United States Government Accountability Office

GAO

Report to Congressional Requesters

September 2006

BISCUIT FIRE RECOVERY PROJECT

Analysis of Project Development, Salvage Sales, and Other Activities

GAO-06-967

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Analysis of Project Development, Salvage Sales, and Other Activities

GAO Accountability · Integrity · Reliability

Highlights

Highlights of GAO-06-967, a report to congressional requesters

Why GAO Did This Study

In 2002, the Biscuit Fire burned almost 500,000 acres of the Rogue River-Siskiyou National Forest in southwestern Oregon. In its wake, the Biscuit Fire Recovery Project (Project) is one of the largest, most complex postfire recovery projects undertaken by the Forest Service. Considerable controversy exists over the Project and its salvage sales to harvest dead trees.

GAO was asked to determine (1) how the Project compares with the Forest Service's general approach to postfire recovery, (2) the status of the Project's salvage sales and how the reported financial and economic results of the sales compare with initial estimates, (3) the status of other Project activities, and (4) the extent of reported improper logging and the agency's response. To answer these objectives, GAO reviewed Project environmental analysis documents, plans, and activity reports and interviewed agency officials.

What GAO Recommends

Given the size and unique nature of this fire and continuing public interest, GAO recommends that the Chief of the Forest Service direct the Pacific Northwest Regional Forester and the Rogue River-Siskiyou Forest Supervisor to report annually on the Project's status until substantially complete. In comments, the Forest Service agreed with the report findings but asked for a time limit for the recommended annual report. GAO modified its recommendation.

www.gao.gov/cgi-bin/getrpt?GAO-06-967.

To view the full product, including the scope and methodology, click on the link above. For more information, contact Robin M. Nazzaro at (202) 512-3184 or nazzaror@gao.gov.

What GAO Found

The Rogue River-Siskiyou National Forest staff followed the Forest Service's general approach to postfire recovery in developing the Biscuit Fire Recovery Project, but several unique circumstances affected the time taken and the alternatives it included. For example, the size of the burned area—and, subsequently, the size of the Project—complicated the environmental analysis and increased the time needed to complete and review it. Also, the regulations and guidance governing timber harvest and road building in the forest's inventoried roadless areas changed several times, in part due to litigation, affecting the amount of timber available for harvest.

As of December 2005, the forest staff had nearly completed 12 salvage sales; however, incomplete sales and a lack of comparable economic data, among other things, make comparing the financial and economic results with the agency's initial estimates difficult. For fiscal years 2003 through 2005, the Forest Service and other agencies spent about $5 million on the sales and related activities. In the next several years, the Forest Service also plans to spend an additional $5.7 million to remove brush and reforest the sale areas. In return, the agency collected about $8.8 million from the sales. While the agency estimated that the salvage sales would generate about $19.6 million for restoration, 6,900 local jobs, and $240 million in regional economic activity, it is premature to compare these estimates with the results because the sales are not complete. The Forest Service will generate additional expenditures, revenues, and economic activity from two sales sold in the summer of 2006. Even when complete sales' results are available, however, a comparison will be complicated by a lack of comparable financial and economic data.

Through December 2005, the forest staff began work on most of the other activities identified in the Project but completing them depends on the amount of salvage harvest, funding sources, and work schedules. For example, the amount of brush disposal work—estimated at 18,939 acres—will be reduced because the acres of salvage harvest have been reduced. Other activities, such as establishing fuel management zones to help fight future fires, depend on the Forest Service funding and scheduling the work over many years. In addition, a large-scale study and monitoring activities are still being planned and yet unfunded. Although the forest staff identified the importance of making Project results available to the public, they do not separately report on Project activities and results from other programs.

During salvage harvest operations in 2004 and 2005, the Forest Service reported three incidents of improper logging and took action to prevent such occurrences in the future. Two of the incidents were caused by Forest Service errors in marking its boundaries. Forest staff have since developed procedures to better mark boundaries of sale areas. A third incident was caused by an error on the part of the company that purchased the sale; the company was fined $24,000, and the trees were left on the ground.

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Abbreviations

EIS	environmental impact statement
K-V	Knutson-Vandenberg
NEPA	National Environmental Policy Act
NOI	Notice of Intent

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United States Government Accountability Office
Washington, D.C. 20548

September 18, 2006

The Honorable Jeff Bingaman
Ranking Minority Member
Committee on Energy and Natural Resources
United States Senate

The Honorable Ron Wyden
Ranking Minority Member
Subcommittee on Public Lands and Forests
Committee on Energy and Natural Resources
United States Senate

The Biscuit Fire Recovery Project (Project), a large-scale project to recover areas of the Rogue River-Siskiyou National Forest burned by the Biscuit Fire, is one of the largest and most complex postfire recovery projects the Forest Service has ever undertaken. The Biscuit Fire burned almost 500,000 acres of federal land in Oregon and California in 2002, making it the largest fire in the nation outside of Alaska since 1997.[1] In the last decade, the nation has experienced many large fires that have burned increasing numbers of acres. The 2002 fire season, one of the nation's worst fire seasons in the last 50 years, burned 6.9 million acres of public and private forests and rangelands in the United States—more than any other year except 2000 and 2005.

After large fires on federal lands, federal land managers identify activities and projects that they believe will help recover forest resources such as trees and vegetation, roads, recreation facilities, wildlife habitat, and streams and rivers. Specifically, the Forest Service within the Department of Agriculture—and other federal land management agencies—have defined recovery activities to include emergency stabilization, rehabilitation, and restoration. Emergency stabilization is conducted within 1 year of a fire through the Burned Area Emergency Response program to address threats to life, property, or resources; it includes work

[1]GAO reported on the federal government's efforts to suppress the Biscuit Fire in GAO, *Biscuit Fire: Analysis of Fire Response, Resource Availability, and Personnel Certification Standards*, GAO-04-426 (Washington, D.C.: Apr. 12, 2004).

such as seeding and mulching to reduce soil erosion and runoff.[2] Rehabilitation is conducted within 3 years of a fire and includes such work as repairing roads or trails, reforesting or planting trees, and restoring wildlife habitat. Restoration continues such rehabilitation activities as reforesting beyond the first 3 years after a fire. The Biscuit Fire Recovery Project focuses on the long-term rehabilitation and restoration of the fire area, not emergency stabilization or Burned Area Emergency Response activities.

During the postfire process, the Forest Service may also consider whether to leave burned trees and allow the burned area to recover naturally or to harvest some of the dead and dying trees—called salvage harvesting—with the intention of generating jobs and economic development, and generating funds to help pay for the recovery of natural resources or Forest Service infrastructure, such as roads and trails. According to the Forest Service, salvage harvesting should be done relatively quickly after a fire, before the trees begin to decay, which makes the wood less usable and valuable. Generally, smaller trees lose their commercial value after about 2 years, and larger trees lose most of their commercial value after 3 or 4 years. However, considerable scientific controversy exists about whether and how quickly harvested areas recover compared with unharvested areas, and experts disagree about whether salvage harvesting the burned timber provides economic development and generates funding for recovery in addition to that needed to pay for planning, preparing, and administering sales. For this reason, we recently recommended that the Forest Service pursue additional research on the effects of salvage harvesting.[3]

While the Forest Service does not have a discrete program or agencywide guidance for managing postfire rehabilitation and restoration activities, its general approach begins with an evaluation of the condition of forest resources. For large fires, Forest Service staff can use photographs and images taken from airplanes or satellites—collectively called remote sensing data—to identify burned and unburned areas. Then, staff identify activities that they believe will help rehabilitate and restore damaged

[2]GAO reported on this program in GAO, *Wildland Fires: Better Information Needed on Effectiveness of Emergency Stabilization and Rehabilitation Treatments*, GAO-03-430 (Washington, D.C.: Apr. 4, 2003).

[3]GAO, *Wildland Fire Rehabilitation and Restoration: Forest Service and BLM Could Benefit from Improved Information on Status of Needed Work*, GAO-06-670 (Washington, D.C.: June 30, 2006).

resources, as well as opportunities for salvage harvest. Depending on how severely or intensely an area is burned, the effects to trees, water, wildlife, and other resources can vary. According to agency officials, they may determine that no rehabilitation or restoration work is needed because natural recovery may be sufficient or the fire may have benefited some resources that are adapted to wildland fire. Further, some areas that have burned, such as wilderness areas, may limit management activities. However, when the staff identify activities they want to undertake and determine that the activities will significantly impact the environment, they develop an environmental impact statement (EIS), as required by the National Environmental Policy Act (NEPA). The EIS identifies the significant environmental effects of the proposed action and a range of reasonable alternative actions. If the proposed action includes salvage sales, the staff conduct a financial and economic analyses of the sales for each alternative in the EIS; the financial analysis estimates the agency's expenditures and revenues, and the economic analysis estimates the jobs and economic income generated. They then issue a record of decision stating the agency's decision and identifying the alternatives considered and begin to implement and monitor the selected alternative. Project activities are typically implemented by the appropriate forest program, such as Forest Products, Engineering, or Fish and Wildlife, as part of each program's annual workload.

The Biscuit Fire burned nearly half of the Siskiyou National Forest, which was administratively joined with the Rogue River National Forest in 2004, and almost all of the Kalmiopsis Wilderness, which lies within the Siskiyou forest.[4] The area lies within the Klamath-Siskiyou ecoregion, an area renowned for its abundant ecological diversity and rugged geological features, as well as being one of the largest areas without roads in the Pacific Northwest. These areas are managed under the Siskiyou National Forest Land and Resource Management Plan (forest plan), as amended by the Northwest Forest Plan—a plan designed to protect species that rely on old-growth forests, while also producing a sustainable level of timber from the national forests of the Pacific Northwest.[5] The Northwest Forest Plan designates land allocations, or areas that must be managed for designated purposes in accordance with specified standards and guidelines. These

[4]There are 155 nationally proclaimed forests, some of which have been joined administratively to enable better management, resulting in 123 administrative units.

[5]The Siskiyou National Forest and the Rogue River National Forest have separate forest plans that were approved in 1989 and 1990, respectively.

allocations include late-successional reserves—areas designed to serve as habitat for species, such as the Northern spotted owl, that depend on late-successional and old-growth trees—as well as areas called "matrix" lands in which most commercial timber harvest is to take place. The Siskiyou forest plan designates some of these lands as inventoried roadless areas—areas without roads that were identified by the Forest Service in wilderness planning efforts. They are managed according to underlying land allocations, some of which restrict road construction and timber harvesting.

After the Biscuit Fire, the Rogue River-Siskiyou National Forest staff developed the Biscuit Fire Recovery Project and an accompanying EIS. In July 2004, the Forest Supervisor signed three records of decision for the Project, one covering activities within inventoried roadless areas, one covering activities in late-successional reserves outside roadless areas, and one covering activities in matrix lands outside inventoried roadless areas. In accordance with the Forest Service's decentralized management structure—which includes 155 national forests, nine regions, and a Washington Office—the Rogue River-Siskiyou National Forest Supervisor decided which of the alternative actions to implement. The activities in the records of decision included almost 20,000 acres of salvage logging with 367 million board feet of timber;[6] almost 20,000 acres of brush disposal—removal of branches and other postharvest debris in the sale areas; 285 miles of fuel management zones—areas in which trees and brush have been removed to reduce "fuel" that might burn in future fires; almost 30,000 acres of reforestation, including harvested acres; and about 7,500 acres of wildlife habitat rehabilitation. The records of decision also called for the Forest Service to monitor certain resource conditions, such as water quality, and conduct a large-scale study of the effects of fire on late-successional reserve habitat and the effect of various management actions on postfire recovery.

The Forest Service's decision to include salvage harvest in the recovery project, particularly in late-successional reserves and inventoried roadless areas, was controversial. Experts disagreed on the amount of timber to harvest, with some asserting that there were large amounts of timber available to harvest in the fire area, and others asserting that any salvage harvest would damage the forest. Numerous lawsuits challenged different aspects of the NEPA analysis, including the adequacy of the Forest

[6]A board foot is the volume of a piece of wood 1-foot square and 1-inch thick.

Service's economic analysis of the sales; these suits are still pending. Meanwhile, a timber industry group was concerned about the time taken to conduct the EIS and salvage harvest, while environmental groups said any delay was attributable to the time taken to analyze additional salvage harvest. In addition, the Forest Service's implementation of the Project's salvage sales is controversial. As of the end of 2005, the Forest Service had sold burnt timber in the matrix and late-successional reserve areas, as well as roadside trees that were considered hazardous because they could fall. Although the forest staff identified the sale boundaries and visited the sale sites during harvest operations, instances of improper salvage harvest occurred. In particular, environmental groups reported that salvage harvest occurred in a botanical area adjacent to one of the salvage sale areas and stated that this indicated poor management of the sales by the forest staff. These groups also dispute the Forest Service's financial and economic estimates for the salvage sales.

In this context, you asked us to determine (1) how the development of the Biscuit Fire Recovery Project compared with the Forest Service's general approach to postfire recovery, (2) the status of the Biscuit Fire Recovery Project salvage sales and how the reported financial and economic results of the sales compared with the Forest Service's initial estimates, (3) the status of other activities identified in the Biscuit Fire Recovery Project, and (4) the extent and cause of improper logging within the Biscuit Fire Recovery Project, as reported by the Forest Service, and changes the agency made to prevent such occurrences in the future.

In conducting our work, we reviewed minutes, briefings, and other forest documents from the administrative file for the Biscuit Fire Recovery Project and developed a time line of the decisions made by the Rogue River-Siskiyou National Forest staff. We discussed the time line with officials and decision makers at the Forest Service's Rogue River-Siskiyou National Forest, Pacific Northwest Region, and Washington Office and the Department of Agriculture to further elaborate on events that affected the time frames and alternatives considered for the Project. To determine the status of the Project's activities, we reviewed contracts for work that had been accomplished, reviewed plans for work not yet accomplished, and discussed both the contracts and the plans with the forest staff to reconcile any differences. We reviewed financial and economic analyses of the salvage sales in the Biscuit Fire Recovery Project EIS and discussed them with the Forest Service's Regional Economist. However, because of ongoing litigation, we did not evaluate the adequacy of the economic analysis. We obtained and analyzed Forest Service expenditures and

receipts from the Biscuit Fire salvage sales, as well as expenditure data from the Department of Justice and Department of Agriculture's Office of General Counsel, which provided legal services related to the salvage sales. We obtained expenditure data for fiscal years 2003 through 2005 and receipts through December 2005, the last year for which complete data were available. Finally, we examined internal and investigative reports on improper logging and interviewed responsible officials about their responses. As appropriate, we assessed the reliability of the data and determined that it was sufficient for this report. We performed our work between November 2005 and July 2006 in accordance with generally accepted government auditing standards. Appendix I provides a more detailed description of our objectives, scope, and methodology.

Results in Brief

The Rogue River-Siskiyou National Forest staff followed the Forest Service's general approach to postfire recovery in developing the Biscuit Fire Recovery Project; however, several unique circumstances affected the time taken to develop the Project and the alternatives it included. First, the size of the burned area—and, subsequently, the size of the Project—complicated the environmental analysis and increased the time needed to complete and review it. For example, to assess resource conditions, such as identifying the extent of dead trees, the forest staff had to rely on remote sensing data that were difficult to interpret and time-consuming to verify. Second, before, during, and after the development of the Project and EIS, the regulations and guidance governing permissible timber harvest and road building in inventoried roadless areas changed several times, in part due to litigation. According to agency officials, these changes affected the amount of timber available for harvest in the inventoried roadless areas and, therefore, directly affected the range of alternatives considered in the EIS and the time needed to develop them. Finally, during development of the EIS, the forest staff reorganized and downsized, although the effect on the EIS is difficult to quantify. According to the staff, the changes increased their workload and limited the amount of time they could devote to developing and implementing the Project. However, according to the Forest Supervisor and other managers, the forest had enough staff to develop and implement the various alternatives identified in the EIS.

As of December 2005, the forest staff had nearly completed 12 salvage sales in the matrix and late-successional reserve areas; however, incomplete sales information and a lack of comparable economic data make a comparison of the financial and economic results of the sales with the

agency's initial estimates difficult. For the sales conducted through 2005, purchasers harvested almost 60 million board feet, which is much less than the 367 million board feet proposed for sale in the EIS. Forest staff overestimated the timber available for harvest and, in addition, some timber decayed during the preparation of the EIS and sales, further reducing the volume of available timber. For fiscal years 2003 through 2005, the Forest Service and other agencies spent about $5 million on the sales and related activities such as law enforcement. In the next several years, the Forest Service plans to spend an additional $5.7 million to remove brush, reforest, and conduct other work in the sale areas. In return, the agency collected about $8.8 million from the sales. In the EIS, the sale expenditures and receipts were estimated to be about $24 million and $19.6 million, respectively, and the salvage harvest was expected to generate about 6,900 local jobs and $240 million in regional economic activity. However, it is premature to compare the results through 2005 with the estimates because the Forest Service will generate additional expenditures, revenues, and potential economic activity from two sales in June and August 2006. Even if complete sale results were available, methodological differences and lack of comparable economic data complicate the comparison of the salvage sale results and EIS estimates. For example, the financial comparison is complicated by the fact that the reported expenditures through fiscal year 2005 include different activities, such as the environmental analysis, than the EIS estimates. Similarly, the economic comparison is complicated by the fact that the Forest Service does not report the jobs or economic activity resulting from sales. According to Forest Service officials, the agency does not conduct the type of analysis needed to report the results because the primary reason for preparing EIS estimates is to compare the relative economic effects of salvage alternatives and not to provide a precise prediction of the outcomes of the sales. However, all else being equal, given that the volume of timber sold through 2005 is substantially less than the volume of sales assumed in the EIS for the selected alternative, we would expect the actual economic results to be less than the EIS estimate.

