) is easily transported and deposited by off road vehicle activity.

The colonization of disturbed areas by weedy and non-native species facilitated by off road vehicle use and disturbance can severely impact the quality of winter and summer forage for wildlife, potentially resulting in long-term impacts to wildlife populations. (Preservation/Conservation Organization, Wood River, IL - #147.185.70311.408)

BECAUSE THEY DESTROY ARCHAEOLOGICAL AND GEOLOGIC SITES

Off road vehicles have also been implicated in damaging archaeological and geologic sites (Stebbins 1974a, Stebbins and Cohen 1976, Wilshire and Nakata 1976). . . . Archaeological and historical features, relic landforms, primitive soils, and other legacies of irreplaceable cultural, aesthetic, and scientific value have also been permanently lost. (Preservation/Conservation Organization, Wood River, IL - #147.131.70311.001)

BECAUSE THEY CAUSE INJURIES AND FATALITIES

The off road vehicle injury and mortality statistics for specific Forests have not been obtained and may or may not be available. Given the proliferation of off road vehicle use on nearly every Forest, it is indisputable the injuries and fatalities, involving adults and children, have and continue to occur on National Forests. These incidents may not only cause suffering and tragedy for the individuals and families affected, but it also requires the expenditure of significant time and money by the United States Forest Service and other agencies for rescue and emergency medical operations. The expense of rescuing an injured recreationist is higher if they are in an off-road area versus if they were more easily accessible along a forest road or trail. Similarly, the cost and time associated with search and rescue for motorized recreationists who become lost would be less if the off road vehicle users were required to

remain on forest trails and roads. The relief requested in this petition will not eliminate off road vehicle-related injuries and mortalities, but it will reduce the time, cost, and difficulty in rescuing injured or lost off road vehicle users and is consistent with the United States Forest Service's duty to provide a safe environment for the public. (Preservation/Conservation Organization, Wood River, IL - #147.223.70310.001)

All terrain vehicles kill and injure people. Many kids have to spend the rest of their life in a wheel chair from all terrain vehicle accidents. Almost 2,800 people have been killed in all terrain vehicle accidents and approximately 54,500 people a year are treated in emergency rooms from all terrain vehicles accidents. (Preservation/Conservation Organization, Wood River, IL - #147.129.70311.101)

BECAUSE THE SMALL NUMBER OF USERS DOES NOT JUSTIFY THEIR USE OF PUBLIC RESOURCES

A small minority of the public enjoy off road vehicle recreation and the American public should not be saddled with the cost of providing this recreation on the public's lands or providing Forest officials with legal protections in the event of a wrongful death and or disability. (Individual, Boonville, MO - #98.22.70311.810)

BECAUSE OF MOTORIZED USERS' DESTRUCTIVE BEHAVIOR

Off road vehicle riders are a problem where we live. We see hunters using them, and we find litter, destruction of forest plant life, etc. We would favor further restrictions and road closures. We understand the difficulty in management, and support the current policies. (Individual, Winona, MO - #93.2.70311.420)

Others have noted that off road vehicle trails frequently serve as dumps for human trash (Kalisz 1996). (Preservation/Conservation Organization, Wood River, IL - #147.131.70311.001)

103. Public Concern: The Mark Twain National Forest should restrict or prohibit off-road vehicles by imposing restrictions.

BY LIMITING USE TO AUTHORIZED AREAS

Off road vehicle use should be limited to the currently authorized areas. (Individual, Ozark, MO - #8.3.70311.701)

We strongly support the Assessment's prescription for restricting all vehicles to officially designated roads and trails. (Preservation/Conservation Organization, Pratt, KS - #96.4.70311.701)

BY NOT EXPANDING DESIGNATED OFF-ROAD VEHICLE TRAILS

A major concern is motorized off road recreation. Existing off road vehicle areas are hard to maintain and riding off designated trails is a problem throughout the forest. The agency has repeatedly claimed the difficulty it has in handling this issue. Limited staff and budget hamper enforcement. Off road motorized recreation has multiple adverse environmental impacts. We recommend that the revised plan commit to at minimum, no expansion of designated off road vehicle trails and greater efforts at enforcement of off road vehicle abuse. (Preservation/Conservation Organization, Columbia, MO - #77.12.70310.002)

BY NOT DESIGNATING NEW OFF-ROAD VEHICLE AREAS AND TRAILS

Audubon has long believed that off-road vehicles and all terrain vehicles are a major threat to most other forest values. There should be no new off road vehicle and or all terrain vehicle areas designated. (Preservation/Conservation Organization, Columbia, MO - #112.11.70311.400)

Trails and roads constructed to facilitate off road recreation, whether legal or illegal, also adversely impact wildlife and wild lands. The adverse impacts of trails and roads on wildlife have been well documented (See, e.g., Cole and Landres 1995, Anthony et al 1995, Noss 1996). These impacts include habitat fragmentation, wildlife displacement, increased human access to previously unused or lightly

used areas, increased susceptibility for direct or indirect wildlife mortality, and an increase in “edge affected” habitat to the detriment of “interior” habitat and interior species.

The mere existence of trails and roads negatively impacts the value of the habitat for a variety of organisms (Cole and Landres 1995, Anthony et al. 1995). Trails and other similar disturbances create microclimates with different temperatures, moisture levels, humidity levels, wind speeds, and levels of solar radiation. Roads and trails can also increase sediment runoff, constrain and divert surface and subsurface flows, introduce toxic runoff, and reduce wildlife habitat and displace wildlife (Adamus and Stockwell 1983, Zeedyk 1996). These affects, along with the disturbance caused by off road vehicles can change the vegetation composition of the edge habitat. (Preservation/Conservation Organization, Wood River, IL - #147.175.50300.420)

BY CLOSING EXISTING OFF-ROAD VEHICLE TRAILS

We also recommend that an alternative to eliminate existing off road vehicle areas be considered. (Preservation/Conservation Organization, Columbia, MO - #77.12.70310.002)

104. Public Concern: The Mark Twain National Forest should restrict or prohibit off-road vehicles in certain areas.

AT HIGHER ELEVATIONS

Trail characteristics also influence erosion potential. Off road vehicle trails at higher elevations generally experience more severe erosion than trails at lower elevations (Willard and Marr 1970, Marion 1994), trail depth is deeper (Burde and Renfro 1986), and erosion rates are greatest during the summer (Dale and Weaver 1974). These impacts may be caused by the higher precipitation rates and extended period of snowmelt in the mountains resulting in muddy soils and a greater potential for erosion, more severe freeze/thaw cycles resulting in more loose soil augmenting erosion rates, and/or increased exposure to wind erosion (Leung and Marion 1996). (Preservation/Conservation Organization, Wood River, IL - #147.141.70311.409)

IN SENSITIVE AND ROADLESS AREAS

Other land and resource management matters that may have particular consequences for state parks and other nearby landholdings include strict limitations and control of off road vehicle use, especially in sensitive and roadless areas. (Placed-Based Group, Columbia, MO - #94.2.50340.001)

105. Public Concern: The Mark Twain National Forest should not give official designations to user-created trails.

BECAUSE OFF ROAD VEHICLES CAN ALTER THE ECOLOGY OF THE DISTURBED AREAS

Off road vehicle caused habitat modification can adversely impact individual species, but more importantly can alter the ecology of the disturbed area. These impacts are not limited to roads and trails constructed and designated for off road vehicle use, but extend to the myriad trails regularly and illegally created by the off-road use of off-road vehicles. Remarkably, despite the environmental impacts, instead of routinely citing and prosecuting those who create illegal trails, the United States Forest Service has, as previously stated, frequently rewarded such unscrupulous behavior by officially designating and including such trails in Forest travel plans. (Preservation/Conservation Organization, Wood River, IL - #147.187.70311.400)

106. Public Concern: The Mark Twain National Forest should enforce the rules on off-road vehicles.

Better enforcement of rules regarding Off Road Vehicles. (Individual, Saint Louis, MO - #50.2.70310.101)

Please enforce rules for off road vehicles and don't open new areas for it. (Individual, Kansas City, MO - #92.5.70300.000)

Another controversial issue excluded from the Notice of Intent (NOI) is the management of off-road vehicles. Off road vehicles are notorious for the damage they inflict. Harmful effects include soil and vegetation damage, destruction of wildlife habitat, air pollution, noise pollution, water pollution, user conflicts and threats to public safety. In addition to these adverse impacts to designated use areas, illegal use of off road vehicles throughout the Mark Twain such as hill climbing, stream running and extension of designated trails has also been a problem. Lack of enforcement personnel has ensured that many off road vehicle users commit trespass violations with impunity and without fear of citation. Moreover, the highly fragmented Mark Twain exacerbates the occurrence of illegal user entrance from adjacent private land or public roads. Considering these many negative impacts, and the availability of other areas on which to ride, we believe that off road vehicles should be banned from the Mark Twain. (Preservation/Conservation Organization, Saint Louis, MO - #87.38.70311.001)

Changes to the plan regarding off road vehicle use and all terrain vehicle use by the public on the Mark Twain National Forest should provide for rigorous containment and enforcement of bounded areas where such use is authorized. Absent continuous oversight and enforcement, this form of entertainment is destructive and consumptive of all or nearly all other values related to public lands. (Individual, Saint Louis, MO - #124.9.70311.001)

It is critical that rules governing vehicle use on the Forest be strictly enforced. This requires adequate budget and staffing, as well as cooperation with local and law enforcement agencies. In areas of the Forest where transportation is not adequately managed, especially pertaining to off-road vehicle use, the results include unjustifiable damage to soils and vegetation, fragmentation of habitat, harassment of wildlife, and disruption of recreationists seeking quality outdoor experiences based on solitude that is often only available in the Forest setting. (Preservation/Conservation Organization, Pratt, KS - #96.4.70311.701)

Off-Road Vehicles – Adequacy of Analysis

107. Public Concern: The Mark Twain National Forest should adequately monitor off-road vehicle effects.

Evaluating and interpreting off road vehicle impacts involves a variety of factors including terrain topography, soil moisture content, soil substrate, plant habitat type, types of vehicle, weight of vehicles, wheel configuration, types of tires and or treads (i.e., low pressure, lugs, cleats, ribbed), time of year, and the amount and timing of off road vehicle use (Ahlstrand and Racine 1993, Wooding and Sparrow 1979). Each of these factors may attenuate or amplify the environmental impacts of off road vehicles.

These impacts and others are not limited to the pages of scientific publications, but have been documented on a large number of National Forests. Though many National Forests fail to properly monitor the effects of off road vehicles on their lands as required by law, records obtained by Wildlands Center for Preventing Roads through the Freedom of Information Act provide numerous examples of the adverse impacts of off road vehicles on United States Forest Service lands. This evidence, which is summarized in the off road vehicle Impacts on National Forests section of this document, represents the minimum impacts of off road vehicles on United States Forest Service lands based on current, and frequently insufficient, monitoring data. If the United States Forest Service properly monitored off road vehicle effects, the evidence of adverse off road vehicle impacts would be even more staggering than that gleaned from the records obtained through Freedom of Information Act. (Preservation/Conservation Organization, Wood River, IL - #147.133.70311.001)

108. Public Concern: The Mark Twain National Forest should reassess off-road vehicle areas.**BECAUSE THEY ARE A THREAT TO OTHER FOREST VALUES**

Audubon has long believed that off-road vehicles and all terrain vehicles are a major threat to most other forest values and there should be a reassessment of the existing areas should be conducted. (Preservation/Conservation Organization, Columbia, MO - #112.11.70311.400)

109. Public Concern: The Mark Twain National Forest should analyze the effects of off-road vehicles on wildlife.

Existing policy relating to off-road vehicles should be reviewed. In doing so, the Forest Service should evaluate the impacts of off road vehicle use on ground-nesting birds, amphibians, reptiles and mammals. Many warbler species that breed in the Ozarks, such as the ovenbird, worm-eating warbler, kentucky, and other bird species such as whip-poor-will and chuck-wills-widow, are ground nesters. Vehicles that wander off designated trails can wreak havoc on their nests and impact breeding success. (Preservation/Conservation Organization, Saint Louis, MO - #102.4.70311.411)

Existing policy relating to off-road vehicles should be reviewed. In doing so, the Forest Service should evaluate the impact of off road vehicle use on butterflies, especially usage outside designated areas where vegetation would be destroyed or damaged. Any disturbance to vegetation will negatively impact butterflies. First, butterflies use plants and trees for shelter when they are not actively flying, so moving vehicles crashing through the undergrowth could kill or injure butterflies at rest. Second, butterfly caterpillars use plants as larval food source so disturbance to vegetation could result in destruction of caterpillar host plants and well as the caterpillars themselves, which might be crushed by tires. Third, caterpillars spend some time on the ground, where they could be run over by moving vehicles. Fourth, butterflies in their chrysalis stage could be injured or destroyed if moving vehicles disturb the plant or ground where the chrysalis is resting. (Preservation/Conservation Organization, Saint Louis, MO - #97.6.70311.415)

110. Public Concern: The Mark Twain National Forest should provide relative value analysis for off-road vehicle use.**TO COMPLY WITH THE MULTIPLE USE SUSTAINED YIELD ACT**

This is a huge portion of the plan. Off road vehicle/all terrain vehicle use is responsible for untold dollars of damage to our national forests through failure to abide by regulations and by inadequate regulations. The Mark Twain is the perfect example. How is the forest service going to pay for restoration of areas which have been devastated by under regulated all terrain vehicle use? What kind of enforcement plan is going to be put into place? The agency cannot assume in the EIS that riders will abide by regulations when there is so much evidence across almost the entire range of all terrain vehicle use that indicates that they do not abide by regulations. The agency must come up with a credible monitoring and enforcement plan if it wants to rely on any kind of assumptions regarding all terrain vehicle users staying within the bounds of the plan's guidelines. That will cost a lot of money, and one has to really wonder if this is the highest priority for a national forest. We believe that there are clearly higher priorities for use of dwindling resources for national forests than to turn them over to all terrain vehicle users to degrade and destroy. All of this would have to [be] analyzed in relation to the requirement to do a relative value analysis under the requirements of the Multiple Use Sustained Yield Act. Relatively speaking, why does the forest even have to provide for all terrain vehicle use? To predetermine this is again another one of these decisions that appears to be being made internally outside the plan process and with no public involvement. (Preservation/Conservation Organization, Brookport, IL - #142.11.70311.101)

111. Public Concern: The Mark Twain National Forest should include the flow chart in the article “Hard Trails in Alaska” in the revised forest plan.

The plan should prescribe an appropriate detailed technical description of the area and method subject to monitoring/resource assessment on those areas where off road vehicle and all terrain vehicle use is authorized so that all parties are of common expectations. For example the process flow chart in the article “Hard Trails in Alaska” by Professor Tom Hunt in the periodical “Land and Water, May/June 2002 may serve as a starter with modifications and elaborations appropriate to the Mark Twain National Forest and should be a part of the plan. (Individual, Saint Louis, MO - #124.9.70311.001)

Snowmobiles**112. Public Concern: The Mark Twain National Forest should restrict or prohibit snowmobiles.****BECAUSE THEY NEGATIVELY AFFECT THE ENVIRONMENT**

While the potential adverse impact of the majority of off road vehicles is rather obvious, several studies have revealed that snowmobiles can also have devastating impacts on snow density, soil temperature, and vegetation, including saplings, shrubs, and grasses. These and associated impacts can result in a loss of surface organic matter and ultimately, through erosion, a loss of topsoil. Moreover, snowmobile use can lead to changes in plant density and species composition (Neumann and Merfiam 1972; Wanek and Schumaker 1975), diminished productivity (Wanek and Potter 1974, Wanek and Schumaker 1975), and can contribute to the spread of noxious weeds and exotic plant species. Changes in plant distribution, density, and productivity, in turn, can lead to alterations in ungulate forage patterns and behaviors.

Snow compaction, whether caused by snowmobiles or through trail grooming activities, increases snow density, decreases soil temperature, and retards snowmelt, and “could produce significant changes in natural vegetation” (Wanek 1971). As a consequence, vegetation productivity, vegetation growth, seed vernalization, seed dispersal, seed germination, organic matter decomposition, humus formation, and microbial activity are adversely affected (Aasheim 1980, Wanek 1971; Wanek 1971a, Wanek 1972, Wanek 1973, Wanek undated, Keddy et al. 1979, Wanek and Schumacher 1975). Rongstad (1980) also reported delayed flowering in some plants in spring, lower soil bacteria, and elimination of some plants due to snow compaction. (Preservation/Conservation Organization, Wood River, IL - #147.161.70311.420)

BECAUSE THEY NEGATIVELY AFFECT AIR QUALITY

Off road vehicles destroy air quality in areas where they are used. Even a small group of snowmobiles or other off road vehicles, for example, produce extremely high levels of pollution. According to emissions data from the California Air Resources Board (see, <http://www.arb.ca.gov> [1/5/99]), one hour on a two-stroke engine used by most snowmobiles and jet skis, produces more smog-forming pollution than a modern car creates in one year. A recent report on air quality in Yellowstone National Park determined that snowmobiles were responsible for nearly all of the air pollution in Yellowstone National Park. The amount of air pollution, generated by the highly polluting two stroke engines which power most snowmobiles, is excessive. According to the Park Service study, on a peak day when 2000 snowmobiles enter the Park, 32 tons of hydrocarbons and 88 tons of carbon monoxide are emitted. Over the course of an entire winter, when more than 60,000 snowmobiles enter the Park, that adds up to 1,200 tons of hydrocarbons and 2,400 tons of carbon monoxide. During one winter snowmobiles emit 78 percent of all carbon monoxide and 94 percent of all hydrocarbons released during the entire year, even though cars and other vehicles vastly outnumber snowmobiles.

Dangerous levels of carbon monoxide (CO) and particulate matter (PM) are a primary concern. CO is extremely dangerous to humans (discussed below), and particulate matter is a recently confirmed human carcinogen by the Environmental Protection Agency. Snowmobiles and other off road vehicles emit dangerously high levels of carbon monoxide. A study conducted for the National Park Service in 1997 concluded that a single snowmobile produces 500-1000 times more carbon monoxide than a 1988 passenger car (Fussell-Snook 1997). (Preservation/Conservation Organization, Wood River, IL - #147.213.70310.418)

BECAUSE THEY CONTAMINATE THE ENVIRONMENT WITH METHYL TERTIARY BUTYL ETHER

Methyl Tertiary Butyl Ether (MTBE)—a controversial fuel-additive and suspected carcinogen, is contaminating water supplies nationwide. All 50 states use Methyl Tertiary Butyl Ether as an octane booster (2-3 percent Methyl Tertiary Butyl Ether), and 20 states are required to have gasoline with at least 11 percent Methyl Tertiary Butyl Ether. The Oxygenated Fuels Association (OFA) predicts that 70 percent of fuel sold nationwide will be oxygenated (11-15 percent Methyl Tertiary Butyl Ether) by the year 2000. Although the additive is commonly regarded as a hazard to drinking water from underground storage tanks, fuel spills, and motorized watercraft, snowmobiles and other off road vehicles are also a significant source of Methyl Tertiary Butyl Ether.

Methyl Tertiary Butyl Ether is a concern in snowmobiles and other off road vehicles for two reasons: 1) because these vehicles spill large quantities of unburned fuel into the environment, up to 15 percent of which is Methyl Tertiary Butyl Ether; and 2) because these vehicles produce very high emissions containing carcinogenic Methyl Tertiary Butyl Ether combustion by-products. In Yellowstone, for example, snowmobiles can dump from one-third to three-quarters of a gallon of Methyl Tertiary Butyl Ether directly into the environment every two hours. Although no studies have addressed wild animal sensitivity to Methyl Tertiary Butyl Ether in the environment, humans are extremely sensitive to the chemical. The Association of California Water Agencies reports that humans can consistently smell the chemical in the water at 15 ppb (Pirnie 1998). Only one-third of a gallon of Methyl Tertiary Butyl Ether is required to bring the drinking water consumed daily by 90,000 people to a contaminant level of 15 'ppb. It is therefore safe to assume that small amounts of raw Methyl Tertiary Butyl Ether from snowmobile exhaust leaching into snow-pack and watersheds within National Forest boundaries should be considered a threat to the quality of Forest water and snow resources, with perhaps more serious implications for wildlife. (Preservation/Conservation Organization, Wood River, IL - #147.219.70310.402)

BECAUSE THEY NEGATIVELY AFFECT WILDLIFE

In the winter in areas which receive snow, snowmobile use, other off road vehicle use on snow, or trail grooming, which compacts the snow surface effectively limits the winter range of the animals, including subnivean wildlife, thereby fragmenting the animal's habitat and adversely affecting the animal's survival. Aune (1981) in his study of the impacts of snowmobiles on wildlife in Yellowstone National Park observed that both snowmobile traffic and the berm created by trail grooming inhibited wildlife crossing of the groomed trails resulting in the artificial concentration of wildlife along road areas. Bison, elk, and deer all appeared to prefer to cross the trail where the berm was absent or when snowmobile traffic was reduced. Subnivean wildlife, as previously stated, can also be adversely impacted by snow compaction caused by snowmobile use. If this use were prohibited, particularly off-road, more habitats would be available for subnivean wildlife. This, in turn, could influence the number of small mammals which benefit the food web and ecology in the (Preservation/Conservation Organization, Wood River, IL - #147.180.50300.411)

Lynx, a species which the Fish and Wildlife Service recently proposed to list as threatened, is . . . adversely affected by snowmobile use. (Preservation/Conservation Organization, Wood River, IL - #147.209.70311.413)

The negative correlation between carrion use and proximity to roads and developments is of critical importance to bear survival and viability given that most spring carrion in Yellowstone occurs on ungulate winter ranges that are located at lower elevations, near roads and developments (Houston 1982). The prevalence of carrion near roads is also undeniably influenced by ungulate (particularly bison) use of groomed snowmobile roads as travel corridors. The groomed roads, therefore, not only alter the natural distribution and movement patterns of bison and other ungulates, but also affect grizzly bear access to carrion, potentially resulting in reduced bear productivity and survival.

Wolves are also impacted by snowmobiling and snowmobile trails (International Wolf 1992). Like ungulates, deep snow can hinder the movements of wolves. However, because wolves have a lighter foot load than most ungulates (Telfer and Kelsall 1984), they are better able to move across snow in search of prey.

Since wolf survival and production is affected by winter food intake, the availability and accessibility of prey in winter affects wolf numbers (Nelson and Mech 1986). Snowmobile trails, whether created by snowmobiles or grooming equipment, may adversely alter predator-prey dynamics, habitat use, predator and ungulate movement and distribution patterns, thereby affecting the availability and accessibility of prey to predators, and also affecting community structure and composition (Paquet et al. 1997). These trails can also facilitate predator expansion into areas where they are more likely to have negative interactions with humans, pets, and cattle.

Excessive snowmobile use may also displace wolves, grizzly bears, and other species from critical habitats (Huff and Savage 1972; International Wolf 1992), travel corridors, and den sites. (Preservation/Conservation Organization, Wood River, IL - #147.208.70310.411)

In a study on the impact of two-stroke emissions on fish, Balk et al. (1994) determined that hydrocarbons disrupt normal biological functions (e. g. DNA adduct levels, enzyme activity), including cellular and sub-cellular processes, and physiological functions (e.g. carbohydrate metabolism, immune system). 119 Serious disruptions of fish reproduction and fry survival also seem likely. (See also, Tjarnlund et al. 1995, 1996). Baker and Christensen (1991), for example, found that embryo and fry of rainbow trout have increased mortality at about pH 5.5. In the eastern United States, where precipitation is more acid than in the West, and where some surface waters are chronically rather than just episodically acidified, fish populations have been severely depressed or eliminated in acidified lakes potentially because of adverse impacts of acidification on the food chain (Schindler et al., 1985). Adams (1975) also found that the influence of lead and hydrocarbon on stamina, measured by ability to swim against a current, was significantly less in trout exposed to snowmobile exhaust than in control fish; the exposed fish made fewer tries to swim against the current, and swam for shorter lengths of time before resting. (Preservation/Conservation Organization, Wood River, IL - #147.216.70310.412)

Other Types of Motorized Recreation

113. Public Concern: The Mark Twain National Forest should distinguish between sport utility vehicles and off-road vehicles.

I am concerned that the needs of forest patrons with street-legal and licensed Jeeps, 4X4 trucks and sport utility vehicles (SUVs) are not being met by the plan. It appears these types of vehicles are referred to as off road vehicles in section IV-C-3 of the document. I will refer to them as "sport utility vehicles" to avoid confusion regarding the type of vehicle being discussed. The document also mentions "off-road" and "off-trail" use by these types of vehicles causing problems or being difficult to manage. In my experience sport utility vehicles and all terrain vehicles are often classified together, when in fact they are very different. Sport utility vehicles often travel at much higher speeds on the trails, do not mix well with horse or foot traffic and can cause trail damage as they slide around corners pushing rocks to the outside of every turn. [All-terrain] vehicles do not have these negative characteristics. Yes, I do own an all terrain vehicle, but think it best used on the farm or in all terrain vehicle parks such as Chadwick. I can see where they would be useful in other parts of the forest during hunting season as well. I am not [appropriately] associated with sport utility vehicle use. (Individual, Kansas City, MO - #84.2.70311.701)

114. Public Concern: The Mark Twain National Forest should allow sport utility vehicle trail riding.

FOR FAMILY RECREATION

Trail riding is the sport utility vehicle activity best suited to this forest. Trail riding is exploring existing roads and trails at a slow rate of speed and enjoying nature, often as a family. This is most enjoyable on unimproved and somewhat challenging roads or trails. The sport utility vehicles that people use for trail riding are frequently driven to work on Monday, so trails or roads that are so "extreme" that body damage is likely are not a good choice. Ideally these trails or roads will present enough challenge to require some driving skill and remain interesting. Trail riding is usually done in a group and the whole group often stops and watches each other negotiate obstacles. In my opinion this is the best, if not only,

way a family with young children can enjoy the forest together. (Individual, Kansas City, MO - #84.5.70310.701)

115. Public Concern: The Mark Twain National Forest should collaborate with four-wheel drive clubs in maintaining and expanding trails open to sport utility vehicles.

Because of my connections with the Kansas Rocks Recreation Park and the Flatland Rover Society, I could easily pull together representatives from many areas' four-wheel drive clubs to begin working with the forest management to put together a plan that will provide enjoyment for SUV owners and protect the forest's natural resources at the same time. We all love the forest and enjoy seeing it with our families. Please provide a contact name and number so my club and I can start working with the forest management to help maintain and possibly expand the trails open to SUVs. (Individual, Kansas City, MO - #84.7.13700.700)

The forest is full of roads and trails that are perfect for trail riding in a sport utility vehicle. With the increase in popularity of sport utility vehicles, it is no wonder that their use in the forest has increased "exponentially". It seems that rather than expand the opportunities for this type of visitor, the forest management has decided to keep decreasing opportunities for sport utility vehicle owners by closing more and more roads and trails. They have also limited the appeal and challenge of many roads by improving them to the point where any minivan could drive them.

It is my hope that the forest management will be open to working with the various four-wheel drive clubs in the area to expand the trail riding opportunities in the forest. My dream would be to have a series of trails connected to travel across the Ozarks via a sport utility vehicle, much like the Ozark Trail is for hikers. I know there is a great deal of interest in trail riding in the forest. Sport utility vehicle owners would be happy to pay fees, volunteer to monitor and maintain trails, adopt trails, help in trash collection and contribute in nearly any other way needed. (Individual, Kansas City, MO - #84.6.50300.701)

116. Public Concern: The Mark Twain National Forest should develop an area for rock crawling.

BECAUSE THE ENVIRONMENTAL EFFECTS ARE LIMITED

Rock crawling takes place on very rugged terrain and usually involves moderately to heavily modified sport utility vehicles driving very slowly—slower than a walking pace. There are areas of the forest that would be excellent for rock crawling. They could be set up much like Chadwick or Sutton Bluff in a limited area or on limited trails. This is the purpose of the Kansas Rocks Recreation Park I am involved with. Environmental Impact is limited due to the rocky terrain traversed by the sport utility vehicles. Many others and I would be interested in helping develop such an area within the forest. Like Chadwick and Sutton Bluff, user fees could apply. (Individual, Kansas City, MO - #84.4.70310.701)

117. Public Concern: The Mark Twain National Forest should restrict or prohibit airboat use.

BECAUSE THEY NEGATIVELY AFFECT SOIL QUALITY

Airboat use in Big Cypress National Preserve in Florida has been correlated with an increase in water turbidity as a result of soil impacts (Duever et al. 1981). Airboat impacts to soils, however, are limited because these vehicles do not generally come into contact with the ground (Duever et al., 1986). Yet, Yamataki (1994) linked the pressure created by airboat hulls and the increased speed of water movement to potential compaction of calcium soil and loss or removal of organic matter. Though the impacts to soil may be limited, airboats are loud generating in excess of 120 decibels when accelerating (Duever et al. 1981, Duever et al. 1986) potentially resulting in a variety of negative impacts on wildlife. (Preservation/Conservation Organization, Wood River, IL - #147.153.70310.001)

118. Public Concern: The Mark Twain National Forest should impose a ten horsepower limit, or less, for watercraft on the Eleven Point River.

Impose a ten horsepower limit, or less, for watercraft on Eleven Point River - National Wild and scenic section. (Individual, Waterloo, IL - #73.4.70310.402)

119. Public Concern: The Mark Twain National Forest should prohibit the use of motorized boats on rivers within the scenic river watershed.

I believe the following points should be considered: Eliminate the use of motorized boats on rivers within the Scenic River watershed. (Individual, Brookline Station, MO - #116.5.70310.402)

120. Public Concern: The Mark Twain National Forest should restrict mudding activities.

BECAUSE THE ROCKY SOIL IN THE OZARKS IS NOT SUITABLE FOR THIS TYPE OF ACTIVITY IN THE FOREST

Mudding can be damaging to the environment and is becoming more limited to “mud runs” on private property. These are usually specially designed or modified vehicles for this purpose and not well suited to the forest. The rocky soil in the Ozarks doesn’t lend itself to mudding anyway. The clubs I have been associate [with] do not participate in mudding and neither do I. I would not support this type of activity in the forest. (Individual, Kansas City, MO - #84.3.70310.409)

121. Public Concern: The Mark Twain National Forest should restrict swamp buggies.

BECAUSE THEY ARE MORE DAMAGING THAN MOST VEHICLE TYPES

Swamp buggies, because of the churning action of their tires, resulted in the most severe soil damage of all vehicle types examined (Duever et al., 1981). These impacts include rutting and trail widening. Rutting, in turn, can significantly increase the speed of water flows, change hydro-period length, alter water tables, cause soil compaction, and puddling (Duever et al., 1981, Aust 1994). (Preservation/Conservation Organization, Wood River, IL - #147.154.70310.420)

Camping

122. Public Concern: The Mark Twain National Forest should facilitate camping.

Camping should be facilitated. (Individual, Kirksville, MO - #121.5.70200.700)

BY EXPANDING AVAILABLE CAMPGROUNDS

It should expand available campgrounds. (Individual, Saint Louis, MO - #82.3.70220.000)

I want to recommend that at the least you change nothing—but would prefer that you improve access and actually open up areas for parking and camping to allow us to encourage more usage and thus increase the income from these sources. We cannot afford to lose any more economic generations in this area. (Individual, Ava, MO - #46.3.70300.804)

BY PROVIDING BETTER CAMPING FACILITIES AND RUSTIC CAMPING

It would be nice to have more and better camping facilities and more rustic camping. (Individual, Sullivan, MO - #101.6.60300.001)

Equestrian Use

123. Public Concern: The Mark Twain National Forest should ensure that new land-type designations do not exclude equestrian use.

In changing or creating new land-type designations, there becomes a real potential for exclusion. Evidence of this is clear in the Shawnee National Forest in southern Illinois where natural areas have been greatly enlarged and adjusted without the scientific data to prove it is a “natural area” and used to exclude horseback riding. Not only is this a concern here, but also that these areas have been identified with multi-agency partnerships. There are some public land management agencies in Missouri that are biased against horse use, which can be proven through their own public land use documents. (Placed-Based Group, Republic, MO - #122.2.60510.702)

124. Public Concern: The Mark Twain National Forest should keep equestrian trails open.

BECAUSE EQUESTRIAN USE IS QUIETER THAN OTHER TYPES OF PERMITTED USE

I believe horseback riding on trails in the Mark Twain National Forest should remain open to ride in all areas except those designated as fragile and it can be documented that horseback riding will adversely impact the area. [It is] quieter than other types of permitted use.

