Box 20, Folder 6: Policy background documents, Vol. IV (Folder 2 of 2). 1989-2001

[s.l.]: [s.n.], 1989-2001

https://digital.library.wisc.edu/1711.dl/NO3IJUD56QWLR8G

RESEARCH IN THE U.S.D.A. FOREST SERVICE: A HISTORIAN'S VIEW

by

Terry L. West, Ph.D.
WO History Unit
U.S.D.A. Forest Service
Washington, DC

Paper presented at Third Symposium on Social Science in Resource Management held at College Station, TX, at Texas A & M University on 18 May 1990. A slightly revised version of a paper presented at the Research Management Training Seminar for Forest Service Research, USDA Forest Service, Arlington, VA. 2 November 1989.

RESEARCH IN THE U.S.D.A. FOREST SERVICE: A HISTORIAN'S VIEW

Terry L. West
WO History Section

The first forestry efforts in North America began with a concern over timber supplies in the colonies. Plymouth Colony in 1626 restricted export and ten years later the unauthorized cutting from public lands. Acts to conserve timber increased in the colonies as nearby supplies were depleted. Later, the Federal government acted to protect stands of live oaks and red cedar to ensure naval construction needs. In fact, the U.S. Navy conducted the first forestry research in Florida in the 1830s on live oak plantings (Dana 1950: 317). This research was soon discontinued and it took nearly fifty years until the government resumed forestry research.

By the end of the 19th century the shifting timber frontier from its origin in the Northeast, then the Lake States, the South, and finally the Pacific Coast; led to a concern over future timber supplies. Dr. Franklin B. Hough presented a paper in 1873 at the annual meeting of the American Association for the Advancement of Science on "The Duty of Governments in the Preservation of Forests." A committee was formed to urge Congress and state legislators to act on forest protection and timber cultivation. Congress responded in 1876 and Dr. Hough was appointed within the Department of Agriculture as the first government forestry agent. The duties of this new post were:

> To determine the annual amount of consumption, importation, and exportation of timber and other forest products, the probable supply for future wants, the means best adapted to their preservation and renewal, the influence of forests upon climates, and the measures that have been successfully applied in foreign countries, or that may be deemed applicable in this country, for the preservation and restoration or planting of forests; and to report upon the same to the Commissioner of Agriculture to be used by him in a separate report transmitted to congress...

From this work grew first a forestry division and later a Bureau of Forestry within the Department of Agriculture and, in 1905, the Forest Service. Thus, it may be said that the Forest Service started as a research agency. This is fitting because several of the early debates over the creation of forest reserves were scientific ones. I will return to this subject once I trace the evolution of the agency from Hough to Gifford Pinchot.

One of the first goals of many members of the early conservation movement was creation of Federal timber reserves out of public lands. The public domain was then administered by the General Land Office (GLO) in the Interior Department. Its primary function was to oversee the transfer of government lands to private ownership. Not until 1891 did the aim of government began to shift from land distribution to land retention with the creation of the first forest reserves. The 1897 Organic Act defined the two purposes of the reserves as timber conservation and watershed protection.

Meanwhile, the first Federal foresters were employed in the Department of Agriculture. Hough was replaced as chief of the division of forestry in 1883 by a political appointee. But when the division became a permanent part of the Department of Agriculture in 1886, Bernard E. Fernow was designated chief, the first professional forester in the position. Under Fernow, technical and original investigations were started since he believed "besides making propaganda (on merits of forestry), we should...establish the principles upon which the forestry we advocate is to be carried on (quoted in Storey 1975: 6)."

Unduly ignored by Pinchot for his role in creating the 1891 forest reserves, Fernow is recognized for his advocacy of research in the agency (Storey 1976: 7). Discouraged by the lack of funds for research, Fernow

resigned in 1898 and Gifford Pinchot became chief. Pinchot was a politician and focused his efforts on the transfer of the reserves to the Department of Agriculture (which happened in 1905) and developing the administration of the Forest Service. These were years of growth with personnel going from 11 in 1898 to 821 in 1905; the number of professional foresters went from two to one hundred fifty-three.

While critical of Fernow for stressing theoretical, rather than practical, forestry Pinchot found it necessary in his first year to establish a Section of Special Investigations. By 1902, it was a division in the agency with 55 employees and accounted for one-third of the $185,000 budget (Steen 1977: 132-133).

FORESTS AND FLOODS

The relation between forests and floods was a matter of debate in those years. As early as 1864, George Marsh argued in *Man and Nature* that forests both reduced the number and volume of floods. Hough discussed the role of forests in affecting climate in his official reports. One intent of the 1873 Timber Culture Act was to promote tree planting on homesteads and that this would increase the rainfall on the treeless plains on the assumption that forests brought rain (Steen 1976: 123).

The role of forests in moderating streamflow was unclear but gained credence enough to be integral to the creation of forest reserves. Noted in the 1897 Organic Act was "securing favorable conditions of water flows" or watershed protection as a primary function of reserve forests.

The importance of forests in flood protection was recognized by foresters but not by engineers. The latter advocated flood control by use of dams and levees (Sartz 1977: 34). The dispute was not just a scientific one since Pinchot felt the Corps of Engineers position harmed the conservation cause by undermining one of the key arguments for creating forest reserves (Steen 1976: 126).

The issue was important because of the need to gain political support for purchase of national forests in the East. The constitutionality of Federal purchase of forest land was at stake. The House Judiciary Committee decided that the commerce clause permitted the purchase of watersheds of navigable streams, if it could be proved that forests prevented floods (Sartz 1977: 35).

The task fell to the Forest Service Office of Silvics to counter the view that forests were unimportant to flood control. Two early Forest Service research employees led the way. Hired in 1901, Raphael Zon became head of research in this period. To decentralize research, Zon proposed creation of forest experiment stations on the national forests. The first area experiment station was established in 1908 at Fort Valley on the Coconino National Forest in Arizona. These stations were Spartan local operations designed to serve the needs of the forest. One exception, however, was the Wagon Wheel Gap Watershed Study in Colorado, a cooperative project with the Weather Bureau to study the effect of timber removal on water yields. The study began in 1910 and its results helped ensure the passage of the Weeks Act in 1911 which allowed Federal purchase of additional national forests.

The second pioneer, Carlos Bates, had chosen the remote site near the Rio Grande National Forest (Colorado) in 1909 for the first controlled experiments on forest-streamflow relations in the nation (Sartz 1977: 35). Little was known of the hydrology of mountain watersheds until Bates' innovative research on how water moves through soil to sustain streams in rainless periods (Sartz 1977: 35). Over the 16-year period of the study, Bates continually sought to extend its scope but money was lacking. Once in his constant struggle for funds, Bates cabled Assistant Chief Earle H. Clapp: "Why Can We Not Get the Dinero?" Forest Service research was shifting from empirical observation to experimental testing of hypotheses, but agency funding did not keep pace with research needs. This shortage of funding would continue to be a constant theme throughout the history of research in the agency.

FOREST PRODUCTS LABORATORY

Fernow started work in 1887 on timber physics (wood utilization) but had to stop in 1896 when the Secretary of Agriculture deemed it not germane to the work of the Division of Forestry. Under Pinchot, the work resumed through contracts with forestry schools but it was decided a centralized permanent testing facility was required. Through a cooperative agreement with the University of Wisconsin, a forest products laboratory was opened in 1910 at Madison. The impetus was the desire to conserve wood through better utilization at a period when much of it was wasted in the process of harvest and manufacture.

In his study of the first fifty years of the Forest Products Laboratory (FPL) from 1910 to 1964, Charles Nelson (1963: 168-169) identified four main recurring challenges:

1. Inadequate budgets
2. Loss of personnel to private industry
3. Lack of publication funds.
4. Difficulty of getting private industry to apply FPL innovations.

1915-THE TURNING POINT

It may be said that the growth of forestry is linked directly with research results. The importance of research to forest management was formalized in 1915 with the creation of a Branch of Research in the Forester's (Washington) Office, with Earle Clapp in charge. Research was to be based out of a central office to ensure project planning on a national scale. The move made research co-equal to the administrative side of the agency.

The original function of Forest Service research was to gather dendrological or other data required to manage the national forests (Harper 1955: 106). When research expanded to private forest lands and became "pure" as well as applied oriented, forest administrators and scientists found themselves in conflict.

Samuel Trask Dana who worked for Zon in the Office of Silvics from 1907 to 1921, recalled the early schism between the two staffs in an interview:

> the common attitude toward research...[was that] it was regarded as harmless, but the real job was practical work in the woods. Only the nuts got involved in establishing sample plots. I think the general attitude was that research was a good field in which to put somebody who couldn't do anything else (Maunder and Fry 1966: 4).

Dana credited Earle Clapp with increasing the prestige and autonomy of research in the agency:

> Clapp and the rest of us researchers felt that control had to be under the immediate direction of the Chief of the Forest Service, independent of the administration, on the ground that the regional foresters would be certain to divert research into solving problems of immediate interest instead of into basic research (Maunder and Fry 1966: 4).

The reason the Regional Foresters stressed practical work was because it was left to them to apply the findings of research to local problems. To cope with the problem of separation of research from administration from 1915 onward, the agency developed a line, staff, and research organization. Independence from administrative duties allowed scientists more time to dedicate to research projects, but made it necessary to develop a staff of specialists to transfer the flow of technical information into field applications (Steen 1976: 139).

USDA AND FOREST SERVICE RESEARCH

As already noted, forestry research was largely the monopoly of the Forest Service in this period (Harper 1955: 110). Influenced by his knowledge of European experiment stations, Zon advocated the establishment of regional stations on the national forests. Dana, who recommended the first (1908) site at Fort Valley, addressed the question of why forestry research was not made part of the agricultural experiment stations which already existed in the nation:

> The answer to that was two-fold: they had their hands full already with agricultural problems, and they were neither interested nor competent to handle forest research.....Also if the work were organized under the agricultural experiment stations, every state would think it had to undertake experimental work in forestry--and that wasn't necessary (Maunder and Fry 1966: 5).

In fact, he regarded the Department of Agriculture in general as indifferent to the Forest Service, a status which gave the agency considerable freedom to operate independently (Maunder and Fry 1966: 5).

The separation of research from administration made the application of results to forestry practices problematic. But it did give the agency recognition for its research function. In his history of the Forest Service, Steen (1976: 138) cited research as helping keep the agency from being transferred to the Department of the Interior, since otherwise the Forest Service would merely be "an administrative organization."

FIELD WORK

Although research concerns were subordinate within the Forest Service to the chore of managing the reserves following their 1905 transfer, research was required by the new agency to cope with the immediate problem of range use. The issue of stock grazing was critical in those years since grazing, and not timber, was the primary concern of forest managers. Western stockmen were some of the strongest opponents of the creation of the forest reserves (national forests) based on their fear that grazing would be prohibited, which it was until 1898. After that year, the GLO and later Forest Service opted not to ban grazing but did attempt to regulate it, leading to years of conflict with the industry.

Range research began in the USDA Department of Botany (1868-1901) and later the Division of Agrostology. The Division of Forestry became interested in the subject and in the summer of 1897 Frederick Coville carried out the first range investigation in the Cascades of Oregon on the impact of grazing (Storey 1975: 18). This important study, published in 1898, was known as the Coville Report (Division of Forestry Bulletin No. 15) and because of it the forest reserves in Oregon were reopened for grazing (Pinchot 1947; Steen 1976).

James Jardine and Arthur Sampson conducted studies in 1907 to determine the grazing capacity of the Wallowa National Forest in Oregon. The early research by Sampson provided the grounds for deferred and rotation grazing, which was the issue of carrying capacity and numbers of stock that could be grazed in an area. This controversial issue continued to be argued both inside and outside the agency and required years of study before the dispute was resolved on scientific grounds (Rowley 1985). Historian Thomas Alexander (1987) uses the case to demonstrate the shift from rule of thumb to scientific range management in the Forest Service.

The bulk of research on range management took place in the Intermountain Region at the Great Basin Experiment Station. The station was established in 1912 on the Manti National Forest in Utah. Although in 1915 Chief Forester Graves separated research from administration, he expected close cooperation between the two. In Region Four, field research was closely tied to the needs of the regional foresters (Alexander 1987: 413).

These research and administration managers held divergent views, with one faction concerned about the economics of the grazing industry and another group focused on the condition of the land. Over time it was the latter who determined policy based on the findings of the researchers on carrying capacity. In the end, the numbers of animals on the national forests were reduced, except during the war years. Professional range management emerged in the agency as the result of the work of its research staff.

McSWEENEY-McNARY RESEARCH ACT OF 1928

In the transition from timber mining to timber growing, the Forest Service Chiefs' annual reports noted the need for research to solve technical problems. By the 1920s, there were twelve regional stations with branch field (experimental) stations in the agency. What was missing was "unifying legislation and congressional support (Steen 1976: 140)." In response, in 1924 the Society of American Foresters set up a special committee on forest research with Clapp as chairman. The forest industry supported the final report which was called an organic act for forest research. In his report, Clapp (1926) argued that the agency was concerned with fire protection, timber growing, and wood utilization but lacked interest in research on those subjects. If forest industry was to follow the advice of the agency, it must be provided with information based on research. With this justification Congress passed the McSweeney-McNary Research Act on May 22, 1928.

The act legitimatized the experiment stations, authorized forest research on a broad scale, and provided appropriations. Finally, it brought attention to the subject of forest research and endorsed the program (Storey 1975: 43-44). The Great Depression years retarded Forest Service research funding somewhat, but from $970,000 in 1929, it went to $1,160,000 in 1930, although declining in 1935 to $1,036,000 (Storey 1975: 46).

FIRE RESEARCH

In 1922, Earle Clapp wrote that those who entered fire research were destined to "become the leaders of the most important forest research activities in the country" (quoted in Hardy 1983: 2). The relation between fire and forestry was as important to the Forest Service in the early years as floods and grazing.

One impetus for forestry research in the United States was the limits of European models for U.S. forest management. Early foresters such as Fernow and Pinchot had been trained in Europe but recognized the need for an indigenous forestry. This was especially apparent in dealing with the threat to forests posed by fire. For European forests simply did not have the fire dangers experienced in America.

This was recognized by Earle Clapp in his call for fire research, as he noted in 1933 "forest fire research apparently originated in the United States, undoubtedly as the direct result of a forest-fire situation which is more serious than in almost any other country" (Pyne 1981: 65-66). In fact, in making the movie Bambi, the Disney studios changed the original setting from Austria, where poachers were the main threat to wildlife, to America and inserted a great fire.

Foresters everywhere regarded fire protection to be a fundamental mission of their profession. When the USDA Forest Service was created in 1905, fire protection became a national program. The mission was used to justify the agency, and its success or failure in fire control became a public test (Pyne 1981: 68).

In addition to fire control, there was a related problem to deal with in the area of fire policy. "Light" (understory brush) burning was a common practice in northern California by timber owners to reduce fire danger. In 1910, it became a political issue as foresters considered it a threat to their views on fire protection (Olmstead 1911). Clearly there was a need for fire research.

The agency began a program, with Chief Greeley writing that "firefighting is a matter of scientific management just as much as silviculture or range improvement (Pyne 1981: 69)." The lead was taken by

California with District Forester Coert DuBois directing tests of light burning and fire planning . In 1914, he published his classic *Systematic Fire Protection in California*.

Fire control was expensive and the 1908 Forest Fire Emergency Act allowed deficit spending in years of bad fires. The first test was in 1910 when the agency spent a million dollars fighting the disastrous fires in Idaho and Montana, then faced bankruptcy (Pyne 1981: 70). The expense alone made fire research important.

By 1921, the Forest Service dedicated the Missoula, Montana, headquarters of the Priest River Forest Experiment Station to fire research. Clapp personally arranged for Harry Gisborne to be assigned to the station. From then until his death during a fire inspection trip in 1949, Gisborne worked on fire research. The many achievements of the man are detailed in the *Gisborne Era of Forest Fire Research: Legacy of a Pioneer* (1983) by Mike Hardy. One significant contribution that Gisborne made was a rating index for projecting fire danger.

Fire research in the period of the 1920s was subordinate to administration, with research focused on fire control rather than fire itself. Under this pragmatic approach fire researchers were expected to leave their field plots and statistical compilations for the fireline. The southern U.S. was an exception since light burning was still an industrial practice. Thus, research on fire and wildlife management and long leaf pine silviculture was carried on in the Southern Region. When the Forest Service created a separate division of fire research in 1948 one objective was a national research agenda supervised by forester-engineers and forester-economists (Pyne 1981: 72).

The mass fire bombings of World War II (all overseas) and post-war climate changed fire research in the agency. The agency cooperated with the Office of Civil Defense on national fire defense. Surplus military equipment went to the agency and 40-man suppression crews and smokejumpers operated to contain brush fires with a rapid attack. The dangers of urban fires in southern California reinforced this orientation. Three forest fire labs were established, with one in Macon (Georgia), one in Riverside (California) and one in Missoula (Montana). By the mid-1960s most fire research was conducted in these three centers.

Large fires in Washington and California in 1970, which burned more national forest acreage than in any year since 1910, helped introduce new research aims. In addition, the Wilderness Act (1964) and environmental movement influenced fire policy. The agency ceased its close ties with Civil Defense and the military. Fire ecology emerged as an important research subject and the agency altered its 10 a.m. containment policy in 1971 and allowed fire by prescription (Pyne 1981 and 1982). Fire sometimes became a friend of the forester in forest management but as the 1988 Yellowstone fires illustrate fire is still a political issue.

RESEARCH OVERVIEW: DEPRESSION, WAR, AND GROWTH--1930-70

While funding for research declined in the 1930s, the Great Depression era was a period of facilities expansion. Programs such as the Civilian Conservation Corps (CCC) and Works Progress Administration (WPA) provided labor and materials for construction. By 1935, forty-eight experimental forests and ranges existed, and their physical plants were being further developed.

The scope of research was also widened during this period with forest and range influences added to the program of several stations. Research on forest genetics received a boost in 1935 when the Eddy Tree Breeding Station was deeded to the government. Inspired by the work of Luther Burbank, lumberman James G. Eddy founded the station in 1925. By now it is part of the Forest Service's Pacific Southwest Forest and Range Experiment Station (Stone 1968).

The McSweeney-McNary Act sponsored research in forest-related fields in other branches of the USDA. The Bureau of Plant Industry, Soils, and Agricultural Engineering investigated forest diseases such as blister rust. Forest insect research was assigned to the Bureau of Entomology. Research in this area was urgent since bark beetles in conifer stands were destroying more merchantable timber in some regions than logging or fires combined (Storey 1975: 51-2). The Forest Service had been involved in this research since the 1902

creation of the Office of Forest Insect Investigation within the USDA Division of Entomology. Dr. A. D. Hopkins, the "father of forest entomology," was the first Chief of the division. When Hopkins retired in 1923, Dr. Frank Craighead served as Chief for the next 27 years.

The first wildlife work was assigned to the USDA Biological Survey (in 1939 it became the core of the new USDI Fish and Wildlife Service). Under the McSweeney-McNary Act, the researchers were to investigate "the life histories and habits of forest animals, birds, and wildlife, whether injurious to forest growth or of value as a supplemental resources, and in developing the best and most effective methods for their management and control." A history of the Forest Service wildlife management and research is covered in an essay by Dennis Roth (1988).

The advent of World War II produced a shift in research aims; many programs were shelved while forest products research expanded. The situation was not much better after the war, there were 62 centers, but appropriations in 1954 were almost at the level of 1947. The need for increased funding was evident in that many centers were staffed by only one or to people. When Verne L. Harper assumed the duty of Assistant Chief in charge of research in 1951, his mission was clear.

Appropriations began to increase by 1955 and climbed upward into the 1970s. From $6 million in FY 1954 they increased to about $14 million in 1960, and reached $42 million by 1970. The program became somewhat more balanced, with forest products research making up only 18 percent of the 1970 budget. Past programs were expanded and new ones started, including forest recreation in 1957 and forest engineering in 1962.

Harper also sought to improve the level of professionalism by the research staff. In the area of salary, the problem was that in the development of the Federal Civil Service system, pay grades were oriented toward administrators not researchers. The higher grades were based on the number of people supervised and the program budget. Thus to get promotions, scientists had to accept administrative responsibilities and do less research. The opportunity to conduct highly paid research elsewhere led many to resign, while those who stayed often became frustrated managers.

The solution was implemented in the Department of Agriculture with the "Man in Job Concept" where a researcher could be graded on research accomplishments based on peer review. Once accepted by the Civil Service Commission, there were two ways for advancement in the Research Branch of the Forest Service: The ladder of research administration or as research scientist.

Harper in the late 1950s changed the research structure from one of centers to one of projects. Under the new system a senior scientist led the project and supervised the staff. This led to improved research administration and better research. To further improve research quality, Harper encouraged continuing education for personnel. The Government Employees Training Act (1958) provided the incentive. In 1957, nearly ten percent of agency scientists were enrolled in graduate training. The number reached 20 percent in 1967 but fell to five percent in 1974 since nearly 75 percent of the professional research employees had advanced degrees (Storey 1975: 73-74).

One other research area that Harper influenced was international forestry. After World War II, the agency had developed ties with the Forestry Division of the Food and Agriculture Organization (FAO) of the United Nations. In the early 1950s research was assigned all aspects of international forestry by the Forest Service. The Forest Service also resumed its membership in the International Union of Forestry Research Organizations (IUFRO), and Harper was an active member until he retired in 1966.

Cooperative forestry research overseas stems from Public Law 480 (1954, amended 1958) which allowed the USDA to dispose of surplus agricultural commodities in return for host country credit. The money was then used in part to fund research by the host country in cooperation with the Forest Service.

RECREATION RESEARCH---SOCIAL SCIENTISTS

Chief Edward Cliff participated in the 53rd Western Forestry Conference in Seattle (Washington) on 12 December 1962. The title of his presentation was "Forestry and Forestry Research in the U.S. Department of Agriculture." The speech began with a summary of current USDA programs that affected forested lands. One of the most recent was the Rural Areas Development Program. Aimed at rehabilitating distressed rural communities, part of the plan called for new or expanded forest products industries. To ensure soil or watershed stabilization, the plan called for reforestation of some areas, and where profitable, recreational ventures.

In regard to Forest Service research on forest recreation, Cliff noted that the agency was only beginning to explore this new field. In his words, "...a rapid expansion of the relatively new and unexplored field of research...will provide a better basis upon which to handle the problems of policy and management of forest recreation...it is long overdue (Cliff 1962: 6)."

Why was forest recreation research ignored for so long? Harry W. Camp wrote in his essay "An Historical Sketch of Recreation Research in the USDA Forest Service" (1983), that recreation "started as the stepchild of other forest disciplines (Camp 1983: 4)." In 1940s when Dr. Verne L. Harper was director of the Northeast Forest Experiment Station, he had advocated a recreation research program. Outside of the wildlife and sportsman's associations, few were interested since many regarded it as a land management problem.

However, through the efforts of Samuel T. Dana, Dean Emeritus of the School of Natural Resources at the University of Michigan, the Forestry Research Advisory Committee recommended in 1954 that research was needed relating to forest recreation. Harper was now an Assistant Chief and funded Dana to work on a forest recreation research program. Finally, in 1960, recreation research was made a line item in the Federal budget. Public interest in the environment and wilderness in the 1960s helped ensure continued research in recreation.

At first, the recreation research program operated within the Division of Forest Economics; it was then shifted to the Division of Range Management Research. In 1959, Harry W. Camp was appointed to be the first head of Forest Service recreation research. Camp and other felt that social aspects of recreation were important, but lack of trained researchers and support by field administrators restricted most investigations to biological and physical concerns. A 1964 Forest Service report "A National Forestry Research Program", for example, lists nine proposed projects under forest recreation research; several of which such as number eight " devising ways to measure recreation use and future requirements" required social science skills.

Recreation research was concerned first with gaining credibility through recreation natural resource studies. Work was conducted on mitigating deterioration of soils and vegetation in campgrounds, for example. A lack of support for even this type of research by field managers was part of a legacy of opposition by "old-line" managers to the influx of specialists experienced by the agency in the 1960s and 1970s. The employment of non-traditional specialists challenged the authority of the old-line managers, accordingly it took time for new programs to be accepted. Sociological studies, although advocated by Dr. George E. Jemison, who later became Chief of Research, were postponed until the recreation research program was better established and funded (Camp 1983). In this period, forest recreation research was conducted regionally by the experiment stations.

The need for specialists in forest recreation led the Forest Service between 1962 and 1965, to appoint employees to cooperative units at five schools of forestry. By 1971, T.F. McClintock, Director of Forest Environmental Research, summarized the results: "Today the demand-supply picture has been reversed. At least 50 universities have now instituted curricula in parks and recreation and/or forest recreation and have attracted several hundred students (Camp 1983: 10)." There was no longer a need for the cooperative program (although the National Park Service continues to have such a program).

Between 1963 and 1983 Forest Service recreation research "became more clearly defined, gained in popularity and scientific significance among the government agencies, and took on international significance (Camp 1983: 10)." One measure of success is the degree to which program concepts, theories, and research techniques are incorporated into management practices. For example, based on studies of river floater's activities on over 60 rivers from Florida to Alaska, the Forest Service, Bureau of Land Management, National Park Service, and others are better able to manage river recreational use. Other examples include: Regulation of visitors to wilderness areas, relocating campsites, and mitigating vandalism (Bey and Dwyer 1987). Progress in (outdoor)recreation in the use of social science methodology and concepts improved to the point that Scott (1986: 7) stated it was "one of the most practical applications of social science to date--anywhere."

Current and future research directions are already being acted on with programs in urban recreation, creation of parks and nature reserves in Third World nations, and providing increased recreational opportunities for the elderly and handicapped.

To end with my personal observation: There is still much improvement needed in the area of employment of skilled social researchers in recreation research and elsewhere in the agency (Wenner 1989; Karr 1983: 164). I find that too often social research is assigned to experiment station staff as an additional duty or contracted out. The results are often of limited value. Social research is increasing critical given the renewed agenda in the USDA on rural revitalization. Also, the social and economic importance of forest recreation in timber-dependent communities of the northwest is especially important given the reduced timber harvests expected there in the future.

It is especially critical that agency social analysis go beyond past narrow case studies of recreation potential in timber dependent communities, we need to study the transaction costs in the transitional phase from logging to a diversified economy.

FINAL VIEWS

In 1939, a conference on forest products research was held at the Forest Products Laboratory. It was one of those useful gatherings of colleagues where views could be aired, and, as such the final report was deemed "not for publication." Discovery of such reports are the joy of the historian, since the remarks they contain are honest opinions. I will cite one of those since it relates to the topic of where research fits into the Forest Service:

> We have often heard the laboratory spoken of as not being part of the Forest Service. It has been said that each unit of the Service goes its own way and thinks it should not be disturbed....We need to think about integrating the work of the Laboratory with Stations and Regions. We want to avoid thinking in terms of individuals and of individuals agencies having a field of their own (C. Forsling quoted in FPL 1939: 47).

In my study of the National Grasslands, grassland rangers/staff echoed the same complaint (West 1989). State and Private Forestry, Research, and the National Forest System form the triumvirate that comprise the USDA Forest Service. The alliance is sometimes problematic since there is a tendency toward fragmentation. Isolation of research from the other two is perhaps the most critical area of concern for the future of the agency. I will touch on this and two other points in the reminder of the paper.

Three issues have emerged from my study of the history of research in the Forest Service. These issues speak to the question of how history affected the current role of research.

The first issue concerns the relation between basic research and forest management. My review found that the basic mission of Forest Service research is to provide the knowledge on which forestry management and protection is based. To garner this knowledge, a national research program was created with regional and branch offices. The creation of a separate branch of research in the Forest Service raised the problem of

technology transfer. The administrative solution was an organization of line, staff, and research personnel, with staff to advise line managers on application of research findings to local problems. Since many early resource concerns were also political issues, such as floods, grazing, and fire, research personnel tended to concentrate on applied work. For example, the work of the FPL on bleached sulfate pulping was result of World War I paper shortages. (By 1931, the lab laid the basis for the transformation of the southern timber industry with use of southern pines and hardwoods for Kraft pulp.) Overall, however, tight funding for FS research limited the number of staff and the program activities. Not until the post-war World War II economic boom and cold war generated funding increases did research really expand. Employment of professional scientists in large numbers allowed projects in pure research areas, such as forest genetics and fire spread. Research became more complicated and at times isolated from local needs. A trend reinforced by the tendency of Forest Service researchers to forge closer ties with their academic colleagues than with National Forest managers.

By the 1970s, politics intervened to shift research back into the applied arena to meet the needs of forest managers. First, in 1974, came the Forest and Rangeland Renewable Resources Planning Act (RPA), amended in 1976 by the National Forest Management Act (NFMA). The charter for research was revised by the Forest and Rangeland Renewable Resources Research Act of 1978, which supplanted McSweeney-McNary. Dennis Roth, former Forest Service Chief Historian, called the NFMA "the most significant law effecting the management of the national forests since the Organic Act" of 1897 (Roth 1989)."

The era of forest plans introduced new demands by national forest planners on research staff. For example, the 1987 Record of Decision for the Sawtooth (Idaho) National Forest (Land and Resource Management Plan) in section G, Research Needs required under part 219.7(e) of the NFMA regulations lists 24 proposed areas of investigation. The lack of data on these subjects led forest planners to request them from the regional research staff.

The second issue is related to the role of research in resolving forest multiple resources management problems. For a long time, the Forest Service enjoyed almost a monopoly on research on forestry, which allowed the agency to believe that its expertise was sufficient to manage and protect forest resources in a professional manner. For example, Catherine Caufield wrote: "In 1952, a Forest Service silviculturalist called the great forests of the Pacific Northwest 'biological deserts' (Caufield 1990: 48)." She went on to note that the first major ecological study of PNW forests did not happen until 1981. This state of Forest Service expertise is now challenged by outside scholars. The growth of forestry schools that followed World War II, fueled by Federal funds, increased university research on forestry and related natural resources. In his critical study *Timber and the Forest Service* (1986) David Clary cited several challenges to perceived agency wisdom by independent scholars. In regard to timber management practices, it began with a 1970 study of clearcutting on the Bitterroot (Montana) NF, by Dean Arnold W. Bolle of the University of Montana school of forestry. But now debate extends to wildlife (northern spotted owl) and old growth-biodiversity. The pressure on Forest Service research personnel to develop baseline studies to guide management of resources stems then from two sources: RPA requirements and outside challenges.

The third theme is the eternal one of funding. The USDA Forest Service in the decade of the 1980s faced the consequences of reduced Federal spending resulting from the national recession and steps to reduce the Federal deficit. In his Reduction-in-Force Report of 3 April 1989, Forest Service Chief Dale Robertson noted that from 1982 to 1989 the agency went from 35,017 to 30,824 permanent employees. (Some research reductions are: FPL from 363 to 305, INT from 266 to 217, and NE from 402 to 327). Overall, in research there was a staff reduction of 25 percent from 964 in FY 1980 to 720 in FY 1990. Most of the reduction resulted from attrition when retiring workers were not replaced. In regard to funding of research, it has remained constant since 1980.

The response by research is to better allocate funds to research priorities. In their essay "Research Planning and Evaluation in the U.S. Forest Service" (1988) Bengston and Kaiser suggested ways to improve research planning and evaluation.

Deputy Chief Jerry Sesco, in his remarks to House subcommittees on 20 September 1989, discussed the future of Forest Service research in terms of a "Priority Research Program," which concerns global climate changes, as well as threatened, endangered, and sensitive (commonly referred to as T&E) plant and animal species (Sesco 1989: 6-7). However if this program is implemented, in these times of reduced funding, some current areas of research will be cut back or eliminated.

The conclusion is obvious: Research in the Forest Service is shaped by the larger political-economic context. Right now it is the greenhouse effect and the northern spotted owl and old-growth biodiversity. The challenge to research is to regain its pioneering past by being ahead of trends rather than being forced into them by outsiders. The danger for research is that they will be expected to resolve problems which appear "scientific" but are really political.

CITATIONS/BIBLIOGRAPHY

Alexander, Thomas G. 1987. "From Rule of Thumb to Scientific Range Management: The Case of the Intermountain Region of the Forest Service." *Western Historical Quarterly*, Vol. 28, #4 (Oct): 409-428.

Bengston, David and H. Fred Kaiser. 1988. "Research Planning and Evaluation in the U.S. Forest Service: Current Practice and Options for Improvement." *Evaluation Review*, Vol. 12, #3 (June): 276-290.

Bey, Calvin and John F. Dywer. 1987. "The Social Science Aspect of Recreation and Urban Forestry in Forest Service Research." Paper presented at the USDA Forest Service Social Science Coordination Workshop, Rosslyn, VA, 14 April.

Camp, Harry W. 1983. *An Historical Sketch of Recreation Research in the USDA Forest Service*. San Francisco, CA: USDA Forest Service - Pacific Southwest Forest and Range Experiment Station. PSW-H-1

Caufield, Catherine. 1990. "The Ancient Forest." *The New Yorker*. May 14.

Clapp, Earle H. 1926. *A National Program of Forest Research. Report of a Special Committee on Forest Research of the Washington Section of the Society of American Foresters*. Washington, DC: American Tree Association for the Society of American Foresters.

Clary, David A. 1986. *Timber and the Forest Service*. Lawrence, KS: University Press of Kansas.

Coville, Frederick V. 1898. *Forest Growth and Sheep Grazing in the Cascade Mountains of Oregon*. Division of Forestry Bulletin No. 15. Washington, DC: USDA Division of Forestry.

Dana, Samuel T. 1950. "Forest Research." Chapter 18 in Robert K. Winter (ed.) *Fifty Years of Forestry in the U.S.A.*. Society of American Foresters.

DuBois, Coert. 1914. "Systematic Fire Protection in California." San Francisco, CA: USDA Forest Service, Pacific Southwest Region.

Hardy, Charles E. (Mike). 1983. *The Gisborne Era of Forest Fire Research: Legacy of a Pioneer*. FS-367. (Northern Forest Fire Laboratory, Missoula). USDA Forest Service. Washington, DC: U.S.G.P.O.

