

## *Bitterroot Burned Area Recovery Project*

### **Project Summary<sup>1</sup>**

In 2000, wildland fires burned 307,000 acres on the Bitterroot National Forest (BNF) in Montana, more than ever before in its recorded history. Across the Northern Rockies in the last century, only the Big Blowup of 1910 surpassed the fires of 2000.

#### **Proposed Project**

The BNF proposed a project to reduce postfire fuel loads and improve watershed and aquatic habitat conditions on about 80,000 acres, including timber harvest on about 40,000 acres. The proposed project was time-sensitive due to (1) threats from flooding and debris flows on burned slopes, and (2) the rapidly diminishing commercial value of burned timber.

#### **Consequences of No Action**

Failure to act would increase the probability of high-severity fires in wildland/urban interface areas and warm/dry forests. Other consequences include keeping ponderosa pine from regenerating in some areas, increasing the risk of invasion by noxious weeds, and forgoing improvements to elk habitat and opportunities for private employment and income.

#### **Timeline**

Planning began in August 2000 and lasted until October 19, 2001, when the notice was published that the final environmental impact statement (EIS) was available. Challenge-related actions began on October 5, 2001, when the Chief sought an emergency exemption from automatic stay, and lasted until February 7, 2002, when the Forest Service reached a mediated settlement with litigants allowing some fuel reduction projects to go forward and canceling others.

#### **Public Concerns**

A public opinion survey of local residents found that more than 80 percent supported the goals of the proposed project, whereas less than 5 percent believed the BNF should do nothing. During the EIS process, the public raised concerns regarding the need for and method of fuel hazard reduction; project effects on soils, watersheds, and aquatic habitat; changes in motorized and non-motorized access; bark beetle risk; economic opportunities; project effects on unroaded lands; and project effects on old growth and flammulated owl habitat.

#### **Procedural Constraints**

The project was large and time-sensitive, so the BNF had to complete a great deal of planning in a very short time. At the same time, the BNF had to provide extensive documentation. Faced with possible appeals and litigation, the BNF had to fully document its “hard look” at all the issues and its full compliance with every conceivably applicable requirement. The following issues illustrate the difficulty and the time and effort required:

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<sup>1</sup> Based on the full project description that follows on page 3. Project descriptions were submitted by line officers to the Forest Service’s Washington Office and lightly edited, then summarized for this report in two pages or less. Each project description is preceded by a two-page project summary.

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- **Roads analysis.** Forest Service roads policy requires extensive analysis and documentation before certain management actions.
- **Water quality.** Requirements included developing total maximum daily load standards for several streams in the project area.
- **Wildlife species viability.** Regulations require the Forest Service to maintain the viability of native and desired nonnative vertebrate species. There are 12 sensitive vertebrates and 27 sensitive plants on the BNF.
- **National Forest Management Act (NFMA) consistency.** NFMA requires that all projects be consistent with standards and guidelines in forest plans. The Bitterroot Forest Plan contains more than 500 standards.
- **National Environmental Policy Act (NEPA) supplementation review.** NEPA regulations require supplementation of an EIS if “significant” new circumstances or information emerge. The BNF thoroughly reviewed the forest plan and its EIS to ensure that the plan still provided adequate direction.

### Public Involvement

The value of open decisionmaking and public participation was evident early in the process. Initial public meetings and informal discussions were very positive. Many local people were happy to share their opinions and suggestions with the Forest Service, which found considerable value in their input. Stronger relationships resulted, along with a heightened sense of community.

After publication of the draft EIS, public discourse became more divisive and adversarial. Given the prospect of judicial review, there was little motivation for compromise. In addition, regional and national interest groups became more assertive, appearing to many to push most local interests out of the picture. Some local interests now saw their involvement as less effective.

For those who prefer more collaborative decisionmaking processes, the transition to an adversarial, prelitigation phase was frustrating and discouraging. Many believe they must choose between joining the adversarial fray and withdrawing from the public involvement process altogether.

### Planning Needs and Costs

By January 2002, BNF employees had spent about 15,000 person-days (57 person-years) on planning the project. The BNF spent about \$1 million to prepare the analysis and documentation needed for the pending decision.

The areas of professional expertise most in demand for this project included fire behavior, fire ecology, soil scientists, hydrologists, fisheries biologists, and wildlife biologists. In some cases, the forest was compelled to recruit people with these skills from outside.

Uncertainty over what is a legally sufficient level of analysis for particular issues and policy directives often leads to levels of analysis and documentation greatly exceeding the amount line officers feel is needed to make an informed decision. This additional analysis and documentation is “for the courts,” and is of little or no use to the general public or agency decision-makers.

## *Bitterroot Burned Area Recovery Project*

### **Project Description**

The Bitterroot Valley in southwestern Montana is bounded by the Bitterroot Mountains on the west and the Sapphire Range on the east. The valley is in Ravalli County, the fastest growing county in Montana. The valley is about 2,400 square miles in size, 75 percent of which is on the Bitterroot National Forest (BNF).

About 36,000 people live in the valley. As the population has grown, many residents have built homes next to forested lands. The BNF abuts private land for about 540 miles in the Bitterroot Valley. Residents enjoy the rural character and feeling of living in the country, close to the natural environment.

During the summer of 2000, wildland fires burned more than 355,000 acres of the Bitterroot Valley, including 307,000 acres on the BNF and 49,000 acres of state and private land. The fires destroyed 70 homes, 170 other buildings, and 95 vehicles. They forced nearly 24 percent of Bitterroot Valley residents to evacuate or prepare to evacuate their residences.

#### **Proposed Project**

As the fires waned, the Forest Service and the Bitterroot Interagency Recovery Team began planning and implementing emergency recovery work. The work focused on stabilizing soils, preventing erosion in areas most severely burned, and preparing for increased streamflows. To promote recovery and rehabilitation of portions of the BNF burned by the fires of 2000, the Forest Service proposed to:

- reduce postfire fuel loadings—
  - on about 20,000 acres in the wildland/urban interface;
  - on about 20,000 acres of burned dry forestlands outside the wildland/urban interface;
  - on about 33,000 acres of classified suitable timberlands outside wildland/urban interface and dry forestlands; and
- improve watershed and aquatic habitat conditions by—
  - upgrading or maintaining about 500 miles of roads within burned drainages to meet state best management practices,
  - rehabilitating 105 miles of road (placing in storage),
  - decommissioning 65 miles of road,
  - revegetating cut-and-fill slopes,
  - removing culvert barriers to fish passage in seven burned drainages,
  - constructing fish habitat structures in eight streams,
  - planting conifers along two stream reaches, and
  - planting trees to reforest about 37,000 acres.

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### Project Purpose and Need

The purpose of the project was to reduce fuels in portions of the burned areas, improve watershed and aquatic conditions in heavily burned drainages, restore forested conditions in some areas, and reduce fuels more cost-effectively by removing forest products and providing jobs and income.

The need was derived from the differences between postfire conditions and desired resource conditions. Desired conditions are based on forest plan direction and management objectives. The proposed actions were designed to move resource conditions closer to the desired condition.

### Project Timeline

The BNF began postfire recovery planning and informal public involvement in August 2000, before the fires were contained. Key steps included initiation of the Bitterroot Interagency Recovery Team and numerous public meetings. Numerous resource specialists from around the United States converged on the Bitterroot Valley in September of 2000 to identify, plan, and carry out burned area emergency rehabilitation.

A team of BNF resource specialists began evaluating postfire conditions in October 2000. Their task was to evaluate the magnitude of the fire impacts, predict future effects, and develop both short- and long-term strategies for recovery. They completed their task in December 2000 and published a 350-page document, "Bitterroot Fires 2000: An Assessment of Postfire Conditions with Recovery Recommendations." The recommendations provided the foundation for development of proposed actions.

After the forest proposed actions, it initiated formal public scoping. A notice of intent to prepare an environmental impact statement (EIS) was published in the Federal Register on February 21, 2001. The draft EIS was made available to the public on May 24, 2001. The BNF extended the public comment period from 45 days to 60 days. The public comment period ended on July 31, 2001. The final EIS was completed the first week of October 2001. The notice of availability of the final EIS was published in the Federal Register on October 19, 2001.

To avoid further resource damage, the forest and region sought to expedite project implementation by requesting an emergency exemption from the automatic stay under the Appeals Reform Act and 36 CFR 215.10(d) on October 5, 2001. Rather than respond to the request, the Chief requested that the Secretary's Office make the project decision, thereby exempting the project from administrative appeal and automatic stay. The Under Secretary for Natural Resources approved the project on December 17, 2001.

On December 18, 2001, a coalition of environmental organizations led by the Wilderness Society and Friends of the Bitterroot filed two lawsuits challenging, among other things, the Under Secretary's authority to authorize the Bitterroot fire recovery project. The cases were consolidated before District Court Judge Donald Molloy. Both plaintiffs sought temporary restraining orders, which the district court granted *ex parte*. Plaintiffs also moved for a preliminary injunction. On January 7, 2002, the district court granted the preliminary injunction, finding that "Congress wanted the opportunity for full democratic participation in Forest Service decision making when

it created a statutory right to an administrative appeal. Neither the Secretary of Agriculture, the Under Secretary of Agriculture, nor the Forest Service can take away a right the Congress granted or a process Congress demanded.”

On February 7, 2002, the government and plaintiffs reached a mediated settlement of the lawsuit and filed a joint motion to dismiss the case. Among other things, plaintiffs agreed that the government may implement all or portions of 16 fuel reduction projects, as well as other activities that do not involve road construction or commercial timber harvest such as fisheries habitat improvement. The government agreed to not implement, pending additional analysis, all or portions of 21 fuel reduction projects. The government also agreed to withdraw its appeal of Judge Molloy’s preliminary injunction.

### **Project-Related Issues**

#### ***Survey Results***

Following the 2000 fire season, the University of Montana’s Bureau of Business and Economic Research conducted a public opinion survey to help the BNF better understand how the people of Ravalli County wanted the forest to be managed, particularly in response to the fires. The Bureau interviewed by telephone over 1,200 residents of Ravalli County during December 2000 and January 2001.

Responses to survey questions paint a picture that differs from public comments on the draft EIS (ROD, p. 2; FEIS, pp. 1-3 and 2-2). In particular:

- 83 percent believe reducing fuels and fire hazards is important or very important.
- 87 percent believe it is important or very important for the BNF to plant trees in burned areas.
- 89 percent believe that it is important or very important for the BNF to salvage burned timber.
- 87 percent believe it is important or very important to restore streams.
- 87 percent think it is important or very important to stabilize soils.
- 72 percent believe it is important or very important to maintain existing roads and trails.
- 4 percent believe it is important or very important that the BNF do nothing to the wildland interface.
- 3 percent believe it is important or very important that the BNF do nothing to burned areas.

The majority of survey respondents favored active management of the Forest’s burned areas.

#### ***EIS Process***

During the development of the EIS, a number of key issues were raised by the public. Some of these issues are briefly summarized below, based on information presented in the FEIS (pp. 2-3 through 2-6).

