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A Vision for Yellowstone's Forests

John Mumma

Paul Grigsby

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ARTICLES

A VISION FOR YELLOWSTONE'S FORESTS

John Mumma*

Paul Grigsby**

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* Former Regional Forester for the Northern Region of the U.S. Forest Service; former Forest Supervisor of the Shoshone National Forest; former Regional Director of Range, Wildlife, Fisheries, and Ecology in the Rocky Mountain Region; former Regional Wildlife, Fish and Ecology Director for the Intermountain Region. Experience in the Greater Yellowstone Area spans over twenty years. Served on the Greater Yellowstone Coordinating Committee during the development of the draft *Vision For the Future, A Framework for Coordination of National Parks and National Forests in the Greater Yellowstone Area*, and *The Greater Yellowstone Area: An Aggregation of National Park and National Forest Management Plans*; served on the Interagency Grizzly Bear Committee.

** University of Montana School of Law, J.D. expected 1995.

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I. INTRODUCTION

The Greater Yellowstone Ecosystem has been described as one of the "crown jewels" of America's protected areas.¹ The nearly fourteen million-acre ecosystem constitutes one of the Earth's largest intact natural ecosystems and overlaps the borders of three states: Wyoming, Idaho, and Montana.² Ninety percent of the Greater Yellowstone Area is administered by federal agencies including the United States Forest Service, National Park Service, United States Bureau of Land Management, United States Fish and Wildlife Service, and the United States Bureau of Reclamation.³

The Forest Service administers ten million acres of the Greater Yellowstone Area. The Forest Service divides these ten million acres among three regions and six national forests.⁴ Each region operates under a different set of management policies. The Northern Region encompasses the Beaverhead, Custer, and Gallatin National Forests. The Intermountain Region encompasses the Targhee and Bridger-Teton National Forests. The Rocky Mountain Region encompasses the Shoshone National Forest.

The Greater Yellowstone Area has played an important role in the history of both the Forest Service and the Park Service.⁵ In 1872, Congress designated Yellowstone as the country's first national park.⁶ In response to concern over the depletion of resources on federal lands, Congress

1. CONGRESSIONAL RESEARCH SERV., LIBRARY OF CONGRESS, GREATER YELLOWSTONE ECOSYSTEM: AN ANALYSIS OF DATA SUBMITTED BY FEDERAL AND STATE AGENCIES, 99th Cong., 2d Sess. 7 (Comm. Print 1986) [hereinafter CRS REPORT]. This article uses the term Greater Yellowstone Area because of its pervasive use in agency documents and publications.

2. Robert B. Keiter, *Taking Account of the Ecosystem on the Public Domain: Law and Ecology in Yellowstone*, 60 U. COLO. L. REV. 923, 927 (1989).

3. U.S. FOREST SERV., DEP'T OF AGRIC. & U.S. NAT'L PARK SERV., DEP'T OF INTERIOR, THE GREATER YELLOWSTONE AREA: AN AGGREGATION OF NATIONAL PARK AND NATIONAL FOREST MANAGEMENT PLANS 2-8 (1987) [hereinafter AGGREGATION REPORT].

4. *Id.*

5. *Id.* at 2-2.

6. Yellowstone was not only the country's first national park but also the world's. CHARLES F. WILKINSON, *CROSSING THE NEXT MERIDIAN* 153 (1992).

established the Yellowstone Timber Land Reserve in 1891.⁷ In 1902, Congress expanded the reserve and renamed it the Yellowstone Forest Reserve.⁸ In 1907, Congress designated the lands in the Yellowstone Forest Reserve as national forests.⁹ The Shoshone National Forest and portions of the Targhee and Bridger-Teton National Forests now comprise what were the first national forests.¹⁰ Thus, the Greater Yellowstone Area contains both the first national forest and the first national park.

Congress' designation of the lands surrounding Yellowstone Park as reserves effectively split the Greater Yellowstone Area ecosystem between two unconnected agencies whose underlying management philosophies are fundamentally different.¹¹ By the early 1960s, the separate missions of¹² and lack of coordination between the Park Service and the Forest Service had become acute enough to be officially addressed.¹³ Subsequently, the Park Service and the Forest Service formed the Greater Yellowstone Coordinating Committee to address these problems,¹⁴ and two congressional subcommittees initiated studies, reports, and guidelines.¹⁵ These studies and documents identified and addressed the problems of managing an ecosystem artificially split by administrative boundaries. The problems identified in this stream of reports—uncoordinated management between the agencies within the Greater Yellowstone Area, inadequate data, and jurisdictional lines that do not correspond to ecosystems—persist today.¹⁶ Neither the interagency boundaries nor the intra-agency boundaries

7. AGGREGATION REPORT, *supra* note 3, at 2-2.

8. *Id.*

9. *Id.* at 2-2, 2-3.

10. *Id.* at 2-2.

11. *Id.* at 1-1 to 1-2.

12. "[P]rinciples of preservation, public enjoyment and non-interference with natural processes" guide administration of the national parks, while conservation principles should guide administration of the national forests while providing for multiple uses. *Id.* at 1-1.

13. A 1964 Park Service and Forest Service agreement, known as the "Treaty of the Potomac," pledged mutual commitment to carry out management activities in a coordinated manner. See Memorandum from William Penn Mott, Jr., Director of the National Park Service and R. Max Peterson, Chief of the Forest Service, to Park Service Regional Directors and Forest Service Regional Foresters I (Dec. 16, 1985) (discussing the "Treaty of the Potomac") (on file with the *Public Land Law Review*).

14. AGGREGATION REPORT, *supra* note 3, at 1-1; U.S. FOREST SERV., DEP'T OF AGRIC. & U.S. NAT'L PARK SERV., DEP'T OF INTERIOR, VISION FOR THE FUTURE: A FRAMEWORK FOR COORDINATION IN THE GREATER YELLOWSTONE AREA-DRAFT 1-3, 1-5 (1990) [hereinafter VISION FOR THE FUTURE].