Harper, Verne L. 1955. "Some Highlights of Forest Research." *Journal of Forestry*, Vol. 53, #2 (Feb): 106-111.

Forest Products Laboratory. 1939. "Report on Conference on Forest Products Research Held at the Forest Products Laboratory (May 3 to 13, 1939)." Unpublished report. Madison, WI: USDA - Forest Products Laboratory.

Forest Service. 1964. "A National Forestry Research Program." Miscellaneous Publication No. 965. USDA Forest Service, Washington Office.

Karr, Ray. 1983. "Forests for the People: Case Study of the RARE II Decision." Ph.D. dissertation. Missoula, MT: University of Montana, School of Forestry.

Maunder, Elwood and Amelia Fry. 1966. "Samuel Trask Dana: The Early Years." Excerpts from Oral History Interviews. *Forest History*, Vol. 10, #2 (July): 2-13.

Nelson, Charles A. 1963. "History of the Forest Products Laboratory." Ph.D. dissertation. Madison WI: University of Wisconsin - Madison, History Department.

Nelson, Charles A. 1971. *History of the U.S. Forest Products Laboratory (1910-1963).* USDA - Forest Service. Madison, WI: USDA Forest Products Laboratory.

Olmstead, F.E. (District Forester). 1911. "Light Burning in California Forests." USDA Forest Service Washington Office. March 14.

Pyne, Stephen. 1981. "Fire Policy and Fire Research in the U.S. Forest Service." *Journal of Forest History*, Vol. 25, #2 (April): 64-77.

Pyne, Stephen. 1982. *Fire in America: A Cultural History of Wildland and Rural Fire.* Princeton, NJ: Princeton University Press.

Roth, Dennis. 1988. "History of Wildlife Management in the Forest Service." Unpublished manuscript. Washington, DC: USDA Forest Service, History Unit.

Rowley, William D. 1985. *U.S. Forest Service Grazing and Rangelands: A History.* College Station, TX: Texas A&M University Press.

Scott, Dave. 1986. "Social Science in the Forest Service." *First National Symposium on Social Science and Resource Management.* Corvallis, Oregon. May.

Steen, Harold K. 1977. *The U.S. Forest Service: A History.* 2nd Edition. Seattle, WA: University of Washington Press.

Steen, Harold K. (ed.) 1994. *View From the Top: Forest Service Research [Oral Histories] by R. Keith Arnold, M.B. Dickerman, Robert E. Buckman.* Durham, NC: Forest History Society.

Steen, Harold K. (ed.) 1998. *Forest Service Research: Finding Answers to Conservation's Questions.* Durham, NC: Forest History Society.

Steen, Harold K. (ed.) 1999. *Forest and Wildlife Science in America: A History.* Durham, NC: Forest History Society.

Stone, Lois. 1968. "The Institute of Forest Genetics: A Legacy of Good Breeding." *Forest History*, Vol. 12, #3 (October): 20-29.

Sartz, Richard S. 1977. "Carlos G. Bates: Maverick Forest Service Scientist." *Journal of Forest History*, Vol. 21, #1 (January): 31-39.

Storey, Herbert C. 1975. "History of Forest Service Research: Development of a National Program." Unpublished manuscript. Washington, DC: USDA Forest Service, History Unit.

Wakeley, Philip C. 1978. "The Adolescence of Forest Research in the South: A Reflective View." *Journal of Forest History*, Vol. 22, #3 (July): 136-145.

West, Terry. 1989. "History of National Grasslands Management Under the USDA Forest Service." Paper presented at The United States Department of Agriculture in Historical Perspective Symposium held June 15-18, 1989, at Ames, IA, Iowa State University.

Wenner, Lambert. 1987. "The Practice and Promise of Social Science in the U.S. Forest Service." Pp. 63-81 in M. Miller, R. Gale, and P. Brown (eds.) *Social Science in Natural Resource Management Systems.* Boulder, CO: Westview Press.

Williams, Gerald W. 1987. "History of Social Science in the Forest Service: Reflecting on the 'Greatest Good of the Greatest Number in the Long Run'." Paper presented at the USDA Forest Service Social Science Coordination Workshop, Rossyln, VA, 14 April 1987.

Additional Related Works of Interest:

Josephson, H. R. 1989. "A History of Forestry Research in the Southern United States." Miscellaneous Publication No. 1462. Washington, DC: USDA Forest Service.

Keck, Wendell M. 1972. "Great Basin Station - Sixty Years of Range and Watershed Research." Research Paper INT - 118. Ogden, UT: USDA Forest Service, Intermountain Forest and Range Experiment Station.

McBeath, Lida W. 1978. "Eloise Gerry." *Journal of Forest History*, Vol. 22, #3 (July): 129-135.

McBeath, Lida W. 1977. "L.J. Markwardt: A Career in Wood Engineering Research." *Journal of Forest History*, Vol. 21, #3 (July): 145-155.

Munger, Thornton Taft. 1955. "Fifty Years of Forest Research in the Pacific Northwest." *Oregon Historical Quarterly*, Vol. 56, #3 (Sept): 226-247.

Munger, Thornton Taft. 1967. *Forest Research in the Northwest.* Interview by Amelia R. Fry. Berkeley, CA: University of California, Bancroft Library, Regional Oral History Office.

Price, Raymond. 1976. *History of Forest Service Research in the Central and Southern Rocky Mountain Regions 1908-1975.* General Technical Report RM-27. Washington, DC: USDA Forest Service.

SOCIAL SCIENCE AND THE FOREST SERVICE

Terry West
WO History Unit
April 1992

As late as 1977, in an internal report for the USDA Forest Service "Lessons From the Monongahela (National Forest) Experience," the author wrote: "Some educators feel that foresters need training in both technical and social sciences so that administrators will exhibit a breadth of perception and ability to accept, judge and react to opposing views." The need for social science training reflects the reality that land use decisions are increasingly less driven by science or public land managers than by the political arena (Karr 1983: 154-155).

This lesson is difficult to accept for some long time employees of the Forest Service, who enjoyed public support for its commodity oriented programs during the first two decades after World War II. Trained mostly in forestry schools at land grant colleges, the orientation of many past employees was toward applied technology--the agricultural school model--with its emphasis on increasing the production of needed crops. After all, meeting the national demand for wood--especially softwood for housing construction--was an important goal of Forest Service foresters doing their part to supply the market created by the baby boom. The backlash over the environmental consequences of commodity production, including deforestation, grew along with the '60s generation.

By the 1970s several disputes over Forest Service timber practices, including the 1973 lawsuit against the Monongahela National Forest over clearcutting led to the passage of laws by to redirect the agency. One of these, the National Forest Management Act of 1976 requires the Forest Service to involve the public more in its decision making and hire people trained in disciplines other than forestry and engineering (Roth and Harmon 1989). Specialists in areas such as wildlife biology, soil science, hydrology, archeology, and landscape architecture were hired to comply with increased demands for documentation of project compliance with land use laws, for as late as 1960, 90 per cent of employees were foresters. Social scientists managed to enter the agency in this period as the window opened for non-foresters. One of the first uses of social science was in the recreation field.

Recreation in national forests boomed in the 1950s, a time of national affluence, developing into a major program in the Forest Service by the 1960s. The research branch of the agency began applied work on recreation and urban forestry that still continues (Bey and Dwyer 1987). Some of this work includes sociological data on preventing vandalism or defining needs of different recreation visitors. A current example of this type of study is "Cross-Cultural Land Ethics" (Ewert and Pfister 1991) based on research on the Angeles National Forest in southern California. Social recreation studies tend to be done by Forest Service research scientists located at Forest and Range Experiment Stations or contracted out to university-based scholars.

The first real entry for social scientists in the agency stems from social impact assessment (SIA) studies mandated by the Forest Service Manual of 1973. The mid-1970s energy extraction boom in Alaska and the Rocky Mountain states, where growing coal and oil activities were having an effect on national forests and grasslands, fueled employment of social scientists to do SIA work (Holden 1987). An additional demand for sociologists and economists in the agency at the same period was to help facilitate public involvement in the land-use planning process. Just when the hiring of social scientists took off, however, it was deflated by the personnel reductions of the administrations of Presidents Jimmy Carter, and Reagan. In an essay "Social Science in the Forest Service" Dave Scott noted "of the 25 to 30 social scientists working in 1982, fewer than 10 are so employed today (Scott 1986: 9)." A key to survival he felt was sharing the insights of social science with a wider slice of line officers and staff specialists, not as a cure-all, but as making them more sensitive to people's needs.

The exact benefit provided the agency by social scientists has always been problematic to managers (Williams 1987). In a 1982 Social Impact Analysis Workshop the status of agency social scientists was reviewed. The lead speaker was Lamar Beasley, the Deputy Chief for Programs and Legislation, who observed that social science was a new discipline in the agency whose practitioners were often hired to do a rather specific technical job, to prepare social economic overviews for forest plans; a lesser number also did social impact analysis of proposed environmental projects within the boundaries of their administrative unit. Aside from this technical contribution, however, the merits of employing social scientists was unclear as expressed by Lamar Beasley: "Only as Forest Service managers become aware of the added skills that you bring with you--skills that will help them make better decisions--will you be able to move from being a technician to a professional (Beasley 1982: 7)."

The challenge for social scientists in the agency has always been to demonstrate the merits of their professional skills to managers by giving them a useful product (briefing report, issue white paper). The dilemma is that seldom is job time given to do the kind of substantive research on major issues that would make clear to managers the unique insights of the professional social researcher.

The acceptance, even employment, of social scientists in the Forest Service is limited by another hurdle beyond getting managers to recognize the importance of social factors in land use management. This is the belief by many forestry school trained managers that are equally competent social scientists themselves (Beasley 1982: 7). "The roots of this problem may be in the traditional belief that foresters or scientists can be trained to do any job (Karr 1983: 171)."

In 1987, to revive the use of social scientists in the Forest Service, a Social Science Coordination Workshop was held in Rosslyn, Virginia, by agency practitioners. The basic conclusion was:

> The agency has relatively few social scientists [a table of selected job titles in a professional-administrative staff position for the agency in October 1985 lists 3 sociologists, 2 general anthropologists, and 20 in social science compared with 140 archeologists, 5,282 foresters, and 1,068 civil engineers] and most outside of research have primary assignments in other specialities (Wenner 1989: 72)

A reason for this dismal lack of social scientists may be found in a paper by then Pacific Northwest (Oregon-Washington) regional sociologist Arnold Holden (1987) that was prepared for the Social Science Coordination Workshop: "intrinsic to the current view of social science in almost all policy matters: Where social science confirms existing belief, it seems trivial; where it conflicts, it is not credible."

Yet, support for social science thinking--if not social scientists-- continues to revive in the agency. The latest opportunity is found in the emergence of "New Perspectives," a program to educate the Forest Service and other land managers in a concept of ecosystem management as applied science with social considerations. The plight of the work force in timber dependent communities faced with reduced employment in the lumber industry is a related concern of the Forest Service. A concern that fits into the recent Presidential Rural Development Initiative. Richard Wetherill, the current regional sociologist for the Forest Service in the Pacific Northwest, is optimistic (1991):

> One trend that seems to be manifesting itself in the outfit is a trend toward the increased use of social science. This is happening in everything from New Perspectives to Forest Plans....more and more [National] Forests across the country are calling me about establishing or re-activating Sociologists or Social Scientist positions in one form or another.

There is a growth in demand for people trained in natural resource (environmental) sociology in the Forest Service and other public land management agencies. The surge in interest in serving a growing "multicultural" customer base may further enhance the competitiveness of cultural anthropologists and other job applicants trained in the social sciences. However, the inside access to jobs may still go to graduates of natural resource (formerly forestry) schools. The scarcity of jobs for foresters in the last decade or more

has forced those schools to widen their curriculum to include social science methods and concepts. This makes their graduates more flexible: they are trained in forest science with a political and social science awareness. At the same time, academic social science programs by focusing on abstract linguistic models of postmodern theory produce graduates unable to compete for practical jobs in the Forest Service and elsewhere (Rhodes 1984).

Bibliography

Beasley, J. Lamar. 1982. "Social Science in the Forest Service in the 1980's." In Maurice Voland and Wendell Hester's (eds) *Social Impact Analysis in the Forest Service: A Workshop Summary*. Washington, DC: USDA Forest Service, Programs and Legislation Office Environmental Coordination Policy Analysis Staff.

Bey, Calvin and John Dwyer. 1987. "The Social Science Aspects of Recreation and Urban Forestry in Forest Service Research." Manuscript prepared for USDA Forest Service Social Science Coordination Workshop, Rosslyn, VA.

Ewert, Alan and Michael Pfister. 1991. "Cross-cultural Land Ethics: Motivations, Appealing Attributes and Problems." Pp. 146-151 in *Transactions of the 56th North American Wildlife & Natural Resources Conference*.

Holden, Arnold. 1987. "Report on Activities: Social Impact Analysis." Manuscript prepared for Social Science Coordination Workshop, Rosslyn, Virginia. April 14 - 16, 1987.

Karr, Ray. 1983. "Forests for the People: Case Study of the Rare II Decision." Ph.D. dissertation. Missoula, MT: University of Montana, School of Forestry.

Roth, Dennis and Frank Harmon. 1989. "The Forest Service in the Environmental Era." Unpublished manuscript. Washington DC: USDA Forest Service, History Unit.

Rhodes, Robert. 1984. *Breaking New Ground: Agricultural Anthropology.* Lima, Peru: International Potato Center - CIP.

Scott, Dave. 1986. "Social Science in the Forest Service." Paper presented at the First National Symposium on Social Science in Resource Management. Corvallis, OR: Oregon State University.

Weitzman, Sidney. 1977. "Lessons from the Monongahela Experience." Report. Washington, DC: USDA Forest Service, History Unit.

Wenner, Lambert. 1989. "The Practice and Promise of Social Science in the U.S. Forest Service." Pps. 63-81 in Marc Miller, Richard P. Gale, and Perry J. Brown (eds.) *Natural Resource Management Systems*. Boulder, CO: Westview Press.

Wetherill, Richard. 1991. *Trendlines: Trend News that Shapes the Pacific Northwest Region's Social Environment*. Newsletter Vol. 3, Nos. 4 & 5 (April/May). Portland, OR: USDA Forest Service, Region 6.

Williams, Gerald W. 1987. "History of Social Science in the Forest Service." Unpublished manuscript prepared for the USDA Forest Service Social Science Coordination Workshop, Rosslyn, VA, April 14, 1987.

USDA FOREST SERVICE MANAGEMENT OF THE NATIONAL GRASSLANDS

Terry West, Ph.D.
Historian
USDA Forest Service

INTRODUCTION

> "...more free land was homesteaded in the twentieth century than in the nineteenth, but much of it was marginal and never should have been brought under the plow (Rowley 1985: 225)."

The origin of the United States Department of Agriculture (USDA) Forest Service administered National Grasslands begins with the disposal of public lands in the early 20th century. The Enlarged Homestead Act of 1909, for example, offered free land to those who would cultivate the Great Plains (Rowley 1985: 225). Market demand for wheat during and after World War I further motivated "sob-busters" to settle previously bypassed grassland areas and plow them for cultivation.

The intensity of the land rush is told in the records of the government land office in Havre, Montana. In 1912 it had recorded about 3,000 entries for land; in 1917, it recorded 7,500. By 1924, the states of the Great Plains were growing 17 million more acres of wheat than in 1909; in 1928 it reached 20 million acres with prices and yields peaking finally in 1931 (Lord 1938: 72-73). The removal of the grass that held down the soil on these marginal farm lands contributed to the erosion of the "dustbowl" in the drought years of the 1930s. In that decade an estimated two-and-a-half million people abandoned their small farms, mainly on the plains, many of whom migrated to the west coast to work in the fields (Rupp 1975: 2).[1] The young author John Steinbeck was so affected by the sight of these families pouring into California to work the fruit harvests that he immortalized them in the novel *The Grapes of Wrath*.

LAND UTILIZATION PROJECTS

The economic and ecological plight of the nation spurred action by the government to mitigate the effects of the depression on the population. The dustbowl lands and peoples became the concern of one of these projects. In 1931 a national conference entitled Land Utilization which called for a survey of submarginal lands. Once identified, the government began to purchase these lands under the authorization of the National Industrial Recovery Act of 1933 (NIRA) and Emergency Relief Appropriations Act of 1935 (ERA). The aim was to control erosion, produce more forage, and ensure economic stability for remaining rural residents. Depleted cropland was planted with grass and the rangeland grazed on a rotating basis. In some areas newly formed grazing associations arose to ensure access to government grazing land by its members through a joint permittee system. Water and soil conservation projects were undertaken by various government programs.

Paper prepared for the symposium on The United States Department of Agriculture in Historical Perspective at Iowa State University (Ames), June 15-18, 1989. A revised version was printed in Agricultural History, Vol. 64, #2 (Spring): 86-98. The current version of the paper was revised by Gerald W. Williams on September 14, 1999.

The purchased lands were called Land Utilization (L-U) projects (Heintz 1989) after the title of the 1931 conference. Between 1933 and 1946, there were 250 L-U projects on 11.3 million acres in 45 states. By voluntary sales (of inhabited lands) the government obtained title to this land for $47.5 million or about $4.40 an acre (Wilson 1965: v).

The lands were first administered by the Resettlement Administration, later named the Farm Security Administration. In 1937, the Bankhead-Jones Farm Tenant Act (Title III) gave custody to the Secretary of Agriculture and authorized more extensive conservation efforts. In 1938 the USDA Soil Conservation Service was given the task of managing the L-U lands, a mission that lasted until 1953 when the Forest Service was assigned the duty.

Soil Conservation Service project work focused on grazing, forests, recreation, wildlife, and watershed protection. During the depression years unemployed locals were hired by relief agencies to work on Land Utilization soil conservation projects enabling those who stayed on the land to survive. In this period the Civilian Conservation Corps was also active on the Great Plains (Lord 1938). From 1938 to 1942, the CCC planted a belt of trees from Mexico to Canada (largely on private lands) to serve as a "shelterbelt" against wind erosion (Droze 1977).

Specific Soil Conservation Service (SCS) projects included building stock water ponds, reservoirs, seeding grasslands (crested-wheat a bunch-grass originally imported from Siberia was widely planted), and fire control. The period after World War II was one of intense range rehabilitation by the SCS. By the time the Forest Service obtained the L-U lands many areas were already restored and needed only continued maintenance to protect the gains.

GREAT PLAINS L-U CHANGES

Government administration of L-U lands resulted in shifts in land use patterns in the Great Plains. Douglas Hurt, historian for the SCS, contended that New Deal social scientists had urged public ownership of L-U lands "on the belief that the needs of society were superior to those of the individual (Hurt 1985: 147)." After purchase of the Land Utilization lands, there were practical demonstrations of the best soil conservation techniques to set an example for adjacent private land holders (Hurt 1985: 148). Since these advisors believed that private landowners also had an obligation to future generations to conserve the land through wise use. To reinforce the lesson, privately held lands were organized into soil conservation districts (Parks 1952). The purpose was to ensure integrated application of conservation practices in the areas of mixed land ownership.

The L-U lands were not intended to be permanent natural areas; instead the goal was to transform marginal farmland into productive rangeland (Wooten 1965: 53). Other resources were to be managed on the L-U lands but the restoration of the local economy through ranching was the critical goal during the depression and afterwards. In this respect the L-U projects were a success (Grest 1953: 44; Hurt 1985) in altering plains agricultural practices "from uncertain crop farming to stabilized grass production (Grest 1953: 44)."

USDA FOREST SERVICE AND THE NATIONAL GRASSLANDS

By Secretary of Agriculture Administrative Order dated 24 December 1953 (effective January 2, 1954), USDA Reorganization Act, administration of the L-U lands was transferred from the SCS to the Forest Service. "The original intent was for the Forest Service to act as interim manager pending final disposal of these acquired lands (Rupp 1975: 4)." At this time there were over ten million acres of L-U lands, most located in the Great Plains.

Discussion continued over the future status of the lands until 1958, when a revised policy disposed of around six million acres to states and colleges. Most of the remaining four million acres was retained by the Forest Service as part of the National Forest System (Rupp 1975: 4). A Secretary of Agriculture Administrative Order on 20 June 1960 designated 3,804,000 acres of the land into 19 National Grasslands. The USDA Forest Service was now responsible for the permanent retention and management of the grasslands. This new task created some internal confusion in the agency regarding the place of the National Grasslands in the Forest Service and their national function.

The 1960 order stated the National Grasslands were to be part of the National Forest System for administration under the Bankhead-Jones Farm Tenant Act. It also stated that the Forest Service was to manage these lands for outdoor recreation, range, timber, watershed, and wildlife and fish purposes. Many in the agency debated what it meant "to manage as part of the National Forest System"? In the words of Deputy Regional Forester (Region 2) Craig Rupp:

> Many Forest Service administrators interpreted this to mean to manage the Grasslands the same as National Forests. Others were of the opinion that the National Grasslands were only big cattle pastures (existing) solely for the use and benefit of the grazing users. Still others saw the grasslands as a bastard child and the best alternative was to dispose of them (Rupp 1975: 5).

SCS PRACTICES AND GRAZING ASSOCIATIONS

When the Forest Service took over management of the grasslands from the Soil Conservation Service existing "SCS policies were not readily accepted" by the new administrators (LaPoint 1989: 3). The Forest Service had managed rangeland for fifty years and many of its range staff felt that the grasslands should abide by established agency practices. One area of difference was working with grazing associations. The SCS had entered into cooperative agreements in 1939 with Great Plains State Grazing Associations and Districts. Clearly, the Soil Conservation Service was agreeable to a policy of working with grazing associations when this step facilitated SCS soil conservation goals. These associations had started as early as 1931 in the Great Plains when stockmen organized to request congress to withdraw public domain land from homesteading and permit it to be leased on a long-term basis (Alt 1988: 2). The key is that the land under control of the association is grazed only by its members.[2]

Forest Service officials were reluctant to surrender control of activities such as issuing permits, collecting fees, controlling trespass and fires to grazing associations. However, the mass transfer of SCS employees in Montana and the Dakotas to the Forest Service in this transition period of management of the national grasslands led to the eventual acceptance of many of the SCS practices. The current policy is to rely on grazing associations where practical. This arrangement is most common in the larger L-U range lands in the northern Great Plains.

Direction for management of the National Grasslands was expanded in 1963 when the 1960 Order was amended. The additions served to reinforce the original L-U mission of promoting grassland agriculture and sustained-yield management; while demonstrating sound land use practices to adjacent public and

private landholders (Wooten 1965: 33). Since 1963, the Forest Service employees of the National Grasslands have labored to carry out this mandate. I will now examine several topics in the contemporary administrative history of the national grasslands derived from interviews with former or current employees.

AUDIT AND ISSUES

Between December 1972 and May 1973, the Office of the Inspector General (USDA) conducted an "audit" of the national grasslands. The regional variations in ecology and history of the grasslands make generalizations difficult. However, the audit did highlight some trends that are worth discussion. One finding was that there had been significant progress in rehabilitating the grasslands, but less success in promoting conservation practices on adjoining lands. One explanation for the failure to promote grassland agriculture in areas such as Colorado was that it was not "economically alluring and rewarding as cultivation and participation in price support programs" (Audit Report 1973: 5). Local-level USDA personnel of the national grasslands and Farm Home Administration each advocated opposite programs to local farmers. The former promoted grazing while the latter were encouraging grain cultivation.

Another area of concern identified in the audit was the negative attitude of some grasslands employees toward grazing associations. In the words of one national grassland manager: "association management was like hiring an army of rabbits to guard the cabbage patch (Audit Report 1973: 5)." By the 1970s, northern New Mexico, Oklahoma, and Texas National Grasslands ceased to have grazing associations. Instead, individual grazing permits were issued and the grassland units fenced-off to make separate pastures. The change was a logical adaptation to the region's ecology and land use patterns. The L-U lands purchased in this area by the government were smaller than in the northern Great Plains. For example, the Black Kettle (Texas) allotments ranged from 30 acres to the largest at 1500 acres.

The absence of grazing associations in the region complicated attempts to promote grassland conservation. National Grassland workers had to preach the message to each individual rancher because collective conversion was impossible without associations. In addition, there were national grasslands managers who did not feel that their duty extended to private property (Audit Report 1973: 13).

CHANGED AGENDAS

> In 1971, about 195 thousand cattle and horses and 37,000 sheep and goats grazed 1.25 million animal unit months on the National Grasslands. National Grassland revenues were mainly from mineral leases, especially oil and gas, which contributed 1.4 million dollars in fiscal year (FY) 1972, compared to $700,000 for livestock grazing fees (Audit Report 1973: 1).[3]

Two trends intersected in the public arena in the 1970s which placed land managers in a bind. The dilemma arose from the clash between environmental concerns and the needs of an expanding national economy and population. The post World War II economic "boom" fostered a national consensus that resource extraction and industrial production were positive contributions to the public good. But growth had environmental consequences which became apparent in the 1970s. This awareness led to the passage of laws aimed at curbing the destruction of the environment. These controls, however, collided with public fears of resource scarcity and economic decline in the U.S. national grassland management reflected these contradictory trends and the balance among resource uses became a public issue.

Fossil fuels and "red meat" (beef cattle) were two resources on the national grasslands that commanded national attention in this period. In 1973 an ad hoc interagency committee was formed with the purpose of seeking answers "on how the national grasslands can best be utilized to promote grasslands agriculture and further USDA programs in the Great Plains" (Regional Forester W.J. Lucas letter to Chief

1973). Lucas, the director of the Rocky Mountain region of the Forest Service, was appointed chair of this committee. The increasing pressure for strip mining coal (at a time of national energy crisis) was a primary concern of this group of public land managers.

Two years later, in a period of large-scale shipments of grains to the Soviet Union, another national need shaped policy. Concerned that grain shortages would decrease cattle production, Forest Service range management staff visualized the national grasslands as centers of cattle production since the animals there relied on forage rather than grains (Forest Service document Cooperative Range Management Program 1975: 1). The estimated "red meat" production from the national grasslands in 1971 was 75 million pounds. The management pressure for beef production was felt mainly on the northern Great Plains national grasslands.

THE PEOPLE

Historians of the Forest Service have observed that despite the agency's well-known esprit de corps not all of its employees feel included in the mainstream of the organization. The national grasslands are one example. Ever since its establishment in 1905, the Forest Service employed mainly foresters who worked on the national forests. Suddenly in 1954 it found itself charged with care of a new type of resource--treeless, flat, grasslands. Those early employees who were assigned to work on the grasslands sometimes felt forgotten by the rest of the agency. A former grasslands ranger (1972-76) expressed this view:

> A lot of people (in the forest service) felt that when you were sent to the National Grasslands that it was like being shipped to Siberia in the agency. But, for many, once they were there a few years, they never wanted to return to the national forests.

The trend toward segregation of the two staffs within the forest service was a concern of management. At late as 1975 at a national grasslands conference held in Arlington, Texas, Deputy Chief Tom Nelson remarked in his speech: "I think over the years there has been some concern as to whether or not the national grasslands were considered an integral part of the national forest system." The personal consequence of the lack of integration was to place grasslands people at a disadvantage in career advancement competition. John McLemore, a ranger on the Black Kettle national grassland in New Mexico from 1965 to 1973, contended:

> In those days you were forgotten about for promotions if you worked on the national grasslands...I believe you advanced further and faster on a National Forest than on a National Grassland. I liked my job at the time so I didn't complain until later.

Not all of those interviewed agreed that grasslands service was a career liability, but they all concurred that the mainstream forest service looked askance at the national grasslands. One employee of the grasslands since 1961 commented:

> I think the Forest Service thought the grasslands was a desert, and they still do not think much different: they kind of look down on the grasslands--there are no trees.

Former grasslands ranger Deen Boe also observed the agency's timber management bias but noted that this is found mainly among western foresters:

> The National Grasslands did feel slighted in the forest service since the tree is a symbol of the agency and not grass. In fact, a lot of people in the forest service wonder why we manage the national grasslands. I find this timber-dominated view less east of the Rockies;

they have a broader view of the multiple resources we manage than western sawlog foresters do.

ON THEIR OWN

Many of the employees who worked on the national grasslands enjoyed the job because of the independence and way of life. Bill Bradshaw a district ranger on the Thunder Basin from 1961-64, described his time on the grasslands as "the best four years in the forest service...because as long as I didn't ruffle too many feathers, I just ran it like I would a ranch (Hinton n.d. chapter 8: 5)." The two reasons why national grassland people were left alone were noted by one former employee: "The Forest Service never really paid much attention to the grasslands. The agency wasn't set up to handle this kind of resource." In brief, the novelty of managing a resource that held little appeal to many in the Forest Service resulted in a "you-are-on-your-own" style of grasslands management. In retrospect, this action appears to have had excellent results, especially in the critical early years of forest service administration of the national grasslands. One factor was that the people is the selected to work on the grasslands were often natives of the region. Jim McLemore, for example, told how he was picked to work on a national grassland.

> I didn't apply for the job; in those days (1965) you didn't have the option of picking jobs. I imagine that they looked for people suited to work on the national grasslands. With my degree in range management and being from north central Texas, I suppose I seemed like a natural to be picked for the job. After I got started I was tickled to death. Most people raised in an environment with mountains don't like the Great Plains, but it was home for me.

The absence of rules and supervision resulted in decentralized management. made for a decentralized management. Deen Boe, a ranger on the Custer National Forest grassland from 1967 to 1972 noted:

> We felt that the regular forest service misunderstood our actions or could care less, thus we ran the national grasslands on our own. A ranger on the national grasslands had lots of leeway as there were not a lot of rules to bind him. The national grasslands don't have a lot of rules, instead in the northern Plains we operated with the grazing associations who dealt with day-to-day operations. The Bankhead-Jones Act was not very specific on L-U lands.

Not only did they design their own work projects (develop stock water ponds, well-drilling, grass planting, gully erosion checks, etc.), often the technology appropriate for the work was invented on site. One long time employee stated: "The source of our innovations was mainly from our range conservation professionals and technicians, the innovators were local employees. One old-timer had a ranching background and knew what would work." Jim McLemore seconds this observation on the sources of ideas for project implementation:

> Lots of ideas we figured out on our own; we had our GS-5 range technician who was born and raised in the area, he had a lot of background (to draw on). I guess I listened to anybody who had something to say. I didn't have enough forest service background to know the forest service system of operating. Instead, I followed what my neighbors did. I had a high regard for the people who worked for me, very capable people.

Multiple-Use, Multiple Views

The grassland acquisition brought the role of integrative management back into the mainstream of forest service range management administration (La Point 1989: 4).

> More of the professionals assigned to Forests should have an opportunity to work on the Grasslands in order to gain experience and expertise in a broad range of resource management activities (Nelson 1975: 2).

Two differences in the make-up of the national grasslands helped shape the vision of those who managed them. One is that unlike the large tracts of land that form the national forests, the national grasslands tend to be made up of dispersed units that are intermingled with state, private, and other federal lands. This pattern of land tenure calls for integrated resource management since a project on one parcel of land has consequences on the land of a neighbor. The result is the ranger must have an active community outreach program.

Two former rangers on the national grasslands commented on the differences between the grasslands and a ranger district on a national forest:

> The real difference is that everything we do on a national grassland is something we do for the adjacent land owners to emulate, we have that in mind when we do projects. I don't really think that we have this idea on national forests, i.e., that we expect adjacent owners to be influenced by our practices.

> The grassland rangers don't tend to be confined by boundaries. They think more of an area concept that is larger than just the federal land they supervise. I thought every ranger should serve on a national grassland because it develops the ability to look at the broad picture of resource management. You learn to deal with different land owners, you learn that the forest service is not alone but part of a larger whole. The primary mission of the forest service in the national grasslands was promotion of sound resource management. You don't do this as a lone wolf. Instead, you coordinate resource management with others as an everyday experience.

Some common examples of coordinated projects include water wells drilled on state land with pipelines crossing private and federal lands. Gas and oil deposits are not confined to map boundaries.

The absence of trees in the grasslands focused attention on the other resources that exist on the national grasslands. In addition to range, managers developed programs for watersheds, recreation, wildlife, minerals, and even cultural resources. The amount of funds and effort allocated to each of these resource programs was, of course, uneven and regional with some grasslands tilting the balance toward certain ones with other units favoring a different emphasis. Overall, the Washington office of the Forest Service felt a need in 1975 to urge national grassland managers that "Wildlife, watershed, and recreation aspects of the National Grasslands need more emphasis (Nelson 1975: 3)." It was in this period that public scrutiny of the grasslands increased, along with interest in recreational opportunities.

CURRENT CONDITIONS AND CHANGES

The national environmental focus of the 1970s on the national forests spilled over to the national grasslands. District rangers on both national grasslands and forest districts found that local concerns over specific project impacts were transformed into national issues. The resulting conflicts among special interest groups coupled with legal appeals led to a lose of local control by the ranger. Local land-use decisions were now being made by higher level staff in the agency. Past resource management prided itself on being exempt from politics with decisions based on scientific knowledge.

The conflicts between local resource users and national environmental groups over specific projects on public lands has intensified political pressure on the agency. The outcome is more often decided in the political or legal arena than by those charged with managing the resources. On the grasslands this has meant the employment of wildlife biologists and an increased stress on non-commodity resources. The change in management emphasis was upsetting to some grazing associations, since they felt their authority to manage was undermined. Nonetheless, grassland staff feel that strides have been made toward a more balanced resources program on the units. One current employee claimed:

> By now we have a better understanding of what the national grasslands should be. We now better manage other resources on the national grasslands. The shift from strict range management hasn't been easy but we now have real neat things done. We just have to get the associations to go along.

One reason for increased public scrutiny of the national grasslands is a result of their discovery by a public seeking outdoor access in states with few public lands.

> In the last 10 years the Northern Great Plains national grasslands are noted more by the general public because of land management planning. The outdoor recreation interests are interested in more than just range use which conflicts with the traditional users. People are discovering the variety of resources on the national grasslands; compared to wooded areas there is a wealth of wildlife in the grasslands.