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- ***Need for and method of fuel hazard reduction.*** At the core of this issue are comments questioning the scientific evidence that using salvage harvest (removing fire-killed trees by logging) is an effective way to reduce fuels, or that reducing fuels reduces the potential effects of future fires.
- ***Effects on soils, watersheds, and aquatic habitat.*** Some expressed concern that using mechanized equipment to reduce fuels through either timber sales or stewardship contracts would increase soil erosion, decrease soil productivity, and decrease water quality.
- ***Changes in motorized and nonmotorized access.*** There was concern that the road rehabilitation activities proposed to improve watershed conditions would reduce current motorized and nonmotorized access for recreation or management.
- ***Bark beetle risk.*** The BNF had a Douglas-fir bark beetle epidemic prior to the fires. Bark beetle populations and beetle-caused tree mortality are expected to increase due to the extensive areas of fire-stressed trees.
- ***Economic opportunities.*** Many people want the Forest Service to maximize economic opportunities through timely salvage of fire-killed trees.
- ***Effects on unroaded lands.*** Some respondents believe that no reforestation, fuel reduction work, or active management other than trail maintenance or perhaps weed control should occur on unroaded lands, defined as “areas without the presence of a classified road, of a size and configuration sufficient to protect the inherent characteristics associated with its roadless condition” (FSH 7710 and USDA 2000r). Unroaded areas do not overlap with inventoried roadless areas.
- ***Effects on old growth and flammulated owl habitat.*** The fires of 2000 reduced old-growth habitat. Some people believe that fuel reduction activities are not appropriate in old-growth habitat because it may reduce the quality of the remaining habitat. Similarly, concern for protecting prime habitat for flammulated owls, a sensitive wildlife species, was expressed.

### Consequences of No Action

Without fuel reductions, watershed or aquatic-habitat improvement, and reforestation of burned areas, wildland/urban interface areas and warm, dry forest environments will have higher probabilities of high-severity fires. Past reforestation investments might be lost and site productivity reduced. Ponderosa pine, which historically occurred on many of the warm, dry forested sites, might not regenerate due to the absence of natural seed sources.

Existing sediment sources will not decrease, leading to a reduction in water quality and aquatic habitat quality. There will be no reduction in the risk of long-term damage to bull trout and west-slope cutthroat trout in numerous occupied drainages, because there will be no reduction in the threat of future severe burns in these recovering drainages.

The risk of further noxious weed invasion will increase due to the unabated risk of future high-intensity fires. In addition, various road management actions will not be taken, leaving elk habitat effectiveness and security at their current low level in the postfire area. In addition, opportunities for private employment and income will be forgone.

## Procedural Constraints

Procedural issues must be viewed in the context of two overriding characteristics of the project. First, the magnitude of recovery actions on 300,000 acres of burned area is almost unprecedented for the forest and the region. The BNF has never experienced such large fires in its recorded history. Only the fires of 1910 provide a comparable event in the Northern Rockies. The Bitterroot fires were the largest, but other fires burned an additional 500,000 acres on other national forests in the Northern Region. The resulting cumulative need for fire recovery actions severely taxed the capacity of Forest Service units throughout the region, especially on the BNF.

Second, the project is urgent. By their very nature, postfire recovery actions are time sensitive; in some case, opportunities are fleeting. Untreated soils on burned slopes pose a serious and immediate threat to public safety and private property. Despite the stabilization work undertaken immediately after the fire, severe flooding and debris flows emanated from BNF lands in the spring and early summer of 2000. Moreover, the opportunity to treat postfire fuel conditions through commercial timber sales and stewardship contracts will diminish rapidly as burned timber loses commercial value.

Opponents of most active and commercial management on national forests have made clear their intention to challenge fuel reduction and salvage activities with every available tool—notably, administrative appeals and lawsuits. The line officers and staff of the BNF are in a difficult position. They face intense pressure to complete a large amount of planning in a very short time. They face equally intense pressure to fully document their “hard look” at all the issues and their full compliance with every potentially applicable procedural requirement. This thorough documentation is essential for the forest to withstand a federal court’s “searching inquiry” of whether the forest “adequately considered all the relevant factors.”

Within this contextual vise (i.e., the need to act quickly yet provide extensive documentation), individual procedural tasks and analysis issues take on a new character. When viewed individually and in isolation, these tasks typically appear appropriate, reasonable, and in most cases not too difficult. However, it is their cumulative extent, when combined with the documentation required to withstand judicial review, that poses the major challenge to agency decisionmakers.

The list of “relevant factors” is incredibly long. Public scoping and comments on the draft EIS resulted in an extensive number of issues. Some interest groups submitted comments that are more than 100 pages in length. Interdisciplinary team leaders faced difficult choices on how to address these issues and the numerous sources of other potentially relevant factors that may become the subject of judicial review. The sources include the extensive regulations of the Forest Service and other agencies, executive orders, Forest Service directives, and hundreds of specific provisions in the Bitterroot Forest Plan. To provide the greatest chance of success in judicial review, the forest felt compelled to document full and rational consideration of every arguably relevant factor, even if only to explain why it was not germane. However, time, costs, and the limited availability of analysts and writers made it infeasible to document everything. The following specific issues illustrate the difficulty forest personnel faced:

- **Roads analysis.** Forest Service policy requires analysis of existing road conditions, anticipated transportation needs, and environmental factors prior to certain management actions.

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The policy imposes specific documentation requirements. The forest spent 100 person-days to comply.

- ***Clean Water Act and water quality.*** Requirements for managing nonpoint pollution, including sediment from national forest land, include developing total maximum daily load standards for rivers and streams classified as “water quality limited segments,” streams where beneficial uses are impaired by certain human activities. Several of these streams are within the area of the BNF’s Burn Recovery Project.
- ***Wildlife species viability.*** National Forest Management Act (NFMA) regulations require the Forest Service to maintain the viability of native and desired nonnative vertebrate species.<sup>2</sup> The Bitterroot Forest Plan identifies three species and old-growth communities as management indicators. The Forest Service Manual prohibits management actions that lead to listings under the Endangered Species Act. There are 12 sensitive vertebrates and 27 sensitive plants on the BNF. Uncertainty about the population dynamics of most of these species makes the analysis of species viability problematic.
- ***NFMA consistency.*** NFMA requires that all projects be consistent with standards and guidelines in forest plans.<sup>3</sup> The Bitterroot Forest Plan contains more than 500 standards. Reviewing and documenting the consistency of EIS alternatives with each standard is cumbersome and time consuming.
- ***National Environmental Policy Act (NEPA) supplementation review.*** NEPA regulations require supplementation of an EIS if “[t]here are significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts.”<sup>4</sup> We thoroughly reviewed the forest plan and its EIS to ensure that the plan still provides adequate direction in the wake of the fires. That took about 90 person-days.

### Public Participation

In the fall of 2000, we held 12 public meetings in various parts of Ravalli County to provide an opportunity for citizens and to share postfire information with the BNF and to help us collect input on postfire recovery needs. After formulating a proposed action, we initiated public scoping. We published a notice of intent to prepare an EIS in the Federal Register on February 13, 2001. News releases were published in area newspapers in February and early March 2001. The project proposal (“scoping letter”) was sent to about 1,300 individuals, organizations, and other agencies in February.

The scoping letter invited interested parties to community meetings to discuss the project and share their ideas and concerns. Community scoping meetings were held in Corvallis, Darby, Sula, and West Fork in February 2001. The meetings introduced the proposed actions, summarized purposes and needs, and provided participants with the opportunity to ask questions and submit comments. Additional meetings were held with representatives of federal, state, and local agencies; tribal representatives; and representatives from the science and research communities.

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<sup>2</sup> 36 CFR 219.19.

<sup>3</sup> 16 U.S.C. 1604(i).

<sup>4</sup> 40 CFR 1502.9(c)(ii).



During the winter of 2001, the University of Montana's Bureau of Business and Economic Research conducted a public survey to gather information from Ravalli County residents about what the priorities should be for postfire management. The survey included more than 1,200 telephone interviews in December 2000 and January 2001. The results showed that a majority of survey respondents strongly favor active resource management in the burned areas. These findings support the majority of comments at Community Opportunity Series meetings.

Written comments (letters or electronic mail) were received from 45 individuals, agencies, businesses, and organizations during scoping. Additional comments were submitted by phone, personal visits, and at the community meetings. Tribal consultation was initiated with interested American Indian tribes and will be ongoing throughout implementation.

The DEIS was made available to the public on May 24, 2001. Letters and a brief overview of the DEIS were mailed to all parties included on the project mailing list. Copies of the complete DEIS were also mailed on May 24 to those who had previously requested it. Notices informing the public of the DEIS's availability were published in the Federal Register and the *Ravalli Republic* (a newspaper) on June 1, 2001.

Information about the DEIS was made available in a variety of formats. A two-page "At a Glance" preview outlining and comparing the five alternatives, a 26-page summary discussing the alternatives in greater detail (with maps), and the 670-page DEIS with a map package (both bound copy and CD) were mailed or made available on request. The DEIS was also posted on the BNF website and made available at the Ravalli and Missoula County libraries.

During the DEIS comment period, public meetings were held in Darby and Hamilton, in conjunction with field trips. A public meeting in Darby occurred on June 7, followed by a bus trip to the Waugh Gulch Demonstration Site on Saturday, June 9. A second information meeting was held in Hamilton on June 14, followed by a bus trip to the Cow Creek Demonstration Site on Saturday, June 16. Both field trips demonstrated on-the-ground examples of proposed activities, allowed the ID Team to present information, and provided the public with further opportunities to ask questions and hold discussions with the ID Team and Line Officers.

A DEIS public awareness campaign was designed and developed to publicize the availability of the DEIS and the opportunity to comment. Newspaper ads and radio spots ran for 3 weeks following the release of the DEIS. Ads ran in the *Ravalli Republic*, *Missoulian*, and *Bitterroot Star*. Radio spots were broadcast several times throughout the day on six local radio stations. Both newspaper ads and radio spots ran from June 23 through July 13, 2001.

The comment period for the DEIS ended on July 31, 2001. The original 45-day comment period was extended to allow 60 days for DEIS review and comment. Over 2,400 comments from individuals, organizations, businesses, and other agencies were received during the comment period. Comments included letters, postcards, form letters and cards, e-mail messages, and telephone calls.

DEIS comments were read by the ID Team, other staff, and the Responsible Official. All comments were included in the content analysis process, to compile, categorize, and capture the full

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range of public viewpoints and concerns. Pursuant to NEPA regulations, the final EIS was made available to the public for 30 days prior to issuance of the record of decision (ROD).<sup>5</sup>

There is widespread belief that the Forest Service's decisionmaking processes must be open and easily understood and that line officers must consider public input prior to making land management decisions. In the case of the Bitterroot project, the value of open decisionmaking and public participation was evident early in the process. Prior to publication of the DEIS, public meetings and informal discussions were very positive. Many members of the local public were happy to share their opinions and suggestions with the Forest Service. Forest officials found considerable value in this input. These experiences strengthened relationships between forest personnel and much of the local public. It also helped continue the heightened sense of community that arose from the shared experience of the fires. Local residents felt they had a say in forest management decisions that were important to them.