Use of the National Forest land should be used to its maximum by the maximum amount of people. (Individual, Rueter, MO - #51.1.70230.700)

BECAUSE EQUESTRIAN USE BENEFITS THE ECONOMY

The equine industry is a big part of the economy in southern Missouri. Currently Douglas County is second in the state in unemployment. We have lost approximately 700 jobs in the last five years. Two factories are totally gone. Another is only employing about half.

We need the income that tourists bring to the area, and part of that comes from trail riders and others using the Ratend Forest for Recreation. (Individual, Ava, MO - #46.2.70230.804)

BECAUSE KEEPING THEM OPEN WILL STOP EQUESTRIANS FROM ACCESSING OLD PATHS AND TRAILS

The word “closed” if relating to vehicle traffic is not of concern. If it relates to horseback riding it is of great concern as these old paths are what many equestrians use as trails. (Placed-Based Group, Republic, MO - #122.7.50340.702)

User Conflicts

125. Public Concern: The Mark Twain National Forest should address conflicts between motorized and non-motorized users.

One of the most contentious and controversial impacts of off road vehicle use documented on many National Forests is the conflict created between off road vehicle users and non-motorized recreationists. 37 of the 59 National Forests reported user conflicts. Again, these records likely underestimate the conflicts between off road vehicle and non-motorized users due to incomplete monitoring programs.

When motorized and non-motorized users have equal access to the same public land, complaints generally follow. The majority of the complaints are generally registered by the non-motorized recreationist whose forest experience is ruined by observing or smelling off road vehicles, by observing damage to the environment attributable to off road vehicles, by being harassed by off road vehicle users, by being displaced from a trail, or from observing litter left by off road vehicle users. Most non-motorized trail users indicate their outdoor experience is degraded by off road vehicle encounters. In Montana, for example, 89 percent of hikers and 84 percent of horseback riders believe motorcycles are incompatible with their use. Many of these non motorized users abandon or are displaced from trails once motorized use becomes significant because of their impaired experiences (Univ. of Montana 1994). (Preservation/Conservation Organization, Wood River, IL - #147.225.70400.700)

126. Public Concern: The Mark Twain National Forest should allow all uses.

My mother has ridden the Mark Twain National Forest on horseback for years. In doing so, she has met many other users on the trails. She reaffirms constantly that the motorized users are the most courteous of all the groups. She has found them to slow down and stop to allow them to pass. She has been cursed and harassed by hikers that feel she has no business in or near the forest. Should these extremists who would curse a 65-year-old woman for riding her horse in the woods have such a large influence over forest policy. (Individual, Farmington, MO - #143.1.70400.702)

BY ENCOURAGING TRAIL SHARING

Shared trails are a must. All user groups should be allowed access and recreation. (Individual, Metropolis, IL - #136.2.70300.703)

NOTWITHSTANDING THE DEMANDS OF ENVIRONMENTAL GROUPS FOR EXCLUSIVE USE OF TRAILS

Of concern in the Proposed Changes is the need to change due to "current social demands." We are very aware of environment groups who are well financed and politically connected that demand exclusion of every forest trail user other than their own. Horseback riding is an activity that is made up of primarily rural or small town folks. The urban values and rural values often are at odds. The rural voice is [not] often heard due to less activism and less access to information. (Placed-Based Group, Republic, MO - #122.3.60510.750)

This is an opportunity to create a forest plan that reflects the needs of the typical forest visitor, one that understands that everyone can share resources and trails. Please do not continue to restrict most users in favor of extremists that do not want anyone except themselves in the Mark Twain National Forest. (Individual, Farmington, MO - #143.3.70400.700)

Trails Management

127. Public Concern: The Mark Twain National Forest should address concerns regarding access to trails.

Access to trails is a concern that needs to be addressed. The statement on this topic, "Any proposed changes to direction for road and transportation management identified by the Forest-Wide roads analysis will be considered in the Forest Plan revision," gives us concern. We wish to be made aware of road changes that may affect access to trails. (Placed-Based Group, Republic, MO - #122.6.50420.703)

128. Public Concern: The Mark Twain National Forest should adequately maintain trails.

[Give] better maintenance of hiker/backpacker trails including the trails themselves, the trails; corridors, parking areas/trailheads, and sign-in areas/boxes. Special emphasis should be given to the Ozark Trail. (Individual, Waterloo, IL - #73.9.70500.700)

We urge you to provide well-maintained hiking trails and clear, simple camp sites. (Individual, Salem, MO - #118.3.70500.700)

BECAUSE POORLY MAINTAINED TRAILS HAVE A NEGATIVE EFFECT ON WATER QUALITY

Recreation is an important commodity provided by the Mark Twain National Forest. But it is not without impacts and the plan needs to address limitations where appropriate. Poorly maintained trails can contribute to runoff and water quality loss. Sensitive areas should be protected from inappropriate use. (Preservation/Conservation Organization, Columbia, MO - #77.11.70200.002)

129. Public Concern: The Mark Twain National Forest should cooperate with the Missouri Department of Natural Resources in constructing and managing trails.

During the 1970s Pioneer Forest began a cooperative effort with the Missouri Department of Natural Resources to build and manage a 13-mile segment of the Ozark Trail. That has been a positive experience for us, and one which we have applied to several other areas of our forest.

We strongly encourage this type of forest use on the Mark Twain National Forest. (Timber or Wood Products Industry, Salem, MO - #129.3.70500.700)

130. Public Concern: The Mark Twain National Forest should collaborate with local and regional groups in keeping trails open.

More cooperation between the FS and local and regional groups to help provide funding and resources to keep trails open. (Individual, Metropolis, IL - #136.4.13700.703)

131. Public Concern: The Mark Twain National Forest should facilitate hiking trails.

Hiking trails should be facilitated. (Individual, Kirksville, MO - #121.5.70200.700)

132. Public Concern: The Mark Twain National Forest should establish more connecting trails from the Ozark Trail.

Establish more connecting trails from the Ozark Trail that would lead to sensitive and/or important recreational areas. Trails should be "hiker only" where appropriate. Such areas would include, but not be limited to, Irish wilderness, Big Barren Creek Natural Area, Big Springs and Big Springs Pines Natural areas, Grasshopper Hollow Natural area, and Keith Springs.

Establish a trail system connecting as many of the St. Francois Mountain areas as possible. Areas would include, but not be limited to, Ozark Trail Marble Creek Section, Lower Rock Creek, Silver Mines, Anderson Mountain, Van East Mountain, and Rockpile Mountain Wilderness.

Establish a connection between the Marble Creek Section of the Ozark Trail with the Missouri Department of Conservation's Ketcherside Mountain Conservation.

Establish a trail from Greer Campground to the Greer Spring Trailhead. (Individual, Waterloo, IL - #73.9.70500.700)

133. Public Concern: The Mark Twain National Forest should establish hiker only sections of the Ozark Trail in sensitive areas.

Establish "hiker only" sections on the Ozark Trail that would go through areas deemed too sensitive for bike/horse use. (Individual, Waterloo, IL - #73.9.70500.700)

Chapter 4

Forest Natural Resources

Natural Resources General

Natural Resources General

134. Public Concern: The Mark Twain National Forest should develop a non-commercial alternative in the forest plan revision.

Develop an alternative that does not include any commercial extraction. (Individual, Columbia, MO - #29.12.55000.200)

The Forest Service should develop several alternatives that include no commercial extraction. This is necessary to comply with your agency's legal obligations under NEPA to develop a reasonable range of alternatives in the planning process. To develop several non-commercial extraction alternatives would be reasonable, since a wide majority of the American public favors ending commercial extraction on public land, and a commensurate range of alternatives should be fashioned to accommodate the diverse range of people who favor this land management direction. (Individual, Olympia, KY - #48.2.55000.200)

A "non-commercial" alternative option for the Forest should be developed. This option should explore the economic and ecological impacts of the non-commercial approach. The role of Forest Service management then becomes to adopt policies and techniques of assisting in the recovery of the natural integrity of the Forest to the point where natural processes can function unencumbered.

Forests provide clean air and water, moderate the effects of climate change and large, unfragmented natural areas allow diverse species to survive—including humans. They are a repository for our natural history—a sanctuary for plants, animals and humans. A non-commercial alternative protects these intrinsic values which other alternatives ignore. These values cannot be calculated economically, but they must be recognized, discussed and considered seriously. A non-commercial alternative would address these critical needs. (Individual, Doniphan, MO - #103.38.55000.001)

A "non-commercial" alternative Plan for the Forest should be developed. This Plan should explore the economic and ecological impacts of such an approach. The Plan should include a full audit of the timber sale program on the Mark Twain, including the use of K-V funds and other accounting tools such as allowing staff to spend time on timber sales over other activities. The Plan should reveal the economic and employment impacts of the timber sale program, minerals development, and recreation. The plan should also look at the employment benefits to local communities of such activities as exotic species eradication, road closures, trash removal, and others. The ecological impacts of this Plan should not be weighed against the current Forest Plan's "desired future conditions," but explore what type of forest could occur under these circumstances. Under such a Plan, the direction of the Forest and its management would be a dynamic one, whereby the agency does not determine what the Forest should look like, and works to achieve such objectives, but where the Forest Service becomes involved in the process of assisting in the recovery of the natural integrity of the Forest to the point where natural processes can function unencumbered and without negative effects outside the natural range of variability. (Individual, Boonville, MO - #98.8.55000.001)

The Sierra Club opposes commercial timber sales on National Forest Lands. We encourage the MTNF to seriously consider a non-commercial alternative. Part of that consideration should be an honest

economic accounting of the current timber management plan which operates at a financial loss. Also a non-commercial alternative would provide significant ecological advantages, especially if combined with limited management activities such as prescribed fire and “pre commercial” thinning where needed to correct past management impacts. We also suggest an alternative that includes only single tree selection and other uneven age practices as used on the Pioneer Forest. The current plan is woefully outdated in its logging prescriptions. (Preservation/Conservation Organization, Columbia, MO - #77.5.55200.200)

135. Public Concern: The Mark Twain National Forest should require licensing of industries that operate on the forest.

Every citizen who operates a motor vehicle in the state of Missouri is required by law to carry liability insurance, and provide proof of same, if requested to do so by law enforcement. This is a sensible policy, given that automobiles, trucks, and other motor vehicles have the potential to do great harm in certain situations.

Likewise, it is totally reasonable to expect proof of insurance of any industries which operate within the confines of federal lands. With the operation of any business, comes the construction of a variety of buildings and other structures, the operation of a number of different types of vehicles, as well as numerous unnamed activities, any or all of which have the potential to do physical damage and/or bodily harm.

For law-abiding citizens who are required by state law(s) to dutifully maintain automobile insurance policies whose purpose is to protect others, it is a slap in the face to see industry locate themselves in/on federal lands, yet provide no bond, no proof of insurance, nor proof of even the ability or the willingness to compensate potential victims, in the event of some industry-caused accident, error, or catastrophe.

We have come to a time when corporations want all the rights of citizenship, with none of the responsibilities. It is time that that should change. (Individual, Black, MO - #28.1.55000.300)

136. Public Concern: The Mark Twain National Forest should stop leasing public land to companies at low rates.

BECAUSE THEY DESTROY EVERYTHING ONCE THEY GET THERE WITH ROADS AND TOXINS

I don't believe Missourians benefit from companies being allowed to “lease” public land at such low rates. Then they destroy everything once they get there with roads and toxins. We need to protect our forests, especially the roadless and natural areas. (Individual, Eureka, MO - #119.2.50000.101)

137. Public Concern: The Mark Twain National Forest should restrict or prohibit commercial activities.

End commercial timber sales and remove the forest from consideration for mineral, oil, or gas leasing. (Individual, Saint Louis, MO - #44.3.55000.101)

It seems to me that commercial exploitation of forests, through timber sales, and mineral, oil, and gas leasing, unavoidably lead to erosion and habitat destruction, and should be minimized as much as possible, if they cannot be eliminated. (Individual, Saint Louis, MO - #109.2.55000.420)

In your 1st step of the process my husband and I respectfully request that there will be the removal of forest service lands from consideration for mineral, oil and gas leasing as well as protection of wilderness areas and an end to commercial timber. (Individual, Saint Louis, MO - #33.2.55000.101)

I have hiked, camped and canoed in the MTNF and greatly value the natural environment it provides. The revised forest plan should reduce the emphasis on commercial timber sales and instead focus on protection and enhancement of native biodiversity. There should be no additional mining on the MTNF. (Individual, Saint Louis, MO - #82.1.55000.410)

The Forest Service, and the individuals that make up this institution, need to understand the place of our National Forests, and the Mark Twain in particular, in the overall scheme of things, especially in the context of the development and exploitation of private land holdings in Missouri. Additionally, the Forest Service needs to recognize that it holds these lands in trust for the American public, a public who has expressed as a majority time and again that commercial exploitation of such national treasures is not in the public interest. The recent trend toward presenting nearly every Forest Service proposal, and logging in particular, as an action to achieve “forest health” is dishonest and obfuscates the real dilemma of aiding Missouri’s forests as they heal from the massive abuse of the early 20th century. The Forest Service needs to behave as stewards of the land, not managers, to protect that sacred expression of wild nature, and to take pride in that. (Preservation/Conservation Organization, Wood River, IL - #147.4.60220.400)

138. Public Concern: The Mark Twain National Forest should implement a recycling program.

The indirect effects of filling up landfills with pallets, wood products, and paper (which are acknowledged in the National Strategy for Waste Prevention and Recycling) must be considered. An alternative of using reusable pallets or pallets made from recycled plastic needs to be considered. This alternative would respond to the issue of whether there is a need to cut this area and what the best use of the area is. An alternative of increasing the use of recycled paper also must be considered for the same reasons. The NFMA states:

recycled timber product materials are as much a part of our renewable forest resources as are the trees from which they originally came, and in order to extend our timber and timber fiber resources and reduce pressures for timber production from Federal lands, the Forest Service should expand its research in the use of recycled and waste timber product materials, develop techniques for the substitution of these secondary materials for primary materials, and Promote and encourage the use of recycled timber product materials. 16 USC ? 1600 (Preservation/Conservation Organization, Wood River, IL - #147.110.55000.101)

BY PRINTING ALL DOCUMENTS ON BOTH SIDES AND USING EITHER ALTERNATIVE FIBER OR 100% RECYCLED PAPER

The Forest Service should follow its mandate to provide a leadership role in waste reduction by printing all documents on both sides and using either alternative fiber or 100% post-consumer recycled paper. (Preservation/Conservation Organization, Wood River, IL - #147.110.55000.101)

BY IMPLEMENTING THE NATIONAL STRATEGY FOR WASTE PREVENTION AND RECYCLING

The Forest Service needs to consider and implement its “National Strategy for Waste Prevention and Recycling.” (Preservation/Conservation Organization, Wood River, IL - #147.108.55200.101)

(RT 1) Timber Resources

Timber Resources General

139. Public Concern: The Mark Twain National Forest should end commercial timber sales in the forest.

The Forest Service should discontinue the use of commercial logging as a means of forest management. As an agency representing the public in the management of public lands, the Forest Service needs to recognize that the majority of Americans surveyed consistently express the opinion that commercial logging should not occur on public land. (Preservation/Conservation Organization, Wood River, IL - #147.17.55200.500)

Commercial logging is not an appropriate use of the Mark Twain. It is a waste of taxpayer money, increases forest fire risk, and is a source of habitat destruction, water quality degradation for downstream human communities, and it adds complication to climate change issues through removing cooling tree cover, eliminating biomass that holds moisture in the local climate, and exacerbating local floods and droughts by eliminating the hydrological flow regulation provided by mature forests. No commercial logging should be allowed on the Mark Twain. (Individual, Olympia, KY - #48.8.55240.420)

No commercial logging should be allowed in the Mark Twain, (the national forests are for the pleasure of the public not the profit of private corporations.) (Individual, Redding, CA - #25.14.55240.500)

I also believe that commercial timber sales should be ended in the MTNF. The most important purpose of the MTNF is to land bank scarce wild resources and habitat for future generations. Timber should come from private wood lots. (Individual, Maryland Heights, MO - #23.3.55240.754)

More than 200 scientists have signed a letter which calls for an end to commercial logging on National Forests. The letter and list of signers is at: <http://www.sierraclub.org/logging/letter/>The analysis needs to consider this letter. (Preservation/Conservation Organization, Wood River, IL - #147.74.55240.105)

BECAUSE THE ENVIRONMENTAL COSTS OUTWEIGH THE MONETARY BENEFITS

No expansion of timber sales should be considered. As we use the trails of the forest and witness the devastation firsthand, it's clear to us that damage caused by logging far outweighs any short term employment or monetary benefits. (Individual, Bonne Terre, MO - #43.3.55240.400)

140. Public Concern: The Mark Twain National Forest should allow private landowners to meet society's timber needs.

BECAUSE PUBLIC LAND TIMBER SALES ARE NOT NEEDED AND ARE UNFAIR COMPETITION

The issue of the need to log to meet society's needs for timber must be addressed. The alternative of private lands providing the timber needs to be considered. The issue of the impacts of local landowners having to compete with below-cost government timber needs to be considered. In a hearing for Kentucky Heartwood v. United States Forest Service, Civil # 97-378 (E. D. KY, April 15, 1998), the timber industry put on witnesses who testified that the price of timber on private land had increased due to the reduction in logging on the Daniel Boone National Forest. The indirect effect of the unfair government competition triggering poor private forest management needs to be analyzed.

The state's private forests can easily provide all of our timber needs. On a state and regional basis, the National Forest contributes an insignificant portion of the timber production. (Preservation/Conservation Organization, Wood River, IL - #147.106.55210.500)

141. Public Concern: The Mark Twain National Forest should ban foreign exportation of timber.

The issue of exports needs to be considered. Trees cut down east of the Mississippi can be exported to foreign countries. An alternative of banning exports needs to be considered. (Preservation/Conservation Organization, Wood River, IL - #147.111.55200.200)

142. Public Concern: The Mark Twain National Forest should address timber theft.

The analysis needs to address the issue of timber theft. A report by the Agriculture Department's Inspector General charges that the US Forest Service often overlooks the theft of timber from our National Forests by failing to follow its own policies intended to prevent timber companies from illegally cutting trees and penalizing those who do. The report shows that out of a sample group of 61 timber sales over the last two fiscal years, 26 operations had cut trees that had not been included in the sale site. Out of these 26 violations, Forest Service administrators informed the USFS enforcement

personnel of only six violations. Additionally, a report by Forest Service employees for PEER ("Unindicted Co-Conspirator) contains additional proof. Therefore, analysis needs to consider these reports and address the impacts timber theft could have.

The Forest Service lost a lawsuit on a similar issue: ATV use on the Mark Twain National Forest~ In the Forest Plan EIS, the Forest Service claimed that there would not likely be any significant impacts from ATV/ORV use on the Shawnee National Forest. The basis for this claim was that there would be designated trails for ORV/ATV use. The Forest Service, however, failed to address the problems with keeping the ATV/ORVs on the trails. There was evidence of law enforcement problems on the Shawnee and other nearby areas. The record indicated that it was unlikely that the ATV/ORV riders would obey the law and stay on the trails. In *Sierra Club v. U.S.D.A.*, 1997 WL 295308 (S. D. Ill. September 25, 1995) aff'd by order adopting opinion 116 F.3d 1482 (C.A. 7 (Ill) 1997), the Court vacated the Forest Plan, EIS, and ROD. Subsequently, the Court issued a permanent injunction enjoining all ATV/ORV use on the Shawnee National Forest. *Sierra Club v. U.S.D.A.*, 1997 WL 295308 (S. D. Ill. March 20, 1996) aff'd by order adopting opinion 116 F.3d 1482 (C.A. 7 (Ill) 1997). The Court ruled that the Forest Service was required to analyze the impacts of the ATV/ORVs violating the law by going off the trails. Similarly, the Forest Service needs to analyze the effects of timber theft. (Preservation/Conservation Organization, Wood River, IL - #147.104-5.55000.002)

Adequacy of Analysis

143. Public Concern: The Mark Twain National Forest should analyze the pre-European composition and manage timber resources accordingly.

A floristic, edaphic, and hydrographic inventory/mapping and pre-historical study of the MTNF should be accomplished for the purpose of determining the pre-european culture character and geographic distribution of the terrestrial natural communities in Missouri (see: *The Terrestrial Natural Communities in Missouri*, by Paul W. Nelson; 1985 MO Natural Areas Committee or recent revisions thereto). Timber management should be restricted first and foremost to those areas where native forest species historically/naturally thrived and sustained a healthy biota. All other lands should be managed with the goal of returning those areas to their natural biotic conditions, e.g., prairie, savanna, glades, fens, flood plains, et al. (Individual, Saint Louis, MO - #124.1.55200.420)

144. Public Concern: The Mark Twain National Forest should analyze the effects of timber harvest on various resources.

BIODIVERSITY

Forest Service research indicates dead and decaying wood accounts for about 25% of a forest's biodiversity. The impacts of removing trees on this component of the forest ecosystem needs to be considered. The Forest Service generally contends that trees are somehow wasted when they die. If the trees die, they need to be allowed to fulfill their function and be recycled back into the ecosystem. The no-action alternative needs to consider these values. According to the Forest Service:

Wildlife and fish need dead, hollow or fallen trees for food and family homes. Nationwide over 149 species of birds, 73 species of mammals, 93 species of amphibians and reptiles and nearly all fish use (dead trees) for food, nesting, or shelter. Only 31 bird species can make their own nest cavities in trees. Another 54 species of birds and other animals also use these holes. Loose bark on dead trees provides roosting colony sites for bats. Up to 167 pygmy nut-hatches have been known to roost simultaneously in a tree hole. Many species of turtles bask on fallen trees in or near water. Rhythmic drumming on dead trees is a ritual woodpeckers use to attract a mate. Ants living in dead wood eat thousands of forest insect pests which can harm living trees. Bass and trout hide under trees that have fallen into the water. The forest neighborhood continually changes and yet the way animals, plants, and people depend on each other remains the same, Even as a tree dies, it continues to give life to animal families and eventually to new trees and other plants, and the cycle begins again. US GPO 1990-0-792-461

The analysis needs to disclose how many standing and fallen dead trees would there be in a healthy natural forest of this size and the current status of this habitat component. (Preservation/Conservation Organization, Wood River, IL - #147.101.55200.411)

WATER RESOURCES

Timber sales increase water flow and sediment. Caves and springs many miles away can be adversely affected by logging 20 or more miles away and in different watersheds. For example, a timber sale could result in increased water entering a cave and in a major storm event, the increased water could result in a flood large enough to kill (i.e., drown) or harm creatures in the cave. Or it could kill someone exploring the cave. It could also adversely affect or kill creatures living in a cave or a spring by changing the temperature or increasing sediment. Thus, the analysis of effects must also consider groundwater and subsurface water flow. (Preservation/Conservation Organization, Wood River, IL - #147.99.55100.402)

The issue of the impacts to soil and water quality needs to be addressed. The effects of soil compaction and vegetation/nutrient removal must be considered. The analysis needs to address the impacts of decreased water quality due to increasing rates of soil erosion and mass wasting events. The effects of sedimentation, nutrient removal, and increased temperatures resulting from logging must be considered. The analysis needs to address the cumulative impacts on aquatic communities, including fisheries.

Some of the factors which need to be considered in the analysis of the cumulative effects include: 1) coarse particulate organic matter, 2) fine particulate matter, 3) algal abundance, 4) temperature extremes, 5) turbidity, 6) diurnal cycle of dissolved oxygen, 7) nutrient input into the stream, 8) amount of suspended solids, 9) stability of substrate and banks, 10) uniformity of water depth, 11) habitat heterogeneity, 12) flow extremes, 13) diversity of microhabitat velocities, 14) primary and secondary production, 15) abundance of shredders versus scrapers, 16) abundance of omnivores versus piscivores. (Preservation/Conservation Organization, Wood River, IL - #147.96.55240.420)

SOIL MOISTURE AS IT AFFECTS CLIMATE

One simulation of the climate, circa 1992, has been criticized as “highly simplified” for reasons including that, in addition to ignoring the vital role played by vegetation, it also assumes that soil moisture is uniform across the globe. Today’s standing dead trees would one day be part of the project area’s soil, shaping its capacity to hold soil moisture. Removal of any tree would, in cumulative fashion, remove some corresponding degree of soil moisture in the future. The agency’s own scientists have pointed out that the agency’s rotation schedule ensures that new growth will be harvested when small, meaning that large dead trees will not be available in the future, which indicates potential that removal of existing large dead trees would amount to an irreversible and irretrievable loss of a resource whose value the agency has underestimated. (Preservation/Conservation Organization, Wood River, IL - #147.70.55200.409)

WILDLIFE

The Forest Service misrepresents its logging projects by using sanitized language, such as “harvest,” to describe the proposed action. The reality of a timber sale is that the Forest Service kills thousands of creatures and many of these creatures suffer long and agonizing deaths. The analysis needs to disclose the true impact of the Forest Service converting our natural heritage into devastated stumpland. The Forest Service always claims that early successional species require the devastation of Forest Service timber sales. The Forest Service, however, neither provides any proof nor evidence of this claimed need or addresses the impacts to the species currently living in the area.

The analysis needs to disclose the impacts to the plants and animals currently living in areas to be logged. For example, scientists estimate the Forest Service kills 250 million songbirds a year, many of whose population is declining. Most killed are defenseless nestlings. The Forest Service kills many other species when it logs. The analysis needs to estimate the number of each different species that will be killed by alternatives with logging. The population trend of each species that will be killed needs to be disclosed. For species with a downward population trend, the analysis needs to disclose how killing all these creatures will impact the trend. Population trends must be calculated from site-specific inventory and monitoring data, not computer models.

The analysis also needs to disclose what kind of death these defenseless creatures will suffer. Will they be instantly killed when the trees are cut or when they are ran over by logging equipment? Or will they suffer a slow and agonizing death from starvation, exposure, or dehydration? The analysis also needs to estimate how long the creatures will suffer before they die.

The Forest Service needs to develop alternatives and mitigation measures to minimize the death and suffering the logging causes. For example, the alternative/mitigation measure of not cutting in the nesting season needs to be developed and considered.

The analysis also needs to disclose the indirect impacts to the species that are not directly killed by the trees being cut down or run over by logging equipment. The analysis needs to disclose how many additional plants and animals will die because of the major and sudden modification to their habitat. The analysis needs to disclose what kind of death these creatures will suffer. Will it be a quick and painless death? Or will the creatures suffer a long and agonizing death from starvation, dehydration, or exposure. The analysis needs to disclose how long these creatures will suffer before they die. The Forest Service needs to develop mitigation measures/alternatives to minimize the deaths and suffering. If the Forest Service claims that some of these species will just go some place else, the Forest Service needs to provide proof of this. For example, the Forest Service would need to provide site-specific data showing other areas are not already occupied by other members of the species.

The analysis needs to address the humane and anti-cruelty laws. The analysis needs to disclose each law and indicate whether it would apply to a timber sale. (Please discuss both the Forest Service's and loggers' compliance with the law.) Even if the Forest Service claims the laws do not apply to their logging, please disclose if all the animals in the sale area are being treated in the manner that would be considered humane under the laws. (Preservation/Conservation Organization, Wood River, IL - #147.90-91.55240.411)

INTERDEPENDENT SPECIES

The issue of secondary impacts of logging needs to be considered. There will be many secondary impacts associated with the project. All these impacts, such as the effects of logging on the balance of interdependent species populations, must be considered. The impact of increased deer on other species needs to be considered. The deer could eat endangered plants. On-going research in Wisconsin indicates deer overpopulation may be contributing to the oak decline problem. Deer apparently eat the oaks and leave the sugar maple.

The impacts of increased deer should be considered. For example: 1) Deer consume or otherwise damage agricultural crops. The value of the crops should be determined and considered. 2) More deer means a higher likelihood of deer/vehicle collision. The economic losses, i.e. damage to cars, lost work time, and medical bills needs to be considered. 3) Deer can also over browse an area. This impact must be considered. (Preservation/Conservation Organization, Wood River, IL - #147.87.55200.420)

BIRD SPECIES

The analysis needs to address the predation impact of logging and wildlife openings. The analysis needs to consider the impact of increased populations of nest predators such as blue jays, raccoons, and black snakes. The analysis needs to also consider the impact of logging roads (both providing feeding areas and a source of calcium for cowbirds) on forest interior species.

The issue of how forest interior species such as the woodthrush can maintain a Minimum Viable Population without protecting this area needs to be addressed. The results of the USFWS Breeding Bird Survey must also be considered. The relative availability of early successional habitat on private land needs to be considered. (Preservation/Conservation Organization, Wood River, IL - #147.86.40000.002)

Forest interior bird species such as Wood Thrush, Red-eyed Vireo, Cerulean Warbler, Yellow-billed Cuckoo, Scarlet Tanager, and many more, have suffered drastic declines in population. Clearcuts, even small ones, are damaging in two ways. First they create isolated patches of forest, which were meant to be contiguous. The Cerulean Warbler prefers large tracts of unfragmented forest (3,000 acres or more). Second, openings in the forest allow the introduction of "edge" birds into the forest. Among the "edge" birds that find their way into the forest interior because of the existence of openings are Bluejays (nest predators) and Cowbirds (nest parasitizers). Occasionally this expansion of edge birds into new forest

interior territories is couched in positive terms as an example of “creating biodiversity”. However, edge birds do not belong in the middle of a forest. They are only there because the forest has been changed from its natural state. Edges, whether created by roads, clearcuts or farming should be reduced as much as possible and the forest should be allowed to grow back into an unfragmented canopy. Application of the Pioneer Forest model of logging would allow that to occur. (Preservation/Conservation Organization, Saint Louis, MO - #102.12.55200.400)

The analysis needs to consider these findings and recommendations. A follow-up study conducted in a heavily forested area concluded:

The conclusion is that some management practices (clearcuts, forest openings, and possibly regeneration openings) may cause a reduction in the reproductive success of birds nesting in adjacent forest. Rates of parasitism are significantly higher for many species in these contexts and daily nest mortality is also slightly higher. Cowbirds appear to be preferentially attracted to openings within the forest and then direct much of their nest-searching activity into forest adjacent to the openings.

It follows from this that the quality of a forest tract as a “source” will depend on the structure of the landscape within the forest tract. Tracts with many internal openings and edges will, in general, produce fewer young per nesting attempt than tracts with few disturbances. Accordingly, management for viable populations of NTMB should involve minimizing the amount of internal opening and edge. (Preservation/Conservation Organization, Wood River, IL - #147.79.55200.411)

The issue of the impact of songbird declines on forest growth needs to be addressed. Research in southern Missouri shows that neotropical songbirds increase oak growth by consuming leaf-chewing insects. The study found that oaks have an enormous decline in biomass production when song birds are kept away. The Study concluded:

Our results imply that declining populations of many neotropical migrant insectivorous bird species may result in decreased forest productivity. Where such population declines in certain bird species have been documented, they have not been offset by increases in populations of other insectivorous bird species. Our research suggests that forest management practices that promote the conservation of insectivorous birds are imperative to maintain forest productivity. Such management practices would emphasize strategies that maximize bird species diversity and the viability of their populations. (Preservation/Conservation Organization, Wood River, IL - #147.88.55200.411)

While the USFWS says it is not a Criminal violation of the MBTA for the Forest Service to approve a timber sale, the USFWS says it is a crime for the loggers to kill birds. For example, the USFWS has stated:

Federal Agencies are required to ensure that their decisions comply with the Migratory Bird Treaty Act (MBTA) (16 U.S.C. 703-712; Ch. 128; July 13, 1918; 40 Stat 755, as amended). The MBTA prohibits the take of migratory birds, nests, eggs and nestlings. The Federal list of migratory birds (50CRF10 April 15, 1985) includes nearly every native bird species found in the State of Idaho, including Northern flicker. The DEIS does not accurately represent MBTA requirements. The FEIS should reflect the analysis below.