15. See, e.g., VISION FOR THE FUTURE, *supra* note 14; AGGREGATION REPORT, *supra* note 3; CRS REPORT, *supra* note 1.

16. Representative George Miller's summary of the May 16, 1993 Workshop on Northern Rockies Ecosystems identifies each of these problems. Letter from Representative George Miller, Chairman of House Committee on Natural Resources, to Committee Members (May 25, 1993) (on file with the *Public Land Law Review*).

reflect the realities of the Greater Yellowstone Area ecosystem.¹⁷

The draft document, *Vision for the Future: A Framework for Coordination in the Greater Yellowstone Area (Vision for the Future)*, a far-reaching and progressive Greater Yellowstone Coordinating Committee effort, called for the agencies in the Greater Yellowstone Area to "Conserve the Sense of Naturalness and Maintain [the Greater Yellowstone Area] Ecosystem Integrity."¹⁸ The *Vision for the Future* espoused sound ecosystem principles ahead of its time. However, it did not survive final agency approval intact. Political manipulation on the part of commodity resource interests and western Congressmen diluted the 1991 final draft retitled, *A Framework for Coordination of National Parks and National Forests in the Greater Yellowstone Area (Framework for Coordination)*.¹⁹ The concepts of the draft *Vision for the Future*, however, did not die because recent political efforts and Forest Service policy changes have carried them forward. On May 25, 1993, Representative George Miller, chairman of the House Committee on Natural Resources, stated that "[c]oordinated and comprehensive management, which is ecologically and scientifically credible, is highly desirable to achieve the end initially anticipated in the protection of lands, wildlife and other resources."²⁰ In 1992, the Chief of the Forest Service mandated that the national forests implement ecosystem management. The Clinton Administration's National Performance Review has designated the Forest Service a "reinvention laboratory."²¹ Reinventing the Forest Service to effectuate meaningful ecosystem management and to avoid "business as usual" requires bold moves by Congress and the Forest Service itself.²²

This article proposes an administrative reorganization of the Greater Yellowstone Area national forests that would accomplish these goals and

17. CRS REPORT, *supra* note 1, at 10.

18. VISION FOR THE FUTURE, *supra* note 14, at 3-7.

19. U.S. FOREST SERV., U.S. DEP'T OF AGRIC., U.S. NAT'L PARK SERV., DEP'T OF THE INTERIOR, A FRAMEWORK FOR COORDINATION OF NATIONAL PARKS AND NATIONAL FORESTS IN THE GREATER YELLOWSTONE AREA (1991) [hereinafter FRAMEWORK FOR COORDINATION].

20. George Miller letter, *supra* note 16.

21. *Reform of the Forest Service: Joint oversight hearing before the Subcomm. on National Parks, Forests and Public Lands and Subcomm. on Oversight and Investigations of the House Comm. on Natural Resources*, 103d Cong., 2d Sess. 11 (1994) (statement of Dr. Jack Ward Thomas, Chief, U.S. Forest Serv., U.S. Dep't of Agric.) [hereinafter *Reform Hearing*]. The current rhetoric emanating from high level Department of Agriculture and Forest Service officials concerning ecosystem management and the new goal of "reinventing the Forest Service" place the Forest Service in the perfect position to make substantive organizational changes. *Id.* (statements of Jim Lyons, Assistant Secretary for Natural Resources and Environment, Dep't of Agric. and Dr. Jack Ward Thomas).

22. George Miller noted that the Workshop on Northern Rockies Ecosystems' participants agreed "that relying only on *voluntary compliance* will assure the continuation of 'business as usual' within and among the agencies." George Miller letter, *supra* note 16.

foster successful implementation of ecosystem management. A favorable political climate, a trend of ecosystem projects, and the recent "reinvention" efforts support reorganizing the Greater Yellowstone Area national forests to conform to the structure of the Greater Yellowstone Area ecosystem.

Section II addresses the history of coordination and ecosystem management issues in the Greater Yellowstone Area and examines the 1986 Congressional Research Service report (*CRS Report*), the Greater Yellowstone Coordinating Committee's *An Aggregation of National Park and National Forest Management Plans* (*Aggregation Report*), *Vision for the Future* and *Framework for Coordination* to highlight the need for better intra-agency coordination in the Greater Yellowstone Area. Section II begins with the creation of the Greater Yellowstone Coordinating Committee, before the passage of the National Forest Management Act (NFMA),²³ and continues to the emergence of ecosystem management as a Forest Service planning policy in 1992.

Section III provides an overview of the principles of ecosystem management and identifies the link between ecosystem management and coordination. Section IV tracks Forest Service implementation of ecosystem management in the Greater Yellowstone Area. Section V suggests that the national trend of ecosystem management and the policy of the current Administration provide an atmosphere conducive to organizational change of the national forests.

Section VI proposes an administrative organization for the national forests of the Greater Yellowstone Area which would serve as a model for other ecosystems. The organizational structure this article proposes would mirror the Greater Yellowstone Area ecosystem and foster implementation of ecosystem management. We believe that the proposal is bold, timely, and necessary. The basic tools are in place and it is now up to the Forest Service administration to take the steps necessary for implementing a creative organization for the future. Failure to do so would be a great disservice to the Greater Yellowstone Area.

Historical, administrative, political, and legal factors have significant influence on the greater Yellowstone Ecosystem. These factors have lined up to create an atmosphere conducive to change. Ecosystem management is the driving force to effectuate the change. Additionally, the dire need for interagency and intra-agency coordination interacts with ecosystem management principles to drive this change.

23. National Forest Management Act of 1976, Pub. L. No. 94-588, 90 Stat. 2949 (1976) (codified at 16 U.S.C. §§ 1600-1614 (1988)).

II. NOTIONS OF INTRA-FOREST SERVICE COORDINATION AND ECOSYSTEM MANAGEMENT IN THE GREATER YELLOWSTONE AREA

A. Background

The creation of the Greater Yellowstone Coordinating Committee in the early 1960s marked early official recognition of the need for coordination among agencies within the Greater Yellowstone Area.²⁴ The Greater Yellowstone Coordinating Committee evolved from the "Treaty of the Potomac,"²⁵ in which the Park Service and the Forest Service pledged to manage resources in a "closely coordinated manner."²⁶ The agreement signaled a new era of cooperation between the Park Service and the Forest Service.