Positive aspects of public involvement seemed to fade after publication of the DEIS. At this point, some interest groups and individuals began to express their views more stridently, leading to more divisive and even adversarial public discourse. Given the obvious prospect of judicial review, there was little motivation for compromise among interests. In addition, regional and national interest groups became more assertive in the process. These interest groups appeared to many to push the majority of local interests out of the picture by virtue of their broader influence and their political and legal expertise in influencing federal agency decisions. This caused some local interests to see their involvement as less effective than before. Despite the best efforts of the agency to prevent it, the public involvement process seemed to dissolve into a process of litigation preparation for some interests.

The transition to the adversarial, prelitigation phase of public involvement is of considerable value to those opposed to what they expect will be the agency's decision. For this segment of the public, the federal judiciary provides an indispensable means of possibly vindicating their opposition to the project. They fully—and with considerable experience and expertise—utilize the public involvement procedures of NEPA to exhaust their administrative remedies and maximize their chances of success in federal court. For those who prefer more pluralistic and collaborative decisionmaking processes, the transition to an adversarial, prelitigation phase of public involvement is frustrating and discouraging. Many feel they must choose between joining the adversarial fray and withdrawing from the public involvement process because their input no longer seems effective or even relevant.

### Planning Needs and Costs

The BNF has assigned to the planning project about 30 people for more than 40 hours per week over the last 12 months. Another 30 employees have been involved on a part-time basis during this period. (This equates to roughly 15,000 person days or 57 person years spent to-date planning this project). In addition, the forest contracted with an outside consultant group for an evaluation of fire effects on the hydrology of the Bitterroot River drainage. The Forest estimates that it has spent about \$1 million to prepare the analysis and documentation needed for the pending decision. That includes more than \$100,000 in printing and mailing costs.

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<sup>5</sup> 40 CFR 1503.1(b), 1506.10(b)(2).

The areas of professional expertise most in demand for this project included fire behavior, fire ecology, soil scientists, hydrologists, fisheries biologists, and wildlife biologists. In some cases, the forest was compelled to recruit people with these skills from other national forests and agencies. However, time-consuming and bureaucratic hiring and contracting processes impeded efforts to utilize human resources outside of the forest's permanent workforce.

To perform their tasks effectively, ID Team members in each required discipline must be familiar with the most recent scientific research, have the ability to critically evaluate and quickly synthesize scientific literature, be able to effectively organize analysis results, and have strong abilities to write clearly and concisely. In addition, they must also be familiar with the latest judicial interpretations of NEPA, NFMA, Endangered Species Act, Clean Water Act, and any other laws applicable to their discipline. These skills are in short supply relative to demand. There is little systematic training to develop these skills, and there are few support systems to reinforce any limitations of the team.

ID Team members often believe that much of their work is “for the courts” and not particularly useful for line officers who make decisions. Anecdotal evidence suggests that the vast majority of the interested public does not read most of the information contained in the EIS. We surmise that only the groups or individuals interested in litigating the decision carefully review the analysis methods and results documented in the EIS and project record.

Many employees would prefer to avoid such assignments because they perceive them as unrewarding exercises in paperwork, with a greater chance of frustration and failure than of success. This further limits the pool of human resources accessible for assignment to planning tasks such as a burn area recovery project.

### Summary

The project does not reveal any conflicts among the substantive provisions of the principal statutes governing National Forest System management. However, it appears that the level of documentation motivated by the broad and imprecise standard of review used by federal courts in NEPA and Administrative Procedures Act cases may be in tension with the Paperwork Reduction Act, the original intent of NEPA, and Council on Environmental Quality regulations (40 C.F.R. 1550.4, and 40 C.F.R. 1502.7).

The project planning process used in the BNF's burned area recovery project has been complex. New regulations and policy directives continue to add to the list of “relevant factors” that arguably must be considered and documented in project planning. Uncertainty over what is a legally sufficient level of analysis for particular issues and policy directives often leads to levels of analysis and documentation greatly exceeding the amount line officers feel is needed to make an informed decision. This additional analysis and documentation is “for the courts,” and is of little or no use to the general public or agency decision-makers.

The BNF forest supervisor believes that his decisionmaking was enhanced by ID Team analysis of the ecological, social, and economic consequences of various project alternatives. He also believes that forest decisionmaking greatly benefits from a clear understanding of the concerns and

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desires of the public. However, much of the analysis and documentation prepared to minimize litigation risks did not substantially help the decisionmaker.

For its part, the public generally appreciates an open decisionmaking process that provides meaningful opportunities for public input. In the early phases of the project, public support was enhanced by the knowledge that numerous agency specialists were working to design alternatives that carefully balanced diverse recovery and rehabilitation opportunities, environmental risks, and public desires. Public acceptance was probably diminished as a result of the perception that litigious interest groups may have more influence on what ultimately happens on the ground than general public input.

## *Santa Fe Municipal Watershed Project*

### **Project Summary**

The 17,384-acre Santa Fe municipal watershed in the Santa Fe River canyon provides 40 percent of the water supply for the city of Santa Fe, N.M. Most of the watershed is in a designated roadless area; it conjoins national forest land on three sides and abuts the city of Santa Fe on the fourth. Fire exclusion has produced a dense understory of fir in the historically open ponderosa pine forest. The forest is highly susceptible to catastrophic fire.

#### **Proposed Project**

The project area is 7,270 acres. It was selected as the highest-priority area within the watershed that can feasibly be treated within a 5- to 10-year period. The project would (1) reduce the fire danger, and (2) stimulate herbaceous ground vegetation, thereby improving long-term soil stability and biodiversity. The proposed project involves “thinning from below,” followed by low-intensity prescribed burning. No new roads would be constructed. No timber sales are proposed.

#### **Consequences of No Action**

A wildfire in the watershed would spread to at least 46,000 acres within two days, possibly threatening lives and property. For the first two days, there would be no chance of containment. The impacts on water and air quality, fish and wildlife habitat, and heritage resources would be enormous. Proximity to Santa Fe is a major concern.

#### **Timeline**

The Forest Service conducted an initial assessment in 1997. A draft EIS was issued in March 2001; the final EIS and ROD were released on October 4, 2001.

#### **Public Concerns**

Initial concerns related to timber sales, roadbuilding, and removal of large trees. Issues that continue to surface include escaped prescribed burns, particularly after the Cerro Grande Fire near Los Alamos, N.M.; the potential for soil erosion and stream sedimentation; potential increased water temperatures, affecting aquatic habitat; changes to wildlife habitat, affecting special-status species or management indicator species; smoke from prescribed burning; increased haul truck traffic through residential areas; potential damage to archeological sites or areas of traditional heritage or cultural concern; and increased ash from burning, which could enter the water supply.

#### **Procedural Constraints**

“Conflicting laws” were not an issue. Analysis and public involvement associated with NEPA were the primary reasons for delay, although some believe that even more data collection and analysis would be desirable. The decision to do an EIS rather than an environmental assessment (EA) added time, although most believe the EIS was worthwhile. Proximity to Santa Fe, a major urban center, necessitated a lengthier process. The process could have been expedited had it been clear from the beginning that it had highest priority for the Santa Fe National Forest.

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### Public Involvement

A collaborative group process began in 1997 and continued through 2001. The former deputy forest supervisor noted that frustrating delays were “indicative of a collaborative process.” The Santa Fe community was actively engaged and *demanding* ongoing input.

Additional involvement included more than 17 meetings with community organizations; monthly public tours of the watershed; a large community forum, including a panel of renowned forest ecologists; meetings with nearby residents; a thin-and-burn demonstration with field trips; a brochure distributed to city residents; a Website; and a great deal of media attention.

### Planning Needs and Costs

The Santa Fe Municipal Watershed Project is not particularly complex from an ecological or hydrological standpoint. However, local constituents simply do not trust the Forest Service to do the right thing. Consequently, the information needs were greater for this project than for many others of similar size and complexity. The demand for sound, supportable information began during initial assessment and continued through the modeling of alternative actions.

It is estimated that the analysis cost more than \$1 million. As to whether the extra time spent added value, the answer to this question is very much in the eye of the beholder. The mayor, regional forester, and others questioned the length of time involved. However, many residents and other interests would have accepted nothing less than the full collaborative process and analysis.

The lengthy collaborative process has apparently substantially reduced the risk of appeal and litigation. The fact that no commercial logging will take place has contributed. Many believe that residents and members of environmental organizations that have been engaged throughout the process will exert pressure on potential litigants to allow implementation to proceed.

However, upon release of the ROD, potential appellants argued that the Forest Service should have conducted extensive inventories of management indicator species and further surveys on “soil conditions, old-growth forest conditions, and other things.” Pointing to a recent court decision on the Cibola National Forest, potential appellants said they might use it as a basis for challenge.

A new concern is the agency’s ability to fund the proposed project. The projected cost of treatment is extremely high, about \$1,500 per acre. This cost would be incurred without the mitigating effect of removing merchantable material. Failure to implement the project after almost five years of public involvement and analysis would be difficult to explain and potentially disastrous if a wildfire occurred during the delay.

## *Santa Fe Municipal Watershed Project*

### **Project Description**

The 17,384-acre Santa Fe municipal watershed in the Santa Fe River canyon provides 40 percent of the water supply for the city of Santa Fe, N.M. The project area comprises about 7,270 acres of the watershed. Land ownerships within the project area consist of Santa Fe National Forest, city of Santa Fe, Audubon Society, The Nature Conservancy, and private lands.

Elevations in the project area range from about 7,000 to 8,500 feet. Ponderosa pine covers 80 to 90 percent of the project area, with the remainder in piñon–juniper and patches of oak, riparian vegetation, and aspen. There is no old-growth forest or habitat occupied by threatened, endangered, or sensitive species.

The project area is in a designated inventoried roadless area. There is one service road at the bottom of the canyon. This unpaved road parallels the river for about 7 miles, ending at the Pecos Wilderness boundary. A few short spur roads and historic trails diverge from the main road. Existing roads provide access to less than 7 percent of the project area; most of the canyon is roadless, and most of the slopes are quite steep and rocky. National forest land designated as roadless or wilderness surrounds the watershed on three sides; the west side abuts the city of Santa Fe.

The project area was selected as the highest priority area within the watershed that can feasibly be treated within a 5- to 10-year period. Other densely forested areas within and around the watershed may be proposed for fuel reduction treatment in the future in order to protect the watershed and the wildland-urban interface.

#### **Proposed Project**

The proposed project involves “thinning from below,” followed by low-intensity prescribed burning. No new roads would be constructed and no log-skidding machines would be used, due to the steep and rugged terrain, distance to roads, erosive soils, and proximity to the water supply. Tree stems, tops and branches less than about four to six inches in diameter would be cut up and place in piles for later burning. In some situations, slash might be scattered on the forest floor rather than piled. Remaining tree trunks (logs) that do not pose a fire hazard would be left on the ground, parallel to the contours of the slope, to help reduce soil erosion and runoff and to aid in nutrient cycling and habitat diversity. Some wood within close proximity to roads might be made available for fuelwood. No timber sales are proposed.

#### **Project Purpose and Need**

Prior to and throughout the 1800s, heavy livestock grazing, homesteading, and logging occurred in the Santa Fe River canyon. The canyon was also Santa Fe’s playground for swimming, fishing, and camping. By the 1920s, the lower slopes were depleted of trees and ground vegetation, soil erosion was severe, and the water had become polluted. In 1932, the watershed was closed to public access to protect the water supply. In addition, the Forest Service pursued a policy of aggressively suppressing all wildland fires. Intensive historical land uses, followed by fire suppres-

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sion, resulted in eliminating the beneficial role of low-intensity surface fires in the fire-adapted ponderosa pine ecosystem that dominates the project area.