The DEBE states: “Trees with unidentified but occupied nest may be felled during logging or thinning activities, destroying the nests. The proposed management activities comply with the MBTA.” The MBTA prohibits the direct take of migratory birds, nestlings and eggs by persons. Actions undertaken by contractors of the Forest Service that include cutting occupied trees, resulting in the death of migratory birds, nestlings or eggs, are not in compliance with the MBTA. However, federal agencies are not considered “persons” under the MBTA, and federal employees are not liable for taking migratory birds while performing their official duties for federal actions within the authority of the federal agency. For instance, prescribed burn actions implemented by Forest personnel are in compliance with the MBTA, even if such actions result in the take of migratory birds, nestlings or eggs.

In this case, however, contractors felling trees with nestlings or eggs would result in take of migratory birds, and persons that cut such trees are liable under the MBTA. If actions were done in the winter, or

other times when nests are not occupied by nestlings or eggs, the action would be in compliance with the MBTA, because the MBTA addresses only direct take, but does not address habitat loss.

The Service recommends the FEIS include project design, timing and implementation requirements to protect migratory birds and their habitats, and correctly describe liability associated with the take of birds, nestlings and eggs. USFWS comments on the proposed Deadwood timber sale on the Boise NF.

The analysis needs to address this and develop mitigation measures to assure the loggers will not violate the MBTA. (Preservation/Conservation Organization, Wood River, IL - #147.92-93.55240.300)

INDIANA BAT

The Federally Endangered Indiana bat needs to be considered. The analysis needs to consider all available research. The ESA requires the Forest Service to use “the best scientific and commercial data available” to fulfill its Section 7 obligations. The analysis needs to consider the summer habitat required by female Indiana bats for maternity roosts (e.g., roost trees, protection from disturbance, and foraging habitat). The analysis also needs to consider the summer roosting and foraging needs of male Indiana bats. The analysis on roosts needs to consider existing and potential roosts in upland and riparian areas and the issues of bats using the trees while the sale is being cut (which would result in their death by killing them when their roost is cut or being killed by an adjacent tree falling on them), loyalty to the roost trees, stress of finding new roosts, and the impacts of removing trees next to roosts or potential roosts (i.e., making the tree more susceptible to windthrow and changing the thermal dynamics). The analysis also needs to consider the email message from Dr. John Whitaker that we sent to the Forest on September 6, 1999. The analysis also needs to consider the impact the logging will have on opening the area which allows other species of bats and birds to compete with the Indiana bat for the insects. Likewise, the analysis needs to consider the issue of additional predators that the Indiana bat will be exposed to as a result of opening the canopy. The analysis also needs to consider if there are any hibernacula in the area. If so, the analysis needs to consider the impacts of the sale on the bats’ summer, fall, spring, and winter habitat. The Forest Service also needs to consider the rulings in *House v. United States Forest Service*, 974 F.Supp. 1022 (E.D.Ky. 1997) and *Bensman v. United States Forest Service*, 984 F.Supp. 1242 (W.D.Mo. (1997)). These rulings specifically rejected all the Forest Service’s standard claims about why the logging will not have any adverse effects on the Indiana bat and ruled that the timber sales in question will “take” the Indiana bat. (Preservation/Conservation Organization, Wood River, IL - #147.119-121.55100.413)

NUTRITIONAL VALUES OF PLANTS

The issue of the nutritional value of the plants growing in the resulting openings needs to be addressed. Research in the Pacific Northwest and Alaska indicates that the nutritional value of plants in open areas, such as a clear-cuts, is significantly less than in a forest. Preliminary results from research being conducted on the Daniel Boone National Forest in Kentucky show the same thing for all forms of logging. (Preservation/Conservation Organization, Wood River, IL - #147.98.55100.406)

HERBACEOUS UNDERSTORY

The issue of the impacts to herbaceous understory needs to be addressed. Research indicates herbaceous-understories never recover from logging. (Preservation/Conservation Organization, Wood River, IL - #147.80.55200.411)

WOOD FIBER WASTE

The analysis needs to consider how this timber sale will promote waste of wood and fiber. The Forest Service cannot bury its head in the sand and say this is beyond the scope of the analysis. The Forest Service has a legal responsibility to provide leadership to waste reduction efforts, ignoring the impacts of providing cheap, particularly below-cost, trees on reduction efforts is not providing leadership. (Preservation/Conservation Organization, Wood River, IL - #147.109.55200.002)

MICROORGANISMS

The issue of impacts to the microorganisms such as fungi and bacteria in the soil needs to be addressed. Logging will kill off many of these. An inventory of these organisms needs to be done so the impacts could be determined. The impacts of compaction, vegetation removal and erosion must be considered. (Preservation/Conservation Organization, Wood River, IL - #147.100.55100.420)

RECREATION AND TOURISM

According to the Explanatory Notes for the 1997 Forest Service Budget: 1) In FY 1994 the Forest Service hosted over 835 million visits on National Forests, compared to 300 million by the National Park Service and 40 million by Disney; 2) Recreational use of the forests is at an all time high, and RPA projections indicate that use will increase over 50 percent by 2040; 3) Over 2 million jobs are associated with the economic activity generated by recreation which is estimated to almost \$100 billion annually; and 4) Recreation fees to the Treasury were \$46 million last year. The timber program, by comparison, created 76 thousand jobs worth \$2.7 billion and cost the treasury \$278 million in 1994.

A survey in the September 1996 issue of Conde Nast Traveler magazine...says that the environment has become a "major issue" for many travelers. More than half of the respondents (218 readers responded) said that the environment has become a factor in their travel plans over the last ten years. Ninety-one percent expressed concerns over environmental conditions at their destinations, and 25% said they had been forced to change travel plans because of environmental problems. Almost 42% said they would have changed plans had they known in advance about problems they encountered. The analysis needs to consider this survey.

The issue of impacts on recreation needs to be considered. The Forest Service should consider how the project, including the cumulative impact of other logging operations, will impact the increased recreational use of the Forest in the future. The project will impact recreation well into the future. The cut area will not be attractive for recreation such as hiking, camping, bird watching, fishing, and solitude. The analysis needs to consider and disclose these adverse effects. The analysis needs to compare the ability of private land to provide recreation and timber versus the National Forest's ability to provide such services. The Forest Service needs to disclose the jobs and income from recreation whenever it mentions the jobs and income created by logging. (Preservation/Conservation Organization, Wood River, IL - #147.112-113.55200.700)

TAXPAYER FUNDS

The forest service should discontinue the use of commercial logging as a means of forest management. As an agency representing the public in the management of public lands, the Forest Service needs to recognize that the majority of Americans surveyed consistently express the opinion that commercial logging should not occur on public land. Additionally, the Forest Service needs to recognize the vast loss of taxpayer money that occurs via the timber sale program. Estimates by congressional agencies and others have set the figure at several hundreds of millions to billions of dollars each year. This is an unacceptable practice and an abuse of the public trust. While the Forest Service maintains that it cannot consider "political" or "national" issues when developing plans for a specific project or forest, these factors must be included when the Forest Service determines which uses in the "multiple use" equation are given priority. (Individual, Doniphan, MO - #103.24.55200.810)

145. Public Concern: The Mark Twain National Forest should consider the cumulative effects of timber harvest on private land adjacent to the forest.

TO DETERMINE ITS OWN MANAGEMENT DIRECTION

Cumulative impacts resulting from past, present, and future land disturbance activities on private and public land must be analyzed in a comprehensive manner. The Forest Service maintains in the explanation of need for most timber sales that logging is necessary to create early seral habitat. This is a ridiculous assertion given the fact that a large portion of the Ozark's native forests have already been cleared for pasture and urban sprawl. If this type of habitat is being created as a result of logging on private land, then the Forest Service needs to manage national forest land as a reserve of contiguous old-growth habitat. Land ownership and use patterns in the region of each timber sale should be analyzed and considered in the development of each proposed action. Additionally, intermediate and long-range projections of logging levels for Missouri and neighboring states need to be incorporated into these decisions. Information presented in the Governor's Advisory committee on Chip Mills Final Report, August 1, 2000, reveals a projected increase in logging in Missouri over the next several decades. Additionally, the Southern Forest Resource Assessment makes projections of increases in logging, largely for pulp, in the southeastern region during the next several decades. While this latter report does not analyze forest practices in Missouri, the following should be acknowledged: while chip mill activity

in Missouri is currently low, the infrastructure exists for an increase in this state as resources are depleted in the southeastern U.S. If the Forest Service manages the Mark Twain for early seral habitat, and as even-aged forests today, then it cannot be a reserve of mature, uneven aged habitat should management of private lands proceed as has been projected. Caution in this respect should be paramount. (Individual, Boonville, MO - #98.3.55200.001)

Cumulative impacts resulting from logging on private land in proximity to national forests must be analyzed. The Forest Service maintains in the explanation of need for most timber sales that logging is necessary to create early seral habitat. If this type of habitat is being created as a result of logging on private land, then the Forest Service needs to manage national forest land as a reserve of contiguous old-growth habitat. Land ownership and use patterns in the region of each timber sale should be analyzed and considered in the development of each proposed action. (Individual, Doniphan, MO - #103.26.55240.501)

146. Public Concern: The Mark Twain National Forest should calculate all costs associated with timber sales.

The Forest Service needs to include all costs and calculations in the EIS and in its calculations. The following actual costs need to be included: Road Costs (Construction, Reconstruction, and Wear and Tear); County Payment; Land Survey; Sale Costs-Harvest Administration, Sale Preparation, Planning, and Silviculture Exam; Management Costs-Reforestation and Timber Stand Improvement; General Administration and Building Depreciation; Washington and Regional Office Overhead, and Law Enforcement. The analysis also needs to consider the wear and tear on non-Forest Service roads. The Forest Service points out that road construction costs are depreciated because they are usually used for more than one sale. Thus, this sale's share of construction costs for all roads that will be used need to be calculated and charged against this sale.

The Forest Service needs to address all the economic trade-offs and all the environmental externalities from the timber sale. The Forest Service needs to conduct an analysis that addresses the points of the Forest Service publication: "Assessing Economic Tradeoffs in Forest Management" PNW-GTR-403; August 1997. The Sky Did NOT Fall—The Pacific Northwest's Response to Logging Reductions by Ernie Niemi, Ed Whitelaw, and Andrew Johnston which can be downloaded at www.pacivers.org/?ublicati?ns/skyfalling.html—needs to be considered.

In September 1995, the General Accounting Office released "Forest Service Distribution of Timber Sale Receipts Fiscal Years 1992-94" GOA/RCED-95-237FS. This report found the Forest Service lost about one billion dollars logging the public's National Forests. The analysis needs to address the findings of the report and calculate the costs of the sales in the same manner. (Preservation/Conservation/Preservation Organization, Wood River, IL - #147.116.55200.806)

AND DISCLOSE HOW MUCH OF THE INCOME FROM TIMBER SALES SUPPORTS FOREST SERVICE ADMINISTRATIVE OVERHEAD

The 6th Circuit ruled that the Forest Service has a tendency to act in its own fiscal interest instead of the public interest. See *Sierra Club v. Thomas*, 105 F.3d 248 (6th Cir. 1997). The 6th Circuit explained that the Forest Service increases its budget by approving timber sales. The analysis needs to disclose how much of the money from logging will be returned to the U.S. Treasury and how much will be diverted for other purposes (KV Fund, etc.). Research by the Association of Forest Service Employees for Environmental Ethics earmarked for reforestation and logging mitigation for administrative overhead including office and staff expenses and the salaries of regional foresters and supervisors. Since this provides a perverse incentive to get the cut out, the analysis needs to disclose how much of the income from the sale will go to pay the Deciding Officer's and other Forest Service employees salaries and other administrative overhead. The no-action alternative needs to disclose its impact on Forest Service employment levels. (Preservation/Conservation Organization, Wood River, IL - #147.115.14100.603)

147. Public Concern: The Mark Twain National Forest should analyze the effects of below-cost sales.

The issue of below-cost sales needs to be addressed. The issue of the indirect effect of increasing the Federal deficit needs to be addressed. All environmental impacts of a larger Federal deficit need to be considered. (Preservation/Conservation Organization, Wood River, IL - #147.114.55200.400)

148. Public Concern: The Mark Twain National Forest should compare the monetary value of timber with that of ecological services.

Forest Service economic analysis never assigns any value to standing forests. This is like selling a car worth \$10,000 for \$100 and claiming a \$95 profit because the classified ad cost \$5. The economic analysis needs to consider economic values of a standing forest such as carbon storage, flood prevention, watershed protection, tourism, recreation, mushroom gathering etc. and compare it to the economic value of stumpland for these factors. (Preservation/Conservation Organization, Wood River, IL - #147.116-117.55200.806)

Land values need to be considered at the planning and project levels. Logged lands are far less valuable than forested areas. Ecological values also need to be considered, because forested areas provide for clean air and water, wildlife habitat, and recreation. The Forest Service never considers these values when doing the economic analysis. If a thorough comprehensive analysis were done, the Forest Service would discover that providing timber on a short term basis may in fact be more costly to the American taxpaying public in the long term. The people demand accountability from their public officials; the Forest Service should not be above a full accounting. Too often, the Forest Service has been found to lose exorbitant sums of money because of allowing below cost timber sales. It's time for the Forest Service to stop the practice of allowing below cost timber sales and subsidized road building. (Individual, Boonville, MO - #98.5.55240.802)

149. Public Concern: The Mark Twain National Forest should analyze the value of the forest as a source of pallets versus its value to habitat and recreation.

The best use of the area needs to be considered. The primary use of hardwoods from the Forest is pallets. The pallets are used only once and usually end up in a landfill. Pallets can be made from recycled plastic. There is a company in Missouri that makes pallets that can be reused 15-20 times. The analysis needs to compare the relative value of this area as a tree farm to make pallets that clog our landfills to wildlife habitat and recreation land. Such an analysis is needed to address the issue of what is the best use of this area. (Preservation/Conservation Organization, Wood River, IL - #147.107.55100.001)

Timber Harvest

150. Public Concern: The Mark Twain National Forest should use best management practices in timber harvest.

The highest level of best management practices should be mandated and strictly enforced in all timber harvests. (Preservation/Conservation Organization, Columbia, MO - #112.12.55240.101)

151. Public Concern: The Mark Twain National Forest should use selective timber harvest techniques.

Use selective forest-thinning logging techniques rather than clear cutting. (Individual, Manchester, MO - #123.3.55200.603)

152. Public Concern: The Mark Twain National Forest should use horses in timber harvest.

If we continue commercial timber sales, then I believe clear cutting should be eliminated and horses should be used to move the downed trees. (Individual, Eureka, MO - #119.4.55200.200)

153. Public Concern: The Mark Twain National Forest should cut timber back from the highway.**FOR SAFETY REASONS**

I drive Highway 19 between Alton fairly often and it seems like almost every time I can see where another tree has fallen across the road and had to be cut away. Every time I think “what if one should fall and I was passing.” It seems to me that for several reasons timber should be cut back 70 to 80 feet from the highway. Contract with loggers to take out the larger trees and with timber cutters to cut the smaller ones and tree tops for firewood. Some of the brush left could be shredded and sold for mulch. Some brush piles could be left for wildlife habitat. This cleared strip could be planted to native grasses and wild flowers. This would provide a much better looking and much safer drive. This should be not only for the one stretch of 19 but for all highways through Forest Service lands. (Individual, Alton, MO - #36.1.55200.001)

(RT 1a) Suitable Lands and Allowable Sale Quantity**154. Public Concern: The Mark Twain National Forest should reevaluate timber suitability.****WITH RESPECT TO ECONOMIC EFFECTS**

The NOI indicates that lands suitable for timber production will be reevaluated. The reevaluation of timber suitability must consider the impact on local economies as well as any environmental impacts. It is also important that all sivicultural techniques be available in forest management decisions concerning timber. It is not clear what the appropriate minimum harvest level is on the Mark Twain National Forest, but it is important that this level support the local timber industry. It should be possible to meet this harvest level and provide excellent forest diversity. (Mining Industry, Washington, DC - #61.2.55200.001)

When evaluating lands for timber production, it is important that a balanced review consider not just environmental considerations, but also the goals of improving the impact upon local timbering communities and the national economy, and reducing the potential for loss of timber (and wildlife habitat) by fire and disease through lack of proper management. The local USFS should be allowed to select the most appropriate from all “timbering techniques” in order to properly manage the Forest. I also believe that the minimum timber harvest needs to be increased to meet the above goals. (Individual, Viburnum, MO - #128.2.55200.001)

The NOI indicates that lands suitable for timber production will be reevaluated. The re-evaluation of timber suitability should/must consider the impact on local economies as well as any environmental impacts. It is important that all sivicultural techniques be available in forest management decisions concerning timber. At present it is unclear what the appropriate minimum harvest level is on the Mark Twain National Forest, but it is important that this level support the local timber industry. In addition, a review of the 2001 financial statement for the Mark Twain suggests that more, rather than less, timber harvest is necessary to reduce overhead costs per unit and increase profits for the government. (Individual, Salem, MO - #153.2.55200.001)

WITH RESPECT TO ENVIRONMENTAL EFFECTS

We support revisiting the “lands suited to timber production” determinations of the current plan. One suggestion that we would offer is that the criteria for filter strips should be expanded to include the heads of intermittent drainages. The plan also should consider more protective slope and aspect criteria. Some of the lands identified for timber management in the current plan include areas with high natural area or biological significance, and maintaining this native integrity should be a fundamental purpose of the timber management planning. (Missouri Department of Natural Resources, Jefferson City, MO - #151.4.55220.400)

155. Public Concern: The Mark Twain National Forest should take intermediate and long-range projections of timber harvest levels into account in the forest plan revision.

Intermediate and long-range projections of logging levels for Missouri and the southeastern U.S. need to be incorporated into these decisions. Information presented in the Governor's Advisory Committee on Chip Mills Final Report, August 1, 2000, reveals a projected increase in logging in Missouri over the next several decades. Additionally, the Southern Forest Resource Assessment makes projections of increases in logging, largely for pulp, in the southeastern region during the next several decades. While this latter report does not analyze forest practices in Missouri, the following should be acknowledged: while chip mill activity in Missouri is currently low, the infrastructure exists for an increase in this state as resources are depleted in the southeastern U.S. If the Forest Service manages the Mark Twain for early seral habitat, and as even-aged forests today, then it cannot be a reserve of mature, uneven aged habitat should management of private lands proceed as has been projected. Precaution in this respect should be paramount. (Individual, Doniphan, MO - #103.27.55210.420)

156. Public Concern: The Mark Twain National Forest should reduce the allowable sale quantity.

I am in favor the reduction in the Allowable Sale Quantity. (Individual, Rolla, MO - #80.1.55220.603)

We support endorsing the reduction in the Allowable Sale Quantity. (Preservation/Conservation Organization, No Address - #81.1.55220.603)

BY EXCLUDING RIPARIAN, ROADLESS, AND RECREATIONAL AREAS

We...urge particular attention to exclusion from lands suitable for timber harvest of riparian floodplains, roadless areas and other lands more important for recreation, which would necessitate significant downward adjustment of the allowable sale quantity (ASQ) for the forest. (Placed-Based Group, Columbia, MO - #94.3.55220.420)

(RT 1b) Even-Aged and Uneven-Aged Management

157. Public Concern: The Mark Twain National Forest should incorporate the proposed changes to even-aged and uneven-aged management.

TO MAINTAIN NATIVE FOREST TYPES

We encourage the changes proposed under "Even-aged and uneven-aged management" to emphasize maintaining native forest types. These ecosystems have been strongly impacted historically and will need not just maintenance, but focused efforts toward restoration of their character, composition and viability. We suggest that more effort be placed on restoring large blocks of native forests. (Missouri Department of Natural Resources, Jefferson City, MO - #151.5.55230.602)

158. Public Concern: The Mark Twain National Forest should use even-aged management.

FOR MAST PRODUCTION

As I remember the standard and guides in the 1986 plan called for a balance of age size class distribution which was to be achieved by even-aged mgt. The objective being 40% sawtimber, 30% large poles, 20% small poles and saplings, and 10% regeneration. This system would provide for at least 50+% of the compartments having mast capability. The 50+% mast capability had been determined to be necessary for meeting minimum mast production for wildlife. Even-aged mgt. in my opinion allows for a better means of keeping tract of potential mast production. The 1986 plan guidelines also included 15% old growth, 20% permanent forage, and 10% temporary. I'm wondering if these objectives are still being used—if so with the decrease in the acreage in even-aged mgt. How can you keep the food base needed

to meet minimum viable population for major wildlife (deer, turkey, squirrels) species? (Individual, Columbia, MO - #35.1.55230.411)

TO MEASURE SPECIFIC HABITAT CONDITIONS

I was a part of the committee in the late 70s that worked on choosing the management indicator species for the 1986 plan. You have stated that it has been difficult to accurately measure specific habitat conditions under the current method for collection data. I would think that uneven-aged mgt. would make it even more difficult. In proposed changes, even-aged mgt. offers a better way of keeping on top of what the forest is capable of providing, in my opinion than uneven-aged mgt. Even-aged mgt. is the recommended silviculture system for the upland cultural hardwood and I believe that it is also often the best way to keep in touch with changes in habitat. (Individual, Columbia, MO - #35.4.55230.411)

FOR EARLY-SUCCESSIONAL WILDLIFE

To meet the demonstrated habitat needs of early-successional wildlife, the Ruffed Grouse Society respectfully suggests that the Forest will need to identify specific landscape units for treatment using even-age forest management treatments. While group-selection harvests can provide suitable habitats for some early-successional wildlife, they are typically of insufficient size to meet the needs of still other species (Thompson and Dessecker 1997). In addition, residual basal areas within even-age units should not exceed 25 sq.ft/acre to maximize understory development and habitat quality. (Preservation/Conservation Organization, Laona, WI - #130.8.55230.411)

The Ruffed Grouse Society encourages the Forest to consider additional wildlife species that require young forest habitats when revising the list of Forest Management Indicator Species. Any useful list should include a balance of species utilizing young and mature forests. (Preservation/Conservation Organization, Laona, WI - #130.5.44310.411)

The location and composition of the Mark Twain National Forest ensures that it is an essential migratory bird stopover area. While some of those species utilize mature forest habitats, others such as the declining American woodcock require early successional habitat in order to “refuel” as they continue their return to and from their breeding grounds. Analysis of American woodcock singing ground survey data indicates a significant long-term (1968-1999) annual decline of 1.6%, in the central survey regions (Bruggink 1999). Key areas of the mark Twain’s oak-hickory forests should be identified and managed to ensure important young forest habitats are available to migrating woodcock as well as many other migrating songbirds. With this in mind, it is important that the Forest consider the crucial importance of allowing appropriate management techniques in riparian zones that “restore and maintains the ecological function”. This should include management strategies that regenerate natural habitats and provide young forest habitat in riparian zones. Such habitat...is being lost across the landscape as carte blanche riparian buffer zones have been established by most public land agencies. (Preservation/Conservation Organization, Laona, WI - #130.7.44300.602)

In several areas, the associated Assessment of the Need for Change document highlights the importance of providing a wide diversity of natural communities and wildlife habitat conditions. The Forest needs to provide habitat for the full array of forest wildlife species including those utilizing young forest habitats. The Forest Service’s own inventory data document that young forest habitats are declining throughout the eastern United States. In our eastern forests, young forest habitats (<20 years old) have declined by 41% over the past 2-3 decades. Not surprisingly, many wildlife species dependent upon young forest habitats are experiencing population declines as a direct result of the ongoing maturation of our eastern deciduous forests. Smith et al. (1993) found that 76% of the Neotropical migratory birds that are experiencing significant population declines in the east require grassland or young forest/shrub habitats. Franzreb and Rosenberg (1997) found that songbirds that require young forest habitats for breeding are almost twice as likely to be declining (46.1%) as are birds that breed in mature forests (26.6%). Askins (1993) found that far more bird species dependent upon young forest habitats are decreasing than are increasing throughout the east. Conversely, far more bird species dependent upon mature forest habitats are increasing than are decreasing. Probst and Thompson (1996) reported that of 187 species of

Neotropical migratory songbirds that breed in the Midwest, more than half (95 species) use shrub-sapling or young-forest habitats to some degree during the breeding season. Many of these species, including blue-winged warbler, Bell's vireo, prairie warbler, white-eyed vireo and yellow-breasted chat, are currently listed as having high management concern for viability in the Midwest (Thompson et al. 1993)

Young Forest habitat is becoming increasingly scarce in Missouri and will lead to significant declines in wildlife populations if management direction does not change in the near future. With that in mind, the Ruffed Grouse Society encourages an active management program on the Forest that maintains a balanced distribution of forest age classes. A Forest Service research report by Thompson and Fritzell (1990) documents that limited clearcutting in extensive oak-hickory forests, such as the Mark Twain National Forest, that maintain a balanced forest age class distribution would increase forest- or beta-level species diversity and total bird density. (Preservation/Conservation Organization, Laona, WI - #130.2-3.55230.411)

ONLY FOR AREA HABITAT CONVERSIONS OR OTHER LANDSCAPE MANAGEMENT OBJECTIVES

Even-aged management should be reserved solely for area habitat conversions or other landscape management objectives. (Individual, Saint Louis, MO - #124.2.55230.603)

159. Public Concern: The Mark Twain National Forest should not use even-aged management.

No clear-cutting or even-aged management should be allowed in the Mark Twain. Only low-impact, selective logging that protects the environment should be allowed. (Preservation/Conservation Organization, Saint Louis, MO - #87.24.55230.400)

I believe that it is important to protect the Mark Twain National Forest very aggressively. The following suggestion helps to ensure such protection. Thus I urge you to adopt these as part of the plan that is now under review. No clear-cut logging should be allowed in the Mark Twain. (Individual, Saint Louis, MO - #56.7.55240.003)

In view of the ecological, recreational and multiple other goals of the MTNF, we particularly support greater emphasis on uneven-aged management and major decrease in clearcutting. (Placed-Based Group, Columbia, MO - #94.4.55230.001)

The Forest Service needs to readdress the assumption that logging is needed to maintain Ozark forests. It is widely accepted that many of the ecological problems existing today in Missouri's forests, including the Mark Twain, are a result of massive clear-cutting during the first few decades of the 20th century, altering age-class and species distribution from the previous stable and dynamic ecology existing prior to logging. The Forest Service continues to assert that in order to "correct" current problems in the forest that logging, clear-cutting and other types of even-aged management in particular, are necessary. The position that even-aged management is needed in order to correct problems created by even-aged management is absurd and must be readdressed. Additionally, it should be obvious that as a clear-cut forested ecosystem regenerates over several decades, there will be a decrease in early seral and other open habitat. As a broader issue, the Forest Service should recognize that its logic as expressed through numerous documents indicates a disbelief that forests can even exist without logging, revealing a dangerous bias. (Individual, Doniphan, MO - #103.25.55210.420)

FOR COMMERCIAL/COMMODITY MARKETS

Even-aged (clear-cut) harvest methods should be abandoned entirely for commercial/commodity market operations. (Individual, Saint Louis, MO - #124.2.55230.603)

160. Public Concern: The Mark Twain National Forest should use uneven-aged timber management.

I am also in favor of continuing and even increasing the use of Uneven Aged Management. (Individual, Rolla, MO - #80.2.55230.603)

We support the continued widespread use of UEAM, (and light cuts in the even aged system.)

We must note the language in the "Needs" document about UEAM contributing to decline could as easily been written to apply to the fact that years of over-reliance on clearcuts have set up other stands, which have not been thinned, for decline. (Preservation/Conservation Organization, No Address - #81.3.55230.109)

BY EMPLOYING SELECTIVE TIMBER HARVEST

The bar graphs you are furnishing concerned citizens entitled "Harvest Method Trends FY 1988-2001" show Clearcut (EAM) climbing in FY 99, 01 and I hear of foresters/silviculturists within MTNF who wish more clearcutting to occur. Added that MTNF continues to refute the virtues of "select cutting" methods expounded by Pioneer Forest and others, one wonders how "ecological sustainability" is to become a sincere part of the Forest Plan. I would encourage more use of uneven-aged management methods. (Individual, Saint Louis, MO - #111.1.55230.602)

The Forest Service needs to fully develop and consider uneven-aged management alternatives. The 6th Circuit has ruled:

The National Forest Management Act mandates that the Service ensure that even-aged management practices be used in the national forests only when "consistent with the protection of soil, watershed, fish, wildlife, recreation, and aesthetic resources, and the regeneration of the timber resource." 16 U.S.C. [section] 1604(g)(3)(F)(v). The National Forest Management Act thus contemplates that even-aged management techniques will be used only in exceptional circumstances. Yet, the defendants would utilize even-aged management logging as if it were the statutory rule, rather than the exception. *Sierra Club v. Thomas*, 105 F.3d 248 (6th Cir. 1997).

The Forest Service needs to consider true uneven-aged management (selection management). The Forest Service must not attempt to use "patch clear-cutting" in place of "group selection." Group selection does not use area regulation, it uses diameter distribution regulation. The Forest Service also needs to consider the research done in Illinois on Group Selection. [Footnote 17: Robinson, Scott "Effects of Selective Logging on Forest Birds in the Trail of Tears State Forest, Southern Illinois.

The research identified group selection openings as "ecological traps." Many species were attracted to the openings, which appeared to be suitable habitat. These species, however, did not successfully reproduce due to predation and cowbird parasitism. The study concluded, "If land is to be logged, single tree selection at low volumes removed (<20%) and long (15-20 years) cutting intervals is the method that will have the least adverse impact on forest bird communities." (Preservation/Conservation Organization, Wood River, IL - #147.118.55230.411)

The Forest Service continues to assert that logging, clear-cutting and other types of even-aged management are necessary in order to correct current problems in the forest. The position that even-aged management is needed in order to correct problems created by even-aged management should be reassessed. As a broader issue, the Forest Service should recognize that its logic as expressed through numerous documents indicates a disbelief that forests can even exist without logging, revealing a dangerous bias. If the Forest Service believes that logging is ecologically sound, it should instead promote selective logging, which encourages uneven-growth of trees, is more sustainable, and does not lead to the problems associated with clear-cutting. It allows tree saplings to reach maturity, maintains shade cover, protects the soil, and maintains diverse wildlife habitat. As an example, the pioneer Forest has shown that selective logging can be a sustainable alternative. (Preservation/Conservation Organization, Saint Louis, MO - #87.25.55230.603)

BY EMPLOYING THE METHODS OF PIONEER FOREST

At the initial adoption of the forest's Land and Resource Management Plan, in 1986, a large number of acres were allocated to uneven-aged management. We (Pioneer Forest) have looked favorably on that and hope your research and on-the-ground management experience with this has proven positive. We can and have shared much of our own experience and research on uneven-aged management here in the Ozarks. We have found it to be productive from the forest management viewpoint, but clearly economically advantageous, publicly acceptable, and in many respects ecologically beneficial. For all of these reasons we certainly would like to see the use of these management measures continue and we hope expanded in your current review of forest management allocations throughout the Mark Twain National Forest. (Timber or Wood Products Industry, Salem, MO - #129.1.55230.001)

The Forest Service should evaluate and consider sustainable timber cutting practices so that our forest resources can be renewed and the integrity of the forest can be maintained. Pioneer Forest is a model of sustainability using the single-tree selection model. (Preservation/Conservation Organization, Saint Louis, MO - #102.9.55200.603)

Within the compartments determined to be native forest species habitat and designated suitable for timber harvest purposes (after plan specified area exclusions), all harvest methods should be in accordance with the single tree selection model developed by the Pioneer Forest. Adoption of the Pioneer Forest paradigm will permit the maintenance of sustainable forests of native species in areas where they are evolutionarily adapted AND BUILD a base of continuously improving quality and value in the MTNF. (Individual, Saint Louis, MO - #124.2.55230.603)

Mineral Resources

Mineral Resources General

161. Public Concern: The Mark Twain National Forest should include the topic of mineral exploration and development in the forest plan revision.