The purpose of the Greater Yellowstone Coordinating Committee was to coordinate the national parks and national forests of the Greater Yellowstone Area. It first sought to address the cross-boundary effects of agency action on grizzly populations by coordinating grizzly bear management. Consequently, the Greater Yellowstone Coordinating Committee formed the Interagency Grizzly Bear Study Team in the early 1970s.²⁷ The creation of the Greater Yellowstone Coordinating Committee and the Interagency Study Team acknowledged the ecological interrelatedness of the Greater Yellowstone Area and public concern over multiple-agency management of the Area.²⁸

Increased public concern spurred a joint subcommittee hearing on the Greater Yellowstone Area in the House Subcommittee on Public Lands and the House Subcommittee on National Parks and Recreation.²⁹ The speakers at the hearing acknowledged conflicts over resource extraction, amenity values, and existence values of the Greater Yellowstone Area. The sponsors of the hearing, Representatives John Seiberling and Bruce Vento, investigated resource use conflicts and federal management of the ecosystem.³⁰ The Committee found that the agencies within the Greater Yellowstone Area lacked sufficient data on the Greater Yellowstone Area. It therefore enlisted the Congressional Research Service to study and report on the Greater Yellowstone Area's management activities, includ-

24. VISION FOR THE FUTURE, *supra* note 14, at 1-5.

25. See Memorandum, *supra* note 13, at 1 (summarizing the "Treaty of the Potomac").

26. *Id.*

27. VISION FOR THE FUTURE, *supra* note 14, at 1-5.

28. *Id.* The *Vision for the Future* also notes early usage of the term "Greater Yellowstone Ecosystem" and credits the term's early usage to grizzly bear researcher Dr. John Craighead.

29. See generally *Greater Yellowstone Ecosystem: Oversight Hearing Before the Subcomm. on National Parks and Recreation of the House Comm. on Interior and Insular Affairs*, 99th Cong., 1st Sess. (1985) [hereinafter *Oversight Hearing*].

30. *Id.* at 1, 2 (opening remarks of the chairman of the Subcommittee on Public Lands).

ing agency coordination.³¹

The *CRS Report* emphasized agency coordination and an ecosystem approach to land management. For example, Chapter III described the effects of development activities on the ecosystem; Chapter IV identified the grizzly bear as an indicator "of the health of the ecosystem;" and Chapter V discussed "issues related to inter-agency coordination management."³² Rather than focus on individual units of the Greater Yellowstone Area, the *CRS Report* synthesized data from the various agencies to create a picture of the Greater Yellowstone Area as an ecosystem.

This new ecosystem approach toward the Greater Yellowstone Area created anxiety among certain groups. In a 1989 law review article, Professor Robert Keiter pointed out that industry and local development groups worried that coordination efforts would preclude commodity uses in the Greater Yellowstone Area.³³ He noted that the 1986 Wyoming legislature introduced a bill disavowing "any state support for the concept of a Yellowstone ecosystem."³⁴ However, it cannot be denied that the Greater Yellowstone Area should be viewed as an ecosystem.³⁵ The 1986 *CRS Report*, to the displeasure of certain groups, began to change the way agencies looked at the Greater Yellowstone Area.

B. *CRS Report*

The *CRS Report* found that the agencies within the Greater Yellowstone Area need to look at the "big picture" of the region. It notes that even though the agencies manage the same type of terrain containing the same wildlife, regional boundaries fragment the area.³⁶ Moreover, the agencies lack sufficient data to evaluate their management choices.³⁷ The *CRS Report* includes examples of inconsistent data measuring units and over-broad categories of resources.³⁸ The *CRS Report* concludes that inade-

31. Keiter, *supra* note 2, at 985-86 (citing *CRS REPORT*, *supra* note 1, at 35).

32. *CRS REPORT*, *supra* note 1, at 35.

33. Keiter, *supra* note 2, at 985. *See also id.* at n. 25 (noting that "[i]ndustry groups, some local governing bodies, and other opponents have resisted any attempt to acknowledge the region as an entity").

34. *Id.* at 985 n. 306. Concern by commodity users continues to surface. A March 1994 *MONTANA FARMER* article calls the recently introduced National Landmarks Conservation Act bill a "Park Service land grab." *A Park Service Land Grab?*, *MONTANA FARMER*, Mar. 1, 1994.

35. The *CRS Report* cites a definition of "ecosystem" and discusses what makes the Greater Yellowstone Area an ecosystem. *CRS REPORT*, *supra* note 1, at 30.

36. *Id.* at 10.

37. *Id.* at 6.

38. *Id.* at 172-74. For example, the report shows that three of the national forests reported grazing data in animal unit months (AUMs), while the other three reported in numbers of animals. In addition, the report shows that the overly broad categories limit the usefulness of data. For example, all types of recreation, at the time of the report, were lumped into one category instead of being broken down into individual types of recreation. *Id.*

quate databases constitute one of the most serious deficiencies.³⁹ It suggests that data problems exist, in part, because the Forest Service is organized along functional rather than ecosystem lines.⁴⁰ The *CRS Report* notes that

there is no provision for formal coordination of Forest plans and activities in adjoining areas. Thus coordination of Forest Service activities in the CGYR [Committee's Greater Yellowstone Region] is not organized to assure consistent actions and effects.⁴¹

This suggestion implies that an ecosystem-wide approach to data collection would allow a broader method of data collection, organization, and storage.⁴²

The *CRS Report* specifically recommends improving coordination among the agencies and national forests within the Greater Yellowstone Area. The "Coordination" section of the report's "Summary and Observations" suggests holding the Greater Yellowstone Coordinating Committee responsible for "assuring consistent data collection among the agencies involved in the Yellowstone area."⁴³ The *CRS Report* also recommends "assuring consistent data collection" among Forest Service units.

The Forest Service itself is highly subdivided within the Greater Yellowstone Area. The report notes that within the three Forest Service regions in the Greater Yellowstone Area, "individual unit boundaries often have little relevance to the Ecosystem."⁴⁴ To address this problem, the report suggests "adjusting existing administrative boundaries, especially ranger districts, within the Ecosystem so that information collected in that administrative area would automatically feed into a central data base."⁴⁵

The *CRS Report's* recommendations allude to ecosystem-wide planning. It points out that the Greater Yellowstone Coordinating Committee's coordination committees lack a "comprehensive, integrated overview of the [e]cosystem," and it criticizes the committees for focusing on only one issue.⁴⁶ The report further states that the various agencies do not analyze

39. *Id.* at 10 (noting that data varies in amount and quality as well as from agency to agency, issue to issue, and within the same agency).

40. *Id.* at 174.

41. *Id.* at 165.

42. Letters from and interviews with numerous ecosystem management personnel on individual national forests and at the regional level clearly indicate that developing a common database is one of the main priorities for implementing ecosystem management. See discussion *infra* section IV.

43. CRS REPORT, *supra* note 1, at 14.

44. *Id.* at 10.