Through December 2005, the forest staff have begun work on most of the other activities identified in the Biscuit Fire Recovery Project but completing them depends on the amount of salvage harvest, funding sources, and schedules. Three such activities, reforestation, brush disposal, and road maintenance, are under way and have funding and time frames associated with them, but the needed work will change with the amount of salvage harvest. For example, the amount of brush disposal work—estimated at 18,939 acres in the records of decision—will be

reduced because the number of acres where salvage harvest occurred has been reduced. Other activities, such as establishing fuel management zones and rehabilitating wildlife habitat—both in and outside salvage sale areas—depend on the Forest Service funding and scheduling the work over many years. In addition, a large-scale adaptive management study and monitoring activities are still being planned and not yet funded. As of June 2006, work contemplated in the study—such as mapping monitoring plots—had not been started, and the forest staff had not determined how the study would be funded. According to the Forest Service, these activities can be funded and implemented many years into the future.

During salvage harvest operations in 2004 and 2005, the Forest Service reported three incidents of improper logging and took action to prevent such occurrences in the future. Two of the incidents were caused by Forest Service errors, and a third was an error on the part of the harvest company that purchased the sale units. One of the Forest Service errors was identified by a local environmental group, and the second was caught by an independent researcher; the purchaser error was reported to the Forest Service by the purchaser. Both of the Forest Service errors resulted from mismarked boundaries, one at the boundary of a botanical area and the other at the boundary of the wilderness area. The forest staff have since developed procedures to better mark boundaries of sale areas, and the regional staff have emphasized the need to properly measure boundaries as well. In the case of the purchaser's error, existing sale administration processes addressed the mistake. Specifically, in accordance with the sale contract provisions, the purchaser was fined $24,000, or $200 for each tree cut, and the trees were left on the site. In addition to these errors, the forest staff worked with local groups that monitored the sale areas before and after harvest and followed up on numerous other claims of improper logging, but determined that the logging was properly conducted.

Given the size, unique nature, and public interest and controversy surrounding the fire and the Project, the potential for significant research results on the effects of postfire management activities, and potential future changes to Project activities, it is important that the Forest Service be able to specifically track and provide information on the Project's status and results. However, because the activities are being implemented through the agency's regular programs, the forest staff do not track or report the status of Project activities separately from other program accomplishments. As a result, although the forest staff indicated in the Project records of decision that monitoring results would be made available to the public, they cannot readily report on the status of Project

activities—in particular the activities that will be implemented over the long term. To help keep the Congress and the public informed on the Project's status and results—particularly the research study component of the Project—we are recommending that the Chief of the Forest Service direct the Pacific Northwest Regional Forester and the Rogue River-Siskiyou National Forest Supervisor to publish an annual status report on the Project through its completion. In commenting on a draft of this report, the Forest Service generally agreed with our findings and the recommendation but stated that the time period for providing the report should be limited to the next 3-to-5 year period. Because of the long-term nature of some of the activities in the Project, we believe the reports should be provided until the Project is substantially complete. We revised the recommendation accordingly.

Background

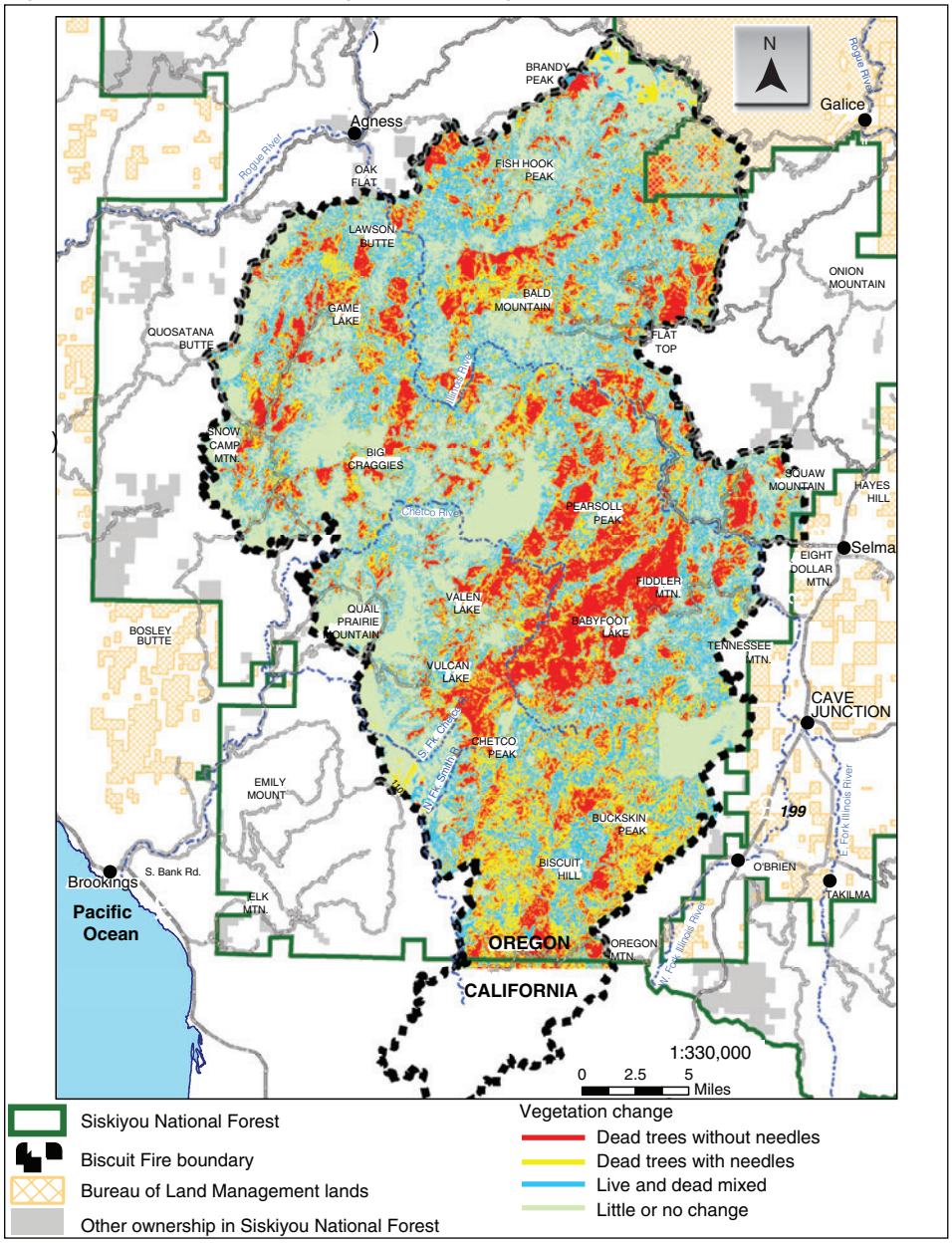
The Biscuit Fire began in July 2002 as 5 separate fires in southwest Oregon in the Siskiyou National Forest, which was administratively joined with the Rogue River National Forest in 2004. The fire was one of 12 or 13 large fires that burned throughout the Pacific Northwest Region in 2002 due to severe drought conditions; in addition to the Biscuit Fire, fires burned in the Deschutes, Umpqua, Malheur, and other forests in the region. In Oregon, the Biscuit Fire burned mostly within the Siskiyou Forest, which encompasses more than 1 million acres of diverse, steep, and rugged landscape made up of the Klamath Mountains, the Coast Ranges, the 180,000-acre Kalmiopsis Wilderness, and many roadless areas.[7] By September 2002, the fire was being controlled, and Forest Service staff were conducting Burned Area Emergency Response program projects to stabilize the most severely burned areas. By November 2002, the fire was declared controlled, and the Rogue River-Siskiyou National Forest staff were beginning their postfire recovery efforts.

In evaluating conditions after the fire, the Rogue River-Siskiyou National Forest staff determined that some areas were not so severely burned as to warrant management action. However, in some instances, the forest staff identified areas that were severely burned and resources that would not recover as quickly as desired without forest intervention. The fire burned in a mosaic pattern, with about 30 percent of the area burned lightly, with little vegetation killed, and about 44 percent burned intensely, with more

[7]The fire also burned a small portion of the Six Rivers National Forest in California and the Medford District of the Bureau of Land Management.

than 75 percent of vegetation killed; the remaining acreage burned with mixed intensity and mixed results (see fig. 1).

Figure 1: Biscuit Fire Map, Vegetation Change



Source: GAO analysis of Forest Service data.

In evaluating postfire recovery projects and activities, the following laws and regulations affect the approach that the Forest Service generally takes:

- The National Forest Management Act of 1976 requires the Forest Service to, among other things, (1) develop a plan to manage the lands and resources of each national forest in coordination with the land management planning process of other federal agencies, states, and localities and (2) revise each plan at least every 15 years. Each forest plan—called a Land and Resource Management Plan—establishes how land areas within a forest may be used and governs individual projects or activities that occur within the forest. Individual projects or activities, such as building a road or harvesting timber, may take place only if they are consistent with the plan and after site-specific environmental review, which often includes public notice, comment, and administrative appeal.

- Under NEPA, agencies such as the Forest Service generally evaluate the likely effects of projects they propose using a relatively brief environmental assessment to determine if an EIS is needed. If the action would be likely to significantly affect the environment, a more detailed EIS is required. An agency may exclude categories of actions having no significant environmental impact—called categorical exclusions—from the requirement to prepare an EIS.[8] One purpose of the EIS is to ensure that agencies have detailed information available to inform their decision making. Agencies such as the Forest Service give the public an opportunity to comment on draft environmental assessments and impact statements. In addition, the Forest Service has established procedures for administrative appeal of its decisions concerning projects and activities on National Forest System lands.[9] As a general

[8]Some Forest Service activities that are subject to a categorical exclusion include actions to (1) repair and maintain roads and trails, (2) regenerate an area to native tree species, including site preparation, and (3) maintain and repair recreation sites and facilities.

[9]Under these regulations, an appeal must be filed within 45 days of the public notice of decision and the appeal must be decided within 45 days after the appeal period closes. The project may be implemented on or after15 days following the appeal decision. The regional forester decides appeals of project decisions by forest supervisors within the region. Regardless of appeals, that portion of a project determined to be an emergency situation may proceed immediately. Emergency situations include those where immediate implementation of a decision is necessary to provide relief from hazards threatening human health and safety or natural resources, or situations that would result in substantial loss of economic value to the federal government if delays occurred.

rule, once the administrative appeals process is complete, the public can litigate in a federal court a decision about a particular project.

- In 2001, the Forest Service issued a rule for managing its inventoried roadless areas, which generally include areas without roads that are 5,000 acres or larger, or smaller areas contiguous to designated wilderness areas.[10] This rule, which was intended to provide lasting protection for inventoried roadless areas within the National Forest System, generally prohibited road construction, road reconstruction, and timber harvesting. However, U.S. District Court for the District of Wyoming found the rule unlawful and struck it down in 2003.[11] The government did not appeal this decision and issued a new rule related to the roadless areas in 2005, also now in litigation. The new rule allows states to petition the Forest Service to issue regulations establishing management requirements for inventoried roadless areas within their states. The opportunity for submitting state petitions is available until November 13, 2006.[12]

- Projects involving salvage harvests are governed by the Forest Service's timber sales regulations and procedures. To sell timber, the forest staff identify the areas that they want to harvest—called sale units—identify the unit boundaries, and develop a timber sale contract that contains many standard provisions, such as limits on which trees can be harvested and requirements to prevent and control erosion. Sale units can be located along roads to allow access by logging trucks and equipment; logs are cut and hauled from the slopes by tractors or pulled by cables suspended above the ground. Sale units that are located farther away from roads—such as roadless areas—can be logged using

[10]Under the Wilderness Act of 1964, the Forest Service undertook a planning effort to identify roadless areas to be added to the wilderness system and those to be opened to development, called the Roadless Area Review and Evaluation. It undertook a second evaluation, called the Roadless Area Review and Evaluation II beginning in 1977 and completed it in 1979.

[11]*Wyoming v. USDA*, 277 F. Supp. 2d 1197 (D. Wyo. 2003), *vacated as moot* 414 F. 3d 1207 (10th Cir. 2005).

[12]As of July 2006, the Department of Agriculture had agreed to work with three states—Virginia, North Carolina, and South Carolina—to make state-specific rules governing inventoried roadless areas. Three states—California, New Mexico, and Oregon—have filed a lawsuit challenging the repeal of the 2001 rules, and Oregon and Washington filed petitions with the Department of Agriculture asking that states be allowed to follow the 2001 rules.

helicopters. In such cases, loggers cut the trees and the logs are then flown out by helicopter. Timber sales are laid out by timber planners and the sales are monitored by a timber sale administrator that visits the site to review contract provisions and harvest operations.

A large fire such as the Biscuit Fire can cause major changes to a forest's resources and planned program of work such as the amount of timber to be sold and harvested, campgrounds and trails to be maintained, and areas of vegetation to be removed or reduced to help avoid future fires. The Siskiyou forest plan establishes goals and objectives for the desired future conditions of the forest that describe management of forest resources and activities such as timber, grazing, recreation, wilderness, and others. As with all land management activities, postfire recovery projects must be consistent with the forest plan. In the case of the Biscuit Fire, postfire recovery projects need to comply with the Siskiyou forest plan, which was approved in 1989. The projects also need to comply with the Northwest Forest Plan, a comprehensive document amending several forest plans adopted in 1994 for the management of federal forest land in Washington, Oregon, and northern California. Old-growth forests are valued as habitat that includes large standing, dead, and down—fallen—trees in various stages of decay. The plan includes a combination of land allocations managed to protect and enhance habitat for late-successional and old-growth related species, while providing a sustainable level of timber sales, as well as standards and guidelines for the management of these land allocations. These standards and guidelines include requirements for retaining dead and decaying trees on the ground, as well as standing dead trees, called snags, that are essential habitat for many wildlife species. The standards and guidelines also impose restrictions on timber harvesting and road building in riparian areas—areas along streams, ponds, reservoirs, and wetlands—to limit the amount of sediment running into them.

Postfire recovery projects are funded by various sources, principally appropriations and trust funds. The Forest Service conducts its rehabilitation and restoration activities through existing programs, including its forest management, watershed, recreation, wilderness, and construction programs, among others. To fund such activities, the agency uses appropriations from sources that include its National Forest System, capital improvement and maintenance, and wildland fire management

accounts.[13] In addition, the Forest Service uses the Knutson-Vandenberg (K-V) trust fund that collects receipts generated from timber sales to pay for reforestation and timber stand improvement in areas harvested for timber, as well as wildlife habitat and other improvements in sale areas.[14] It also uses the Salvage Sale Fund, which collects receipts generated from salvage sales, to pay for future salvage sales. Other sources of funds, such as gifts, bequests, and partnerships, also fund postfire recovery projects.[15]

[13]We are exploring with the Department of Agriculture the availability of these appropriations for the purpose of funding rehabilitation and restoration projects.

[14]The Knutson-Vandenberg (K-V) Act of 1930 (16 U.S.C. 576-576b) established a trust fund to collect a portion of timber sale receipts to pay for reforesting areas from which timber is cut. The reforestation projects eligible for such funding include growing trees for planting, planting trees, sowing seeds, removing weeds and other competing vegetation, and preventing animals from damaging new trees. The act was amended in 1976 to allow the Forest Service to use these funds for other activities, such as creating wildlife habitat. It was amended again in 2005 to authorize expenditures within the entire Forest Service region in which the timber sale occurred.

[15]The most significant partnership is the one established by the Secure Rural Schools and Community Self-Determination Act of 2000. Under this act, the agency can use resource advisory committee funds, which are provided to forests for local stewardship projects chosen by resource advisory committees. Under the act, counties may receive certain annual payments in lieu of those that the county would have received for timber harvests occurring on national forests within the county. The county may reserve a portion of these funds for special projects that benefit federal lands. These projects are to be proposed by local resource advisory committees and must be approved by the Forest Service, which can then carry out approved projects using the reserved funds.