With all the controversy over lead mining in the forest, how can this be left out of the plan revision process? We (Heartwood Inc.) do not believe that the current management direction is adequate, and we believe this amounts to a predecision without public involvement to continue current mining activities which are damaging the forest. We object strongly to this. (Preservation/Conservation Organization, Brookport, IL - #142.14.55330.003)

It is not in the best interest of the public to allow additional lead exploration or mining in the Mark Twain National Forest. A review of all mining activities and designations on the MTNF should be included as part of the planning process. This important environmental issue should not be ignored. Mining is a major threat to the MTNF, particularly in the Scenic River watershed. Addressing this should become one of the priorities for your review. (Individual, Columbia, MO - #95.1.55310.002)

Over two decades of scientific study and research have put into question the suitability of lead exploration and development in this District. The decision of whether and under what conditions to allow lead mining, particularly those conditions that apply to surface activities, rests, in part, with the Forest Service. The starting point for Forest decisions on whether to allow lead exploration and mining, and under what conditions to allow those activities, comes from the direction articulated in the LRMP. (National Park Service, Omaha, NE - #150.4.55330.100)

The 1986 forest plan lacks adequate protection for forest resources that might be impacted as a result of mineral exploration and development. In fact, virtually the entire forest remains open to such activities. Over the years, perhaps no other natural resource issue in Missouri has caused more public debate than

lead mining in the Ozarks. It is inconceivable how the Forest Service can now propose to completely eliminate this issue from discussion. This proposal is unacceptable and illegal. (Individual, Boulder, CO - #31.3.55320.003)

Priorities for planning on the Mark Twain National Forest should include special attention to mining issues, in particular, the ability of the Forest Service to prohibit lead mining or exploration in sensitive areas. The Forest Service should have the power and duty to remove any area from consideration if mining would harm the forest, streams, wildlife or recreational value. All current mining and exploration activities should be reviewed as part of the planning process. (Individual, Saint Louis, MO - #105.1.55300.001)

INCLUDING A REVIEW OF MINERAL DEVELOPMENT AND ECOLOGICAL RESTORATION

If these steps [of reviewing mineral extraction and ecological restoration] are taken, the benefits to Missouri will be profitable. At the same time visitors to our forest can experience a certain amount of serenity. (Individual, Scott City, MO - #114.3.60000.750)

162. Public Concern: The Mark Twain National Forest should not include the topic of mineral exploration and development in the forest plan revision.

NMA (National Mining Association) notes that the Forest Service correctly determined that no changes are necessary to the minerals exploration management direction in the Forest Plan. As the NOI states, the responsibility of the Forest Service in regards to mining is limited to the surface activities. Protection of the surface during mineral entry is adequately addressed in the present plan. In addition, it is important to provide access to potential mineral deposits, and these deposits exist where the geology dictates identification. Thus, the decision by the Forest Service concerning mineral management is the correct decision and is strongly supported by NMA. (Mining Industry, Washington, DC - #61.1.55300.003)

The situation concerning the mineral exploration and management has already been discussed and reshaped so reopening the topic will serve no real purpose. The Forest Service has taken the correct course of action. (Individual, Viburnum, MO - #40.1.55320.003)

I believe that the Forest Service correctly determined that no changes are necessary to the minerals exploration management program outlined in the current Forest Plan. As the NOI states, the responsibility of the Forest Service in regards to mining is limited to the surface activities. Protection of the surface during mineral entry is adequately addressed by the existing plan. In addition, it is important to provide access to potential mineral deposits whereby development and production can provide jobs and tax dollars to support other activities on the forest. The assessment conducted by the Forest Service concerning initial mineral entry and their decision concerning mineral management is the correct decision. (Individual, Salem, MO - #153.1.55320.003)

Regarding mineral entry, the current requirements and guidelines provide multiple layer of environmental and other surface protection. It is important both locally and nationally that the public be provided (1) an inventory of resources on Public Lands as identified by responsible mineral exploration, and (2) access to an affordable and reliable domestic supply of critical minerals and metals from accountable mining. The USFS's decision that the current plan provides the proper level of access and protection for all significant issues identified is correct. In the future if significant new issues arise, they can be provided for by future revisions. (Individual, Viburnum, MO - #128.4.55300.003)

163. Public Concern: The Mark Twain National Forest should restrict or prohibit mineral, oil, and gas leasing.

Removal of Forest Service lands from consideration for mineral, oil, and gas leasing. Lead mining is not appropriate for the Mark Twain National Forest. Expansion of lead mining should be strictly prohibited.

No land exchanges to allow such expansion should be authorized. (Individual, Waterloo, IL - #73.7.55300.500)

I think forest service lands should be removed from consideration of mineral, oil and gas leasing. (Individual, Sullivan, MO - #101.3.55300.500)

No granting of mineral, oil, and gas rights within the national forest. (Individual, Saint Louis, MO - #99.4.55300.604)

I feel very strongly that you should remove forest-lands from consideration for mineral, oil and gas leasing. I camp, float and fish in the scenic river watershed and it frightens me to think about any more destruction (by mining) than has been already allowed. (Individual, Eureka, MO - #119.1.55300.750)

UNTIL A COST ASSESSMENT SYSTEM IS CREATED

Accurate and comprehensive assessment systems of the true costs of the impact of minerals exploration and extraction of minerals on our natural heritage biota in terms of loss of unfragmented habitat, clean water, clean air, introduction of exotic species, loss of recreation space remains to be accomplished. Recommend a moratorium on minerals exploration until such a system is devised. (Individual, Saint Louis, MO - #124.12.55320.806)

IN SENSITIVE AND ROADLESS AREAS

Other land and resource management matters that may have particular consequences for state parks and other nearby landholdings include withdrawal from mineral leasing of ecologically sensitive areas, roadless areas, and areas near state parks and other sensitive lands outside Mark Twain National Forest boundaries. (Placed-Based Group, Columbia, MO - #94.2.50340.001)

Adequacy of Analysis

164. Public Concern: The Mark Twain National Forest should analyze the effects of mineral exploration and development.

The agency has stated in the ASSESSMENT OF THE NEED FOR CHANGE FOR THE MARK TWAIN NATIONAL FOREST LAND AND RESOURCE MANAGEMENT PLAN AND NOTICE OF INTENT TO REVISE THE FOREST PLAN [4/8/2002], THAT “the Forest Plan contains appropriate and adequate direction in regards to the surface activities associated with mining that occur on the Mark Twain National Forest”. It has elected to ignore the issue of mining—preferring to avoid the controversy surrounding the issue. The agency does not propose any change to management direction in the Forest Plan. In its Notice of Intent in the Federal Register, the agency states that public comments received on the topic are “beyond the scope” of Forest Plan revision, and will be acknowledged as such. This position is not acceptable. The agency has, in subsequent public meetings across Missouri, expressed regret for the position—but has not revised or changed its tone in an official format—it has not printed a retraction, nor informed the public in news releases or in a revised NOI that it will give the issue due consideration—as is required by law.

The current Forest Plan is woefully lacking in managing surface impacts associated with mining. MTNF lands in the Salem-Potosi District are a case in point. The documented degradation of lands leased to mining industry in the region is well established. Research done in the area over the years suggests serious long-term damage to resources and hazards to humans and animals for perpetuity. The agency has suggested that it need not look at the issue in the planning process because adequate protections exist for surface resources. We submit that evidence shows otherwise and we urge the team to: do their homework—look at the research; make field trips to witness the effects of mining; listen to the stories of the nearby residents—to reassess the “adequacy of protections” to surface values of soil, water, wildlife, scenery and other resources. (Individual, Doniphan, MO - #103.19.55300.420)

PARTICULARLY FULL-SCALE MINING

The current plan only addresses mineral exploration in relation to surface activities. The plan does not discuss how the Forest Service will address lease issuance. The Forest plays a decisive role in both exploration and development leases, and the existing science raises substantial questions about the suitability of lead mining in the District. The LRMP should define how the Forest will manage areas having the potential for exploration and full-scale mining, and define management prescriptions for exploration and full-scale mining.

The environmental impact statement accompanying the current plan revision should consider both exploration and full-scale mining. There is no question the District has high potential for exploration, and full-scale mineral development is reasonably foreseeable. In analyzing this type of development, the Forest must also analyze impacts that will occur on areas it administers and on areas that would be affected by mining development. As we have pointed out, future mining activities will have the potential to affect NPS-administered lands and waters. (National Park Service, Omaha, NE - #150.5.55320.100)

TO FOSTER PUBLIC TRUST

However, on page 15 of your NFC under "Minerals Exploration", I cannot see how MTNF can get away with not proposing changes in this area. This topic needs reworking. The relatedness of "exploratory drilling" to "potential mining" is a given. When challenged decisions wane or flow depending on which "Administration" is in the Nation's Capitol, then there is a problem that you should revise at this time. IN short, does the MTNF claim to be representative of the citizens of the nation or of the current party in Office in Washington, D.C.? (Individual, Saint Louis, MO - #111.8.55300.003)

TO ADDRESS KARST TOPOGRAPHY

Under the current Forest Management Plan, the MTNF has been riddled with exploratory drill sites in one of the most highly developed karst regions of the world, the Missouri Ozarks. The potential impacts from such exploration activities have not been comprehensively assessed. Given the vulnerable nature of karst lands/waters, it surely warrants such as assessment. The fact that recent research indicates that the two aquifers underlying much of the MTNF lands, the St. Francois aquifer and the Ozark aquifer, are NOT separate and distinct from each other, and have been found to mix, indicates that any mining for lead ore would contaminate our (I live in the MO Ozarks) drinking water and rivers. Community water providers and residents of the region have been driven to drill deeper and deeper to reach potable water. The flow of water between the surface and subsurface of the karst lands that the MTNF administers intermingle. Hence, an impact to the surface is an impact to the subsurface. Since there is no distinction between surface and subsurface water, management goals of the new Mark Twain National Forest must favor protection of water resource values. (Individual, Alton, MO - #108.10.55300.402)

TO ADDRESS THE SCENIC RIVERS IN THE FOREST

I believe that mining and mineral exploration is a threat to the Mark Twain Forest and especially the Scenic River watershed. The Forest Service should include a review of all mining activities and designations on the Mark Twain Forest as part of the forest planning process. (Individual, Brookline Station, MO - #116.1.55300.402)

I urge that mining activities and designations in the Mark Twain National Forest should be reviewed as part of the forest planning process. Pollution to the Scenic Rivers watershed should be prevented. (Individual, Kirksville, MO - #121.1.55300.402)

BECAUSE THE TOPIC WAS NOT ADEQUATELY ADDRESSED IN THE PAST

Concerning minerals exploration, the Final Environmental Impact Statement, Hardrock Mineral Leasing Mark Twain National Forest Missouri, p. 504 (1988), admits "the potential effects of mineral development activities were not evaluated in detail during the preparation of the [1986] Forest Plan." (Preservation/Conservation Organization, Saint Louis, MO - #87.4.55310.002)

The Forest Service has expressly acknowledged that it did not, in fact, even consider mineral exploration when the 1986 (now expired) Forest Plan was adopted.

“The potential effects of mineral development activities were not evaluated in detail during the preparation of the 1986 Forest Plan.” See, Final Environment Impact Statement, Hardrock Mineral Leasing, Mark Twain National Forest Missouri at p. 504 (1988).

It is incomprehensible that an issue as controversial and environmentally destructive as mineral exploration, which was not even addressed as a major issue in the 1986 Forest Plan, would be omitted from the new Forest Plan revision process. It is a major issue and it should be addressed. (Preservation/Conservation Organization, Saint Louis, MO - #1.3.55320.003)

After reviewing some of the documents available from the web address for the MTNF, it is very clear that no change is viewed as necessary for the Minerals Exploration component of the existing forest plan. In spite of what appears to be anonymity on this score, I want to address this issue from my own perspective.

The 1986 plan includes only a single goal for the mineral management area. I do understand that there is shared responsibility with the Bureau of Land Management on mineral exploration/leasing. The single stated goal seems simplistic and too permissive. It does not fully recognize the management responsibilities currently exercised and fails to pinpoint the monitoring responsibility which would seem to fall on either the forest service or land management. Any active lease pollution beyond expected levels should be cause for loss of the leasing rights. (Individual, Scott City, MO - #115.1.55300.002)

165. Public Concern: The Mark Twain National Forest should prepare an EIS for each proposal for mineral exploration.

All areas of ecological sensitivity and high biodiversity priority should be withdrawn from consideration for mineral leasing. A full Environmental Impact Statement based on the impacts of mining should be developed for all proposals for mineral exploration. (Preservation/Conservation Organization, Columbia, MO - #112.10.55300.002)

Mineral Exploration and Development

166. Public Concern: The Mark Twain National Forest should allow mineral exploration and development.

Mining of all types should be allowed in the National Forests. They belong to all of us not just the environmentalists who make the most noise. (Individual, West Plains, MO - #37.4.55300.107)

TO DECREASE FOREIGN DEPENDENCE

Please don't allow those countries that still produce mineral wealth to acquire the same strangle hold on the United States as has happened with OPEC from our lack of oil production. You can help by leaving the MTNF Plan as it is concerning mineral exploration. It is not always apparent, but everything has some connection to mining; from the computer screen you are looking at right now, to the shirt on you back. (Individual, Rhinelander, WI - #54.6.55300.600)

167. Public Concern: The Mark Twain National Forest should restrict or prohibit mineral exploration and development.

To protect and restore water resources, and to manage the public lands for the greatest good of the public, the Forest Plan should dis-allow expansion of mining activities. (Preservation/Conservation Organization, Wood River, IL - #147.36.55300.403)

I advocate the elimination of mining on all public lands in Missouri. (Individual, Ozark, MO - #8.2.55300.604)

There should be no expansion of lead prospecting and mining activities on the Mark Twain. No land exchanges to facilitate such expansion should be allowed. (Individual, Jefferson City, MO - #110.4.55300.500)

BECAUSE IT IS INCOMPATIBLE WITH THE MULTIPLE USE POLICY

Mining is also incompatible with a multi-use policy. This policy is one that needs to be urgently reassessed in general, but specifically with regard to mining activities. Mining precludes all other forest values. (Preservation/Conservation Organization, Saint Louis, MO - #87.22.55300.002)

Mining is NOT compatible with a Multiple-Use Policy. The Forest Service policy on multiple-use must be reassessed, especially on mining activities. Mining precludes all other forest values. There must be no mining in or near the Mark Twain National Forest (Individual, Alton, MO - #108.11.55300.101)

TO PROTECT WATER QUALITY

Proposed goals for the current LRMP do not insure that forest and streams are managed for the greatest public good. This is evident in the permitting of mining activities in MTNF, which can pollute groundwater through tailings and mine waste. Residents of the area depend on these aquifers as their primary source of drinking water. Especially in a karst region, minerals exploration could penetrate unidentified caverns and pollute water contained within. In the past, the Forest Service has down played the threat that mining poses to ground water resources. The Forest Plan revision should correct this stance and provide adequate protections for ground water. (Preservation/Conservation Organization, Saint Louis, MO - #87.12.55300.402)

To protect and restore water resources, the LRMP should dis-allow expansion of mining activities. (Individual, Doniphan, MO - #103.14.55300.403)

TO PROTECT CERTAIN AREAS

Mining is not appropriate for Mark Twain National Forest. While under the Weeks Law Act authority for mineral prospecting is permitted on the MTNF lands, it is not mandated, nor is mineral development when a deposit is found. New information presented by the tech team at the USGS, Rolla, Mo. In May 2001 would indicate that explorations for minerals deposits in the Eleven Point District yielded a significant discovery of high-grade ore under National Forest lands in and near the Eleven Point National Scenic River. USGS maps presented by research geologist Randall Orndorff show the deposit to exist. The current management plan, which allows mining within the Scenic River corridor, cannot protect natural resource values (as so demonstrated on the Salem and Potosi District) and is an issue that must be addressed in revising the LRMP. (Individual, Boonville, MO - #98.10.55300.101)

I understand that under your current management, you're allowing for possible drilling underground within the Mark Twain National parks. I also understand that this could very likely affect Greer Springs and be disastrous for the Eleven Point. I don't understand how this can even be a small possibility! I'm completely outraged. (Individual, No Address - #17.1.55320.402)

We (The State of Missouri Department of Natural Resources) do not agree with the Forest Service position that changes in the management direction of the Forest Plan regarding mineral exploration and mining are not warranted . . . Relating to mineral exploration activities, the department believes it to be extremely important that the Forest Service not defer this issue to a future Forest Plan revision or separate environmental impact statement analysis. We believe the implication of consent to mining activities from the allowance of prospecting activities to continue on all Mark Twain National Forest lands is very evident. This implied consent condition should not be allowed to continue on any forest system lands, however, we believe this to be especially true for lands within the Eleven Point District of the Mark Twain National Forest. We believe that there is now sufficient information available for the Forest Service to recommend and support a withdrawal of lands in the Eleven Point District from further mineral exploration activities, and that this Forest Plan revision should accomplish such a withdrawal. (Missouri Department of Natural Resources, Jefferson City, MO - #151.14+16.55320.003)

AND ENCOURAGE RECYCLING INSTEAD

I urge you to prevent mining. Drilling, (even exploratory) for oil, gas and minerals is not a suitable use for wild public lands, nor is it compatible with wildlife survival. Mining contributes heavily to stream degradation and habitat destruction. Humans have many choices, such as obtaining lead by recycling car batteries, which has proved to be a profitable enterprise right here in Missouri. Many new, efficient technologies exist which can limit our need for new sources of oil and gas. But wildlife doesn't have a choice. If we destroy their habitat through harmful and unnecessary practices, we will lose them forever. (Individual, Saint Louis, MO - #100.4.55300.420)

168. Public Concern: The Mark Twain National Forest should address lead mining in collaboration with other land and resource agencies.

The Forest has an obligation to coordinate its planning efforts with other land and resource agencies. Since there is a connection established between NPS resources and potential mining activities in the district, it may be appropriate for the Forest to consider developing a joint resource management plan with ONSR that would address lead mining in the ONSR watershed. We are available to discuss this option with you at your convenience. (National Park Service, Omaha, NE - #150.6.55300.112)

169. Public Concern: The Mark Twain National Forest should restrict or prohibit lead mining in the forest.

Lead mining degrades forest habitat and poisons water, air, and soil. (Individual, Rolla, MO - #90.1.55330.420)

If we want, and I do, a healthy Mark Twain National Forest, there can be no, I repeat, NO lead mining in the Mark Twain. There can be no exploratory mining for lead or any other mineral in the Mark Twain National Forest. (Individual, Alton, MO - #108.7.55300.602)

I believe the new plan should strictly prohibit lead mining and lead mine exploration. Lead mining is not compatible with any of the other goals of the MTNE. (Individual, Maryland Heights, MO - #23.1.55330.101)

Due to resultant degradation of water quality, wildlife habitat, and recreation opportunities, lead mining is not an appropriate use of the Mark Twain. Expansion of lead mining should be strictly prohibited. No land exchanges to allow such expansion should be allowed. (Individual, Olympia, KY - #48.7.55330.001)

I believe that it is important to protect the Mark Twain National Forest very aggressively. The following suggestion helps to ensure such protection. Thus I urge you to adopt these as part of the plan that is now under review.

Lead mining is not appropriate for the Mark Twain. Expansion of lead mining should be strictly prohibited. No land exchanges to allow such expansion should be authorized. (Individual, Saint Louis, MO - #56.6.55330.003)

IN THE SURROUNDING WILDERNESS AREAS

The current forest plan allows for lead exploration in this region, but thankfully excludes the Irish Wilderness as it is a "Wilderness Area". There is however a great amount of Mark Twain National Forest that is not part of the Wilderness, but is so close in proximity, that I feel even exploration should be moved further back. What I would suggest is the following:

1. Setup a boundary (in miles) from Wilderness areas where exploration is NOT allowed. This is to protect possible outreaching damage to Wilderness areas.
2. Consider areas, which would be more greatly affected to be included in the "No exploration" areas.

a. Certain areas are far more susceptible to outreaching damage than others considering the topography, current state of the forest/fields, nearby springs and rivers. I feel that all areas around the Eleven Point river should all be considered in the “no exploration” area. This area is in my opinion more likely to have outreaching damage that cannot be seen at first glance if exploration or further activities would be allowed. It is a beauty that should not be tainted as it may be impossible to ever re-create it.

b. To quote Loring Bullard in the July 2002 Conservationist article titled Missouri “The Spring State”, “Fissures and tubes in the karst bedrock are like arteries moving water and its dissolved and suspended materials rapidly into and through the subterranean realm.” This alone depicts the fragility involved with our springs and rivers, and how something as simple as “exploration”, which includes drilling, could drastically affect this region. It also states “Shallow groundwater, the plumbing systems of some of our springs, is easily compromised by surface pollution.” In my opinion this would include clearing of an area and exploration for minerals in an area that could suffer tremendous damage. Damage that would affect the land, groundwater, springs, and the Eleven Point River. Of course areas in Arkansas and further would suffer from stream damage. (Individual, No Address - #55.2-3.55320.420)

BECAUSE OF KARST TOPOGRAPHY

Groundwater studies in the region confirm the recharge zone for Big Spring on the Current River and encompasses an area of high interest to lead mining companies in the Doniphan/Eleven Point District (District). Past history of tailing impoundment failures in the New Lead Belt demonstrate the lead tailings deposited on the surface of a highly developed karst landscape are virtually certain to leak into the subsurface groundwater pathways. The southern part of Missouri is well-known to be one of the most highly developed karst landscapes in the United States. Once in the groundwater, lead would emerge from springs in the area and threaten the integrity of the nationally significant resources of ONSR. In addition to the significance of ONSR, the State of Missouri has designated three major rivers, the Current, Jack’s Fork, and Eleven Point, as “Outstanding National Resource Waters”. This designation protects these rivers against any degradation in quality. (National Park Service, Omaha, NE - #150.3.55330.402)

The districts primarily at risk for additional mining and drilling contain karst geology and provide a sole source aquifer for many Missourians’ drinking water. These areas should not be subject to mining. (Preservation/Conservation Organization, Columbia, MO - #77.3.43210.604)

170. Public Concern: The Mark Twain National Forest should not allow the Doe Run Company to operate in the forest.

As is well known DOE Run has been oblivious to the environment around its operation after strenuous protest forever, DOE Run can not be trusted!!! (Individual, Kansas City, MO - #140.13.55330.103)

No expansion of mining on USFS lands. Doe Run has had enough of a free ride and destroyed enough acreage with tailings ponds and other debris. (Individual, Manchester, MO - #123.1.55330.604)

I am writing to you to express my concern about the Doe Run company expanding mining operations farther into the Mark Twain national forest. I do not believe the public interest is best served by allowing them to expand operations, especially near waterways. (Individual, No Address - #9.1.55330.402)

IN DEFERENCE TO THE DEPARTMENT OF INTERIOR’S ASSESSMENT OF RISKS

The NPS disagrees with the Forest’s characterization of the lead mining issues in its NOI, and we are concerned these issues will not be considered during the revision of the LRMP. During the 1900s, issues regarding the prudence of issuing prospecting permits to the Doe Run Company rose to the level of the Secretary of the Interior and the Secretary of Agriculture, as well as the highest level in the State of Missouri. In 1998, the department of the Interior Solicitor issued a 33-page opinion highlighting the risks of issuing prospecting permits, the operation of applicable law, and the obligation of federal agencies to examine the full effects of mining proposals under the National Environmental Policy Act.

The Doe Run Company eventually withdrew its permit applications and has not submitted new applications. (National Park Service, Omaha, NE - #150.2.55330.003)

BECAUSE OF ITS HISTORY OF POLLUTION

The Forest Planning SHOULD NO LONGER HAVE THE DOE RUN LEAD MINING Company continuing to BE OPERATING ON PUBLIC LANDS with its RECORD OF Pollution and EXPLOITATION. (Individual, Elkland, MO - #45.1.55330.500)

There should be absolutely no more exploration for mining or additional mining per se in Mark Twain National Forest. Lead mining poses a serious threat to the forest and particularly to the rivers that run there. Doe Run Lead has shown itself to be an irresponsible polluter, mindless of the serious effects of its actions; witness the situation in Herculaneum. (Individual, Bonne Terre, MO - #43.1.55300.420)

I encourage you to review all mining activities in the Mark Twain National Forest. For example, why would one even consider allowing a company such as Doe Run Lead Mining Company to explore for or extract minerals at new locations. Its pollution record is abysmal. How can past environmental damage by a company within the state of Missouri be ignored as a factor when considering exploration or lease applications. (Individual, Scott City, MO - #114.1.55330.400)

In addition to the health and environmental risks associated with mining and exploratory drilling, the public has a right to expect that the MTNF, as a federal agency, would seek to do business only with reputable contractors or other agents in regard to any forest related products or services. With regard to mining the MTNF has dealt repeatedly with the Doe Run Mining Company. That company is a frequent violator of pollution regulations. The MTNF should not do business with Doe Run, or any similar habitual violator, until or if such company establishes a record of compliance. (Preservation/Conservation Organization, Columbia, MO - #77.4.55330.106)

Lead mining is a frivolous venture in our present day economy as the profit margin on domestic lead is nearly non-existent. Stop letting companies like Doe Run pollute and alter our pristine forests for the purpose of mining lead ore which can be easily acquired from other locations for extremely reasonable prices. (Individual, Mantua, NJ - #86.13.55330.806)

BECAUSE OF ITS HISTORY IN HERCULANEUM

In your discussions of revisions of the plan for the future of Mark Twain National Forrest in Missouri and the Eleven Point River, You will be considering the option of allowing Doe Run to mine in the area. In the name of all you hold dear, do not let this happen. Doe Run has demonstrated a complete lack of Corporate responsibility in their stewardship in the past, and one cannot expect them to change in the future.

Even animals do not defecate in their own nests, but Doe Run contaminates Herculaneum, moves all the families of corporate officers to un-contaminated communities, then has the gall to say that the town is not contaminated "that badly."

If Doe Run is allowed to mine near the Eleven Point, the disaster will be assured, only the date of its occurrence will be unsure.

Be careful in your decisions, we are watching you. (Individual, No Address - #16.1.55330.001)

I would like to know that there will be not a single possibility of the Doe Run Company destroying your beautiful area like they've destroyed our area. I've lived in the town neighboring Herculaneum all of my life and have even attended school there. I'm seeing many people displaced because of that company. My husband was employed by Doe Run for years (and is suffering severe symptoms—from a very high blood lead count). He's told me of their unscrupulous practices and how they get around the law. He's been involved with having to do very unsafe things just to keep his job. I know it's too late for the damage they've done to our community but it's not too late for your community. I have no doubt that, if

allowed, they will have ABSOLUTELY no regard for our beautiful river. (Individual, No Address - #17.3.55330.001)

I am totally against the Doe Run company doing any more damage to Missouri. To the point—we already have plenty of evidence in Herculaneum as to how Doe Run handles their operations. Let our National Forests remain as they were originally intended by the people who donated the property—to remain as NATURAL HABITATS for our plants and animals—this should not even be open for debate—Keep Doe Run Out!! (Individual, No Address - #20.1.55330.420)

ON THE ELEVEN POINT RIVER

Please do not let Doe Run ruin the Eleven Point River area. This area needs to be protected. My family and my sibling's families have used this area for camping for years, and now it's our children's turn to use it. How much do we need to destroy our great state's natural beauty? One of our greatest resources is tourism! (Individual, No Address - #15.1.55330.750)

I was reading an article on the kmov.com about doe run wanting to mine more of the Eleven Point River area. I hope this does not happen. We enjoy the mark twain national forest area. We are purchasing property just above Annapolis Mo. and spend a lot of our weekends all summer long. Is there anything we can do to keep the mining from expanding? (Individual, No Address - #18.1.55330.000)

I had just seen the news story on ch. 4 in St. Louis about the Doe Run Co. wanting to mine for lead near the Eleven Point River. As a state, we can't let this happen. I'm STRONGLY AGAINST THIS, and will do whatever it takes to prevent this from ever happening within the confines of the law. Please voice my statement as a taxpayer in Missouri to the superiors in the USDA Forest Service. (Individual, Saint Louis, MO - #14.1.55330.403)

Please don't let Doe Run Lead Mining invade any more of our beautiful state. Especially don't give them permission to drill or mine further around the Eleven Point River, Jacks Fork, area. (Individual, No Address - #13.1.55330.403)

Rangeland Resources

171. Public Concern: The Mark Twain National Forest should restrict or prohibit livestock grazing in sensitive riparian areas.

We support riparian maintenance and restoration. We hope to see in the future some legislation keeping livestock out of streams, sensitive areas, springs, rivers etc. as was done when we lived in Wis., by the DNR—fencing cattle from these places. Water is and is going to be a priority for all of us, and we are so fortunate here in the Ozarks to have so many sources of water, and also water of such good quality compared to other places. (Individual, Winona, MO - #93.5.55400.403)

To protect and restore water resources, the LRMP should eliminate livestock grazing in streams. (Individual, Doniphan, MO - #103.16.55400.403)

ON THE ELEVEN POINT RIVER

Grazing of livestock in riparian areas continues, including within the easement of the Eleven Point National Scenic River (cattle are a frequent sight in the river itself as well as on the already severely eroded banks). This practice has the consequence of erosion paired with unacceptable nutrient burden - further degrading the quality of the water resource and fouling the recreational appeal of the river. (Individual, Doniphan, MO - #103.9.55400.403)

172. Public Concern: The Mark Twain National Forest should encourage native grazers over traditional livestock grazers.

The character and composition of native habitats of, e.g., glades or prairies, will be changed due to the selection of which type of herbivore (cattle-vs-bison) may be allocated grazing rights. Native species such as bison as grazers tends to result in improved species richness. The MTNF Plan should include a system of transition from conventional livestock grazing to only native species only on public lands. (Individual, Saint Louis, MO - #124.4.55400.400)

Chapter 5

Forest Values

Environmental Values

Environmental Values General

173. Public Concern: The Mark Twain National Forest should protect the forest environment.

Our parks should be protected by the Federal Government and because of some loop-hole and (I'm sure) money, your management is allowing for the possibility of complete ruin for this wonderful area and river. (Individual, No Address - #17.2.40000.104)

ABOVE THE SHORT-TERM PROFIT OF SPECIAL INTERESTS

We must also place the benefit of all people (clean air, unspoiled nature) above the short term profit of special, i.e., mining interest. (Individual, Saint Charles, MO - #7.2.40300.750)

WITHOUT CONSIDERATION OF POLITICAL PRESSURE

Given the current state of the world (growing human populations, declining species, global deforestation, global warming, etc.), it is increasingly difficult to comprehend why federal and state land managers cannot grasp the necessity of taking these issues seriously and of managing public resources for values other than corporate welfare resource extraction. Please do the right thing and not the thing that will maximize special interest campaign contributions for the local Congressman. (Individual, No Address - #26.13.40000.103)

FOR A GROWING POPULATION

In the event that the FINAL EIS is actually issued in October 2005, and the intended "design life" of the Forest Plan is 15 years, the basic framing of alternatives in the PLAN must try to anticipate conditions as they will be in the year 2020.

The US Census Bureau projects that the population of Missoula will increase from 5.5 million = (present) to 6.25 million by 2025 and the adjoining state's populations will also increase—no state is projected to lose population. The population of the planet will increase from 6.239 BILLION today to 7.5 BILLION in 2020. This combination will impose severe demands for open space recreation on all public lands in the midwest and the MTNF; it will also assure increasing status as a scarce resource for the MTNF.

A paramount demand of major segments of the 2020 public will be in search of those recreation areas that provide an opportunity for immersion in their vision of what represents the values of our natural heritage ambience. A landscape imposing/exhibiting a continuation of frenzied commodity hustle will fail to provide for that need.

CHALLENGE: The mission and function of the revised MTNF LRMP should be to leave the legacy of our natural heritage resources in superior biological integrity and higher cultural value than they were at the beginning of the Plan. (Individual, Saint Louis, MO - #124.13.75900.001)

FOR FUTURE GENERATIONS

Mark Twain National Forest has been a place of great beauty to me. I feel I am going home when I drive into the park. It has become a little too commercial in the lodge area but still beautiful. "Don't let it be ruined!!" I want my future relatives to enjoy the same beauty! (Individual, Warrensburg, MO - #139.13.75200.754)

Please protect our precious resources for all now, and future generations. (Individual, Chesterfield, MO - #137.13.10000.754)

We have been watching so many trees being taken down in our neighborhood for business . . . we like to think at least the MARK TWAIN NATIONAL FOREST is protecting life for our grandchildren. (Individual, Saint Louis, MO - #33.1.55240.754)

The more crowded and congested the state becomes, the greater the need for natural areas. Uses for these areas, which have long term destructive impact, should be phased out.