UNFINISHED BUSINESS

One subject that requires further research is the outcome of efforts to influence private land owners to practice sound resource management. The results appear to be mixed. In areas where crop production on marginal lands is now viable because of changed technology, the promotion of grassland agriculture is more difficult. One former Curlew (Idaho) grassland employee claimed some success with specific projects:

> They duplicated the wind protection projects and a few were interested in wildlife enhancement as they organized hunting clubs on their lands and charged fees to outsiders to hunt...Our water demonstrations (irrigation systems) have been copied by the private sector because the things we've done have been practical, economical.

The benefit of the national grasslands is that they offer a rare opportunity to demonstrate sound long term land-use management practices that are neglected by the private sector. In Texas one former ranger had this experience:

> This is something I couldn't measure. If the local ranchers learned from the national grasslands or not? It probably was an uphill labor but I didn't realize it at the time. I thought I was doing urgent business but I didn't rent a hall and yell at the ranchers. I'd just

demonstrate it on the national grassland. Looking back, maybe the examples caught on. The ranchers in west Texas are not far-sighted enough; the southwest may turn into a desert because of poor grazing, poor management by the private sector.

On April 22, 1998, Forest Service Chief Mike Dombeck signed a letter concerning the future management of the national grasslands. In this letter, Dombeck noted:

> The National Grassland Management Review in 1995 led to an important and ambitious action plan. We have undertaken the Northern Great Plains planning effort for land and resource management plan revisions for national grasslands in the Dakotas, Wyoming, and Nebraska. I have now decided we should take additional administrative actions... (Dombeck 1998:1)

Chief Dombeck went on to outline three items to recognize the uniqueness of the national grassland units of the national forest system:

- Assignment of an Associate Deputy Chief's position in the Washington office with overall responsibility for national grasslands
- Establishment of a new grassland supervisor's office to administer the national grasslands located in North Dakota and the Grand River National Grassland in South Dakota. This Grassland Supervisor will report to the Northern Region (R-1) Regional Forester.
- Separate land and resource management plans, at the revision time for national forest plan revisions, will be prepared to include the preparation of a separate plan for each national grassland or combination of national grassland units under the jurisdiction of a single supervisor.

SUMMARY

Several aspects of Forest Service administration of the national grasslands should be emphasized. The broad outline of Forest Service administration of the grassland may be outlined as follows. National grasslands management was a new responsibility for a forestry-based agency. To cope with the task the agency relied on veteran SCS employees which helped ensure a continuity of policy on the L-U lands. The administrative isolation of the national grasslands created a sense of uniqueness and independence on the part of the small staffs on the national grasslands. Because they were few in number, the unit employees shared information, worked as a team, and invented solutions to project needs while out in the field.

The absence of a well defined mission sometimes led to debates about the purpose of the national grasslands within the agency. Some stressed range management while others a more balanced resource mix. By the 1970s multiple use of resources came to the fore in the agency and the national grasslands began to emphasize recreation and wildlife. By the 1980s on the northern Great Plains this additional stress on other resources challenged the traditional working relationship the units had with grazing associations. In the late 1990s, there was a renewed effort by the Chief of the Forest Service to highlight national grasslands a unique, separate units of the agency.

Present-day rangers enjoy less local control than their predecessors since management decisions are often made at higher levels of the agency than before. The agency still must struggle to integrate personnel of the national grasslands and the national forests in the national forest system. There will always be those employees who dread the thought of being assigned to the Great Plains. Yet, if those who are there are helping prevent another dustbowl, perhaps they are "serving the people and caring for the land" in a real sense.

BIBLIOGRAPHY

Alt, Bernard W. 1988. Letter of March 21, 1988, to Dr. Henry C. Dethloff, Intaglio Inc., College Station, Texas. "Grasslands Historical Document."

Audit Report. 1973. "Audit Report. Forest Service. National Grasslands Administration. Report No. 60183-1-H." Washington, DC: USDA Office of the Inspector General.

Cooperative Range Management Program. 1975. "State and Private Forestry Rangeland Cooperative Range Management Program." Washington, DC: USDA Forest Service.

Dombeck, Mike. 1998. Letter dated April 11, 1998, from Mike Dombeck, Chief of the USDA Forest Service, Washington, D.C. to the Regional Foresters.

Droze, Wilmon H. 1977. *Trees, Prairies, and People: A History of Tree Planting in the Plains States.* Denton, TX: Texas Woman's University.

Friday Newsletter. 1989. "Grassland LUP Payments Distributed." *The Friday Newsletter*, No. 11 (March 24): 1. Washington, DC: USDA Forest Service, Public Affairs Office.

Grest, Edward G. 1953. "The Range Story of the Land Utilization Projects." *Journal of Range Management*, #6 (Feb): 44-50.

Heintz, Tom. 1989. "The National Grasslands of the Northern Region." Brochure, Region 1. Lemmon, SD: USDA Forest Service, Grand River & Cedar River National Grasslands.

Hinton, Wayne. n.d. "History of the Forest Service Rocky Mountain Region." Contract 53-3187-6-25. Unpublished manuscript. Washington, DC: USDA Forest Service, History Program.

Hurt, Douglas R. 1985. "The National Grasslands: Origin and Development in the Dust Bowl." Pp. 144-157 in Douglas Helms and Susan L. Flader (eds.) *The History of Soil and Water Conservation*. Washington, DC: The Agricultural History Society.

Lord, Russell. 1938. *To Hold This Soil*. USDA Miscellaneous Publication No. 321. Washington, DC: USDA Soil Conservation Service.

La Point, Halcoyn. 1989. Oral History of the Grazing Associations. Paper presented at the 1989 Society of Range Management Meeting. Dickinson, ND: USDA Forest Service, Custer National Forest.

Lucas, W.J. 1973. Letter dated August 3, 1973, from the Ad Hoc Committee on National Grasslands in the Great Plains to Chief of the USDA Forest Service. USDA Forest Service, Region 2.

Nelson, Tom. 1975. Remarks by Deputy Chief Tom Nelson at National Grassland Conference, Arlington, Texas. December 10, 1975. Transcript.

Parks, W. Robert. 1952. *Soil Conservation Districts in Action*. Ames, IA: The Iowa State College Press.

Rowley, William D. 1985. *U.S. Forest Service Grazing and Rangelands: A History*. College Station, TX: Texas A & M University Press.

Rupp, Craig. 1975. "History of National Grasslands." Paper presented at the National Grasslands Conference in Arlington, Texas. December 10, 1975.

Russell, Ted. 1975. "History of National Grasslands." Paper presented by Ted Russell, Director, Range Management, Northern Region, USDA Forest Service. National Grasslands Conference held in Arlington, TX, on December 10, 1975.

Wilson, M.L. 1965. "Forward to Agricultural Economic Report No. 85." Washington, DC: USDA Economic Research Service.

Wooten, H.H. 1965. "The Land Utilization Program, 1934 to 1964: Origin, Development, and Present Status." Agricultural Economic Report No. 85. Washington, DC: USDA Economic Research Service.

ENDNOTES

1. "Among the critical agricultural problems of the 1930s was the cultivation of a large acreage of submarginal farmland--land that could not profitably grow crops. Mortgage foreclosures, tax delinquencies, and personal hardship were commonplace in areas where large acreages of submarginal land was being farmed. Severe droughts, floods, erosion, poor cultivation practices, neglect, and frequently abandonment were causing heavy damage to the land (Wilson 1965: 5)."

2. Continuity of permittees is common in the grazing associations of the northern Great Plains. For example, "75% of current ones in the Medora Association can trace their permits back to the original members of the 1930s (La Point 1989: 2)."

3. To replace property tax revenues lost due to federal land ownership, the government returns 25 percent of grassland revenues to the counties for schools and roads. *The Friday Newsletter* (No. 11. 24 March 1989) reported that in 1988, payments to counties from National Grassland and Land Utilization projects totaled $7,186,810. Payments ranged from $3,508,722 paid to North Dakota to $64.75 paid to California; 23 states received payments.

WJ McGee and Conservation as Applied Anthropology

by

Terry West, Ph.D.

History Unit
USDA Forest Service
Washington, D.C.

June 1992

INTRODUCTION

This paper recognizes the contribution of William John McGee to the conservation movement of the progressive era (1880-1920) in American political history (Hays 1959). The conservation cause emerged at the end of the 19th Century when professional societies (engineering, mining, forestry) began advocating state and Federal government management of forests, range, minerals, water, and wildlife on public lands (Steen 1991, 1992). The political success of these groups is manifested by the passage of acts such as the Forest Reserve Act of 1891, the Forest Management or Organic Act (1897) and the Reclamation Act (1902).

It was not until 1907, however, that the conservation movement evolved into a public cause with a distinctive philosophy that combined elements of scientific efficiency and social justice (McGee 1908, Pinchot 1911 and 1947, Holmes 1972: 6) (1). In that year WJ McGee reported that natural resources were interrelated and that they should be managed in integrated ways for the public good (Pinchot 1947: 331). These two ideas became the cornerstone of President Theodore Roosevelt's conservation policy, a program that met the resistance of members of Congress and the inertia of the over 20 separate bureaus that managed natural resources on public lands (Pinchot 1947: Chapter 10). To circumvent this opposition President Roosevelt created the Inland Waterways Commission in 1907 as a public forum (Ponder 1987: 32). In its 1908 report, prepared mostly by McGee, the Commission recommended a single government agency be empowered to manage multiple-purposes development of river basins by coordinating irrigation, navigation, flood control, and hydroelectric power.

The departure of Roosevelt from office in 1909 enabled Congress to abort the Commission but its recommendations laid the foundation on which the Tennessee Valley Authority (TVA) was modeled a generation later (Pinkett 1990: 10, Holmes 1972: 13, Pinchot 1947: 331). This new approach to natural resources policy-making (Miller 1973: 22) reflected the progressive Republican reform goal of modernizing government to make it more responsive to society's needs (Graves 1987: 140-141). The idea of comprehensive resource management influenced a generation of natural resources managers and the concept of multiple use is still the basis for public administration of natural resources.

Several scholars have briefly recognized the pivotal role played by McGee in the conservation movement (Cross 1953, Ross 1975, Twight 1983). Historian Curtis Hinsley (1981) gives a fuller account of the life of W J McGee but his main focus is on his stint as de facto head of the Bureau of American Ethnology from 1893 to 1903. The result is a bifurcated legacy: McGee is either seen as a forgotten minor figure in the history of anthropology (Hinsley 1981: 231) or a natural scientist who played an important role in the early stage of conservation history (Twight 1983). Even those authors who explore the evolution of his conservation philosophy (Cross 1953, Ross 1975), ignore the real key to McGee's involvement in the conservation movement in the last years of his life found in a letter he wrote describing his work organizing the Inland Waterways Commission: "...(it was) the highest application of applied anthropology thus far attempted (McGee quoted in Hays 1959: 124)."

In accounts of the history of applied anthropology--the application of applied knowledge to solve human problems--the conservation work of McGee is not mentioned (van Willigen 1986). The purpose of this essay is to correct that oversight.

BACKGROUND

William John McGee, the fourth of nine children, was born on April 17, 1853, on the family homestead near Farley, Iowa. His father James arrived in America from Ireland in 1832. His mother, Martha Ann Anderson, was from Kentucky. In a biography, *The Life of W J McGee* (1915), his only sister Emma observed: "WJ was a sickly infant who under healthy country life grew sturdy and filled with nervous energy. Although he performed his share of farm chores, his greater interest was the life of the mind."

His early education came from a little red school house he attended during winter terms. His mother kept the house filled with books and magazines and McGee took pleasure in reading. Possessing a good memory, McGee pursued his own education "preferring solitude with a book to sports or other recreation." He roamed the countryside by day examining fossils, rocks, and caverns, while at night he read on these subjects and laid the foundation for his later work in geology.

No doubt there best psychological profile of his character is from his sister Emma McGee:

> that Don (childhood nickname) was somewhat eccentric cannot be denied. This trait in his character may have been due to lack of all round culture of the schools or to physical causes. He had a somewhat morbid organization which was kept up by excitement. His seeming awkwardness and oddity in early years was probably assumed to cover over his diffidence and extreme super-sensitiveness. My brother, however, became more masterful as he grew older and went out into the world and had greater opportunities of meeting people (McGee 1915: 43-44)."

Elsewhere she describes him as "proud to a fault." A methodical man, two weeks before his death he was finishing an essay "Well and Subsoil Water" for publication.

His habit of signing his initials without periods was mentioned by Emma (McGee 1915: 38) without comment, that eccentric trait earned him the name among printers of "No Stop McGee" (Steen 1976: 75 footnote 17).

Although he was clearly not devoted to farming, WJ remained at home until age 21. At the age of 14 to 16 he was guided in his home studies by his older brother George Henry, who was attending Cornell College (Iowa). WJ studied Latin, mathematics, German, astronomy, surveying and law; later he focused on archeology and geology. Although largely self-taught, he did correspond with established scholars, especially in the area of his greatest interest, geology. (Later, in 1901, Cornell College awarded WJ an honorary doctor's degree). Between 1871 and 1881 he conducted geologic and topographic surveys of northeastern Iowa. This work led to his enrollment in the geology section of the American Association for the Advancement of Science in 1878. By virtue of his studies on glaciation in the upper Mississippi Valley, he was called to work for the United States Geological Survey (USGS) in 1883, then headed by Major John Wesley Powell. At 30 years of age, McGee under Powell headed the division of the Atlantic Coastal Plains Geology in Washington, D.C.

WJ McGee and Scientific Societies

Historian Curtis Hinsley (1981: 234) depicts McGee as an insecure man who attempted to transcend his rural background by joining scientific societies. After his arrival in Washington, D.C. in 1883, McGee was a founder of the Columbian Historical Association, and later was president of the American Anthropological Association, of the National Geographic Society, and of the American Association for the Advancement of

Science. When the Washington Academy of Sciences was founded in 1898, McGee was the only person belonging to all twelve constituent societies.

Membership in Washington scientific society was further helped by his marriage in 1888 to Anita Newcomb, whose father, America's foremost astronomer, was well connected in scientific circles. His sister Emma (McGee 1915: 61-62) wrote "WJ's wife is a woman of extraordinary brilliant intellect...she contributed not a little to his success in the various fields of labor to which he was called." WJ was never socially accepted by his in-laws and aware that his wife was more intellectual than domestic oriented he encouraged her to obtain a medical degree and study anthropology. By 1904, Anita was in Japan studying nursing conditions during the Russo-Japanese war. The marriage did not last despite two surviving children. The Cosmos Club became WJ McGee's refuge. (2)

Cosmos Club

Of all his memberships his joining of the Cosmos Club was most important to the history of the conservation movement. Founded in ____, the Cosmos Club included John Wesley Powell and other prominent men of science. Another co-founder, Spencer F. Baird, first head of the U.S. Fish Commission, in 1878 was secretary of the Smithsonian. After 1886, the Cosmos Club assembly room was used for meetings of several scientifically-oriented organizations, including the National Geographic Society, Geological Society, and Anthropological Society of Washington. At their meetings, Powell and others expressed views on natural resource topics. It was in this period that several members of the club became linked with conservation causes as leaders, including Gifford Pinchot who became a major advisor to President Theodore Roosevelt (Pinkett 1990).

Gifford Pinchot first met McGee in 1898 when Pinchot arrived in Washington, D.C. to assume his new position as head of the Division of Forestry at the Department of Agriculture. The Cosmos Club was a prime meeting place, and its members took Pinchot under their tutelage. Theodore Roosevelt, at that time a member of the U.S. Civil Service Commission, was not a member but as a frequent guest rubbed shoulders with McGee as well as two other future resource advisors Gifford Pinchot and Frederick Newell--all of whom had a hand in drafting his first address to Congress in which he advocated in 1901 the transfer of the forest reserves from the Department of the Interior to the Department of Agriculture (a prime Pinchot goal) and other conservation measures. The groundwork was being laid for the conservation crusade but its fruition was not yet ripe.

BUREAU OF AMERICAN ETHNOLOGY

As director of the USGS, Powell sought to change public land grant policy in that part of the arid West that depended on irrigation for farming. After he closed entry to homesteaders of public lands with irrigation potential, they reacted by getting Congress to undermine Powell, who resigned in 1893. Powell then went to the Bureau of American Ethnology and was followed by McGee who had to change fields after a decade (1883-1893) of labor in geology at the USGS.

Powell had lobbied Congress from 1873 to 1878 for a government-supported scientific bureau of anthropology. The Bureau of American Ethnology (BAE) was founded in 1879 to "produce results that would be of practical value in the administration of Indian affairs," according to Powell in his *First Annual Report of the Bureau of American Ethnology* (1881). Powell had challenged the policy of placing Indians on reservations in unplanned settlements that ignored traditional ethnic boundaries. The BAE's aim was to help form a policy based on scientific knowledge: Ethnographic surveys were to be conducted to guide reservation planning. However, in practice Powell dedicated himself to using survey data to develop a guiding theory of human evolution. Here he was influenced by the work of Lewis Henry Morgan, especially his *Ancient Society* (18__).

McGee was hired (in 1893) as an ethnologist at the BAE but quickly set himself up as "ethnologist in charge" as heir apparent to Powell, who was rapidly declining in health. Anxious to establish his

qualifications for the position McGee devoted his first months to studying Powell's views on human evolution, and in 1894 and 1895 made trips to the Southwest to collect artifacts and conduct ethnographic field work on the Seri of Baja Mexico. Alfred Kroeber later said McGee's work had some fine observations, but was mixed with doubtful assumptions (Kroeber 1931).

Samuel Langley, who became the third Secretary of the Smithsonian in 1887, was aware of the growing dismay of members of Congress over Powell's BAE diversion from its original mission, but Langley waited until Powell's death in 1902 to reform the Bureau. Langley had opposed McGee's employment nine year before because he considered McGee unfit by temperament or training to administer a scientific bureau (Hinsley 1981: 248). Powell won that round but after his death Langley refused to formally elevate McGee to replace Powell; instead Langley appointed William Holmes, head curator of anthropology at the National Museum, as director of the BAE. McGee opted to resign in mid-1903. Holmes played his part by shifting BAE work from theory to material collections for public display. This museum orientation effectively eliminated BAE leadership of American ethnology (which was reborn under Franz Boas at Columbia University).

CONSERVATION THEORY

McGee, along with another Powell disciple, Lester Frank B. Ward (who joined the USGS in 1881) had earlier offended Langley by publishing papers in the Smithsonian *Annual Report* (1894) that Langley called "atheistic and radical" (Cross 1953: 152). Historian Whitney Cross calls the ideas expressed in McGee's paper "The Earth the Home of Man" the ideological roots of the conservation movement (Cross 1953: 156). The ideas that upset Langley and formed the intellectual basis of the conservation movement of 1907. They were a synthesis by McGee of the thoughts of George Perkins Marsh, author of the first environmental history *Man and Nature* (1864), John Wesley Powell, and Lester Frank Ward. In essence McGee's paper noted the role of people in altering nature to benefit self. The human species used culture to manipulate nature but did not "own" the earth given the interdependence of man and nature. Powell, Ward, and McGee utilized the forum of the Smithsonian Institution to present their views in a series of Saturday lectures in 1895 (Ross 1975: 54).

In the policy arena, their view that responsible stewardship of nature was necessary in order to ensure human survival led Powell, Ward, and McGee to advocate resource management by government. "All wanted to unite science and government to manage natural resources for public welfare (Ross 1975: 58)." Because this idea of government control of natural resources for the benefit of the common man was contrary to laissez-faire assumptions of American individualism, its implementation required a political struggle in the form of the conservation crusade. McGee gradually found himself at the center of that effort because as Cross noted:

> It was McGee, and neither Powell, Ward, nor any other of their fellows, who directly and specifically transmitted the common beliefs of the trio into the twentieth century conservation movement (Cross 1953: 156).

The start of McGee's direct involvement in the movement probably began in 1901 when he accompanied Secretary of Agriculture James Wilson, Gifford Pinchot, Frederick H. Newell, and Joseph A. Holmes on a ten day trip to the Southern Appalachian Mountains to investigate sites for a proposed Appalachian national forest reserve (Pinkett 1970: 97). Pinchot was Chief of the USDA Bureau of Forestry, Newell was a hydraulic engineer who conduced irrigation surveys for the Department of the Interior and in 1902 headed the Geological Survey, while Holmes was a geology professor at the University of North Carolina appointed state geologist in 1891--the first one in the nation--and founder of the Appalachian National Park (later Reserve) Association.

McGee saw his involvement in the Inland Waterways Commission as applied anthropology because early anthropology in the U.S. was in an applied ethnology stage of the discipline (van Willgen 1986: 21). The Bureau of American Ethnology with its government sponsored policy research was the leader in the field at the time. Applied work defined the discipline of anthropology in this period. The Women's Anthropological Society of Washington funded research on housing conditions in Washington, D.C. in 1896, resulting in an organization to improve the quality of housing for the poor. And although Franz Boas was known as the founder of academic anthropology in the U.S., he did policy research for the United States Immigration Commission; which was published in 1910. The research rebutted racist claims concerning the impact of immigration of the American population. It was this model of applying knowledge to solve human problems that led McGee to designate his conservation work in those terms.

Exile and Resurrection

After his resignation from the BAE in July 1903, McGee's personal life declined; he was now jobless and plagued by cancer and separated permanently from his wife. The story this point seems to be one of minor fame overshadowed by personal lose. From the vantage point of the history of anthropology that seems to be the verdict:

> WJ McGee has been largely forgotten in American anthropology today. Yet in his ten-year career as anthropologist, from 1893 to 1903, he rose to the height of the profession in this country (Hinsley 1981: 231).

In his history of the development of American anthropology, *Savages and Scientists*, Curtis Hinsley Jr. (1981: 231) attributes McGee's fleeting fame to his lack of original contributions to ethnology. WJ McGee, de facto head of the Bureau of American Ethnology from 1893 to 1903, used his position to promote the young science of ethnology. It was for this promotional activity and not his fieldwork that McGee achieved his influence in the profession of that era. After he left the BAE scholars draw a curtain on his career in anthropology because he was no longer a player in the field. The center of activity in anthropology shifted from the Smithsonian Institution to Columbia University. It is true that he did not make original contributions, but if he is largely forgotten in anthropology today, it is because historians of anthropology have failed to define the field beyond its academic context and ignore McGee's final act of applied anthropology. In his last five years of life (1907-12) McGee made a remarkable contribution to American history by being "the brains of the conservation movement." In the words of historian Whitney R. Cross:

> All the compensatory drives from a disease-ridden body, a ruined career, and a broken marriage, heightened his lifelong devotion to the general welfare for a final decisive stroke of public service (Cross 1953: 160).

When McGee left the Bureau of American Ethnology in 1903 he took a position as chief of the anthropological section of the St. Louis Exposition. After the Exposition closed, he labored in vain to organize a municipal museum in St. Louis. There, in 1906 he attended a meeting of the Lakes-to-the-Gulf Deep Waterway Association, a newly-formed group of farm and commercial interests promoting a navigable Waterway from the Gulf to Chicago as an alternative competition to railways. However, McGee went beyond this limited goal. Instead, he developed a holistic management plan for the entire Mississippi River Valley. As outlined by Ross:

> Following his plan, engineers would construct works, designed at the same time for preserving forests, for conserving soils, for impounding potable waters, for developing waterpower, for reclaiming irrigable lands toward the western headwaters, for protecting the bottomlands bordering the main rivers and for canalizing all the large waterways to make navigation safe and economical (Ross 1975: 57).

On March 12, 1907, McGee sent President Roosevelt a petition requesting the appointment of a waterways commission to study the Mississippi River in a comprehensive way. Before McGee did this he

had traveled to Washington, D.C. in January 1907 where he had "fruitful" discussion with Pinchot about his plan for integrated management of inland waterways. It was no wonder that Pinchot later claimed his own personal revelation on the idea of conservation took place in February (Pinchot 1947: 322-323). Neither Pinchot nor McGee claimed original credit for the idea of conservation since ideas on forestry, irrigation and conservation existed in the writings of Charles Sprague Sargent, John Muir, and George B. Grinnell (Ross 1975: 58). Instead, the two men honed these notions into a pragmatic political agenda that they devised while camping in the Rocky Mountains in the summer of 1907 (Cross 1953: 161). On March 14, 1907, President Theodore Roosevelt created as Inland Waterways Commission, and WJ McGee was elected vice-chairman and secretary, posts he held until his death. The same month he was appointed as an expert in soils and water in the Bureau of Soils, a USDA position that also lasted until his death.

McGee and Pinchot

McGee's career was resurrected by his appointment to the Inland Waterways Commission. The opportunity enabled him to make two lasting contributions to the conservation movement; the first was his scientific view of a river and its watershed as an ecosystem that tied together forestry, soil, and water conservation in an ecological fabric (Ross 1975: 59). The second was his anthropological perspective that conservation was more than wise-use--it was government management of resources for the common good (McGee 1908, 1910a). In this period of business consolidation the issue of monopoly was becoming prominent in public and political debate. Gifford Pinchot later acknowledged:

> It was McGee who first pointed out to me that the wise Conservation and use of natural resources for the benefit of the people involved the whole question of monopoly (Pinchot 1947: 359).

This concern eventually led Pinchot, as head of the Forest Service, to lobby against Federal sales of hydroelectric sites and coal lands to private companies. This opposition finally resulted in Pinchot being fired in 1910 by President Taft and the derailment of the conservation movement until the advent of the Civilian Conservation Corps in the 1930s. (3)

The movement did enjoy considerable success from 1907 until 1909. In addition to the Inland Waterways Commission, McGee recommended that Roosevelt call a conference of state governors and other prominent citizens to arouse national support for a major effort for conservation of natural resources. Roosevelt agreed and the conference was held at the White House in 1908, with credit going to McGee for writing speeches for many of the speakers and drafting Roosevelt's address (Pinkett 1990: 11). The conference ended with an endorsement of a National Conservation Commission to survey the nation's natural resources. Congress, concerned that the President was assuming too many legislative powers, balked and cut off funding. Because this took place at the end of the Roosevelt administration, Pinchot and his supporters never realized their goal of a single government agency integrating natural resources management in the Federal government (Pinchot 1947: 321).

Final Words

Pinchot and McGee continued to correspond and plot political strategy during McGee's final years. Unable to attend the 3rd annual meeting of the Mississippi Valley Historical Association at Iowa City, Pinchot wrote McGee on April 25, 1910, "it occurs to me that this meeting offers an excellent opportunity for presenting Conservation, and I wondered of you might not arrange to attend?" McGee attended and spoke. In his paper, "The Conservation of Natural Resources" (McGee 1910b), he noted that in the first century of the nation there was a great waste of natural resources. By the second century farsighted thinkers such as Powell, Pinchot, and Theodore Roosevelt appeared and advocated conservation with the purpose of preserving "the equal rights of present and future generations in and to the resources of the country." He ended by calling the conservation cause a "new patriotism" against the tyranny of monopoly ownership of the "common heritage."

Later, on July 2, 1910, McGee wrote Pinchot:

> Let us not forget that for years Wall Street has been in absolute control, and will not yield dominion without a bitter fight. Can you and T.R. win (the election of 1912)? Pray consider that with him most carefully.

McGee's personal feelings emerge in these letters and in the same letter he continues: "I have not recovered from the strains of leaving Grey Towers (home of Gifford Pinchot in rural PA) and Mrs. Pinchot and the children: From Eden to Earth is a long fall, especially when the latter is so horrid as now; and the children--but words fail!"

McGee died at age 59 on 5 September 1912 in Washington, D.C. of cancer. He died at the Cosmos Club where he was staying and, although his will stipulated there be no funeral, a service was held at the home of Gifford Pinchot.

The final tribute was from Gifford Pinchot:

> McGee was always ready to put his knowledge and ideas at the service of his friends...I have never met a man whose imaginative suggestiveness in scientific work, and in the application of scientific results to human problems, could equal his. It was always the application of knowledge that appealed to him. His mind passed easily across the details of scientific problems to their bearings on matters that would count for the welfare of the people (Pinchot 1947: 359).

Although conservation is widely viewed now as a scientific practice of human intervention in nature to maintain and increase the supply of natural resources (Kennedy 1988: 246-247), this critique ignores the social justice side of conservation "prophet" McGee. He was not a deep ecologist calling for an earth first program, instead he was an anthropologist who recognized that natural resource management is really "human management" (Fiske 1990). Environmental efforts must include the human element because in the words of archeologist V. Gordon Childe "the most important element in man's environment is his fellow man (Crumley 1990). To subordinate man to nature is to deny culture. It was this belief that led McGee to call his conservation work "applied anthropology"--but whatever its title the work he did was a lasting contribution and he merits greater recognition as a leader in American conservation and applied anthropology.

END NOTES:

(1) The four main points that emerged as conceptual foundations of the conservation movement were: 1. conservation is not locking up resources, it is their development and wise-use; 2. conservation is the greatest good for the greatest number, for the longest time; 3. the Federal public lands belong to all the people; and 4. comprehensive, multiple-purpose river basin planning and development should be utilized with respect to the nation's water resources (Lester 1991).

(2) Anita Newcomb studied medicine at Columbian College (Washington) before it closed it doors to women, and following post-graduate courses at John Hopkins practiced medicine in Washington, D.C. from 1892-96. Later, she served as director of D.A.R. Hospital Corps and 1898 she became the only woman to hold the position of acting assistant surgeon of the U.S. Army. After Congress approved the organization of army nurses' corps, she resigned in 1900. By 1904 she was acting president of the Society of Spanish-American War Nurses and inspected nursing conditions in Japan during the Russo-Japanese War.

(3) The advent of World War I led to the ebbing of public interest in the conservation/progressive cause, although leaders of the movement continued to keep alive the progressive agenda. In 1915, for example, Gifford Pinchot met in Chicago with Jane Adams (founder of Hull House), Scott Nearing, and other progressives to found the Public Ownership League to promote public utilities; a goal that Weidner (1983: 71) stated "was motivated as much by social concern as by an interest in cheap electricity." Pinchot was governor of Pennsylvania at that time.

BIBLIOGRAPHY

Cross, Whitney R. 1953. "WJ McGee and the Idea of Conservation." *Historian*, Vol. 15: 148-62.

Crumley, Carole. 1990. "Understanding the Human Role in Environmental Change: Disciplinary Schismogensis and the Spectre of Environmental Determinism." Unpublished ms. (draft). Chapel Hill, NC: University of North Carolina, Department of Anthropology.

Fiske, Shirley. 1990. "Resource Management as People Management: Anthropology and Renewable Resources." *Renewable Resources Journal*, Vol. 8, #4 (Winter): 16-20.

Graves, Gregory. 1987. "Anti-Conservation and Federal Forestry in the Progressive ERA." Ph.D. dissertation, History Department. Santa Barbara, CA: University of California.

Hays, Samuel P. 1959. *Conservation and the Gospel of Efficiency: The Progressive Conservation Movement, 1890-1920*. Cambridge, MA: Harvard University Press.

Hinsley Jr., Curtis M. 1981. *Savages and Scientists: The Smithsonian Institution and the Development of American Anthropology 1846-1910*.

Homes, Beatrice H. 1972. *A History of Federal Water Resources Programs, 1800-1960*. Miscellaneous Publication No. 1233. Washington, D.C.: USDA Economic Research Service.

Kennedy, James J. 1988. "The Symbolic Infrastructure of Natural Resource Management: An Example of the U.S. Forest Service." *Society and Natural Resources*, Vol. 1: 241-251. United Kingdom: Taylor and Francis.

McGee, William J 1908. "The Cult of Conservation." *Conservation*, September. Reprinted in Emma McGee (1915: 186-193).

McGee, William J 1910b. "The Conservation of Natural Resources." *Mississippi Valley Historical Proceedings, 1909-1910*. Reprinted in Emma McGee (1915: 88-100).

McGee, William J 1910a. "The Five-Fold Functions of Government." *Popular Science Monthly*, September. Reprinted in Emma McGee (1915: 194-211).

McGee, Emma. 1915. *Life of WJ McGee*. Farley, IA: Privately printed.

Miller, Joseph. 1973. "Congress and the Origins of Conservation: Natural Resource Policies, 1865-1900." Ph.D. dissertation. Minneapolis, MN: University of Minnesota, History Department.

Pinchot, Gifford. 1911. *The Fight for Conservation*. Garden City, NJ: Doubleday, Page & Company.

Pinchot, Gifford. 1947. *Breaking New Ground*. New York, NY: Harcourt, Brace, and Company. Reprinted in 1972 by the University of Washington Press and in 1987 by Island Press.

Pinkett, Harold. 1970. *Gifford Pinchot: Private and Public Forester*. Urbana, IL: University of Illinois Press.

Pinkett, Harold. 1990. "Conservation Lists at the Cosmos Club." *Occasional Historical Study No. 2*. Washington, DC: Cosmos Club.

Ponder, Stephen. 1987. "Gifford Pinchot: Press Agent for Forestry." *Journal of Forest History*, Vol. 31, #1 (Jan): 26-35.

Ross, John R. 1975. "Man Over Nature: Origins of the Conservation Movement." *American Studies*, Vol. 16, #1 (Spring): 49-62.

Steen, Harold K. 1976. *The U.S. Forest Service: A History*. Seattle, WA: University of Washington Press. Reprinted in 1991.

Steen, Harold K. 1991. "The Beginning of the National Forest System." FS-488. Washington, DC: USDA Forest Service.

Steen, Harold K. 1992. *Origins of the National Forests: A Centennial Symposium*. Harold K. Steen (ed.). Durham, NC: Forest History Society.

Twight, Ben. 1983. *Organizational Values and Political Power: The Forest Service Versus the Olympic National Park*. University Park, PA: The Pennsylvania State University Press.

van Willigen, John. 1986. *Applied Anthropology: An Introduction*. South Hadley, MA: Bergin & Garvey Publishers, Inc.

Weidner, Bethany. 1983. "Public Power's Early Evangelists." *Public Power*, (Nov-Dec): 70-74.