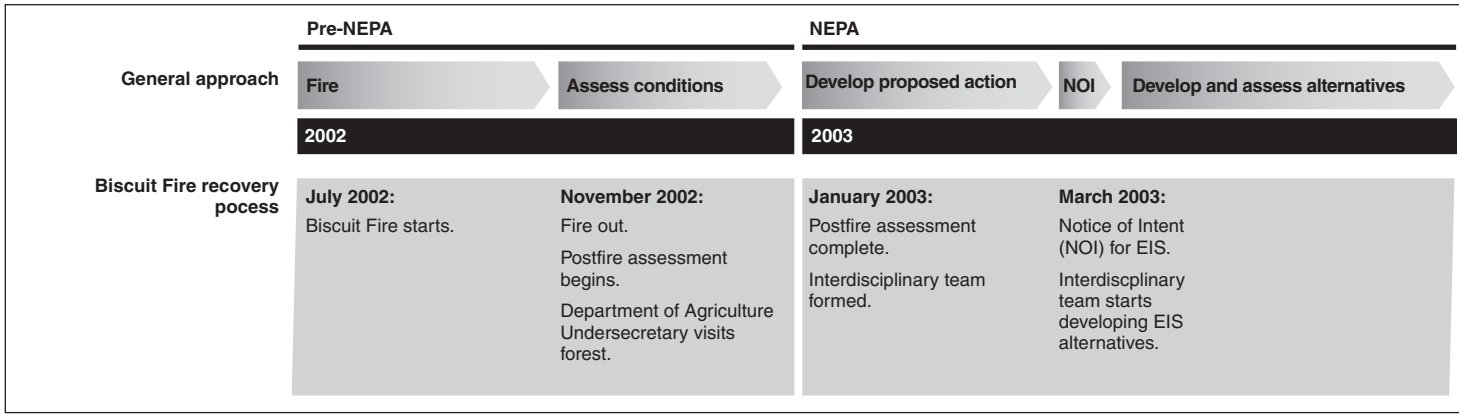
Rogue River-Siskiyou National Forest Staff Followed the Forest Service's Postfire Recovery Approach, but Unique Circumstances Affected the Time Taken and Alternatives Considered for the Biscuit Fire Recovery Project

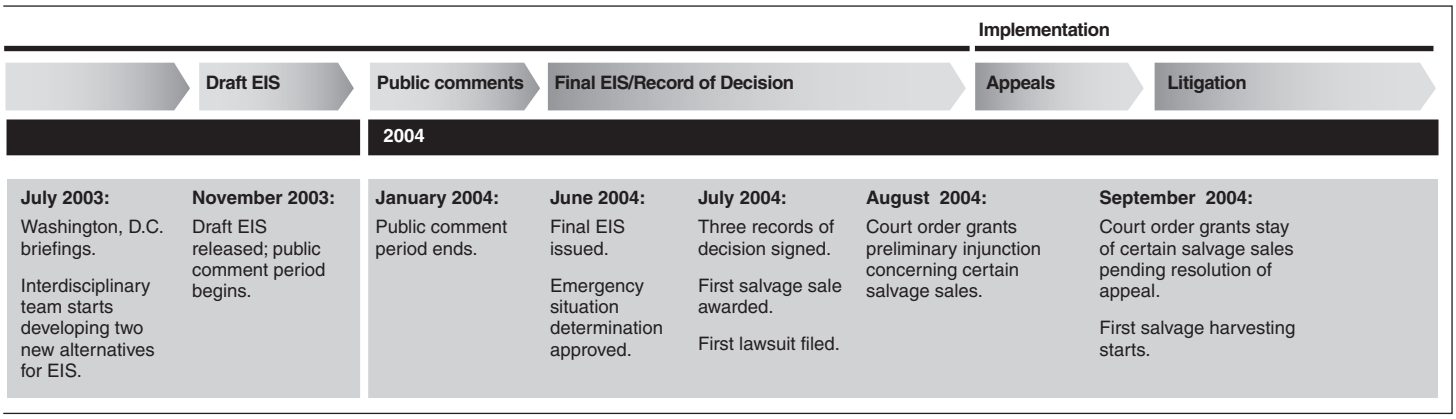
In developing the Biscuit Fire Recovery Project, the Rogue River-Siskiyou National Forest staff followed the Forest Service's general approach for postfire recovery efforts, but several unique circumstances, combined, affected the time taken to develop the Project and the alternatives included in it. First, the size of the burned area—and subsequently the Project—complicated the environmental analysis and the time needed to complete and review it. For example, to assess resource conditions, such as identifying the extent of dead trees, the forest staff had to rely on remote sensing data that were difficult to interpret and time-consuming to verify. Changes in the remote sensing data throughout the development of the Project caused the salvage sale volumes in the different EIS alternatives to change. Second, before, during, and after the development of the Project and the EIS, the regulations and guidance governing activities that could occur in the inventoried roadless areas changed several times, in part due to litigation. Changes that allowed salvage harvest in the inventoried roadless areas directly affected the alternatives considered in the EIS and the time needed to develop them. Third, during development of the EIS, the forest staff were reorganized and downsized, although the effect on the EIS is difficult to quantify. According to the forest staff, the changes increased their workload and limited the amount of time they could devote to developing and implementing the Project. However, according to the Forest Supervisor and other managers, the forest had enough staff to develop and implement the various alternatives identified in the EIS.

Rogue River-Siskiyou National Forest Staff Followed the Forest Service's General Approach for Planning the Biscuit Fire Recovery Project

In the wake of the Biscuit Fire, the Rogue River-Siskiyou National Forest staff followed the Forest Service's general approach to postfire recovery planning for large fires. The Forest Service does not have a national program directing postfire recovery efforts or nationwide guidance on the development of recovery projects after a fire. However, according to Forest Service officials, regions and forests that had experienced past large fires with severe damage to their resources followed a general approach of assessing the conditions of forest resources after the fire, identifying projects needed to rehabilitate and restore damaged resources and opportunities for salvage harvest, and following the steps documented in the Forest Service's NEPA manual, which include implementing and monitoring the chosen project. Figure 2 shows the time line of events in the development of the Project compared with the Forest Service's general approach.

Figure 2: Biscuit Fire Recovery Project Time Line Compared with the Forest Service's General Approach to Postfire Recovery




Implementation
Draft EIS
Public comments
Final EIS/Record of Decision
Appeals
Litigation
2004
July 2003:
Washington, D.C. briefings.
Interdisciplinary team starts developing two new alternatives for EIS.
November 2003:
Draft EIS released; public comment period begins.
January 2004:
Public comment period ends.
June 2004:
Final EIS issued.
Emergency situation determination approved.
July 2004:
Three records of decision signed.
First salvage sale awarded.
First lawsuit filed.
August 2004:
Court order grants preliminary injunction concerning certain salvage sales.
September 2004:
Court order grants stay of certain salvage sales pending resolution of appeal.
First salvage harvesting starts.

Source: GAO.

Generally, to determine management actions to recover a burned area, forest staff assess the postfire conditions and evaluate various actions that could help to achieve their forest plan's desired conditions. For large fires and recovery projects specifically, as shown in figure 2, forest staff (1) assess the resources in the burned areas; (2) develop a proposed action to recover resources, which can include multiple activities; (3) issue a Notice of Intent (NOI) to prepare an EIS; (4) develop and analyze alternatives to the proposed action; (5) issue a draft EIS and solicit public comments on the draft; and (6) issue a final EIS and record of decision to make a formal decision about the project.[16] At this point, the forest staff implement and monitor the project, although it may be appealed or subject to litigation. Some projects can be finished within a few years after the fire; others may be implemented years after the fire.

In the case of the Biscuit Fire Recovery Project, the forest staff wrote a formal postfire assessment, published in January 2003, 3 months after the fire was declared controlled. The Biscuit postfire assessment was conducted by a team of forest resource specialists, with expertise in forestry, recreation, engineering, hydrology, soil science, and fish and wildlife. The team visited key areas burned by the fire to view and measure the effects of the fire and to determine how severe the effects were on different resources. They then identified potential work to repair damaged resources. During this assessment, the team also held multiple meetings to gather the public's input on what to do to repair the damage caused by the fire.

In January 2003, after the Biscuit postfire assessment was completed, forest officials began the NEPA process by identifying members of an interdisciplinary team made up of about 30 resource specialists from the Rogue River-Siskiyou National Forest and other units of the Forest Service. Over the next few months, the team developed the purpose and need for the recovery work and then developed a proposed action, or a set of activities to be conducted in the area. In March 2003, the forest staff published an NOI in the *Federal Register* announcing that it would prepare an EIS for the Biscuit Fire Recovery Project. In it, the forest staff identified the purpose and need for action in the Biscuit Fire area: recovery of potential economic value through salvage harvest; restoration of vegetation

[16]The agency may or may not follow similar steps for smaller fires or fires with less controversial activities. In such cases, Forest Service officials may plan smaller projects or they may not plan any activities if they do not expect to receive funding.

altered by the fire—in particular, reforestation; protection of late successional habitat from future fire and insect damage; protection from future fire through hazardous fuel reduction; and learning about postfire management activities. The Project originally proposed in the NOI included salvage harvest on about 7,000 acres of matrix lands, totaling 90 million board feet; fuel reduction on 16,000 acres including late-successional reserve lands; meadow habitat treatments; road closures and repair; and reforestation on about 30,000 acres.

As shown in figure 2, from March through October 2003, the interdisciplinary team developed alternatives for the proposed action and analyzed their effects on the environment. According to forest and regional officials, the team sought to develop a range of alternatives that were reasonable, including a range of salvage options, fuel reduction alternatives, and other activities. According to the Department of Agriculture's Office of General Counsel, the agency is given discretion in developing a reasonable range of alternatives but typically develops two or more alternative ways of meeting the purpose and need of the proposal—in addition to an alternative that considers no action. During the process of developing alternatives, the team also identified projects in the Biscuit Fire area that could be conducted under categorical exclusion, including repairing recreational trails and sites; road maintenance such as replacing culverts; reforestation of burned areas identified as plantations—areas managed for harvest; and salvage harvesting trees that posed a hazard along roads. The team and the forest staff documented these categorically excluded projects separately and conducted them in 2003 and 2004 as the EIS for the Biscuit Fire Recovery Project was being developed. In addition, the forest staff held "deck" sales in which they sold trees that had been cut by firefighters during suppression activities and piled up or "decked." According to Forest Service officials, because the environmental effects of cutting the trees occurred during the firefighting, an emergency activity, and the hauling would have limited environmental effects, the deck sales were not subject to a NEPA analysis.

The Rogue River-Siskiyou National Forest staff issued its draft EIS for the Biscuit Fire Recovery Project in November 2003, a year after the fire was controlled, and allowed public comment through January 2004, as shown in figure 2. Approximately 23,000 public comments were received, summarized, and incorporated into the final EIS, which was issued in June 2004. A month later, in July 2004, the forest staff issued three records of decision—one each for the inventoried roadless areas, the matrix areas outside inventoried roadless areas, and late-successional reserves outside

inventoried roadless areas. According to Forest Service officials, the decision to issue three records of decision was made to separate the more controversial projects—specifically the salvage sales in the inventoried roadless areas—from the less controversial projects to allow the latter to move forward without appeal and litigation. With the issuance of the final EIS and records of decision, an emergency situation determination approved by the Pacific Northwest Regional Forester in June 2004 became effective for the salvage sales in the matrix and late-successional reserve areas. The determination stated that the government would lose approximately $3.3 million if the sales were delayed for the full 105-day appeal period. The decision did not apply to the inventoried roadless area sales because, according to agency officials, the forest staff were not ready to conduct these sales at the time of the decision. Although the region was the first in the country to define an emergency under the economic criteria in the Forest Service regulations, the Biscuit Fire was not the first recovery project to which the region applied this argument.[17]

Overall, the general approach to postfire recovery efforts does not have specific time frames associated with it. According to Pacific Northwest Region officials, the NEPA analyses conducted in the region can take from 1 to 3 years to complete. Figure 2 shows that the development of the Biscuit Fire Recovery Project took about 1 ¾ years, after the fire was controlled, to complete, from November 2002 through July 2004. The records of decision were issued in July 2004, and the forest staff awarded the first of several salvage sales the same month. The emergency situation determination allowed the forest staff to begin implementing the Project immediately, without waiting up to 105 days for the appeal process to conclude. However, according to Forest Service officials, because the harvest season in this region typically ends in September, the purchasers did not have time to schedule the Biscuit Fire harvest into their workloads, and most of the salvage sale harvest occurred in 2005—3 years after the fire. This delay in the salvage harvest concerned all parties involved because of the additional loss of the commercial value of the trees. One of the key lessons identified in a regional evaluation after the 2002 fire season

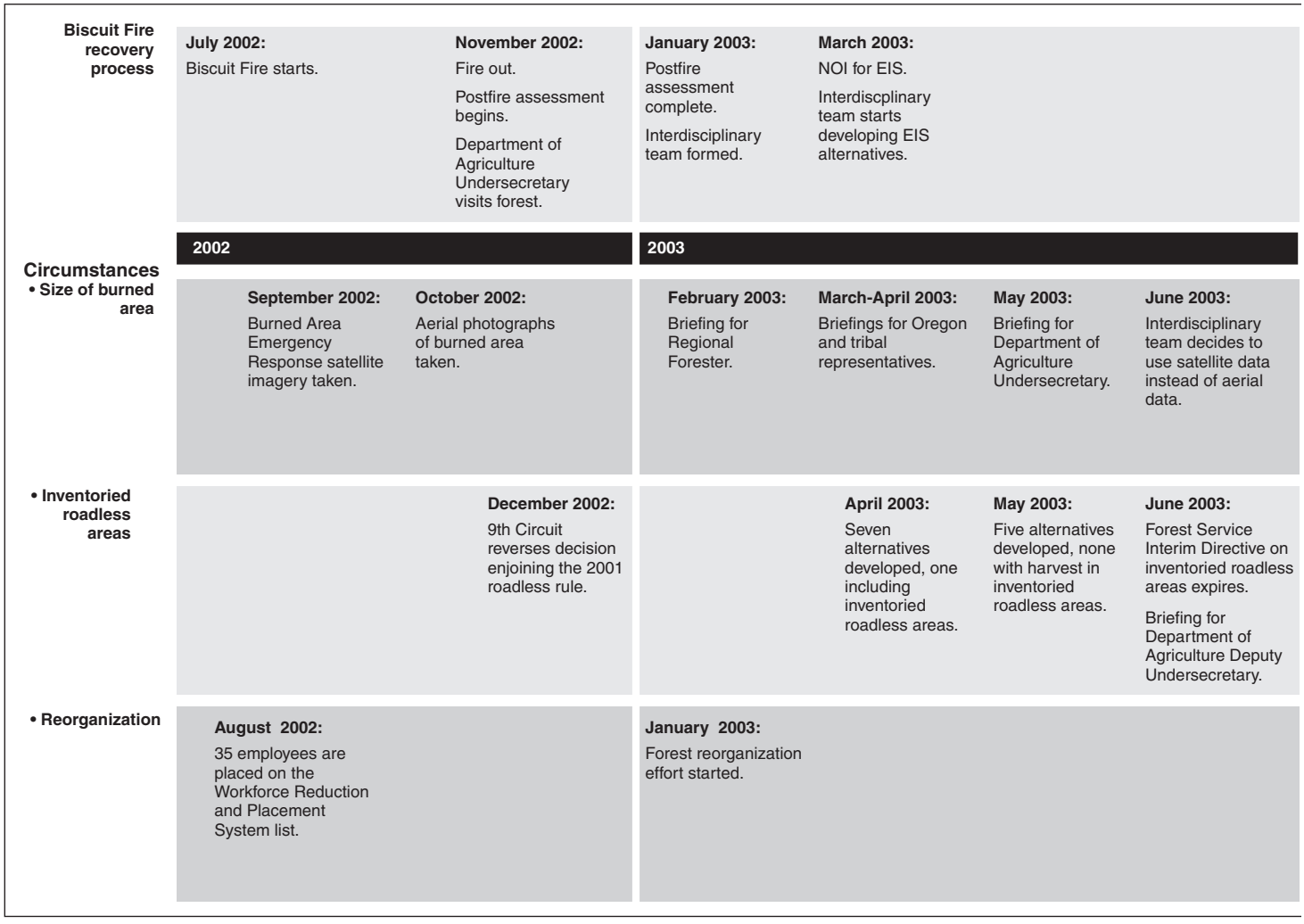
[17]The use of an economic rationale to support an emergency situation determination was upheld in November 2004 in *League of Wilderness Defenders v. U.S. Forest Service*, Civ. No. 04-488-HA (D. Or. 2004). The use of an economic rationale was deemed "not an impermissible reading" of the Appeals Reform Act, *Earth Island Institute v. Pengilly*, 376 F. Supp. 2d 994, 1008-1009 (E.D. Cal. 2005). The *Pengilly* decision struck down the regulation authorizing regional foresters to make emergency situation determinations. *Id.* at 1009. The Chief of the Forest Service is now the only official authorized to make such determinations.

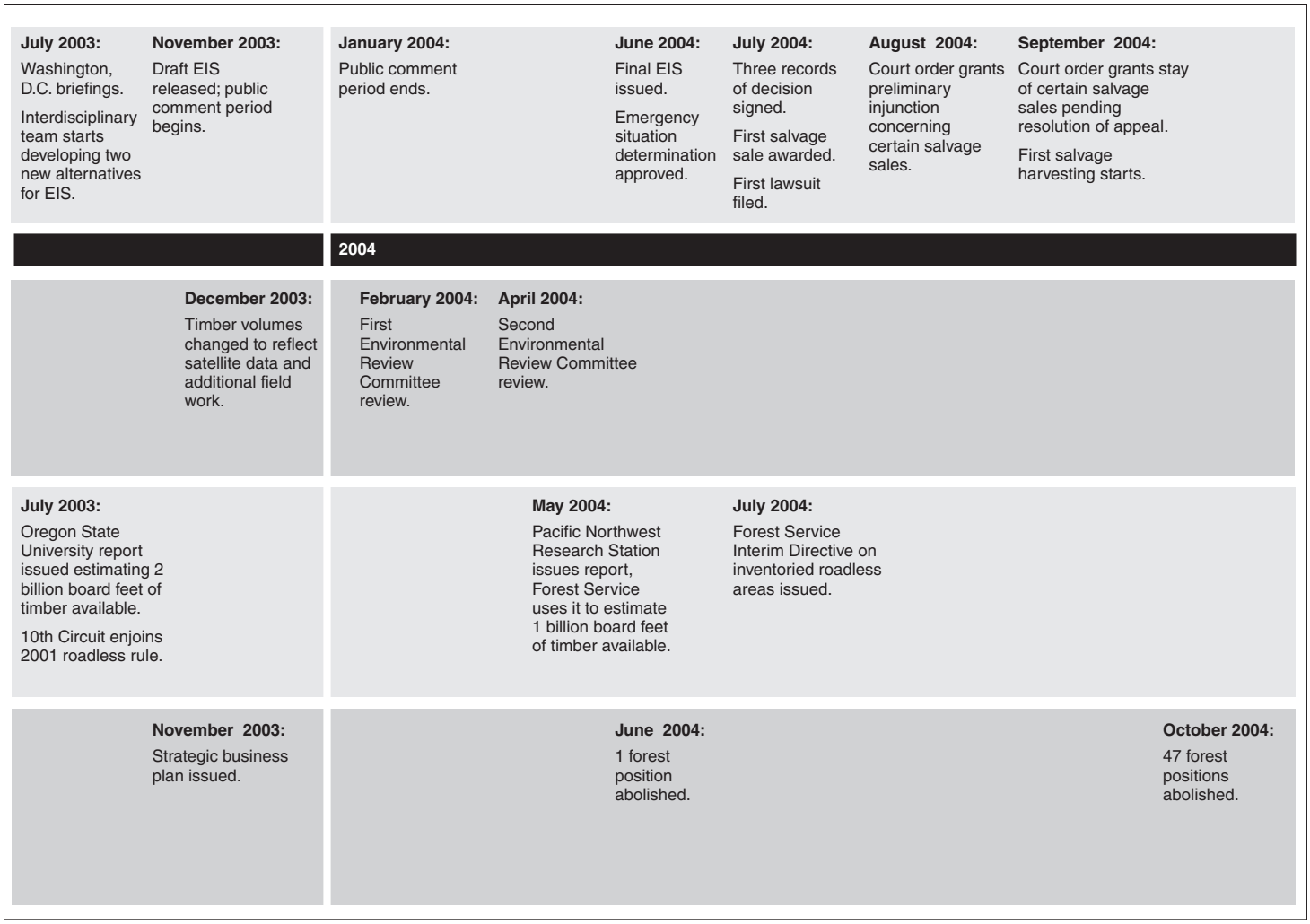
was that the identification of potential salvage sales should begin immediately after a fire. At the national level, in December 2004, an interregional committee published a strategy for postfire recovery, which identified challenges for managing postfire environments and proposed potential actions to improve the identification of salvage sales after large fires. According to Forest Service Washington Office officials, these actions have not yet been implemented because the agency has instead been focused on formulating broader restoration policy that encompasses postfire recovery actions.