45. *Id.* at 14.

46. *Id.* at 9.

cumulative effects of extractive activities.⁴⁷

Even the format of the *CRS Report* suggests that the Greater Yellowstone Area should be studied and managed from an ecosystem standpoint. The report contains categories of development activities, with each category providing a section for analysis of impacts on other resources and values.⁴⁸ The report emphasizes coordination and suggests a link between agency coordination and effective ecosystem-wide planning.⁴⁹

C. *Aggregation Report and Vision for the Future Document*

The *CRS Report* has pressured the agencies within the Greater Yellowstone Area, especially the Forest Service and the Park Service, to assess their coordination efforts and establish common goals.⁵⁰ The 1987 Greater Yellowstone Coordinating Committee publication, *An Aggregation of National Park and National Forest Management Plans*, outlines these assessments and identifies coordination goals.⁵¹ The subsequent 1990 *Vision for the Future*⁵² and the resulting *Framework for Coordination*⁵³ continue the coordination efforts recommended by the *CRS Report*.

The Greater Yellowstone Coordinating Committee published the *Aggregation Report* as part of the "new momentum" of coordination efforts in the Greater Yellowstone Area.⁵⁴ The report makes two illustrations.⁵⁵ First, it presents a picture of the present or existing natural resources, values, amenities, and economic and social conditions.⁵⁶ Second, it projects what those natural resources, values, amenities, and economic and social conditions will be in ten to fifteen years.⁵⁷

The *Aggregation Report* envisions that present conditions be com-

47. *Id.* at 165.

48. *Id.* at 21-24 (table of contents).

49. See *infra* section III for a discussion on the connection between ecosystem management and coordination.

50. Keiter, *supra* note 2, at 986.

51. AGGREGATION REPORT, *supra* note 3, at v-vi.

52. See VISION FOR THE FUTURE, *supra* note 14.

53. See FRAMEWORK FOR COORDINATION, *supra* note 19.

54. Robert D. Barbee et al., The Yellowstone Vision: An Experiment that Failed or a Vote for Posterity, Address at Partnerships in Parks and Preservation Conference (Sept. 9-12, 1991). Robert Keiter makes an interesting observation that the Forest Service and Park Service, through the GYCC, undertook the *Aggregation Report* "to fend off the threat of congressional intervention," but that the *Aggregation Report* does not mention the *CRS Report* as its impetus. Keiter, *supra* note 2, at 986 n.312 and accompanying text.

55. AGGREGATION REPORT, *supra* note 3, at 1-1; Karen J. Budd, *Ecosystem Management: Will National Forests be "Managed" into National Parks?*, in THE GREATER YELLOWSTONE ECOSYSTEM 65, 65-66 (Robert B. Keiter & Mark S. Boyce eds., 1991); Keiter, *supra* note 2, at 986 n.312 and accompanying text.

56. AGGREGATION REPORT, *supra* note 3, at 1-1.

57. *Id.*

pared to desired future conditions. It calls for managers to identify and address the problems of each national forest or national park through the established planning process for each forest or park.⁵⁸ The report outlines a two-stage (short-term and long-term) follow-up to address the identified coordination problems. The long-term stage is supposed to follow completion of the six forest plans in the Greater Yellowstone Area.⁵⁹ The report calls for Forest Service regional guide amendments to address intra-agency coordination and provide policies for coordination between the Forest Service and the Park Service.⁶⁰ Specifically, the report says the regional guide amendments should address, among other problems:

1. Cases where use and display of management area direction/prescriptions in land management plans are not consistent among units;
2. Cases of inconsistent management for lands with similar characteristics, but on different units; and
3. Inconsistencies that are not readily explained or do not result from [a] fundamental difference in mission.⁶¹

Shortly after the *Aggregation Report*, the Forest Service and Park Service, through the Greater Yellowstone Coordinating Committee, collaborated on the seventy-four page *Vision for the Future* document.⁶² The *Vision for the Future*, which utilized the *Aggregation Report* information,⁶³ contained fourteen goals to "describe desired future condition[s] of the Greater Yellowstone Area."⁶⁴ The *Vision for the Future* purported to be a tool for focusing "both agencies during the management plan and regional guide review process and to provide a common focus for the individual park and forest plans."⁶⁵ Like the *Aggregation Report*, the *Vision for the Future* provided that the next step in the coordination process would be amendments to Forest Service regional guides and forest plans and to National Park Service general management plans and

58. *Id.*

59. *Id.* at 4-2. The report projected the Plans to be completed by 1988. *Id.* The last plan, the Bridger-Teton, was completed in 1990.

60. *Id.*

61. *Id.* See also Budd, *supra* note 55, at 67-68 n.17 (citing Memorandum from U.S. Forest Service, Phase 2-Applying the Aggregation, 3 (1988)).

62. Barbee et al., *supra* note 54, at 82. An interdisciplinary team of four Park Service and four Forest Service specialists wrote the *Vision for the Future* in the winter and spring of 1989-90. *Id.*

63. Keiter, *supra* note 2, at 987.

64. VISION FOR THE FUTURE, *supra* note 14, at 1-6. See also Michael Milstein, *A fading Yellowstone 'Vision'*, HIGH COUNTRY NEWS, June 3, 1991, at 10 (providing an excellent account of the *Aggregation Report* and *Vision for the Future* process and the controversy surrounding the *Vision for the Future* document).

65. VISION FOR THE FUTURE, *supra* note 14, at 1-6, 5-1.

resource management plans.⁶⁶

Released in August 1990 for public comment, the *Vision for the Future* draft generated heated debate and a well-documented controversy.⁶⁷ Environmental groups screamed that the document "lacked clout," while commodity interest groups "blasted the plan for putting too much emphasis on preservation."⁶⁸ After public comment, political manipulation, and confused shuffling through agency hands, the Park Service and Forest Service jointly published a gutted final draft in September 1991. Entitled *A Framework for Coordination of National Parks and National Parks in the Greater Yellowstone Area*, the document was down to eleven pages from seventy-four pages.⁶⁹

The *Vision for the Future* was two years ahead of its time. Though completely reworked and published as the *Framework for Coordination*, the *Vision for the Future* left behind its ideals and goals.⁷⁰ The resultant *Framework for Coordination* carried over from the *Vision for the Future* the principal goal to "maintain functional ecosystems."⁷¹ The *Vision's* recommendation to amend regional guidelines and forest plans still stands in the *Aggregation Report*. Today the Greater Yellowstone Coordinating Committee remains dedicated to carrying out the three goals of the *Vision for the Future*:

1. Conserving the sense of naturalness and maintaining ecosystem integrity;
2. Encouraging opportunities that are biologically and economically sustainable; and
3. Improving coordination among agencies.⁷²

66. *Id.* at 5-1.