In the future these lands will be all that is left of "natural Missouri" and they should be managed as thus. (Individual, Mountain View, MO - #21.1.60220.400)

Let's take care of our beautiful spaces so other generations can have them to enjoy as well. (Individual, Saint Charles, MO - #7.3.60200.754)

174. Public Concern: The Mark Twain National Forest should give more areas management prescriptions that favor preservation over timber commodity production.

There are a vast number of concerned citizens among our visitors and our members who desire to see more National Forest land put into Management Prescriptions that favor "preservation" over utilitarian management for timber cutting. (Preservation/Conservation Organization, Eureka, MO - #42.4.60220.500)

As a frequent visitor to our public lands, I want our national forest to be used for ecological protection and restoration. Extractive industries have no place on our public land. (Individual, Salt Lake City, UT - #27.1.60220.500)

175. Public Concern: The Mark Twain National Forest should provide more emphasis and direction to encourage biodiversity.

Provide more emphasis and direction to encourage biodiversity. (Individual, No Address - #148.8.60200.410)

176. Public Concern: The Mark Twain National Forest should focus on larger geographic areas.

Forest Service staff members have found that, "Forest Service and Bureau of Land Management plans in the 1990s addressed issues on individual planning units with only limited focus on larger geographic areas. (Duncan, 2000). This narrow scope indicates that accounting for larger geographic risk is unique for the Forest Service, despite the agency's recent efforts toward more realistic accounting. (Individual, Pine Bush, NY - #3.10.40100.400)

177. Public Concern: The Forest Service should replace routine references to forests by timber features to references by species or terrestrial community features.

We recommend that language in the revised forest plan replace routine references to forests as timber or as hard or soft wood instead with specific species or terrestrial community references. Although this may seem academic, it will retain focus on the forest as a natural community not as a source of timber. (Preservation/Conservation Organization, Columbia, MO - #77.6.55200.100)

178. Public Concern: The Mark Twain National Forest should carry out restoration activities.

RESTORE THE FOREST TO THE CONDITION IT WAS IN PRIOR TO COMMERCIAL DEVELOPMENT

In some parts of the Salem-Potosi district where I often travel, the forest seems irreparably ruined by human hands. I believe you should do everything within your power to restore it to its pre-logging pre-mining glory. (Individual, Manchester, MO - #123.7.55000.602)

Remedial work to restore as best possible those areas on the Forest which have been negatively impacted by prior mining activities should be included in the Plan. (Individual, Jefferson City, MO - #110.5.55300.003)

DO NOT INCLUDE COMMERCIAL ACTIVITIES IN RESTORATION PROJECTS

Commercial extraction of a product should never be allowed as part of a restoration project. This dual purpose inevitably skews the approach and authenticity of the project, and the potential for damaging things worse than they already are is very real. IF vegetation is manipulated, let it lay where it is and don't take it offsite. Furthermore, extensive monitoring of biological diversity and ecological relationships, from the soil up, needs to be an integral part of any restoration project before, during, and after (over short and long-term periods) any restoration activities. (Preservation/Conservation Organization, Wood River, IL - #147.48.55000.420)

RESTORE FRAGMENTED LANDSCAPES FOR THE BENEFIT OF BIRD SPECIES

A study published in Science contained these findings and recommendations for neotropical migrants:

Nest predation and parasitism by cowbirds increased with forest fragmentation in nine midwestern landscapes that varied from 6 to 95 percent forest cover within a 10-kilometer radius of the study areas. Observed reproductive rates were low enough for some species in the most fragmented landscapes to suggest that their populations are sinks that depend for perpetuation on immigration from reproductive source populations in landscapes with more extensive cover.

Our results suggest that a good regional conservation strategy for migrant songbirds in the Midwest is to identify, maintain and restore the large tracts that are most likely to be population sources. Further loss or fragmentation of habitats could lead to a collapse of regional populations of some forest birds. Land managers should seek to minimize cowbird foraging opportunities within large, unfragmented sites. In more fragmented landscapes, the reduction of cowbird parasitism may require trapping and large scale restoration efforts, whereas reduction of local forest edges may reduce nest predation and increase mating success. Increasing fragmentation of landscapes, however, could be contributing to the widespread population declines of several species. (Preservation/Conservation Organization, Wood River, IL - #147.78.44300.400)

Adequacy of Analysis

179. Public Concern: The Mark Twain National Forest should include environmental analyses in the forest plan revision.

REGIONAL LANDSCAPE ANALYSIS

The regional landscape analysis needs to: 1) Identify the distribution, richness, and portions of patch (habitat) types and multipatch landscape types; 2) Consider the collective patterns of species distributions (richness, endemism); 3) Consider heterogeneity, connectivity, spatial lineage, patchiness, porosity, contrast, grain size, fragmentation, juxtaposition, patch size frequency distribution, perimeter area ratios, and the pattern of habitat layer distribution; and 4) Consider the disturbance processes (areal extent, frequency, or return interval, rotation period, predictability, intensity, severity, and seasonality), nutrient cycling rates, energy flow rates, rates of erosion and geomorphic and hydrologic processes, and human land-use trends. (Preservation/Conservation Organization, Wood River, IL - #147.227.40100.002)

COMMUNITY-ECOSYSTEM ANALYSIS

The community-ecosystem analysis needs to: 1) Identify relative abundance, frequency, richness, evenness, and diversity of species and guilds; 2) Identify proportions of endemic, exotic, threatened, and endangered species; 3) Identify dominance-diversity curves, lifeform proportions, similarity coefficients, and C4:C3 plant species ratios; 4) Consider the substrate and soil variables, slope and aspect, vegetation biomass and physiognomy, foliage density and layering, horizontal patchiness, canopy openness and gap portions, abundance, density, density and distribution of key physical features (e.g., cliffs, sinkholes, and outcrops) and structural elements (snags and down logs), water and resources (most) availability, and snow cover; 5) Consider the biomass and resource productivity, herbivory, parasitism, and predation rates, colonization and local extinction rates, patch dynamics (fine scale disturbance processes), nutrient cycling rates, and human intrusion rates. (Preservation/Conservation Organization, Wood River, IL - #147.228.40100.002)

POPULATION-SPECIES ANALYSIS

The population-species analysis needs to: 1) Identify absolute or relative abundance, frequency, importance or cover value, biomass, and density. 2) Consider dispersion (micro-distribution), range (macro-distribution), population structure (sex and age ratio) habitat variables, and within-individual morphological variability. 3) Consider the demographic process (fertility, recruitment rate, survivorship, mortality), metapopulation dynamics, population genetics, population fluctuations, physiology, growth rate (of individuals), acclimation, and adaptation. (Preservation/Conservation Organization, Wood River, IL - #147.229.40100.002)

GENETIC ANALYSIS

The genetic analysis needs to: 1) Identify allelic diversity and presence of rare alleles, deleterious recessive, or karyotypic variants. 2) Consider the effective population size, heterozygosity, chromosomal or phenotypic polymorphism, generation overlap, and heritability. 3) Consider inbreeding depression, outbreeding rate, rate of genetic drift, gene flow, mutation rate, and selection intensity. (Preservation/Conservation Organization, Wood River, IL - #147.230.40100.002)

180. Public Concern: The Mark Twain National Forest should analyze biodiversity and forest fragmentation.

The issue of biodiversity and forest fragmentation needs to be considered. In an interview, former Chief Jack Ward Thomas summed up why these issues are so important:

First don't let habitat situations get so bad that species get listed. That's playing Russian roulette. Once a species gets listed as threatened or endangered, it quickly slips out of anybody's hands and into the hands of the regulatory agency. That means you get ahead of the situation. You ask "How are we going to address this circumstance in a rational, reasonable fashion, in a coordinated manner so that it is not necessary to list the plant or animal?" One would not want to repeat the exercises of the Pacific Northwest where nobody would face the issue and everybody continued to twist away from the inevitable. If you look at the history if that particular issue, solutions were proposed and rejected, back and forth. The social and economic impacts kept increasing with each ratchet. The earlier you can address these issues, the more chance it will be addressed rationally with minimal impact. The longer you wait, the more options you lose, and the more dramatic the effect becomes in the end.

Seeing the Forests and the Trees: An Interview with Jack Ward Thomas. "Wisconsin Natural Resources," 1995.

It is time to act to protect neotropical migrants and biodiversity in general. The longer the Forest Service waits, the worse the problem becomes. (Preservation/Conservation Organization, Wood River, IL - #147.76.40000.420)

The analysis must define and measure biodiversity both in terms of the existing condition and the condition that would result if each of the alternatives is implemented. The analysis must consider the vulnerability, reduction from historical abundance, and the regional importance of all species in the project area. The analysis must use the pre-settlement condition of the project area as a benchmark for comparison with the existing condition and proposed changes to the project area. The analysis must

consider the functional, structural, and compositional attributes of biodiversity. The analysis needs to evaluate the existing condition of biodiversity, and compare it with the natural range of variability.

This needs to be considered within a landscape context. The analysis needs to consider the importance of maintaining connectivity between both individual and larger habitat blocks. To adequately consider the impacts of the project on biodiversity at the landscape scale, the following analysis must be conducted for all of the alternatives:

size distribution of habitat patches for all community types and forest seral stages.

patch size diversity index.

degree of connectivity maintained between habitat patches at various scales, particularly between those patches that are now uncommon in the landscape (e.g., late successional forests, roadless areas).

vegetation mosaic patterns.

cumulative effects at scale of watershed and regional ecosystem.

comparison of landscape patterns created by development to those created by natural disturbance regimes for all the above variables.

maintenance of uncommon or unique landscape elements (e.g., rare plant communities, natural ecotones, undistributed vegetation along environmental gradients, etc.).

Existing conditions regarding these variables needs to be considered within the context of their historical ranges of natural variability (i.e., what was there before large-scale human alteration of the landscape?). (Preservation/Conservation Organization, Wood River, IL - #147.82-83.40100.410)

FOR ALL SPECIES

Biodiversity and forest fragmentation must be addressed in regard to all species, not just birds. This includes, but is not limited to: mammals, invertebrates, plants, insects, micro-organisms, reptiles, and amphibians. The degree to which this area provides a biological corridor and its value should be considered. Sampling effects and minimum area requirements of all species should be addressed. The impact of cowbird parasitism and predation to forest interior birds should be prominently considered. The analysis of the impacts to forest interior birds needs to address nesting success. Some studies have documented forest interior birds in recently logged areas. The presence of these species in these areas normally indicate that the species are being harmed. Forest interior birds normally do not successfully reproduce in recently logged areas. These areas, in essence, have become ecological traps. The need for large tracts of forests should be considered. (Preservation/Conservation Organization, Wood River, IL - #147.77.40000.420)

181. Public Concern: The Mark Twain National Forest should reference all of the monitoring and evaluation reports and relevant scientific information.

Please reference all of the monitoring and evaluation reports, and relevant scientific information (Preservation/Conservation Organization, Brookport, IL - #142.3.60310.809)

182. Public Concern: The Mark Twain National Forest should collaborate with the Nature Conservancy in incorporating the Ozark Ecoregional Assessment data into the forest plan revision.

As part of its conservation work, the Nature Conservancy develops ecoregional assessments to determine the minimum land and water areas required to maintain the full extent of a region's biodiversity. We recently completed the Ozark Ecoregional Assessment. As an organization we are committed to working with partners to utilize this information, to ensure that resource management plans meet societal and economic needs while sustaining and restoring our natural heritage. The Ozark Ecoregional Assessment involved an analysis of global and regional data on plant and animal species, natural communities, and ecological systems essential to maintaining the full array of biological diversity. The Assessment includes information on numbers and spatial distribution of the conservation target occurrences, viability criteria and rankings, and associated information including assessment data regarding critical landscapes and aquatic reaches with multiple conservation targets. A multi-disciplinary team from Conservancy and partner organizations, and agencies from all of the states in the Ozark

Ecoregion developed this Assessment. We believe that this science based assessment represents the most current and comprehensive data available for biodiversity and ecological issues in the Ozarks, and would hope that it would prove useful to the Mark Twain National Forest planning team. As outlined in the current master memorandum of understanding between The Nature Conservancy and the Forest Service (02-SMU-132000-03), the Conservancy and the Service have agreed to cooperate on a variety of activities including “development and implementation of forest plans.” As part of this, the Conservancy is willing to work with the Service to make portions of the Ozark Ecoregional Assessment data available for incorporation in your planning process. I am confident that we can build on our previous record of success in cooperative projects with the Mark Twain National Forest involving ecological assessments, fire effects studies, and ecological restoration projects. (Preservation/Conservation Organization, Saint Louis, MO - #113.2.10310.809)

183. Public Concern: The Mark Twain National Forest should address the lack of accurate, historical records on the conditions of the ecosystem prior to European settlement.

The Forest Service needs to recognize and address the lack of accurate, historical records on details of what existed (and how it existed, as in the arguments surrounding the issue of indigenous fire prescription) in the ecosystem prior to European settlement. Reliance on sketchy and inadequate historical records to justify significant management activities in the name of restoration is of great concern. (Preservation/Conservation Organization, Wood River, IL - #147.47.60300.420)

Climate

184. Public Concern: The Mark Twain National Forest should analyze the effects of forest management on climate.

I ask that you include a thorough analysis of the effects of forest management on local, regional and global climate. (Individual, Pine Bush, NY - #3.1.40400.002)

It is my belief that scientists cited herein have raised credible and substantial questions of material interest to the human environment, including some important implications for public health, public safety, and fundamental economic behavior in affected regions. The basic lesson here is plain: Actions affecting vegetation/forest cover on the land surface can have simultaneous hydrologic and climatic impact far beyond the actual site where that cover is modified. This is no small matter for the Forest Service or other federal agencies. See for example, *Public Service Co. of N.H. v. NRC* 582 F.2d 77 (1st Circuit Court) 439 U.S. 1046 (1978) in which the court found that NEPA requires federal agencies to “use all practicable means” to avoid environmental “degradation” and to consider the environmental impact of their actions “to the fullest extent possible.” More recently, in *Baltimore Gas and Elec. Co v. NRDS*, 462 U.S. 87 (1983), the court found that NEPA “places upon the agency the obligation to consider every significant aspect” of environmental impact and that NEPA aims to make sure agencies would take a “hard look” at environmental consequences of any action.

Drought can have significant economic as well as ecological impact, and is a classic instance in which economic and ecological interests merge full force. Given the Forest Service’s capacity to either trigger drought via its alterations and modifications of vegetative cover, and/or its capacity to exacerbate drought triggered by whatever other process, the two cases cited above seem applicable in the present instance. (Individual, Pine Bush, NY - #3.7.40400.300)

Air

185. Public Concern: The Mark Twain National Forest should analyze the effects of forest management on air.

AIR MASSES

Forests propel significant amounts of water to the atmosphere, where moving air masses carry it to downwind sites.

Pielou, for example, says “Vegetation pumps an enormous amount of water from the soil into the air; few people realize how much, because the whole process is invisible. For example, a single hectare of Douglas-fir forest spews out about 50 tons of water vapor in the course of a sunny, summer day, or about 235 bathtubs full.” This pumping process has been known since the term “transpiration” entered the vocabulary of botany, and is significant to all forest- and climate-related decision-making today.

It is also axiomatic that moving air then transports this water to downwind destinations, and that this process has inescapable and profound implications for land management agencies. The implications arise because agencies including the Forest Service can exert considerable influence on climate and climate change by their any actions that alter the flow of water across lands and skies as water falls and rises along a trajectory toward progressively more inland areas.; e.g., Hornberger et al say “Evapotranspiration represents a dominant outflow of water from most catchments and accounts for approximately two-thirds of precipitation over most continental land masses.”

The impact of this fundamental process can extend for significant distances. For example, Penman (1970) observed that, once forests pump water to the moving air masses above them, that air may carry the water to nearby sites or sites located “thousands of miles away.” Widely televised weather reports sometimes show satellite imagery tracking weather systems all the way from the Pacific over the Rockies and Plains to the Great Lakes and even to Atlantic regions including the recently drought-stricken Appalachians. (Preservation/Conservation Organization, Wood River, IL - #147.65-66.40400.809)

CARBON HOLDING CAPACITY

The issue of carbon holding capacity needs to be addressed. An older forest holds more carbon than a young forest. [Footnote 10: Mark E., William K. Ferrell, Jerry F. Franklin, “Effects on Carbon Storage of Conversion of Old-Growth Forests to Young Forests.” *Science*, Vol. 247, 9 February 1990, pp. 699-70.] The issue of the impact of increased nitrates needs to be addressed. As forests are forced to absorb ever higher levels of nitrates from the atmosphere, their systems become saturated. When forest disturbances occur (fires, logging, etc.) these nitrate levels are released into streams and into the air as gaseous nitrates. High levels of nitrates in the soil can lead to cation loss, acidification, with obvious long-term forest health implications. (Preservation/Conservation Organization, Wood River, IL - #147.95.40400.602)

Water

Water Resources General

186. Public Concern: The Mark Twain National Forest should include water resources as a revision topic in the forest plan revision.

Even though the Forest Service document, Assessment of the need for change for the Mark Twain National Forest Land and Resource Management Plan and Notice of Intent to revise the Forest Plan . . . states that recent amendments to goals and management direction is adequate to protect and restore high quality waters and aquatic ecosystems, they do not. The amended goals and management directions are not adequate to protect or restore water quality, as evidenced by the continued degradation of water resources in Ozark streams administered by the MTNF. These waters are the most precious natural

resource of the bioregion, and one of the most valuable public resources. (Individual, Alton, MO - #108.13.43000.003)

We support the selection of “Riparian Areas and Water Quality” as a major revision topic. In many cases the riparian area along a stream should be defined as “the entire floodplain.” It is particularly important to rigidly protect the high water quality in Karst areas. (Preservation/Conservation Organization, Columbia, MO - #112.2.43000.003)

We agree that this is a critical part of the forest plan, especially considering that the Forest Service’s original mission was watershed protection. Fake claims, such as that logging doesn’t affect water quality, need to be honestly reevaluated. Mitigation measures need to be supported by credible evidence. Also, it is noteworthy that the agency admits that it needs to define some of these terms in the forest plan, so therefore, that leads credence to the argument that other vague phrases and terms in this NOI need to be defined through the plan process and not predefined through some internal agency process. (Preservation/Conservation Organization, Brookport, IL - #142.8.43000.101)

Adequacy of Analysis

187. Public Concern: The Mark Twain National Forest should analyze the effects of forest management on water.

CUMULATIVE EFFECTS

The issue of all cumulative threats to water quality, including logging, illegal dumping, oil and gas leasing, wildlife openings upstream of the project area must be addressed. The analysis needs to identify all these threats. The analysis needs to identify and protect all riparian areas, wetlands, and floodplains. (Preservation/Conservation Organization, Wood River, IL - #147.97.43200.002)

NON-POINT SOURCE POLLUTION

The analysis needs to identify all site-specific “Best Management Practices” for controlling non-point source pollution. The analysis needs to identify and consider any water quality monitoring done to demonstrate the adequacy of the Best Management Practices. (Preservation/Conservation Organization, Wood River, IL - #147.97.43200.002)

WATER MIGRATION

Water’s migration across the surface of land is so important to climate and change that it requires some emphasis; e.g., Wood et al (1992) report that “The redistribution of solar energy over the globe is central to studies of climate and climate change. Water plays a fundamental role in this redistribution through the energy associated with evapotranspiration, the transport of atmospheric water vapor, and precipitation.

A fundamental point is that, rather than merely passive recipients of precipitation, forests play an active role by returning it to the atmosphere for subsequent redistribution to downwind locations. Therefore, we can alter climate by what we do on the land surface as much or more than we alter the climate via greenhouse gases we put into the air. (Individual, Pine Bush, NY - #3.5.40400.403)

LAND-SURFACE HYDROLOGY

Wood et al reports that “the importance of the land-surface hydrology to climate has emerged as an important research area since the 1960s” and that “During the past 20 years, a steady progression of research has shown the importance of land hydrology on Earth’s climate.” Importantly for the Forest Service and all locations downwind of public lands administered by the Forest Service, Wood and colleagues then go on to note that one computer model of climate change circa 1992 is “widely” recognized” for its major deficiencies including that it “does not explicitly consider vegetation” in its projections of future climate. Perhaps more than any other federal agency of the United States, the Forest service must not make the error of this same omission. (Individual, Pine Bush, NY - #3.6.40400.403)

HYDROCLIMATOLOGY

What is the role of the Mark Twain National Forest on hydroclimatological forces in the midwest?...What is the role of the Mark Twain in providing moisture to farms and communities downwind? (Preservation/Conservation Organization, Wood River, IL - #147.64.40400.001)

Many Americans think of climate change solely in terms of warming as a result of greenhouse gasses including carbon dioxide. Within the relevant sciences, this change is sometimes referred to as “greenhouse-forcing” of the climate. First identified as a possible threat to the human environment in the 1930s, greenhouse forcing has been a subject of a solidifying consensus that it is shaping up as the threat to the human environment. Because forests are part of the planet’s carbon cycle, many have taken interest in forest management as a problem or opportunity within a context of greenhouse-forcing. The Forest Service is well aware that forests may be significantly affected by greenhouse-forcing (e.g., Iverson et al 1999) Any action by the Forest Service may affect the carbon cycle.

But a parallel, simultaneous and therefore cumulative form of climate change arises from actions that the human population takes on the surface of the land, including actions that alter the circulation/redistribution of water and, thereby, the climate. The scientific specialty most closely identified with study of this process is generally known within the sciences as “hydroclimatology,” and the general impact of land use on climate is known as “land-use forcing.” Forests are part of the hydrologic cycle, and there is evidence that land-use forcing was an equal or greater influence on the human environment than greenhouse-forcing is. Any action by the Forest Service may force change in the hydrologic cycle and thereby the climate, in cumulative impact with greenhouse-forcing. (Individual, Pine Bush, NY - #3.2.40400.500)

188. Public Concern: The Mark Twain National Forest should analyze the effects of adjacent land practices on water quality in the forest.

Not only has the Forest Service failed to adequately assess and address the cumulative impacts to water quality (both surface and subsurface of its own practices, but it has not seriously considered impacts from the current land use practices in the surrounding region. Conversion of private forested land to pasture land is increasing at an alarming rate. Increased cutting of trees on surrounding non-public lands to feed chip mills is of great concern. Existing burden of chemical and nutrient additions to the springs and streams of MTNF lands is already a threat to water quality. All of these impacts must be factored into any management alternative developed by the agency, and should strongly influence policy and practices implemented for the future forests. (Preservation/Conservation Organization, Saint Louis, MO - #87.14.43100.501)

(RT 5) Water Quality and Riparian Areas

189. Public Concern: The Mark Twain National Forest should manage the forest with water quality in mind.

We strongly support the proposed changes for item 5, Riparian Areas and Water Quality. Riparian areas are certainly an important part of forest management, and greater protection for riparian areas and their associated surface waters should result from more clearly defined and quantifiable identification and delineation criteria. Restoring and maintaining the integrity of riparian zones is important for protecting water quality. Where the best opportunities exist, the EIS should also examine surface watershed activities and their synchrony with the native ecosystems and processes. (Missouri Department of Natural Resources, Jefferson City, MO - #151.12.43000.003)

The Forest Service document, Assessment of the Need for Change for the Mark Twain National Forest Land and Resource Management Plan and Notice of Intent to Revise the Forest Plan [4/8/2002], states that recent amendments to goals and management direction is adequate to protect and restore high quality waters and aquatic ecosystems. Therefore it is proposed that no additional changes be made, at this time.

As evidenced by the continued degradation of water resources in Ozark streams administered by the Forest Service, clearly the amended goals and management directions are not adequate—neither to protect, nor to restore—water quality nor the health of aquatic ecosystems. The agency is empowered to guide and direct activities in order to maintain and to improve water quality of both surface and subsurface water resources. The agency has a responsibility and duty to manage the public forest lands it administers with the guiding principle that these waters are the most precious natural resource of the bioregion, and the most valuable of public resources. Past and proposed management practices do not reflect an understanding, on the part of the agency, of this principle of “the commons”. Proposed goals for the Forest Plan do not insure that forests and streams are managed for the greatest public good.

Past and current practices have changed the quality, quantity and patterns of flow in our sensitive Ozark streams, including outstanding rivers and streams already designated as federally protected, and mandated for “no degradation”. The practice of cutting timber and the building of road networks have the documented result of stream damages from sedimentation and aggradation. Reduction of forest cover from timbering and road building operations damage and destroy root systems, resulting in uncontrolled run-off during storm events, creating: severe erosion; reducing water clarity; damaging and destroying habitat for sensitive live species; and decreasing seasonal flow conditions. Herbicides used in forested areas add to the toxic burden of the watershed resulting in unacceptable risks to water quality. Grazing of livestock in riparian areas continues, including within the easement of the Eleven Point National Scenic River (cattle are a frequent sight in the river itself as well as on the already severely eroded banks). This practice has the consequences of erosion paired with unacceptable nutrient burden—further degrading the quality of the water resource and fouling the recreational appeal of the river. (Preservation/Conservation Organization, Wood River, IL - #147.31-32.43200.003)

It seems to me that the number one priority we should have in regard to this national forest is to minimize degradation of the forest environment as much as possible. One especially important aspect of this degradation is damage to streams and loss of water quality. (Individual, Saint Louis, MO - #109.1.43000.400)

I believe that it is important to protect the Mark Twain National Forest very aggressively. The following suggestion helps to ensure such protection. Thus I urge you to adopt these as part of the plan that is now under review.

The protection of water quality and riparian corridors should be guiding principle for revision of the Forest Plan. Aggressively protect the quality and integrity of both surface and subsurface water resources. (Individual, Saint Louis, MO - #56.4.43000.402)

TO COMPLY WITH LEGAL RULINGS

The courts have specifically ruled that an agency must stop, look, listen and give a hard look when water issues are involved (e.g., West Branch Valley Flood Protection Ass’n v. Stone 820 F. Supp. D.D.C. 1993). In fact, fluctuations of water levels affecting recreational and/or commercial activities or aquatic life has been ruled a “major federal action” (NRDC v. Hodel). (Individual, Pine Bush, NY - #3.8.43000.300)

BY CONSIDERING THE ENTIRE DRAINAGE AREA

Management plans should reflect watershed values and take into consideration land use practices within the entire drainage area (not just MTNF lands). (Individual, Doniphan, MO - #103.18.43000.402)

To protect and restore water resources, and to manage the public lands for the greatest good of the public, the Forest...management plans should reflect watershed values. (Preservation/Conservation Organization, Wood River, IL - #147.38.43000.402)

190. Public Concern: The Mark Twain National Forest should protect water quality in the forest by restricting certain activities.

The practice of cutting timber and building of road networks have the documented result of stream damage from sedimentation and degradation. Reduction of forest cover from timbering and road

building operations damages and destroys root systems, resulting in uncontrolled run-off during storm events, creating severe erosion, reducing water clarity, damaging and destroying habitat for sensitive species, and decreasing seasonal flow condition. Herbicides used in forested areas add to the toxic burden of the watershed resulting in unacceptable risks to water quality. I.e. There must be NO timber cutting, No road building, and No spraying or using herbicides and no grazing of livestock in riparian areas of the Mark Twain National Forest.

To protect and restore water resources and to manage the public lands for the greatest good of the public, the LRMP should identify the following objectives: 1. Maintain fully forested conditions within its boundaries. 2. Stop building roads. 3. Not allow any mining activities. 4. Discontinue herbicide use. 5. Reflect watershed values, and keep our rivers and streams clean, clear, and pristine. (Individual, Alton, MO - #108.14.43000.001)

Water quality is a major concern for the state of Missouri. The state has recognized that many of our streams are impaired. Even our reference streams are of lower quality than expected. Recreation and clean drinking water are at stake. The MTNF plan should result in forests, savannas and streamsides that provide good watershed protection. As stated earlier, mining endangers water quality. Other potential sources of water quality loss include, herbicide use, logging, road building and grazing (especially in riparian areas). While individual instances of some of these activities may seem to have minimal impact, cumulative impacts can be significant. The forest plan should provide for greater monitoring of water quality and limitations on any activity impairing water quality. (Preservation/Conservation Organization, Columbia, MO - #77.10.43200.403)

The practices of logging and the building of road networks have the documented result of stream damages from sedimentation and aggradation. Reduction of forest cover from timbering and road building operations damage and destroy root systems, resulting in uncontrolled run-off during storm events, creating sever erosion; reducing water clarity; damaging and destroying habitat for sensitive species; and decreasing seasonal flow conditions. (Individual, Doniphan, MO - #103.7.43000.402)

191. Public Concern: The Mark Twain National Forest should focus on sustainable forest management key 13, protection of water quality and prevention of soil erosion.

DUE TO EFFECTS OF MINING, TIMBER HARVEST, OFF-ROAD VEHICLES, HORSES, ETC.

Focus on sustainable Forest Management. Key 13, protection of water quality and prevention of soil erosion from impacts of mining, logging, off-road vehicles, horses, etc. (Preservation/Conservation Organization, Columbia, MO - #6.1.60200.001)

192. Public Concern: The Mark Twain National Forest should protect riparian areas and water quality.

Other land and resource management matters that may have particular consequences for state parks and other nearby landholdings include protection of riparian areas and water quality. (Placed-Based Group, Columbia, MO - #94.2.50340.001)

193. Public Concern: The Mark Twain National Forest should revise the riparian guidelines.

FOR FUTURE GENERATIONS

We challenge the planning team to spearhead a planning effort that will do as was originally envisioned by the citizens of our history who make it possible for the public to preserve these unique forested watersheds and protect them for the benefit of future generations. (Individual, Doniphan, MO - #103.5.43000.754)

TO ALLOW FLEXIBLE SITE-SPECIFIC MANAGEMENT

There is a substantial need to revise the riparian guidelines. The current guidelines are too inflexible. Revised guidelines must have the ability to be modified to unique ground situations. Blanket setbacks and protections for second and third order streams should be based upon the need to protect site-specific areas. There is a strong need to develop guidelines that allow this flexibility. (Individual, Salem, MO - #153.3.43400.002)

Watershed approach to resources should not be used as it tends to be too general and overlooks sight specific issues. (Individual, Metropolis, IL - #136.3.43000.402)

TO PROTECT SURFACE AND SUBSURFACE WATERS

Management emphasis should be to protect surface and subsurface water resources and to improve watershed quality in the regions containing Forest lands. (Individual, Jefferson City, MO - #110.11.43000.402)

TO PROTECT KARST LANDS

The flow of waters between the surface and subsurface of the karst lands are the same waters—intermingled. An impact to “the surface” is an impact to the “subsurface.” Management goals and objectives should consider these waters to be intermingled and protect the integrity of valuable water resources. (Preservation/Conservation Organization, Saint Louis, MO - #87.21.43210.402)

We agree with the intent to address karst terrain and features more fully. Most of the streams in some of the Forest management areas are losing streams. We suggest those highly karstic management areas of the forest have prescriptions at the landscape level to better protect spring and well aquifers. (National Park Service, Omaha, NE - #150.7.43210.402)

Fisheries and Wildlife

Fisheries and Wildlife General

194. Public Concern: The Mark Twain National Forest should include fish and aquatic resources in the forest plan revision.

How are you going to deal with any new information about fish and aquatic resources that may come forth either internally or from the public? How can you leave such a huge portion of the plan out? This seems to us to be a predecision without public involvement. (Preservation/Conservation Organization, Brookport, IL - #142.13.44000.003)

195. Public Concern: The Mark Twain National Forest should consider the Songbird Species of High Management in the forest plan revision.

The Ruffed Grouse Society also recommends that the Forest ensure that the Songbird Species of High Management, identified by the US Fish and Wildlife Service’s Partners in Flight Program, be incorporated into any management planning decisions. This would include consideration of this list of species in potential changes to the R9 Regional Forest’s Sensitive Species List and more importantly to include management strategies in this revision process that address the needs of these species on the Forest. It is essential that the long-term viability of these species be considered during this revision process. (Preservation/Conservation Organization, Laona, WI - #130.6.44300.411)

196. Public Concern: The Mark Twain National Forest should respect the intrinsic value of sentient beings in the forest.

Respect the intrinsic value of all sentient beings contained in the MTNF. (Individual, No Address - #148.10.75200.756)

Adequacy of Analysis

197. Public Concern: The Mark Twain National Forest should provide all of its species monitoring data for the last twenty years.