Current ponderosa pine forests in the area are very dense, averaging 500 to 1,000 trees per acre. The trees are currently so crowded that their growth is suppressed and they are becoming more susceptible to mortality by fire. Heavy shade has eliminated most herbaceous vegetation on the forest floor. The gradual loss of ground vegetation has reduced biological diversity and soil stability. In addition, the long-term decline in water entering the reservoirs since 1913 is correlated with the increase in the number of trees.

A dense understory of fir has formed, highly susceptible to mortality by fire. The thickets of smaller trees act as ladder fuels that quickly carry a surface fire into the crowns of the taller trees. The understory ladder fuels, together with the dense overstory canopy of trees, create conditions for a fast-spreading, uncontrollable, high-intensity crown fire. The crown fire would likely burn nearby homes and create large amounts of smoke lasting for days or weeks. The fire would destroy valuable forest and watershed resources; cause mass movement of soils, ash, and woody material into the river and reservoirs; and result in severe flooding in Santa Fe.

The primary purpose of the project is to reduce the probability of a large-scale, high-intensity crown fire. A secondary purpose is to stimulate herbaceous ground vegetation, thereby improving long-term soil stability. The desired condition is fewer trees in the understory and openings in the forest canopy. This will not only reduce the heat intensity and rate of spread of a crown fire, but also increase the amount of herbaceous vegetation and enhance habitat diversity.

### Project Timeline

The need for some action to protect the Santa Fe watershed has been recognized for many years. Recent high-intensity fires throughout the country have greatly increased awareness of the watershed's vulnerability to a catastrophic fire event.

The Forest Service initiated an open and collaborative planning process during the initial assessment of existing conditions, beginning in 1997. A draft environment impact statement (DEIS) was issued in March 2001; the final EIS and record of decision (ROD) were released on October 4, 2001.

### Project-Related Issues

Despite assurances that commercial logging was not planned, many of the initial concerns of the public were related to timber sales, roadbuilding, and removal of large trees. Within the scope of the actual proposed project, issues that continue to surface include:

- **Fire control.** Prescribed burns may escape control measures and threaten water supply, residential areas, and other resources. This concern has escalated as a result of the Cerro Grande Fire near Los Alamos, N.M.
- **Soil and water quality.** Thinning and burning activities might increase soil erosion and stream sedimentation.



- **Aquatic/fish habitat.** Thinning conifers near the river might increase water temperature and affect the aquatic habitat.
- **Wildlife habitat.** Thinning and burning might cause changes that affect habitat and wildlife, including special status species; or might affect population viability for management indicator species identified in the forest plan.
- **Air quality/smoke.** Smoke from burning can accumulate in residential or other areas where people work or recreate, affecting visibility and human health.
- **Social/traffic.** Increased haul truck traffic through residential areas might affect the quality of life and cause vibration damage to old adobe or stucco homes along the travel route, particularly along Upper Canyon Road.
- **Heritage resources.** Thinning and burning activities might damage archeological sites or areas of traditional heritage or cultural concern.
- **Facilities/treatment plant.** Burning produces ash that could enter the water supply during rainstorms, causing damage to the water filtration system and affecting water quality and taste.

### Consequences of No Action

Forest Service modeling indicates that during summer drought conditions, a wildfire in the watershed would quickly spread to at least 46,000 acres within two days, possibly threatening lives and property. For the first two days, there would be no chance of containment. The impacts on water and air quality, fish and wildlife habitat, and heritage resources would be enormous. Proximity to Santa Fe is a major concern.

### Procedural Complexity

There was no indication that “conflicting laws” were an issue in this case. Analysis and public involvement associated with the National Environmental Policy Act (NEPA) were pointed to as the primary reasons for the delay in project implementation. There is no consensus as to whether the period of time needed to meet the NEPA/public involvement demands was too long or not long enough. Some, both within the agency and externally, believe that the delay has been needless; others feel that *further* data collection and analysis would be desirable. This became evident immediately after release of the ROD, when some critics alleged that additional inventories of management indicator species were necessary.

The Santa Fe National Forest decision to do an EIS rather than an EA added time to the process, but the general view is that the investment was worth the effort. A common view was that the level of public interest and controversy would have been far less had the watershed been “on the back forty,” thereby greatly shortening the time necessary for analysis and public involvement. However, the proximity of the project to Santa Fe necessitated a lengthier process.

The lead planner for the project recognized that some key players, including the mayor of Santa Fe, were frustrated by what they perceived as unnecessary delays. Acknowledging the high level of local interest, the planner noted that “we needed really good NEPA in order to have a defensi-

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ble process. We expected legal challenge. Environmental groups initially made it very clear that they didn't support any project in the Santa Fe watershed."

The acting forest supervisor also did not believe that laws and regulations caused undue delays in the process. He summed up the time-consuming complexity as typical of wildland/urban interface situations. Santa Fe has many wealthy and highly educated residents with a high level of interest in public land management in general. In the supervisor's opinion, the level of analysis was consistent with "what the public wants us to do."

It should be noted that this process could have been expedited had it been clear from the beginning that this had highest priority for the forest. With many "number one priorities," it is easy for some to be side tracked. Subsequently, it is all too easy to allege that a particular project (such as the Santa Fe Watershed Restoration Project) was overly time consuming, forgetting about all of the other projects that, at the time, were being evaluated simultaneously.

### Public Involvement

The project had a high level of public involvement. A collaborative group process was initiated in 1997 and continued through 2001. Additional involvement included:

- more than 17 meetings with community organizations;
- monthly public tours of the watershed;
- a large community forum, including a panel of renowned forest ecologists;
- meetings with nearby residents;
- a thin-and-burn demonstration with field trips;
- a brochure distributed to city residents;
- a Website; and
- a great deal of media attention.

The former deputy forest supervisor, although expressing frustration over the time the project took, noted that it was "indicative of a collaborative process." He pointed out that there was "a high expectation of legal challenge without the long public involvement process." The common belief is that this involvement was not just "nice to do." The Santa Fe community was actively engaged and *demanding* ongoing input.

### Planning Needs and Costs

The Santa Fe Municipal Watershed Project is not particularly complex from an ecological or hydrological standpoint. The complexity resulted largely from political realities. The highly educated and engaged local constituents simply do not trust the Forest Service to do the right thing. They do not accept agency expert opinions on face value. Consequently, the information needs were greater for this project than for many others of similar size and complexity. There was a demand for "outside" scientific opinion, such as that presented by well-known forest ecologists at a community forum.

In the ROD, the forest supervisor stated: “I felt that by using the best available science, combined with a truly open and collaborative public participation process, I could make an informed decision about how to reduce fuel loads while maintaining the ecological integrity of the natural resources in the watershed. The analyses for soil, water, and aquatic and terrestrial biota were contracted out to respected experts in those fields. The contractors, together with over 16 resource specialists from the Forest Service, conducted a thorough analysis of the relevant issues and alternatives.”

The demand for sound, supportable information began in the early stages of the process (assessment of existing conditions) and continued through modeling of likely outcomes of alternative actions. Despite the detailed analysis, potential appellants are now arguing that the agency should have conducted extensive inventories of management indicator species. They point to a recent court decision on the Cibola National Forest in New Mexico as the basis for their position. A spokesman for the complainants noted that in addition to additional inventories, his group wants to see further surveys on “soil conditions, old-growth forest conditions, and other things.”

As to whether the extra time spent added value, the answer to this question is very much in the eye of the beholder. The mayor, regional forester, and others questioned the length of time involved. However, many residents and other interests would have accepted nothing less than the full collaborative process and analysis.

It is estimated that the analysis cost more than \$1 million. This includes expenses for consultants, the value of which has been questioned by some critics, given the amount of oversight required by agency personnel.

### **Vulnerability to Challenge**

Initially, there was a high expectation of legal challenge to any project in the Santa Fe watershed. However, the lengthy collaborative process has apparently substantially reduced the risk. The fact that no commercial logging will take place has also undoubtedly reduced the risk. Although challenge is still possible, many believe that residents and members of environmental organizations that have been engaged throughout the process will exert pressure on potential litigants to allow implementation to proceed.

However, immediately upon release of the ROD, potential appellants (Forest Guardians and the Forest Conservation Council) noted that the agency failed to conduct inventories of management indicator species. Pointing to a recent court decision on the Cibola National Forest, a spokesman for the groups stated: “I don’t know what they’re going to have to do. One option is to start the process over and gather the required data. Another option is to do a supplemental environmental impact statement.” The executive director of the Forest Conservation Council went even further: “Unless they follow the letter of the law as is written out in Judge Parker’s order, we’ll obviously be challenging that project.”

A new concern is over the agency’s ability to fund the proposed project. The projected cost of treatment is extremely high, about \$1,500 per acre. This cost would be incurred without the mitigating effect of removing merchantable material. The Southwest Region has indicated it does not have the funds available to implement the project at this time. Failure to implement due to lack

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of funding after almost five years of public involvement and analysis would be difficult to explain and potentially disastrous if a wildfire occurred during the delay.

### Summary

An assessment of whether this or most other project analyses were *overly* complex and/or time consuming is highly subjective. Many would argue that spending more than \$1 million over a five-year period is extreme and unnecessary. However, national forest projects in close proximity to urban areas are becoming increasingly common. The local constituents in these settings are often highly educated and distrustful of the Forest Service. These projects will require a greater degree of analysis and collaboration with the public than has historically been the case.

The public is no longer willing to accept Forest Service management decisions at face value. They want detailed analysis and they want to be personally involved with the process. This sharing of decisionmaking will be a difficult transition for many traditional agency managers. If the initial mindset is, “We are the professionals. We know what is best for the land. Just let us get on with our jobs,” then *any* delays due to additional analysis, outside “expert” opinions, and public collaboration will be seen as needless and wasteful. If a conscious choice is made to engage in a collaborative effort with the public, it must be understood that this will extend the time and effort needed to implement a project. Additionally, the final project implementation may be significantly different than that originally envisioned by the agency.

Whether the final decision has been improved as a result of the process depends equally on one’s point of view. To those who firmly believe that commercial wood products should have been removed as part of the project or that more acres should be treated, the decision is flawed. However, through a collaborative process, a decision was reached that most constituents find reasonable. Any project designed with commercial sales would surely have been appealed and litigated. By this standard, one could easily argue that the decision has been improved. That is, it has a high level of public acceptance and a high likelihood of implementation, at least from the standpoint of public support.

However, funding issues may prove to be a problem. The loss of credibility could be severe if the forest is unable to meet public and agency expectations due to lack of financial resources to accomplish project objectives. After years of planning and analysis, it would be disastrous for the agency to have a catastrophic fire in the watershed for lack of treatment funds.

The potential appeal based on the ostensible need for inventories of management indicator species (and the related ruling in the Cibola National Forest case) could delay project implementation. That would illustrate a rather common situation: the agency often works diligently and collaboratively to design a project acceptable to constituents, only to have implementation stalled by a very small minority relying on esoteric legal arguments.