Unique Circumstances Affected the Time Taken and Alternatives Considered for the Biscuit Fire Recovery Project

While the Rogue River-Siskiyou National Forest staff followed the general approach for postfire recovery on Forest Service lands, three unique circumstances affected the time taken to develop the Project EIS and the alternatives that were included in it. First, the size of the fire and proposed recovery activities increased the complexity of the analysis and review of the overall Project. Second, changes in the regulations and guidance for inventoried roadless areas that occurred during development of the Project caused alternatives to be added to the analysis and increased the time taken for the analysis. Third, the forest staff planned and implemented a major reorganization and downsizing during the development of the Project. Combined, these unique circumstances affected the time taken to develop the Project EIS, although it is difficult to distinguish the individual effect of each circumstance. In addition, the size of the fire and the changes to the management activities allowed in the inventoried roadless rules caused changes in the amount of timber considered for salvage sale in the Project alternatives and added two alternatives to the EIS. Figure 3 shows the events surrounding each unique circumstance compared with the events in the development of the Project.

Figure 3: Unique Circumstances Affecting the Time Taken and Alternatives Considered for the Biscuit Fire Recovery Project





Source: GAO.

Size of Burned Area and Project Increased Complexity of Analysis and Attention to and Review of Project

The first circumstance unique to the Biscuit Fire that affected development of the Project was the size of the area burned by the fire and, subsequently, the size of the area included in the Project. The size increased the complexity and amount of work needed to analyze and review resource conditions, Project alternatives, and potential impacts. While the fire burned almost 500,000 acres, the forest staff excluded the Kalmiopsis Wilderness in the postfire recovery work, leaving about 320,000 acres of nonwilderness area for evaluation. Normally, to assess the conditions of

resources burned in a fire, forest staff conduct site visits, take measurements and samples of different resources and conditions, and identify potential rehabilitation and restoration activities. For large fires, they can use aerial photographs and satellite images. However, the Biscuit Fire was much larger than other fires that were considered large, causing the forest staff to conduct the postfire assessment and to use different sources of remote sensing data to assess the condition of forest resources. The size of the fire and Project also increased the attention and amount of review the Project received.

The forest staff decided to conduct a postfire assessment of the Biscuit Fire because of the large area that had been burned and needed to be assessed to determine what recovery actions were needed. However, according to forest and regional officials, while the data gathered and analyzed during the assessment were useful in moving forward with recovery, writing the formal report added time to the process. Forest officials involved in the Biscuit postfire assessment stated that because the fire was so large, and access was limited due to the lack of roads and steep terrain, they could only conduct limited site visits to gather information on the condition of forest resources that had been burned and those that remained unburned. The assessment, according to the officials, was useful for the purposes of getting a head start on gathering data on these resource conditions, which were ultimately useful in the NEPA analysis. At the same time, forest and regional officials acknowledged that the assessment did not help them narrow the range of projects to be conducted and was time-consuming and expensive, causing several weeks of delay in the NEPA analysis. According to these officials, the postfire assessment—while useful in soliciting public comments about what should be done to recover the burned area—contained a wish list of projects that could be done regardless of funding sources and schedules. As such, the assessment may have set expectations too high about what could be practically accomplished, given funding and time. According to the Forest Supervisor, the postfire assessment should have focused on time-sensitive projects to facilitate the NEPA process. In response to the lessons learned from the 2002 fire season, the region will conduct postfire assessments separately from the assessment of salvage opportunities and will deploy a rapid assessment team to quickly identify salvage opportunities after a fire to prevent delay and decay of trees that can be harvested.

The size of the burned area and the increased complexity of the assessment was also reflected in the need to use remote sensing data to adequately assess the resources in such a large area. Changes to the sources of data

added time to the EIS development and affected the salvage harvest volumes being considered in different alternatives. Given the size of the burned area and Project area, the forest staff used aerial and remote sensing data, in addition to site visits to verify the data, to assist in the analysis of vegetation conditions, burned timber available for salvage, and wildlife habitat conditions. Overall, the data helped the staff in covering a large area but also required additional analysis work that added to the time needed to develop the EIS. The interdisciplinary team started using aerial photographs taken at the end of the fire, as shown in figure 3, to identify potential areas for salvage harvest. The team used these photographs to identify patches of dead trees that were a certain size and density; however, because the locations seen in the photographs were inaccurately identified and details were insufficient at times, the forest crews did not always find enough dead trees when they visited the sites. By June 2003, the wildlife staff on the team determined that satellite images taken of the burned area more clearly showed areas of dead timber than the aerial photographs. Because the team did not want to use two sets of data—the aerial photographs and the satellite images—the team selected the satellite images as the data set for the EIS analysis. This added time to change the underlying maps in its Geographic Information System, which the forest staff used to prepare maps for the EIS analysis. In addition to adding time for analysis, the data changes had an effect on the EIS alternatives being considered by the team. For example, the maximum amount of timber estimated as available for salvage harvest decreased from about 1 billion board feet in the draft EIS issued in November 2003 to about 600 million board feet in the final EIS issued in June 2004, due to the use of more accurate satellite data, more field verification of data, and application of strict salvage guidelines for the late-successional reserves.

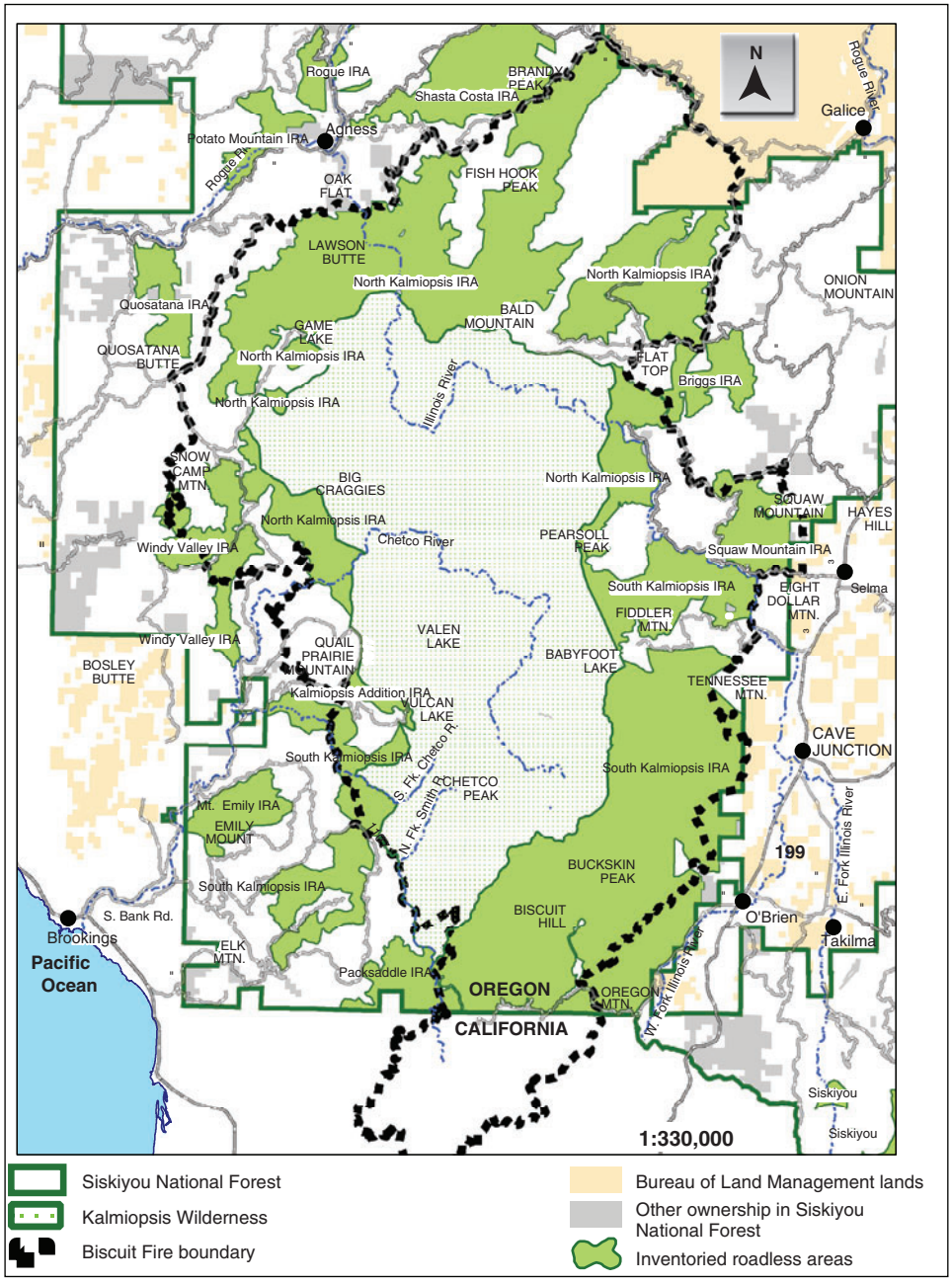
Finally, the size of both the fire area and the Project resulted in additional review by Forest Service regional officials and Department of Agriculture officials, as well as increased attention by state officials. The additional review included two evaluations by the region's Environmental Review Committee—a group responsible for examining more complicated EIS documents in the region for substantive concerns and to ensure compliance with Forest Service regulations. The Environmental Review Committee reviewed the EIS in February 2004 and again in April 2004 before its issuance. According to regional staff, the evaluations identified the need to revise the document, and these revisions required a few additional weeks to complete. In addition, the review included visits and several briefings for the Undersecretary and Deputy Undersecretary of Agriculture for Natural Resources and Environment and key state and

tribal officials to apprise them of the status of the EIS (see fig. 3). According to the Undersecretary, large, controversial fires and recovery projects such as the Biscuit Fire Recovery Project elicit additional attention from department officials because of increased congressional interest. These briefings took some time, but according to the Forest Supervisor, did not affect the time needed to produce the EIS.

Authorized Management Activities in Inventoried Roadless Areas Changed over the Course of Planning for the Project

The second circumstance unique to the Biscuit Fire that affected the development of the Project was the uncertainty of the regulations and guidance governing road building and salvage harvest activities in inventoried roadless areas, which affected the alternatives in the Project EIS and the time needed to analyze them. Figure 4 shows the inventoried roadless areas in the fire area.

Figure 4: Map of Burned Area with Inventoried Roadless Areas



Sources: GAO analysis of Forest Service data.

As can be seen from figure 3, the regulations and guidance governing activities in inventoried roadless areas changed several times. The first change occurred in December 2002. Regulations promulgated in 2001 would have limited road building and timber harvest in inventoried roadless areas; however, in May 2001, the U.S. District Court for the District of Idaho prohibited the Forest Service from implementing the regulations. Subsequently that year, to help provide guidance for addressing road and timber management activities until land and resource management plans are amended or revised, the Forest Service issued an interim directive that allowed some road building and timber harvest activities in the areas with the approval of the Chief of the Forest Service or a Regional Forester. In December 2002, immediately after the fire was controlled and as the forest staff developed the postfire assessment, the U.S. Court of Appeals for the Ninth Circuit reversed the Idaho district court's decision, effectively reinstating the 2001 regulations. The plaintiffs petitioned the appellate court to rehear the case, which the court denied in April 2003. During this time, the interdisciplinary team was developing its proposed action and began developing its EIS alternatives. In April 2003, the team had identified seven alternatives, the largest of which included 386 million board feet of salvage harvest from matrix, late-successional reserve, and inventoried roadless areas. However, by May 2003, after the appellate court declined to rehear the plaintiff's case, the team narrowed the alternatives to five, the largest of which included 104 million board feet from matrix lands and fuel reduction work and did not include salvage harvest in the inventoried roadless areas.

In July 2003, a convergence of events led the forest staff to develop two new alternatives with larger salvage harvest amounts, including amounts in the inventoried roadless areas. That month, the 2001 regulations were again enjoined, this time by the U.S. District Court for the District of Wyoming.[18] Second, the Forest Service's interim directive on inventoried roadless areas expired and was not reinstated until July 2004. During this time, forest supervisors were authorized to make road and timber management decisions within inventoried roadless areas consistent with the applicable land management plan. And third, an Oregon State University report identified 2 billion board feet as available for salvage harvest in the Biscuit

[18]In May 2005, the Department of Agriculture repealed the 2001 roadless rule, issuing a new one in its place. In July 2005, the U.S. Court of Appeals for the Tenth Circuit vacated the district court decision, holding that the dispute giving rise to the original opinion had become moot with the repeal of the 2001 rule.

Fire area, many times greater than the largest draft EIS estimate. According to Forest Service officials, the amounts differed because the purpose of the Oregon State University report was to identify all timber available for salvage regardless of legal or other restrictions on harvest. The district court's decision came a week after the Oregon State University report and during the same week that the Forest Supervisor and Project leader visited Washington to brief Forest Service Washington Office staff, Oregon congressional delegation members, and Department of Agriculture officials on the five alternatives in its EIS—none of which included salvage harvest in the inventoried roadless areas. The forest officials providing the briefing received several comments about the need for more logging that would include harvest in the inventoried roadless areas. According to forest and regional officials, the failure to consider at least one alternative proposing salvage harvest within inventoried roadless areas might have made the EIS vulnerable to legal challenges based on the idea that the alternatives the Forest Service considered did not include a reasonable range of alternatives. Despite concerns about completing the EIS quickly to allow any salvage harvest to occur as quickly as possible, forest and regional officials determined that an estimated 8-week delay to conduct the analysis of new alternatives would be acceptable. Between the end of July and October 2003, the interdisciplinary team developed two additional alternatives that included about 1 billion board feet and about 500 million board feet of salvage harvest respectively for the draft EIS.

Forest Reorganization and Downsizing Began during Planning for the Project

The third circumstance unique to the Biscuit Fire that affected the development of the Project was a reorganization and downsizing of the Rogue River-Siskiyou National Forest staff. Since the 1990s—before and after the two forests were administratively combined—the Siskiyou and Rogue River National Forest workforce declined as timber harvest amounts declined. Their annual operating budget dropped from $33.6 million in fiscal year 2001 to $25.1 million in fiscal year 2006. The number of staff also dropped, falling from 619 at the beginning of fiscal year 2002 to 400 at the start of fiscal year 2005.[19]

Beginning in January 2003, just as the forest staff issued its postfire assessment, the staff reorganized to address decreasing budgets and staff numbers. As shown in figure 3, the forest staff issued a strategic business plan in November 2003, just as the draft EIS was released and the two

[19]The figures for fiscal years 2001 and 2002 combine the budget and staffing for the two forests.

forests joined as one administrative unit. More than 150 positions were identified that could be officially abolished to achieve the reorganization option the Forest Supervisor selected. The forest staff began identifying positions to be abolished in August 2002, identifying 35 positions to be placed on the Forest Service's Workforce Reduction and Placement System list, which allows the employees to receive priority in moving to vacant positions elsewhere in the Forest Service. After its strategic business plan was issued, the forest staff began officially abolishing positions in June 2004. From that month through October 2004, 48 positions were abolished.

The effect of this downsizing and reorganization on the development of the EIS is difficult to quantify. According to forest staff involved with the interdisciplinary team that developed the EIS, they worked on both the EIS and Project in addition to their ongoing daily responsibilities. They contrasted this experience with a previous large fire on the forest's lands—the Silver Fire in 1987—for which there was dedicated staff for the EIS and recovery project. However, according to the Forest Supervisor and other managers, the forest had enough staff to develop and implement the various alternatives identified in the EIS. The Forest Supervisor stated that he directed staff to place priority on the Project and, according to the Regional Forester, additional staff were available to help the team, if needed.