67. Barbee et al., *supra* note 54, at 82.

68. Milstein, *supra* note 64, at 10-11.

69. *Id.* at 10-11; Barbee et al., *supra* note 54, at 82; FRAMEWORK FOR COORDINATION, *supra* note 19. The January 25, 1993 *High Country News* provides a detailed account of the political controversy surrounding the *Vision for the Future* document in the form of an excerpt from a staff report of the U.S House of Representatives Subcommittee on the Civil Service entitled *Interference in Environmental Programs by Political Appointees: The Improper Treatment of a Senior Executive Service Official*. Michael Milstein, *Conspiracy Destroyed a Vision for Yellowstone*, HIGH COUNTRY NEWS, Jan. 25, 1993, at 8. The report concludes, in part, "that the perception of substantial public comment hostile to the draft [*Vision for the Future*] document was, in reality, almost entirely manufactured." *Id.*

70. Barbee et al., *supra* note 54, at 82.

71. FRAMEWORK FOR COORDINATION, *supra* note 19, at 4.

72. COORDINATED MANAGEMENT IN THE GREATER YELLOWSTONE AREA UPDATE (Greater Yellowstone Coordinating Comm., Bozeman, Mont.), Spring 1994, at 1. The Montana Stock Growers Association (MSGA) also believes that the principles of the *Vision for the Future* document still exist. Commenting on a bill recently introduced by Rep. Bruce Vento called the National Parks and Landmark Conservation Act, the MSGA pointed out that it "sounds remarkably like the Yellowstone 'Vision' plan that floundered two years ago because of opposition by ranchers, loggers, miners, and others." *Park Service Land Grab*, *supra* note 34.

The document also left behind some lessons on coordination. Speaking on the draft *Vision for the Future* and ecosystem management concepts, former Yellowstone National Park Superintendent Robert Barbee noted that during development of the document, "staff members weren't or had not been adequately introduced to the idea or simply could not imagine what they had in common with other agency personnel a hundred miles away on the other side of the ecosystem."⁷³ This is still true today.⁷⁴

The *CRS Report* found that the agencies were not coordinated and that the organizational structure of the Forest Service does not follow the structure of the Greater Yellowstone Area ecosystem. The subsequent *Aggregation Report*, *Vision for the Future*, and *Framework for Coordination* set forth guidelines for "[c]onserving the sense of naturalness and maintaining ecosystem integrity."⁷⁵ Since the publication of these reports and guidelines, the Forest Service has adopted ecosystem-wide planning. In June 1992, the Chief of the Forest Service, in letter 1330-1, announced that "the Forest Service is committed to using an ecological approach in the future management of the National Forests and Grasslands."⁷⁶ Thus, while there is *de facto* recognition that the whole Greater Yellowstone Area should be managed as an ecosystem,⁷⁷ ecosystem management on the Forest Service domain is now official policy.

The *Vision for the Future*, espousing concepts politically ahead of its time, ended up a very diluted document. It may have died a political death, but its ecosystem principles have persisted and found their way into contemporary land management practices. The next two sections show that the principles of the *Vision* process—coordination and ecosystem management—have survived and that they support this article's proposal for an administrative reorganization of the Greater Yellowstone Area national forests. We recognize that coordination is a means, not an end, to improved ecosystem planning and management in the Greater Yellowstone Area. In achieving ecosystem management, however, an ecosystem philosophy and approach should occur concurrently within each unit of the Forest Service as well as within each agency.

73. Barbee et al., *supra* note 54, at 84.

74. *Id.*

75. *VISION FOR THE FUTURE*, *supra* note 14, at iii.

76. Letter from F. Dale Robertson, Chief of U.S. Forest Service, to Regional Foresters and Station Directors (June 4, 1992) (on file with the *Public Land Law Review*) [hereinafter Chief's Letter].

77. Robert Keiter has written extensively about *de facto* recognition of the [Greater Yellowstone Area] region, or ecosystem, as the relevant management unit." Keiter, *supra* note 2, at 993. He focuses on increased interagency coordination and refers to Phase One and Phase Two of interagency plans since the *CRS Report*. *Id.* at 991-97. Analysis of interagency coordination, e.g., between Forest Service and Park Service, is an extensive topic and beyond the scope of this article which focuses on the coordination activities of one agency.

III. PRINCIPLES OF ECOSYSTEM MANAGEMENT—WHY COORDINATION IS NECESSARY

This brief overview of ecosystem management principles and guidelines found in Forest Service literature illustrates the relationship between ecosystem management and coordination and the consequent need to eliminate the barriers posed by artificial inter-Forest Service boundaries. A National Hierarchical Framework of Ecological Units (National Hierarchical Framework)⁷⁸ presently being developed by the Forest Service outlines the geographic hierarchy and framework of ecosystem management. The National Hierarchical Framework notes that implementing ecosystem management requires, in addition to other information, a definition of ecosystems and knowledge of their characteristics.⁷⁹ The Framework defines ecosystems as “three dimensional segments of the earth, . . . where life and environment interact” and which are composed of “multiple abiotic and biotic factors.”⁸⁰ Ecosystems are not isolated entities. Rather, they form “continuums on the earth’s surface.”⁸¹ They “exist at many spatial scales, from the global ecosphere down to regions of microbial activity,” with the number of factors comprising ecosystems greater at finer scales.⁸² Additionally, ecosystems are nested—each ecosystem is a discrete entity as well as part of a larger whole.⁸³ Larger ecosystems affect smaller ones and smaller ecosystems contribute to the general characteristic of larger ones.⁸⁴ For conceptual and practical purposes, humans delineate ecosystems based on physical, biological, and social factors.⁸⁵

Based on this simplified description of ecosystems, it follows that “ecosystem management” should consider the inter-relationships of ecosystem components. That is, ecosystem management should consider that wildlife, vegetation communities, riparian areas, fire, geologic features, and other components interact and are blind to administrative boundaries.⁸⁶ From a strict ecological point of view, ecosystem manage-

78. U.S. Forest Serv., Dep’t of Agric., National Hierarchical Framework of Ecological Units (Aug. 30, 1993) (draft edition on file with *Public Land Law Review*) [hereinafter National Hierarchical Framework].