Perhaps the nature of the problem is best represented by the following quote from the executive director of the Forest Conservation Council: “I would like to just say that we are very concerned about the risk of wildfire in the watershed. And we as well as the rest of the community want to address that issue. But we will require the Forest Service to follow the letter of the law. These laws are established to protect the environment.”

## *Megram Fire Recovery Plan*

### **Project Summary**

The Six Rivers National Forest lies in the Coastal Range of northern California. In 1995, a winter storm damaged trees on 35,000 acres, producing a severe fire hazard. To reduce fuels, the forest proposed a salvage sale. Appeals delayed the sale; by 1999, only 1,600 acres of the blowdown area had been treated. In 1999, the 59,000-acre Megram Fire burned through the project area.

#### **Proposed Project**

The forest proposed treatments in the most severely burned watersheds, including salvage harvest on 863 acres and more than 200 acres of noncommercial fuels reduction. Most project areas are designated Late Successional Old Growth (LSOG). They do not include inventoried roadless areas. The project's purpose was (1) to reduce fuel accumulations and create fuelbreaks as a precondition for introducing prescribed fire; and (2) to accelerate reforestation of severely burned areas to help manage LSOG for late-seral characteristics. As often happens, the only way the forest could finance fuels treatment was through a commercial timber sale that generated enough funds to finance other treatments, such as prescribed fire.

#### **Timeline**

Following the blowdown on December 12, 1995, the forest evaluated the situation and proposed a salvage sale that included helicopter logging. The EA was appealed and partially remanded in October 1997. It was supplemented and cleared appeals review in September 1998. By that time, however, the salvage timber had lost value and logging costs had increased. The helicopter units were removed from the package and the sale was made.

Following the 1999 Megram Fire, the forest prepared a new watershed analysis, as required by the Northwest Forest Plan. In October 2000, the forest published a notice of intent to prepare an EIS for proposed fire recovery activities. In May 2001, the Forest Service Chief granted an exemption from appeal. In July 2001, a coalition of environmental groups filed a complaint and a court granted a temporary restraining order. In April 2002, the court ruled that the EIS was inadequate and enjoined the project.

#### **Procedural Constraints**

Following the 1995 blowdown, the initial proposed project area for fuels treatments included an inventoried roadless area. The forest used provisions under the 1995 Rescission Act to conduct its EA for the project. Then the firestorm of opposition to the "salvage rider" hit. Ultimately, the forest abandoned proposed treatments in the roadless area and agreed to supplement the EA.

Requirements under the Northwest Forest Plan were complex and confusing. The forest was found to have incorrectly applied the "survey and manage" requirement in the proposed helicopter logging units. Instead of removing the units and proceeding with the rest of the project, the forest decided to supplement the EA, gambling that the damaged timber would hold its value. By the time the supplemented EA cleared appeals review, it was difficult to recover much commercial value from the blowdown and the helicopter units had to be removed.

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Most people working under the Northwest Forest Plan approve of its requirements for watershed analysis; interagency, scientific, and public collaboration; and a generally coarse-filter adaptive-management approach. However, the “survey and management” requirements do not fit in. They represent almost the ultimate in fine-filter single-species management. Data collection is expensive, and its potential to contribute to a larger scientific understanding is unknown because there is apparently no research design in place.

“Survey and manage” requirements are a problem for designing fuels reduction projects, whether they involve thinning or prescribed fire alone. The management strategy is to survey and avoid impact, both to suitable habitat and to individuals. In fact, “survey and manage” requirements are typically more inflexible than consultation requirements for endangered species. Also, the cost per acre is high.

Community interest was high. The forest spent considerable time in consultation with interested parties, trying to build public support for blowdown treatments.

Appeals review of the EA caught mistakes that the forest had made. However, the appeals process provided neither the means nor the incentive to negotiate a resolution that addressed both the Forest Service’s concerns and the appellants’ core objections.

Exemption from stay while appeals are pending is allowed in emergencies. However, the definition of “emergency” leaves out economic considerations. That puts Forest Service decisionmakers in a bind: The only financially feasible way to address environmental problems associated with wildland fires, blowdowns, insect epidemics, and other events might be a commercial timber sale. Dead trees lose value quickly; forest managers are hard pressed to do a good job on environmental analysis and complete the appeals process before the value is lost. Alternatively, reliable noncommercial funding mechanisms for restoration work would help managers proceed with large recovery projects.

There is a dynamic balance in land management planning between proscriptive and nonproscriptive approaches to management. Many people want to know exactly what the rules are for management. Rules for forest management need to be flexible, with generous ranges that reflect ecological realities. We must be accountable, yet we cannot deliver on our social and political commitments from inside a straightjacket. Balance is needed for success.

## *Megram Fire Recovery Plan*

### **Project Description**

The Six Rivers National Forest lies north of San Francisco, in the Coastal Range of northern California. In 1995, a winter storm damaged trees on 35,000 acres on the forest. Windthrow and other damage resulted in a fuel load of 300 to 400 tons per acre, posing a severe fire hazard.

To reduce hazardous fuels, the forest proposed a salvage sale that included helicopter logging. The EA was appealed and partially remanded in 1997. It was supplemented and cleared appeals review on September 10, 1998. By that time, however, the salvage timber had lost value and logging costs had increased. The helicopter units were removed from the package and the sale was made.

By 1999, only 1,600 acres of the 1995 blowdown area—less than 5 percent—had received hazardous fuels treatment. In 1999, the Megram Fire burned through the project area, including the area under contract. The burn covered 59,000 acres, with 17,000 acres severely burned.

#### **Proposed Project**

The forest moved quickly to implement postfire treatments. First, the forest conducted a watershed analysis, as required under the Northwest Forest Plan. Next, the forest began preparing an EIS for a proposed postfire salvage and fuels treatment project known as Fuels Reduction for Community Protection, phase 1. The project focused on the most severely burned portions of watersheds, including the 1995 blowdown area. The proposal was to salvage harvest 863 acres of dead trees along roads and ridgetops and do more than 200 acres of noncommercial fuels reduction. The forest elected not to treat the Orleans Inventoried Roadless Area, even though it was also severely fire damaged. Most project areas are designated Late Successional Old Growth (LSOG).

The project purpose was twofold:

1. to reduce fuel accumulations and create fuelbreaks as a precondition for introducing prescribed fire; and
2. to accelerate reforestation of severely burned areas to meet the requirement to manage LSOG for late-seral characteristics.

Proposed were various methods to reduce fuels, including pruning, lop-and-scatter, onsite chipping, and pile-and-burn. Strategically placed fuel reduction zones were to be partly achieved by salvaging commercially usable material. As often happens, the only way the forest could finance fuels treatment was through a commercial timber sale that generated enough funds to finance other treatments, such as prescribed fire.

On May 14, 2001, the forest requested an exemption from stay while appeals were pending under 36 CFR 215.10(d). The Forest Service Chief granted the exemption on May 25. On July 9, the forest supervisor signed the record of decision.

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On the same day, an environmental coalition filed a complaint alleging that the Chief's exemption was arbitrary and capricious and that the EIS is flawed. On July 12, a court ruled in favor of the plaintiffs and granted a temporary restraining order. The Forest Service withdrew the exemption and began the administrative appeals process. In April 2002, a judge found the EIS inadequate and enjoined the project. The forest began to assess the prospect of preparing a supplemental EIS.

### Project Timeline

The timeline reveals numerous attempts by the forest to address the perceived resource problems through traditional timber management approaches. The environmental community has responded with dogged attempts to, in effect, "let nature take its course."

- **December 12, 1995.** Storm damage/blowdown on the Orleans and Lower Trinity Districts, Six Rivers National Forest. About 35,000 acres sustain severe damage. The damaged trees are predominately white fir. The resulting fuel load exceeds 300 to 400 tons per acre in the most severely damaged areas.
- **Spring to winter 1996.** The forest evaluates the blowdown and determines that the fuels situation merits immediate attention. The forest devises a proposed action using salvage logging, to be followed by a program of prescribed fire. The proposed action is to be analyzed using the 1995 Rescission Act provisions. The proposed project area includes the Orleans Roadless Area. The Secretary of Agriculture forbids entry into Inventoried Roadless Areas using the Rescission Act provisions. The forest augments EA documentation to withstand appeal.
- **July 23, 1997.** The forest issues a decision notice for the Late Successional Reserve RC-305 Fuel Reduction Project.
- **October 23, 1997.** The Pacific Southwest Region issues a decision partly affirming the forest supervisor's decision, but reversing the decision on the proposed helicopter logging units. The forest was found to have incorrectly applied the "survey and manage" requirements for the Del Norte salamander, a category 2 survey-and-manage species under the Northwest Forest Plan.
- **June 8, 1998.** The forest decides to supplement the record for the RC-305 Fuel Reduction Project and issues a second decision notice.
- **September 10, 1998.** The region issues an appeal decision affirming the forest supervisor's decision. Ultimately, only 1,600 acres of the more than 30,000 acres affected by the blowdown ever receive hazardous fuels treatment of any kind.
- **Fall 1999.** The Megram and Fawn Fires (Big Bar Fire Complex) burn about 123,000 acres in the Shasta-Trinity and Six Rivers National Forests. An additional 2,480 acres of private and Hoopa Tribal lands also burn.
- **March 2000.** The forest completes and publishes a new watershed analysis. The original watershed analysis is no longer useful because of the changed conditions. The new watershed analysis is 367 pages long and is required by the Northwest Forest Plan.



- **October 30, 2000.** The forest files a notice of intent to prepare an EIS for proposed fire recovery activities. These include development of strategically placed fuelbreaks within severely burned stands with associated fuel treatment areas. Fuels treatment consists of a combination of removal of commercial material with various postharvest and other fuel treatments.
- **May 14, 2001.** The forest requests an exemption from appeal under 36 CFR 215.10(d).
- **May 25, 2001.** The Chief grants the exemption from appeal.
- **July 9, 2001.** the Forest Supervisor signs the record of decision for proposed fire recovery activities. A coalition of environmental groups files a complaint alleging that the Chief's exemption is arbitrary and capricious and that the EIS fails to properly assess the environmental impacts of the project.
- **July 12, 2001.** The court rules in favor of the plaintiffs and grants a temporary restraining order. The agency withdraws the exemption and completes the administrative appeal process.
- **April 18, 2002.** The court decides in favor of litigants against the Megram Fire Recovery Plan, ruling that the EIS was inadequate and enjoining the project.

### **Management Complexity**

National forest managers address resource problems with the direction, budget, and personnel available to them, based on the environmental, social, and political context of the day. The wisdom of their strategic and tactical decisions is ultimately judged by the results.

### ***Rescission Act***

In 1995, Congress passed the Rescission Act to encourage federal land managers to salvage dead, dying, and diseased trees with a minimum of the analysis and documentation required under the National Environmental Policy Act. Projects proposed under the Rescission Act were exempted from appeal and subject to limited judicial review. The forest used Rescission Act provisions to conduct its EA of proposed fuels reduction treatments in the 1995 blowdown area.

However, there were complicating factors. The forest had recently come under the Northwest Forest Plan, the requirements of which were complex and confusing, with little clear direction at first. The forest was also spending considerable time in consultation with interested parties, trying to build understanding and support for the blowdown treatment project, including entry into the inventoried roadless area.