WOMEN'S CLUBS AND CONSERVATION[1]

Terry L. West, Ph.D. (Deceased)
USDA Forest Service
Washington Office

The lack of franchise for women in the United States before 1920 did not exclude them from political activism–the influence of women in shaping the national agenda during the "progressive conservation era" (1890-1920) is testimony. In this era of "club house politics," public policy was often shaped by an influential few. With many members of the male elites of the period enthusiastic about commodity production, it was left to their female counterparts to concern themselves with the social and environmental consequences, from the plight of urban sweatshops to rural stream pollution. It was in the efforts of State and national federations of women's clubs where women were most effective. The linkage of women's clubs with the conservation crusade at the turn of the 20th century is illustrated in the following accounts.

Mary Eno Pinchot--mother of Gifford Pinchot--headed the 100-member Conservation Committee of the 77,000-member Daughters of the American Revolution (DAR). Some of the committee's causes included protecting Niagara Falls and watersheds in the Appalachian Mountains. It was told by a former member that a frequent reply to their letters asking State governors what they might do for conservation, was to "mind the children." This they did by promoting conservation education to school children. **Rosalie Mabel Edge (1877-1962)** of New York City was, like many of the women leaders in conservation also active in the suffrage movement. An active member of the National Audubon Society in the 1920's, and 1930's, she sponsored several reforms in game laws and started the Hawk Mountain Sanctuary of Pennsylvania. **Mrs. Lovell White** helped found the Save the Redwoods League (1918) and was active in the California Federation of Women's Clubs. The latter group led a successful effort to have a forestry school established at the University of California, Berkeley.

Gifford Pinchot of the Forest Service paid homage to the support of the Federation of Women's Clubs for forest conservation, writing that without it the creation of the Minnesota Forest Reserve "would have been impossible." He claimed that this effort of 1902 led to the first reserve by direct congressional action rather than presidential proclamation (Pinchot 1947:205).

At the American Forest Congress held in Washington, D.C., in 1905, **Lydia Phillips**--chair of the forestry committee of the General Federation of Women's Clubs with 800,000 members in 1905 and its own magazine, *Century*--in an impromptu address described the clubs' work in promoting tree planting, forest preservation, and irrigation. The partnership of women in forestry and conservation began to fade shortly after this event. The 1910 dispute over the construction of the Hetch Hetchy Dam in California split the earlier allies into two camps: The Sierra Club and preservationists versus the Forest Service and conservationists. Many women tended to feel more akin to the values of preservation of parks and wildlife and joined those movements. By 1915 over half the members of the Audubon Society were women in 1929 the National Parks Association had more female members than male. Another faultline where the genders parted was in occupational and leadership roles. This became apparent by 1913 at the Fifth National Conservation Congress. Despite the presence of women participants, only men were featured in the coverage by the magazine, *American Forestry* (now entitled *American Forests*). Such neglect of women is attributed (Ranney 1990:46) to "the arrival of conservation and forestry as technical professions. Women were excluded."

Originally printed on pages 24-26 in Terry L. West's *Centennial Mini-Histories of the Forest Service*, FS-518, Washington, DC: USDA Forest Service.

In the USDA Forest Service, the remaining role of women in conservation was in the field of public education. **D. Priscilla Edgerton**--who retired in 1938--began work at the WO in 1909 as an editor and wrote *The Forest, a Handbook for Teachers*, an agency "bestseller,"in 1930. Perhaps the most famous Forest Service educator of the time, however, was **Margaret March-Mount**. She began work in 1923 on the Bighorn National Forest and soon after on the Shoshone National Forest, where apart from her regular job, she did publicity for the Cody Club (a private society to revive the history of Buffalo Bill). The latter publicity experience and her personal desire to restore nature to health led to her work in Milwaukee at the regional office in the role of Conservational Educational Activities with Women's Clubs. Her work took her on speaking tours before garden clubs, school children, and other civic groups, all the time to promote tree planting. The success of her "penny pines" Children's Conservation Crusade to get student donations to fund the planting of pines on national forests (the Forest Service would plant 1,000 seedlings for every 4 dollars received) led to her transfer to the Washington, DC, headquarters to continue the effort nationwide. An article in the 1942 *Washington Post* credits March-Mount with motivating the national DAR to promote the planting of 5 million seedlings in 36 states and the District of Columbia. It mentions as well the goal of the General Federation of Women's Clubs of establishing a federation forest in every state. This work may be viewed as part of the war effort but the linkage of the Forest Service with Women's Clubs in conservation programs in those years was evidence of past mutual activism. In recent years, the link has faded just as the cutting edge of environmental activism has passed to other, often newer, organizations.

References:

Pinchot, Gifford. 1947. *Breaking New Ground*. New York, NY: Harcourt, Brace, Jovanich.

Ranney, Sally Ann Gumaer. 1990. "Women and the History of American Conservation." *Women in Natural Resources*, Vol. 11, #3 (March): 44-50. Moscow, ID: University of Idaho.

Crossing the Divide: Forest Service Milestones in the 1990s

Compiled by
Hutch Brown, Ph.D.
Chief's Speechwriter
and
Gerald W. Williams, Ph.D.
National Historian
USDA Forest Service
Office of Communication
Washington, D.C.

January 30, 2001

F. Dale Robertson as Chief

Soon after his appointment as chief in 1987, Dale Robertson had to face a public which was wary of anything the Forest Service had to say or proposed to do. Especially troubling was growing controversy about the harvest of old growth (ancient forest) trees in the Pacific Northwest and the protection of several species of animals and plants that fell under the protection of the Endangered Species Act of 1973. He appointed several task forces to consider all options, but when the decisions were made they did not satisfy everyone. Robertson also led efforts by the Forest Service to find new and creative ways to manage the national forests, especially by emphasizing the non-commodity (non-timber) resources, new forestry, new perspectives, and finally ecosystem management. In 1992, he spoke before Congress on the need for the agency to move into ecosystem management and reduce reliance on clear cutting techniques.

In 1990, nearly 300,000 acres of wilderness were designated in the Tongass National Forest in Alaska. The Colorado RARE II act established 611,000 acres of wilderness plus an additional 173,000 acres designated for special protection in that state. Other RARE II acts designate 38,000 acres of wilderness in Illinois and Maine.

During the spring of 1992, the "Earth Summit" or "Rio Conference" was held in Rio de Janeiro, Brazil. Most nations attend the conference with many agreements signed. The forestry component was led by the USDA Forest Service. Unexpected opposition from several developing nations who do not want the larger, more developed countries telling the developing countries how to manage their resources.

President Clinton called for and attended the Forest Conference in Portland, Oregon, in April. He gave the USDA Forest Service and the USDI Bureau of Land Management, in cooperation with the USDI Fish & Wildlife Service, 60 days to come up with a scientifically sound plan for managing the spotted owl habitat in western Washington, western Oregon, and northwestern California. Researchers from the Pacific Northwest Research Station led the massive undertaking. After a 30-day extension, the Forest Ecosystem Management Assessment Team (FEMAT) prepared an extensive report and an accompanying EIS team and had the draft environmental impact statement documents "on the street" by July.

The Eastside Columbia River Basin team began a project to assess the federal portions (mostly the Forest Service and BLM) of the interior Columbia River Basin for future management. The project assessment area covers central and eastern Washington and Oregon, Idaho, and western Montana. The Upper Columbia Basin Team joined with the Eastside Team (now called the Interior Columbia Basin Ecosystem Management Project or ICBEMP) to produce the draft documents for review by 1997. The science-based project incorporated an extensive number of researchers and specialists from the Forest Service and the Department of the Interior, as well as university experts and researchers from across the country. Congress requested that a large-scale ecosystem assessment begin in the Forest Service–the Sierra for California and Nevada. Another large-scale ecosystem assessment, the Southern Appalachian, began with the Southern Research Station leading the effort. (See discussions below.)

New Forestry, New Perspectives, and Ecosystem Management

Jerry Franklin, formerly with the Forest Service, and Chris Maser, formerly with the Bureau of Land Management, are often considered as "gurus" of the *new forestry* approach to forest management. The findings of decades of important scientific forest research have provided much needed clues to the long-term health and productivity of the coniferous forests of the northwest. Because of extensive research carried out on the H.J. Andrews Experimental Forest (part of the Willamette National Forest) Franklin and Maser were able to make some preliminary conclusions that indicated there was more to the forest than the trees. They led the Forest Service into new forestry as a search for alternative ways to manage the federal forests. Interestingly, this push for change has come from inside the agencies, rather than from external pressure from interest groups or Congress.

There were a number of significant changes from old to new forestry practices: Leaving large logs on the ground after harvest to help replenish the soil with nutrients vs. leaving the clearcut and laid bare to mineral soil; leaving dead trees standing in clumps or scattered for wildlife refuge and nest building vs. falling every snag for safety; creating wildlife snags by blasting commercially valuable green trees vs. taking every green tree; leaving large strips of trees to connect with other areas as travel ways (corridors) for animals vs. clearcutting until the entire drainage is cut over; leaving trees along creeks and rivers and in stream headwall areas to protect the water and fisheries vs. taking every tree except in critical soil areas; cool or no burning for site preparation vs. burning down to mineral soil; replanting mixed species vs. a monoculture of evergreens or hardwoods. A revolution in management practices was taking place based on research from within the agencies.

In the summer of 1990, the Forest Service embraced a new concept called *new perspectives* as a "top-down" idea which would be complementary to the new forestry "bottom-up" idea. New perspectives was a new goal for the national forests which was more philosophical and addressed the larger societal questions and values surrounding the management of the national forests. New forestry and new perspectives were replaced in 1992 with the more comprehensive term "ecosystem management." The Forest Service, Bureau of Land Management, Fish and Wildlife Service, National Park Service, and other land management and regulatory federal agencies are embracing ecosystem management as a new paradigm for management into the next century.

"Rise to the Future" and Other Fish & Wildlife Programs

For many decades, the agency thought of wildlife as big game, upland and waterfowl bird species, and various salmon, trout, and warm-water species of fish. The notion was that in order to have value, the species must bring in recreation dollars to the agency or local communities. It was only in the 1980s and especially the 1990s that these notions have changed. The Endangered Species Act of 1973 helped to speed the change with the listing of a few key species–like the bald eagle and peregrine falcon–to more controversial species such as the much debated northern spotted owl and snail darter fish, as well as the recent Canada lynx, bull trout, and several species of salmon in the Pacific Northwest.

Traditionally, the Forest Service has managed national forest habitat for wildlife and fish, leaving population management, including reintroductions, up to state and other federal agencies. Challenges for the Forest Service in wolf reintroduction include sustaining habitat (for example, through fire use to stimulate forage for prey species); helping to manage wolf encounters with humans and livestock; and helping to address deep-rooted, culturally ingrained public fears through educational programs. Once hunted nearly to extinction, the wolf has been reintroduced in several parts of the United States by the U.S. Fish and Wildlife Service. The red wolf, native in the Southeast, has been reintroduced on national forests in eastern Tennessee and North Carolina; the gray wolf, native throughout most of the North and West, has been reintroduced onto national forests in the Southwest, the northern Rockies, and the Great Lakes region. The reintroduced wolves have been nearly doubling their population annually. Wolf conservation and recovery in the Southwest took a major step forward in spring 2000 with the release of captive-bred Mexican wolves in Arizona and New Mexico.

The USDI Fish and Wildlife Service has completed the planning process for reintroducing grizzly bears into the Bitterroot Mountains of Idaho and Montana. Under the plan, the FWS will introduce a minimum of 25 bears over five years into the 5,785 square miles of the Selway-Bitterroot and Frank Church-River of No Return Wildernesses. The wilderness areas are surrounded by more than 15,000 square miles of additional public land. The recovery goal for the Bitterroots ecosystem is about 280 grizzly bears in 50 to 100 years. An estimated 50,000 grizzly bears lived in the contiguous United States prior to European settlement. Grizzlies have been eliminated from about 98 percent of their historic range in the lower 48 states. Today, about 1,000 to 1,100 bears remain in five scattered populations in Idaho, Montana, Washington and Wyoming. Only two of the populations have more than 50 bears. Reintroduction will not begin for one year, during which a 15-member Citizen Management Committee will be formed to guide the process.

Several new fish and wildlife resource programs were developed under Robertson's leadership, including the highly successful "Rise to the Future!," a program designed to enhance the production of fish on the national forests through partnerships to improve aquatic habitats and increase opportunities for the public to fish. Money spent on fishing by 1990, outnumbered dollars spent on both hunting and non-consumptive uses. Related special programs included the "Bring Back the Natives" (conservation of native fish species), "Every Species Counts" (manage, protect, and conserve plant communities and aquatic species), "Join Us" program–an initiative to strengthen public-private partnerships in wildlife and fisheries management; "Taking Wing"–a waterfowl and wetlands initiative to enhance habitat and support the North American Waterfowl Plan; and the very successful "Animal Inn" program that was designed to communicate the importance of managing dead standing and fallen trees for wildlife habitat. In addition, the Forest Service has initiated a number of significant fish and wildlife programs, including protection and improvement of the Kirtland's Warbler habitat in Michigan, bats in the southwest through installation of "bat-gates," and red-cockaded woodpecker in the southeast. Wildlife resource initiatives with the titles such as "Partners in Flight" (involving neotropical migrant birds), "Get Wild!" (cooperation to manage and improve healthy ecosystems and high-quality wildlife habitat for terrestrial and semi-aquatic wildlife, "Answer the Call" (provides food, cover, and water supplies for quail), and many others. For fish, there is the program called "Fish Watch" (an education program designed to elevate the importance of fish and clean water) that was started by Presidential executive order in 1995. Other fishing efforts include "Pathway to Fishing," "Adopt a Watershed," and "Future Fisherman's Foundation" that are all lead by key fish and wildlife organizations and Federal agencies.

In the mid-1990s, the Forest Service entered signed a collaboration with three other federal agencies regarding the importance of native plants and plant communities. The resultant program called "Celebrating Wildflowers" is designed to promote the conservation and management of native plants and plant habitats, while emphasizing the aesthetic, recreational, biological, medicinal, and economic values of wildflowers.

Northwest Forest Plan

Since the 1970s, the management of Federal forests in the Pacific Northwest has been controversial and contentious. By 1992, there were more than a dozen lawsuits and three court injunctions involving the northern spotted owl, the marbled murrelet, and timber harvest in old-growth forest. On April 2, 1993, President Clinton convened the Forest Conference in Portland, OR, to address the human and environmental needs served by the Federal forests of the Pacific Northwest and northern California. The President directed his cabinet to craft a balanced, comprehensive, and long-term policy for the management of more than 24 million acres of public land administered by the USDA Forest Service and USDI Bureau of Land Management (BLM).

In October 1993, coordination began with the signing of the memorandum of understanding to establish a regional framework for cooperative planning, decisionmaking, and implementation of a Northwest Forest Plan. About 30 percent of the area covered by the plan already had special congressional designations (such wilderness areas and wild and scenic river areas). Under the plan, the remaining 70 percent was classified into late-successional reserves (30 percent), adaptive management areas (6 percent), managed late-successional areas (1 percent), administratively withdrawn areas (6 percent), riparian reserves (11

percent), and matrix (16 percent). Each allocation had accompanying standards and guidelines that work together to form a comprehensive management strategy. The strategy included protection measures, restoration activities, and commercial timber harvest. Ongoing monitoring helped determine the plan's effectiveness in promoting habitat for northern spotted owls and marbled murrelets, protecting and restoring watersheds, and promoting a sustainable level of goods and services from Federal forests.

The resulting Northwest Forest Plan, signed in 1994, was declared sufficient by the courts to settle the then-ongoing lawsuits. The Northwest Forest Plan represented the first time that the Forest Service and the BLM, in conjunction with the USDC National Marine Fisheries Service, USDI Fish and Wildlife Service, and Environmental Protection Agency, developed a common management approach for an entire ecological region. Science contributions provided Federal land managers with crucial scientific information for environmentally sound management decisions of complex and varied ecological systems throughout the region. The comprehensive ecosystem management strategy developed under the plan served as a prototype for similar regional initiatives in other parts of the United States.

Jack Ward Thomas Appointed as Chief

In 1993, after years of controversy surrounding national forest management, the Forest Service was demoralized, with the public deeply suspicious of agency motives and initiatives. Jack Ward Thomas, a Forest Service wildlife researcher his entire career, had led successful efforts to resolve conflicts over management, especially related to spotted owls in the Pacific Northwest. After his appointment as Chief in 1993, Thomas moved quickly to implement an ecosystem-based approach to managing all national forestlands.

Interior Columbia Basin Ecosystem Management Project (ICBEMP)

After completing the Northwest Forest Plan, the Administration focused on Federal lands in the eastern portion of the Pacific Northwest. In July 1993, the Forest Service and the BLM were directed to "develop a scientifically sound and ecosystem-based strategy for management of eastside forests." In response, the two agencies initiated the Interior Columbia Basin Ecosystem Management Project (ICBEMP). Other major partners included the Fish and Wildlife Service, National Marine Fisheries Service, and Environmental Protection Agency.

The ICBEMP was designed to provide a long-term, comprehensive strategy for managing public lands on a landscape level, addressing forest and grassland health, fish and wildlife habitat, and regional social and economic issues. When completed, the management strategy will apply to 64 million acres of Federal lands in eastern Oregon and Washington, Idaho, and western Montana. A final environmental impact statement (EIS) was expected in fall 2000.

The project included completion of a framework for ecosystem management based on a scientific assessment of the interior Columbia River Basin. The assessment examined the status of ecosystems within the basin, including their historic trends, current status and trends, and projected future outcomes and conditions. The ICBEMP science team gathered a information from a multitude of sources throughout the basin, including more than 20 data bases and 180 geographic information system layers for mapping. Forty expert panels/workshops were convened and more than 130 reports were contracted from independent scientists. Scientists focused on the need to reduce the threat of wildland fire, the spread of noxious weeds, and damage to forest health from disease and insects while remaining sensitive to local communities who rely on natural resources.

Public participation began with scoping meetings to encourage public participation. Beginning in March 1994, the public was invited to periodic project update meetings. Project staff gave more than 70 special presentations. Two far-reaching video teleconference broadcasts were held to solicit public comments and provide information. The broadcasts reached more than 87 communities in 6 States, eliciting thousands of public comments.

In 1997, the ICBEMP released two draft environmental impact statements (EIS's), one for the eastside of the Cascades and the other in the Upper Columbia River Basin. The ensuing 335-day public comment period included more than 100 meetings and generated more than 83,000 comments. Project staff met with interested citizens, resource advisory councils, provincial advisory committees, special interest groups, and Forest Service and BLM employee groups. The executive steering committee participated in several tribal summits with American Indian tribes.

In October 1998, Secretary Glickman and Secretary of the Interior Bruce Babbitt directed the ICBEMP team to develop a new approach for the project and to issue a supplemental draft EIS for public comment. The supplemental draft EIS was to focus only on critical, broad-scale issues—landscape health, aquatic and terrestrial habitat, and socioeconomics within the project area. Released in May 2000, the supplemental draft EIS received about 500 public comments.

The final strategy will promote the restoration and protection of Federal lands in the interior Columbia River Basin. The strategy will involve activities such as reintroducing fire to the ecosystem, reducing the spread of noxious weeds, restoring and eliminating roads, and thinning unhealthy and diseased forests. The strategy will also outline a regionwide blueprint for the protection of environmentally sensitive areas such as old forests and streams and watersheds. The intent is to improve the health and resiliency of these public lands, improve and protect fish and wildlife habitat, and provide the public with a sustainable and predictable level of goods and services.

The ICBEMP scored several notable successes. It completed the first comprehensive, landscape-level scientific assessment of its size in the United States. It was the first major Federal resource management planning process to include, from the beginning, a multistate coalition of counties, a model for county involvement in other regions. It prepared a subbasin review guide to help users consistently apply the project's broad scientific findings and decisions to smaller areas. The project partners learned to collaborate at the regional level by developing management tools helpful to field personnel. In many ways, the ICBEMP paved the way for landscape-level, ecosystem-based resource management initiatives nationwide.

Sierra Nevada Framework for Conservation and Collaboration

In 1998, partly inspired by the FEMAT and ICBEMP models, the Forest Service initiated the "Sierra Nevada Framework for Conservation and Collaboration." The new framework was designed to integrate the latest science into a collaborative approach to national forest management. It included developing an environmental impact statement (EIS) to update forest plans for national forests in the Sierra Nevada and on the Modoc Plateau.

Even before the framework process began, the Forest Service invited the public to participate in formulating a proposed action. More public meetings followed the November 1998 release of a formal notice of intent; another round of public meetings came after the draft EIS was published in May 1999. In all, the Forest Service held over 120 public meetings and gathered comments from some 12,000 individuals. Another 38,000 signatures arrived on petitions and postcards. Special efforts were made to consult with tribes and to solicit comment from county supervisors and commissioners. Public comment heavily influenced the development of alternatives and directly contributed three specific alternatives for the draft EIS.

The draft EIS addressed five problem areas: Old forest ecosystems; aquatic, riparian, and meadow ecosystems; fire and fuels management; noxious weeds; and lower westside hardwood ecosystems. The EIS also considered access and recreation opportunities, subregional differences, and socioeconomic impacts on communities.

Special teams updated analyses in the EIS based on scientific review and public comment, working closely U.S. Fish and Wildlife Service biologists to develop conservation strategies. Recommendations for a final decision were developed with additional advice from scientists and resource specialists from State and other Federal agencies, and from forest supervisors and their staffs. Before completion of the final EIS, an

independent team of scientists was reviewed the scientific information in the EIS for consistency with current research findings and scientific methods.

The most visible and difficult task was developing an effective conservation strategy for old forests and associated wildlife species while at the same time reducing forest fuels and losses from wildland fire. Ultimately, the regional forester's decision will involve balancing risks and managing uncertainties. The final EIS and proposed record of decision were printed December 2000.

Southwest Strategy

The southwestern States of Arizona and New Mexico have unique cultures and ecosystems, partly due to the region's special climate. In the 1990s, Federal agencies in the region recognized the need for a landscape-level, ecosystem-based approach to natural resource management to help conserve the region's social and natural heritage.

In November 1997, the Secretaries of Agriculture and the Interior, together with Deputy Under Secretary of Defense (Environmental Security), directed their respective land management agencies to develop an interagency strategy for conserving the values unique to the Southwest. The "Southwest Strategy" was designed to maintain and restore the region's cultural, economic, and environmental quality of life in a manner that was collaborative, scientifically based, legally defensible, and implementable. Federal land managers were directed to manage natural resources in Arizona and New Mexico for sustainability, with sensitivity to the unique social, economic, and cultural diversity of the region. That included meaningfully engaging stakeholders in resolving issues affecting their lives.

A regional executive committee, with representatives from Federal agencies and the States and tribes, was formed to implement the "Southwest Strategy." The committee chartered issue-based work groups to develop seamless, current, and accessible information for resolving issues of concern. Work groups devised policy recommendations, coordinated with other interorganizational efforts, and explored ways to improve public service. For example, a priority for the "Scientific Information Work Group" was to list research and monitoring needs for the Southwest that were not being addressed.

Alaska Contract Cancellations

Established in 1917, the Tongass National Forest covers some 17 million acres, making it the largest unit in the National Forest System. Its borders include about 85 percent of southeastern Alaska, a region 500 miles long and 100 miles wide. After World War II, the Government vigorously promoted wood-pulping facilities in southeastern Alaska to utilize the vast wood supply and to provide stable, year-round employment. In 1951, the Forest Service awarded a 50-year contract for some 8.5 billion board feet of Tongass timber to a company operating a pulp mill in Ketchikan, AK. In 1957, the Alaska Lumber and Pulp Company, Inc. (now the Alaska Pulp Corporation) closed a similar deal for operating a pulp mill in Sitka, AK. In 1980, Congress bolstered the timber supply through the Alaska National Interest Lands Conservation Act (ANILCA), directing the Secretary of Agriculture to offer 4.5 billion board feet of Tongass timber per decade.

However, Alaskan lumber companies steadily lost market share in the Pacific Rim. From 1980 to 1987, the Forest Service prepared and offered an annual average of 467 million board feet of Tongass timber, whereas the volume sold and harvested averaged only 280 million board feet. The disparity precipitated the Tongass Timber Reform Act of 1990, repealing the ANILCA provisions. In 1994, continued losses forced Alaska Pulp Corporation to close its Sitka mill, and the Ketchikan mill followed suit in 1997. After negotiations, the Forest Service terminated the long-term timber supply contracts for both companies. Although the Forest Service continued to support a stable timber program, the agency was finally free from statutory and contractual obligations to manage the Tongass National Forest just like the rest of the National Forest System—for the long-term health of the land.

Tongass Forest Plan

By the 1990s, a new forest plan for the Tongass National Forest was long overdue. The existing plan dated from 1979 and called for an annual timber sale level of 520 million board feet to feed the two large pulp mills in Sitka and Ketchikan, AK. Moreover, it contained only minimal protections for wildlife habitat.

In 1991, a committee of scientists commissioned by the forest planning team warned that unless the pace of logging was slowed, at least nine wildlife species, including the brown bear, the Queen Charlotte goshawk, and the Alexander Archipelago wolf, could disappear from the Tongass National Forest. The scientists recommended establishing large old-growth reserves to maintain habitat blocks for wildlife.

The forest plan drafted in 1993 did not adequately reflect the scientific findings and was shelved. In May 1994, Chief Thomas directed the regional forester to obtain a scientifically credible, legally defensible land management plan for the forest. A team of scientists from the Pacific Northwest Research Station assembled the best information available on the key issues addressed in the new plan—wildlife viability, fish habitat, caves and karst (sensitive to logging), alternatives to clearcutting, and social and economic issues.

The closing of the mills in Sitka and Ketchikan facilitated the forest planning process by freeing the Forest Service from its contractual obligations for high levels of timber harvest. In 1997, after repeated revisions to strengthen its scientific foundations, the Tongass National Forest Land and Resource Management Plan was signed. However, to address 33 challenges filed against the plan by special interests, the Forest Service made further modifications, primarily to reduce the annual allowable timber sale quantity and to add more protections for old growth. In 1999, Under Secretary Jim Lyons signed a record of decision finalizing the modified plan.

In the final plan, the annual allowable sale quantity of 187 million board feet provided a sound commercial basis for Alaska's timber-dependent communities. In 42 separate wildlife areas scattered throughout the forest, the plan established timber harvest rotations of 200 years, with 234,000 acres of old growth permanently shielded from harvest. The plan ensured the long-term health of the land by protecting old growth, headwater areas, stream and beach buffers, caves and karst, and habitat for species viability. Perhaps most importantly, the planning process could serve as a national model for integrating science into natural resource management planning.

1995 Salvage Rider

In 1994, more than 1.4 million acres burned on our national forests. The fires left large areas of dead and dying timber, raising the risk of insect infestation and future large fires. On July 27, 1995, the Rescission Act was signed into law. It contained provisions for an emergency salvage timber sale program. The program was designed to reduce the risk to forest health by salvaging timber from burned areas.

A provision in the Rescission Act gave it primacy over other laws, specifically Federal laws for environmental protection. The President and the heads of the agencies affected by the Rescission Act strongly believed that they should follow the environmental laws circumvented by the Act, even though there was no legal requirement to do so. They were confident that salvage could be accomplished while still meeting environmental standards. Accordingly, the President directed the affected agencies to implement the Act's salvage provision, in accordance with the Northwest Forest Plan, other existing policies and plans, and existing environmental laws, except for actions expressly prohibited by the Rescission Act.

The various agency heads signed an interagency memorandum of agreement. The memorandum reaffirmed the agencies' commitment to comply with existing environmental laws while conducting the salvage-related activities authorized by the Rescission Act. In fulfilling their commitment, the signatories agreed to build upon ongoing efforts to streamline procedures for environmental analysis and interagency consultation and cooperation. Interagency collaboration received a vital boost.

The Rescission Act provoked a divisive national controversy. Environmental groups branded the Act as an attempt to allow "logging without laws." The Act contained provisions prohibiting appeals by the public and providing for "Option 9" and "318" sales, which pertained to old-growth sales delayed by lawsuits and by new listings of threatened and endangered species. Many suspected that the real purpose of the Rescission Act was to cut old-growth timber.

Salvage sales in roadless areas also became a contentious issue. Secretary Glickman directed the Forest Service to allow salvage sales in roadless areas only where the risk of fire was high in the vicinity of homes and communities or where trees were susceptible to insect attack within 3 years. Harvest of green trees during timber salvage raised further concerns. The Forest Service directed managers to subordinate the harvest of green trees to the salvage of dead and dying trees, limiting green-tree harvest during timber salvage to areas where it was necessary for safety and stand improvement.

In testimony before the Senate Committee on Energy and Natural Resources on August 1, 1996, Secretary Glickman went straight to the heart of the matter. Excluding the public, he said, from its right to consultation on public policies for managing public lands "has created an atmosphere of misinformation and even mistrust between the Government and the people." Noting that litigation had risen to unprecedented levels, the Secretary invoked the words of Gifford Pinchot, first Chief of the Forest Service, who argued that the American people must know all about their national forests and take an active part in their management. "After guiding Forest Service policy and implementing this emergency program," added the Secretary, "I wholeheartedly agree."

The timber target level under the Rescission Act was to offer 4.5 billion board feet of salvage timber, plus or minus 25 percent. The Forest Service achieved that goal while observing the letter and spirit of environmental laws designed to protect our Nation's natural resources for the benefit of future generations.

Mike Dombeck Appointed as Chief

In the 1995 salvage rider debate, the Forest Service responded effectively to an agenda set by Congress. But the debate showed that the agency needed to set its own agenda for natural resource conservation. In January of 1997, Secretary Glickman called on Mike Dombeck, then-Acting Director of the BLM, to serve as Forest Service Chief. Dombeck created a long-term vision for improving the health of the land through a natural resource agenda focusing on healthy watersheds; sustainable forest ecosystems; dispersed recreation opportunities for all Americans; and a sound system of forest roads, including special protections for roadless areas. Dombeck worked to implement the Forest Service's Natural Resource Agenda through collaborative stewardship, helping to restore confidence in the Forest Service as a conservation leader.

Natural Resource Agenda

Not long after his appointment, Chief Dombeck received a letter from Congress threatening to fund the Forest Service at a diminished, "custodial" level because the agency was allegedly not producing commodities commensurate with its level of funding at the time. The letter reflected widespread concern in Congress, the public, and even the agency itself that the Forest Service had lost sight of its mission.

The Forest Service faced a crisis of confidence. "We have two very basic choices," said Chief Dombeck. "We can sit back on our heels and react to the newest litigation, the latest court order, or the most recent legislative proposal. This would ensure that we continue to be buffeted by social, political, and budgetary changes. Or we can lead by example. We can lead by using the best available scientific information based on principles of ecosystem management to advance a new agenda. An agenda with a most basic and essential focus—caring for the land and serving people."

Formulated in 1997, the Forest Service's Natural Resource Agenda was designed to regain the initiative for the agency in the debate over public land and resource management. At its core were four focal areas, each chosen as a basis for consensus among the contending parties.

The first focal area was watershed health. The National Forest System was founded in part "for the purpose of securing favorable conditions of water flows" (Organic Act of 1897). By 2000, watersheds in the national forests and grasslands supplied about 60 million Americans with their drinking water. Moreover, Forest Service research had shown that healthy watersheds were the foundation for sustainable forest and grassland ecosystems, which in turn supported prosperous rural communities. A second focal area therefore became managing natural resources for sustainability, seen as the key to conserving and restoring the health of the land.

Long before the 1990s, recreation had become the dominant use of the national forests and grasslands, eclipsing commercial resource extraction. A third focal area in the Natural Resource Agenda became recreation—furnishing all Americans with a variety of dispersed recreation opportunities while protecting the wildland values that drew visitors and supported a bustling tourism trade. The agency's experience had shown that sustainable forest management and recreation both depended on a sound system of forest roads. But the forest road system was in growing disrepair, vastly underfunded for proper maintenance and reconstruction. The fourth focal area became sound roads management, including protections for remaining roadless areas.

The Natural Resource Agenda became the basis for a series of Forest Service initiatives, some involving partnerships across ownership boundaries, others entailing the most extensive public consultations in Forest Service history. Initiatives included large-scale watershed restoration projects and new rules for roads management and roadless area conservation.

By 2000, there were signs of growing public confidence in the agency. Favorable reports again outweighed negative stories in the media. Contentious debates had all but ceased in Congress over levels of timber harvest and appropriations for forest roads. For FY2001, in a striking vote of confidence, Congress raised the Forest Service's annual budget from $2.9 billion to $4.4 billion, a 47-percent increase and the largest in agency history.

National Forest Management Act Planning Rule

The Forest Service is required, under the Forest and Rangeland Renewable Resources Planning Act of 1974 (RPS) as amended by the National Forest Management Act of 1976 (NFMA), to establish and maintain sound regulations for national forest management planning. The existing NFMA planning rule was adopted in 1979 and amended in 1983. By the 1990s, the public was demanding more involvement in policy planning, and new ecological insights were revolutionizing natural resource management through ecosystem-based approaches. A planning rule revision was overdue.

For more than 10 years, the Forest Service worked on revising the NFMA rules. Secretary of Agriculture Dan Glickman facilitated the process by appointing the Committee of Scientists, a group of eminent specialists commissioned to review and evaluate the Forest Service's planning procedures. The committee published its report and recommendations in March 1999. Based on these, the Forest Service released the proposed rules in October 1999. To discuss the proposed rules, the agency held 23 national public workshops; more than 10,000 public comments were received. The agency analyzed the comments and used them in preparing the final NFMA rules, released in November 2000.

The final rules affirmed ecological, social, and economic sustainability as the overall goal for managing the National Forest System. Maintaining and restoring ecological sustainability became was confirmed the highest priority. In the spirit of Gifford Pinchot, first Chief of the Forest Service, the rule also facilitated greater public collaboration in all phases of the planning process. "National Forests are made for and owned by the people," wrote Pinchot in *Uses of the National Forests* (1907)–the public version of the Forest Service's *Use Book* of laws and administrative procedures. "They should also be managed by the people." Under the new rule, national forest management was to be based on cooperatively developed landscape-level goals. The postdecisional appeal process was replaced with a predecisional objection process to increase public input into the decisionmaking.