This Forest Plan revision will affect the way the Mark Twain National Forest will be managed for the next 10 to 20 years. With this in mind the Forest service should provide the public with all of Mark Twain's species monitoring data from the last 20 years. Any analysis should reflect whether past management land practices are either beneficial or detrimental in the recovery of known sites that may contain federally listed or candidate species. The Forest Service must play an active role in ensuring species recovery and not insist on activities that will disrupt recovery efforts. The Forest Service should base decisions on whether the area of a proposed project contains listed or candidate species or could potentially be desirable habitat for the recovery of federally listed or candidate species. The Forest service should work closely with the U.S. Fish and wildlife Service, state agencies and concerned citizens to ensure that conservation efforts are benefiting federally listed and candidate species and to enhance a level of trust between parties. (Individual, Alton, MO - #108.26.44200.002)

With this in mind the Forest Service should provide the public with all of Mark Twain's species monitoring data from the last 20 years. Any analysis should reflect whether past management land practices are either being beneficial or detrimental in the recovery of known federally listed and candidate species. All land disturbance activities should be eliminated or significantly reduced around known sites that may contain federally listed or candidate species. The Forest Service must play an active role in ensuring species recovery and not insist on activities that will disrupt recovery efforts. The Forest Service is legally responsible for protecting, restoring, and recovering federally listed and candidate species within the borders of the Mark Twain National Forest. Endangered species protection and recovery must be a primary goal not only in revising the Forest Plan but also when doing analysis at the project level. (Individual, Boonville, MO - #98.36.44200.101)

198. Public Concern: The Mark Twain National Forest should analyze and disclose baseline and population trend site-specific species data.

The Forest Service needs to obtain baseline data for all MIS species, forest interior birds, and reptiles and amphibians~ This needs to be done with field surveys. See *Sierra Club v. Glickman*, 974 F.Supp. 905 (E.D.Tex. 1997). Survey methodologies must be disclosed. An adequate monitoring plan also needs to be in place. The Forest Service needs to conduct plant and animal surveys in all seasons.

The analysis needs to disclose all the site-specific data that is being used. For all the data, the analysis should reveal when it was gathered, who gathered it (including their qualifications) and the methodologies used. We have been on many Forest Service tours of proposed timber sales when the Forest Service could not find the site. Thus, we are concerned that the people who gathered the data for the project area may have been in the wrong place and not known it. The analysis needs to disclose the technology used to determine the location when the site-specific data was gathered and provide proof that the data is for the correct area.

The population trends of threatened, endangered, sensitive species, and MIS needs to be disclosed for the Ranger District, Forest and Region. The trend of threats to these species in each Ranger District, Forest and Region needs to be disclosed. (Preservation/Conservation Organization, Wood River, IL - #147.94.44310.002)

The analysis needs to address the status of native fisheries and mussels, and stream habitat quality compared with historic conditions in the project area, Forest and region-wide. The analysis needs to disclose the population trends of exotic or introduced species relative to native fisheries and mussels in the project area. The impacts the project will have on these populations needs to be addressed. (Preservation/Conservation Organization, Wood River, IL - #147.102.44100.002)

199. Public Concern: The Mark Twain National Forest should analyze the factors that would impede the movement and dispersal of closed canopy forest wildlife species between stands and larger regions.

The analysis needs to consider the degree to which the alternatives would impede the movement and dispersal of closed-canopy forest wildlife species between stands and larger regions. The analysis should present and quantify the degree of fragmentation within the project area that has already taken place and those that will occur as a result of the various alternatives. . . . Analysis needs to be conducted and presented to show the range of potential impacts for the following variables:

Total amount and distribution of late-successional and mature forest habitat.

Total amount and distribution of important wildlife habitats now uncommon due to past human activity (e.g., riparian forests, native grasslands, etc.).

Total amount and percentage of forest habitat compromised by edge effects.

Size distribution of habitat patches by seral stage and forest type.

Degree of connectivity between both individual forest stands and larger habitat blocks.

Degree of structural contrast between habitat patches.

Population viability analysis for species or feeding guilds most prone to fragmentation effects (e.g., area sensitive mammals, forest-dwelling songbirds). (Preservation/Conservation Organization, Wood River, IL - #147.81.60200.002)

200. Public Concern: The Mark Twain National Forest should include the science-based Important Bird Areas in its management considerations.

We urge that the best biological diversity and ecological data available be used to drive management decisions. We encourage the MTNF to incorporate the science based Important Bird Areas derived by Audubon and its partners into its management considerations. (Preservation/Conservation Organization, Columbia, MO - #112.5.44100.410)

Threatened, Endangered, and Sensitive Species

201. Public Concern: The Mark Twain National Forest should review the Endangered Species Act on a regular basis.

The use of the endangered species act should be limited to review on a regular basis not a general overview once every plan revision. (Individual, Metropolis, IL - #136.6.30350.100)

202. Public Concern: The Mark Twain National Forest should address threatened and endangered species in the forest plan revision.

The Indiana Bat and Hines Dragonfly as well as other endangered species are being ignored, misrepresented and marginalized by the MTNF's position that "they're all doing just fine and we don't need to even bother discussing them." (Individual, Viburnum, MO - #126.4.44200.003)

The issue of how best to protect endangered species must also remain open for discussion. The amendment ignored other species which are rapidly declining in population and not sufficiently protected, including the eastern and Ozark Hellbender and numerous endangered plant species.

The protection of T and E species should not be left out of the current revision process. (Individual, No Address - #148.2.44200.003)

The revised plan should include specific measures related to the protection, recovery and monitoring of all threatened, endangered and sensitive species. It is not sufficient to rely on the plan as a whole. TES species protection should be a major part of the plan. The revised plan should look forward beyond 15 years in planning of wildlife. Thus is should plan for the recovery of native species that may be not even

currently found on the Mark Twain. The plan should revise some management indicator species to include aquatic species that are highly sensitive to water quality, including amphibians. Species that are dependent on interior forest and unbroken habitat should also be MIS. Given the projected population growth in Missouri, during the next 15 years expected life of the forest plan it will become increasingly important that the MTNF provide the large unbroken habitat needs that most private lands will lack. (Preservation/Conservation Organization, Columbia, MO - #77.9.44200.101)

The Forest Service should make the protection and recovery of federally listed and candidate species its number one priority. In the past 15 years, the Forest Service's compliance with the ESA and other laws has been token at best. Without citizen enforcement and litigation, the Forest Service would still be "fast tracking" projects, to the detriment of listed species and other valuable natural resources. The Forest Service may have a mandate to cut timber, but they do not have a mandate to ignore environmental laws despite what the industrial extractors and their political allies in Washington may think and espouse. (Individual, Boonville, MO - #98.1.44200.101)

For the protection of threatened and endangered species the existing plan contains mere objectives and little direction for the protection of biological diversity. Subsequent amendments only protected three species and lacked provisions for other endangered species or non-listed species with rapidly declining populations. (Preservation/Conservation Organization, Saint Louis, MO - #87.5.44200.413)

TO COMPLY WITH THE ENDANGERED SPECIES ACT

The Endangered Species Act mandates the use of best-known science in management decisions and to err on the side of species conservation when reaching those decisions. Decisions should also include consideration of the cumulative effects of proposed management when added to the present and past condition of lands. The Forest Service, in consultation with the Fish and Wildlife Service, should base decisions on whether the area of a proposed project contains listed or candidate species or designated critical habitat for the recovery of federally listed or candidate species. The Forest Service must work closely with the U.S. Fish and Wildlife Service, state agencies, and concerned citizens to ensure that conservation efforts are benefiting federally listed and candidate species and to enhance a level of trust between all parties. Forest Service biologists should obtain accurate species counts through "on the ground" surveys, using recognized best scientific practices. Biologists should also identify, catalog, and monitor all possible suitable habitat. Endangered species must be of primary consideration in all activities on the National Forest. (Individual, Boonville, MO - #98.37.44200.809)

TO REFLECT RECENT DATA

In response to upgraded scientific data, protection of endangered species and habitat should be addressed beyond the few species already covered by the plan. (Individual, Saint Louis, MO - #5.3.44200.410)

In the last twenty years, much new data has been gathered about endangered species and species of special management concern and many new species have been added to those lists because of population declines. Indeed, the U.S. Fish and Wildlife Service's Breeding Bird Survey was just getting underway when the most recent Forest Plan was adopted in the 1980s. The Forest Service should work with the most up-to-date information available when setting future forest management policies. (Preservation/Conservation Organization, Saint Louis, MO - #1.2.44200.809)

BECAUSE THE RECENT AMENDMENTS ARE INADEQUATE

The Forest Service's proposal to ignore mineral exploration and the protection of threatened and endangered species during the revision process of the Mark Twain National Forest plan is unacceptable. The 2000-2001 amendments to the plan concerned only three species; the Indiana bat, gray bat, and bald eagle. The amendment ignored other species which are rapidly declining in population and are not sufficiently protected, including the eastern and Ozark hellbender and numerous endangered plant species. (Individual, Salt Lake City, UT - #27.2.44200.003)

The issue of how best to protect endangered species must also remain open for discussion. The 2000-2001 amendments to the plan concerned only three species: the Indiana bat, gray bat, and bald eagle. The amendment ignored other species which are rapidly declining in population and are not sufficiently protected, including the eastern and Ozark hellbender and numerous endangered plant species. Even though the Notice of Intent maintains that the current plan “provided objectives contributing to the viability of species,” the plan contains little direction for the protection of biological diversity. The protection of threatened and endangered species, and biological diversity generally, should not be left out of the current revision process. (Individual, Boulder, CO - #31.4.44200.003)

203. Public Concern: The Mark Twain National Forest should not address threatened and endangered species in the forest plan revision.

BECAUSE THE RECENT AMENDMENTS ARE ADEQUATE

NMA (National Mining Association) supports the determination that additional evaluation of management of threatened and endangered species is unnecessary. The recent amendment of the Mark Twain Forest Plan for threatened and endangered species made several significant changes to the way that the Forest Service would manage the Mark Twain Forest for those species identified in consultation with the US Fish and Wildlife Service. This amendment adequately covers the present need and any unforeseen need can be addressed with future amendments. (Mining Industry, Washington, DC - #61.5.44200.003)

The recent amendment of the Forest Plan for threatened and endangered species made several significant changes to the way that the Forest Service would manage for those species identified in consultation with the US Fish and Wildlife Service. This amendment adequately covers the present need and any unforeseen need can be addressed with future amendments. (Individual, Viburnum, MO - #62.7.44200.003)

The Forest Plans recent amendment for T and E species complies with the US Fish and Wildlife’s requirements and provides more than adequate protection. (Individual, Viburnum, MO - #128.3.44200.003)

The determination by the USFS that additional evaluation of management of threatened and endangered species is unnecessary is the correct action. The recent amendment of the Mark Twain Forest Plan for threatened and endangered species made several significant changes to the way that the Forest Service would manage the Mark Twain Forest for those species identified in consultation with the US Fish and Wildlife Service. This amendment adequately covers the present need. (Individual, Salem, MO - #153.4.44200.003)

204. Public Concern: The Mark Twain National Forest should protect threatened, endangered, and sensitive species.

We need particularly to protect habitats where threatened and endangered species can be found. (Individual, Saint Louis, MO - #49.4.44200.411)

Protection and restoration of habitat for native forest species. Greater protection for threatened and endangered species. (Individual, O Fallon, MO - #91.9.44000.411)

I would ask that your plan consider the following for incorporation in the plan.

Greater protection for threatened or endangered species, which necessarily includes better habitat protection for native forest species. (Individual, Saint Louis, MO - #44.1.44200.003)

The protection of threatened and endangered species, and biological diversity generally, should not be left out of the current revision process. (Individual, Salt Lake City, UT - #27.3.44200.003)

Revisions to the LRMP should adopt a pro-active philosophy especially with regard to endangered and sensitive species. Rather than focusing on doing the minimum to avoid violating the Endangered Species Act, The PLAN should provide staff guidance on ways to actively enhance the habitat and species richness of the MTNF wherever resources permit. For example the forest provides sanctuary/habitat for various State listed species. (see Missouri Species of Conservation Concern Checklist - 2001). Land managers should be cognizant where species with a state rank of S-1, S-2, and S-3 may be located so that management actions will not inadvertently cause harm or perhaps even extirpation of a species from the state. (Individual, Saint Louis, MO - #124.11.44200.101)

THROUGH THOROUGH ANALYSIS

For all state and Federal threatened and endangered (including candidate species), sensitive species, species of concern, and rare species the analysis needs to: 1) Describe the desired future condition (habitat quality, quantity, and configuration needed to support the desired population levels), 2) Disclose any known or suspected limiting factors, 3) Define suitable habitat and the status of the habitat in the project area for the species, and 4) List management recommendations which would remove or mitigate any adverse effects. (Preservation/Conservation Organization, Wood River, IL - #147.231.40100.413)

WITH EMPHASIS ON SPECIES REQUIRING LARGE, INTACT TRACTS OF FOREST

The top priority for management should be protection for threatened, endangered, and sensitive species, and of native plant communities and wildlife habitat. An emphasis should be placed on species requiring large, intact tracts of forest. (Individual, Columbia, MO - #29.7.40000.420)

The top priority for managing the Mark Twain should be the protection of PETS species, as well as native plant communities and native wildlife habitat. Species who require large, unfragmented interior forest areas should give first priority. (Individual, Olympia, KY - #48.3.44200.420)

MOUNTAIN LIONS

The Forest Service must give full consideration to the habitat needs of the mountain lion. There have been an increasing number of verified sightings of this animal in Missouri in recent years and there now seems little doubt that a permanent population exists. Federal agencies such as the Forest Service should stop ignoring the fact that mountain lions exist in our state and, instead, start planning for their protection. The U.S. Fish and Wildlife Service has stated that the lion's "primary need is apparently for a large wilderness area with an adequate food supply." Each individual animal can occupy a home range of from five to twenty-five square miles or more in size, making large blocks of undisturbed habitat essential for the mountain lion's survival. The revised Forest Plan must account for these habitat needs. (Preservation/Conservation Organization, Saint Louis, MO - #87.31.44200.411)

REPTILES AND AMPHIBIANS

Reptile and amphibian populations have been dropping dramatically throughout the world. The effects to these species need to be evaluated. Baseline data needs to be gathered for the entire project area. A monitoring plan needs to be developed. Research indicates logging devastates salamander populations. (Preservation/Conservation Organization, Wood River, IL - #147.102.44100.002)

OZARK HELLBENDER

OZARK HELLBENDER (*Cryptobranchus alleganiensis bishopi*)

This illusive salamander lives in the clear spring-fed rivers and streams of the Black River and North Fork of the White River watersheds. Logging and mining have devastated their numbers. As in the situation with endangered mussels, the Forest Service must prohibit land disturbance activities in or near streams, creeks, or rivers that may contain the Ozark hellbender. (Preservation/Conservation Organization, Wood River, IL - #147.125.44300.411)

BATS

All bat species are critically important to the overall health of forested and riparian ecosystems by controlling populations of insects that threaten the health of native plants, particularly trees. Bats should also be considered to be a beneficial species to control the spread of the invasive gypsy moth and the native red oak borer since these species are both of the lepidoptera genus, which is also a favored food source of all three endangered bat species. The Forest Service must protect known bat populations, particularly known summer roosting areas and hibernacula. Known hibernating caves should be gated and monitored for malicious activities in or near the caves. Bats are sensitive to drastic changes to their habitat (such as changes in temperature and humidity in caves or loss of summer forested roosting habitat). Eliminating alteration of critical habitat is essential if populations of these endangered bat species are to recover. (Individual, Boonville, MO - #98.39.44000.411)

EAGLES

When Congress adopted the bald eagle as the national symbol in 1782, the great raptor numbered an estimated 25,000 to 75,000 birds in what would become the lower 48 states. Native only to North America, the species originally ranged from the northern reaches of Alaska and Canada south to northern Mexico. Currently nesting eagles are rare in Missouri but there is a wintering population of 800-1200 eagles throughout Missouri including the Mark Twain national Forest. Eagles need old trees adjacent to clear running rivers with abundant fish populations in order to nest. This habitat is available throughout the mark Twain National Forest. Improving stream water quality and protecting streamside habitat would not only improve living conditions for migrating eagles but may also convince some eagles to build nests in Missouri. (Individual, Boonville, MO - #98.41.44000.411)

BUTTERFLIES

We urge the Forest Service to consider impacts to butterfly species in the new Forest Plan. Many butterfly species are found in the Ozarks, including several uncommon and rare butterflies. Butterfly habitat requirements, and the potential impact on butterflies by proposed activities such as logging, lead mining, and ORV usage, should be considered along with other types of wildlife.

All butterflies need two types of plants; nectaring plants for butterflies (flight stage of life cycle) and food, or host, plants for caterpillars. Butterflies cannot survive unless both type of plants are available. Because a butterfly species often use just one or two host plants, the reduction or disappearance of a host plant can extirpate an entire species from an area where it should be found. Moreover, the disappearance of a butterfly species, or a drastic reduction in its range and/or population, can occur quickly. Butterflies are extremely sensitive to disturbance of their habitat. Many of the activities on the MTNF, such as logging, lead mining, and ORV usage, negatively impact butterflies.

Some of the uncommon and rare butterflies whose ranges include the MTNF are listed below. All references are to Butterflies through Binoculars: the East by Jeffrey Glassberg, President of NABA.

A. Ozark Woodland Swallowtail, *Papilio joanae*. Extremely rare. This species is found ONLY in the Ozarks and is restricted to cedar glades and woodland glades.

B. Swamp Metalmark, *Calephelis muticum*. Extirpated from most of its range, its remaining habitat lies almost exclusively in Missouri. It is found in "moist to wet areas with swamp thistle."

C. Appalachian Azure, *Celastrina neglectamajor*. Found in southern Missouri. Its caterpillar food plant is black cohosh.

D. Dusky Azure, *Celastrina nigra*. Found in eastern Missouri along "stream banks and ravines in rich woodlands."

E. Diana Fritillary, *Speyeria diana*. Found in extreme southern Missouri, if at all, an extension of the limited Arkansas population. This butterfly's range has greatly contracted. Uses "glades and other open areas within rich, moist mountain forests." "F. Golden-banded Skipper. *Autochton cellus*. Found in southern Missouri. "Always one of the rarest and most elusive butterflies in the East." Its habitat consists of wooded ravines with a stream or other water. (Preservation/Conservation Organization, Saint Louis, MO - #97.4-5.44000.003)

Wildlife Reintroductions

205. Public Concern: The Mark Twain National Forest should reintroduce the cougar to the Mark Twain National Forest.

TO CULL DEER HERDS

The state of Missouri has an overpopulation of white-tailed deer that makes animal-human conflict inevitable. Encounters and consequences of human-deer conflict include traffic accidents, destruction of agricultural crops, the spread of Lynne disease, and now the looming threat of Chronic Wasting Disease. Healthy deer populations would be restored if the presence of ambush predators, like the Eastern cougar (a federally listed species in Missouri) were around to cull deer herds. Cougars are apex predators and play an important role in helping to maintain a balanced, healthy ecosystem. (Individual, Boonville, MO - #98.38.44200.411)

206. Public Concern: The Mark Twain National Forest should collaborate with the Wild Canid Survival and Research Center regarding potential red wolf recovery in the forest.

The Wild Canid Survival and Research center is an internationally recognized wildlife organization, which rears endangered canids for federal release programs. Because the Mark Twain National Forest (MTNF) is listed by the federal recovery program as one of twenty-six potential secondary release areas for the red wolf (*Canis rufus gregoryi*), we would like to become involved in your upcoming Forest plan revision process. (Preservation/Conservation Organization, Eureka, MO - #42.1.13700.108)

(RT 2c) Wildlife Habitat Management Direction

207. Public Concern: The Mark Twain National Forest should protect and restore wildlife habitat.

Habitat management to preserve ecological balance and protect the integrity of existing ecological communities should be a priority. (Preservation/Conservation Organization, Saint Louis, MO - #102.2.44200.420)

Habitat management to preserve ecological balance and protect the integrity of existing ecological communities should be preserved.

Large intact tracts of forest should be preserved. Fragmentation of the forest canopy, even small openings should be a priority. (Individual, Alton, MO - #108.2.44300.411)

FOR NATIVE SPECIES

Please protect and restore habitat for our native species. (Individual, Kansas City, MO - #92.2.44300.411)

[There should be] protection and restoration of native forest species habitat. (Individual, Newburg, MO - #57.6.60300.411)

You should protect and restore habitat for native forest species. (Individual, Sullivan, MO - #101.9.60300.420)

Protection and restoration of the various ecosystems within the national forest, which will allow native species to thrive and will provide habitat for native wildlife. (Individual, Saint Louis, MO - #99.6.60300.420)

FOR SPECIES REQUIRING LARGE TRACTS OF CONTIGUOUS FOREST

Please manage the forest for wildlife habitat, especially for those beasts that require large tracts of contiguous forest. (Individual, No Address - #148.3.44300.411)

AGAINST NOISE

Noise is particularly damaging for wildlife because they live in such relatively quiet environments. As a result, increased hearing sensitivity is essential to avoid predators, pursue prey, for breeding, and to find young. (Preservation/Conservation Organization, Wood River, IL - #147.190.44300.757)

208. Public Concern: The Mark Twain National Forest should preserve bird habitat.

TO PROMOTE BIRD POPULATION GROWTH FOR INSECT CONTROL

Many forest interior species are insect eaters. If bird populations were to increase, as a result of forest management that preserves rather than destroys habitat, birds would help control insect populations and keep them in balance. Without a balance between birds and insects, insects can cause unnatural amounts of damage to the forest. If more birds were available to eat the insects, the Forest Service could rely less on human intervention models for controlling insects (pesticides, timber cutting) and allow the birds to do the job in an ecologically balanced manner. In addition, such an approach would reduce the expenditure of economic and staff resources. (Preservation/Conservation Organization, Saint Louis, MO - #102.13.60200.415)

TO ENHANCE RUFFED GROUSE POPULATIONS

The Ruffed Grouse Society recommends the inclusion in the Need for Change document of the opportunity to support viable populations of ruffed grouse to the Forest. The Mark Twain National Forest may provide one of the few opportunities in the state to manage for the habitat needs of this species. Populations of ruffed grouse appear to be viable in similar oak-hickory ecosystems in other parts of Missouri. The Ruffed Grouse Society would be pleased to work with the Forest staff in establishing realistic and ecologically sound population and habitat objectives for ruffed grouse. (Preservation/Conservation Organization, Laona, WI - #130.4.44300.411)

(RT 2d) Management Indicator Species

209. Public Concern: The Mark Twain National Forest should revise the management indicator species list as part of the forest plan revision.

The MIS (management indicator species) list in the first plan was grossly inadequate. The list in this plan needs to include bats, such as the Indiana bat, frogs, salamanders, snakes, and some birds that are in trouble due to habitat loss, such as the American redstart, wood thrush, downy woodpecker. (Preservation/Conservation Organization, Brookport, IL - #142.4.44310.002)

Please, do correctly revise and update the list of Management Indicator Species which you state will be done in the NFC. (Individual, Saint Louis, MO - #111.5.44310.400)

The NOI also stated that one objective of the new forest plan is a revised list of management indicator species (MIS). Species should be chosen based upon their ability to indicate the health of the forest ecosystem. For this reason, species requiring large, unbroken blocks of habitat, such as the mountain lion and forest interior bird species, should be included as indicator species. Such species are used as indicators in other regions and should be used on the Mark Twain as well. Species requiring old-growth hardwood forests, such as the cerulean warbler, should also be chosen in order to reflect the health of older tracts. The cerulean warbler is a good indicator of order to reflect the health of older tracts. The cerulean warbler is a good indicator of the effects of habitat fragmentation, especially from logging activity. They are easily monitored and its nesting habits are extremely area-sensitive. Other forest interior birds which are good indicator species of old-growth tracts include the scarlet tanager, Kentucky

warbler, and worm-eating warbler. They require large, contiguous tracts of land because forest fragmentation increases the birds' susceptibility to predation and parasitism. Recent studies have shown that in Maryland, the occurrence of scarlet tanagers increases with the size of the patch of forest and with the level of isolation. The pine warbler should also be added as an indicator since it is one of the few bird species requiring tracts of pine forest as opposed to hardwood. (Preservation/Conservation Organization, Saint Louis, MO - #87.32.44310.602)

We very much agree with the Forest Service recommendation that the list of management indicator species needs to be revised. In order to provide a better reference to impacts on ecosystem health and sustainability, this list needs to be more comprehensive towards a spectrum of conservative species that are linked to healthy native natural communities, rather than environmental generalists and game species. This should be evaluated in the EIS. (Missouri Department of Natural Resources, Jefferson City, MO - #151.8.44310.420)

TO INDICATE WATER QUALITY

The current list also lacks indicators for water quality. Species that should be considered for aquatic monitoring include the Topeka Shiner, blacknose shiner, the rainbow darter, and the hell bender. The Topeka Shiner is an endangered species that occurs in the MTNF; Fish and Wildlife Service has indicated that the Topeka shiner is considered a good indicator of the health of aquatic ecosystems. The blacknose shiner is another fish whose population is nationally declining. It requires clean, cool, well-oxygenated streams with abundant aquatic vegetation and is therefore a good indicator of sedimentation and temperature change. The rainbow darter also thrives only in clear, flowing water, and is used as an indicator in other areas. (Preservation/Conservation Organization, Saint Louis, MO - #87.33.44310.402)

TO INCLUDE EARLY SUCCESSIONAL SPECIES

Management indicator species for monitoring the outcomes of modified management regimes . . . should include strong representation of early successional species. The use of highly adaptive habitat generalist species would not be of value in this context. We would recommend that Bewick's wren, bobwhite quail, Bell's vireo, worm-eating warbler, and woodcock be considered as potential management indicator species in appropriate zones of the Forest. The quail and woodcock are especially good indicators of young forest and forest opening conditions, because they are relatively easy to census. (Preservation/Conservation Organization, Pratt, KS - #96.3.44310.602)

TO INCLUDE VARIOUS ENDANGERED SPECIES

I also believe there are some endangered species, such as the Yellow-Billed Cuckoo, the American Redstart Wood Thrush, Acadian Flycatcher, that should be on the MIS (management indicator species). List and plans for maintaining their viability should be included in the revised Mark Twain National Forest Plan. Endangered species protection and recovery must be a primary goal not only in revising the forest Plan, but also when doing analysis at the project level. (Individual, Alton, MO - #108.25.44310.411)

TO INCLUDE LARGE PREDATORS

The revised list of MIS should also include large predators, as they are at the top of the food chain. In addition to the mountain lion, the black bear is also an appropriate choice. Black bears, with a home range of up to 80 square miles, require land that is removed from human activity because their habits are easily disturbed by encroachment. Exposure to easily-obtained food from humans, such as trash, causes them to associate humans with an easy meal and often results in their destruction. Currently, Missouri has only been required to destroy one bear; by preserving large tracts of wilderness the state can hopefully avoid future conflicts. (Preservation/Conservation Organization, Saint Louis, MO - #87.36.44310.411)

The revised list of MIS should also include large predators, as they are at the top of the food chain. In addition to the mountain lion, the black bear is also an appropriate choice. Bears require land that is removed from human activity because their habits are easily disturbed by encroachment. Exposure to easily-obtained food from humans, such as trash, causes them to associate humans with an easy meal.

This results in the bears being labeled “nuisances” and ultimately destroyed, hence the saying “a fed bear is a dead bear.” Currently, Missouri has only been required to destroy one bear; by preserving large tracts of wilderness the state can ensure that the black bear will continue to exist in our state. Furthermore, black bears have a home range of up to 80 square miles. (Preservation/Conservation Organization, Wood River, IL - #147.60.44310.411)

TO INCLUDE THE INDIANA BAT

The Indiana bat could also serve as an indicator for caves. (Preservation/Conservation Organization, Saint Louis, MO - #87.35.44310.400)

The Indiana bat should be an MIS. (Preservation/Conservation Organization, Wood River, IL - #147.61.44310.400)

TO INCLUDE MUSSELS

Mussels are indicator species of stream health and water quality. All three of these species can be found on the Mark Twain National Forest. All land disturbance activities must be prohibited in close proximity of watersheds that support these mussels. During the past 30 years, numbers both of individual and species diversity of native mussels have declined throughout the United States and Canada. Freshwater mussels are imperiled disproportionately relative to terrestrial species. Scientific research indicates that 55% of freshwater mussel species are either imperiled or extinct as compared to 7% of bird and mammal species. This alarming decline is primarily the result of habitat destruction and destructive human activities. All land disturbance activities in or near streams, creeks, and rivers must be prohibited in order to improve water quality, mussel habitat, and mussels’ chances of survival. (Preservation/Conservation Organization, Wood River, IL - #147.123.44310.402)

TO INCLUDE AMPHIBIANS

Amphibians should also be added to the MIS list. They are regarded as good indicators because their permeable skins are sensitive to pollutants, they are habitat specialists with restricted distributions, and they are a vital component to ecosystems. The hell bender, Ozark or eastern, is an ideal indicator because it requires clean, fast streams and is particularly sensitive to agricultural runoff and acidic runoff from mining operations. Its population in the Ozarks is in jeopardy. Two other potential indicators are the cave salamander or grotto salamander since the current MIS list lacks an indicator for water and caves. The cave salamander is usually found in caves and the grotto salamander is found solely in wet caves and underground streams. (Preservation/Conservation Organization, Saint Louis, MO - #87.34.44310.412)

(RT 1) Vegetation and Botanical Resources

Vegetation and Botanical Resources General

210. Public Concern: The Mark Twain National Forest should maintain fully forested conditions within its boundaries.

To protect and restore water resources, and to manage the public lands for the greatest good of the public, the forest plan should maintain fully forested conditions within its boundaries; (Preservation/Conservation Organization, Wood River, IL - #147.34.60510.403)

211. Public Concern: The Mark Twain National Forest should aggressively promote early successional conditions.

TO PROMOTE POPULATION GROWTH IN EARLY SUCCESSIONAL BIRD SPECIES

The need to aggressively manage eastern forest ecosystems to provide a significant presence of early successional conditions is both well documented and evident. We support the maintenance of a shifting matrix of early, and late-successional habitat conditions; but the Mark Twain National Forest, like most

other forest lands, has progressed toward a dominance of mature and over-mature forest conditions. Issue A,1,(b) of the Assessment notes the marked increase in uneven-aged management on the Forest and a corresponding decline in even-aged management. This trend has ensured the decline in early successional conditions. This same trend is apparent throughout eastern forests and is reflected in the inordinate declines in early successional species. A 1996 report by Probst and Thompson documents that more than half of the 187 neo-tropical migrant birds that nest in this region rely on early successional habitats for some portion of their breeding cycle. This, combined with the diminished occurrence of young forest conditions, has contributed significantly to declines in half of the eastern United States early successional breeding bird populations. This compares to a decline of approximately 24 percent in mature forest breeding bird populations. (Preservation/Conservation Organization, Pratt, KS - #96.1.60220.411)

Important species rely on early successional conditions and large forest openings, including the ruffed grouse, American woodcock, and northern bobwhite quail. . . . Addressing needs for these species include focusing on early successional conditions and forest openings in and adjacent to wetland and riparian areas. Additionally, the forest offers a regionally important opportunity to establish a significant ruffed grouse population. (Preservation/Conservation Organization, Pratt, KS - #96.2.60300.420)

TO COMPLY WITH THE NATIONAL FOREST MANAGEMENT ACT'S REQUIREMENT TO MAINTAIN VIABLE POPULATIONS OF ALL NATIVE WILDLIFE

The Ruffed Grouse Society is encouraged by the Forest's demonstrated awareness that without management intervention and a change in plan direction, the oak-hickory, short-leaf pine and oak-pine forests will continue to decline resulting in a severe loss to ecological diversity in the area. We urge the Forest to proactively address the conservation of early-successional forest communities and constituent wildlife during the revision process. This will be essential if the Forest is to meet its obligation with the National Forest Management Act to maintain viable populations of all native wildlife. It is crucial that active management including forest disturbance be conducted to maintain this community and provide diverse forest ecosystems essential for all native wildlife species. (Preservation/Conservation Organization, Laona, WI - #130.1.60300.411)

212. Public Concern: The Mark Twain National Forest should evaluate old growth designations independently of potential timber stands.