Salvage Sales Are Nearly Complete, but a Full Comparison of Financial and Economic Results with Initial Estimates Is Difficult

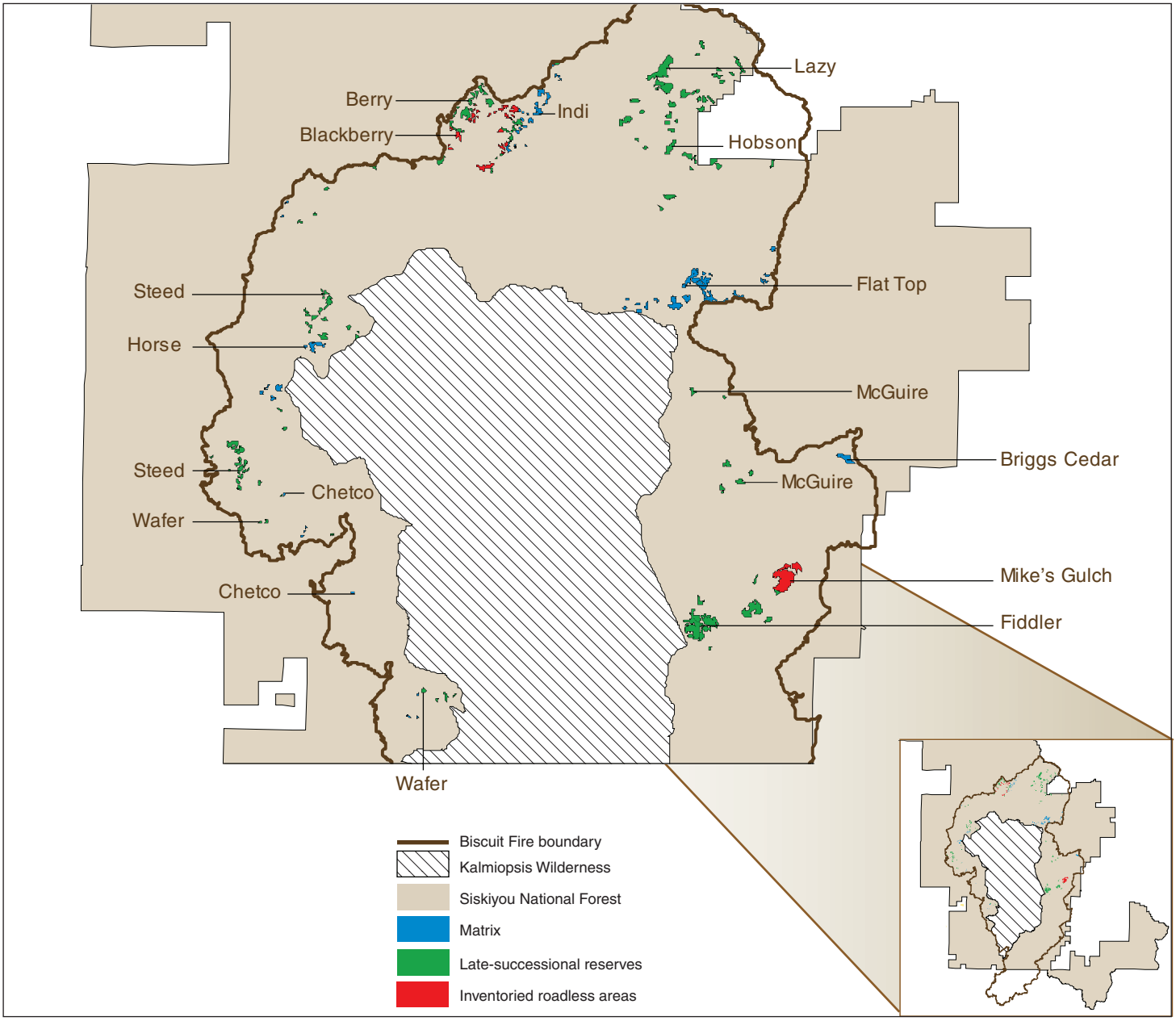
As of December 2005, the forest staff had nearly completed 12 salvage sales in the matrix and late-successional reserve areas; however, incomplete sales information and a lack of comparable economic data make a comparison of the financial and economic results of the sales with the agency's initial estimates difficult. For the sales conducted through 2005, purchasers harvested almost 60 million board feet, which is much less than the 367 million board feet proposed for sale in the EIS. Forest staff overestimated the timber available for harvest and, in addition, some timber decayed during the preparation of the EIS and salvage sales, further reducing the volume of available timber. For fiscal years 2003 through 2005, the Forest Service and other agencies spent about $5 million on the sales and related activities such as law enforcement. In return, the agency collected about $8.8 million from the sales. From these receipts, the Forest Service plans to spend an additional $5.7 million in the next several years to remove brush, reforest, and conduct other work in sale areas. In the EIS, the sale expenditures and receipts were estimated to be about $24 million and $19.6 million, respectively, and the salvage harvest was expected to generate about 6,900 local jobs and $240 million in regional economic

activity. However, it is premature to compare the results through 2005 with the estimates because the Forest Service will generate additional expenditures, revenues, and potential economic activity from two sales in June and August 2006. Even if complete sale results were available, methodological differences and a lack of comparable economic data complicate the comparison of the salvage sale results and EIS estimates. For example, the financial comparison is complicated by the fact that the EIS expenditure estimates are based on different activities than the reported expenditures through fiscal year 2005; adjustments can be made to allow a comparison, but they are complicated. Similarly, the economic comparison is complicated by the fact that the Forest Service does not report the economic results of sales. The analysis needed to report such data can be done, but according to Forest Service officials, the agency does not conduct this type of analysis because the primary reason for preparing EIS estimates is to compare the relative economic effects of salvage alternatives and not to provide a precise prediction of the outcomes of the sales.

Forest Service Has Nearly Completed 12 Salvage Sales, but the Volume Harvested through 2005 Was Substantially Less Than Estimated

As of December 2005, the Rogue River-Siskiyou National Forest staff completed 12 salvage sales identified in the Biscuit Fire Recovery Project EIS and records of decision. After the EIS and records of decision were released in July 2004, the forest staff finished preparing and completed 12 sales totaling about 67 million board feet of timber on almost 3,700 acres of land in the matrix and late-successional reserve areas, as shown in figure 5.

Figure 5: Map of Salvage Sales Sold in the Biscuit Fire Recovery Project



Source: GAO analysis of Forest Service data.

One sale occurred in 2004; the others occurred in 2005. Although several lawsuits were filed against the sales, they generally did not delay the implementation of the salvage sales in the matrix areas. A timber industry trade association and timber companies filed the first case against the Project alleging, among other things, that the Project violated the National Forest Management Act by failing to implement required reforestation activities. Environmental groups also filed lawsuits against the Project alleging, among other things, that the Forest Service: (1) allowed unauthorized personnel to mark trees for harvest, (2) performed an inadequate NEPA analysis, and (3) lacked authority to issue the emergency situation determination.[20] Two court orders stemming from this collection of cases affected the timing of Project activities. First, the U.S. District Court for the District of Oregon issued a preliminary injunction on August 3, 2004, prohibiting certain salvage activities from proceeding because the sales contracts failed to require Forest Service personnel—rather than purchasers—to identify standing dead trees within the sale area that were not to be harvested for environmental reasons. The court lifted this injunction on August 20, 2004, after the agency amended the contracts. Second, the U.S. Court of Appeals for the Ninth Circuit issued an emergency stay prohibiting the late-successional reserve sales from proceeding pending resolution of an environmental group's appeal of a district court ruling in favor of the Forest Service. The emergency order was in effect from September 7, 2004, through March 7, 2005. This period included the winter months during which sales activity can be impossible because of weather conditions and, when possible, may be restricted to limit the risk of spreading a particular fungus along wet roads. The forest staff provided a waiver to begin harvesting in March 2005 rather than June, the usual end of the restrictions on salvage harvest activities.

Table 1 shows the volume of timber sold and harvested on the 12 sales as of December 2005. According to Forest Service staff, the majority of the timber volume harvested occurred in 2005. In general, the volume harvested was less than the volume sold because the sales were "scaled" sales that allowed the purchasers—with the concurrence of the timber sale administrator—to leave trees that did not have good timber and pay only for the timber removed from the sale units. In the case of the Horse sale,

[20]The industry association case was mostly dismissed, while certain parts were voluntarily withdrawn. Most of the environmental claims were rejected by the U.S. District Court for the District of Oregon. The environmental groups' appeals are pending in the U.S. Court of Appeals for the Ninth Circuit as of September 2006.

the harvested volume was greater than the sale volume because additional trees died after the sale contract was awarded but before the harvest was complete. According to a forest official, these trees posed a hazard to the loggers in the sale unit, so the timber sale administrator added them to the sale contract.

Table 1: Biscuit Fire Recovery Project Salvage Sale Locations and Volumes through December 2005

		Volume (in thousand board feet)		
Sale name	**Date sold**	**Sold**	**Removed**	**Remaining**
Matrix lands				
Briggs Cedar	December 2004	2,341	1,823	0
Chetco	August 2004	289	217	0
Flat Top	November 2004	6,622	3,537	0
Horse	July 2004	2,415	2,800	0
Indi	July 2004	6,305	4,244	300
Late-successional reserves				
Berry	July 2004	12,834	9,923	0
Fiddler	July 2004	14,482	10,613	0
Hobson	July 2004	7,319	3,810	0
Lazy	August 2004	5,581	875	4,706
McGuire	June 2005	2,104	866	0
Steed	August 2004	6,074	4,572	0
Wafer	August 2004	688	436	0
Total		**67,054**	**43,716**	**5,006**

Source: Forest Service Automated Timber Sale Accounting System.

Through 2005, the agency had sold nothing in the inventoried roadless areas but decided in spring 2006 that it would offer two sales—Mike's Gulch and Blackberry—in these areas. In the records of decision, the forest staff had identified salvage harvest units in the inventoried roadless areas of the forest with a total of 194 million board feet available. In laying out salvage sales, the forest staff planned to offer about 38.1 million board feet in the two sales and determined that the remaining harvest units did not have enough merchantable timber left for sale. The forest staff selected the sale areas that had the better timber volume and would have the least effect on roadless and potential future wilderness values. Mike's Gulch was advertised and sold in June 2006; the forest staff sold 261 acres with about

9.3 million board feet for about $300,000. In August 2006, the forest staff sold almost 7.9 million board feet on 274 acres in the Blackberry sale for almost $1.7 million.

In addition to the salvage sales that resulted from the Biscuit Fire Recovery Project EIS and records of decision, the forest staff completed eight salvage sales of timber using a categorical exclusion that did not require the preparation of an EIS. These sales involved trees that the forest staff identified as hazardous because they could fall on roads. In addition, the forest conducted six deck tree sales. The hazard and deck tree sales were sold in 2003, while the development of the Biscuit Fire Recovery Project was ongoing. The deck sales were completed in 2003, while the hazardous trees were harvested primarily in 2004. Table 2 shows the individual sales and timber volumes harvested.

Table 2: Biscuit Fire Hazard and Deck Tree Salvage Sales and Volumes through December 2005

Sale name	Volume removed (in thousand board feet)
Hazard sales	
Raspberry	2,565
Indigo	1,798
Qcamp	11
River Six	1,851
Baby Onion	1,517
Bald Bear	3,251
Game Horse	3,105
Chetco	594
Deck sales	
North	339
South	198
Chetco	32
North End II	138
Buckskin II	45
Dasher II	46
Total	**15,489**

Source: Forest Service Automated Timber Sale Accounting System.

Although all salvage sales planned in the EIS and records of decision are not complete, the acres and amount of timber salvaged in the matrix and late-successional reserve areas were much less than anticipated by the forest staff in the EIS. In the records of decision, the forest staff estimated that it would sell about 367 million board feet of salvage timber, which would be removed from 18,939 acres. Through December 2005, 44 million board feet have been removed from 3,700 acres, and an additional 15 million board feet have been removed from the hazard and deck tree sales. In a March 2006 report,[21] the forest staff identified the following two reasons that the amount sold is much less than they had estimated:

- *Overestimation*: The original amount of timber available for harvest was overestimated for three reasons. First, the forest staff had difficulty applying the legal requirements in the Northwest Forest Plan to protect late-successional reserve habitat and riparian corridors. The staff had adjusted the timber volume estimates in the EIS to remove late-successional reserve habitat and riparian reserves. After the issuance of the EIS and records of decision, when the staff planned the sales, they discovered more riparian areas that needed protection and identified more trees that they needed to leave to meet habitat requirements. Second, the forest staff discovered that the hazard salvage sale volumes had not been removed from the EIS volumes. Third, the volume estimates based on remote sensing data were inaccurate—when the forest staff visited the sale sites and viewed the actual trees rather than photos or images, the trees were either alive or not large enough for sale.

- *Decay*: The amount of timber that would be lost to decay was underestimated. Although the forest staff estimated decay rates accurately, the EIS estimate was based on one-third of the timber harvest occurring in 2004 rather than 2005, when most of the salvage harvesting actually occurred. In planning the sales, the forest staff determined that more trees had decayed than they had estimated in the EIS. As such, they removed some sale units and acres because the trees no longer had commercial value or there were too few trees with remaining value to make the sale unit economical to harvest.

[21]Forest Service, *Response to Appropriations Committees' Questions* (Washington, D.C.: March 2006).

In addition, the March 2006 report identified 8,174 acres from inventoried roadless areas that had not been harvested due to ongoing litigation. In April 2005, the Forest Service agreed with plaintiffs in one of the cases pending before the U.S. District Court for the District of Oregon not to harvest in the inventoried roadless areas until a new roadless rule had been finalized.[22] The rule was finalized in May 2005. In August 2005, the state of Oregon and two other states—California and New Mexico—filed a lawsuit asserting that the Forest Service rescinded the 2001 roadless rule without carrying out the environmental analysis NEPA requires.[23] Throughout 2005, the Forest Service held ongoing discussions with the Governor of Oregon to delay action on inventoried roadless area sales to await a decision on one of several lawsuits before the U.S. District Court for the District of Oregon challenging the adequacy of the EIS for the Biscuit Fire Recovery Project. According to Forest Service officials, they were trying to avoid further litigation concerning the roadless area sales. In February 2006, the district court rejected the challenge. In June 2006, after the forest staff auctioned the first inventoried roadless area sale—Mike's Gulch—an environmental group challenged this sale in district court, alleging that the Forest Service violated NEPA by not preparing a supplemental EIS to review significant new information concerning adverse environmental effects of salvage logging within inventoried roadless areas. The court refused to issue a preliminary injunction against the sale, holding that the environmental group was unlikely to prevail. In July 2006, the plaintiffs in the states' roadless rule case moved for a temporary restraining order against the sale. After the Mike's Gulch purchaser agreed not to start operations until August 4, 2006, the plaintiffs withdrew the motion. The purchaser began harvesting on August 7, 2006. The purchaser of the Blackberry sale began harvest on August 28, 2006.

[22]The plaintiffs in turn agreed to a stay of the court's consideration of claims that the Biscuit Fire Recovery Project inventoried roadless area record of decision violated the 2001 rule.

[23]Washington and Wyoming joined the lawsuit later.

Forest Service and Other Agencies Spent an Estimated $5 Million for the Biscuit Fire Salvage Sales from Fiscal Years 2003 through 2005, and Forest Service Plans to Spend $5.7 Million of the $8.8 Million in Receipts from Sales

From fiscal years 2003 through 2005, the Forest Service reported that it spent an estimated $4.6 million to plan, prepare, and administer the salvage sales in the Biscuit Fire Recovery Project, while other agencies spent an estimated $350,000. Forest Service expenditures include NEPA planning, salvage sale preparation, and administration for fiscal years 2003 through 2005, and indirect activities that support the Forest Products program—such as information technology, budget, financial, and public affairs activities.[24] Other agencies' expenditures were for activities related to Biscuit Fire salvage sales, including Department of Agriculture and Department of Justice attorneys' legal services in litigation over the salvage sales through 2005.[25] Table 3 shows the Forest Service's and other agencies' estimated expenditures on the Project salvage sales by fiscal year. Appendix I discusses the methodology used to estimate Forest Service expenditures.

[24]Because the Forest Service does not account for expenditures on a sale-by-sale basis, the forest staff identified expenditures based on their knowledge of the work conducted during fiscal years 2003 through 2005 and estimated regional and Washington Office expenditures based on the percentage charged for regional and Washington Office costs against the forest's salvage sale plans. Under Forest Service direction, forests collect an assessment for regional and Washington Office activities for the Salvage Sale Fund. Each forest calculates its own assessment rate. In fiscal years 2001 through 2005, the rate for the Rogue River-Siskiyou National Forest was 5.2 percent.

[25]Within the Department of Justice, the Environment and Natural Resources Division defends Executive Branch agencies in environmental challenges to government programs and represents the United States in matters concerning the stewardship of the nation's natural resources and public lands. The division paid attorney salaries and travel expenses to defend challenges to the Project from existing resources.

Table 3: Estimated Expenditures on Biscuit Fire Salvage Sales, Fiscal Years 2003 through 2005

Agency	2003	2004	2005	Total
Forest Service[a]	$1,250,000	$2,489,000	$906,000	**$4,646,000**
Agriculture[b]	12,000	13,000	9,000	**34,000**
Justice[c]	0	87,000	226,000	**313,000**
Total	**$1,262,000**	**$2,600,000**	**$1,100,000**	**$4,993,000**

Sources: Forest Service, Department of Agriculture, and Department of Justice.

Note: Numbers may not add due to rounding.

[a]Includes law enforcement overtime and travel, but not regular law enforcement salaries because these are not tracked by sale. According to Forest Service officials, the funds were not new funds but were taken from existing budgets.

[b]Includes Office of General Counsel salaries, including 32.85 percent for benefits. According to General Counsel officials, the funds were not new funds but were taken from existing budgets.

[c]Includes attorney salaries, including 29.54 percent for benefits and travel. According to department officials, the funds were taken from existing budgets.