The final NFMA rules placed greater emphasis on the use of science in planning, partly by promoting the use of regional ecosystem assessments in planning and decisionmaking. The rules also emphasized monitoring and evaluation of resource conditions and trends over time so that management can adapt to changing conditions. Under the new rules, science advisory boards were to be established to update planners on the latest scientific information and analysis. The rules affirmed the Forest Service's commitment to the viability of all species in the National Forest System. Finally, the rules established a framework for identifying and responding to emerging problems.

Through its commitment to planning on a landscape level, the new NFMA planning rules represented a fundamental change in philosophy. It broke with past bureaucratic models to help the Forest Service public land managers work more closely with the American people to sustain the health, biological diversity, and productivity of the Nation's lands and waters. Completion of the new rules was a major milestone for the Forest Service.

Sustainable Resource Management

Since the Earth Summit in Rio de Janeiro in 1992, the Forest Service has been a leader in the international movement for sustainable development. Immediately following the summit, the Forest Service adopted an ecosystem-based approach to managing the national forests and grasslands. In November 1993, a presidential decision directive stated a national commitment to "achieving sustainable management of U.S. forests." In the 1990s, the Forest Service's ecosystem-based approach to managing the land matured into the notion of sustainable resource management.

From 1993 to 1995, the Forest Service participated in the "Montreal Process," an international initiative to develop criteria and indicators of sustainable forest management for temperate and boreal forests. This work led to the Santiago Declaration by the United States and 11 other countries, in which the signatories endorsed the criteria and indicators as a tool for monitoring and guiding progress toward sustainable forest management.

The Forest Service took steps to incorporate the criteria and indicators into agency work. Since its inception in 1999, the Forest Service was a leading participant in the "Roundtable on Sustainable Forests," which included representatives from the forest products industry; nongovernmental organizations; and Federal, State, and local governments. Participants agreed that the Montreal criteria and indicators provided a sound common basis for evaluating the sustainability of U.S. forests, both private and public.

Sustainable resource management was part of the Forest Service's commitment to landscape-level management across ecosystems and ownerships, in accordance with sound science. The Committee of Scientists appointed by the Secretary of Agriculture identified sustainability as the fundamental principle for managing the National Forest System. The new NFMA planning rules established in 2000 recognized the fundamental role of sustainability. The 2000 revision of the agency's strategic plan incorporated sustainability into the mission of the Forest Service, using the criteria and indicators to formulate strategic accomplishments and a basis for resource assessments.

Recreation Agenda

After World War II, the number of recreational visits to the national forestlands soared. From just 18 million visitor-days in 1946, it climbed to almost 1 billion in 1999—nearly 50 times more. By the 1990s, recreation dwarfed all other uses of the national forests and grasslands, contributing billions of dollars to the gross national product.

In 1997, the Forest Service acknowledged the central role of recreation by making it a major focal area in the new Natural Resource Agenda. A growing number of visitors placed potential strains on the land; three-quarters of the Nation's outdoor recreation occurred within half a mile of a stream or water body. The Forest Service faced daunting challenges in meeting visitor expectations for enjoyable access to recreational

activities while conserving the high quality of the wildland experience—the very thing visitors came for. The agency's first priority remained conserving and restoring watershed health.

To meet the challenge, the Forest Service crafted a Recreation Agenda to protect and maintain the essential wildland character of the national forests and grasslands. Like the Natural Resource Agenda, the Recreation Agenda abandoned old ways of doing business in favor of new approaches. Good social science became the basis for recreation management decisions. The agency adopted a customer-driven approach, relying on sound marketing to deliver the right services in the right way. That included collaborating with the private sector to enhance revenues while improving customer service. By managing business relationships strategically, the Forest Service sought to become a better business partner.

The agenda included a new commitment to reaching youth and underserved populations, thereby building future constituencies and extending the benefits of outdoor recreation to all Americans. Another focal area was to increasing the quantity and quality of conservation education and interpretive programming, thereby expanding the agency's support base while reducing the adverse effects of recreation on ecosystems. By managing and using information more effectively, the Forest Service would improve accountability, efficiency, and responsiveness. Finally, the agenda included national design standards for facilities to create a strong sense of place.

The Recreation Agenda was designed to guide Forest Service recreation programs into the 21st century, helping the Forest Service live within the limits of the land while increasing visitor satisfaction. Partnership was key; projects would be prioritized based on feedback from partners and local communities, in accordance with sound science. It is expected that by focusing on core competency—offering outstanding natural settings for dispersed recreation—the Recreation Agenda would improve customer service, expand conservation education and interpretation, and build community relationships and partnerships.

Wilderness Agenda

America's love affair with its wilderness has always been troubled. By the 1990s, only 5 percent of the original American wilderness remained protected in designated wilderness areas. Much of the remaining American wilderness was rock and ice, located in high-elevation areas with little or no commercial potential. Challenges to wilderness had grown to include wildland fire management as well as water and air quality; new technologies, such as a proliferation of motorized vehicles; an increasingly urban society often out of touch with the wilderness idea; a growing tendency to use wilderness for temporary release from urban pressures, without regard for its special values; and habitat loss through encroachment by invasive nonnative species.

Wilderness values are unique. Wilderness provides the cleanest water and air; critical habitat for many native plants and animals, often their last, best hope for refuge; quiet venues of unmatched scenic splendor for solitary enjoyment; and economic benefits to communities through tourism and recreation. Responsible wildland stewardship is predicated on conserving the remaining wilderness for the benefit of future generations.

In 1994, the Forest Service rededicated itself to effective wilderness management. The agency's "Wilderness Agenda" was designed to address problems facing wilderness management, guiding the wilderness program into the 21st century. The agenda committed the Forest Service to outreach, education, and training to increase public support for wilderness, including designation of new wilderness areas in under represented ecosystems, such as old-growth and bottomland forest. To help the agency better understand the threats to wilderness, the agenda called for a comprehensive program of wilderness inventory and monitoring and a common wilderness information delivery system shared across agencies. The value of wilderness as a baseline for scientific research would be enhanced by incorporating wilderness areas into national forest inventorying and monitoring processes.

Theodore Roosevelt once stood on the rim of the Grand Canyon and said, "Leave it as it is. The ages have been at work on it and man can only mar it." The same can be said about every remaining acre of American wilderness. The "Wilderness Agenda" was designed to address the challenges to America's remaining wilderness by working in the spirit of Theodore Roosevelt to help inspire in all Americans an awe and reverence, a love for the land—feelings that alone can ensure the conservation of our wilderness heritage.

Recreation Fee Demonstration Program

All receipts on Federal lands were traditionally returned to general Government funds and could not be invested in the projects, facilities, and services that generated them. By the 1990s, many underfunded Federal facilities were deteriorating. The Forest Service joined other Federal agencies in working with Congress to address the problem. In FY1996, Congress authorized a test: Fees collected from recreational users at a number of sites would be retained by Federal agencies for investment at those sites. The Recreational Fee Demonstration Program was born.

From October 1, 1995, to September 30, 2001, the Forest Service retained all project revenues and at least 80 percent of the revenues at 100 specially chosen recreation sites in 38 states and Puerto Rico. In FY99, the Forest Service collected $26.5 million. The fees were used to maintain thousands of miles of trails, retrofit hundreds of facilities and sites for accessibility, refurbish hundreds of campsites, upgrade signs and information for visitors, expand office hours for improved visitor services, and more. The Forest Service reinvested at least 90 percent of revenues at the project or site where it was collected. The remainder was distributed to fee projects within the region, at the discretion of the regional forester.

The Forest Service began by testing many kinds of fees to see what the public might best accept. Based on public comments, changes were made to projects. Free days or areas were instated to accommodate low-income visitors; volunteers were rewarded with free passes; and annual pass systems were designed to reduce per-visit costs. The Forest Service worked to ensure that the program did no damage to relationships with concessionaires and permittees, and that the program was fairly administered to all user groups.

Olympics on the National Forests

The Cherokee National Forest served as a venue for the 1996 Olympic Games in Atlanta, GA. The Forest Service collaborated with the Tennessee Valley Authority, the State of Tennessee, and local communities to promote economic development in the Ocoee River watershed, including promotion for the world's greatest white water facility. The result was an unparalleled accomplishment: The first Olympic Games white water slalom event ever on a natural river.

After the 1996 success, the national forests were again invited to serve as an Olympic venue, this time for the 2002 Olympic Winter Games in Utah. The Forest Service began planning responsible development of the Snowbasin Ski Area on the Wasatch-Cache National Forest. The agency regards the Olympic games as a unique opportunity to showcase recreation on national forestlands while linking healthy ecosystems to quality of life.

The Forest Service's main goal was to help ensure that Olympic-related activities on the national forests were safe and environmentally sound. That included consultation on facilities development, avalanche forecasting, and educating the public about avalanche dangers. Other goals included working with local communities to help visitors to the games feel safe and welcome. In addition, the Forest Service has worked to leave a legacy for future generations by upgrading and restoring out-of-date recreation areas and by helping to plant groves of Olympic trees at 1,600 schools and communities throughout Utah, with more than 7,000 trees to be planted over 4 years.

National Recreation Reservation Service

More than a decade ago, growing recreational use of the national forests and grasslands rendered a reservation service for campsites necessary. In the 1980s, the Forest Service opened a campsite reservation service. In a 1996 survey, the overwhelming majority of campground respondents welcomed the idea of a reservation service.

The National Recreation Reservation Service (NRRS) emerged from a 1995 memorandum of understanding among major Federal providers of outdoor recreation opportunities. Launched in 1999, the NRRS included nationwide recreation facilities managed by the Forest Service and the U.S. Army Corps of Engineers, which maintains campgrounds on Federal reservoirs across the country. The system was set up for other providers of recreation services to join, if they chose.

The NRRS was designed to provide seamless, one-stop-shopping for Federal recreation opportunities while achieving management efficiencies for the participating agencies. Through the NRRS, customers benefitted from enhanced recreation information and reservation services through multiple sales channels for more than 50,000 recreation sites and facilities.

Federal Lakes Recreation Demonstration Program

The "Federal Lakes Recreation Demonstration Program" was founded as a laboratory for the National Partnership for Reinventing Government. The Forest Service Chief is a member of the "Federal Lakes Recreation Leadership Council," an eight-agency group formed in October 1999 to implement recommendations by the President's "National Recreation Lakes Study Commission." The "Federal Lakes Recreation Demonstration Program" was designed to showcase improvements to recreation opportunities on Federal lakes. The purpose is to better serve the public, protect natural resources, and create a healthier social and economic environment.

Projects chosen for the program had a high level of community and interagency support, but faced regulatory challenges to their lake management plans. Demonstration projects were designed to show how the regulatory or contracting authority could be improved or how partnership funding could be obtained. Six nominated projects were accepted and added to the pilot list of 30 lakes.

National Heritage Strategy

Heritage connects people to the land. For thousands of years, the forests and grasslands have been home to communities who depended upon their mountains, rivers, and canyons for food, shelter, and spiritual well-being. The same applies today. The Forest Service's "National Heritage Strategy" was designed to deepen the agency's understanding of the lands that it manages and the communities that are served and to ensure that future generations will have an opportunity to discover the human story etched into their public landscapes. Awaiting discovery in the hollows, mountains, and valleys of our national forests and grasslands are the remnants of past cultures, of a centuries-old relationship between people and the land. Heritage resources hold clues to past ecosystems, add richness and depth to the national forest landscapes, provide links to living traditions, and help transform a beautiful walk in the woods into an unforgettable encounter with history.

The "National Heritage Strategy" was designed to help the Forest Service ensure that future generations will have an opportunity to discover the human story etched into their public landscapes. It has helped the agency make the past come alive as a vibrant part of people's recreational experiences and community life. The strategy helped move the Forest Service's heritage program more firmly into the arena of public outreach, seeking to define the program in terms of stewardship, public service, and a context for natural resource management.

Through the "National Heritage Strategy," the Forest Service gained a framework for enhancing the cultural value of our public lands. For example, the strategy focused efforts on prioritizing and protecting our most important heritage sites; developing more effective ways to inventory, evaluate, and protect heritage resources; expanding partnerships with researchers and scholars; and building stronger relationships with tribes based on mutual heritage goals.

New Century of Service

New Century of Service is a new 5-year effort focusing on public service as the Forest Service approaches its 100-year anniversary in 2005. In the spring of 1905, the Forest Reserves (now National Forests) were transferred from Department of the Interior management to USDA management, then on July 1st, with the start of the new fiscal years, the USDA Bureau of Forestry was renamed as the Forest Service. New Century of Service commemorates the Forest Service's rich history in land stewardship, successes, and lessons learned; and looks forward to the next century, sharing and acknowledging excellence in the work, programs, and ideas of the agency. New Century of Service, that is lead by a team of champions from all units of the agency, culminates in 2005. Many ways to celebrate the events are under consideration.

Road Management Rule and Policy

The National Forest transportation system mushroomed in the postwar period to meet the rising demand for timber harvest from the national forests. The system grew to some 380,000 miles of forest roads—enough to circle the earth about 15 times; only about a fifth of those roads were suitable for passenger cars. In the 1990s, with the Forest Service's shift in emphasis to sustainable forest management, timber harvest declined to a fraction of its former level. The agency was left with a road system that was designed primarily for a vastly diminished use.

As a result, the Forest Service was no longer able to afford its vast road system. Congressional funding for forest roads declined from $600 million in 1980 to less than $200 million in 2000. The agency received only about 20 percent of the funding needed to maintain existing roads, and its funding backlog for roads reached $8.4 billion—more than twice its entire FY2000 budget. Deteriorating forest roads were causing landslides, soil erosion, and stream siltation, destroying habitat for sensitive species and reducing safe public access.

In 1997, the "Natural Resource Agenda" made a sound system of forest roads a top Forest Service priority. The agency began the process of revising its road management rule and policy. The intent was to ensure that new and existing roads were essential for resource management and use; that construction, reconstruction, and maintenance of roads minimized adverse environmental impacts; and that unneeded roads were decommissioned and natural processes restored.

In February 1999, the Forest Service announced an interim rule that temporarily suspended road construction and reconstruction in certain unroaded areas on national forests and grasslands. The interim rule gave the agency 18 months to draft a new road policy and develop new analytical tools. On March 2, 2000, the Forest Service outlined a proposed road management policy. The policy would rely on scientific analysis and public involvement at the local level. It is designed to help the Forest Service determine how best to manage the more than 380,000 miles of roads in the national forest roads system. The 77-day comment period generated 5,900 public responses used in preparing the final rule and policy. The final rule, released in January 2001, requires a science-based analysis of the forest road system as a basis for all future decisionmaking.

The new policy was designed to help the Forest Service prioritize its road maintenance and reconstruction work so the national forest road system will be more affordable to manage in the future. With the new policy, all roads are to meet standards designed to ensure their efficient management within the capabilities of the land. Standards included compliance with resource objectives and sustainability at likely funding levels. All adverse environmental effects associated with road construction, reconstruction, and maintenance were to be minimized. Unneeded roads were to be identified for decommissioning, starting with those that posed

the greatest risk to public safety or environmental health. Public involvement in forest road management will be ensured through coordination with State, county, local, tribal, and other Federal authorities. Additionally, the final rule includes interim prescriptions for new road construction in sensitive unroaded and roadless areas until a comprehensive forest-scale, science-based analysis of the road system is incorporated into forest plans.

Roadless Area Conservation Rulemaking

The 1995 salvage rider controversy highlighted a lingering problem: the lack of special protections for roadless areas on national forestlands. Following passage of the 1964 Wilderness Act, the Forest Service began inventorying roadless areas for possible designation by Congress as wilderness. Many of these areas were chosen for the National Wilderness System. By 1998, remaining inventoried roadless areas covered some 58.5 million acres, or about 31 percent of the National Forest System.

Many inventoried roadless areas do not meet the strict criteria for wilderness designation, even though they share many wilderness characteristics. Roadless areas provide values unique to a tiny and dwindling portion of the increasingly developed American landscape. They are a biological refuge for native plant and animal species and a bulwark against the spread of nonnative invasive species. As a baseline for natural habitats and ecosystems, roadless areas offer rare opportunities for study, research, and education. In addition, they provide unique opportunities for dispersed recreation, sources of clean drinking water, and large undisturbed landscapes that offer privacy and seclusion.

In late 1998, recognizing the unique value of roadless areas, the Forest Service began to formalize a vision for their long-term protection. On October 13, 1999, the President formally announced his support during a speech at Reddish Knob in Virginia's George Washington National Forest. He directed the Forest Service to undertake an open and public process to "provide appropriate long-term protection for most or all of these currently inventoried 'roadless' areas, and to determine whether such protection is warranted for any smaller 'roadless' areas not yet inventoried."

The Forest Service issued a project plan to complete rulemaking for roadless area protection within 14 months. On October 19, 1999, in a formal notice of intent published in the *Federal Register*, the Forest Service proposed to immediately restrict certain activities in roadless areas, such as road construction. In addition, the agency proposed to develop procedures to guide roadless area management, but to treat Alaska's Tongass National Forest separately because of its unique social and economic conditions.

The initial rulemaking process included 187 public meetings attended by about 16,000 people and an interactive Website that scored more than 11 million hits in its first 6 months. In all, the Forest Service's notice of intent elicited more than 517,000 responses, an unprecedented number for any Federal rule making. A special team analyzed the comments, and the Forest Service used the analysis to help formulate alternatives for roadless area conservation to propose for public discussion.

In formulating the alternatives, the Forest Service analyzed the environmental, social, and economic impacts of each, conducting in-depth scientific research and using innovative analysis techniques. For example, the agency developed the most complete and accurate maps of roadless, wilderness, and other national forest areas to date. In addition, the agency compiled the first complete national data base of threatened and endangered species on national forestlands and the first analysis on the effects of fire in inventoried roadless areas. To improve the environmental analysis, the Forest Service consulted with representatives from 17 other agencies.

The Forest Service released its *Draft Roadless Area Conservation Environmental Impact Statement* on May 9, 2000, and held a public comment period of the draft that closed on July 17, 2000. The proposed rule included a prohibition on road construction and reconstruction in all roadless areas except in the Tongass

National Forest, where a decision would be deferred until the next forest plan review and made by local forest officials.

Following release of the proposed rule, the Forest Service held 445 public meetings attended by more than 23,000 people. About 7,000 chose to make oral comments at sessions specifically designed for that purpose. The proposed rule generated more than 1.6 million public responses. Again, a special team analyzed the responses and the Forest Service used them to modify the alternatives, strengthen the analysis, and select a preferred alternative. The final EIS was released in November with the publication of the final rule in mid-December. One change between draft and final was the inclusion of the Tongass National Forest in the analysis and a ban on new road construction.

Giant Sequoia National Monument

Since their discovery by Euro-Americans in the 1850s, giant sequoias have been a classic symbol of California. Giant sequoias are the largest living things on earth, with a very long lifespan and a limited geographic range. The groves have long been recognized for their aesthetic, scientific, and commercial value. Logging of giant sequoias mostly ended by 1926 due to economic constraints, but their recreational and scientific value has remained strong.

California's Sequoia National Forest has 38 of the remaining 75 giant sequoia groves. Management of giant sequoias has included prescribed burning and logging to remove competing vegetation from suppressing sequoia regeneration. Early attempts at burning met with limited success. Logging created tremendous controversy and debate about the best way to preserve the groves for future generations. Debate has continued over whether prescribed fire, logging, or other management strategies would best preserve, protect, and restore the groves.

On February 14, 2000, the Forest Service was given the task of consulting with appropriate Federal, State, local, and tribal officials and agencies about giving the giant sequoia groves on the Sequoia National Forest special protections by creating a national monument. Two public meetings in Visalia and Fresno, CA, on the proposed monument. Additionally, the Forest Service solicited written comments from the public.

On April 15, 2000, President Clinton proclaimed the Giant Sequoia National Monument on 327,769 acres of national forest land. Most recreational activities, including hunting, were unaffected, as were existing rights-of-way, fuelwood collection for personal use, and already authorized grazing, mining, and other special uses. Prescribed fire, cultural treatments, and improvements for wildlife, fisheries, and watersheds were to be permitted, but trees were to be removed from the monument only for ecological restoration or public health and safety. However, timber sales already under contract or with a decision document could proceed.

Land Transfers and Acquisitions

Despite the lawsuits and numerous congressional hearings, the Forest Service was able incorporate through gifts and purchase several significant bodies of land, including the Land-Between-the Lakes and the Baca Ranch. The Baca Ranch addition added to the NFS a huge base of fundamentally intact ecosystem on the mountains of northern Arizona. The Land-Between-the-Lakes came about through a transfer of land from the Tennessee Valley Authority (TVA) to the Forest Service. These two large areas were significant in that the people and other agencies think highly of and have confidence in the Forest Service to administer these unique lands for the future.

Rocky Mountain Front Mineral Withdrawal

In 1805, when Meriwether Lewis and William Clark made their historic journey of discovery, they found vast western plains teeming with bison and elk, with wolves and grizzlies roaming the edges of huge ungulate herds. Some semblance of that pristine western landscape survives at the foot of the Rocky Mountains in

Montana, an area known as the Rocky Mountain Front. Much of it is protected by the Helena National Forest and the Lewis and Clark National Forest.

Mining laws dating to 1872 allowed anyone to enter a national forest or grassland and stake a 20-acre claim. The prospector was entitled to use the land's surface resources to develop the claim, with limitations imposed in 1955 to prevent the worst abuses. A discovery of hardrock minerals could justify a patent on the claim for full mineral rights.

Since 1909, the Government had acted to constrain free access to minerals on public lands if it conflicted with the public interest. In 1998, to protect the Rocky Mountain Front, the Government prohibited leasing in the area for oil and gas. During completion of the analysis for prohibition, 104 mining claims were staked in the area, eliciting a Forest Service decision to request a formal withdrawal from mining for hard rock minerals. The Transfer Act of 1905 had left such withdrawals up to the Secretary of the Interior. Withdrawals of more than 5,000 acres were subject to congressional review.

In February 1999, Chief Dombeck petitioned the Secretary of the Interior to segregate 405,000 acres of the Rocky Mountain Front from mineral entry while a formal mineral withdrawal report was prepared. Working with BLM, the Forest Service completed the report, together with an environmental impact statement. In September 1999, after public hearings generated a mostly favorable response, Chief Dombeck asked the Secretary of the Interior to withdraw the Rocky Mountain Front from hardrock mining for 20 years, with the option of subsequent 20-year withdrawals. Amended forest plans for the affected national forests reflected the withdrawal decision.

The withdrawal was needed to preserve the area for traditional and cultural activities by American Indians, to protect threatened and endangered species, and to conserve outstanding scenic values and roadless areas. The Front was home to nationally important wildlife populations, including the only remaining population of prairie-ranging grizzlies in the United States. Preservation of the area was intended to keep the ecosystem intact across the Bob Marshall Wilderness Complex and Glacier National Park, in accordance with the Forest Service's commitment to landscape-level, ecosystem-based natural resource management.

Large-Scale Watershed Restoration Projects

In the 1990s, the Forest Service increasingly embraced a fundamental truth formulated by Aldo Leopold, a one-time Forest Service employee who founded the science of wildlife management and pioneered the field of ecology in the 1930s. "Instead of learning more and more about less and less," Leopold noted, "we must learn more and more about the whole biotic landscape." Leopold understood that land health is impossible without a comprehensive, landscape-level approach to managing the land.

Beginning in 1997, the Forest Service emphasized a watershed approach to landscape-level land management. "Given the fundamental importance of water to all life," said Chief Dombeck, "healthy watersheds are the basic measure of our mission at the Forest Service to care for the land and serve people." In 1999, the Forest Service broke new ground by launching a series of collaborative large-scale watershed restoration projects. Around the country, 15 large watersheds, providing water for millions of people and habitat for numerous sensitive and threatened species, were chosen to become national prototypes for a more visionary management of ailing watersheds and ecosystems.

The Forest Service's large-scale watershed restoration projects covered parts of 23 States. In FY2000, the Forest Service invested $24 million in 12 watershed restoration projects across the country. The Federal, State, tribal, and private partners put up about $22 million in matching funds. The projects ranged from the 3-million-acre "Blue Mountain Demonstration Area" in Oregon to the multi-state "Chesapeake Bay Watershed Partnership" in the mid-Atlantic region.

Specific requirements were attached to project funding. A business plan for each large watershed project was required, together with on-the-ground projects designed to achieve stated objectives. Other requirements included annual progress reports and a plan for self-sufficiency after 5 years.

Short-term gains were immediately apparent. For example, project teams established more than 70 miles of riparian forest and 1,500 acres of native grass in critical watersheds. Partnerships were of every type, public and private, large and small; almost 13,000 individuals were involved. From the hardwood forests of the Mississippi Delta to the Green Mountains of Vermont, community development happened on many levels, attesting to the connection between ecological and economic health. From Pacific Northwest forests to New York's watershed, project partners pioneered new technologies, such as electronic ear tags to manage cattle grazing near streams and modified wood fibers that absorb pollutants from surface runoff.

Through the projects, the Forest Service leveraged scarce resources—people, dollars, and facilities—to accomplish shared objectives on a landscape level. The watershed partnership approach is based on a few key principles: a mutual long-term vision for the land; cooperative decisionmaking across landownerships; shared costs and workloads; and a commitment to new ways of thinking and acting. Aside from specific project benefits, the large-scale watershed initiatives provided a vehicle for communicating to the public the importance of private and public forests for water quality. The projects helped to integrate program delivery, weaving together the urban, rural, and wildland landscapes and thereby connecting the forest to the faucet. On a landscape level, the large-scale watershed projects have helped strengthen the fabric, natural and social, of the lands and communities that together comprise America.

Unified Federal Policy for Watershed Management

More than 800 million acres of the Nation's land are managed by Federal agencies for multiple uses, such as drinking water, irrigation, transportation, recreation, and wildlife habitat. The "Clean Water Action Plan" directs U.S. Departments of Agriculture and the Interior to work with other Federal agencies, States, tribes, and stakeholders to develop a unified Federal policy (UFP) for watershed management on Federal lands. The multi-agency policy is designed to protect the health of aquatic ecosystems, to protect public health, improve water quality, reduce polluted runoff, improve natural resources stewardship, and increase public involvement in watershed management on Federal lands.

A working draft of the UFP was prepared by a Federal interagency team with members from the U.S. Departments of Agriculture, Commerce, Defense, Energy, and the Interior; Environmental Protection Agency; Tennessee Valley Authority; and U.S. Army Corps of Engineers. In June 1999, the draft was distributed for comment to the States and tribes, and 11 public meetings were held to solicit comments. No major conflicts were identified. The final policy, issued in October 2000, reflects input from 126 organizations and 122 individuals. The proposed UFP will be published in the *Federal Register.* This will be the next step in obtaining input from stakeholders and a continuation of the preliminary consultation with the States and Tribes. The Forest Service has scheduled a 60-day public comment period and plans to hold four public meetings (Milwaukee, WI; Portland, OR; Denver, CO; and Atlanta, GA). In addition to the public meetings, separate sessions will be held in each city for tribal members and agency employees.

The primary UFP goals are to use a watershed approach to prevent and reduce pollution of surface and ground waters caused by Federal land and resource management activities and to do so in a unified and cost-effective manner. The UFP calls on Federal agencies to:

- Reach agreement on the use of a common science-based approach to watershed assessments of Federal lands;
- Use a watershed management approach for protecting and restoring watersheds;
- Identify high-priority watersheds for focusing resources;
- Improve compliance with water quality requirements under the Clean Water Act; and
- Enhance collaboration with tribes, States, and interested stakeholders.

This UFP provides a basis for helping the Federal government serve as a model for water quality stewardship.

American Heritage Rivers

In his 1997 State of the Union Address, the President announced the "American Heritage Rivers Initiative" to provide special recognition to outstanding stretches of America's rivers. This initiative is an innovative response to communities seeking Federal assistance in revitalizing their economies, protecting natural resources, and preserving the history and culture of their rivers.

Communities across America answered the President's call by nominating 126 rivers for designation as "American Heritage Rivers." An advisory committee reviewed the nominations and recommended ten rivers to the President but encouraged him to make additional designations. The President chose to designate 14 rivers.

Without establishing new Federal regulations on property owners, the "American Heritage Rivers Initiative" uses Federal resources to cut red tape and lend a helping hand. The initiative relies on locally driven solutions; the Federal role is to focus attention and resources on each designated river. For example, the Government provides small business grants and loans; information and maps to help communities identify and evaluate historic, environmental, and economic resources; assistance in preparing a sound strategy and building a broad base of support; training in the use of soil and water quality information as a basis for decisionmaking and program monitoring; research and interpretive assistance in compiling and communicating a river history; technical and financial assistance for river restoration and pollution prevention; and economic modeling to help communities assess benefits and costs of proposed projects.

The "American Heritage Rivers Initiative" was founded upon the belief that what is good for the environment is also good for the economy. The initiative brought citizens, businesses, and Government together to clean up rivers, rejuvenate surrounding areas, and stimulate economic growth. The partnerships formed showed how active stakeholders working with local businesses and Government agencies can make dramatic improvements.

Major Fire Events and Policy Milestones

Three factors changed the face of wildland fire management in the 1990s: the impact of the 1994 South Canyon Fire; the rising number of large fires (1,000 acres burned or more); and the growing number of homes built by people from urban and suburban areas in fire-prone rural areas, the so-called wildland-urban interface.

The South Canyon Fire will long be remembered, next to such firefighting calamities as the 1910 Big Blowup and the 1949 Mann Gulch Fire, as a pivotal event in the annals of wildland firefighting. On July 6, 1994, on the outskirts of Glenwood Springs, CO, what was supposed to be a routine fire suppression effort on Storm King Mountain resulted in 14 firefighter fatalities. The tragedy riveted the attention of firefighters and the general public nationwide. Memorials to the fallen still serve as a focal point for wildland firefighters, much as the Vietnam Memorial serves as an emotional center for veterans.

The subsequent South Canyon Fire investigation report set in motion a series of reviews and an interagency effort to effect fundamental change, culminating in the 1995 "Federal Wildland Fire Management Policy and Program Review." The new interagency policy confirmed that firefighter and public safety is a universal responsibility and the first priority at the Forest Service. The policy also focused renewed attention on fire use for wildland health, on effective preparedness and suppression programs, on wildland-urban interface protection, and on coordinated program management.

The 1994 fire season was pivotal in another way, as well. In that year, more than 1.4 million acres burned on the national forests and grasslands. It was only the third time since 1919 that the National Forest System

had seen more than a million acres burn in a single fire season. The two previous severe fire seasons had come just a few years earlier, in 1987 and 1988. More than a million acres burned again in 1996, and then again in 2000. The trend was clear: The fires that had been postponed for 70 years through a policy of systematic fire exclusion would no longer wait. Large fires were returning to the interior West.

As Chief Dombeck put it, "Sooner or later, rivers will fill their flood plains and fire-adapted ecosystems will burn." For thousands of years, severe fires in the fire-adapted, higher elevation forests had etched patchwork patterns into the landscape every few decades or centuries. In a sense, Mother Nature was reclaiming her turf. But the worst fire problems had little to do with Mother Nature. Ironically, systematic fire exclusion had exacerbated the fire risk in many parts of the interior West. At lower elevations, western forest types historically had frequent low-intensity fires that kept the number of trees per acre low. For example, the density of ponderosa pines on Arizona's Kaibab National Forest has been estimated at 56 per acre in 1881. Large, severe fires were rare in the open, parklike western forests.

Beginning in the 1930s, growing firefighting effectiveness excluded all fire from our forests, even surface fires. Small trees and brush, no longer kept out by fire, now built up in lower elevation western forests. Dense coniferous thickets commonly added 200 to 2,000 small trees per acre in old-growth stands and 2,000 to 10,000 small trees per acre where the forest canopy had been removed through timber harvest. When fires now occurred, the dense fuels could make the fires so severe that they destroyed entire forest stands. In 2000, some 56 million acres of national forests in the interior West were at high or moderate risk of wildland fires that could compromise ecosystem integrity and human safety.

The heightened fire risk was exacerbated by the growing wildland-urban interface. A rising population density in many rural areas placed people and communities in forest ecosystems naturally prone to fire, increasing the threat to life and property. Wildland-urban interface fires, such as the 1991 Oakland Hills Fire, graphically illustrated the destructive power of wildland fire in an urban environment. Drought conditions in Florida in 1998 produced wildland fires affecting much of the State's population; entire counties were evacuated, and firefighting resources had to be brought in from across the country. In 2000, the Cerro Grande Fire burned parts of Los Alamos, NM; and the Buffalo Creek, Hi Meadow, and Bobcat Fires threatened communities in Colorado. Wildland and rural fire managers were in a quandary: How could they meet traditional expectations for fire protection by a public that chose to live in a fire-prone environment?

Such challenges, coupled with changing public attitudes toward natural resource use, contributed to a long-term revolution in Federal wildland fire policy. A new fire management paradigm, inaugurated in the 1970s with the abandonment of fire exclusion, gained strength in the 1990s in tandem with the Forest Service's more holistic, ecosystem-based approach to natural resource management. The need for greater stakeholder involvement, the rising cost of fire protection, the growing number of large fires, and the increasing emphasis on safety all came together to produce a series of new policy initiatives culminating in the "2000 National Fire Plan."

On September 8, 2000, Secretary Glickman and Secretary of the Interior Bruce Babbitt delivered a national plan to the President outlining steps that could be taken to better manage fire for the health of communities and environment. The report, *Managing the Impact of Wildfires on Communities and the Environment,* recommended a Fiscal Year 2001 budget of $2.8 billion for the wildland fire programs of the Departments of Agriculture and the Interior. Congress appropriated funds to support the plan, including $1.1 billion for the Forest Service in FY2001. The plan called for increasing the national firefighting capabilities; rehabilitating and restoring lands and communities affected by fire; using techniques such as prescribed fire to reduce hazardous fuels; planning for fire preparedness; increasing cooperative programs in support of local communities; as well as funding to replenish and enhance the Departments' fire suppression accounts, which have been depleted by the year 2000 extraordinary fire costs, and to repay FY 2000 emergency transfers from other appropriations accounts. The "National Fire Plan" offers unprecedented opportunities for investing in the long-term health of the land while making the rural communities better places to live and work. Congress also provided the Forest Service with funding to hire 3,500 firefighters in 2001 to increase firefighting capability to the 100% Most Efficient Level. On November 15, 2000, the agency began

advertising for the positions, creating a web site at www.fs.fed.us/fsjobs to provide information. The announcement will remain open until the positions have been filled.