Then the firestorm of opposition to the "salvage rider" hit. Ultimately, the forest abandoned proposed treatments in the roadless area and agreed to supplement the EA after the Clinton Administration dropped support for the Rescission Act. The forest now believes that it lost nearly a year through its initial strategy and that using provisions under the Rescission Act, particularly for the inventoried roadless area, was a serious mistake.

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### *Tunnel Vision*

The EA was appealed in October 1997. The forest supervisor's decision was affirmed in part, but reversed for the helicopter logging units. The forest was found to have incorrectly applied the "survey and manage" provision under the Northwest Forest Plan for the Del Norte salamander.

At this point, the forest could have decided to drop the helicopter units from the proposed project and proceed with the remainder. Project success depended on recovering enough value from sold timber to finance the reduction of commercially valueless materials. The material to be removed was mostly white fir, which loses salvage value quickly; two years after the blowdown, the percentage of cull material was increasing every day.

Instead, the forest decided to conduct the required salamander surveys and supplement the EA, gambling that the damaged white fir would hold its value. The survey cost \$28,350 for 1,134 acres (or about \$25 per acre). The survey protocol required site visits in spring and fall under specific weather conditions. In September 1998, the Pacific Southwest Region issued an appeal decision affirming the supervisor's decision on the project. However, by then it was difficult to recover much commercial value from the blowdown.

In retrospect, tunnel vision seems to have guided the forest's strategy. Tunnel vision is the tendency to focus on an objective without maintaining the appropriate situational awareness. It seems that the forest should have cut its losses and implemented the 1997 decision without further analysis. However, the forest was totally committed to getting the entire project area treated due to its concern about hazardous fuels. As time went on and the forest's commitment of financial resources grew, it became ever harder to walk away. Unfortunately, the longer the materials remained in the woods, the less commercial value they contained; and the less able the forest was to recover enough value from materials removed to repay the Salvage Sale Trust Fund and finance additional noncommercial treatments.

### *Learning From Experience*

The forest used its experience following the 1995 blowdown to develop a strategy for a postfire treatment project after the 1999 Megram Fire. The strategy included a phased approach for treating the most severely damaged areas first. The forest supervisor also chose to use an EIS rather than an EA, although EAs have been used for small-scale restoration, such as hazardous-tree removal along roads. Community interest is high; the forest has conducted considerable outreach and consultation with interested parties.

"Survey and manage" requirements are a problem for designing fuels reduction projects, whether they involve thinning or prescribed fire alone. The management strategy is to survey and avoid impact, both to suitable habitat and to individuals. As a result, projects are often dropped after surveys, because most species are to be protected from prescribed fire and/or timber harvest. In fact, "survey and manage" requirements are typically more inflexible than consultation requirements for endangered species. Also, the cost per acre is high for "survey and manage" protocols; for the Megram Hazard Tree Project, it was \$12,650 for 230 acres (or \$55 per acre) and \$77,000 for 1,100 acres (or \$70 per acre).

### ***Limited Options for Treatment***

At present, the only reliable source of funding for recovery and restoration projects is the Salvage Sale Trust Fund. When forests need treatment, national forest managers can either “do nothing” or “do salvage” in hopes that timber sales will suffice to repay the trust fund, as required, and finance other needed restoration projects, as well. It can happen that watersheds with commercially valuable materials receive needed treatments (such as noxious weed removal), whereas watersheds equally in need of treatment go untreated for lack of merchantable materials that can be removed. Limited options for managers in financing restoration projects affect our credibility and constrain our thinking.

### **Procedural Complexity**

#### ***Administrative Appeals***

The case of the Megram Fire Recovery Plan illustrates both the strength and the weakness of the system of administrative appeals. Appeals review of the EA on the proposed blowdown project caught the mistakes that the forest had made in following direction for “survey and manage” and forced it to document compliance in the EA. However, the appeals process did not change the forest’s decision. It provided neither the means nor the incentive to negotiate a resolution that addressed both the Forest Service’s concerns and the appellants’ core objections. Briefly stated, the outcome was excellent documentation with poor on-the-ground results (untreated fuels).

Exemption from stay while appeals are pending is allowed in emergencies. “Emergency” is narrowly defined; it does not permit economic considerations to enter into the decision. That puts Forest Service decisionmakers in a bind: The only financially feasible way to address environmental problems associated with wildland fires, blowdowns, insect epidemics, and other events might be a commercial timber sale. Dead trees lose value quickly (depending on the species); forest managers are hard pressed to do a good job on environmental analysis and complete the appeals process before the value is lost. Commercial values are the funding engine for other recovery work, including watershed restoration, noncommercial fuels reduction, and noxious weed removal.

#### ***Northwest Forest Plan***

The Northwest Forest Plan was the earliest large-scale attempt at ecosystem-level planning. The process requirements in the plan are not mandated in the environmental statutes or even in the case law that interprets those statutes. From a process standpoint, most people working under the Northwest Forest Plan approve of its requirements for watershed analysis; interagency, scientific, and public collaboration; and the generally coarse-filter adaptive-management approach envisioned by scientists and framers of the plan.

However, the “survey and management” requirements do not fit in. They represent almost the ultimate in fine-filter single-species management. The Endangered Species Act (ESA) has been criticized as a species-by-species approach, but “survey and manage” goes far beyond ESA in that regard. Data collection is expensive, and its potential to contribute to a larger scientific understanding is unknown because there is apparently no research design in place. Data collection without a research design is usually a waste of time.

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### Summary

Some field personnel and others criticize the agency for timid management decisions. As this example illustrates, however, virtually every aspect of the regulatory, social, and political environment makes risk taking an almost unworkable option for managers. Dr. Tom Atzet, a zone ecologist in the Pacific Northwest Region interviewed for this case example, spoke eloquently about the need to manage ecological systems using a flexible adaptive approach that recognizes that mistakes teach as much as successes about natural systems, if not more. This “no rules—just right” approach is the antithesis of regulation. Given that we will always have rules, it is important that the rules be well designed and flexible.

This case example does not suggest that the problem is in the statutes, with the exception of the Administrative Appeals Reform Act (AARA). The AARA does not appear to provide any functional or meaningful process for resolving conflicts. Some consideration should also be given to the statutes that govern the Salvage Sale Trust Fund. Although the law functions according to its original intent, it limits ecological restoration options for modern managers. Alternatively, additional reliable funding mechanisms for restoration work that does not necessarily entail or depend on commercial sales would help managers proceed with large recovery projects.

Finally, there is a dynamic balance in land management planning between proscriptive and non-proscriptive approaches to management. Many people, both internally and externally, want to know exactly what the rules are for management. When NFMA was originally crafted, it was commonly believed that outputs would only rarely be adjusted in forest plan revision and that a 15-year planning horizon was perfectly appropriate. Experience has shown that outputs cannot be stable, and that 15 years are meaningless in the life of a forest ecosystem. Rules for forest management need to be flexible, with generous ranges that reflect ecological realities. We must be accountable, yet we cannot deliver on our social and political commitments from inside a straightjacket. Balance is needed for success.

## *Indian River Watershed Restoration Project*

### **Project Summary**

The Indian River Wild and Scenic River runs through the Hiawatha National Forest on Michigan's Upper Peninsula. Like most rivers on the Hiawatha National Forest, the Indian River was heavily damaged during the log drives of the early 20th century. Disturbance by recreationists and deer has contributed to more than 4,300 feet of bank erosion. In the sandy soils, even a slight disturbance causes sand to slide into the river; trees cannot establish themselves on the banks.

Deep pools are rare along disturbed banks. Much of the habitat is classified as "glide," with low velocity, shallow depth, usually sand bottom, and a general lack of woody debris. Glide habitat is poor for trout. Fish surveys have found brook and brown trout strongly associated with deep pools formed by treetops, logs, rootwads, or debris accumulations.

#### **Proposed Project**

The Hiawatha National Forest proposed two sets of projects on about 4,500 acres over 28 miles of the Indian River Wild and Scenic River corridor. Proposed fisheries projects included stabilizing eroding banks, maintaining existing log/stump covers, placing tree groups in riffles and pools, enhancing wood turtle nesting habitat, and reestablishing native riparian plant species along river banks. Proposed recreation projects included designating canoe/boat access sites, relocating access at a trailhead, obliterating a dead-end road, improving access sites, designating campsites along the river, improving a bridge drive-in site, maintaining a shelter and improving associated facilities, and establishing a new recreation site.

#### **Consequences of No Action**

Bank erosion would continue, keeping fish habitat poor. The river would be wide, shallow, and sandy along eroding banks. Fish cover in the form of downed trees would continue to be scarce. Glide habitat would remain dominant, whereas high-quality pool habitat would remain low. Very little change in natural trout reproduction would be expected in the short term.

#### **Timeline**

Based on comments received during scoping, the forest prepared an EA for the project. On April 13, 1999, the EA was sent out for a 30-day review. Two decision notices resulted, one for the vegetation management portion of the EA, and one for the fisheries and recreation projects. Both decisions were appealed, but the regional office affirmed them. The appellants filed suit on July 31, 2000. The vegetation management decision was withdrawn and a settlement was reached in September 2001 on the fisheries and recreation projects.

#### **Public Concerns**

The groups that appealed and litigated did not want to see any type of project within the Indian River Wild and Scenic River corridor. Other public concerns were generally motivated by self-interest. Private landowners were interested in how the proposed action could affect their land.

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The timber industry was interested in timber volume and other timber-related issues. Anglers wanted to know how fishing might be affected. Canoeists wanted to continue using the river.

### Procedural Constraints

Forest Service employees and the public they interact with are frustrated over the time it takes to complete analysis and move forward to implementation. Questions arise as to why professional input and documents need to be continually revised to deal with new information or concerns, and why it is necessary to document everything in great detail in anticipation of appeals. The NEPA process itself does not generate concern, but rather the appeals and litigation that have become so common in Forest Service management.

### Public Involvement

The Hiawatha National Forest mailed the proposed action for the Indian River projects to 150 individuals and organizations for public comment. Comments were received from 31 individuals and groups. On April 13, 1999, the EA was sent out for a 30-day review. Five individuals or groups responded, including the groups that appealed and litigated.

### Procedural Costs

Working on appeals and litigation requires a great deal of time and energy from specialists (district and forest), NEPA/appeals staff, and office support staff. Staff specialists, support personnel, the district ranger, and sometimes the forest supervisor are involved in discussions and conference calls. Time-consuming involvement detracts from other forest priorities. Time spent on appeals can be estimated and accounted for in yearly budget projections, but this is not generally the case with litigation. Litigation costs include employees' time, photocopying of extensive documentation, supplies, and mailing.

A year of work and a great deal of time and money went into the litigation without producing any significant changes in the projects that will be implemented. Other lawsuits across the region (and to a certain extent across the agency) have resulted in changes to EAs. The Hiawatha National Forest, like other national forests, has strengthened its biological evaluations for listed threatened or endangered species and for regional forester sensitive species, as well as its EA documentation. The forest is also more aware of other parts of the EA process that need to meet specific expectations, and resources or issues (noxious weeds, for example) that require additional attention.