79. *Id.* at 2.

80. *Id.* at 6.

81. *Id.* at 2.

82. *Id.* at 7.

83. Patrick S. Bourgeron & Mark E. Jensen, *An Overview of Ecological Principles for Ecosystem Management*, in 2 EASTSIDE FOREST ECOSYSTEM HEALTH ASSESSMENT, ECOSYSTEM MANAGEMENT: PRINCIPLES AND APPLICATIONS, 51 (Mark E. Jensen & Patrick S. Bourgeron eds., U.S. Dep’t of Agric. 1993) [hereinafter EASTSIDE FOREST ECOSYSTEM].

84. National Hierarchical Framework, *supra* note 78, at 7.

85. *Id.*

86. A 1993 paper by Forest Service and Nature Conservancy ecologists provides an overview of

ment utilizes an ecosystem concept that brings "[t]he biological and physical worlds together into a holistic framework within which ecological systems can be described, evaluated and managed."⁸⁷

For the Forest Service, "ecosystem management" means "that an ecological approach will be used to achieve the multiple-use management of the National Forests and Grasslands" and that human and environmental values will be blended so that the "Forests and Grasslands represent diverse, healthy, productive, and sustainable ecosystems."⁸⁸ Ecosystem management focuses on "desired ecological conditions." Land managers should take into account ecosystem health and integrity as well as "desired social conditions" when delineating desired ecological conditions.⁸⁹ For administrators and planners, ecosystem management implies integrating policy goals on multiple levels.⁹⁰

The fact that ecosystem components, both biotic and abiotic, are interconnected and distributed geographically dictate that the Forest Service should coordinate ecosystem management efforts not only between units but with other agencies. Forest Service literature acknowledges the link between coordination and successful ecosystem management.⁹¹ The Intermountain Region effort called the Process Model to Guide Ecosystem Management Efforts (Process Model) points out that applying ecosystem management includes the following:

1. understanding that our problems and actions are connected and that instead of solving isolated problems interdependence must be understood;⁹²
2. developing harmony among parts because fragmented thinking and goal setting results in fragmented landscapes;⁹³
3. striving to understand ecosystem content in terms of the

biotic and abiotic interrelations and ecosystem properties, with discussion on concepts such as "biogeochemical cycles." P.S. Bourgeron et al., *Ecological Theory in Relation to Landscape and Ecosystem Characterization*, in *EASTSIDE FOREST ECOSYSTEM*, *supra* note 83, 65, 65-74.

87. National Hierarchical Framework, *supra* note 78, at 7.

88. Chief's Letter, *supra* note 76.

89. Intermountain Region, Dep't of Agric., A Process Model to Guide Ecosystem Management Efforts (Sept. 1993) (unpublished draft version on file with *Public Land Law Review*) [hereinafter Process Model].

90. Regions 1, 2, 3, 4, 5, 6, 9, 10, et al, U.S. Dep't of Agric., Framework for a Shared Approach to Ecosystem Management (Sept. 1 1993) (unpublished, draft version on file with *Public Land Law Review*) [hereinafter Framework for a Shared Approach].

91. See, e.g., Chief's Letter, *supra* note 76, Attachment 1; Framework for a Shared Approach, *supra* note 90; Process Model, *supra* note 89. See also Bourgeron & Jensen, *supra* note 83, at 51 (asserting that "[e]cosystem connections at various scales and across ownerships make coordination of goals and plans for certain resources essential to success").

92. Process Model, *supra* note 89, at 2.

93. *Id.*

geographical and temporal context in which they occur;⁹⁴

4. forming coalitions; and⁹⁵

5. recognizing that ecosystems overlap political and administrative boundaries and demand approaches that do the same.⁹⁶

Specific guidelines intimating coordination between units are:

1. integration of research, resources, and actions across geographic scales;⁹⁷

2. integrating policy goals and landscape expectations across levels and geographic scales; and⁹⁸

3. sharing information and data bases for integrating evolving knowledge.⁹⁹

Thus, this article next examines the national forests of the Greater Yellowstone Area to see whether coordinated ecosystem management exists. We focus on coordination for two reasons. First, although ecosystems are not clearly definable and can be viewed on a continuum from a single tree to the earth as a whole,¹⁰⁰ the Greater Yellowstone Area is a defined and recognized ecosystem.¹⁰¹ The Greater Yellowstone Area is also part of a nested complex of ecosystems; it is one piece of the continental-wide ecosystem and is itself made up of numerous, smaller ecosystems.¹⁰² Second, ecosystem management principles dictate that coordination should occur not only between the Forest Service and other agencies but also within the Forest Service itself.

IV. ECOSYSTEM MANAGEMENT IN THE GREATER YELLOWSTONE AREA NATIONAL FORESTS TODAY

This section considers the legal and practical factors that support the proposal. This section argues that present Forest Service policy and various

94. *Id.* at 3.

95. *Id.*

96. *Id.* at 4.

97. Chief's Letter, *supra* note 76, Attachment 1.

98. Framework for a Shared Approach, *supra* note 90, at 1.

99. *Id.* at 4; Chief's Letter, *supra* note 76, Attachment 1.

100. National Hierarchical Framework, *supra* note 78, at 7.

101. The 1986 CRS Report noted that "the existence of a 'Greater Yellowstone Ecosystem' is a scientific construct, rather than a legal designation, and is independent of any congressional action." CRS REPORT, *supra* note 1, at 30. As an indication that the current administration considers the Greater Yellowstone Area to be an ecosystem, see Memorandum from David Garber, Chairperson of GYCC to Mary O'Lone on the Vice President's Staff for Reinventing Government (Oct. 8, 1993) (on file with the *Public Land Law Review*).