Payments to States

Since 1908, States have received 25 percent of Forest Service revenues to help fund schools and roads. In addition, counties received 50 percent of BLM revenues from the revested Oregon and California Railroad and reconveyed Coos Bay Wagon Road grant lands. Payments were never stable, tied as they were to fluctuating and controversial timber sales. By 2000, with timber sales in decline since 1988, payments to States and counties had dropped by 36 percent.

In 1999, two bills were introduced in Congress to increase and stabilize payments to States by decoupling payments from Federal receipts, but both were blocked by the congressional leadership. Two other bills were opposed by the Administration for continuing to link payments to timber sales or other Forest Service funds. One of them passed the House in November 1999. Backed by the timber industry, many county commissioners and superintendents, and the National Education Association, it linked timber sales to payments for county schools and roads.

The Administration responded by stating its willingness to work with Congress based on five core principles: (1) providing a permanent, stable source of funding; (2) allowing flexibility at the local level; (3) promoting noncontroversial projects to build trust and collaboration; (4) promoting strong collaboration; and (5) establishing clear lines of authorities. After nearly 11 months of negotiation, a compromise was reached. The bill signed into law would base payments on the average of the State's three highest payments from FY1986 to FY1999. It also requires the counties that receive more than $100,000 to invest 15 to 20 percent in county projects and/or forest restoration, maintenance, or stewardship. Finally, it would require the Secretary of Agriculture to create citizen advisory committees representing environmental, commercial, and local interests.

On October 30, 2000, the President signed the Secure Rural Schools and Community Self-Determination Act, stabilizing payments to rural counties by providing about $1.1 billion above current payments over 5 years. Counties no longer have to depend on controversial timber sales to provide the funding for their local schools and roads. "For 92 years, the education of our rural school children was dependent on the harvest of trees," said Chief Dombeck. "This legislation reduces State dependence upon natural resource decisions to fund education."

Healthy Investment in Rural Environments

"Healthy Investment in Rural Environments" (HIRE) was a legislative proposal in the FY2001 budget to decouple mandatory spending for on-the-ground forest restoration activities from timber receipts and to authorize mandatory spending on an expanded range of forest health and infrastructure projects utilizing local labor. For years, the Forest Service was criticized for using timber-related permanent and trust funds known as the "Knutson-Vandenberg" (K-V), "Brush Disposal," and the "Salvage Sale Funds." Critics charged that the link to timber sale receipts biased the agency in favor of timber harvest, and that the agency relied on the receipts to finance and maintain organizational capacity.

Beginning in 1998, Chief Dombeck emphasized financial accountability for the Forest Service, including trust fund reform and more public scrutiny and transparency for agency processes. He called for an administrative reform of the timber-related funds pending permanent legislative solutions. In its FY2000 budget justification, the Forest Service announced the preparation of a proposal to move the funds from the mandatory to the discretionary side of the budget. In June 1999, the agency listed options for replacing the funds with discretionary funding through the annual appropriations process. Included were 10 administrative actions approved for implementation by the Chief and Executive Committee.

The Executive Committee selected a preferred option for the FY2001 budget proposal: to move the timber-related funds to the discretionary side of the budget, and to transfer wildland fire operations and hazardous fuels reduction to the mandatory side. In August 1999, a team assembled to complete the analysis for the preferred option and to prepare budget estimates designed to make the proposal budget neutral. The result was included in the agency's budget proposal for FY2001. The team continued to analyze the potential effects of the proposal on Forest Service personnel.

With the release of the Administration's FY2001 budget, the proposal shifted from trust fund reform to drafting HIRE legislation. Translating the proposed initiative into legislative language was difficult. For example, the President's budget included "Range Betterment Fund" receipts in HIRE. Historically, the K-V fund had been used to cover fire suppression obligations whenever regular appropriations fell short. OBPA insisted that any new HIRE fund to replace the timber-related funds should also cover unexpected fire suppression obligations. The legislative proposal for HIRE was forwarded by USDA to OBPA in June 2000. The proposal never cleared OBPA or reached Congress.

Environmental Compliance and Protection Program

In the 20th century, thousands of sites accumulated on the national forests and grasslands with hazardous wastes or sources of hazardous substances. Many such sites threatened public health and welfare, degraded water quality, destroyed fish and wildlife habitat, and diminished recreational opportunities.

In the 1990s, through its "Environmental Compliance and Protection Program," the Forest Service launched cleanup and restoration projects pursuant to the Comprehensive, Environmental Response, Compensation, and Liability Act (CERCLA) and the Resource Conservation and Recovery Act (RCRA). The Forest Service cleaned up most sites contaminated by its own past actions and established cleanup policies and direction for the agency. The Forest Service continues to work with other Federal agencies, State enforcement agencies, Indian tribes, and interested parties to clean up sites and restore natural conditions.

Most cleanup sites were abandoned or inactive mines. The 1872 General Mining Act permits mining on public lands with few constraints. A 1998 inventory identified about 39,000 abandoned or inactive mines on national forestlands. Some 5,000 mine sites required cleanup, with about 1,700 sites qualifying for action under CERCLA. In addition, the national forests and grasslands harbored numerous landfills, dumps, and illegal drug laboratories, adding to the cleanup burden. Another 100 cleanup actions were required on lands used by or acquired from the U.S. Department of Defense to deal with hazardous substances and unexploded ordnance.

Under its "Environmental Initiative" and CERCLA authorities, the Forest Service encouraged the private parties responsible to clean up the sites they had contaminated. Since 1995, Forest Service actions under its authority resulted in more than $200 million worth of cleanup work performed or paid for by the responsible parties. Under CERCLA, the agency exercised a lead agency role at sites entirely on national forestlands and worked with the Environmental Protection Agency and State agencies on cleanups elsewhere.

The Forest Service incorporated its cleanup and restoration projects into its natural resource management programs, such as watershed restoration and minerals management. The cleanup program became part of the agency's overall mission strategy and was included in the regular Forest Service budget process to achieve goals targeted by the USDA "Hazardous Materials Management Program." Sites were prioritized for cleanup based on the risk to human health and the threat to the environment, with a priority watershed approach playing a role.

Stewardship Contracting

In the 1990s, the Forest Service took steps to end the divisive debates surrounding timber harvest on the national forests by making watershed health and sustainable forest ecosystems agency priorities. Timber harvest continued, but at a fraction of the peak levels reached in the 1980s, down from more than 12 billion board feet per year to about 3 to 4 billion board feet per year. The primary purpose of timber harvest on the national forests became vegetation management, not furnishing wood fiber for the Nation's use.

Traditionally, the Forest Service has relied not only on timber harvest, but also on service contracts as vegetation management tools to reduce risks to forest health from disease, insects, and wildland fire. However, the early 1990s revealed the limitations of both tools. Public controversy continued to surround timber sales on the national forests. Furthermore, the declining commercial value of the vegetation that was needed to be removed rendered timber harvest increasingly infeasible, and timber sale contracts limit what purchasers can be required to do. Service contracts are a powerful and flexible tool, but they cannot be used to dispose of commercially valuable material. Moreover, limited appropriations always constrain the amount of work that can be accomplished in this manner.

In 1996, the Forest Service began to consider the alternative of stewardship contracting. Stewardship contracts entail multifunction procurements over multiple years, are oriented toward achieving end results, promote collaboration with local community groups and other stakeholders, and exchange goods for services. By 1998, the Forest Service had identified 22 stewardship contracting pilot projects.

In FY99, Congress appropriated funds for up to 28 "stewardship end-results demonstration contracts." The legislation included expanded authorities, such as retention of receipts, exchange of goods for services, and best value award of contracts. In its progress report to Congress for FY2000, the Forest Service showed that its 28 stewardship pilot projects were widely distributed geographically, test all supplemental authorities, and address a broad array of ecologic as well as social and economic objectives. More than half the projects were expected to be completed before FY2003, with only one extending beyond FY2005.

Initial reactions to stewardship contracts were favorable. New coalitions emerged around the pilot projects, sometimes including groups typically opposed to Forest Service activities. Attention could focus on the desired condition of the land following treatment, not on resource-specific advocacy. The contentious concept of a commercial sale was eclipsed by a focus on meeting the total treatment needs of a given watershed in a unified and comprehensive manner.

Quincy Library Group Pilot Project

Since the 1970s, a divisive debate has debilitated national efforts to restore the public forestlands to health. By the 1990s, the contending extremes had somewhat exhausted their energy and public appeal. Hopeful signs emerged of a new approach as former adversaries began to sit down together, putting aside what divided them to discuss what they had in common.

The "Quincy Library Group" (QLG) in California's Sierra Nevada was one such initiative. The group emerged in 1992 from a meeting between representatives of Friends of Plumas Wilderness, an environmental group; and Sierra Pacific Industries, a member of the timber industry. The meeting was mediated by the supervisor of Plumas County, who chose Quincy Library as the venue to help keep the meeting civil.

That first meeting was followed by years of efforts by the QLG to change management of California's Lassen and Plumas National Forests and the Sierraville District of the Tahoe National Forest to promote forest health and ecological integrity while ensuring an adequate timber supply and local economic stability. The QLG proposed three strategies: (1) selecting trees, singly and in groups, for harvest immediately throughout the forest to allow management within the concept of maintaining a relatively continuous forest cover; (2) carrying out the fire and fuels management objective recommended in the report known as "California Spotted Owl Technical Assessment of Its Current Status"; and (3) implementing a riparian management

program, including wide protection zones and active restoration efforts. The QLG's goal was an all-age, multistoried, fire-resistant forest approximating presettlement conditions.

From FY95 through FY97, the Forest Service implemented a forest health pilot project based on the activities advocated by the QLG. About 56,900 acres were treated through timber sales, but the QLG lobbied for a broader program. The group's efforts paid off when the Herger-Feinstein Quincy Library Group Forest Recovery Act was signed into law on October 21, 1998. The Act directed the Secretary of Agriculture, acting through the Forest Service, to conduct a pilot project along the lines advocated by the QLG. However, the Act did not appropriate specific funding for the project. The Forest Service estimated a cost of $31 million per year for full implementation of the pilot project QLG on about 50,000 to 70,000 acres per year.

In FY99, the Forest Service completed the required environmental impact statement, calling for a mitigation measure to protect California spotted owl habitat. The QLG strongly objected to the mitigation measure, maintaining that it would prevent full implementation of the project authorized by the Act. In 2000, with a project budget limited to $12.2 million, the Forest Service completed pilot project activities on about 20,500 acres.

Lands Legacy Initiative

The "Lands Legacy Initiative" propelled the "Forest Legacy Program" (FLP) from a small, underfunded effort to an important national program to protect private forests from development. Established by the 1990 Farm Bill, the FLP initially had limited support, reaching a funding low of $2 million in FY97. But there was the potential for using the FLP to protect private forests for the benefit of all Americans.

Under pressure from development, many acres of private forest land are being converted and fragmented every day. Outright purchase to protect the remaining forests is not always a viable option; a voluntary approach is often preferable. Perpetual conservation easements can be a powerful tool for private forest land protection. The "Lands Legacy Initiative" brought funding well above levels initially supported by Congress. From about $7 million in FY99, funding for the FLP jumped to almost $30 million in FY2000 and then to $60 million in FY2001.

Through the FLP, the Forest Service works with State Foresters, local governments, land trusts, and interested landowners to conserve forestlands of regional and national significance from conversion to non-forest uses. Through conservation easements or fee simple purchase, the partners cooperate with willing landowners to ensure that traditional uses and public values are protected on private forest land for future generations.

On February 14, 2000, $18.6 million in "Forest Legacy" grants for 29 projects encompassing nearly 250,000 acres in 19 States and territories. The participating States submitted these projects to the Forest Service for funding. In addition to the projects, Congress earmarked $5 million for three other projects. By August, the program had protected 118,655 acres in 12 States. For example, a large land value donation was made a short distance from rapidly developing areas of Salt Lake City, UT. The land ranges from snow-covered peaks and alpine lakes to rich downstream meadows and pastureland; it remained in family ownership. By 2000, 22 States and Territories were participating in the program, and another 9 States were developing or considering program plans.

Tribal Governments Relations Program

Since 1990, the Forest Service had maintained an active "Tribal Government Relations Program" to improve relations with American Indian and Alaska Native tribes, resulting in many government-to-government partnerships. In 1997, the Forest Service produced an American Indian/Alaska Native Resource Book to help local managers work with and support local tribes. Subsequently, the Chief created a task force to further strengthen relations with American Indian and Alaska Native tribes.

The Urban Resources Partnership

In 1993, through a USDA initiative, the Administration launched the "Urban Resources Partnership" (URP). For seven years, Federal agencies and partners collaborated with underserved communities to address environmental problems, based on a shared realization that a greener urban infrastructure will produce neighborhoods that are cleaner, healthier, more energy efficient, and ultimately more prosperous.

The URP put Government resources at the service of community-led projects through funding and onsite technical assistance. URP projects included restoring streambanks, establishing public trails, conducting anti-littering/beautification campaigns, and enhancing water quality and urban wildlife habitat.

By 2000, the partnership included 13 designated areas nationwide—Atlanta, GA; Boston, MA; Buffalo, NY; Chicago, IL; Denver, CO; East St. Louis, IL; Las Vegas, NV; Los Angeles, CA; New York, NY; Philadelphia, PA; San Francisco, CA; Seattle, WA; and South Florida. With the help of the local community, each participating city established a steering committee that might include Federal, State, and local agencies; nonprofit organizations; local businesses; and foundations. The steering committee established the local partnership's mission, investigated natural resource conditions and community needs, set priorities, and agreed to a grant application process. It then assembled a technical team to work on projects with community leaders.

The URP and its projects were partially funded through $300,000 grants by USDA to each of the 13 designated areas. Additional funds from USDA and other Federal, State, and city agencies were used to hire a local program administrator. Communities matched each Federal dollar with labor, in-kind donations, and funding from local sources. The URP helped recipients meet the matching requirement by facilitating introductions to community groups, nonprofit organizations, foundations, and local government agencies.

The URP initiative tapped the enormous power of community-based action through listening to local communities and helping them realize their dreams. Program benefits included improved conditions in neighborhoods and a stronger social fabric. The URP has helped our Nation fulfill a pledge to empower our urban communities and enhance the quality of life in our urban areas, at a minimum cost to the taxpayer.

Millennium Green

In the 1990s, urban areas were rapidly expanding, often at the expense of neighboring farm- and forest land. Decades of development had left many of the urban areas with a tree canopy cover of less than 20 percent, adversely affecting streams and wetland buffer systems, water quality, storm water runoff, air quality, and a host of other factors related to human health and ecosystem sustainability.

To help address the problem, the Clinton administration established a "White House Millennium Council" to encourage, promote, and acknowledge the creation of healthier, more livable community environments in the new millennium. In July 1999, the council asked that USDA and the Forest Service take the lead in developing a "Millennium Green Initiative" as a part of the Administration's millennium celebration.

Working with Federal and other partners, the Forest Service launched "Millennium Green" as a national campaign to help communities continue to be green and growing. One of the campaign's first initiatives was to establish Millennium Groves in the States, Territories, and the District of Columbia. "Millennium Green" was officially launched in December 1999 with the dedication of the white oak in front of the USDA Administration building by First Lady Hillary Rodham Clinton and Secretary Glickman. Numerous celebrations followed, along with a number of related State initiatives and events in cities and communities across the country during the spring planting season. In honor of "Millennium Green," a special "Arbor Day Celebration Award" was presented to USDA by the National Arbor Day Foundation in Nebraska City, NE, in April 2000.

Forest Service Reinvention

In 1993, another initiative was put in place to "reinvent" Government through more efficient, cost-effective, responsive ways of working on behalf of Americans. Among dozens of Forest Service reinvention actions, three achievements stand out: The "Enterprise initiative"; "Service First"; and a recreation Website.

The Forest Service's "Enterprise initiative" was designed to integrate market mechanisms into everyday agency operations. Employees created their own small businesses serving internal customers, operating in a self-determined, self-motivated way to accomplish Forest Service work more effectively and efficiently. Successful implementation in one Forest Service region led to plans to expand the program into other regions in future years. Enterprise put the best ideas from the world of private business to work to motivate and reward Forest Service employees for accomplishing high-quality work on time. "The Forest Service is growing its own small businesses," noted *Government Executive Magazine* (November 1999), "and possibly building the government of the future."

"Service First" was inspired by the Reinvention initiative's focus on customer service and seamless government. A partnership of the Forest Service and the BLM, Service First enabled the Nation's two largest Federal land managers to deliver one-stop customer service to users of public lands while improving their collective capability to care for the land. By pooling resources, the agencies could avoid duplication of effort; they collocated offices, shared personnel, combined operations, harmonized processes and permits, and standardized public information. Through Service First, the American people saw a single, unified, common-sense approach to customer service on nearly a third of the Nation's lands.

To improve customer service, the Forest Service and partners designed an Internet program, recreation.gov, that provides recreation information on all Federal lands in the United States. Our public lands are the greatest outdoor recreation resource in the Nation. In the past, recreational users of those lands had to seek information through myriad sources and formats. Now, through a partnership of the Forest Service and six other Federal agencies, users have a one-stop, 24-hour source of information on all Federal lands.

Civil Rights Accomplishments

Since the Civil Rights Act of 1964, all the Administrations have sought to ensure that the Federal workforce reflected the face of America and served all segments of the American public. The Forest Service has launched civil rights initiatives in several areas. One goal was to build a diverse workforce through multicultural recruitment initiatives. The Forest Service invested more than $2.3 million per year, in partnership with universities, on national recruitment initiatives. For example, the agency recruited more than 100 students per year through partnerships with Historically Black Colleges and Universities, Hispanic Serving Institutions, Tribal Colleges, and the President's Committee on People with Disabilities to fill natural resource and other professional positions. At Tuskegee University in Alabama, more than 400 students have participated in the "Forest Resources Program." Many are in the Forest Service today. At the University of California at Davis, Asian Americans, Pacific Islanders, and other minority students interested in natural resource careers were recruited. The Forest Service also shares career opportunities in the agency with colleges and universities that serve Hispanic Americans. The Forest Service "Tribal College Initiative" has 10 years of experience with capacity building in natural resources at 15 tribal colleges nationwide. The "Persons with Disabilities Initiative" works through 146 colleges and universities to recruit persons with disabilities seeking careers in fields related to natural resources.

The Forest Service also developed a comprehensive planning process to build a diverse and highly skilled workforce. The agency is training future conservation leaders by helping schoolchildren learn about the environment in a multicultural setting. For example, providing hands-on learning opportunities to 800 schoolchildren at Bailey's Elementary School for the Arts and Sciences, in Bailey's Crossroads, VA. Through the Central California Consortium, the Forest Service is working with partners and local communities near Fresno, CA, to encourage schoolchildren—mostly minority—to enter fields related to natural resources.

Another goal was a supportive work environment for all employees. In 1997, the Forest Service tackled a backlog of 1,194 equal-employment opportunity complaints that was undermining confidence in the agency's commitment to civil rights. Some 96 percent were resolved, with fewer complaints filed since. In January 1998, the Forest Service established a program for early dispute intervention and resolution, available to all employees, that serves as a USDA model. In FY99, the program enjoyed an 81 percent resolution rate. Other initiatives included a zero-tolerance policy for discrimination, retaliation, and all kinds of harassment; a complaint resolution model to help parties assess the resolvability of complaints; a settlement justification procedure to monitor resolutions; a dispute resolution guide; a quick-response team to help resolve complex EEO cases; a survey-based program to improve the work environment; and civil rights training for all employees.

Beginning in 1997, the Forest Service sought to improve accountability by establishing civil rights directors and staffs in every region and research station. The agency commissioned an organizational effectiveness study and began implementing study recommendations for improving its civil rights organization.

The Forest Service in the late 1990s developed a strategic outreach plan for underserved communities. The strategy was designed to help women, minorities, and people with disabilities understand and participate in all Forest Service programs and activities. In 1999, the senior, youth, and volunteer programs served more than 120,000 Americans, including about 40,000 women and 17,300 people from racial and ethnic minorities.

The Forest Service is also active in the "USDA National Commission on Small Farms." In 2000, the Forest Service worked with other USDA agencies to help more than 130 small farmers, many of them African-American, to attend the second "Agricultural Marketing Outreach" workshop in Memphis, TN. The agency is collaborating with Alaska Native corporations and helped 11 Alaska Native corporations complete forest stewardship planning. The Forest Service's new conservation education staff area is funding more than 70 projects nationwide, some focusing on underserved youth.

Program and Financial Accountability

In the 1990s, longstanding controversies surrounding public land management policies, especially below-cost timber sales, brought the Forest Service's financial management and program structure under increased scrutiny. For more than 10 years, the agency was unable to produce auditable financial statements. Studies by the General Accounting Office and others found persistent financial management weaknesses, undermining the Forest Service's accountability to, and credibility with, both Congress and the American people.

Under Chief Dombeck, the Forest Service took decisive steps to put its house in order. In fiscal year 2000 (FY2000), after several years of careful preparation, the agency successfully implemented its Foundation Financial Information System, a general ledger accounting system. It adopted off-the-shelf software used by 40 other agencies to meet Federal accounting standards.

In the area of budget reform, the Forest Service developed an integrated set of land health and service-to-people performance measures that link directly to mission-related outcomes and financial information. The budget structure was simplified to reflect the nature of the real work being done in the field, focusing on outputs and outcomes rather than budget line items and linking directly to the agency's draft strategic plan (2000 revision). The FY2001 budget presentation was reformatted using a performance-based approach, allowing Congress to appropriate funding based on agency performance. A new budget formulation tool was planned for implementation during the FY2003 budget process. The new tool will permit preparation of forest-based budget requests that reflect both field needs and agency initiatives.

Other improvements toward a clean audit opinion included implementation of a comprehensive methodology for producing auditable financial statements. The agency also completed the first real property inventory in its history and adopted standard definitions for indirect costs. Lines of communication with the National

Finance Center were improved to handle systems requests, resolve feeder system issues, and address cash reconciliation.

In 1998, the national leadership team was reorganized to create functional lines of accountability. An office of the chief financial officer was created and a field operations assessment initiated to address functional lines of financial accountability throughout the agency. A new platform was introduced to replace the agency's crumbling information technology infrastructure, and the agency eliminated a backlog of more than 1,000 civil rights complaints.

The Forest Service's accountability initiatives helped restore the agency's credibility with Congress. In FY2001, the Forest Service worked with Congress to reengineer the budget structure for two major appropriations, those for the National Forest System and for Construction (including road management). The number of line items for these appropriations fell from 34 to 13, increasing the Forest Service's flexibility in the use of funds—a measure of confidence and trust.

The Millennium Bug (Y2K) Program

During FY 2000, the Forest Service successfully executed a comprehensive program to prevent disruptions of business processes caused by Year 2000 (Y2K) failures. The agency also completed implementation of a new computer system and a new office automation suite. Over 32,000 personal computers have been installed at over 800 locations throughout the agency. With industry-leading, mainstream, enterprise management systems now deployed across

USDA Forest Service Strategic Plan (2000 Revision)

From the very beginnings of the National Forest System in 1905, the Forest Service based its natural resource management on the principle of sustainability—the very principle at the heart of the Forest Service's revision of the strategic plan. The "2000 Revision" focused on outcomes—outcomes in managing the lands and resources of the National Forest System, in collaboration with the American people; outcomes in delivering technical assistance through State and Private Forestry programs; outcomes in making use of scientific information from Research programs; and outcomes in improving the management of, and accountability for, all Forest Service activities. Our focus on outcomes such as the health of the land, the quality of our water, and customer satisfaction represented an important change in focus for the Forest Service.

Building on the tradition of the founders of the Forest Service, Theodore Roosevelt and Gifford Pinchot, the four goals of the 2000 Revision were ecosystem health, multiple benefits for people, scientific and technical assistance, and effective public service. Associated with each goal were objectives, strategies to achieve the objectives, and measures of progress. Collectively, these components of the strategic plan provided purpose and context for future management actions and investments, setting milestones for evaluating progress toward the goals.

Separate annual performance plans were designed to address specific management actions and investments needed to ensure progress toward the goals and objectives of the strategic plan. Annual performance plans will reflect local needs identified in resource management plans for the national forests and grasslands, as well as plans for research and assistance to tribal governments, States, and communities. Annual budget proposals will seek the funding needed to deliver the annual actions and investments.

Policy Analysis

Policy Analysis (PA) published *Water and the Forest Service,* the first comprehensive survey of water quantity, quality, uses, and value on the National Forest System. Over 25,000 electronic copies and 5,000 hard copies have been distributed. The report has been used by the Chief, Regional Foresters, and others in speeches and testimony for Congressional hearings. PA prepared a legislative proposal for grass-banking

initiative for 2002 Farm Bill. The initial proposal has been accepted by the Forest Service and work is continuing on formulating more detailed proposal for submission to the Department.

Policy Analysis has also developed strategic analysis of the agency's fire and fuels management direction; briefed Chief; effected material redefinition of underlying strategy for fire and fuels management, as embodied in the 30 day report to the President. The staff has negotiated a contract with the Pinchot Institute, funding their work on forest community partnerships and collaborative stewardship. Maintained and expanded effective working relationship with Institute staff and leadership.

PA has developed and coordinated the agency's plan for transition to the new George W. Bush administration. This effort included development of a strategic approach for transition, organization and development of briefing materials, establishing a "Transition Advisory Board," and other activities.

Economic Recovery Grants

In June 2000, the Pacific Southwest Region announced grants through three programs totaling nearly $600,000. Just over $200,000 was shared among eleven Sierra Nevada counties through a number of "Economic Recovery Program" grants. The grants helped support community planning and economic diversification. The "Rural Economic Assistance program" of the "Northwest Economic Adjustment Initiative" provided 18 grants to be distributed among nine counties, for a total of $290,000. The Hale Halawai Ohana O'hanalei Community Center of Hanalei, HI, was the recipient of a grant for $100,000 for watershed protection and enhancement planning in the Hanalei River watershed.

Research and Development Programs:

Clean water. Forest Service scientists at the Forest Products Laboratory completed research that demonstrated that low-cost, fiber-based water filtering technology can remove organic and inorganic toxic materials, pesticides, and herbicides from both point and non-point sources. Field research trials have been initiated in the New York City and the Catskill Watershed Corporation (which provides potable water to over 9 million people), and in the Wayne National Forest to clean up contaminated water from old, abandoned mines.

Chlorine-free pulp bleaching. Forest Service scientists at the Forest Products Laboratory developed a chlorine-free wood pulp bleaching technology, which will eliminate discharge of chlorinated hydrocarbons into rivers and streams. This technology requires only 0.2 cubic meters of water per ton of pulp compared to 20-40 cubic meters for conventional bleaching.

Brazilian Cooperative Forestry Research. Collaborative research with the Brazilian government and the NASA LBA program in the Tapajos National Forests was expanded by increasing the capabilities of the analytical laboratory in Brazil and by initiating new studies on the biogeochemical and wildlife affects of selective timber harvesting.

Mapping land cover and natural vegetation of Puerto Rico. The first map of land cover in Puerto Rico since 1978 was completed by the Institute of Tropical Forestry. Accuracy assessments and further research on advanced mapping algorithms will begin in FY 2001.

Municipal water supplies. Research completed by Forest Service scientists on instream-flow needs was used in establishing water permits in several areas in Puerto Rico and was highlighted in a National Science Foundation sponsored video on the "Long-Term Ecological Research program." A symposium on management of Puerto Rican streams was attended by 100 people, including representatives from five governmental agencies and Puerto Rico's Planning Board.

Kyoto Protocol. Scientists in the Northeastern and North Central Research Stations collaborated with USDA and other government agencies to interpret the forestry implications of the Kyoto Protocol and developed a U.S. policy on forests and carbon sequestration. for the State Department. The results could provide the incentive for practicing sustainable forestry and help minimize the cost of reducing emissions along. In addition, a policy on forests and carbon sequestration will be featured in international negotiations on the "Kyoto Protocols" culminating in November 2000.

Guidelines for science-based decision-making. Forest Service scientists have developed guidelines for the application of cutting-edge science on contentious management issues. These guidelines will be used by the Forest Service and other research and land management agencies to defend land management decisions on millions of acres of public forest and rangelands.

Soil quality standards. The Pacific Southwest Research Station developed soil quality standards that have been proposed for operational monitoring of sustainable forestry on public lands of the United States. The country's largest family-owned, forest management company, Sierra Pacific Industries, has adopted these standards.

Wildland fire assessments. Forest Service Scientists in the Pacific Southwest Research Station, through the National Interagency Fire Center, distributed a revised software package to firefighting agencies throughout the U.S. for assessing the relative merits of alternatives for fighting escaped wildfires. This software has resulted in saving millions of dollars during the 2000 fire year by guiding more cost-effective fire-management decisions.

FOREST SERVICE ISSUES 2000

Compiled by the USDA Forest Service, Office of Communication

December 2000

The following is a compilation of some 29 different issues facing the USDA Forest Service at the end of the year 2000, near the beginning of the new administration. Each issue discussed below contains a background explanation and a contact person to obtain additional information.

The identified issues are:

- ❑ Cohesive Fire Strategy
- ❑ Wildland Fire Management Policy
- ❑ Fire Risk on National Forest Lands
- ❑ Fire Use
- ❑ Suppression Costs on Large Fires
- ❑ National Fire Plan
- ❑ Smokey Bear
- ❑ Wildland-Urban Interface Fire
- ❑ Foundation Financial Information System (FFIS)
- ❑ Categorical Exclusions and Appeal Regulations
- ❑ Sustaining the Forest Service Library Service–Briefing Paper to Associate Chief (two parts):
  - ❑ Management of science information
  - ❑ Maintaining a historical database
- ❑ National Website Project
- ❑ FY2001 Budget
- ❑ Payments to States/Secure Rural Schools and Community Self-Determination Act of 2000
- ❑ Final Planning Rule
- ❑ Forest Service Recruitment Policy
- ❑ Stewardship Contracting Pilot Projects
- ❑ Forest Service Strategic Plan 2000 Revision
- ❑ National Publications Process
- ❑ Public Affairs Development Guide
- ❑ Public Affairs Outline Training Opportunities
- ❑ Recreation Fee Demonstration Program
- ❑ Recreation Agenda
- ❑ Road Management Policy
- ❑ Unified Federal Policy for Watershed Management
- ❑ Watershed Protection and Restoration
- ❑ Grizzly Bear Reintroduction in the Bitterroot Mountains
- ❑ Wolf Reintroduction

ISSUE: Cohesive Fire Strategy

OVERVIEW: The 1994 fire season was especially severe on public wildlands in the interior West. For only the third time since 1919, more than a million acres burned on our national forestlands. The two previous years were 1987 and 1988, indicating the beginnings of a pattern: Large fires were returning to the interior West. Suppression costs in 1994 reached almost $850 million, the highest level ever. Many wildland firefighters paid the ultimate price, with 134 entrapments and 35 fatalities, including 14 fallen firefighters on Storm King Mountain, Colorado.

In response, the Federal wildland fire community joined in a series of investigations and reports that culminated in the 1995 Federal Wildland Fire Management Policy and Program Review. Congress commissioned a separate investigation by the U.S. General Accounting Office. The resulting report was published in April 1999 under the title, "Western National Forests: A Cohesive Strategy is Needed to Address Catastrophic Wildfire Threats." Based on the GAO study, the Forest Service's Fire and Aviation Management staff prepared a report published in October 2000 under the title, "Protecting People and Sustaining Resources in Fire-Adapted Ecosystems: A Cohesive Strategy."

In accordance with the 1995 Federal Wildland Fire Management Policy, the Cohesive Strategy "establishes a framework that restores and maintains ecosystem health in fire-adapted ecosystems for priority areas across the interior West." High-priority areas under the strategy are the wildland-urban interface, readily accessible municipal watersheds, threatened and endangered species habitat, and existing low-risk areas (for example, by preventing fuel buildups). The strategy has three elements:

31. Social (for example, increasing public awareness of fire's ecological role, collaborating with stakeholders in project implementation, and promoting local firesafe practices).
2. Institutional (for example, establishing long-term policy objectives and assessment procedures).
3. Program management (for example, concentrating national programs on areas at risk, conducting regional assessments, adjusting local forest plans, expanding community firewise programs, and strengthening fire-related research).

STATUS: The Cohesive Strategy is in effect under the National Fire Plan.

WHAT'S AHEAD: Implementation.

CONTACT: Judy Kissinger, (202) 205-1094

ISSUE: Wildland Fire Management Policy

OVERVIEW: Forest Service fire policy has undergone a revolution since the 1960s. Today's flexible fire management has multiple components:

- Prevention (more than just Smokey Bear, it includes local and regional campaigns to prevent human-caused fire and promote firesafe practices).
- Suppression (including preparedness).
- Fire use (for various purposes, including fuels management, habitat management, silviculture/forest management, and site preparation).

Early fire policy was shaped by the experience of the Big Blowup of 1910, when 3 million acres in the northern Rockies burned in just a few days, taking 85 lives. In the 1930s, the Forest Service established the 10 a.m. policy of suppressing every wildland fire by 10 a.m. on the morning after it was first reported.

Systematic fire exclusion caused fuel buildups with devastating consequences for human safety and ecosystem health. By the 1960s, the adverse effects were obvious. In 1978, the Forest Service formally abandoned fire exclusion in favor of today's flexible fire management policy. Based on local conditions, land managers blend techniques—including prevention, suppression, and fire use—to achieve the twin goals of land health and vibrant, productive ecosystems.

However, the worst effects of long-term fuel buildups remained hidden until the 1990s, when large fires (1,000 acres burned or more) returned with a vengeance. In 1987, 1988, 1994, 1996 and 2000, more than a million acres burned on our national forestlands, a level unprecedented since the 1920's. A pivotal year was 1994, when 14 firefighters died in a wildfire blowup in Colorado, known as the South Canyon Fire.