Those interested in the Hiawatha National Forest do not fully understand the processes under which the national forest operates and cannot understand why it takes so long to implement decisions. Those who commented on the Indian River proposal and recognized that an additional alternative was developed in response to their comments likely felt the Forest Service was responsive to their thoughts and concerns. However, the level of public acceptance by the majority of stakeholders was not increased by the litigation.

## *Indian River Watershed Restoration Project*

### **Project Description**

The Indian River project area encompasses about 4,500 acres on the Hiawatha National Forest in Schoolcraft County, on the central part of Michigan's Upper Peninsula. The project area covers 28 miles of the Indian River Wild and Scenic River corridor, from just east of Straits Lake downstream to the mouth of Big Murphy Creek.

#### **Proposed Project**

The Indian Wild and Scenic River Management Plan provides programmatic management direction for fisheries, wildlife, riparian and upland vegetation, and recreation within the Indian River Wild and Scenic River corridor. The forest proposed projects to move the area toward the desired future condition. Proposed activities would protect and enhance the fisheries, wildlife, scenic, recreational, and hydrological values identified in the river planning process.

The forest prepared an EA for the projects, resulting in two decision notices: one for the vegetation management portion of the EA, and one for the fisheries and recreation projects. Northwood Wilderness Recovery and Heartwood appealed both decisions, but the regional office affirmed them. The appellants filed suit on July 31, 2000. Following discussions with the Office of General Counsel, the vegetation management decision was withdrawn. In September 2001, a settlement was reached on the fisheries and recreation projects.

The proposed fisheries projects included:

- stabilization of 18 eroding banks using log/stump cover structures;
- maintenance of existing log/stump covers at 2 sites;
- placement of 58 tree groups in riffles and pools where woody debris is rare;
- enhancement of wood turtle nesting habitat at known nesting sites and potential sites; and
- reestablishment of native riparian plant species along river banks.

The proposed recreation projects included:

- designation of 4 canoe/boat access sites;
- relocation of access at Pine Marten Run trailhead, including canoe rest, trail to river, minor bank stabilization, signs, and interpretation of logging dam remnants;
- obliteration of dead-end road at the McCormick access site;
- site improvements at the Thunder Lake Road access site, including aggregate/boardwalk to the river, gravel loop turn-around/parking area, sign board, canoe rest, and planting of conifers on both sides of the entrance;
- site improvements at 8-Mile access, including a rustic boardwalk across a wet area, aggregate parking/drive, signs, sign board, canoe rest, and fill for 2-car parking;

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- designation of 4 dispersed campsites along the river;
- improvements at Forest Road 2258 (FR2258) bridge drive-in site, including surfacing, definition of camping area, signs, sign board, fire ring and canoe landing;
- maintenance of Adirondack shelter in the Iron Jaw area in concert with signing of the site, development of canoe landing, and short trail upstream of landing spot; and
- establishment of a new site between Indian River Campground and Delias Run.

### Affected Environment

Fish habitat and its associated fish community differ across the project area due to differing geological features and river valley characteristics. Midsummer water temperatures, which strongly influence the composition of the fish community, average 6 to 8 °F higher in the upper portion of the project area (FR2258 crossing) than in the downstream area between the Indian River Campground and the County Road 449 (CR449) crossing. From the FR2258 crossing down to the mouth of the Little Indian River, a lack of streamside shade in the large, open pine plains, in addition to outflows from Straits Lake, push water temperatures into the high 70s in midsummer. Due to the higher temperatures, brook trout are virtually absent, whereas warmwater species such as rock bass, hornyhead chub, creek chub, and blacknose dace dominate the fish community.

The Little Indian River cools the Indian River slightly, and rolling hardwood hills provide some forest canopy over the river. Camp 83 Creek and Delias Run enter in the middle of the project area and also cool the river. Below Delias Run, the river valley becomes confined between the high banks of the pine plains. Stands of large pines on the steep slopes provide substantial shade, and the river cools several degrees within several river miles. With the cooler temperatures, brook trout, brown trout, mottled sculpin, and longnose dace are the dominant fishes in the lower half of the project area.

Although coldwater salmonids generally avoid the upper river miles of the project area in midsummer, both brown trout and brook trout spawn on gravel/cobble riffles throughout the entire river from September through November, when water temperatures are much cooler. Due to the lack of woody debris accumulations in these fast water riffle zones, only large fish have the strength to spawn in many of these areas. In addition, young trout hatched from these areas tend to congregate around woody debris. Fish surveys just above CR437 in the long rocky riffle have found low numbers of trout; fish being strongly associated with submerged logs, currently rare in the area.

Several tributary streams serve as spawning and nursery sites for brook and brown trout. Camp 83 Creek and Delias Run naturally reproduce brook and brown trout; both species ascend these tributaries in the fall to spawn. Due to the small size of these streams, many fish produced here are believed to migrate to the main river as competition for food increases.

Lake sturgeon, a state-listed threatened species and a management indicator species, have been reported migrating up the Indian River at several sites in the project area throughout the century. Young sturgeon have never been found in fish surveys, but adult sturgeon do ascend the river to



spawn in the month of May. Sturgeon surveys in the lower mile of the Indian River have found adult sturgeon congregating in deep pools as they migrate from Indian Lake to spawning grounds. Sturgeon are presumed to prefer cobble/gravel riffles for spawning, although natural reproduction of the species has never been documented in the Indian River.

More than 4,300 feet of bank erosion were identified on the Indian River within the project area. Most of the large banks range from 15 to 60 feet in height. Due to the sandy soils, even a slight disturbance causes sand to slide into the river. Trees cannot establish themselves on banks, which are disturbed each year by recreationists and deer. Deep pools are rare along eroding banks on the Indian River. Much of the habitat along these banks is classified as “glide,” with low velocity, shallow depth, usually sand bottom, and a general lack of woody debris. Woody debris accumulations are also rare on river meanders where erosion occurs. On stable high riverbanks, pine forests are found. Deep pools with high concentrations of logjams are generally found at the base of stable banks. Fish surveys have found brook and brown trout ranging from 7 to 25 inches in length strongly associated with deep pools formed by treetops, logs, rootwads, or debris accumulations.

### **Consequences of No Action**

Bank erosion would continue at all active erosion sites on the Indian River and Delias Run. Recreational use would continue in the traditional areas, thus preventing any natural revegetation of the eroding banks. Fish habitat at these sites would continue to be of poor quality. The river would be wide, shallow, and sandy along eroding banks on the bends of the river. Fish cover in the form of downed trees would continue to be scarce at these sites. Glide habitat would remain the dominant type, whereas high-quality pool habitat would remain low in the Indian River, especially in the vicinity of the mouth of Delias Run.

Trout spawning areas located in the major riffle reaches of the river would continue to lack substantial woody cover. Some trees might fall into these reaches through natural processes, but most trees are of small diameter and would be pushed to the side of the river channel by high water velocities. Overall, very little change in natural production of trout species would be expected in the short term. Fish plants would still be necessary to maintain the fishery.

### **Project-Related Issues**

The environmental groups that appealed and litigated did not want to see any type of project within the Indian River Wild and Scenic River corridor. That included “white hat” projects aimed at restoring the river, such as fisheries projects.

Outside of environmental groups, public comments generally tended to focus on self-interest. Private landowners were interested in how the proposed action could affect their land. The timber industry was interested in timber volume and other timber-related issues, such as char on trees that might result from underburning. Anglers wanted to know how the proposed actions will affect fishing opportunities or species. Canoeists wanted to continue to use the river.

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### Procedural Constraints

Forest Service employees and the public they interact with are frustrated over the time it takes to complete analysis and move forward to implementation. Questions arise as to why professional input and documents need to be continually revised to deal with new information or concerns, and why it is necessary to document everything in great detail in anticipation of appeals. The NEPA process itself does not generate concern, but rather the appeals and litigation that have become so common in Forest Service management.

### Public Participation

The Hiawatha National Forest mailed the proposed action for the Indian River projects to 150 individuals and organizations for public comment. Comments were received from 31 individuals or groups. Twenty-six responded with concurrence, concerns, questions, or suggestions. An additional five people had no comment, but asked to remain on the mailing list.

The interdisciplinary team analyzed all of the public comments and responded to each. Most concerns raised during the initial public scoping period could be addressed by the no action alternative, the proposed action, or mitigations relative to the proposed action. Other comments were addressed in chapter III, Environmental Effects.

On April 13, 1999, the EA was mailed to the public for a 30-day review. Five individuals or groups responded, including those who eventually appealed and litigated. Given the number of responses, it appears that the level of public participation and involvement through the scoping period and 30-day review were appropriate.

Most comments focused on concerns over commercial logging with the Wild and Scenic River corridor and the potential effects on soil and water quality. Questions were raised about commercial harvest of pine stands and how that harvest would enhance the scenic values of the corridor, given the use of heavy equipment. Although the Indian River National Wild and Scenic River Management Plan allows the use of logging to protect or enhance the outstanding values of the river within the Recreational Segment, respondents suggested that noncommercial methods be used to enhance the scenic quality of the pine plantations with the corridor. Based on that, an additional action alternative was developed proposing noncommercial methods to reduce the plantation appearance of those pine stands.

Internally, the litigation that ensued seemed costly, time consuming, and of no value to correcting the concerns associated with the Indian River project. The plaintiff's primary focus seemed to be on the Wild and Scenic River as compared to the actual projects proposed by the agency. The Indian River, like most rivers on the Hiawatha National Forest, was heavily damaged during the log drives of the early 20th century. However, the plaintiffs did not want to see any management activities within the corridor, even if designed to restore the river system.

### Procedural Costs

Working on appeals and litigation requires a great deal of time and energy from specialists (district and forest), NEPA/appeals staff, and office support staff. Staff specialists, support personnel, the district ranger, and sometimes the forest supervisor are involved in discussions and con-

ference calls. Time-consuming involvement detracts from other forest priorities. Time spent on appeals can be estimated and accounted for in yearly budget projections, but this is not generally the case with litigation. Litigation costs include employees' time, photocopying of extensive documentation, supplies, and mailing.

A year of work and a great deal of time and money went into the litigation without producing any significant changes in the projects that will be implemented. Other lawsuits across the region (and to a certain extent across the agency) have resulted in changes to EAs. The Hiawatha National Forest, like other national forests, has strengthened its biological evaluations for listed threatened or endangered species and for regional forester sensitive species, as well as its EA documentation. The forest is also more aware of other parts of the EA process that need to meet specific expectations, and resources or issues (noxious weeds, for example) that require additional attention.

### **Vulnerability to Challenge**

The Hiawatha operates under the assumption that every decision will be appealed. Appeals are rarely site (or even forest) specific. Examples of “global replacement” of forest names into appeals are relatively common. There is a general sense that some groups “throw anything at the wall to see if something sticks” relative to issues raised in response to public involvement efforts.

### **Summary**

The litigation of the Indian River project resulted in the investment of more than a year of involvement by the interdisciplinary team, staff specialists, support personnel, and line officers. When the dust settled, the Hiawatha National Forest, was, for the most part, allowed to move forward and implement a project that was very close to the original decision.