As the Project's salvage sales are not complete and work will continue through at least fiscal year 2006, additional expenditures for the salvage sales can be expected. Also, the forest staff plans to spend $5.7 million in the next several years to remove brush, reforest the sale areas, and repair and maintain roads. This figure is based on collections of salvage sale receipts collected and deposited into the K-V Fund, Brush Disposal Fund, road maintenance account, and other accounts to pay for work in the Biscuit Fire salvage sale areas. The Brush Disposal Fund is a permanent fund created to allow the deposit of funds to pay for certain brush disposal work on all timber sales, including salvage sales. Forest Service staff complete brush disposal work using funds collected as an additional charge to the purchaser based on the amounts paid for the trees harvested. The funds are deposited in the Brush Disposal Fund, and the agency generally seeks to spend them within 3 years of the completion of the sale. The road maintenance account is a trust fund created with purchasers' deposits for roadwork that is then conducted by the Forest Service.

In total, for the 12 salvage sales and 14 hazard and deck sales completed through 2005, the forest staff collected more than $8.8 million. Of this amount, about $3.7 million was collected from the Project's salvage sales, while more than $5.1 million was collected from the sale of hazard and deck trees. Table 4 shows the revenues generated for the Project's sales, as well as the hazard and deck tree sales.

Table 4: Revenues Collected from Biscuit Fire Salvage Sales through December 2005

		Deposits			
Sale type	**Sale receipts**	**Brush disposal**	**Road maintenance**	**Other**	**Total**
Hazard and deck sales	$4,528,933	$411,371	$175,074	$33,285	**$5,148,664**
Matrix and late-successional reserve sales	$2,245,145	$826,424	$362,507	$256,068	**$3,690,145**
Total	**$6,774,078**	**$1,237,795**	**$537,582**	**$289,353**	**$8,838,809**

Source: Forest Service Automated Timber Sale Accounting System.

Note: Numbers may not add due to rounding.

Of the total receipts collected, about $6.8 million was collected as revenue for the sales, and about $2.1 million was collected as deposits for brush disposal, road maintenance, and other work. From the $6.8 million, the forest staff deposited $3.7 million into the K-V Fund for reforestation and other rehabilitation work associated with the sale and the fire; most of the remaining funds were deposited into the Salvage Sale Fund to support future salvage sales in the region. Of the $2.1 million in deposits, about $1.2 million was deposited into the Brush Disposal Fund, $538,000 was deposited for road maintenance, and about $290,000 was deposited for other purposes that include contracts for companies that weigh and measure the harvested trees—called scaling contracts.

A Comparison of the Financial and Economic Results with EIS Estimates Is Difficult

While the Biscuit Fire Recovery Project contains estimates of the financial and economic results of the salvage sales for each proposed alternative, a comparison of the estimates with the results is difficult. First, the incomplete sales mean that financial and economic data for the salvage sales are also incomplete, which makes a comparison of the sales' financial and economic results with the EIS results premature. Furthermore, even with complete sales data, the comparison of the estimates with final sales' results is complicated by methodological differences related to the way the expenditure estimates and results are calculated and a lack of comparable economic data.

The Biscuit Fire Recovery Project EIS estimated that the salvage sales planned under the alternative selected by the Forest Supervisor would cost about $24 million to prepare, administer, and reforest and would generate about $19.6 million in revenues for the government—about $13 million from sales receipts and $6.6 million for brush disposal deposits. These

funds, according to the Project EIS, would be available to help pay for postfire recovery activities. In addition to financial revenues for the federal government, the EIS estimated the economic effects of the salvage sales for each alternative. The Project EIS estimated the direct and indirect economic effects of the sales in each alternative for five counties in southwest Oregon—Coos, Curry, Douglas, Jackson, and Josephine—and examined the economic sectors affected by the salvage sales, such as wood manufacturing, construction, and retail trade. The EIS estimated that the salvage logging in the selected alternative of the EIS would generate about 6,900 local jobs and $240 million to the regional economy related to the harvesting and processing of the timber.[26]

Because the Forest Service held two additional salvage sales for the Project in 2006, it is premature to compare the forest's financial and economic results with the estimates in the EIS. With additional sales, the Forest Service will have additional, unknown expenditures and revenues, making the total results on all sales unknown and incomparable with the estimated results. A comparison of the results through 2005 with the EIS estimates could be made if the estimates were available on a sale-by-sale basis; however, according to a Forest Service official, the EIS estimates are averaged across the sales and are reported as a total only, not separately for each sale. Unlike typical timber sales that have well-defined units and volumes, the EIS estimates were necessarily formulated using several broad assumptions about the salvage sale units and the timber volume available in them, as well as harvesting methods and average purchaser costs. Because the forest staff ultimately ended up changing sale units and recombining units in different sales, the units in the EIS estimate differ from those ultimately sold. According to a Forest Service official, these assumptions and average prices would cause the estimate to be less precise, but they had to be made because the size of the fire and the number of sales prevented the forest staff from making more precise estimates. Similarly, the economic estimates cannot be compared with the sale results because the appropriate regional data, such as jobs created by salvage sales, cannot be calculated until the sales are complete.

[26]To generate these estimates, the Forest Service assumed that all salvage-related activities would be located in the area, and the local job market and wood-processing sector could respond to this new demand. To the extent that the salvage-related activities displace other regional work, these estimates would be reduced.

Although a comparison of the financial results of the Project's salvage sales is premature because the sale results are incomplete, an examination of the volume and prices paid—both components of revenue—indicates that the EIS overestimated volume and underestimated prices received for potential sales. The amount of timber volume sold and removed from the 12 salvage sales was much less than the EIS estimated was available. The EIS estimated that 173 million board feet out of the total 367 million board feet, or 47 percent of the total timber volume estimated for sale, would be available in the matrix and late-successional reserve areas, while the remaining 194 million board feet would be available in the inventoried roadless areas. By the end of 2005, the forest staff had sold 67 million board feet from the matrix and late-successional reserves. With regard to price, the EIS estimated that the timber sales would generate receipts of $37 per thousand board feet. The actual price received for the 12 salvage sales averaged $47 per thousand board feet, while the actual price received for the hazard sales averaged $293 per thousand board feet and for the deck sales averaged $397 per thousand board feet. The difference in prices received reflects some difference in quality due to the fact that the hazard and deck trees were removed a year or so earlier. It also reflects the fact that the hazard sales are near a road and deck sales are already logged, which would mean a purchaser would have minimal or no logging costs.

Even when the salvage sales are complete and final data are available on sale expenditures, revenues, and economic results, certain methodological factors complicate the comparison of the sale results with the EIS estimates. Specifically, the Forest Service's estimated expenditures and those estimated in the EIS were calculated for different purposes and, therefore, do not contain the same items. For example, the EIS estimates do not include expenditures on NEPA, indirect costs, or law enforcement and litigation, while the forest's estimated expenditures for fiscal years 2003 through 2005 do include these expenditures. According to a Forest Service official, the purpose of the EIS is to compare alternatives and assess the differences among alternatives, therefore certain costs that are the same for each alternative, such as NEPA and indirect costs, are not included. On the other hand, the expenditures reported by the forest staff for fiscal years 2003 through 2005 include those expenditures that can be allotted to salvage sales—such as NEPA expenditures—for the purpose of showing full expenditures related to the Biscuit Fire salvage sales. A comparison of these amounts would be complicated by adjustments and assumptions that would need to be made to facilitate the comparison.

With regard to the economic analysis, even at the completion of the sales, the Forest Service does not conduct the type of analysis needed to report the actual economic results of the sales, which would allow a comparison with the estimates. The needed analysis would require the collection of appropriate economic data, as well as formulation of appropriate economic models to clearly separate the effects of salvage sales on jobs and on the economy of the region from effects of other concurrent regional and national factors. This retrospective analysis is difficult but could be done; however, according to a Forest Service official, the agency does not typically conduct the analysis needed to report these results because the primary reason for preparing EIS estimates is to compare the relative economic effects of salvage alternatives and not to provide a precise prediction of the results of the sales. However, given that the volume of timber sold through December 2005 is substantially less than the volume of sales assumed in the EIS for the selected alternative, we would expect the actual economic results of the sales to be less than the EIS estimate, all else being equal.

Other Biscuit Fire Recovery Project Activities Are Under Way, but Depend on Harvest Activity, Schedules, Sale Revenues, and Other Funding

The Rogue River-Siskiyou National Forest staff have begun implementing other activities in the Project's records of decision but completing these activities depends on the extent of salvage sales, workload schedules, salvage sale revenues, and other funding. In the Project's records of decision, the forest staff included numerous activities to help burned areas recover, including postsale activities such as reforestation that would be conducted in salvage sale areas. Table 5 shows the key activities included in the Biscuit Fire Recovery Project records of decision and the amount of work planned and completed for each through December 2005. The forest staff have begun work on reforestation, brush disposal, and road maintenance but the extent of this work depends, in large part, on the amount of salvage harvest activity that occurs. The forest staff have also begun work on fuel management zones and wildlife habitat activities—which are planned for both within and outside the salvage sale areas—but completing this work depends on uncertain schedules and funding sources. In addition to the activities in table 5, the records of decision for the Project proposed a large-scale study of postfire management activities such as salvage harvest and fuel management zones, and monitoring of the Project's activities. The forest staff are still planning these activities, which are not yet funded.

Table 5: Work Planned and Completed through December 2005

Project activity	Work planned	Work completed through December 2005
Brush disposal—activity fuel treatment (acres)	18,939	554
Reforestation (acres)	30,278	706
Road maintenance (miles)	559	307
Fuel management zone creation (miles)	285	15
Wildlife habitat restoration—seeding (acres)	6,800	715
Wildlife habitat restoration—meadow encroachment reduction (acres)	700	0

Source: GAO analysis of Forest Service documents.

Work Under Way on Brush Disposal, Reforestation, and Road Maintenance Activities, but Extent of Work Needed Depends on Levels of Harvest

Through December 2005, forest staff had begun work on brush disposal, reforestation, and road maintenance activities. These activities have funding sources because the Forest Service collects and deposits sale revenues for brush disposal and reforestation activities and because much of the road maintenance work is conducted by the sale purchaser. However, the amount of work that the forest planned to accomplish for each of these activities has changed as a result of the amount of timber sold and harvested in the Biscuit Fire salvage sales. For example, the amount of brush disposal work—an estimated 18,939 acres in the records of decision—will be reduced because the acres where salvage harvest will be done have been reduced.

Brush Disposal

As shown in table 5, the forest staff have accomplished 554 acres of brush disposal, also referred to as slash disposal or activity fuel treatment. After a salvage sale, forest staff are responsible for brush disposal, which usually entails burning piles or areas that are covered with vegetative debris from the sale such as stumps, chunks of wood, broken tree tops, tree limbs and branches, rotten wood, or damaged brush resulting from salvage logging operations. In general, under the Biscuit Fire salvage sale contracts, the purchasers were required to create piles of such debris on the acres logged before the forest staff conducted their brush disposal work.

While the forest staff had planned to accomplish almost 18,939 acres of brush disposal, they have revised the total amount needed to about 3,000 acres because the acres sold for salvage harvest were much less than anticipated—about 3,700 acres through December 2005. The forest staff do

not need to conduct brush disposal if the anticipated salvage sales do not occur. In addition, the forest staff said that they will not conduct work on every single acre of a salvage sale unit because, in some cases, the treatment is not needed. As of the end of December 2005, the forest staff have collected $826,000 in the Brush Disposal Fund for the Biscuit Fire salvage sales.

Reforestation

As of December 2005, the forest staff had planted 706 acres of trees. The Forest Service plants trees to help reforest areas where trees have been removed by natural events such as wildland fire, or by timber harvest, that might not recover naturally. In the Project records of decision, the forest staff estimated that they would plant trees on about 30,000 acres, including 18,939 acres in the areas that would be salvage harvested, and about 11,000 acres that had been burned but not harvested. On the harvested acres, the forest staff plan to conduct reforestation work after the salvage sales are closed and brush disposal is completed. The estimated 30,000 acres of planting will be reduced because the forest staff will not need to plant acres that were planned for salvage but will not be harvested. In addition to the reforestation activity identified in the Project records of decision, the forest staff replanted 8,935 acres through 2005 under a categorical exclusion to restore plantations—areas to be managed for future timber harvest—destroyed by the Biscuit Fire. This work was funded from appropriated funds and reforestation trust funds.

In general, planting work that occurs in salvage sale areas is funded from sale revenues collected and deposited into the K-V Fund, while planting outside of sale areas is funded through the forest's appropriated funds for vegetation management. For sale area reforestation, the K-V plans identified about $4.6 million worth of work to plant the harvested areas. About $2.7 million was deposited into the K-V Fund for planting activities, although the plans are not yet final and, according to forest staff, funds can be shifted to projects needing them until the plans are final. The Forest Service retains these funds for use in the salvage sale area and generally uses them within 5 years after the sale is closed to complete reforestation. During the 5 years after a sale is completed, forest staff inspect the areas to determine the extent of growth of planted seedlings and naturally grown seedlings. In some cases, the Forest Service determines that sufficient numbers of trees have grown in the area naturally, and the planned reforestation work will not be needed. According to agency guidance, if this occurs before the sale is administratively closed, the K-V funds can be

used to fund other activities planned for the sale area, such as wildlife habitat restoration.[27]

Road Maintenance

As of December 2005, 307 miles of the 559 miles of road maintenance had been completed. Road maintenance activities, which include blading, grading, and gravel replacement on Forest Service roads, were conducted by the purchasers as part of the salvage sale contracts. The 559 miles identified in the records of decision include all the roads in the forest's road system; however, according to forest engineers, not all roads will receive treatment because only the roads used by purchasers while they are harvesting the Biscuit Fire salvage sales are maintained under contract. Furthermore, some roads may receive two or more treatments because roads that are used for two or more sales are maintained under each contract. In addition to the road maintenance planned for the Project, 176 miles of roads were maintained by the purchasers during and after the hazard and deck sales—some of them the same roads that were treated under the Project sales.

In addition to the maintenance performed by the purchaser, the purchasers made deposits into a road maintenance account. The forest staff will use these deposits to pay for work, such as asphalt resurfacing, on roads used by multiple purchasers. The deposits were collected in addition to the price paid for the salvage sale and were based, in part, on the volume of timber harvested from each sale. As of December 2005, more than $360,000 had been deposited in the road maintenance account to be used to maintain roads in the future.

Work Is Under Way on Fuel Management Zones and Wildlife Rehabilitation, but Funding and Schedules Are Uncertain

As of the end of 2005, the forest staff had also begun fuel management and wildlife rehabilitation activities identified in the Biscuit Fire Recovery Project records of decision, but completing these activities will depend on the Forest Service funding and scheduling the work over many years (see table 5). As of June 2006, the forest staff have not specified funding sources or work schedules for completing these activities.

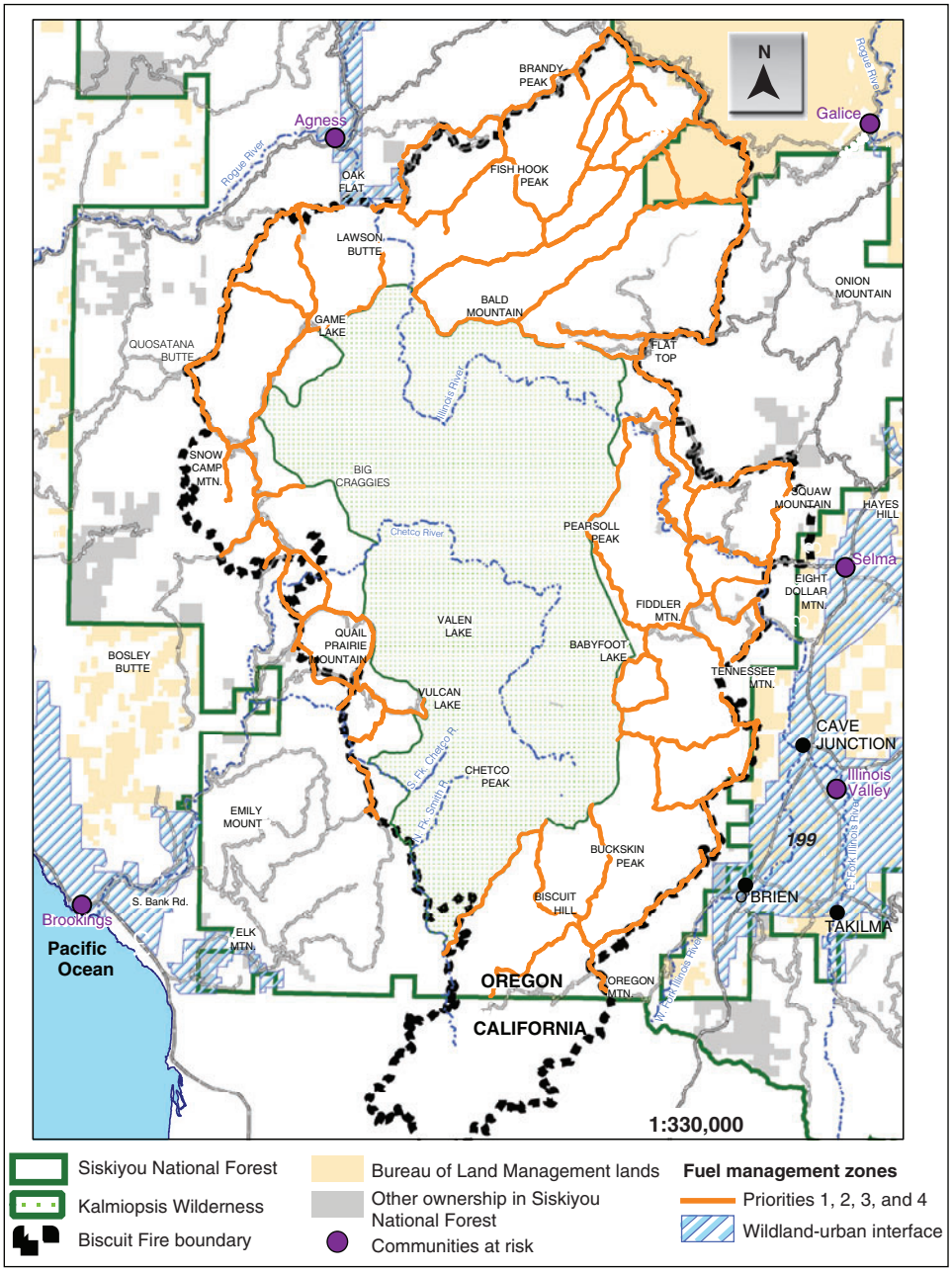
[27]In 2005, the Congress amended the K-V act to specifically authorize the expenditure of funds for watershed restoration; wildlife habitat improvement; control of insects, disease, and noxious weeds; community protection activities; and the maintenance of forest roads within the Forest Service region in which the timber sale occurred.