All old growth opportunities should be evaluated independently of potential timber stands. Opportunities must be based on both landscape and structural characteristics. Any stand that meets either or both characteristics should be designated old growth. (Preservation/Conservation Organization, Wood River, IL - #147.232.40100.001)

213. Public Concern: The Mark Twain National Forest should give priority to riparian areas for inclusion in old growth designations.

Riparian areas deserve priority for inclusion in old growth designations for watershed protection and wildlife benefits. (Preservation/Conservation Organization, Wood River, IL - #147.232.40100.001)

214. Public Concern: The Mark Twain National Forest should address native plants in the forest plan revision.

The Plan should declare a Forest wide policy that native plant species will be prescribed for all landscape features related to architectural, recreational, transportation, engineering, and commercial projects and contracts wherever feasible. (Individual, Saint Louis, MO - #124.5.45000.101)

215. Public Concern: The Mark Twain National Forest should maintain natural forest types, and aggressively restore natural vegetation and native terrestrial communities on large regional scales.

We agree that the diversity of natural communities native to the Ozarks is not provided for by current management direction. Most Ozark forests are actually degraded, open woodlands that are heavily overstocked and have very sparse herbaceous communities compared to their native condition. Many timber practices are not designed to maintain or restore this, such as clear cutting and the preclusion of fire. Current standards have low percent herbaceous thresholds that promote tree harvest, but are far too low to reflect the native natural condition. We recommend that the revised forest plan fundamentally seek to maintain natural forest types, and aggressively restore natural vegetation and native terrestrial communities on large regional scales. The benefits of such a strategy to Missouri could be extraordinary. (Missouri Department of Natural Resources, Jefferson City, MO - #151.7.60300.400)

216. Public Concern: The Mark Twain National Forest should identify and protect all unique plant communities.

The analysis needs to identify and the Forest Service needs to protect all unique plant communities. Plant communities need to be identified based on the species present. Plant groups which need to be identified and protected include 1) all threatened and endangered species and all species under consideration for this status, 2) all state listed species, 3) and all sensitive species. (Preservation/Conservation Organization, Wood River, IL - #147.103.45100.406)

217. Public Concern: The Mark Twain National Forest should explain the basis for its decision to maintain oak-hickory, shortleaf pine, and oak-pine communities by silvicultural techniques.

What information is being used as the basis for the premade determination that you will maintain oak-hickory, shortleaf pine and oak-pine communities by silvicultural techniques? (Preservation/Conservation Organization, Brookport, IL - #142.2.55210.809)

218. Public Concern: The Mark Twain National Forest should continue restoration of the shortleaf pine forests of southern Missouri.

We have been watching with some interest the development of your management prescriptions and the work you have already conducted at your Pineknott Area. We applaud this restoration of the short-leaf pine forests of southern Missouri. You have some particularly good areas here with a well-developed short-leaf pine component. Considering your management intentions, it would seem to be the highest and best use for the area and we encourage you to continue your restoration efforts. (Timber or Wood Products Industry, Salem, MO - #129.4.60300.400)

219. Public Concern: The Mark Twain National Forest should continue to delineate the land-type associations and ecological land types on which pine planting is allowed.

The forest plan should continue to delineate the land-type associations (LTAs) and ecological land-types (ELTs) on which pine planting is allowed with pine restoration occurring on those lands indicated to be in pine prior to European settlement. (Preservation/Conservation Organization, Columbia, MO - #112.7.60000.001)

Exotic Species

220. Public Concern: The Mark Twain National Forest should address exotic species.

The Forest Service should take an aggressive stand on exotic species introduction and proliferation in the Mark Twain. Extensive monitoring should be routine, covering intact forests and other ecosystems as

well as and most importantly over logged areas, rights-of-way, and other manufactured openings in the forest. Exotic species are opportunistic and generally first appear in open areas. Monitoring should be carried out regularly in order to mitigate the spread of such species, which can become difficult, even impossible, if left alone for much time. Exotic species removal should be carried out manually wherever possible (utilizing a local workforce, thereby assisting surrounding communities). Herbicide use should be prohibited. (Individual, Boonville, MO - #98.7.45200.101)

Heritage Resources

221. Public Concern: The Mark Twain National Forest should protect heritage resources in the forest.

We support heritage resources. (Individual, Winona, MO - #93.3.75900.000)

INCLUDING THE GREER SPRING MILL

The Forest Service [acquired] Greer Spring and the Greer Spring Mill That acquisition and its transfer were a happy event for Missouri, filling in a key piece of the Eleven Point National Scenic River, protecting the last undeveloped large spring in Missouri, and expanding the ownership of the national Forest in this area.

We have watched and in a small way participated in your development of the short walking trail to the spring. We recognize this trail as one of the best short walking experiences in the state. Kudos to your staff.

Sadly the old mill on the property has not seen the same kind of care. We encourage you and your staff to incorporate into your planning the protection of the remaining structure. What is left should be shielded from the elements and secured in some fashion so that it not continue to deteriorate. . . . We ask that your planning and budgeting here include such an endeavor. (Timber or Wood Products Industry, Salem, MO - #129.5.75900.758)

Appendix A

Content Analysis Process

Public responses to the Mark Twain National Forest Plan Revision Notice of Intent are documented and analyzed using a process called content analysis. This is a systematic process of compiling and categorizing all public viewpoints and concerns submitted on a plan or project. Information from public meetings, letters, emails, faxes, and other sources are all included in this analysis.

In the content analysis process, each response is assigned a unique number. This number allows analysts to link specific comments to original responses. All respondents' names and addresses are entered into a project-specific database program, enabling creation of a complete list of all respondents.

Analysts read and code responses using the coding structure. Each comment is coded by subject and verified by a second analyst for accuracy and consistency. Then all coded comments are entered verbatim into a comment database. Database reports track all input and allow analysts to identify public concerns and to analyze the relationships among them. The final analysis document includes an executive summary, which discusses respondents' main areas of concern, and a formal list of public concern statements. Each public concern statement is accompanied by one or more sample excerpts from original responses.

This process and the resulting document do not replace responses in their original form. Rather, they provide a map to the responses and other input on file at the offices of the Content Analysis Team (CAT) in Salt Lake City, and the Mark Twain National Forest. Interested parties are encouraged to read public comment firsthand.

It is important to recognize that the consideration of public comment is not a vote-counting process in which the outcome is determined by the majority opinion. Relative depth of feeling and interest among the public can serve to provide a general context for decision-making. However, it is the appropriateness, specificity, and factual accuracy of comment content that serves to provide the basis for modifications to planning documents and decisions. Further, because respondents are self-selected, they do not constitute a random or representative public sample. The National Environmental Policy Act (NEPA) encourages all interested parties to submit comment as often as they wish regardless of age, citizenship, or eligibility to vote. Respondents may therefore include businesses, people from other countries, children, and people who submit multiple responses. Therefore, caution should be used when interpreting comparative terms in the summary document. Every substantive comment and suggestion has value, whether expressed by one respondent or many. All input is read and evaluated and the analysis team attempts to capture all relevant public concerns in the analysis process.

Appendix B

Coding Structure

Presented below is the list of categories or “codes” used to sort public comment on the Combined Interim Directives. A more detailed description of the coding, database construction, and other elements of the methodology used for this analysis can be found in Appendix A: Content Analysis Process.

Mark Twain National Forest Plan Revision Notice of Intent

Planning

PLANN 10000 Purpose and Need for a new Forest Plan

- 10010 Adequacy of analysis/Topics excluded from the revision process (*General comments only; anything specific to a resource should be coded to the resource*)
- 10100 National guidance for strategic plans (Page 1)
 - 10110 The Government Performance and Results Act Strategic Plan (1998)
 - 10120 Forest Service Policy Statements on Ecosystem Management (1992)
 - 10130 Forest Service Natural Resource Agenda (1998)
 - 10140 National Direction to adopt Scenery Management System (1999)
 - 10150 Strategic Fire Plan (2000)
- 10200 Results of monitoring and evaluation
- 10300 New information available (Page 2)
 - 10310 Ozark-Ouachita Highlands Assessment (1999)
 - 10320 The Biodiversity of Missouri Report (1998)
 - 10330 Hierarchy of Ecological Units Framework (2000)
 - 10340 Terrestrial Natural Communities of Missouri
 - 10350 Roads Analysis completed on the Salem and Potosi districts (FY 1999)
 - 10360 Watershed Analysis for the Mark Twain National Forest (FY 2000)
- 10400 Relation to other Forest Service rules and directives
 - 10410 Relation to 2001 Roadless Rule (issued 01/12/2001) – (*This is for comments relating to the Roadless Area Conservation Rule. General comments about roadless areas should be coded to MGMNT 60530*)
 - 10420 Relation to the Planning Rule
 - 10430 Relation to the various forest or regional plans

PLANN 11000 Editorial Corrections or Clarifications (*Comments coded here should specifically mention editorial and/or clarification concerns*)

PLANN 12000 Decision making – general

- 12100 Role/authority
 - 12110 President/Executive branch
 - 12120 USDA/Forest Service
 - 12130 Legislative branch
 - 12140 Judicial branch
 - 12150 City, state, and county governments
- 12200 Roles of Interest Groups
 - 12210 Environmental groups

- 12220 Conservation/wise use groups
- 12230 Industry/Business groups
- 12300 Role of General Public
 - 12310 Local Citizens
 - 12320 Nationwide citizens/communities

PLANN 13000 Public Involvement

- 13100 Adequacy/availability of information
 - 13110 Federal Register notice
 - 13120 Previous scoping comment period
- 13200 Outreach/agency communication efforts
 - 13210 Clarity/comprehensibility
 - 13220 Website/email
- 13300 Use of public involvement/comment
 - 13310 Methodology and techniques
 - 13320 Land conditions and public demands (*specifically in context of public involvement*)
- 13400 Public Meetings
- 13500 Adequacy of comment period
 - 13510 Extension needed
 - 13520 No extension needed
- 13600 Adequacy of timeframe
- 13700 Collaboration

PLANN 14000 Agency Organization and Funding

- 14100 General comments about the USDA/Forest Service
- 14200 Funding for planning process
- 14300 Funding for the implementation of the forest plan
- 14400 Use of best available science (*General comments only; a anything specific to a resource should be coded to the resource*)
- 14500 USDA/Forest Service staff training, education, and competence

ALTER 20000 Alternative Development (*General comments about the alternative development process; anything specific to a resource should be coded to the resource*)

LEGAL 30000 Relationship to Applicable Laws, Regulations, and Policies (*General comments only; anything specific to a resource should be coded to the resource*)

- 30100 Adequacy of analysis
- 30200 Constitution
- 30300 Federal Laws, Acts, and Policies
 - 30310 NEPA (National Environmental Policy Act)
 - 30320 APA (Administrative Procedures Act)
 - 30330 CAA (Clean Air Act)
 - 30340 CWA (Clean Water Act)
 - 30350 ESA (Endangered Species Act)
 - 30360 NFMA (National Forest Management Act)
 - 30370 Other

ENVIR 40000 Environment Values – General

- 40100 Adequacy of Analysis

40200 Environmental quality and ecosystem integrity
40300 Short-term vs. long-term productivity/risks
40400 Global climate

ENVIR 41000 Geology and soils

41100 Adequacy of Analysis

ENVIR 42000 Air quality

42100 Adequacy of Analysis

ENVIR 43000 Water Resources

43100 Adequacy of Analysis
43200 Water Quality **(RT 5)**
 43210 Karst hydrologic systems
43300 Wetlands
43400 Riparian Areas **(RT5)**
43500 Rivers

ENVIR 44000 Fisheries and Wildlife

44100 Adequacy of Analysis
44200 Threatened, Endangered, Proposed, and Sensitive Species
44300 Wildlife habitat management direction **(RT 2c)**
 44310 Management Indicator Species **(RT 2d)**

ENVIR 45000 Vegetation and botanical resources (RT 1)

45100 Adequacy of Analysis
45200 Nuisance/exotic plant species

LANDS 50000 Land Use

50100 Public property (*Access to public property across private lands*)
50200 Private property (*Access to private property across public lands; for specific comments concerning economic impacts see ECONO 80330*)
 50210 Special-use road permits
50300 Roads Management (*Comments regarding recreation and roadless areas should be coded to those categories*)
 50310 Adequacy of Analysis
 50320 Road construction/reconstruction
 50330 Road maintenance
 50340 Road closure/obliteration
50400 Transportation Management (Page 11)
 50410 Road density standards in management area prescriptions
 50420 Woods Roads
 50430 Forest Plan Transportation Map

NRCOM 55000 Natural Resources and Commodities

55100 Adequacy of analysis (*General comments about analysis of natural resources*)
55200 Timber Management **(RT 1)**
 55210 Adequacy of analysis
 55220 Lands suited to timber production and Allowable Sale Quantity (ASQ)
 (RT 1a)
 55230 Even-aged and uneven-aged timber management **(RT 1b)**

- 55240 Timber Harvest
- 55300 Minerals Management
 - 55310 Adequacy of analysis
 - 55320 Minerals Exploration
 - 55330 Lead Mining
- 55400 Grazing
 - 55410 Adequacy of analysis

MGMNT 60000 Forest Management

- 60100 Adequacy of analysis
- 60200 General forest management (*Guiding philosophies of management*)
 - 60210 Multiple use management
 - 60220 Ecosystem management
- 60300 Forest Health management (*These are generally affected resources, make sure you're coding to the management action*)
 - 60310 Ecological Sustainability and Ecosystem Health (*comments related to forest health*) **(RT 2)**
 - 60320 Oak decline and forest health **(RT 2a)**
 - 60330 Reforestation and Timber Stand Improvement Management direction **(RT 2b)**
- 60400 Fire Management (*These are generally affected resources, make sure you're coding to the management action*) **(RT 3)**
 - 60410 Prescribed fire **(RT 3a)**
 - 60420 Wildland fire suppression **(RT 3b)**
 - 60430 Fuels Management **(RT 3c)**
- 60500 Management Areas **(RT 4)**
 - 60510 Management area boundaries and New Land-type Associations (LTA) **(RT 4a)**
 - 60520 Special Area allocations **(RT 4b)**
 - 60530 Roadless Area designations (*general comments about roadless areas should be coded here*)
 - 60531 Spring Creek
 - 60532 Swan Creek
 - 60540 Wilderness designations
 - 60550 Wild and Scenic River Designations
 - 60551 Eleven Point River
 - 60552 North Fork River
 - 60553 Gasconade River
 - 60554 Courtois River
 - 60555 Huzzah River
 - 60556 Lower Current River
 - 60560 Other specific designations
 - 60561 North Fork
 - 60562 Big Springs
 - 60563 Van East Mountain
 - 60564 Lower Rock Creek
 - 60565 Smith Creek
 - 60566 Greer Spring
 - 60567 Carmen Springs
- 60600 Illegal Activities in national forests
 - 60610 Drug cultivation/manufacturing

60620 Vandalism of heritage resources

RECRE 70000 Recreation

- 70100 Adequacy of analysis
- 70200 Recreation management
 - 70210 Hunting and Fishing
 - 70220 Camping
 - 70230 Outfitter guides
- 70300 Allow/Prohibit recreation and/or general access
 - 70310 Motorized recreation
 - 70311 OHV and ATV use on the forest
 - 70312 Closed unless posted open
 - 70320 Non-Motorized recreation
 - 70330 Mechanized recreation
- 70400 User conflicts
- 70500 Trails management
- 70600 Scenery management

SOCIO 75000 Social Values General *(These are generally affected resources, make sure you're coding to the management action)*

- 75100 Adequacy of analysis
- 75200 Society and social issues
- 75300 Population
- 75400 Community structure and stability
- 75500 Quality of life
- 75600 Legacy/future generations
- 75700 Noise, public health, and safety
- 75800 Environmental Justice *(also general social justice and equal opportunity)*
- 75900 Heritage Resources management (Page 14)

ECONO 80000 Economy and Economic Values *(These are generally affected resources, make sure you're coding to the management action)*

- 80100 Adequacy of analysis
- 80200 US economy
- 80300 Local/Community economics
 - 80310 Employment
 - 80320 Business viability
 - 80330 Private property values
- 80400 Contribution of economies/businesses
- 80500 Cost benefit analysis

TRIBL 90000 American Indian Rights and Traditions

- 90100 Adequacy of Analysis
- 90200 Federal Trust Responsibilities
- 90300 American Indian use of public lands
 - 90310 Cultural interests
 - 90320 Economic interests
 - 90330 Spiritual interests
 - 90340 Tribal government issues

ATT 99999 Attachments

ALTERNATIVE FIELD

Affected Resource Code (the whys – the effect)

This code is used to indicate impacts on forest resources of various management actions. Code to the management action, then use the affected resource code to capture what that action or activity will affect.

- 000 – No affected resource
- 001 – Multiple affected resources
- 002 – Adequacy of Analysis
- 003 – Selection/Exclusion as a revision topic

- 100 – Planning decisions/decision authority
- 101 – Other USDA/Forest Service rules/policies
- 102 – Administrative effectiveness/efficiency
- 103 – Trust and integrity - general
- 104 – Trust & integrity of USDA/Forest Service
- 105 – Influence of interest groups
- 106 – Influence of industry groups
- 107 – Influence of environmental groups
- 108 – Public relations/public involvement/public opinion
- 109 – Adequacy/availability of information
- 110 – Outreach/agency communication efforts
- 111 – Public education/understanding
- 112 – Relations with other agencies/organizations
- 113 – Agency funding/staffing/structure

- 200 – Alternatives

- 300 – Laws, policies, and legal issues

- 400 – General environment
- 401 – Specific ecosystem/ecoregions
- 402 – Watershed health
- 403 – Water quality/clarity
- 404 – Water quantity/runoff
- 405 – Wetlands/Riparian areas
- 406 – Vegetation and botanical resources
- 407 – Plant species diversity
- 408 – Exotic/nuisance plant species
- 409 – Soil quality
- 410 – Biodiversity general
- 411 – Wildlife and habitat
- 412 – Aquatic wildlife and habitat
- 413 – Threatened, endangered, or sensitive species (animal or plant)
- 414 – Livestock/domestic animals
- 415 – Insect populations
- 416 – Game species
- 417 – Non-game wildlife
- 418 – Air quality
- 419 – Global climate
- 420 – Multiple environmental affected resources

- 500 – Public lands
- 501 – Private property

- 600 – Resource commodities
- 601 – Agricultural products
- 602 – Forest health
- 603 – Timber resources
- 604 – Mining
- 605 – Grazing
- 606 – Role of fire

- 700 – Recreation general
- 701 – Motorized recreation

- 702 – Non-motorized recreation
- 703 – Access
- 750 – Society and social values
- 751 – Population/demographics
- 752 – Quality of life
- 753 – Spiritual values
- 754 – Future generations
- 755 – Scenic and aesthetic values/resources
- 756 – Intrinsic/non-market values
- 757 – Noise levels
- 758 – Cultural and historic resources
- 800 – Economy and economic values
- 801 – National economy
- 802 – State/local economy
- 803 – County/State agricultural base
- 804 – Jobs/employment
- 805 – Private property values
- 806 – Cost-benefit analysis
- 807 – Non-market economic values of ecosystem services
- 808 – Comparative economic contribution of various services
- 809 – Best available science/scientific advances
- 810 – Use of taxpayer money
- 900 – American Indian cultural resources
- 901 – American Indian traditional lands and uses

Appendix C

Public Concern List

Introduction

Public Concerns are derived directly from public comment. Each represents the gist of a statement of concern made by the public. Concerns may be derived from one person's input, but often represent the view of many respondents. They are intended to aid the planning team in characterizing the issues to be analyzed in subsequent stages of the planning process. They may also provide a framework for preparing responses to public comment. Primarily, public concerns serve to guide readers to public comment on specific topics. As such, this index is intended to be used as a cross reference to public concerns listed in chapters 1 through 5 of the Summary of Public Comment. Readers may identify their areas of concern within the list provided in this index and then reference the relevant portion of the summary document. There they will find sample quotes in support of the concern statement. Each sample quote includes a letter number reference should users wish to look at the original letter on file at the Mark Twain National Forest.

Chapter 1 Process and Planning	1-1
THE REVISION PROCESS	1-1
The Revision Process General.....	1-1
1. Public Concern: The Mark Twain National Forest should revise the forest plan.....	1-1
To reflect the public interest	1-1
To only cover appropriate time periods	1-1
2. Public Concern: The Mark Twain National Forest should revise language in the forest plan.....	1-1
Topics Included/Excluded from the Revision Process	1-1
3. Public Concern: The Mark Twain National Forest should consider all relevant topics in the forest plan revision.....	1-1
Because exclusion of topics violates National Environmental Policy Act and National Forest Management Act requirements.....	1-2
Because various issues have been deferred in the past.....	1-3
Because the old forest plan has expired.....	1-3
To reflect recent data and public concern.....	1-3
Including cultural and historical resources	1-4
Including transportation, monitoring, and scenery management.....	1-4
Including mining and threatened and endangered species.....	1-4
4. Public Concern: The Mark Twain National Forest should exclude certain topics in the forest plan revision.	1-4
Mining and Threatened and Endangered Species.....	1-4
Use of Science.....	1-4
5. Public Concern: The Mark Twain National Forest should use a scientific approach to the National Environmental Policy Act process.	1-4
To ensure proper information gathering	1-4

Relation to Other Planning Processes 1-4

6. Public Concern: The Mark Twain National Forest should address the forest plan revision’s effects on other national forests. 1-4

7. Public Concern: The Mark Twain National Forest should explain how language is determined for different national forests’ Notices of Intent..... 1-5

PUBLIC INVOLVEMENT..... 1-5

Public Involvement General..... 1-5

8. Public Concern: The Mark Twain National Forest should recognize that its failure to correct the error in its Notice of Intent prevented adequate public participation. 1-5

Should explain its failure to correct the error..... 1-5

9. Public Concern: The Mark Twain National Forest should explain its failure to hold public meetings in the St. Louis area. 1-5

10. Public Concern: The Mark Twain National Forest should explain what public involvement was utilized in the Ozark-Ouachita Highlands Assessment. 1-5

11. Public Concern: The Mark Twain National Forest should make the 1986 forest plan more accessible to the public. 1-5

12. Public Concern: The Mark Twain National Forest should inform the public of management plans in the Pine Knot Area. 1-6

13. Public Concern: The Mark Twain National Forest should consider using volunteers in the forest..... 1-6

Use of Public Involvement/Comment..... 1-6

14. Public Concern: The Mark Twain National Forest should consider the public’s input in the forest plan revision process. 1-6

To foster public trust 1-6

To reflect recent data and public concern 1-7

Role of Interest Groups..... 1-7

15. Public Concern: The Mark Twain National Forest should not cater to corporate interests. 1-7

AGENCY STAFFING 1-8

16. Public Concern: The Mark Twain National Forest should employ staff biologists..... 1-8

To protect wildlife..... 1-8

Chapter 2 Forest Management 2-1

FOREST MANAGEMENT GENERAL..... 2-1

Forest Management General..... 2-1

17. Public Concern: The Mark Twain National Forest should address the potential biological, economic, and social effects of forest management activities. 2-1

18. Public Concern: The Mark Twain National Forest should provide a forest acreage summary to the public. 2-1

19. Public Concern: The Mark Twain National Forest should protect and increase the size of the larger tracts of forested areas. 2-1

With a goal of providing habitat for those species that require such forested habitat..... 2-1

Because some neotropical migratory bird species that breed in the Ozarks require large unbroken forest canopy 2-1

20. Public Concern: The Mark Twain National Forest should define certain terms. 2-1

Primitive or natural forest 2-1

Open woodland versus non-open woodland..... 2-1

Adaptive management 2-2

Greater flexibility of silvicultural techniques 2-2

Illegal Activities 2-2

 21. Public Concern: The Mark Twain National Forest should crackdown on
 illegal activities. 2-2

 To increase visitor safety..... 2-2

FOREST HEALTH MANAGEMENT 2-2

 Forest Health Management General 2-2

 22. Public Concern: The Mark Twain National Forest should consider the
 effects on forest health in development of management alternatives..... 2-2

 23. Public Concern: The Mark Twain National Forest should define the
 phrase “healthier balance.” 2-2

(RT 2) Ecological Sustainability and Ecosystem Health 2-2

 24. Public Concern: The Mark Twain National Forest should emphasize
 ecosystem management. 2-2

 To ensure productive, healthy ecosystems by blending social, economic,
 physical, and biological needs and values..... 2-2

 To promote biological diversity 2-3

 25. Public Concern: The Mark Twain National Forest should promote forest
 ecosystem health and sustainability. 2-3

 By protecting the integrity of existing ecological communities 2-3

 By restoring sustainable native ecosystems 2-3

 By making changes founded on sustaining the composition, structure and
 dynamics of native forest ecosystems 2-4

 By changing the management standards and guidelines to the equivalent
 of those provided in the “terrestrial natural communities of missouri” 2-4

 over timber sustainability 2-4

 26. Public Concern: The Mark Twain National Forest should ecologically
 restore glades and savannas..... 2-4

 27. Public Concern: The Mark Twain National Forest should use the full
 array of silvicultural tools to achieve forest health and ecosystem
 composition objectives. 2-4

(RT 3) FIRE MANAGEMENT 2-5

 Fire Management General 2-5

 28. Public Concern: The Mark Twain National Forest should address its
 contradictory attitude toward fire..... 2-5

 29. Public Concern: The Mark Twain National Forest should recognize that
 fire is not a natural component in eastern forests. 2-5

 Because it is usually the result of arson 2-5

 30. Public Concern: The Mark Twain National Forest should address effects
 of fire fighting in the EIS. 2-5

 31. Public Concern: The Mark Twain National Forest should develop
 standards and guidelines for fire fighting. 2-5

 32. Public Concern: The Mark Twain National Forest should work with
 adjacent landowners and communities in promoting fire safety
 measures. 2-5

Adequacy of Analysis..... 2-5

 33. Public Concern: The Mark Twain National Forest should scientifically
 assess the history, scope, and ecological role of fire. 2-5

Because little data is available to understand the effects of fire in the forest2-5

34. Public Concern: The Mark Twain National Forest should present all studies and other information it is using in the application of fire on the forest.2-6

Because there is wide discrepancy in the literature on the effects and necessity of fire in the Ozark Region.....2-6

35. Public Concern: The Mark Twain National Forest should assign studies and long-term operational fire regimes to special areas.2-6

36. Public Concern: The Mark Twain National Forest should base the frequency and seasonal scheduling of prescribed fire on ongoing scientific studies.....2-6

With the object of sustaining native species richness.....2-6

(RT 3a) Prescribed Fire2-7

37. Public Concern: The Mark Twain National Forest Service should use fire as a necessary natural process.....2-7

To emulate historic natural disturbance regimes2-7

To protect and restore biological diversity2-7

To restore large scale communities that benefit from periodic fire.....2-7

To maintain healthy glades, forests, wildlife habitat, and to reduce fuel loads.....2-7

38. Public Concern: The Mark Twain National Forest should use fire on a limited basis.2-7

Because of riparian and habitat areas that are federally listed, and during times of the year when fire might imperil wildlife2-7

39. Public Concern: The Mark Twain National Forest should not use prescribed fire.2-7

Because the Ozarks do not have the catastrophic fires of the northwest2-7

(RT 4) MANAGEMENT AREAS2-8

Management Areas General.....2-8

40. Public Concern: The Mark Twain National Forest should protect special areas.2-8

To preserve the forest for future generations2-8

41. Public Concern: The Mark Twain National Forest should set aside more land for wilderness and special area designation.2-8

Because over the last 16 years only one out of a list of 56 candidates has been elevated to special status.....2-8

Because the public desires more wilderness preservation2-8

42. Public Concern: The Mark Twain National Forest should reexamine all existing ecological land type designations.....2-9

To ensure that previous determinations are consistent with up-to-date scientific information2-9

43. Public Concern: The Mark Twain National Forest should differentiate between roadless, wilderness, and wild and scenic river designations, and the restrictions and conditions that go with them.2-9

Because it would be very helpful in allowing the public to understand the need for change.....2-9

(RT 4a) Boundaries and New Land-Type Associations.....2-9

44. Public Concern: The Mark Twain National Forest should base management boundaries on national, regional, and local considerations.....2-9

Because it is a public involvement requirement2-9

45. Public Concern: The Mark Twain National Forest should use the revised land-type association boundaries to delineate management areas..... 2-9

46. Public Concern: The Mark Twain National Forest should revise management unit area descriptions and boundaries according to the latest ecosystem based classifications. 2-9

47. Public Concern: The Mark Twain National Forest should describe a new management unit category for restoring significant native landscapes. 2-10

(RT 4b) Special Area Allocations..... 2-10

Roadless Areas..... 2-10

48. Public Concern: The Mark Twain National Forest should inventory roadless and contiguous areas..... 2-10

49. Public Concern: The Mark Twain National Forest should not evaluate roadless areas during the forest plan revision. 2-10

50. Public Concern: The Mark Twain National Forest should evaluate only the originally designated roadless areas during the forest plan revision, not those identified in the Roadless Area Conservation Rule. 2-10

51. Public Concern: The Mark Twain National Forest should protect roadless areas. 2-11

Because these areas serve as models of habitat restoration, are resistant to fire and invasive pests, provide refuge for endangered species, and are important both for recreation and their existence value 2-11

Including uninventoried roadless areas 2-12

52. Public Concern: The Mark Twain National Forest should manage roadless areas as wilderness areas..... 2-12

53. Public Concern: The Mark Twain National Forest should recommend roadless areas to Congress for wilderness designation..... 2-12

Wilderness Areas 2-13

54. Public Concern: The Mark Twain National Forest should recommend more areas for wilderness designation. 2-13

Should recommend greater amounts of contiguous acreage..... 2-13

Should recommend the entire forest..... 2-13

Other Designations..... 2-13

55. Public Concern: The Mark Twain National Forest should review standards and guidelines for managing wild and scenic rivers..... 2-13

To see if they should be tightened based on past implementation..... 2-13

56. Public Concern: The Mark Twain National Forest should recommend high quality rivers for inclusion in the wild and scenic river system. 2-13

Because they provide critical riparian habitat 2-13

57. Public Concern: The Mark Twain National Forest should protect the Eleven Point River..... 2-14

By reducing access to the river 2-14

For future generations 2-14

LAND USE..... 2-14

Land Use General..... 2-14

58. Public Concern: The Mark Twain National Forest should provide an accurate survey of the forest’s ownership..... 2-14

Because reliance on old and inaccurate survey lines has led to problems with private buildings and forest management activities 2-14

59. Public Concern: The Mark Twain National Forest should clarify in writing that some lands inside the forest boundaries are privately owned, and that private ownership should be respected..... 2-14

Land Exchanges.....2-15

60. Public Concern: The Mark Twain National Forest should make plans for land exchanges and acquisitions available for public comment.....2-15

61. Public Concern: The Mark Twain National Forest should collaborate with private and public agencies to coordinate land acquisitions.2-15

62. Public Concern: The Mark Twain National Forest should develop stringent standards and guidelines that prohibit land exchanges for purely economic or administrative reasons.2-15

Because land exchanges are acceptable only if they involve lands of equal value, are carried out to protect one or more natural resource, and do not facilitate environmentally degrading activities on the forest periphery2-15

63. Public Concern: The Mark Twain National Forest should base its acquisition and exchange of tracts on the need to protect the long-term viability of ecosystems.2-15

Because consolidation for the sake of economic operation and maintenance is not sound public policy.....2-15

By accelerating the acquisition of inholdings with priority given to ecologically sensitive areas2-15

By acquiring additional public lands that either provide a buffer to sensitive resources or establish habitat corridors between isolated tracts.....2-16

64. Public Concern: The Mark Twain National Forest should not allow land exchanges for degraded land.....2-16

65. Public Concern: The Mark Twain National Forest should define and clarify land exchanges in the context of mineral development.....2-16