102. The National Hierarchical Framework of Ecological Units discusses the concept of ecosystems being interrelated and "occurring in a nested geographic arrangement, with numerous smaller ecosystems embedded within larger ones." National Hierarchical Framework, *supra* note 78, at 7.

federal acts and regulatory schemes compel an ecosystem approach to management of the national forests. This section then examines the actual ecosystem management efforts of the three regions and six national forests within the Greater Yellowstone Area. An important component of effective implementation of ecosystem management is coordination among the organizations and agencies that operate in or are affected by the activities within an ecosystem.¹⁰³ This examination reveals that the national forests of the Greater Yellowstone Area do not exhibit significant signs of either coordinated or consistent ecosystem management planning or implementation.¹⁰⁴ They do not appear to focus on important ecosystem management principles such as coordinated goal setting, data collecting, or data sharing.¹⁰⁵

A. Forest Service Ecosystem Management Policy

Some ecosystem management researchers trace ecosystem mandates as far back as the 1897 Organic Administration Act.¹⁰⁶ Moreover, they claim that a clear pattern of ecosystem notions exists in legislation affecting the national forests.¹⁰⁷ However, the June 4, 1992 letter from the Forest Service Chief (Chief's letter) expressly ordered the management of national forests and grasslands on an ecological basis.¹⁰⁸ The Forest Service's adoption of an "ecological approach in the future management of the National Forests and Grasslands" provides a starting point for scrutinizing the Forest Service's present commitment to ecosystem management in the Greater Yellowstone Area.

This mandate carries forward past recognition of the role of ecosystem management practices. Prior to this formal adoption of ecosystem management, the Forest Service touted a policy called New Perspectives which alluded to ecosystem principles. Under New Perspectives, the Forest

103. Various Forest Service policy guides and papers stress coordination. See, e.g., U.S. FOREST SERV., DEP'T OF AGRIC., ECOSYSTEM MANAGEMENT QUESTIONS AND ANSWERS (1993) Question 6; Framework for a Shared Approach, *supra* note 90; Process Model, *supra* note 89, at 5; Luther P. Gerlach and David N. Bengston, *If Ecosystem Management is the Solution, What's the Problem? Eleven Challenges for Ecosystem Management* JOURNAL OF FORESTRY (forthcoming summer 1994).

104. A Northern Region staff member stated that by implementing effective ecosystem management, existing national forest boundaries will no longer matter. The corollary to this, however, is that an administrative organization with boundaries reflecting cognizable ecosystems would foster more effective ecosystem management. Interview with Northern Region NFMA/NEPA Coordinator and Ecosystem Management Team member in Missoula, Mont. (Nov. 16, 1993) [hereinafter Northern Region Interview] (notes on file with the *Public Land Law Review*).

105. During the interview it was acknowledged that coordinating data bases across boundaries is a significant problem. *Id.*

106. Mark E. Jensen & Richard L. Everett, *An Overview of Ecosystem Management Principles*, in EASTSIDE FOREST ECOSYSTEM, *supra* note 83, at 9, 10.

107. *Id.*

108. Chief's Letter, *supra* note 76, at 1.

Service was supposed to experiment "with more environmentally sensitive ways to manage."¹⁰⁹ New Perspectives preceded the Chief's Letter by three years.¹¹⁰ The Chief's Letter went one step past New Perspectives by expressly adopting ecosystem management. The question remains whether "an ecological approach to managing the National Forests and Grasslands" under a policy of ecosystem management will differ from "experimenting with more environmentally sensitive ways to manage" under New Perspectives.

In addition to New Perspectives, there were early ecosystem experimental efforts such as the Trail Creek project and supplemental environmental impact statement on the Beaverhead National Forest in Montana.¹¹¹ These efforts, along with the Northern Region's effort titled Sustaining Ecological Systems, paved the way for applying ecological principles on large-scale land units. This history allows us to accept the assertion that the Forest Service had no choice but to adopt ecosystem management.¹¹²

The Greater Yellowstone Area has long been recognized as a region where preservation of its qualities will require coordinated ecosystem management.¹¹³ The *CRS Report* criticized federal agencies for their lack of coordination in managing the Greater Yellowstone Ecosystem and made specific recommendations. The *Aggregation Report* called for coordinated regional guidelines as a way to improve coordination within the Greater Yellowstone Area. The *CRS Report* and the *Aggregation Report* provided recommendations which the Forest Service should heed as it implements ecosystem management in the Greater Yellowstone Area national forests.

Not only does Forest Service policy support implementation of ecosystem management, but regulatory and statutory law also support it.¹¹⁴ Robert Keiter noted five major factors that support this argument. First, agency actions have established a *de facto* recognition that the Greater Yellowstone Area is an ecosystem and should be managed as such.¹¹⁵ The Greater Yellowstone Coordinating Committee, the *Aggregation Report* and *Vision for the Future* and the *Framework for Coordina-*

109. *Id.*

110. *Id.*

111. Initiated by former Regional Forester John Mumma.

112. James Kennedy & Thomas M. Quigley, *Evolution of Forest Service Organizational Culture and Adaption Issues in Embracing Ecosystem Management*, in *EASTSIDE FOREST ECOSYSTEM*, *supra* note 83, at 19, 24 (arguing that the Forest Service was compelled to adopt ecosystem management).

113. *See supra* section II.

114. For a more comprehensive discussion of the legal support for ecosystem management see Keiter, *supra* note 2, at 991.

115. *Id.* at 993-97.

tion documents are examples of this recognition.¹¹⁶ Second, the Endangered Species Act¹¹⁷ provides for species protection that is not boundary limited.¹¹⁸ Third, the National Environmental Policy Act (NEPA)¹¹⁹ provides that ecological factors such as transboundary and cumulative effects be considered before federal agencies authorize development.¹²⁰ Fourth, the NFMA and its implementing regulations provide standards to ensure ecological integrity and biological diversity in the national forests.¹²¹ Last, Keiter argues that judicial and administrative decisions support the notion that agency officials have legal authority to develop and implement ecosystem management.¹²²

For illustrative purposes it is helpful to expand on two statutory schemes containing ecosystem management principles, the Multiple-Use and Sustained-Yield (MUSY) Act¹²³ and the NFMA and its implementing regulations. Ecosystem principles can be read from the MUSY Act in two ways. First, as Professor Charles Wilkinson points out, the MUSY Act on its face called for a shift to equal emphasis on the resources away from a regime which emphasizes timber production ahead of other resources.¹²⁴ The act also called for considerations other than managing the resources for the "greatest dollar return."¹²⁵ The act alphabetically lists the major national forest resources— outdoor recreation, range, timber, watersheds, and wildlife and fish—to indicate that no one resource should dominate the Forest Service's attention.¹²⁶ Second, the language of the act indicates a holistic management approach. The act states that

"Multiple-Use" means: The management of all the various renewable surface resources of the national forests . . . making the most judicious use of the land . . . over areas large enough to provide sufficient latitude for periodic adjustments in use to conform to changing needs and conditions.¹²⁷

116. See *supra* section II; Keiter, *supra* note 2, at 993-94.

117. 16 U.S.C. §§ 1531-1544 (1988).