Fuel Management Zones

As shown in table 5, by the end of 2005, the forest staff had completed almost 15 miles of fuel management zones.[28] These fuel management zones are concentrated along roads and ridges, as well as the perimeter of the Biscuit Fire. They are areas where vegetation or fuels—trees and brush that act as fuel for wildland fires—have been reduced to help create a space where firefighters can be more successful suppressing future fires. Maintaining them requires periodic efforts to burn or cut down brush and trees that grow in the areas. The Project's records of decision show that the forest staff plan to maintain about 285 miles of these fuel reduction zones in the matrix, late-successional reserves, and inventoried roadless areas, as shown in figure 6.

[28]These figures do not include work conducted for the hazard sales.

Figure 6: Map of Biscuit Fire Recovery Project Fuel Management Zones



Source: GAO analysis of Forest Service data.

The forest staff do not have a schedule for developing fuel management zones and have not requested additional funds for the work. According to a forest official, most of the work to date has been incidental to salvage sale work in areas where salvage sales touched on identified fuel management zone areas. The official explained that creating and maintaining fuel management zones identified in the records of decision must be done in addition to fuel reduction work needed in areas adjoining developed or urban areas, called the wildland-urban interface. The official stated that funding priorities for fuel reduction work are concentrated in the wildland-urban interface because this is where human life and high value property are most at risk. The forest staff has identified numerous projects in this area that need to be completed, and the fuel management zone work would not have as high a priority for funding.

Wildlife Habitat Rehabilitation

By the end of 2005, the forest staff had accomplished 715 acres of seeding—scattering grass seeds in meadows to increase the amount of vegetation and enhance native grasses—to improve wildlife habitat. In addition to seeding, wildlife restoration work can involve removing trees and shrubs to reduce their encroachment into grasslands and meadows. Such work provides forage for grazing wildlife, including deer and elk, and provides habitat for birds such as the purple martin.

In the Project records of decision, the forest wildlife staff planned to accomplish 6,800 acres of seeding and 700 acres of meadow encroachment work. As with fuel management zones, the forest staff have not scheduled or requested additional appropriated funds to accomplish the work. While the staff included about $1.3 million of projects in K-V plans for the Biscuit Fire salvage sales, salvage sale revenues were sufficient to fund about one-third of the planned work. Forest staff stated that it is still possible for K-V funds to become available to fund wildlife projects if the funds are not used for reforestation or planting work; however, if K-V funds are not available, the wildlife projects planned for the Biscuit Fire area will compete for funding with other wildlife projects outside the fire area.

Research and Monitoring Are Being Planned, but Funding and Schedules Are Uncertain

The Project records of decision include a large-scale adaptive management study of postfire activities, such as salvage harvest and prescribed burns, and monitoring of the progress and results of the Project. These activities will be implemented over many years and depend on other activities to be accomplished. The forest staff are still planning these activities and completing them depends on schedules and funding sources. Although the staff have developed a tentative schedule for the monitoring program, they

have not developed a schedule for the adaptive management study. The study includes some activities that are part of the forest's regular work but also includes work that would be desirable if funding can be identified. Similarly, while some monitoring work was intended to be conducted as part of the forest's regular program work, several of the monitoring items have been designated as desirable depending on funding sources.

Adaptive Management Study

At the time of our review, the forest staff had just begun planning for the large-scale adaptive management study included in the Project. The study includes a management experiment to learn about and adapt different management actions in postfire vegetation across a broad landscape. The objectives of the study are to compare the results of different postfire management strategies designed to restore and protect habitat for late-successional reserves and old-growth related species. With the help of Forest Service researchers, a study plan was written to design the study, identify comparable areas of the forest in which to conduct different treatments, design the vegetation treatments, and identify monitoring needed for the projects. The treatments include salvage and replanting, natural recovery, and prescribed burns, which will set the areas on different pathways for recovery that will be monitored for significant differences.

Completion of the study depends on the completion of other Project activities. The treatments cannot be completed unless other activities—namely the salvage sales and fuel management zones—are completed. In addition, one of the treatments included in the study involves prescribed burning, but the forest staff have not yet issued a record of decision for prescribed burning activities that it studied in the EIS. Completion also depends on activities being conducted in the areas chosen for the study. The EIS identified 12 areas of about 3,000 acres each as locations for the study. At the time of our review, because the acres of salvage sale had been reduced, about half of the study areas were available. According to the researchers who designed the work, the study is still viable, despite the reduction in areas subject to different treatments.

Implementing the study depends on the forest staff scheduling the activities identified as needed and determining which forest program will conduct and fund the work. The Project EIS outlined the study's activities and identified those that the forest staff could undertake in their normal workload and additional activities that should be accomplished but were not funded. The Pacific Northwest Research Station paid for and conducted initial work in the area by gathering remote sensing data of the

burned area to establish a baseline for future assessments of vegetation conditions and how the three different treatments may affect the vegetation differently. While there is still time to set up the study, the Pacific Northwest Research Station recommended that a committee or board be established to ensure that the needed activities are conducted. The forest officials had not taken action on this recommendation at the time of our review.

Monitoring

The Biscuit Fire Recovery Project records of decision identify a number of monitoring activities, with three purposes: (1) to assure that all aspects of the Project are implemented as intended, (2) to determine that certain critical activities have the desired effect, and (3) to allow changes to occur if activities are found to have been implemented incorrectly or have undesired effects. The records of decision and the final EIS identify some of the monitoring activities, as required to meet policy or standards, while the final EIS identifies other monitoring activities as desired, which refers to monitoring that would provide important information for future projects and administrative studies.

At the time of our review, the forest staff reported that they had conducted some of the monitoring associated with salvage sales from the records of decision, which included monitoring

- planting sites and site preparation,
- the number of snags and down trees retained on salvage sale sites,
- activities to mitigate the effect of noxious weeds,
- marking used during salvage sales to ensure compliance with harvest requirements and marking guides,
- activities to mitigate threats to threatened and endangered species, and
- specific aspects of activities identified for protecting threatened and endangered species.

According to forest staff, this monitoring is carried out by timber sale administrators as they visit and inspect sale sites. Their findings are included in inspection reports that are part of the timber sale contract files. The administrators can also determine whether best management practices have been followed for the timber sales, which include actions to reduce

soil erosion and runoff from sale areas. According to forest staff, these practices can be separate activities or they can be part of the design of the timber sale. For example, a best management practice can include designing a timber sale to use cable or helicopter logging rather than tractor logging to reduce soil disturbance and erosion.

For the other monitoring identified in the records of decision, the forest staff have drafted a plan that states whether each activity is required to meet policy or standards, suggests the frequency with which monitoring should take place, and outlines monitoring parameters and techniques. For example, the plan identifies the need to monitor noxious weed treatments after 1 to 5 years and after 5 to 10 years by using field visits to examine treated sites to determine whether treatments have removed populations of weeds. The plan does not, however, identify which forest staff will conduct the monitoring or which forest funds will be used to accomplish the work.

The Project records of decision stated that monitoring results would be made available to the public. The unique nature of the Biscuit Fire and the significance of the Project activities underscore the importance of this information for showing the Congress and the public the extent of recovery work accomplished and remaining to be done. However, monitoring the status of the Project's activities is not included in the monitoring plan. Further, the forest staff do not report annual accomplishments for the Biscuit Fire separately from their other program accomplishments. The activities in the Project are being implemented by the forest's regular programs, including Forest Products, Natural Resources, and others. Although a forest monitoring report for 2004 includes activities conducted in the Biscuit Fire, forest staff did not comprehensively report on the status of activities in the Project such as salvage sales, reforestation, road maintenance, wildlife habitat rehabilitation, fuel management zones, and others. Without such information, the forest staff cannot report on the status and results of the Project, as described in the records of decision.

Forest Made Operational Changes and Assessed Fines to Address Improper Logging That Occurred in Three Locations

During the hazard and salvage sales conducted in areas burned by the Biscuit Fire, the Rogue River-Siskiyou National Forest staff received and investigated numerous complaints of logging in areas where it should not have occurred. The forest staff confirmed three instances of improper logging and determined that two were the result of errors on the part of the forest staff, and one was an error by the timber purchaser. The forest staff attributed most of the other alleged cases of improper logging to disagreements over the definition of a riparian area and, after further review, dismissed them. Forest Service officials admit that the confirmed cases of improper logging were serious errors and have taken steps to prevent such occurrences on future salvage sales.

Forest Staff Made Mistakes Leading to Two Incidents of Improper Logging but Plan to Better Mark Boundaries

The forest staff acknowledge that mistakes resulted in improper logging in two cases, one that occurred in the Babyfoot Lake Botanical Area adjacent to the Fiddler salvage sale—one of the 12 salvage sales in the Biscuit Fire Recovery Project—and another in the Kalmiopsis Wilderness Area adjacent to the Bald Bear hazard sale. In both cases, forest officials identified actions to improve the marking of boundaries for timber and salvage sales.

Babyfoot Lake Botanical Area—Fiddler Salvage Sale

Babyfoot Lake is a 350-acre area within the Siskiyou National Forest designated as a botanical area because it contains several rare species such as Brewer's spruce, a spruce that grows in southwest Oregon and northern California. Botanical areas are specific management areas designated in forest plans that require natural management and allow researchers to study plants in their natural state. As such, timber harvest should not occur in the area. However, during the Fiddler salvage sale, about 16 acres of the botanical area adjacent to the sale were harvested. This incursion was discovered by members of a local environmental group in August 2005. A total of 292 tree stumps were counted within the area.

According to the District Ranger in whose area the incident occurred and who investigated the incident, a series of occurrences led to the improper logging:

- During the fall of 2003 and spring of 2004, the Fiddler sale was being planned on maps and on the ground. In December 2003, the timber officer responsible for the Fiddler sale left the forest staff and from that time through January 2005, the position was filled by two detailees from different ranger districts and by the District Ranger.

- In the fall of 2003, the Forest Service staff used maps and a global positioning system to paint and flag the boundary of the Fiddler sale units, including a unit near Babyfoot Lake. During the winter, the timber staff discovered that the botanical area was included in the sale unit on the map. The boundary that should have followed a ridge top next to a road was instead drawn farther down the hill in the botanical area. The map was corrected, and the timber staff determined that they would need to repaint and remove flags from the unit boundaries in the spring when the weather improved and they could visit the site.

- In the spring of 2004, the correct boundary of the Fiddler sale units was painted by helicopter—a new technique that was being tested on the Biscuit Fire areas—following the correct boundary from the map. However, no one removed the flags and paint from the incorrect boundary, resulting in two boundaries marked on the sale unit. The timber sale administrator—the staff person responsible for monitoring the sale units during the salvage operations—did not notice this discrepancy while reviewing the sale units just before the sale.

- During harvest operations in 2004, the timber sale administrator and the purchaser followed the flags and painted trees, not the helicopter-painted boundary, which was the correct one.

The District Ranger determined that this was a mistake on the part of the timber staff and that the amount of communication among the timber staff and oversight over the salvage sales were insufficient. She stated that the staff were working quickly to plan sales and to prepare for sales as soon as the records of decision with an emergency situation determination were signed. The sales were sold 2 weeks after the records of decision were signed.

The District Ranger stated that several simple actions were needed to avoid similar problems in the future. In a report to the Forest Supervisor, she stated that future sales should ensure that botanical areas are marked on the sale map and flagged to distinguish them from the sale boundaries. It was further suggested that timber sale procedures include a checklist of items—such as botanical areas—for timber sale administrators' reviews. In November 2005, the Department of Agriculture's Office of Inspector General confirmed the error on the part of the forest staff and stated that the proposed solutions sounded reasonable. According to forest timber staff, the staff used an updated checklist to review the layout of the Mike's

Gulch sale held in June 2006. The sale units did not contain a botanical area but bordered a research natural area that is to be marked.

The District Ranger also asked for an assessment of actions that could be taken to mitigate the damage that occurred from the salvage cutting and has implemented some actions already. For example, the Forest Service did not burn the slash in the area, as it normally would after a salvage harvest, leaving the trees to decay naturally. As of June 2006, the assessment and several actions had been recommended. For example, one of the recommendations is to expand the boundaries of the botanical area to include several areas of live Brewer's spruce outside the current boundary; agency officials say this action would require the preparation of an environmental analysis or EIS and perhaps an amendment to the Siskiyou forest plan.

Kalmiopsis Wilderness Area—Bald Bear Hazard Sale

In 2003, the Forest Service sold hazardous trees along roads in the Biscuit Fire area. One of the sales—the Bald Bear sale—occurred along a road on the boundary of the Kalmiopsis Wilderness Area. Although timber harvest and mechanized activities such as the use of chain saws are not allowed in wilderness areas, about 16 trees within the Kalmiopsis Wilderness Area were cut during the hazard sale. The District Ranger who investigated this incident found the following:

- The road in the Bald Bear sale runs along the boundary of the Kalmiopsis Wilderness Area; the boundary follows a ridgeline but where the terrain flattens, the boundary is along the road. The boundary signs were burned and difficult to see.

- The timber staff that marked the boundary for the sale called the forest staff to verify the boundary and were told it was on the ridge. The timber staff followed a line through the flat area, rather than the road, and included a portion of wilderness in the sale area.

- The timber officer did not confirm at the site that the boundary was accurate, which was important given its close proximity to the Kalmiopsis Wilderness Area.

- An outside researcher informed forest staff about the boundary error. The timber sale administrator directed the purchaser not to cut the area until the boundary could be checked; however, when the administrator arrived at the site, the trees had already been cut.

The District Ranger stated that the logging was a result of mistakes on the part of the forest staff and the purchaser. Specifically, she noted that checking the boundary was the timber officer's responsibility and acknowledged that the timber staff did not discuss the proximity of the Kalmiopsis Wilderness Area with the purchaser. Either of these activities might have identified the mismarked boundary. In addition, she said the purchaser failed to control its workforce after receiving notification of the mistake.

The District Ranger asked the timber staff to identify actions to prevent this problem in the future. She noted that the regional staff issued a letter in 2004, prior to the incident, emphasizing the need to better identify forest boundaries. According to forest timber staff, in marking the Mike's Gulch sale in June 2006, the forest staff used surveyors to identify the forest's boundaries with private lands, and planned to have the surveyor mark the boundaries of the research natural area. The District Ranger stated that she had her staff prepare a range of options to mitigate the damage caused by the improper logging and, as of June 2006, had decided to leave the trees and stumps untouched since they are near the road and not part of the pristine environment.

Timber Purchaser Improperly Cut Trees That Were Not Burned, and Forest Staff Followed Contract Procedures in Fining Company

During the Wafer sale—another of the 12 salvage sales from the Project records of decision—the purchaser cut 120 live, or "green," trees in error. The purchaser caught the mistake and brought it to the attention of the Forest Service timber sale administrator. The timber sale administrator halted the sale and put the purchaser in breach of contract. The purchaser stated that the cutting crew was inexperienced and, therefore, made the mistake. The forest's contracting office required the purchaser to pay $200 per tree, or $24,000, in penalties, and the green trees were left in the forest.

This incident of improper logging was investigated by a Forest Service law enforcement officer. According to the law enforcement official, because the purchaser reported the improper logging, it is not likely that the purchaser was attempting to steal the green trees. In addition, the forest staff took action in response to the improper logging by putting the purchaser in breach of contract. The sale contract clearly stated that all green trees were to be protected. However, according to Forest Service officials, accidental harvest of green trees can sometimes occur in large salvage sale operations. While timber sale administrators inspect sales periodically, they neither inspect the cutting operations on a day-to-day basis nor control the purchaser's operations.

Forest Service Pursued Other Claims of Improper Logging

In addition to these three incidents, Rogue River-Siskiyou National Forest officials received numerous reports of improper logging from local environmental groups who monitored the salvage sale operations. According to a forest official, timber sale administrators and other forest staff investigated these claims. The majority of these claims involved logging in riparian reserves, which are 174-foot buffers on each side of a stream or waterway that protect riparian habitat and water quality. Forest officials stated that the agency's definition of a riparian area differs from the definition used by the environmental groups. The Forest Service defines a riparian area to be a channel with some evidence of sediment having been moved, while the environmental groups identify a riparian area as a depression in which water may flow. In reviewing these areas, forest staff said they identified one riparian area that had been salvage harvested and should not have been. However, it is difficult to know when the stream appeared because according to forest staff, after logging, the runoff from rain and precipitation is much higher and new "streams" are created. Also, during wet years, more streams are created from the increased runoff.

Another claim of improper logging had to do with salvage harvesting in a botanical area. The same environmental group that discovered the Babyfoot Lake harvest reported to the Forest Service that logging from the Steed sale overlapped into the Sourgame Botanical Area. The forest staff investigated this incident and determined that the environmental group had used the larger of two boundaries, identified as alternatives, in the EIS for the Siskiyou forest plan. The record of decision for the plan chose the smaller area as the botanical area.