Because the practice of trading land to mining corporations in order to avoid culpability and accountability is not a legitimate method.....2-16

66. Public Concern: The Mark Twain National Forest should not exchange lands lying within the proclamation boundary for development.....2-16

Because these lands will one day be part of the forest2-16

67. Public Concern: The Mark Twain National Forest should exchange unwooded areas with private landowners and farmers willing to raise industrial hemp.2-16

To benefit local economies2-16

68. Public Concern: The Mark Twain National Forest should pursue federal funding for land acquisition.2-17

To help protect large areas of habitat or establish corridors between such areas2-17

Chapter 3 Forest Activities 3-1

TRANSPORTATION SYSTEM MANAGEMENT3-1

Roads Management3-1

Roads Management General3-1

69. Public Concern: The Mark Twain National Forest should develop a roads inventory.....3-1

70. Public Concern: The Mark Twain National Forest should only designate roads that are hardened and sited for vehicle use.....3-1

71. Public Concern: The Mark Twain National Forest should clarify road term reclassifications.3-1

72. Public Concern: The Mark Twain National Forest should clarify the term “woods road.”.....3-1

Because the public uses it for any road.....	3-1
Adequacy of Analysis	3-1
73. Public Concern: The Mark Twain National Forest should analyze aspects of road management.	3-1
Including land capabilities, erosion, sediment, traffic levels, off road vehicle use, enforcement, road use, road management, and maintenance	3-1
74. Public Concern: The Mark Twain National Forest should analyze the effects of roads on wildlife.	3-2
From roadkills and from fragmentation	3-2
75. Public Concern: The Mark Twain National Forest should analyze the economic and biological effects of the current road pattern on the flora and fauna.	3-2
Because fewer roads have less effect on the ecology of the forests and require less financial and human resources needed to maintain those roads.....	3-2
Road Construction/Reconstruction	3-2
76. Public Concern: The Mark Twain National Forest should restrict or prohibit road construction.	3-2
Because of the negative effects of habitat fragmentation	3-3
Because of the negative effects on water quality, soil, and habitats serving as corridors.....	3-3
Because of the maintenance backlog.....	3-3
To protect and restore water resources.....	3-3
To manage the public lands for the greatest good of the public.....	3-3
Road Maintenance	3-4
77. Public Concern: The Mark Twain National Forest should upgrade main entrance roads to wilderness areas.....	3-4
Road Closure/Obliteration	3-4
78. Public Concern: The Mark Twain National Forest should close roads.	3-4
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79. Public Concern: The Mark Twain National Forest should budget money for installation of physical closures on unclassified roads.	3-4
To ensure that roads are blocked and inaccessible.....	3-4
80. Public Concern: The Mark Twain National Forest should not close roads.	3-4
Because the roads need to be accessed to fight fires	3-4
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81. Public Concern: The Mark Twain National Forest should develop road density standards.	3-5
Because roads affect wildlife, recreation, water quality, and scenic beauty	3-5
82. Public Concern: The Mark Twain National Forest should reduce road density in sensitive areas.	3-5
Because there is a \$8.5 billion backlog on road maintenance and the entire road system may be deteriorating	3-5
Because roads are sources of gully erosion and sediment.....	3-5
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83. Public Concern: The Mark Twain National Forest should change the “closed unless posted open” signs to “open unless posted closed.”	3-5
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all other traditional marking of travel ways across the country 3-6

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groups 3-6

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 84. Public Concern: The Mark Twain National Forest should maintain
 access. 3-6

 85. Public Concern: The Mark Twain National Forest should provide
 affordable and accessible recreation..... 3-6

 86. Public Concern: The Mark Twain National Forest should give greater
 priority to recreation than to timber harvest. 3-7

 Because recreation is more important economically and more compatible
 ecologically with maintaining forest health 3-7

 87. Public Concern: The Mark Twain National Forest should emphasize low
 impact recreation. 3-7

 To preserve diverse species 3-7

 88. Public Concern: The Mark Twain National Forest should not expand
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 For low impact recreation..... 3-7

 Because promoting fees will encourage more motorized forms of
 recreation which would harm other popular, less damaging uses of the
 forest 3-7

 89. Public Concern: The Mark Twain National Forest should enlist the help
 of recreation groups to maintain recreation areas. 3-7

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 90. Public Concern: The Mark Twain National Forest should standardize its
 policy on motorized recreation. 3-8

 Including development of a linked system of forest roads and trails for
 non-street legal or younger riders 3-8

 91. Public Concern: The Mark Twain National Forest should change semi-
 primitive non-motorized designations to semi-primitive motorized
 designations..... 3-8

 Because the exclusion of motorized recreation from these areas is not
 justified 3-8

 To alleviate congestion 3-8

 92. Public Concern: The Mark Twain National Forest should maintain
 motorized access..... 3-8

 Because motorized recreation benefits the economy..... 3-9

 93. Public Concern: The Mark Twain National Forest should allow motorized
 events in the forest..... 3-9

 Because it benefits the economy 3-9

 94. Public Concern: The Mark Twain National Forest should remove the
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 95. Public Concern: The Mark Twain National Forest should restrict or
 prohibit all recreational vehicles. 3-11

Because they are inherently destructive to unspoiled environments and aesthetically at odds with natural places 3-11

96. Public Concern: The Mark Twain National Forest should enforce roadless area vehicle restrictions. 3-11

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97. Public Concern: The Mark Twain National Forest should include off-road vehicle use as a major revision topic. 3-11

To comply with the National Forest Management Act and the National Environmental Policy Act..... 3-11

Because it meets the criteria for inclusion 3-11

Because off-road vehicle users pay taxes and license fees..... 3-11

98. Public Concern: The Mark Twain National Forest should allow off-road vehicle use. 3-12

Because it is public land..... 3-12

To recover harvested game 3-12

99. Public Concern: The Mark Twain National Forest should open more trails for off-road vehicle use. 3-12

For the tax paying citizens..... 3-12

To disperse recreation..... 3-13

100. Public Concern: The Mark Twain National Forest should maintain the special use areas designated for off-road vehicle use. 3-13

To lessen effect in other areas 3-13

101. Public Concern: The Mark Twain National Forest should develop rigid standards and guidelines..... 3-13

To ensure that off-road vehicle use does not destroy natural resources..... 3-13

102. Public Concern: The Mark Twain National Forest should restrict or prohibit off-road vehicles due to their effects. 3-13

Because their effects are inconsistent with the Clean Air Act, The Clean Water Act, applicable executive orders, and Forest Service regulations and policies 3-13

Because they negatively affect soil..... 3-13

Because they negatively affect water resources..... 3-14

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Because the small number of users does not justify their use of public resources 3-17

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103. Public Concern: The Mark Twain National Forest should restrict or prohibit off-road vehicles by imposing restrictions..... 3-17

By limiting use to authorized areas..... 3-17

By not expanding designated off-road vehicle trails..... 3-17

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104. Public Concern: The Mark Twain National Forest should restrict or prohibit off-road vehicles in certain areas. 3-18

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105. Public Concern: The Mark Twain National Forest should not give official designations to user-created trails.3-18
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106. Public Concern: The Mark Twain National Forest should enforce the rules on off-road vehicles.3-18

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107. Public Concern: The Mark Twain National Forest should adequately monitor off-road vehicle effects. 3-19

108. Public Concern: The Mark Twain National Forest should reassess off-road vehicle areas. 3-20
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109. Public Concern: The Mark Twain National Forest should analyze the effects of off-road vehicles on wildlife..... 3-20

110. Public Concern: The Mark Twain National Forest should provide relative value analysis for off-road vehicle use. 3-20
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111. Public Concern: The Mark Twain National Forest should include the flow chart in the article “Hard Trails in Alaska” in the revised forest plan. 3-21

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112. Public Concern: The Mark Twain National Forest should restrict or prohibit snowmobiles. 3-21
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113. Public Concern: The Mark Twain National Forest should distinguish between sport utility vehicles and off-road vehicles..... 3-23

114. Public Concern: The Mark Twain National Forest should allow sport utility vehicle trail riding. 3-23
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115. Public Concern: The Mark Twain National Forest should collaborate with four-wheel drive clubs in maintaining and expanding trails open to sport utility vehicles..... 3-24

116. Public Concern: The Mark Twain National Forest should develop an area for rock crawling..... 3-24
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117. Public Concern: The Mark Twain National Forest should restrict or prohibit airboat use. 3-24
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118. Public Concern: The Mark Twain National Forest should impose a ten horsepower limit, or less, for watercraft on the Eleven Point River. 3-25

119. Public Concern: The Mark Twain National Forest should prohibit the use of motorized boats on rivers within the scenic river watershed..... 3-25

120. Public Concern: The Mark Twain National Forest should restrict mudding activities. 3-25
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121. Public Concern: The Mark Twain National Forest should restrict swamp buggies. 3-25

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122. Public Concern: The Mark Twain National Forest should facilitate camping.	3-25
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By providing better camping facilities and rustic camping.....	3-25
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123. Public Concern: The Mark Twain National Forest should ensure that new land-type designations do not exclude equestrian use.	3-26
124. Public Concern: The Mark Twain National Forest should keep equestrian trails open.....	3-26
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Because equestrian use benefits the economy	3-26
Because keeping them open will stop equestrians from accessing old paths and trails.....	3-26
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125. Public Concern: The Mark Twain National Forest should address conflicts between motorized and non-motorized users.	3-26
126. Public Concern: The Mark Twain National Forest should allow all uses.	3-27
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127. Public Concern: The Mark Twain National Forest should address concerns regarding access to trails.	3-27
128. Public Concern: The Mark Twain National Forest should adequately maintain trails.	3-27
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129. Public Concern: The Mark Twain National Forest should cooperate with the Missouri Department of Natural Resources in constructing and managing trails.....	3-28
130. Public Concern: The Mark Twain National Forest should collaborate with local and regional groups in keeping trails open.	3-28
131. Public Concern: The Mark Twain National Forest should facilitate hiking trails.	3-28
132. Public Concern: The Mark Twain National Forest should establish more connecting trails from the Ozark Trail.	3-28
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135. Public Concern: The Mark Twain National Forest should require licensing of industries that operate on the forest.....	4-2
136. Public Concern: The Mark Twain National Forest should stop leasing public land to companies at low rates.....	4-2
Because they destroy everything once they get there with roads and toxins	4-2

137. Public Concern: The Mark Twain National Forest should restrict or prohibit commercial activities.4-2

138. Public Concern: The Mark Twain National Forest should implement a recycling program.4-3

 By printing all documents on both sides and using either alternative fiber or 100% recycled paper.....4-3

 By implementing the National Strategy for waste prevention and recycling.....4-3

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 139. Public Concern: The Mark Twain National Forest should end commercial timber sales in the forest.....4-3

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 140. Public Concern: The Mark Twain National Forest should allow private landowners to meet society’s timber needs.....4-4

 Because public land timber sales are not needed and are unfair competition4-4

 141. Public Concern: The Mark Twain National Forest should ban foreign exportation of timber.4-4

 142. Public Concern: The Mark Twain National Forest should address timber theft.4-4

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 143. Public Concern: The Mark Twain National Forest should analyze the pre-European composition and manage timber resources accordingly.4-5

 144. Public Concern: The Mark Twain National Forest should analyze the effects of timber harvest on various resources.4-5

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 145. Public Concern: The Mark Twain National Forest should consider the cumulative effects of timber harvest on private land adjacent to the forest.4-10

 To determine its own management direction.....4-10

 146. Public Concern: The Mark Twain National Forest should calculate all costs associated with timber sales.4-11

 And disclose how much of the income from timber sales supports Forest Service administrative overhead.....4-11

 147. Public Concern: The Mark Twain National Forest should analyze the effects of below-cost sales.4-12

 148. Public Concern: The Mark Twain National Forest should compare the monetary value of timber with that of ecological services.4-12

149. Public Concern: The Mark Twain National Forest should analyze the value of the forest as a source of pallets versus its value to habitat and recreation. 4-12

Timber Harvest 4-12

150. Public Concern: The Mark Twain National Forest should use best management practices in timber harvest. 4-12

151. Public Concern: The Mark Twain National Forest should use selective timber harvest techniques. 4-12

152. Public Concern: The Mark Twain National Forest should use horses in timber harvest. 4-12

153. Public Concern: The Mark Twain National Forest should cut timber back from the highway. 4-13

For safety reasons 4-13

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154. Public Concern: The Mark Twain National Forest should reevaluate timber suitability. 4-13

With respect to economic effects..... 4-13

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155. Public Concern: The Mark Twain National Forest should take intermediate and long-range projections of timber harvest levels into account in the forest plan revision. 4-14

156. Public Concern: The Mark Twain National Forest should reduce the allowable sale quantity. 4-14

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157. Public Concern: The Mark Twain National Forest should incorporate the proposed changes to even-aged and uneven-aged management. 4-14

To maintain native forest types..... 4-14

158. Public Concern: The Mark Twain National Forest should use even-aged management. 4-14

For mast production 4-14

To measure specific habitat conditions..... 4-15

For early-successional wildlife..... 4-15

Only for area habitat conversions or other landscape management objectives 4-16

159. Public Concern: The Mark Twain National Forest should not use even-aged management. 4-16

For commercial/commodity markets..... 4-16

160. Public Concern: The Mark Twain National Forest should use uneven-aged timber management..... 4-17

By employing selective timber harvest 4-17

By employing the methods of pioneer forest..... 4-18

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161. Public Concern: The Mark Twain National Forest should include the topic of mineral exploration and development in the forest plan revision. 4-18

Including a review of mineral development and ecological restoration..... 4-19

162. Public Concern: The Mark Twain National Forest should not include the topic of mineral exploration and development in the forest plan revision. 4-19

163. Public Concern: The Mark Twain National Forest should restrict or prohibit mineral, oil, and gas leasing..... 4-19

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In sensitive and roadless areas.....	4-20
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164. Public Concern: The Mark Twain National Forest should analyze the effects of mineral exploration and development.	4-20
Particularly full-scale mining	4-21
To foster public trust	4-21
To address karst topography	4-21
To address the scenic rivers in the forest.....	4-21
Because the topic was not adequately addressed in the past	4-21
165. Public Concern: The Mark Twain National Forest should prepare an EIS for each proposal for mineral exploration.	4-22
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166. Public Concern: The Mark Twain National Forest should allow mineral exploration and development.	4-22
To decrease foreign dependence	4-22
167. Public Concern: The Mark Twain National Forest should restrict or prohibit mineral exploration and development.	4-22
Because it is incompatible with the multiple use policy	4-23
To protect water quality	4-23
To protect certain areas.....	4-23
And encourage recycling instead	4-24
168. Public Concern: The Mark Twain National Forest should address lead mining in collaboration with other land and resource agencies.....	4-24
169. Public Concern: The Mark Twain National Forest should restrict or prohibit lead mining in the forest.	4-24
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Because of Karst Topography	4-25
170. Public Concern: The Mark Twain National Forest should not allow the Doe Run Company to operate in the forest.	4-25
In deference to the department of interior's assessment of risks.....	4-25
Because of its history of pollution.....	4-26
Because of its history in Herculaneum	4-26
On the Eleven Point River.....	4-27
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171. Public Concern: The Mark Twain National Forest should restrict or prohibit livestock grazing in sensitive riparian areas.....	4-27
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172. Public Concern: The Mark Twain National Forest should encourage native grazers over traditional livestock grazers.....	4-28
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173. Public Concern: The Mark Twain National Forest should protect the forest environment.	5-1
Above the short-term profit of special interests	5-1
Without consideration of political pressure	5-1
For a growing population	5-1
For future generations	5-1

174. Public Concern: The Mark Twain National Forest should give more areas management prescriptions that favor preservation over timber commodity production. 5-2

175. Public Concern: The Mark Twain National Forest should provide more emphasis and direction to encourage biodiversity. 5-2

176. Public Concern: The Mark Twain National Forest should focus on larger geographic areas..... 5-2

177. Public Concern: The Forest Service should replace routine references to forests by timber features to references by species or terrestrial community features. 5-2

178. Public Concern: The Mark Twain National Forest should carry out restoration activities..... 5-3

 Restore the forest to the condition it was in prior to commercial development 5-3

 Do not include commercial activities in restoration projects..... 5-3

 Restore fragmented landscapes for the benefit of bird species 5-3

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 179. Public Concern: The Mark Twain National Forest should include environmental analyses in the forest plan revision..... 5-3

 Regional landscape analysis 5-3

 Community-ecosystem analysis 5-4

 Population-species analysis 5-4

 Genetic analysis..... 5-4

180. Public Concern: The Mark Twain National Forest should analyze biodiversity and forest fragmentation. 5-4

 For All species 5-5

181. Public Concern: The Mark Twain National Forest should reference all of the monitoring and evaluation reports and relevant scientific information. 5-5

182. Public Concern: The Mark Twain National Forest should collaborate with the Nature Conservancy in incorporating the Ozark Ecoregional Assessment data into the forest plan revision..... 5-5

183. Public Concern: The Mark Twain National Forest should address the lack of accurate, historical records on the conditions of the ecosystem prior to European settlement. 5-6

Climate 5-6

 184. Public Concern: The Mark Twain National Forest should analyze the effects of forest management on climate. 5-6

Air 5-7

 185. Public Concern: The Mark Twain National Forest should analyze the effects of forest management on air. 5-7

 Air masses 5-7

 Carbon holding capacity 5-7

Water 5-7

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 186. Public Concern: The Mark Twain National Forest should include water resources as a revision topic in the forest plan revision. 5-7

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 187. Public Concern: The Mark Twain National Forest should analyze the effects of forest management on water..... 5-8

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188. Public Concern: The Mark Twain National Forest should analyze the effects of adjacent land practices on water quality in the forest.	5-9
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189. Public Concern: The Mark Twain National Forest should manage the forest with water quality in mind.	5-9
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By considering the entire drainage area.....	5-10
190. Public Concern: The Mark Twain National Forest should protect water quality in the forest by restricting certain activities.....	5-10
191. Public Concern: The Mark Twain National Forest should focus on sustainable forest management key 13, protection of water quality and prevention of soil erosion.	5-11
Due to effects of mining, timber harvest, off-road vehicles, horses, etc.....	5-11
192. Public Concern: The Mark Twain National Forest should protect riparian areas and water quality.....	5-11
193. Public Concern: The Mark Twain National Forest should revise the riparian guidelines.....	5-11
For future generations	5-11
To allow flexible site-specific management	5-12
To protect surface and subsurface waters	5-12
To protect karst lands	5-12
Fisheries and Wildlife	5-12
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194. Public Concern: The Mark Twain National Forest should include fish and aquatic resources in the forest plan revision.	5-12
195. Public Concern: The Mark Twain National Forest should consider the Songbird Species of High Management in the forest plan revision.....	5-12
196. Public Concern: The Mark Twain National Forest should respect the intrinsic value of sentient beings in the forest.	5-12
Adequacy of Analysis.....	5-13
197. Public Concern: The Mark Twain National Forest should provide all of its species monitoring data for the last twenty years.	5-13
198. Public Concern: The Mark Twain National Forest should analyze and disclose baseline and population trend site-specific species data.	5-13
199. Public Concern: The Mark Twain National Forest should analyze the factors that would impede the movement and dispersal of closed canopy forest wildlife species between stands and larger regions.	5-14
200. Public Concern: The Mark Twain National Forest should include the science-based Important Bird Areas in its management considerations.....	5-14
Threatened, Endangered, and Sensitive Species.....	5-14
201. Public Concern: The Mark Twain National Forest should review the Endangered Species Act on a regular basis.	5-14
202. Public Concern: The Mark Twain National Forest should address threatened and endangered species in the forest plan revision.....	5-14
To comply with the Endangered Species Act.....	5-15
To reflect recent data.....	5-15
Because the recent amendments are inadequate.....	5-15

203. Public Concern: The Mark Twain National Forest should not address threatened and endangered species in the forest plan revision. 5-16
 Because the recent amendments are adequate 5-16

204. Public Concern: The Mark Twain National Forest should protect threatened, endangered, and sensitive species..... 5-16
 Through thorough analysis 5-17
 With emphasis on species requiring large, intact tracts of forest 5-17
 Mountain lions 5-17
 Reptiles and amphibians 5-17
 Ozark hellbender..... 5-17
 Bats..... 5-18
 Eagles..... 5-18
 Butterflies 5-18

Wildlife Reintroductions 5-19

205. Public Concern: The Mark Twain National Forest should reintroduce the cougar to the Mark Twain National Forest. 5-19
 To cull deer herds 5-19

206. Public Concern: The Mark Twain National Forest should collaborate with the Wild Canid Survival and Research Center regarding potential red wolf recovery in the forest..... 5-19

(RT 2c) Wildlife Habitat Management Direction 5-19

207. Public Concern: The Mark Twain National Forest should protect and restore wildlife habitat..... 5-19
 For native species 5-19
 For species requiring large tracts of contiguous forest..... 5-20
 Against noise 5-20

208. Public Concern: The Mark Twain National Forest should preserve bird habitat. 5-20
 To promote bird population growth for insect control 5-20
 To enhance ruffed grouse populations 5-20

(RT 2d) Management Indicator Species 5-20

209. Public Concern: The Mark Twain National Forest should revise the management indicator species list as part of the forest plan revision..... 5-20
 To indicate water quality..... 5-21
 To include early successional species..... 5-21
 To include various endangered species 5-21
 To include large predators..... 5-21
 To include the Indiana bat 5-22
 To include mussels 5-22
 To include amphibians 5-22

(RT 1) Vegetation and Botanical Resources 5-22

Vegetation and Botanical Resources General 5-22

210. Public Concern: The Mark Twain National Forest should maintain fully forested conditions within its boundaries. 5-22

211. Public Concern: The Mark Twain National Forest should aggressively promote early successional conditions. 5-22
 To promote population growth in early successional bird species 5-22
 To comply with the National Forest Management Act's requirement to maintain viable populations of all native wildlife..... 5-23

212. Public Concern: The Mark Twain National Forest should evaluate old growth designations independently of potential timber stands. 5-23

213. Public Concern: The Mark Twain National Forest should give priority to riparian areas for inclusion in old growth designations.5-23

214. Public Concern: The Mark Twain National Forest should address native plants in the forest plan revision.....5-23

215. Public Concern: The Mark Twain National Forest should maintain natural forest types, and aggressively restore natural vegetation and native terrestrial communities on large regional scales.....5-24

216. Public Concern: The Mark Twain National Forest should identify and protect all unique plant communities.5-24

217. Public Concern: The Mark Twain National Forest should explain the basis for its decision to maintain oak-hickory, shortleaf pine, and oak-pine communities by silvicultural techniques.....5-24

218. Public Concern: The Mark Twain National Forest should continue restoration of the shortleaf pine forests of southern Missouri.5-24

219. Public Concern: The Mark Twain National Forest should continue to delineate the land-type associations and ecological land types on which pine planting is allowed.....5-24

Exotic Species5-24

220. Public Concern: The Mark Twain National Forest should address exotic species.5-24

HERITAGE RESOURCES.....5-25

221. Public Concern: The Mark Twain National Forest should protect heritage resources in the forest.5-25

Including the Greer Spring Mill.....5-25

Appendix D

Demographics

Introduction

Demographic analysis presents an overall picture of respondents: where they live, their general affiliation to various organizations or government agencies, and the manner in which they respond. The database CAT uses contains public comment organized under subject categories (see Appendix B), and demographic information. This kind of database can be used to isolate specific combinations of information about public comment. For example, a report can show public comment from certain geographic locations or show comments associated with certain types of organizations. Thus demographic coding, combined with comment coding, allows managers to use the database to focus on specific areas of public concern linked to geographic area, organizational affiliation, and response format.

The total number of responses is as follows:

107	original responses
498	organized campaign responses
605	total responses

The demographic analysis presented in this appendix is based on the 605 total responses (the 498 organized campaign responses are summarized in Appendix E.).

It is important to recognize that the consideration of public comment is not a vote-counting process in which the outcome is determined by the majority opinion. Relative depth of feeling and interest among the public can serve to provide a general context for decision-making. However, it is the appropriateness, specificity, and factual accuracy of comment content that serves to provide the basis for modifications to planning documents and decisions. Further, because respondents are self-selected, they do not constitute a random or representative public sample. The National Environmental Policy Act (NEPA) encourages all interested parties to submit comment as often as they wish regardless of age, citizenship, or eligibility to vote. Respondents may therefore include businesses, people from other countries, children, and people who submit multiple responses. Therefore, caution should be used when interpreting the numbers provided in this report. While demographic information can provide insight into the perspectives and values of respondents, it does not necessarily reveal the desires of society as a whole. All input is considered and the analysis team attempts to capture all relevant public concerns in the analysis process.

CAT identifies several categories for demographic purposes. Responses are the individual letters, postcards, emails, etc., received. Respondents are the individual response writers. Signatures refer to the people who signed these individual responses. The number of signatures may be greater than the number of responses as there may be more than one signature per response. Likewise, the number of total responses may be larger than the number of total respondents due to multiple submissions by the same respondents. CAT determines the number of responses received for a given project, the number of respondents, and the number of signatures.

Geographic Representation

Geographic representation is tracked for each response. Table 1 displays, by origin, the number of responses and signatures. Responses were received from 34 states as well as 1 foreign state. Note that 30 responses did not indicate geographic information.

Table D-1. Number of Responses and Signatures by Origin

State	Number of Responses	Number of Signatures
Alabama	1	1
Alaska	0	0
Arizona	1	1
Arkansas	2	2
California	4	4
Colorado	10	10
Connecticut	0	0
Delaware	0	0
District of Columbia	1	1
Federated States of Micronesia	0	0
Florida	0	0
Georgia	2	2
Guam	0	0
Hawaii	0	0
Idaho	1	1
Illinois	27	31
Indiana	12	22
Iowa	0	0
Kansas	5	5
Kentucky	10	10
Louisiana	1	1
Maine	0	0
Maryland	0	0
Massachusetts	1	1
Michigan	3	3
Minnesota	2	2
Mississippi	1	1
Missouri	447	459
Montana	1	1
Nebraska	2	2
Nevada	1	1
New Hampshire	0	0
New Jersey	1	1
New Mexico	1	1
New York	11	11

North Carolina	1	1
North Dakota	0	0
Ohio	3	3
Oklahoma	0	0
Oregon	0	0
Pennsylvania	5	5
Puerto Rico	0	0
Rhode Island	1	1
South Carolina	0	0
South Dakota	0	0
Tennessee	2	2
Texas	1	1
Utah	4	4
Vermont	0	0
Virginia	1	1
Washington	2	2
West Virginia	4	4
Wisconsin	3	3
Wyoming	0	0
International	1	1
Response submitted by Multiple States	1	4
Anonymous/Unknown	28	29
Total	605	635

Organizational Affiliation

Organizational affiliation is tracked for each response. Table 2 displays, by organization type, the number of responses and signatures. The first box indicates respondents who wrote on behalf of themselves or those whose affiliation was unclear.

Table D-2. Number of Responses and Signatures by Organization Type

Organization Type	Number of Responses	Number of Signatures
Individual/Unaffiliated	575	601
University/Professional Society	0	0
Federal Agency/Elected Official	1	1
State Agency/Elected Official	1	1
County Agency/Elected Official	0	0
Town/Municipality Agency/Elected Official	1	1
Government Employees, Organizations and Unions	0	0
Tribal Official/Member	0	0
Agriculture Industry/Association	0	0
Conservation District	0	0
Business	0	0
Place Based Group	2	2
Civic Group	0	0
Range/Grazing Organization	0	0
Timber or Wood Products Industry/Association	1	1
Mining Industry/Association	2	2
Oil and Pipeline Industries	0	0
Recreational Non-Motorized Organization	1	1
Recreational Motorized Organization	3	3
Special Use Permittee	0	0
Conservation/Preservation Organization	17	18
Utility Group/Organization	0	0
Multiple Use, Wise Use, Land Rights Organization	0	0
Other	0	0
Single Responses signed by Multiple Organizations	1	4
Total	605	635

Response Type

Table 3 displays, by response format, the number of responses and signatures. The majority of responses received were letters, followed by forms (organized response campaigns) and public meeting comment forms.

Table D3 - Number of Responses/Signatures by Response Type

Response Type #	Response Type	Number of Responses	Number of Signatures
1	Letter/Fax	103	116
2	Form	493	510
3	Resolution	0	0
4	Action Alert	0	0
5	Transcript	0	0
6	Public Meeting Comment Form	9	9
7	Public Meeting Transcript	0	0
8	Public Meeting Group Notes	0	0
9	Workshop Notes	0	0
Total		605	635

Delivery Type

Delivery types are also tracked for each response received on the project. Responses were received in the form of mail and e-mail.

Table D4 - Number of Responses/Signatures by Delivery Type

Delivery Type Code	Delivery Type	Number of Responses	Number of Signatures
E	E-mail	158	174
F	Fax	0	0
H	Hand delivered	0	0
M	Mail	447	461
T	Telephone	0	0
Total		605	635

Appendix E

Organized Response Report

Organized responses represent 82 percent of the total responses received during the public comment period for the Mark Twain National Forest Plan Revision Notice of Intent (498 out of 605). Five or more responses, received separately but containing identical text, constitute an organized response campaign. Once an organized response campaign letter is identified, a “master” is entered into the database. All responses with matching text are then linked to this master within the database with a designated number. If a response does not contain all of the text presented in a given organized response, or if it includes additional text, it is entered as an individual letter. Identical responses from four or fewer respondents are also entered as individual letters.

Organized responses are identified with both a number and a name (usually a salutation or first line of text). The following table presents the total number received of each form and summarizes the concerns found therein.

Table E-1 Organized Response Campaigns

Name of Form	Total Received	Description of Form
1	24	Supports putting all issues out for comment. Recommends wilderness areas and wild and scenic river designations. Requests protection for roadless areas, water quality, and threatened and endangered species; reassessment of the role of fire, reduction of the road density in sensitive areas, and acquisitions of land inholdings. Requests that no off-road vehicles, lead mining, and commercial timber harvest be allowed in the forest. Also requests to be on the mailing list but to receive no further documents.
2	171	Supports putting all issues out for comment. Recommends wilderness areas and wild and scenic river designations. Requests protection for roadless areas, water quality, and threatened and endangered species; reassessment of the role of fire, reduction of the road density in sensitive areas, and acquisitions of land inholdings. Requests that no off-road vehicles, lead mining, and commercial timber harvest be allowed in the forest. Also requests to be on mailing and to receive further documents.
3	52	Opposes leaving the issues of mineral exploration and threatened and endangered species out of the revision process. Requests that the use of new technology and data gathering be used to address these issues. Also requests to be on the mailing list but to receive no further documents.
4	18	Opposes leaving the issues of mineral exploration and threatened and endangered species out of the revision process. Requests that the use of new

		technology and data gathering be used to address these issues. Also requests to be on the mailing list and to receive further documents.
5	23	Supports opening all roads and trails unless posted closed and providing a policy that addresses workable situations for young riders on non-street legal motorcycles. Requests changing the designation of semi-primitive non-motorized areas to semi-primitive motorized areas.
6	8	Supports the reevaluation of land suitable for timber management and suitability, studying inventoried roadless areas, and revising riparian guidelines. Also supports threatened and endangered species and mineral exploration amendments as they are.
7	9	Opposes closing roads and restricting access to motorized recreational vehicles. Requests better enforcement of rules.
8	170	Supports putting all issues out for comment. Recommends wilderness areas and wild and scenic river designations. Requests protection for roadless areas, water quality, and threatened and endangered species; reassessment of the role of fire, reduction of the road density in sensitive areas, and acquisitions of land inholdings. Requests that no off-road vehicles, lead mining, and commercial timber harvest be allowed in the forest.
9	14	Supports opening all roads and trails unless posted closed and providing a policy that addresses workable situations for young riders on non-street legal motorcycles. Requests changing the designation of semi-primitive non-motorized areas to semi-primitive motorized areas. Also requests that there be more areas for motorized recreation.
10	9	Supports allowing off-road vehicles in the forest based on taxpayers' rights.

Appendix F

List of Preparers

The list includes the names of the individuals and area of contribution they made toward the completion of the analysis of public comment for the Mark Twain National Forest Plan Revision Notice of Intent.

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