The general publics who are interested in and care about the Hiawatha National Forest, including those who participate in public involvement activities, don't fully understand the processes under which the national forest operates and can't understand why it takes so long to implement decisions. Those who commented on the Indian River proposal and recognized that an additional alternative was developed in response to their comments likely felt the Forest Service was responsive to their thoughts and concerns. However, the level of public acceptance by the majority of stakeholders was not increased by the litigation.

In completing the settlement agreement, the forest has implemented the recreation projects. The prognosis for implementation of the fisheries enhancement projects is excellent. The vegetation management portion of the original proposal will be revised through an environmental analysis and will once again go through the NEPA process.

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## *Morgan Falls Trail Reroute Project*

### **Project Summary**

The trail leading into Morgan Falls on the Chequamegon–Nicolet National Forest in Wisconsin is one of the most heavily used trails on the forest. The trail has expanded in width in some locations as hikers have attempted to walk around wet areas. In other areas, the trail is narrow and rocky, presenting safety concerns. User-developed trails have led to increased sediment delivery in the stream and concerns about sensitive plants.

#### **Proposed Project**

The trail would be rerouted to correct problems associated with the poor trail location and high use, including sediment deposited into Morgan Creek, threats to sensitive plant species in the area, muddy trail tread in some locations, trail inaccessibility for persons with disabilities, use of the woods by visitors to relieve themselves, and visitor parking on the forest road due to the inadequate parking facilities.

#### **Consequences of No Action**

Failure to reroute the trail would result in continued degradation of aquatic ecosystems. Visitors would continue to develop new trails. The resulting braided trails could compromise sensitive plants. Safety concerns associated with an undersized parking facility would continue.

#### **Timeline**

Scoping began in August 1999. The decision notice and finding of no significant impact were signed in April 2001. There were no appeals. The forest began to implement the project in late summer 2001.

#### **Public Concerns**

Public comments were generally positive. The primary concerns centered around the potential for introducing nonnative plants (noxious weeds). Some concerns were raised that trail improvements would further increase use. However, those who made such comments also seemed to recognize that doing nothing would exacerbate current problems.

#### **Public Participation**

Forest Service personnel met with local township officials to discuss the proposal prior to scoping. An independent-living specialist was also consulted. The forest mailed 146 scoping documents. Only two responses were received to the mailing, although six additional comments were received.

#### **Procedural Constraints**

Most local people are generally amazed and disheartened by the length of time it takes from project initiation to implementation. It is difficult for them to understand our process or what is required of us under various laws. Many people feel that the Forest Service has the professional

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expertise to put good projects in place while being sensitive to the wide range of resource concerns.

Organized environmental groups appear to generally distrust the Forest Service and its professional expertise. Many do not believe that active management of any kind is appropriate on National Forest System lands, with the exception of correcting serious resource concerns (e.g., sediment delivery) in order to return the forest to a more “natural” condition. The focus of the Morgan Falls project, which was in part to correct sediment delivery and protect sensitive native plant communities, likely contributed to the success of the process and the project.

For the most part, our NEPA documents are written for a relatively small segment of the public, those who are generally inclined to take exception to management activities on the national forests. Analysis details beyond those necessary to make a sound decision are needed to survive a challenge and to provide the data needed for those internally who will research the document and project record in response to appeals and development of the agency response. This project was not appealed, but the level of effort put into the document and background material was made with potential appeals in mind.

### Planning Needs and Costs

The recreation specialist on the ranger district developed the concept of a trail reroute. The ultimate decision was improved based on input from a variety of internal specialists, ranging from hydrology to recreation and engineering. Although comments from the public were generally well intentioned and site specific, they did not improve this particular decision. Given the low number of responses to scoping, one might conclude that this project was acceptable to a large percentage of the public from the beginning.

This project was well thought out and analyzed by a wide range of internal specialists. Legitimate resource concerns were raised and addressed through internal discussions and analysis. A second action alternative was designed to address the perception, internally, that more than one action alternative is needed. The second alternative was not cost-effective and had its own share of resource-related concerns associated with it. It was essentially a straw dog.

The ID teams for this project included specialists in recreation, engineering, hydrology, wildlife, ecology, fisheries, and NEPA. In addition, inputs were required from the public affairs officer and other forest-level staff. The time demands on some specialists exceeded their time available.

It seems as though we cross a line from a point where we have excellent and well-thought-out input from specialists, a good design for a project (including alternatives), and thorough documentation of effects, to excessive documentation of effects in an effort to “bullet-proof” the analysis in the event of challenge.

## *Morgan Falls Trail Reroute Project*

### **Project Description**

The trail leading into Morgan Falls on the Great Divide Ranger District of the Chequamegon–Nicolet National Forest in Wisconsin is one of the most heavily used trails on the forest. An estimated 15,000 visitors hike the trail each year during the snow-free season to view the falls. The trail has expanded in width in some locations as hikers have attempted to walk around wet areas. Those wet areas exist due to natural drainage patterns and the undesirable trail location. In other areas, the trail is narrow and rocky, presenting safety concerns on this high-use trail. User-developed trails have led to increased sediment delivery in the stream and concerns about a variety of sensitive plants found in this ecologically unique and scenic area.

### **Project Purpose and Need**

The purpose of the EA was to evaluate a proposed reroute of the trail to Morgan Falls, with the goal of correcting problems associated with the poor trail location and high use. In addition, the end result should protect sensitive plant species in the trail area, improve water quality, and restore the health of the watershed and aquatic ecosystems of Morgan Creek.

Management concerns addressed in the proposal included:

- sediment deposited into Morgan Creek as a result of the current trail location, which follows portions of the stream channel;
- high trail use—approximately 15,000 visitors each year and increasing;
- sensitive plant species in the area, which might be compromised by uncontrolled trail use;
- muddy trail tread in some locations, with visitors creating new trails to avoid wet areas;
- trail inaccessibility for persons with disabilities;
- use of the woods by visitors to relieve themselves due to the absence of a toilet facility; and
- visitor parking on FR199 in high-use periods due to the inadequate size of the parking lot.

### **Project Timeline**

Scoping was initiated in August 1999. The decision notice and finding of no significant impact were signed in April 2001. There were no appeals.

The forest began to implement the project in late summer 2001. The parking lot has been expanded, a new toilet installed, and a bridge framework placed where the new trail will cross the stream and wet areas. Work on trail relocation will occur during the 2002 field season.

### **Project-Related Issues**

The project was somewhat unusual, given that the few comments received were, for the most part, relative to this particular project and specific to the location. The value of the comments varied, but the intentions were good as compared to the “normal” barrage of issues raised relative to topics such as management indicator species and the “expiration” of the current forest plan.

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### Consequences of No Action

From the agency perspective, failure to implement the proposed trail reroute would have resulted in continued degradation of the aquatic ecosystems associated with the stream in the project area. Visitors would continue to develop new trails as they wandered farther out in search of a high-and-dry route to Morgan Falls. The resulting braided trails would potentially compromise populations of sensitive plants. Safety concerns associated with an undersized parking facility would continue, because users would park on a heavily used forest/township road during peak use periods.

### Procedural Constraints

Most local people are generally amazed and disheartened by the length of time it takes from project initiation to implementation. It is difficult for them to understand our process or what is required of us under various laws. Many people feel that the Forest Service has the professional expertise to put good projects in place while being sensitive to the wide range of resource concerns. Being unfamiliar with the process often causes them concern about Forest Service management, given the length of time required to move from point A to point B.

Other people, primarily those associated with organized environmental groups, appear to generally distrust the Forest Service and the professional expertise on staff to address resource concerns. Many do not feel active management of any kind is appropriate on National Forest System lands, with the exception of correcting serious resource concerns (e.g., sediment delivery) in order to return the forest to a more “natural” condition. It appears that some of these groups are using the complexities associated with the process to promote an agenda of less active management.

The focus of the Morgan Falls project, which was in part to correct sediment delivery and protect sensitive native plant communities, likely contributed to the success of the process and the project.

The core ID Team and extended ID Team for this project included specialists in recreation, engineering, hydrology, wildlife, ecology, fisheries, and NEPA. In addition, the effort required input from the public affairs officer and other forest-level staff. The time demands on some specialists exceeded their time available. The specialists in areas that are most often the subject of appeals, such as wildlife biologists, plant ecologists, and (to a lesser extent) hydrologists, are often stretched beyond the limits of what should be expected. With the advent of requirements associated with roads analysis, engineers are also in demand.

### Public Participation

Public participation for this project centered around the mailing of the scoping document to potentially interested publics, tribal governments, and other agencies (146 mailed). Forest Service personnel met with local township officials to discuss the proposal prior to scoping. An independent-living specialist (private sector) was also consulted and offered advice on project design. The number of responses received in response to scoping and review of the EA suggests that efforts to involve the public were more than adequate.



Only two responses were received in response to the 146 scoping documents mailed. Six additional comments were received, possibly from those who heard about the project from others or read about it in the Forest's NEPA quarterly. The amount of mailings as compared to the number of responses suggests the number of mailings was possibly excessive.

The comments from the public were generally positive. The primary concerns centered around the potential for introducing nonnative plants (noxious weeds). This concern is shared internally. Some comments were less useful, but not difficult to address.

Given the "white-hat" nature of this project (addressing watershed issues and sensitive plant population concerns while improving accessibility), the district ranger anticipated success. However, given other challenges faced by this and other forests, there is always a level of discomfort associated with any decision on any proposal. Our sense is that our decision would have been upheld, unless unforeseen procedural errors were identified during appeal review.

### Summary

The process is frustrating for many local publics and employees due to the amount of time it takes to put an action in place. For the most part, our NEPA documents are written for a relatively small segment of the public, those who are generally inclined to take exception to management activities on the national forests. Analysis details beyond those necessary to make a sound decision are needed to survive a challenge and to provide the data needed for those internally who will research the document and project record in response to appeals and development of the agency response. This project was not appealed, but the level of effort put into the document and background material was made with potential appeals in mind.

Internally, it seems as though we cross a line from a point where we have excellent and well-thought-out input from specialists, a good design for a project (including alternatives), and thorough documentation of effects, to excessive documentation of effects in an effort to "bullet-proof" the analysis in the event of challenge. As a rule, local people in this area don't understand or appreciate the complexity involved with the process.

The recreation specialist on the ranger district developed the concept of a trail reroute. The ultimate decision was improved based on input from a variety of internal specialists, ranging from hydrology to recreation and engineering. Although comments from the public were generally well intentioned and site specific, they did not improve this particular decision. This project was well thought out and analyzed by a wide range of internal specialists. Legitimate resource concerns were raised and addressed through internal discussions and analysis. A second action alternative was designed to address the perception, internally, that more than one action alternative is needed. The second alternative was not cost-effective and had its own share of resource-related concerns associated with it. It was essentially a straw dog.

The Morgan Falls trail reroute was generally supported by the public from its inception, particularly by those who recognized the concerns about the existing condition and who were knowledgeable about the unique vegetative communities in the Morgan Falls area. Some concerns were raised that trail improvements would further increase use. However, those who made such

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comments also seemed to recognize that doing nothing would exacerbate current problems. It seems evident that those who normally contest Forest Service management proposals also recognized the value of correcting the problems that have resulted from the existing trail location and the high use associated with visitation to Morgan Falls.

Given the low number of responses to scoping, one might conclude that this project was acceptable to a large percentage of the public on the mailing list from the beginning.