The South Canyon Fire investigation report set in motion a series of reviews culminating in the 1995 Federal Wildland Fire Management Policy and Program Review. The new interagency policy confirmed that firefighter and public safety is our first priority. The policy also focused renewed attention on fire use for wildland health, on effective preparedness and suppression programs, on wildland-urban interface protection, and on coordinated program management.

STATUS: Today, the 1995 Federal Wildland Fire Policy remains in effect. Interagency suppression policy is set by the National Wildfire Coordinating Group under the Incident Command System. Safety is our first priority, followed by initial attack and protecting communities at risk.

WHAT'S AHEAD: Using the Federal Wildland Fire Policy to guide implementation of the Cohesive Fire Strategy under the National Fire Plan.

CONTACT: Judy Kissinger, (202) 205-1094

ISSUE: Fire Risk on National Forest Lands

OVERVIEW: Historically, the vast majority of the acres burned each year have been on State and private lands and on lands managed by the U.S. Department of the Interior, not on national forestlands. In the 1990s, for example, less than 14 percent of the acres burned nationwide were on the national forests and grasslands. The 2000 fire season was exceptional: The proportion of acres burned on the National Forest System reached about 32 percent (2.3 million acres out of 7.3 million acres), mostly in the interior West. The last time more than two million acres burned on the national forests was in 1919.

Severe fire seasons all but ceased on the national forests after the 1920s. From 1930 to 1986, a period of 57 years, the number of acres burned on the national forests never approached one million in any fire season, thanks to growing firefighting effectiveness.

Then, in 1987, the large fires returned—with a vengeance. The 1987 and 1988 fire seasons saw 1.2 and 1.5 million acres, respectively, burn on the national forests. More than a million acres burned again in 1994, and then again in 1996. The trend was clear: The fires we had postponed for 70 years through a policy of systematic fire exclusion would no longer wait. Large fires were returning to the interior West.

Sooner or later, fire-adapted forests will burn. For thousands of years, severe fires in our fire-adapted, higher elevation forests had etched patchwork patterns into the landscape every few decades or centuries. In a sense, Mother Nature was reclaiming her turf.

But our worst fire problems had little to do with Mother Nature. Ironically, systematic fire exclusion had exacerbated the fire risk in many parts of the interior West. At lower elevations, western forest types historically had frequent low-intensity fires that kept the number of trees per acre low. But our growing firefighting effectiveness allowed small trees and brush to build up. When fires now occurred, the dense fuels could make the fires so severe that they destroyed entire forest stands. In 2000, some 56 million acres of national forests in the interior West were at high or moderate risk of wildland fires that could compromise ecosystem integrity and human safety.

STATUS: The National Fire Plan provides funds for reducing the fire risk by increasing preparedness and suppression capacity, working with communities to reduce hazardous fuels and restore natural ecosystem functions, and helping homeowners make their properties firesafe.

WHAT'S AHEAD: Implementing preparedness and fuels management programs under the National Fire Plan.

CONTACT: Judy Kissinger, (202) 205-1094

ISSUE: Fire Use

OVERVIEW: Fire use has two types: prescribed fire (fire ignited by management) and wildland fire use (naturally ignited fire designated for management purposes—formerly called "prescribed natural fire"). For both types, uses include (among others):

- Site preparation (clearing away slash and exposing mineral soil for forest regeneration).
- Fuels management (reducing fuels that might cause wildfires).
- Habitat management (for example, mimicking American Indian fire use to recreate historical landscape mosaics for maximum biodiversity).

The fire use tradition has deep roots in European and American Indian cultures. For example, swidden (slash-and-burn) agriculture was widely practiced in both cultures for thousands of years (for details, see the many works of Stephen J. Pyne, the leading national fire historian). Settlers used fire wherever they went, partly to clear the land, partly to maintain it. For example, forests were burned seasonally in many parts of the Nation for purposes such as improving browse for free-ranging livestock and destroying pests such as insects and snakes.

In the South, fire use persisted into the 20th century, forming the basis for the region's leadership in prescribed fire use. Elsewhere in the Nation, fire use was hotly debated at the turn of the century. The fledgling Forest Service studied the effects of fire use and concluded that almost all fire was bad for forests, except for site preparation. Drawing on the romantic firefighting mythology surrounding the Big Blowup of 1910, the agency relentlessly campaigned for total fire exclusion, practicing various fire exclusion policies until the 1970s.

Fire exclusion proved so successful that historical conditions changed on millions of acres nationwide. Where frequent fire once kept much of the land under early-successional open forest, fire exclusion brought tremendous fuel buildups and allowed shade-tolerant species to become dominant. By the 1960s, land managers began to understand the adverse effects of fire exclusion. The Forest Service increasingly experimented with fire use in areas outside the South (where fire use had persisted on the Coastal Plain). In 1978, the agency formally abandoned the fire exclusion policy in favor of a flexible policy, including fire use based on local conditions. In 1995, the Federal Wildland Fire Management Policy and Program Review embraced the growing need for fire use "to protect, maintain, and enhance resources." From 1994 to 2000, the Forest Service increased fuels treatments from 385,000 to 1,320,000 acres—mostly prescribed fire.

STATUS: Today, the 1998 *Wildland and Prescribed Fire Management Policy: Implementation Procedures Reference Guide* is the Forest Service's fire use bible. Fire use is predicated on the existence of a fire management plan; however, only 10 percent of areas with burnable vegetation are covered by an FMP. Fire use is a fuels management method in the National Fire Plan.

WHAT'S AHEAD: Completing more FMPs and expanding fire use programs.

CONTACT: Judy Kissinger, (202) 205-1094

ISSUE: Suppression Costs on Large Fires

OVERVIEW: The last 15 years have dramatically reversed a long-term trend of steady or declining fire season severity. In 1987, for the first time since 1919, more than a million acres burned on the national forests. More than a million acres burned again the following year, and then again in 1994 and 1996. In 2000, more than two million acres burned. The trend was clear: The fires we had postponed for 70 years through a policy of systematic fire exclusion would no longer wait. Large fires were returning to the interior West, often with devastating effects due to decades of fuel buildups.

In tandem with the return of large fires came rising suppression costs (see the table and figures on the next page). In 1994, the cost of suppressing wildland fires reached an all-time high of $757 million for the Forest Service alone. That precipitated a study, "Fire Suppression Costs on Large Fires: A Review of the 1994 Fire Season." The study drew several conclusions:

- Explosive fuel buildups in the interior West have made traditional suppression tactics more expensive and less effective.
- Line officers have few incentives to take risks that could reduce suppression costs.
- Twin emphases on protecting private property and reducing adverse fire effects on natural resources contribute to high suppression costs.
- Use of type 1 helicopters has soared, increasing suppression costs.
- The declining number of skilled personnel available for assignment to fires has contributed to rising costs.

In 1999, two fires alone, the Kirk and Big Bar Complex Fires, together scorched some 227,000 acres and cost about $178 million, roughly 30 percent of the total Forest Service fire suppression budget for that year. The high cost of these fires precipitated another study, "Policy Implications of Large Fire Management: A Strategic Assessment of Factors Influencing Costs." The study team drew conclusions similar to those in the earlier report. Other findings included the need for:

- Enhanced preparedness, fuels management, and state fire assistance.
- More fire management plans. Less than 10 percent of areas with burnable vegetation are covered by a fire management plan, in violation of Federal Wildland Fire Policy.
- Better use of wildland fire situation analysis as a fire management tool.
- Elimination of personnel disincentives such as fire line pay disparities and pay caps.

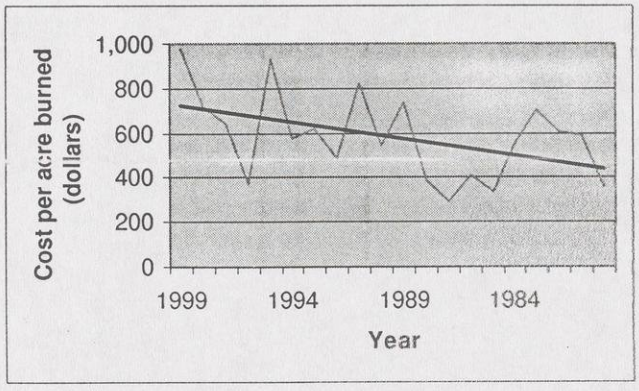
STATUS: The Forest Service and Congress are seeking solutions to at least some of the problems pointed out in the reports.

WHAT'S AHEAD: New funding under the National Fire Plan will help address some of the staffing, preparedness, and fuels management issues.

CONTACT: Judy Kissinger, (202) 205-1094

Forest Service expenditures for emergency fire suppression on lands in the National Forest System, 1980-99. All expenditures are in 1999 dollars. Although costs fluctuated from year to year, the trend was rising for both absolute costs and cost per acre burned.

Year	***Cost***	***Acres burned***	***Cost per acre burned***
1999	$591,000,000	605,000	$976.86
1998	219,300,000	306,000	716.67
1997	154,246,960	241,000	640.03
1996	514,153,200	1,367,000	376.12
1995	350,635,608	376,000	932.54
1994	849,987,396	1,476,000	575.87
1993	205,616,119	330,000	623.08
1992	340,802,589	699,000	487.56
1991	163,741,389	200,000	818.71
1990	319,088,563	585,000	545.45
1989	442,166,330	597,000	740.65
1988	604,357,759	1,556,000	388.40
1987	368,538,256	1,281,000	287.70
1986	167,696,327	406,000	413.05
1985	249,250,324	741,000	336.37
1984	102,490,769	187,000	548.08
1983	56,711,069	81,000	700.14
1982	50,128,049	83,000	603.95
1981	191,011,998	325,000	587.73
1980	136,767,256	379,000	360.86
Total	6,077,689,961	11,821,000	--
Average	303,884,498	591,050	582.99



ISSUE: National Fire Plan

OVERVIEW: The National Fire Plan was developed from the report by the secretaries of agriculture and the interior to the president in response to the wildfires of 2000 ("Managing the Impact of Wildfires on Communities and the Environment" September 8, 2000). Implementation of the National Fire Plan will ensure sufficient firefighting resources for the future, restore ecosystems damaged by the recent fires, rebuild community economics, and reduce future fire risk through fuel reduction efforts.

There are fire key points to the National Fire Plan:

1. Firefighting–continue to fight fire for the remainder of the 2000 season and be adequately prepared for next year.
2. Rehabilitation and Restoration–restore landscapes and rebuild communities damaged by the wildfires of 2000.
3. Hazardous Fuel Reduction–invest in projects to reduce fire risk.
4. Community Assistance–work directly with communities to ensure adequate protection.
5. Accountability–be accountable and establish adequate oversight coordination, program development and monitoring for performance.

STATUS: President Clinton signed legislation Oct. 11, appropriating $1.9 billion for the Forest Service for normal ($1.3 billion) and emergency ($619 million) fire-related expenditures. Additional fire-related funding was approved for Department of Interior agencies.

WHAT'S AHEAD: The following is a list of required reports and a general time line for the reports:

- "Protecting People and sustaining Resources in Fire-Adapted Ecosystems: A Cohesive Strategy" –publish within 60-days in the Federal Register–a national level framework for addressing the problem of over-accumulated vegetation and fuels and the related effects of uncharacteristically severe wild land fire. It provides priority-setting criteria to channel limited resources to the highest-risk areas.
- Recommendations for additional funding needs, an inventory of "at risk" communities, and any additional needed authorities–by May 1, 2001.
- "Expedited" NEPA procedures–appraise congress within 60 days whether or not to develop.
- Accountability–within 90 days, develop a financial plan showing how all funds will be spent.
- Action Plan–within 90 days–details as to how work will be accomplished.
- A performance report within 90 days of the end of the fiscal year.

CONTACT: Judy Kissinger, (202) 205-1094

Information available on the Forest Service Intranet at: http://fsweb.wo.fs.fed.us/pao/fireplan/

USDA Forest Service
National Fire Plan

Documentation associated with the National Fire Plan development.
Check back often as this site, and the Plan, progress.

THE NATIONAL FIRE PLAN COMMUNICATION PLAN - October 19, 2000 This Communications Plan outlines the strategy for the rollout and implementation of the National Fire Plan. Included are key messages, talking points, questions and answers, sample news release, and a recent speech by the Chief.

NATIONAL FIRE PLAN POWER POINT PRESENTATION This presentation provides a basic, "national" overview of the National Fire Plan. The presentation outline includes an overview of the presentation, Fire Season 2000, The President's Request, The Plan and a Summary. Speaker notes are also included. The presentation is set up so that specific, local information can be added.

2001 APPROPRIATION FUNDING FOR NATIONAL FIRE PLAN - TALKING POINTS 10/13/00 Talking points, key messages and questions and answers regarding the National Fire Plan and the results of the Interior and Related Agencies Appropriations Bill signed by the President.

A COHESIVE STRATEGY "Protecting People and sustaining Resources in Fire - Adapted Ecosystems - October 13, 2000" Talking points, key messages and questions and answers regarding this the Forest Service Management Response to the April 1999 GAO Report (GAO/RCED-99-95)

"PROTECTING PEOPLE AND SUSTAINING RESOURCES IN FIRE-ADAPTED ECOSYSTEMS - A COHESIVE STRATEGY - OCTOBER 13, 2000 This is the full report, approved by the Chief. This report is the Forest Service Management Response to the General Accounting Office Report GAO/RCED-99-95.

MANAGING THE IMPACT OF WILDFIRES ON COMMUNITIES AND THE ENVIRONMENT - A Report to the President In Response to the Wildfires of 2000 - September 8, 2000 This is the report to the President by the Secretaries of Agriculture and the Interior. This is "the national fire plan."

WESTERN NATIONAL FORESTS - A Cohesive Strategy is Needed to Address Catastrophic Wildfire Threats April 1999 GAO/RCED-99-95 This is the report done by GAO at the request of the House Subcommittee on Forests and Forest Health, Committee of Resources that prompted the development of "A Cohesive Strategy" by the Forest Service.

THE NATIONAL FIRE PLAN IMPLEMENTATION TEAM MATERIALS This is a link to the website being use by the National Fire Plan Management for the posting of all current team documents. Current information such as, The Plan of Work, Implementation Notes, Budget Overview - summaries and details, Briefing Papers, and so forth can be found here.

ISSUE: Smokey Bear

OVERVIEW: The Smokey Bear campaign, officially known as the Forest Fire Prevention Campaign, is one of the most successful campaigns in advertising history. In the 1930s, 39 million acres burned on average each year, mostly through human carelessness on State and private lands. The Forest Service had long waged educational campaigns to help prevent fires, with limited success.

In 1944, working with The Advertising Council, the Forest Service introduced Smokey Bear in a poster campaign that quickly caught the public imagination. Various artists improved on Smokey's appearance over the years; in the 1960s, Forest Service artist Rudy Wendelin put the finishing touches on Smokey's look.

In 1950, a black bear cub was rescued following a fire on the Lincoln National Forest in New Mexico. To help promote the Smokey campaign, the Forest Service named the bear after Smokey and transported him to the zoo in Washington, D.C., where he remained a popular tourist attraction until his death in 1976.

Reaching its heyday in the 1960s, the Smokey campaign expanded from posters into cartoons, radio, television, and song recordings. Today, Smokey remains one of the most widely recognized fictional characters in the United States. Since the mid-1940s, the population has almost doubled and wildland visitation has multiplied by about 45. Despite the corresponding increase in the opportunity for fire starts, the number of wildland fires nationwide in the 1990s was about a third lower than in the 1940s, almost certainly—at least in part—thanks to Smokey. For example, the Forest Fire Prevention Campaign credits Smokey with reducing the number of wildland fires caused by children from 7 percent to 1 percent since 1984.

Beginning in the 1970s, the growing realization that fire plays a natural, beneficial role in wildland ecosystems damaged Smokey's credibility in the eyes of some critics. However, Smokey's role has always been to prevent careless fire use, not to promote systematic fire exclusion. That was a management policy that Smokey had nothing to do with.

STATUS: Smokey's message against careless fire use remains as valid as ever. In the 1990s, almost 9 out of 10 wildland fires were human-caused.

WHAT'S AHEAD: The Forest Service partnership with The Advertising Council in the Forest Fire Prevention Campaign will continue to use Smokey to reach children with messages against careless fire use.

CONTACT: Judy Kissinger, (202) 205-1094

ISSUE: Wildland-Urban Interface Fire

OVERVIEW: Wildland-urban interface fire helped change the face of wildland fire management in the 1990s. The heightened fire risk posed by increasing numbers of large fires (fires that burn 1,000 acres or more) was exacerbated by the growing wildland-urban interface.

The wildland-urban interface properly refers to urban areas (usually suburbs) that have spread into fire-prone rural areas through urban sprawl, usually while assuming wildland characteristics themselves, such as heavy over- and understory vegetation. The classic wildland-urban interface fire was the 1991 Oakland Hills Fire, which burned a large suburban area in Oakland and Berkeley, California. The area abuts forested county parkland and itself has heavy, mostly nonnative vegetative cover on fire-prone slopes subject to prolonged drought. The fire burned 1,580 acres in several days, at times showing the extreme behavior associated with wildland fire blowups. It took 25 lives and destroyed some 2,700 structures, causing more than $1.68 billion in damages.

Wildland-urban interface fire includes what is more properly called wildland-rural interface fire. Homes have mushroomed since the 1970s in fire-prone rural areas nationwide, built by people from urban and suburban areas who retire to them or use them for vacations. Many are clustered near national forestlands for the recreation opportunities and amenities they offer. Moreover, under special use permits, thousands of vacation homes have been built on the National Forest System since its inception in 1905; many are inhabited year-round. Additionally, many national forests surround parcels of private property with homes.

In the 1990s, wildland-urban interface fires such as the Oakland Hills Fire graphically illustrated the destructive power of wildland fire in an urban environment. Drought conditions in Florida in 1998 produced wildland fires that affected much of the state's population; entire counties were evacuated, and firefighting resources had to be brought in from across the country. In 2000, the Cerro Grande Fire burned parts of Los Alamos, New Mexico; and the Buffalo Creek, Hi Meadow, and Bobcat Fires threatened communities in Colorado. Wildland and rural fire managers face a quandary: How can they meet traditional expectations for fire protection by a public that increasingly chooses to live in a fire-prone environment?

STATUS: The National Fire Plan includes funding for programs designed to address the wildland-urban interface, such as helping homeowners create defensible spaces around their homes and helping rural fire departments increase their capacity for fire protection in the wildland-urban interface.

WHAT'S AHEAD: Implementing the wildland-urban interface programs under the National Fire Plan.

CONTACT: Judy Kissinger, (202) 205-1094

ISSUE: Foundation Financial Information System (FFIS)

OVERVIEW: The work accomplished in FY 2000 positioned the Forest Service to have a single integrated financial system that is both Standard General Ledger (SGL) and Year 2000 compliant. Successful implementation of FFIS is critical to the Forest Service's strategy of receiving an unqualified opinion on its annual financial statement audit. An unqualified opinion will reassure the public of the Forest Service's ability to manage entrusted resources. Additionally, FFIS significantly reduces redundant activities now being done by field personnel, particularly in accounts payable, billings, accounts receivables, and collections processes.

STATUS: Year End Closing. The original schedule developed to close FY2000 in FFIS has taken longer than originally scheduled. FFIS was scheduled to have completed year-end close and be available to users by November 1, 2000. It currently is not expected to available before November 7.

The lagging completion of year-end closing in FFIS has very little to do with system failures or shortcomings. Indeed, FFIS has performed with very few problems through the whole year-end process and those that have appeared have quickly been resolved or temporary work arounds devised. The main reason for the delay in closing is the intensive research and work that Financial Management (FIN) and Planning and Budget Analysis (P&BA) are performing. We must assure that the financial records are complete and accurate financial data is available to produce the agency's financial statements and to have good beginning balances for FY2001. Since this is the first agency-wide closing we have done under FFIS, a lot had to be learned to complete this closing. Problems were also found in work that was completed earlier in the year that had to be corrected. As result of the extensive amount of research and work that had to be done, more FFIS processing cycles were needed than were planned and cycles could not be started when planned. Due to the large volume of transactions in the Forest Service FFIS application, it takes many hours to complete a processing cycle. Thus, the additional cycles have added days to our closing schedule.

Foundation Financial Information System (FFIS) Availability: FFIS has not been available during the hours scheduled for the system to be available to users. The situation developed during the last quarter of FY2000. Users have had a difficult time entering transactions into FFIS, completing analyses needed for year-end, payments have been delayed to vendors, and the Office of Inspector General (OIG) has complained FFIS unavailability has hampered the conduct of the audit of the Forest Service financial statements.

Generally, the huge volume of transactions being processed by the Forest Service has caused excessively long processing times for Forest Service nightly, weekly, and monthly cycles. These cycles are the processes to record the transactions entered into FFIS, update journals, create reports, conduct assurance tests to assure accounts are properly balanced, process transactions from Forest Service and National Finance Center (NFC) feeder systems, create backups of files, and perform other functions. These cycles cannot be run while the system is up and available to users. FFIS must be brought down and closed to users to run them. Other problems related to database management, and hardware and software issues and limitations contribute to the situation.

The Forest Service and the USDA are aggressively pursuing this issue. In September, modifications were made to the FFIS nightly cycles to increase availability to users. Put simply, the normal nightly cycle was divided into two parts. Each part is run every other night. By doing this, system availability has greatly increased to the point that the planned schedule is nearly being met.

This solution, however, is a temporary one that cannot be used indefinitely. Transactions are not being posted timely, and the potential for future larger delays is increased by the build-up of transactions that are accumulated when one part of the cycle is not run.

System availability was one of the primary issues that created the Forest Service FFIS Summit. The solutions to the issues being addressed by the Summit teams will bring the processing times of the Forest Service FFIS cycles within the parameters needed by our users. In the meantime, Financial Management

Systems will be aggressively monitoring FFIS cycles and making adjustment to schedules and individual jobs within the cycles to assure user needs and system processing needs, which include payments to vendors, are addressed.

Training: A draft letter has been posted to the FFIS Intranet Site that reflects the courses that we may be conducting in FY 2001, depending upon demand. Instructions for both the employee and the supervisor are included in the draft letter to register the needs of all users. Some of the courses we may be offering include: PRCH Interface, PCMS Interface, Travel Interface, TSA Interface, Cost Allocation, Reports – Technical Aspects and Primary Purpose. More information may be found at the following web site: http://fsweb.wo.fs.fed.us/cfo/ffis/training.html (click on the Microsoft Word document, FY2001 Financial Management Training Needs Assessment draft letter, to view additional courses and information).

WHAT'S AHEAD:

FFIS Post Implementation Assessment

A new Forest Service initiative, the FFIS Post-Implementation Assessment (PIA), is underway. The purpose of the project is to:

- Provide an objective assessment of how well FFIS is delivering intended benefits to the Forest Service.
- Identify current performance gaps and successes in order to develop a road map for future FFIS improvements.
- Review implementation history, identity lessons learned, and provide recommendations on how to improve other future Forest Service implementations.

The FFIS Post Implementation Assessment Team will be assessing both the technical and organizational performance aspects of the FFIS implementation. The FFIS specific project areas that will be reviewed in the assessment are: project management; architecture and infrastructure; financial processes/procedures/ policies; reports; interfaces; financial performance measures; system configuration/implementation; security; configuration testing; training; communications and change management; Help Desk development; conversion; production operations setup activities; pilot operations (based on FY99 pilot); suspense file management; and Collections Clearinghouse. All employees currently involved in directly accessing the system, as well as management within your units, will have an opportunity to be involved in some aspect of the assessment.

CONTACT: POC Edna Decker (703) 605-4900

ISSUE: Categorical Exclusions and Appeal Regulations

OVERVIEW: The Forest Service has identified typical classes of actions that normally do not require documentation in an environmental impact statement (EIS) or an environmental assessment (EA) (40 CFR 1507.3(b)(2), called categorical exclusions (FSH 1909.15 Chapter 30). An action may be categorically excluded from documentation in an EIS or an EA only if the proposed action falls within the categories of actions and when there are no extraordinary circumstances that may result in a significant environmental effect. Examples of extraordinary circumstances include potential threats to threatened or endangered species and wetlands.

A recent court ruling in *Heartwood v. USFS*, No. 98-CV-4289-JPG (S.D. Ill.) declared null and void all project decisions approved under the timber harvest categorical exclusion (FSH 1909.15, Chapter 30, 31.2(4)) since September 16, 1998. Units throughout the agency were directed to not use this category (Deputy Chief's 2450/1950 Memo, Oct. 1, 1999).

Presently, Forest Service appeal regulations state that decisions for actions that are categorically excluded from documentation in an EA or EIS, with the exception of the timber harvest categorical exclusion, may not be appealed (36 CFR 215.4(b)).

In a second Heartwood case, *Heartwood, Inc. v U.S. Forest Service*, Civ. No. 99-4255 (S.D. Ill. Sept. 15, 2000), the agency and plaintiff entered into a settlement agreement where the Forest Service would promulgate an interim final rule setting forth notice, comment, and appeal procedures for the following activities, even if they are categorically excluded from documentation in an EIS or EA:

1. Projects involving the use of prescribed burning;
2. Projects involving the creation or maintenance of wildlife openings;
3. The designation of travel routes for off-highway vehicle (OHV) use which is not conducted through the travel management planning process as part of the forest planning process;
4. The construction of new OHV routes and facilities intended to support OHV use;
5. The upgrading, widening, or modification of OHV routes to increase either the levels or types of use by OHV's (but not projects performed for the maintenance of existing routes);
6. The issuing or reissuing of special use permits for OHV activities conducted on areas, trails, or roads that are not designated for such activities;
7. Projects in which the cutting of trees for thinning or wildlife purposes occurs over an area greater than 5 contiguous acres;
8. Gathering geophysical data using shorthole, vibroseis, or surface charge;
9. Trenching to obtain evidence of mineralization;
10. Clearing vegetation for sight paths from areas used for mineral, energy, or geophysical investigation or support facilities for such activities.

STATUS: Notice was recently published in the *Federal Register* (65 FR 61302, Oct. 17, 2000) indicating that, pending a final rule, the agency would apply notice, comment and appeal procedures to the above actions effective October 24, 2000. This notice does not affect the agency's list of categorical exclusions. It makes certain actions subject to notice, comment, and appeal.

WHAT'S AHEAD? The timber harvest category will be removed from the handbook following a public notice and comment period beginning with a notice in the *Federal Register*. A replacement for the timber harvest category is being considered.

CONTACT: Joe Carbone (202) 205-0884

Sustaining the Forest Service Library Service--Briefing Paper to Associate Chief

ISSUE: There are **two issues**. The **first** is a strategic question of how the Forest Service manages science information, implements the NFMA planning rules and meets the needs of planners, researchers, and outside customers. The **second** issue is the immediate need to save and maintain the historical database FS INFO and acquire the systems support needed to launch it on the World Wide Web. The second issue is a subset of the first. Although both issues are corporate, they have not received proper attention, and customer service has suffered through limited access to the Forest Service's scientific information resource. The "user pay" model does not work because it does not support the infrastructure. Further, management and funding of the Library Service is decentralized, and managing it corporately for the agency is difficult.

OVERVIEW: The customer service of providing access to research literature is managed by the Forest Service Library Network of nine Libraries and a Technical Services Center. The Libraries are managed by research stations and one region-with some cost-share arrangements with Regions and the Technical Services Center by Region 8. Budget reductions in the last eight years have affected in-house library operations, especially in staffing, collections, maintenance and systems support.

STATUS: The issues have been raised on many occasions to Forest Service leadership:

- The Library Network briefed Chief and Staff (May 1998) to inform leadership and seek support for the FS INFO database. R&D submitted a budget request for the database but it was not funded.
- The Library Network made recommendations to the Chief Operating Officer in August 1999. There was no action.

The Library Network briefed the WO R&D Executive Team (WORET) in early 2000. WORET requested mid-year funding to provide a stopgap measure to restore FS INFO. The request was not funded. WORET had looked into strengthening partnerships with the National Agricultural Library and CAB International. WORET had led a FSR&D Executive Team (Green Team) discussion in September 2000 to obtain a corporate R&D understanding and to develop a strategy for long-term sustainability of a scientific information system for the Forest Service. That work is underway. WORET also approached the Ecosystem Management Coordination Staff to provide a stopgap measure for FS INFO while a long-term solution is being sought. On October 10, 2000, the Associate Chief assigned the lead to the Deputy Chief of R&D to look into these two issues and to provide her with a proposal within one week on the formation of a board of directors, funding, and equitable shares of funding among different branches of the Forest Service.

R&D Assessment of the State of the Library Service: The Library network has provided a set of statistics for this assessment. It is attached in the appendix. The Forest Service Library network is one of the Forest Service's information management assets. Currently, it is an investment of $2.2 million and about 27 FTE's. It is a highly decentralized system with a great deal of diversity in organization, funding sources, and customer needs. The diversity is shown in Table 1 on the number of positions and funding sources. Note that there is no in-house library in the Pacific Northwest save for the Library in Juneau, Alaska. Region 6 and PNW obtain "user pay" service through the NC Library. Some Libraries are cost-shared between R&D and NFS, others are entirely funded by R&D. Levels of service between libraries are highly variable. The INFO South library and the Technical Services Center are funded by R-8.

There is no question that because of funding reductions, and the effects of the "user pay" system, a number of traditional products have declined or been phased out. Table 2 lists the statistics on production of the Monthly Alert (a forestry-focused product similar to Current-Contents). Note that some Libraries are not offering the Monthly Alert and in general the service has dropped dramatically since 1998. Customer profiles have not been studied in depth. Table 3 lists the statistics on document delivery and interlibrary loan as an indicator of customer needs. The quality of the data is not consistent, but some trends are obvious. The total numbers show that three main user groups are R&D, NFS, and non FS customers. The WO and other parts of the FS constitute a small number, although they may be very important.

R&D believes that the Forest Service has not invested sufficiently to move the Library Service into the information age. As customers rely more and more on Internet access to databases, there is a need to shift corporate energy from paper products to Web-based products. There is a great need for a one-stop shopping service for scientific information. The Forest Service does not have such service. There is inadequate support from systems people. Although the database FS INFO is currently a Web version, it is still within the FS firewall and the general public cannot access it.

The R&D View: The R&D believes that the first issue (managing science information) is a strategic one that requires corporate attention to carry out the agency business. The second issue (saving FS INFO) is a subset of the bigger picture and although it requires urgent attention, due to critical funding losses for FY 2001, it should be treated in the context of the first issue. Without centralizing the funding and management structure, some degree of consistency can be accomplished with policies provided by the Deputy Chief for R&D. For example, a policy on mandatory distribution of research publications to major repositories and abstracting services is being renewed. The agency needs to commit to a corporate way to operate. R&D proposes the following:

WHAT'S AHEAD: To solve the immediate need to save FS INFO, funding "off the top" to provide a stopgap measure be taken from:

NFS	50%
R&D	25%
SPF	25%

For the long term:

1. A Board of Directors be chartered by the Chief's Office and should consist of representatives from these areas:

   R&D
   NFS
   SPF
   IRM
   Office of Communications
   A Library Network representative
   User Groups within the Agency

   The board should be balanced with headquarters and field people who understand the issues. The primary charter for the Board is to provide strategic thinking and guidance for: One-stop shopping, Internet access, wholesaling (getting information in and out) and retailing (providing services) information, and shaping the future roles and structures of the in-house library system. The Board should have access to the Forest Service leadership to provide advice and information on equitable funding formulations and to advocate for the Library Service in budget discussions and decisions.
2. Continue the Green Team approach of strengthening and building mutual relationships with other organizations that manage science information to ensure that the FS customer service is broader than in-house.
3. Consider further centralization of library functions where it makes economic and functional sense to do so.
4. Establish an accountability system so that there is consistency between a decentralized management system and corporate priorities.
5. Seek corporate decisions on:
   - What level of funding centralization is needed? Some or all?
   - What level of funding is needed for the whole library service?
   - What is equitable funding formulation? Who pays? What formula to use?

CONTACT: JoAnn Grey, (202) 205-1061

Appendix

Table 1. Positions & Funding Sources

Library	PFT's (Grades ranges from GS-1—GS-12)	Funding Sources
RMRS	5 PFT	R-1*, R-2, R-3*, R-4, RMRS, MTDC
PSW	4 PFT + .25 PFT Admin.	R-5, PSW
FPL	3 PFT	FPL
INFO South	3.125 FTE (non-FS)	R-8, SRS*, Subscribers
Alaska	2 PFT	R-10, PNW-Alaska
NE	1 PFT + .1 PFT Admin.	NE
NC	3 PFT	R-6*, R-9, NC, PNW*
Tropics	3.5 PFT	IITF
Tech. Serv. Center	2 PFT + .?? PFT Admin.	R-8 (formerly WO, IS&T)
Total	26.975 PFT + ?? Admin.	

All of the libraries make extensive use of alternative labor sources: SCSEP, Work-Study students, Volunteers, Job Corps, etc.

*This identifies units that require user pay for each individual request or provide minimal funding for limited service which inhibits FS employees in their quest for quality scientific information.

For example, Region 1 instituted user pay in FY 1999:

Region 1	Monthly Alert	Document Delivery	Literature Searches
FY 1998	5,434	127	50
FY 1999	299	30	7

Table 2. Statistics, Monthly Alert

	FY 1998 (Total: 75,547)						FY 1999 (Total: 29,944)						
Library	WO	NFS	R&D	S&PF	# F S Other	Non-FS	WO	NFS	R&D	S&PF	# F S Other	Non-FS	WO
RMRS	366	35,741	7,671	*	5,157	13,760	364	13,966	3,189	*	1,963	3,884	352
PSW		573**	153**					775	171				
FPL	No Alert service												
South		2,703	188		77	1,184		1,325	70		39	580	
Alaska	No Alert service												
NE	Not available												
NC	62	6,137	1,124	364	287	0	6	2,414	893	105	193	7	0
IITF	No Alert service												
Total	428	45,154	9,136	364	5,521	14,944	370	18,480	4,323	105	2,195	4,471	352

- For RMRS—S&PF is included with NFS

** Estimates

FS Other: Most libraries only keep detailed statistics for their geographic clientele. Service to FS customers outside that area may be lumped together in this category. It could include WO, NFS, R&D, or S&PF.