Conclusions

The Biscuit Fire Recovery Project generated considerable public interest and controversy, particularly over treatment of the postfire landscape. With the near completion of the Project's salvage sales, it is apparent that much less was sold and removed through the salvage sales, changing the need for such projects as brush disposal and reforestation. It remains to be seen how much of the other recovery work—wildlife habitat rehabilitation, fuel management zones, monitoring, and the adaptive management study—will be accomplished given the lack of specific funding and schedules. As the Project's activities are implemented over the next several years, accountability for their accomplishment rests with the Rogue River-Siskiyou National Forest staff. One of the Project activities with potentially significant results is the proposed large-scale adaptive management study, which offers an opportunity to gather scientific

information with broad implications for recovery actions and postfire salvage harvest elsewhere on Forest Service lands. Successful implementation of the study and other Project activities will take commitment on the part of the forest staff to coordinate the work over several years. In light of the size and unique nature of the Biscuit Fire, and continuing public interest in the recovery of the area, it is important that the forest staff communicate the results of the Project to the Congress and the public. The forest staff—and the Forest Service—recognize the importance of providing information on the Project's status and results to the public but do not report results in such a way that makes the information readily available. Regular tracking and reporting of the status of the Project's activities and results are needed.

Recommendation for Executive Action

To help keep the Congress and the public informed on the status of the Biscuit Fire Recovery Project and the significant research work on the postfire effects of salvage and nonsalvage management actions, we recommend that the Chief of the Forest Service direct the Rogue River-Siskiyou National Forest Supervisor and the Pacific Northwest Regional Forester to provide an annual public report on the status of the activities included in the Project. The report should provide an update on the status of work accomplished and still planned for each of the activities in the Biscuit Fire Recovery Project EIS and records of decision: fuel treatments, prescribed burning, salvage harvest, vegetation and wildlife restoration, roads and water quality, and the large-scale study. The agency should produce such reports until the Project is substantially complete.

Agency Comments and Our Evaluation

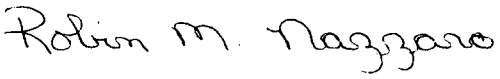
We provided the Departments of Agriculture and Justice with a draft of this report for review and comment. The Forest Service provided written comments on behalf of the Department of Agriculture (see app. II). The Department of Justice had no comments on the draft report. In its comments, the Forest Service said that the report provided a good view of the process, events, and Project through December 2005. The agency generally agreed with our recommendation for the issuance of an annual update on the status of Biscuit Fire recovery activities but suggested that the time period for producing the report be limited to the next 3- to 5-year period. We stated in the recommendation that the reports should be produced annually until the Project is complete and that may be 5 years or longer given the nature of some of the recovery activities. For this reason, we hesitate to provide a specific time limit but believe there is value to

providing the agency with some discretion about when they discontinue the report. Therefore, we revised the recommendation to state that the reports should be provided until the Project's activities are substantially complete.

The Forest Service also stated that an explanation of the litigation, controversies, and protests that occurred since December 2005 would provide the readers an understanding of the complexities of trying to manage fire projects. The report describes the status of sales through 2006, the emergency situation determination used to expedite the sales, the effects of litigation on the sales, and delays in the inventoried roadless area sales. We believe this discussion is sufficiently descriptive of these events and, therefore, did not make any changes to the report in response to this comment. The Forest Service also said that the report does not make it clear that the planning processes and appeals do greatly reduce the final timber harvest volumes. While the planning process was a factor in the time taken to develop the EIS, we did not evaluate the effects of the process on timber volumes because it was not one of the objectives of this report. Also, the report does not discuss the appeals process because the Forest Service used an emergency situation determination, which eliminated the appeals process for 11 salvage sales. Finally, the Forest Service also provided several clarifications of technical information that we incorporated in the report as appropriate.

As agreed with your offices, unless you publicly announce the contents of this report earlier, we plan no further distribution of this report until 18 days from the report date. At that time, we will send copies of this report to interested congressional committees, the Secretary of Agriculture, the Attorney General of the United States, the Chief of the Forest Service, and other interested parties. We will also make copies available to others upon request. In addition, the report will be available at no charge on the GAO Web site at http://www.gao.gov.

If you or your staff have any questions, please contact me at (202) 512-3841 or nazzaror@gao.gov. Contact points for our Offices of Public Affairs and Congressional Relations may be found on the last page of this report. GAO staff who made major contributions to this report are listed in appendix III.



Robin M. Nazzaro
Director, Natural Resources
and Environment

Objectives, Scope, and Methodology

Our objectives were to determine (1) how the development of the Biscuit Fire Recovery Project compared with the Forest Service's general approach to postfire recovery; (2) the status of the Biscuit Fire Recovery Project salvage sales and how the reported financial and economic results of the sales compared with the Forest Service's initial estimates; (3) the status of other activities identified in the Biscuit Fire Recovery Project; and (4) the extent and cause of improper logging within the Biscuit Fire Recovery Project, as reported by the Forest Service, and changes the agency made to prevent such occurrences in the future.

To determine how the development of the Biscuit Fire Recovery Project compared with the Forest Service's approach to postfire recovery efforts, we developed information on the (1) general approach used by the Forest Service to assess postfire conditions and identify rehabilitation and restoration projects and (2) detailed process used by the Rogue River-Siskiyou National Forest to develop the Biscuit Fire Recovery Project. To develop information on the general approach, we first reviewed available Forest Service guidance and directives on postfire management and National Environmental Policy Act (NEPA). There is no final guidance on postfire rehabilitation and restoration activities and, therefore, we reviewed guidance for the Pacific Northwest Region and a draft national strategy developed by the Interregional Ecosystem Management Coordination Group to describe the general postfire recovery process. We also interviewed Forest Service officials at headquarters, the Pacific Northwest Region, and the Rogue River-Siskiyou National Forest about the general approach. To develop the details of Project development, we reviewed meeting minutes of the Project's interdisciplinary team and a forest advisory group during the development of the Project and its environmental impact statement (EIS) in 2003 and 2004. We also interviewed forest and regional staff involved in the development and review of the Project and EIS. To facilitate the interviews, we developed a time line of key events, which we provided to officials before the interviews. We also interviewed the key decision makers in the process—the Forest Supervisor, Regional Forester, Deputy Chief for the National Forest System, and Undersecretary and Deputy Undersecretary of Agriculture for Natural Resources and Environment to determine their roles in the process and in the final records of decision for the Project.

To determine the status of the Project's salvage sales, we obtained and analyzed information on the sales proposed in the Project's records of decision. We gathered sale data from the Forest Service's Automated Timber Sale Accounting System including sale name, acres sold, volume

harvested, receipts, and receipts disposition. We also gathered this information for sales held prior to the issuance of the Project EIS—sales of hazard trees and trees cut from fire lines during the active fighting of the Biscuit Fire. We gathered this information as of December 2005 to ensure that we captured volume harvested and receipts paid for timber harvested in the fall of 2005 but for which the financial data were captured a month or two later. To determine whether the timber receipts data were reliable for our purposes, we interviewed Forest Service financial officials about the Timber Sale Accounting System and operations and controls over data and data reliability, as well as reviewing the system documentation. Through this process, we determined that the data are reliable for reporting the status of the Biscuit Fire salvage sales and receipts.

To gather information on the Forest Service's expenditures on the Project's salvage sales, we had to identify what activities and budget line items are related to salvage sales because the Forest Service does not report financial data on a sale-by-sale basis. We gathered information for fiscal years 2003 through 2005 because this was the period during which the Forest Service conducted work to plan and implement the Project and its salvage sales and because 2005 is the last fiscal year for which complete financial data are available. To identify what activities are associated with salvage sales, we reviewed the Forest Service timber sale preparation handbook that describes what activities to include in the financial analysis of a timber sale. We also interviewed Forest Service personnel about what activities and expenditures should be included in a full accounting for a timber sale, including a salvage harvest sale. Finally, we obtained and reviewed previous Forest Service reports that referred to the total cost of its timber sale program and reviewed the activities and expenditures included in those estimates.[1] We then worked with the financial staff of the Rogue River-Siskiyou National Forest to identify the expenditures for a range of activities included in these reports: NEPA planning, timber sale preparation, timber sale administration, reforestation activities, timber

[1]The Forest Service used to report on the full costs of the timber program using the Timber Sale Program Information Reporting System. Changes to the agency's accounting system and lack of interest caused the agency to stop producing the reports.

stand improvement activities, and forest indirect expenditures.[2] Most of these expenditures occurred from two budget line items—one for appropriated timber funds and one for the Salvage Sale Fund. We also included an estimate of regional and Washington Office expenditures. Because the Forest Service does not account for the costs of timber sales, we had no basis to allocate regional and Washington expenditures and as a result, used the forest's assessment rate for regional and Washington Office costs for the Salvage Sale Fund. The rate, 5.2 percent, was charged to all Salvage Sale Fund plans by the forest staff in fiscal years 2001 through 2005 to collect funding to pay for regional and Washington Office activities. Finally, because law enforcement and litigation are activities directly related to salvage sales, we obtained expenditures from the Forest Service's law enforcement regional office located in Portland, Oregon, and from the Department of Agriculture's Office of General Counsel and the Department of Justice's Environment and Natural Resources Division for their work related to litigation and other legal services for the salvage sales. The law enforcement expenditures represent overtime and travel expenditures for officers who worked on the Biscuit Fire salvage sales; the expenditures for the Departments of Agriculture and Justice represent salaries for the attorneys involved in litigation and other legal services. To determine the reliability of the Forest Service data, we interviewed Forest Service financial officials responsible for the Foundation Financial Information System and the auditors responsible for reviewing the Forest Service's annual financial statements to determine if there were any material weaknesses relevant to the data. We determined that there were none and that the data are reliable for our purpose of reporting Biscuit Fire salvage sale expenditures. We are relying on the reported expenditures of the Departments of Agriculture and Justice.

We reviewed the Forest Service's estimated financial and economic results for the proposed salvage sales in the Project EIS and discussed specific aspects of the estimates with the Forest Service's Regional Economist, the primary official responsible for these analyses. We attempted to compare the financial results of the actual salvage sales with the Forest Service's estimated financial results. However, because during the course of our

[2]We did not include the annual payment made to local governments under the Secure Rural Schools and Community Security Act of 2000. The act established an alternative payment for counties that share federal timber receipts. For fiscal years 2000 through 2006, the counties could choose to receive payment based on the 25 percent amount established under the act of May 23, 1908 or an average of the three highest 25 percent payments made during 1986 through 1999.

analysis the Forest Service held two more salvage sales in the summer of 2006, the financial results—expenditures and receipts—of the sales available to date were incomplete. We also determined that there are methodological differences in the calculation of expenditures. We determined that the Forest Service does not report economic results, and we could not make the comparison of economic results and estimates, although such a comparison could be made if the appropriate analysis were conducted. We attempted to adjust the EIS estimates to make a comparison based only on the sales conducted through 2005 by disaggregating the EIS estimates by sale. The disaggregated results would have enabled us to use only the results of comparable EIS sales as the basis of comparison with the results of sales actually sold though 2005; however, we determined that the EIS estimates, which were based on broad averages across the land types, could not be disaggregated and attributed to individual sales.

To determine the status of other recovery project activities, we interviewed forest staff responsible for the activities included in the records of decision and identified the sources of information available to document the status. Different program staff are responsible for conducting the activities in the Project, which include planting, seeding, road maintenance, fuel management zones, research, and monitoring activities. For activities other than research and monitoring, we compiled and summarized the work conducted through December 2005, reviewing contracts for planting work, accomplishment reports for brush disposal work and wildlife rehabilitation activities, and maps for fuel management zones. Where they were available, we reviewed plans for work to be accomplished in the future. We presented this information to the appropriate forest staff and confirmed the data with them. To determine the status of the landscape-scale research study, we interviewed the forest and Pacific Northwest Research Station officials who developed the research proposal in the EIS. The officials provided an update of the status, which we then confirmed with forest officials. Finally, we obtained a copy of the most recent monitoring schedule and discussed the monitoring program with the forest's timber manager.

To determine the extent and cause of reported improper logging, we obtained and reviewed Forest Service reports on the three incidents in the Babyfoot Lake Botanical Area, Kalmiopsis Wilderness, and Wafer sale to determine the facts of the incidents. We then reviewed an Office of Inspector General report on the Babyfoot Lake incident and two law enforcement reports on the wilderness and Wafer sale incidents to determine other views of the incidents. We visited the Babyfoot Lake site to view the correct boundary and the improperly harvested area. We

interviewed Forest Service officials responsible for the day-to-day oversight and operations of timber sales, representatives of a local environmental group monitoring the salvage sales and responsible for discovering the Babyfoot Lake incident, and law enforcement and Office of Inspector General officials who reviewed the cases to determine the Forest Service's response to the incidents. To determine the Forest Service's response to other claims of improper harvest, we reviewed a file of letters and agency responses. We also reviewed reports from a third-party monitor who visited sale sites that had been harvested and viewed the results of operations.

We performed our work in accordance with generally accepted government auditing standards from November 2005 through July 2006.

Comments from the Forest Service

Note: GAO comments supplementing those in the report text appear at the end of this appendix.

USDA United States Department of Agriculture | Forest Service | Washington Office | 1400 Independence Avenue, SW Washington, DC 20250

File Code: 1420
Date: SEP 0 7 2006

Ms. Robin Nazzaro
Director, Natural Resources and Environment
U.S. Government Accountability Office
441 G Street, N.W.
Washington, DC 20548

Dear Ms. Nazzaro:

The Forest Service has the following comments on the Biscuit Fire Recovery Project Draft, GAO-06-967. Most of the comments are an attempt to clarify the document. Our suggestions are as follows:

Now on p. 11.

PAGE 13

See comment 1.

First bullet; line 2: after the words environmental assessment, add "to determine if an environmental impact statement is needed…" and at the end of the sentence add "is needed."

See comment 2.

First bullet; line 7: change environmental analysis to environmental impact statement.

See comment 3.

First bullet, lines 8-14: reword the last part of that paragraph to read as follows: "The Agency gives the public an opportunity to comment on draft environmental impact statements. In addition, the Forest Service has established procedures for administrative appeal of its decisions, concerning projects and activities on National Forest System lands. As a general rule, once the administrative appeals process is complete, the public can litigate in federal court a decision on a particular project."

Now on p. 12.
See comment 4.

Last bullet, lines 1-4 (continues to page 14), reword as follows: "In 2001 the Forest Service issued a rule for managing its inventoried roadless areas, which include lands that meet Forest Service roadless area inventory criteria. In general these areas are 5000 acres or larger, or if smaller, are contiguous to an existing Wilderness area. These areas were previously considered for wilderness potential as part of the Roadless Area Review and Evaluation (RARE) initiated in 1972 and again in the 1979 RARE II study. Neither of these efforts was successful in resolving issues that surround management of inventoried areas. The 2001 rule was intended to provide lasting protection …." (the rest of this sentence remains unchanged).

See comment 5.

Footnote 8: begin the sentence with "Some" to make it clear that the included list is not all exhaustive.

Now on p. 18.

PAGE 19

See comment 6.

Lines 11-12: we suggest that the phrase "one with the minimum work needed to meet forest plan standards and guidelines …" could be better worded. It might be more appropriate to say "but typically evaluates two or more alternative ways of meeting the purpose and need of the proposal…"

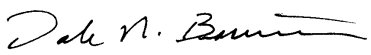
See comment 7.

Overall the report provides a good view of what happened up to last December. An explanation of the additional activities, including litigation, controversies, and protests that occurred since then would provide the readers an understanding of the complexities of trying to manage fire projects. Also, although there is some discussion on the differences in the projected volumes that might be harvested and those that will ultimately be harvested, the report does not make it clear that the planning processes and appeals do greatly reduce the final volumes. The estimated volumes damaged are mostly fairly accurate. It is the identification of resource values along with decay associated with lapsed time that decreases the final harvest.

See comment 8.

The recommendation to report progress to Congress will in some extent take care of updating the information provide in the report which is the status as of December 2005. As some minor work may be done in this large area, we would recommend that the time frames on the report to Congress be limited to the next 3-5 year period.

Sincerely,



DALE N. BOSWORTH
Chief

The following are GAO's comments on the Forest Service's letter, dated September 7, 2006.

GAO Comments

1. We revised the report accordingly. We stated that the EIS is required rather than needed.

2. We revised the report accordingly.

3. We revised the report accordingly.

4. We revised the report accordingly.

5. We revised the report accordingly.

6. We revised the report accordingly.

7. The report describes the status of sales through 2006, the emergency situation determination used to expedite the sales, the effects of litigation on the sales, and delays in the inventoried roadless area sales. We believe this discussion is sufficiently descriptive of these events and, therefore, did not make any changes to the report in response to this comment. While the planning process was a factor in the time taken to develop the EIS, we did not evaluate the effects of the process on timber volumes because it was not one of the objectives of this report. Also, the report does not discuss the appeals process because the Forest Service used an emergency situation determination, which eliminated the appeals process for 11 salvage sales.

8. We disagree that the report should be limited to the next 3 to 5 years because some of the activities in the Project are likely to extend beyond that period of time. For this reason, we continue to believe that such a time limit should be based on the Project's completion. We do believe there is value to providing the agency with some discretion about when they discontinue the report. Therefore, we revised the recommendation to state that the reports should be provided until the Project's activities are substantially complete.

GAO Contact and Staff Acknowledgments

GAO Contact

Robin M. Nazzaro (202) 512-3841 or nazzaror@gao.gov

Staff Acknowledgments

In addition to the individual named above, David P. Bixler, Assistant Director; Susan Iott; Rich Johnson; Mehrzad Nadji; and Dawn Shorey made key contributions to this report. Joyce Evans, Lisa Knight, John Mingus, Cynthia Norris, Alison O'Neill, Kim Raheb, Jena Sinkfield, Jay Smale, and Gail Traynham also made important contributions to this report.

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