NOTE: There has been a general downward trend in Monthly Alert usage over the last couple of years. This is because of lack of sufficient funding. We have been short catalogers which significantly reduces the size of the Alerts, thus reducing the number of requests. And, we had major problems in FY 1999 (and still have problems for that matter) getting new database software to work properly and reliably. This again resulted in much fewer records available for Alerts (and other services). These problems were due to not having a trained systems administrator. In fact, we have been unable to get the database moved from the FSWeb to the WWW because of this.

Table 3. Statistics, Document Delivery/Interlibrary Loan

	FY 1998 (Total: 42,510)						FY 1999 (Total: 30,617)						
Library	WO	NFS	R&D	S&PF	# F S Other	Non-FS	WO	NFS	R&D	S&PF	# F S Other	Non-FS	WO
RMRS	116	2,032	8,300	*	38	338	475	2,680	10,528	*	15	237	46
PSW		1,649**	1,586**					1,749	1,677				
FPL	4,577 FY 1997, FY 1998 Not avail.								3,624				
South		542	338			695	1	871	213		65	1,066	1
Alaska		704	1,181					2,041	806				
NE	Not available						Not available						
NC	18	578	1,685	9	39	22	0	1,982	2,483	84	6	14	67
IITF	15	25	835		300	16,888	Not available						
Total	149	5,530	18,502	9	377	17,943	476	9,329	13,331	84	86	1,317	1,15

- For RMRS—S&PF is included with NFS

** Estimates

FS Other: Most libraries only keep detailed statistics for their geographic clientele. Service to FS customers outside that area may be lumped together in this category. It could include WO, NFS, R&D, or S&PF.

Other Statistics: All libraries provide many other services that are not easily quantifiable or not collected by more than one library. These include, for example, online training sessions, # of public drop-in customers, journal routing, reference inquiries, referral services, web services, electronic access to materials, database use, and cataloging.

Notes Regarding Statistics: Funding difficulties compounded by very large workloads has resulted in inadequate statistical tracking. We have to focus our limited time on serving our customers. Because we have different direction from our respective leadership, we all keep statistics differently to meet local interest and concerns.

ISSUE: National Website Project

OVERVIEW: The objective of the National Website Project is to develop a standard-setting Forest Service National Headquarters website that meets user needs, contains effective graphics, and can be modeled by field sites. The website will provide a clear agency identity, be simple for internal and external audiences to navigate, offer high quality information and respond to the projected growth in demand for Internet services. The need for high quality presentation and consistency, as well as organized design is mandated in USDA Departmental regulations, which the Forest Service site does not meet. The site also is not in compliance with the Americans with Disabilities Act, an issue this project will address.

A National Web Team will implement the project. The Team Leaders will be the Office of Communication, Information Resources Management and a web contractor who will provide technological expertise and facilitate the reorganization of a content intensive site. A Web Working Group consisting of representatives from deputy areas and the field will review new content and design to insure it meets the needs of their target audiences, inform the project from their own web initiatives, act as a sounding board for testing the new site and provide input on policy.

The project will be approached in four phases: 1) Planning and research–identify user groups, determine security and accessibility needs, determine technical resources needed, develop policy; 2) Content analysis–review existing content, identify areas requiring different types of content, develop new site structure and navigation, test a functioning model; 3) Graphic design–identify design criteria, develop appropriate graphic looks (2-3), gather feedback, make selection and develop templates; 4) Implementation and training–move from test to production environment, create user guides, familiarize staff to assist in maintenance and future expansion.

STATUS: Contractor bids have been solicited, and a technical evaluation team with representatives from the Washington Office and the field conducted evaluations on November 8.

WHAT'S AHEAD: A contractor will be selected and the process described above will begin.

CONTACT: Christine Murray (202) 205-1545

ISSUE: FY 2001 Budget

OVERVIEW: FY 2001 funding is included under Title II Related Agencies, Title IV Wildland Fire Emergency Appropriations, Title V Emergency Supplemental Appropriations, and Title VIII Land Conservation, Preservation and Infrastructure Improvement. Performance and accountability will continue to be the major themes for the Forest Service in FY 2001. The emphasis on these areas will be even greater than before, as the Forest Service moves forward to implement a variety of actions to enhance our financial management, to provide increased emphasis on performance outcomes and outputs, and to effectively communicate the goals of the agency and its leadership.

The most significant item for the Interior and Related Agencies Appropriations Act for FY 2001 was the major increases that Congress appropriated for dealing with the devastating fire season of 2000. The Administration submitted an amendment to its original FY 2001 President's Budget, and Congress acted on our request in conference. For the Forest Service, this resulted in substantial increases in Wildland Fire and State and Private Forestry. With the exception of the Research appropriation, all other appropriations received funding above the president's requested level. Not only has Congress appropriated large funding increases, the appropriations committees have made very clear their expectations that the land management agencies must perform, must be accountable for the funds, and should work collaboratively with state, tribal and local governments to ensure success. The managers also stated that they believe that the increased funds in FY 2001 will only be of value in increasing firefighting capability if the increases are sustained in the out years.

In addition to the increased funding for fire management, Congress also created a six-year Land Conservation, Preservation and Infrastructure Improvement Program. This was in recognition of the critical nature of land conservation and related activities, and guarantees significantly increased funding for critical land acquisition and other land protection programs. Forest Service received increases totaling $153 million for State and Private Forestry, National Forest System (NFS), Land Acquisition and Capital Improvement and Maintenance.

A simplified budget structure for the NFS appropriation was proposed in the FY 2001 budget. While Congress did not accept the proposed reduction to three budget line items, it did approve a simplified structure that better reflects the integrated nature of the work the agency routinely accomplishes and supports the work that is necessary to restore and maintain land heath while promoting ecological sustainability. Another change combines the maintenance and reconstruction/construction line items into a single line item for each of the three program areas: facilities, roads and trails. There was also a change to the appropriation title, which is now called Capital Improvement and Maintenance.

STATUS: The Forest Service budget office is working to determine how these provisions will affect future forest service plans.

WHAT'S AHEAD: Forest service managers can expect that the FY 2002 budget request will continue initiatives begun under this appropriation.

CONTACT: Susan Craft, (202) 205-1131

APPROPRIATION	FY 2000 ENACTED[1]	FY 2001 ENACTED	PERCENT CHANGE
Research	**217,694**	**229,616**	**+5%**
State and Private Forestry			
Title II	202,960	250,955	
Title IV [2]		118,274	
Title V		11,294	
Title VI [3]	5,000		
Title VIII		34,000	
Total	**202,960**	**414,523**	**0.99**
National Forest System			
Title II	1,147,951	1,280,693	
Title V		7,249	
Title VIII		20,000	
Total	**1,147,951**	**1,307,942**	**0.14**
Wild land Fire Management			
Title II	857,956	1,265,129	
Title IV [2]		501,000	
Total	**857,956**	**1,766,129**	**1.06**
Capital Improvement and Maintenance			
Title II	436,843	468,568	
Title VIII		50,000	
Total	**436,843**	**518,568**	**0.19**
Land Acquisition			
Title II	79,835	102,205	
Title VI [3]	76,000		
Title VIII		49,000	
Total	**155,835**	**151,205**	**-3%**
Other Appropriations	**26,944**	**15,195**	**-43%**
Total Discretionary Appropriations	**3,052,933**	**4,403,178**	**+44%**

1 For comparison purposes, FY 2000 adjusted to reflect primary purpose and General Administration spread among appropriations

2 All funding under Title IV was appropriated under Wildland Fire Management. State and Private Forestry funding was specified in the report at the levels shown above.

3 FY 2000 Title VI provided funds for land acquisition (Priority Land Acquisition and Land Exchanges)

ISSUE: Payments to States/Secure Rural Schools and Community Self-Determination Act of 2000

OVERVIEW: On October 20, 2000, President Clinton signed legislation to stabilize annual payments to states and counties for schools and roads. The new legislation breaks a 92-year-old link between Forest Service payments to states and revenues collected from the sale and use of a variety of national forest products and services. It also creates citizen advisory committees and gives local communities the choice to fund restoration projects on federal lands or in counties.

Legislation passed in 1908 required that 25 percent of Forest Service revenues from commodity receipts be returned to states in which national forest lands are located. The states then transferred these payments to counties for upkeep and maintenance of public schools and roads.

The new legislation–entitled "Secure Rural Schools and Community Self-Determination Act of 2000" -- is based on a new payment formula that stabilizes payment levels to their historic high. The new formula is based on averaging a state's three highest payments between 1986 through 1999 to arrive at a compensation allotment or "full payment amount." Counties may choose to continue to receive payments under the 25 percent fund, or to receive the county's proportionate share of the state's full payment amount. If a county chooses the 25 percent fund, then every two years those counties have to choose to continue to receive a payment based on that fund or to receive a payment based on the State's full payment amount. Once a county chooses a payment based on the State's full payment amount, they will receive this payment for all subsequent years through FY 2006.

The legislation's creation of citizen advisory committees gives local communities the choice to fund restoration projects on federal lands or in counties. For the federal projects, a resource advisory committee recommends projects to the Secretary. The Secretary of the specific project's Agency makes project decisions. Anyone can propose projects to the resource advisory committee. With county projects, the resource advisory committee is advisory only. The county makes county project decisions.

STATUS: Implementation of payments to states relative to this legislation is under review. In addition, the Forest Service currently has no agency-wide resource advisory committee structure in place to review projects or for any other purpose. For the most part, the agency has established committees as directed by statute or Presidential order for narrowly defined purposes such as the Opal Creek Scenic Recreation Area Advisory Council, special purpose committees such as the Fixed Anchors in Wilderness Negotiated Rulemaking Committee, and discretionary committees such as the 12 President's Forest Plan Provincial Advisory Committees (PACs). The purpose and membership of existing agency committees coming closest to the membership interests set forth in the Act are a weak match. The BLM has a system of regional advisory committees in the West, deemed by the Act to meet its committee requirements, which, if BLM agrees, can be used by nearby forest units. Each committee will need a designated federal officer (usually a forest supervisor or district ranger) as the responsible official and a staff person who acts as the committee executive. PAC committee staff members estimated staff support for their committees ranged from 15 to 60 percent of a staff year for FY 1999. PAO participation in committee management varies.

WHAT'S AHEAD: The Forest Service will research the legislation's language and develop implementation plans. First payments using the new payment formula will occur October 2001. In addition, the agency will establish a broad resource advisory committee structure similar to the BLM committee system in areas where no committee structure now exists. That committee structure, which will incorporate established committees wherever possible, has not yet been determined, but the impact on forest units supporting resource advisory committees will be substantial. The network of advisory committees must be established in 180 days.

CONTACT: Tom Tidwell, (202) 202-0970 or Doris Celarier, 202-205-1020

ISSUE: Final Planning Rule

OVERVIEW: The Final Planning Rule emphasizes three elements: sustainability, collaboration and science. The collaborative component of the rule will have the greatest impact on the Forest Service's public affairs professionals. Under the Planning Rule, to promote sustainability the responsible official must actively engage the American public, interested organizations, private landowners, state, local, and Tribal governments, federal agencies and others in the stewardship of National Forest System lands. The rule requires the official to provide early and frequent opportunities for people to participate openly and meaningfully in planning.

The responsible official may seek assistance or advice from a committee, consistent with the requirements of the Federal Advisory Committee Act (FACA). Each Forest or Grassland Supervisor must have access to an advisory committee with knowledge of local conditions and issues, although an advisory committee is not required for each national forest or grassland. Advisory committees used by other agencies may be utilized through proper agreements.

The Final Planning Rule also provides for independent scientific review during the revision process to determine if land and resource management plans are meeting sustainability goals. Scientists from a broad range of disciplines and institutions may be involved in the planning process in a variety of roles and relationships. The public will have more opportunities to interact with scientists during the planning process.

The Final Planning Rule calls for establishing science advisory boards, independent scientific review to determine if land management plans meet sustainability goals, and, when appropriate, science consistency evaluations to determine whether the planning process is consistent with the best available science. These committees may need authorization under FACA.

STATUS: The Final Planning Rule has been signed and was published November 9 in the *Federal Register*.

WHAT'S AHEAD: Existing land and resource management plans will remain in affect until amended or revised. In-process amendments or revisions must be completed within six month's of the Rule's signing, or the new rule will apply.

CONTACT: Linda Parker (202) 205-1151

ISSUE: Forest Service Recruitment Strategy

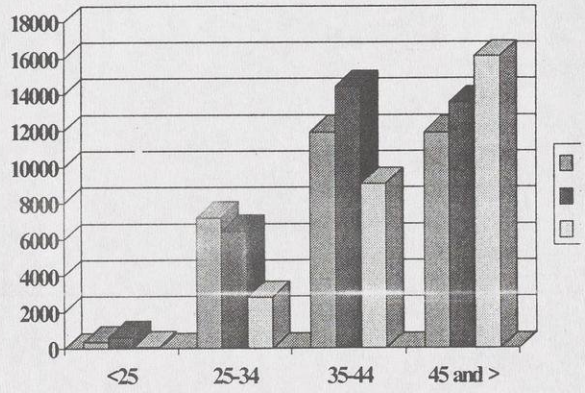
OVERVIEW: According to NAPA's Forest Service workforce plan, there was a 35-40 percent reduction in agency-wide numbers of Foresters, Engineering Technicians, Civil Engineers, and Contractors from 1992-1999. At the same time, the Forest Service's workforce has continued to age. In 1999, more than 16,000 of the 28,000-plus total permanent employees were age 45 or older and nearing retirement. Research also showed that the Forest Service's diversity profile needs strengthening. Minority employees make up about 16 percent of the total Forest Service workforce as compared to a national norm of 23 percent. Women comprise 39 percent of the total Forest Service workforce, compared with the national norm of 47 percent. Statistics like these require the Forest Service to focus on hiring more diverse individuals and meeting the changing skill needs.

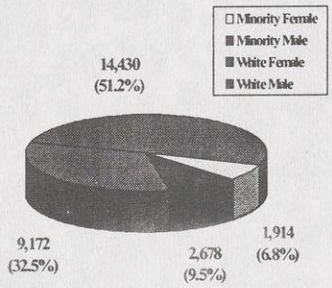
STATUS: The purpose of the Forest Service National Recruitment Strategy is to guide corporate hiring of individuals that meet skill and diversity needs consistent with mission objectives. To address the needs of the Forest Service's workforce for the next five years, the National Academy of Public Administration (NAPA) submitted a U.S. Forest Service Workforce Plan in November of 1999. In that plan, NAPA recommended developing a strategic recruitment plan that identifies "actions necessary to acquire and/or develop a workforce that meets changing mission priorities." This desired workforce would reflect concerns contained in the service's Natural Resources Agenda, the Forest Service strategic plan, and the agency's statement of diversity goals. In a February 2, 2000, letter, the Forest Service's chief operating officer, Phil Janik, directed that the NAPA recommendations be implemented. This Corporate Recruitment Strategy was completed in June 2000.

Age Profile FS-Wide

FS Permanent Work Force

WHAT'S AHEAD: The Corporate Recruitment Str
January 2001.





ce intranet at

ISSUE: Stewardship Contracting Pilot Projects

OVERVIEW: Over the past several years, the Forest Service has been collaborating with local community groups, the environmental community and others, to develop new ways to more effectively and efficiently implement the vegetative treatments needed to accomplish important forest restoration and ecosystem health objectives on National Forest System lands. Oftentimes these treatments necessitate working with material that, because of its size or species, is of relatively little economic value. Agency experience suggests that our traditional administrative tools for managing vegetation, i.e., the standard timber sale and service contracts, are often not well suited to handling such material. Stewardship contracting is perceived as a possible way of overcoming some of our current problems. Stewardship contracting is usually viewed as entailing: 1) multi-year, multi-function procurements, 2) an end-results orientation, 3) increased collaboration with local community group and other interested stakeholders, and 4) the exchange of goods (e.g., timber values) for services rendered. In October 1998, Congress authorized up to 28 stewardship end-results demonstration contracts.

STATUS: There are approximately 37 current stewardship pilot projects underway, with at least one in each region.

WHAT'S AHEAD: As authorized by Congress in October 2000, the Forest Service will implement up to 28 additional stewardship contracting pilot projects, at least nine of which are to be in Region 1, and three in Region 6.

CONTACT: Cliff Hickman (202) 205-1162

ISSUE: Forest Service Strategic Plan 2000 Revision

OVERVIEW: The 2000 Revision to the Forest Service Strategic Plan is mission driven. It outlines long-term goals and objectives that set the course and provide the guidance for the Forest Service contribution to forest and grassland sustainability in North America and around the world. The goals and objectives provide the broad view of what outcomes the agency plans to pursue. The Revision focuses on outcomes or results to be achieved over a period of time, typically longer than one or two years. The Revision includes strategies for each long-term objective that point to the types of actions the Forest Service must pursue in order to achieve the objective.

The four goals of the Strategic Plan 2000 Revision are:

- Ecosystem Health–Promote ecosystem health and conservation using a collaborative approach to sustain the nation's forests, grasslands, and watersheds.
- Multiple Benefits to People–Provide a variety of uses, values, products, and services for present and future generations by managing within the capability of sustainable ecosystems.
- Scientific and Technical Assistance–Develop and use the best scientific information available to deliver technical and community assistance and to support ecological, economic, and social sustainability.
- Effective Public Service–Ensure the acquisition and use of an appropriate corporate infrastructure to enable the efficient delivery of a variety of uses.

STATUS: The Strategic Plan Revision 2000 is on the Internet at: http://www.fs.fed.us/plan/stratplan.pdf.

WHAT'S AHEAD: The Strategic Plan Revision 2000 provides the foundation for Forest Service land management decisions. Annual performance plans will address specific management actions and investments needed to ensure progress toward the goals and objectives. The performance plans will reflect local needs identified in resource management plans for national forests and grasslands, as well as plans for research and assistance to tribal governments, states, and communities.

CONTACT: Nancy Osborne (202) 205-1292

ISSUE: National Publications Process

OVERVIEW: Over the past few years, many field units have become involved in the publishing of national publications. National publications, as defined in both Departmental and Forest Service regulations, are those intended for distribution nationwide or across a single agency geographic boundary.

The process for producing national publications is set by the Department and has some requirements and standards not applicable to regional/station publications. Of utmost importance are the requirements for Departmental editorial and design review and Departmental approval of special requirements such as multicolor printing, special paper, etc. The requirements call for USDA editorial review of double-spaced text BEFORE design has begun and for design to either follow the USDA Visual Management Manual or to be performed by the USDA Design Center. If the design is created by other than USDA and varies from the Visual Management Manual, it must have USDA design approval.

STATUS: Currently, there are many national publications being produced in the field that are not following regulations. Some are being printed without ever being brought to the attention of the WO-OC, and those that are brought to our attention arrive "ready to print" although they haven't had USDA editorial review and do not follow design standards. This adds additional time, effort, and often funding, as the document has to be corrected or redesigned to meet standards. In many cases, the people designing the publication have no knowledge of the USDA standards and many times have no design experience at all.

WHAT'S AHEAD: USDA has been less lenient than in the past regarding giving approval for designs outside of the standards, and with good reason. A large percentage of the "ready-to-print" publications we are receiving are not printable. Images are low resolution, disks are incomplete, graphics are embedded in files and cannot be manipulated, etc. By the time it gets to USDA, we are often in a crisis mode to get a printable document in a limited timeframe--resulting in rush charges and, often, second-rate products.

WO-OC needs field office help to ensure that national publications follow the process from the beginning and are in keeping with USDA design and editing standards. We welcome the field assistance on the multitude of jobs, but need everyone to be working within the bounds of the same regulations.

CONTACT: Mary Jane Senter, (202) 205-1719

ISSUE: Public Affairs Development Guide

OVERVIEW: There is a new a professional development guide for public affairs professionals to use in the agency. A Public Affairs (PA) Development Guide has been developed specially for the 1035 series to meet three needs, 1. To give line and unit managers a perspective of what public affairs professional can provide them and, 2. What are the tools public affairs professionals need to meet the 1035 series core competencies. 3. Provide training resources to meet needed core competencies short falls.

STATUS: The PA Guide was mailed to all regional and station public affairs directors who will then distribute them within their office and send to field public affairs employees.

WHAT'S AHEAD: This PA Guide is a living document that will be updated and revised as changes take place in the public affairs profession and as training needs change..

CONTACT: David Widmark (503) 665-2139

ISSUE: Public Affairs Online Training Opportunities

OVERVIEW: Providing specialized public affairs training to our public affairs employees can be costly. Therefore, we are working with the Corporate Training staff to see what training opportunities exist online to meet the core competency training requirements.

The first generation of training opportunities both online and in a classroom setting has been compiled. The training catalog lists training vendors, their websites, cost, what core competency the training meets and if the training is provided online.

STATUS: Our training catalog went online in early November 7, 2000, it can be found in the Office of Communication Public Affairs Development website under TRAINING. An announcement has been sent to all public affairs employees informing them of its availability.

WHAT'S AHEAD: As more training opportunities and options become available they will be noted in the In the Loop newsletter and posted to the online training catalog.

CONTACT: David Widmark (505) 665-2139

ISSUE: Recreation Fee Demonstration Program

OVERVIEW: Congress established the Recreation Fee Demonstration Program in 1996 and the program allows the Forest Service and other federal land agencies to test up to 100 recreation fee demonstration projects per agency. It calls for testing various ways to benefit visitors to public lands by providing funds needed to maintain and improve recreation facilities, services and resources. Congress required that at least 80 percent of fees collected be spent on recreation projects on the public lands where they are collected

Recreation fees supplement appropriated funds that have remained relatively flat, and have not kept pace with the increasing needs of visitors. Recreation fees help to provide the clean, enjoyable facilities and experiences the visiting public deserves, and to reduce the more than $1 billion backlog in recreation maintenance. More than $80 million in fees have been collected thus far for recreation needs with 95 percent of the fees invested at the national forests where they were collected

STATUS: Congress has extended the program through September 2002, and efforts are under way to authorize a permanent recreation fee program. 90 Forest Service projects had been initiated through May 2000, with 100 total anticipated by the end of FY 2001.

WHAT'S AHEAD: The Forest Service supports attempts in Congress to make recreation fees permanent. With a new Congress in January 2001, the level of support for permanent fees remains to be seen. The Forest Service will continue to establish recreation fee demonstration projects. Project fee levels and administration will evaluate and adjusted as needed as part of ongoing efforts to make it easier for the public to pay the fees.

CONTACT: Greg Super (202) 205-1398

ISSUE: Recreation Agenda

OVERVIEW: To cope with the continuing increase in visitors to national forest lands and to help ensure a safe, enjoyable experience for visitors while working within the limits of the land, the Recreation, Heritage, and Wilderness Resources staff created a Recreation Agenda. The agenda is an internal road map for conducting the agency's recreation business. It flows logically from the Natural Resource Agenda and the Agency Strategic Plan.

The agenda changes how the Forest Service defines and conducts its recreation business. It calls for improved application of social science to recreation, greater customer focus, expanded revenue, better management of resources and partnership relations, vital information management, recreation experience enhancement, and conservation of ecosystem.

To help craft the agenda, the Forest Service held a National Recreation Summit in October 1999. Representatives of environmental groups, the recreation industry, individual recreation users, and the government were invited to review a draft Recreation Agenda and suggest modifications. Then, 14 regional recreation summits were held across the country to solicit additional input from interested groups and individuals. A second national summit was held in June 2000, with attendance mirroring that of the first national summit. Attendees were given 60 days to suggest any final modifications to the Recreation Agenda before the Forest Service completed and released the agenda.

STATUS: The Recreation Agenda was unveiled at the National Trails Symposium, Redding, Calif., Sept. 22, 2000. An implementation plan is being drafted.

WHAT'S AHEAD: Each year through 2006, recreation management will develop a specific, annual recreation action plan with clear objectives, specific projects, timelines, and proposed future budgets to address each of the emphasis areas.

The agenda is a road map to guide Forest Service recreation programs into the future. The plan consists of changes to how we do business and much of it will not require increased funding beyond what is normally provided for recreation. As appropriate, and if necessary, recreation fund increases will be requested during normal budget processes. In addition, recreation fee demonstration funds and other tools will help with implementation of the agenda.

CONTACT: Dick Paterson (202) 205-1358

ISSUE: Road Management Policy

OVERVIEW: The Forest Service road system is extensive, including more than 380,000 miles of official roads. Roads are essential for public use and enjoyment of the National Forest System. An estimated 1.7 million recreational vehicles use the forest roads every day--10 times more than in 1950. In contrast, an estimated 1.7 million recreational vehicles use the forest roads every day--10 times more than in 1950. Recreation use of the national forests and grasslands is projected to continue to increase.

Current funding is inadequate to manage the forest road system. Less than 20 percent of forest roads are fully maintained to planned safety and environmental standards. The backlog of reconstruction on forest roads is estimated to be more than $8.4 billion due to inadequate regular maintenance. Funding for decommissioning roads this decade has only financed a reduction of one-half of one percent of the forest roads per year--far less than needed.

STATUS: In February 1999, the Forest Service announced an interim rule that temporarily suspended road construction and reconstruction in certain unroaded areas on national forests and grasslands. The interim rule gave the agency no more than 18 months (September 1, 2000) to draft a new road management policy and to develop new analytical tools.

A proposed policy, which was released in March 2000, was designed to rely heavily upon scientific analysis and public involvement at the local level. The agency held a 60-day public comment period with a 15-day extension and received more than 5,800 letters during the comment period. More than 5, 800 letters were received during the comment period. Issues included public access, environmental effects of road building and definitions.

WHAT'S AHEAD: The Forest Service expects to release the final policy in early December.

CONTACT: Heidi Valetkevitch, Office of Communication, (202) 205-0914

ISSUE: Unified Federal Policy for Watershed Management

OVERVIEW: The Unified Federal Policy for Watershed Management (UFP) joins federal land management agencies in a watershed approach to land and resource management. It provides a framework to help ensure that federal land and resource management demonstrates good stewardship and protects the health of federally managed watersheds and aquatic ecosystems.

The UFP has two primary goals: 1) to reduce and prevent any pollution of surface and ground water caused by runoff from federally managed lands through a unified approach to watershed management; and 2) federal agencies will join in cost-effective management of basic land, resources, and facilities as models of good stewardship and effective watershed management. Eight federal departments and agencies have signed the UFP.

STATUS: The UFP was released in October 2000 after the final signatures of the eight federal departments and agencies signed to policy. It is available on the Internet at http://www.cleanwater.gov/ufp.

WHAT'S NEXT: The next step is to implement the UFP through enhanced collaboration among federal agencies, states, tribes, private landowners and interested stakeholders. Federal land management agencies will work with these stakeholders to identify priority watersheds on which to focus budgetary and other resources.

CONTACT: Karen Solari (202) 205-0879

ISSUE: Watershed Protection and Restoration

OVERVIEW: The first priority of the Forest Service is to maintain and restore health of our watersheds. They are the basis for ecological health, forest health, and sustainable resources uses. Our objective is to protect our healthiest watersheds and restore the ecological integrity of those where it has been disrupted. Healthy, properly functioning watersheds are resilient in the face of natural events such as floods, fire, and drought and are more capable of absorbing the effects of human-induced disturbances. Watersheds absorb rain and recharge underground aquifers. They provide wildlife and fish habitat and connect headwaters to downstream areas, and wetlands and riparian areas to uplands. Healthy watersheds dissipate floods across flood plains, increase soil fertility and minimizing damage to lives, property, and streams. They reduce drinking water treatment costs and increase reservoir storage life. How we manage our forests and rangelands has a profound effect on the quality of our watersheds.

STATUS: Most watersheds in our nation's forests and grasslands are healthy, supporting a variety of thriving ecosystems. In some areas, however, watersheds have deteriorated. Symptoms of poor health include declining water quality, increasing insect and disease outbreaks, and decreasing stocks of native fish and wildlife.

WHAT'S AHEAD: Consistent with the Organic Act, watershed health and restoration remain the oldest and highest calling of the Forest Service:

- We will continue to make watershed health the overriding objective of National Forest and Grassland management.
- We will conduct watershed assessments to provide a better understanding of the effects of land management decisions on watershed condition.
- We will use a watershed approach to prevent and reduce pollution of surface and ground waters from our land and resource management activities.
- Recognizing the essential contribution of National Forests and Grasslands to public sources of drinking water, we will work with the states to identify and map each community that depends on national forests for their drinking water supply and estimate how many people each system serves.
- We will also assess each of our relevant forest plans to ensure they provide adequate protection to drinking water supplies.
- We will work with federal, state, and local agencies, tribal governments, and interested stakeholders to identify priority watersheds to focus budgetary and other resources.
- We will continue to strengthen our compliance with water quality requirements of the Clean Water Act and will provide technical assistance to the states and tribes in their development of Total Maximum Daily Loads for National Forest System lands.

For additional information: http://www.fs.fed.us/largewatershedprojects

CONTACT: Melody Mobley (202) 205-0999

ISSUE: Grizzly Reintroduction in the Bitterroot Mountains

OVERVIEW: The U.S. Fish and Wildlife Service (FWS) has completed the planning process for reintroducing grizzly bears into the Bitterroot Mountains of Idaho and Montana. Under the plan, the FWS will introduce a minimum of 25 bears over five years into the 5,785 square miles of the Selway-Bitterroot and Frank Church-River of No Return Wildernesses. The wilderness areas are surrounded by more than 15,000 square miles of additional public land. The recovery goal for the Bitterroots ecosystem is about 280 grizzly bears in 50 to 100 years.

An estimated 50,000 grizzly bears lived in the contiguous United States prior to European settlement. Grizzlies have been eliminated from about 98 percent of their historic range in the lower 48 states. Today, about 1,000 to 1,100 bears remain in five scattered populations in Idaho, Montana, Washington and Wyoming. Only two of the populations have more than 50 bears.

The grizzly bear is native to the Bitterroots and was once common there. After more than a century of persecution, the last Bitterroots grizzlies were killed in the 1940s. Of all remaining unoccupied grizzly habitat in the lower 48 States, the wilderness area in the Bitterroots has the best potential for grizzly recovery. This area has high-quality grizzly habitat; it is also the largest block of wilderness in the Rocky Mountains south of Canada.

Traditionally, the Forest Service has managed national forest habitat for wildlife and fish, leaving population management, including reintroductions, up to state and other federal agencies (such as FWS). Challenges for the Forest Service in the Bitterroots will include sustaining grizzly habitat (for example, through wildland fire use to stimulate berry production); helping to manage grizzly encounters with humans and livestock; and helping to address deep-rooted, culturally ingrained public fears through educational programs.

STATUS: The FWS published a final rule in the *Federal Register* on November 17, 2000. The reintroduced bears are to be designated as a nonessential, experimental population to allow management flexibility. The bears will be radio-collared and monitored. If they act aggressively toward humans or attack livestock, they will be relocated or destroyed.

WHAT'S AHEAD: Reintroduction will not begin for one year, during which a 15-member Citizen Management Committee will be formed to guide the process. The committee will include a cross-section of local citizens and agency representatives from federal and state agencies and the Nez Perce Tribe. Before reintroduction begins, the FWS and Forest Service will conduct public outreach and information/education programs, together with a sanitation program to install bear-proof garbage storage containers in campgrounds and facilities in and around the wilderness areas.

CONTACT: Brad Marman, (202) 205-1718

ISSUE: Wolf Reintroduction

OVERVIEW: Once hunted nearly to extinction, the wolf has been reintroduced in several parts of the United States by the U.S. Fish and Wildlife Service. The red wolf, native in the Southeast, has been reintroduced on national forests in eastern Tennessee and North Carolina; the gray wolf, native throughout most of the North and West, has been reintroduced onto national forests in the Southwest, the northern Rockies, and the Great Lakes region. There is potential for wolf recovery in some areas of the Northeast, where suitable habitat and prey species remain.

There are about 2,500 gray wolves in the Great Lakes area, primarily in Minnesota, Michigan, and Wisconsin, which exceeds the number established as the recovery goal set for the species in this region. The northern Rockies have about 235 wolves, including about 85 naturally occurring animals in northwestern Montana and about 150 reintroduced wolves in Yellowstone National Park and central Idaho. The reintroduced wolves have been nearly doubling their population annually. Wolf conservation and recovery in the Southwest took a major step forward in spring 2000 with the release of captive-bred Mexican wolves in Arizona and New Mexico.

A wildlife conservation foundation set up by Ted Turner, who owns more than a million acres of ranchland and other tracts nationwide, has proposed reintroducing wolves in the central Rockies to eventually help link wolf populations in the northern Rockies with those in the Southwest. The foundation has offered to play the traditional reintroduction role of the Fish and Wildlife Service, releasing the animals and managing the population, with the Forest Service and Bureau of Land Management furnishing most of the habitat.

Wolf recovery depends on restoration of prey species such as deer, elk, and moose; science-based management; and habitat and legal protection. Traditionally, the Forest Service has managed national forest habitat for wildlife and fish, leaving population management, including reintroductions, up to state and other federal agencies. Challenges for the Forest Service in wolf reintroduction include sustaining habitat (for example, through fire use to stimulate forage for prey species); helping to manage wolf encounters with humans and livestock; and helping to address deep-rooted, culturally ingrained public fears through educational programs.

STATUS: In Minnesota, successful wolf recovery has led to delisting; in the Southwest, released individuals have been shot and program success is in doubt. The reintroduced wolves in the Southwest and northern Rockies were designated as a nonessential, experimental population to allow management flexibility. The wolves are radio-collared and monitored. If they act aggressively toward humans or attack livestock, they can be relocated or destroyed.

WHAT'S AHEAD: Continued monitoring, along with mediation and educational programs. Consultations with the states and others on the Turner Foundation proposal for wolf reintroduction on the national forests in the central Rockies.

CONTACT: Brad Marman, (202) 205-1718