118. Keiter, *supra* note 2, at 997-98, 956-67.

119. 42 U.S.C. §§ 4321-4370 (1988).

120. Keiter, *supra* note 2, at 998 (citing notes 80, 118, 131-34, 204, 220-27). For a full discussion of the NEPA argument, see Robert B. Keiter, *NEPA and the Emerging Concept of Ecosystem Management on the Public Lands*, 25 LAND & WATER L. REV. 43 (1990).

121. Keiter, *supra* note 2 at 998 (citing notes 187-203).

122. *Id.* at 998-1001 (citing *Nat'l Wildlife Fed'n v. Nat'l Park Serv.*, 669 F.Supp. 384 (D. Wyo. 1987); *Intermountain Forest Indus. Ass'n v. Lyng*, 683 F.Supp. 1330 (D. Wyo. 1988)).

123. 16 U.S.C. §§ 528-531 (1988).

124. Charles F. Wilkinson, *The Forest Service: A Call for a Return to First Principles*, 5 PUB. LAND L. REV. 1, 15-16 (1984) (citing 16 U.S.C. §§ 528, 531(a) (1982)).

125. *Id.*

126. *Id.*

127. 16 U.S.C. § 531(a) (1988).

The act also refers to managing resources "without impairment of the productivity of the land."¹²⁸

Subsequent to the MUSY Act, Congress enacted the National Forest Management Act.¹²⁹ The act found that "the new knowledge derived from coordinated . . . research programs will promote a sound technical and ecological base for effective management . . ."¹³⁰ Biodiversity is a primary ecosystem principle found in the NFMA and its regulations.¹³¹ The NFMA mandates that the Forest Service "provide for diversity of plant and animal communities based on the overall suitability and capability of the specific land area in order to meet overall multiple-use objectives."¹³²

The implementing regulations called for by the NFMA espouse ecosystem concepts. They call for forest planning based on fourteen principles.¹³³ These principles include, in part:

1. establishment of goals and objectives for multiple-use and sustained-yield management of renewable resources without impairment of the productivity of the land;¹³⁴
2. recognition that the national forests are ecosystems and their management for goods and services requires an awareness and consideration of the interrelationships among plants, animals, soil, water, air and other environmental factors within such ecosystems;¹³⁵
3. protection, through ecologically compatible means of all forest and rangeland resources from depredations by forest and rangeland pests; and¹³⁶
4. use of a systematic, interdisciplinary approach to ensure coordination and integration of planning activities for multiple-use management.¹³⁷

The regulations specifically call for maintaining "viable populations of existing native and desired species."¹³⁸ One of the minimum management requirements in carrying out the goals and objectives of the National Forest system includes preserving and enhancing "the diversity of plant and animal communities."¹³⁹ Numerous other provisions of the regulations

128. *Id.*

129. National Forest Management Act of 1976, Pub. L. No. 94-588, 90 Stat. 2949 (1976).

130. 16 U.S.C. § 1600(4) (1988).

131. Keiter, *supra* note 2, at 964-967.

132. *Id.* at 964 (citing 16 U.S.C. § 1604(g)(3)(B)).

133. 36 C.F.R. §§ 219.1(b)(1)-(14) (1993).

134. 36 C.F.R. § 219.1(b)(1).

135. 36 C.F.R. § 219.1(b)(3).

136. 36 C.F.R. § 219.1(b)(8).

137. 36 C.F.R. § 219.1(b)(10).

138. Keiter, *supra* note 2, at 964 (citing 36 C.F.R. § 219.19).

139. *Id.* (citing 36 C.F.R. § 219.27(g)).

state or allude to ecosystem concepts.¹⁴⁰

B. *Forest Service Ecosystem Management Implementation Within the Greater Yellowstone Area*

Policy and law collectively call for the Forest Service to practice ecosystem management. Presently, the organizational boundaries of the Forest Service in the Greater Yellowstone Area do not mimic the ecosystem, even though the reports and documents referred to thus far clearly indicate that the Greater Yellowstone Area should be conceptualized and managed as an ecosystem. This part, then, focuses on evidence of ecosystem management and coordination within the Forest Service units involved in the Greater Yellowstone Area—the Northern, Intermountain, and Rocky Mountain Regions and the Beaverhead, Custer, Gallatin, Targhee, Bridger-Teton, and Shoshone National Forests.

The actual implementation of ecosystem management should occur as each forest carries out its forest plan.¹⁴¹ Where a particular landscape or habitat classification transcends national forest boundaries, management of that particular small-scale ecosystem should be coordinated with other national forests sharing that ecosystem.¹⁴² The *Aggregation Report* suggested that the guidelines of the three Greater Yellowstone Area regions be coordinated.¹⁴³

1. *Regional Level Coordination*

Examples of region-wide coordination include specific projects as well

140. Criteria "prepared to guide the planning process . . . may be derived from . . . [e]cological, technical, and economic factors." 36 C.F.R. § 219.12(c)(5). Management prescriptions should conserve soil and water resources, protect streams, lakes, wetlands and other bodies of water, and provide for adequate fish and wildlife habitat to maintain viable populations. 36 C.F.R. §§ 219.27(a)(1), (4), (6).

141. See ROCKY MTN. REGION, U.S. DEP'T OF AGRIC., THE ROCKY MOUNTAIN REGION & ROCKY MOUNTAIN STATION JOINT STRATEGY FOR IMPLEMENTING ECOSYSTEM MANAGEMENT, item 7 (1992) [hereinafter ROCKY MOUNTAIN REGION STRATEGY]; INTERMOUNTAIN REGION, DEP'T OF AGRIC., ECOSYSTEM MANAGEMENT IN THE INTERMOUNTAIN REGION, A STRATEGY FOR IMPLEMENTING THE CHIEF'S NEW POLICY STATEMENT OF JUNE 4, 1992-REVIEW DRAFT 6 (1992) [hereinafter INTERMOUNTAIN REGION STRATEGY]. In the Nov. 16, 1993 interview, the Northern Region Ecosystem Management Team member noted that it should not make any difference what region a national forest is in because there should be "coordinated planning from the bottom up." Northern Region Interview, *supra* note 104.

142. The concept of cross-boundary consideration and balance as a basic tenet of ecosystem management is found throughout Forest Service internal literature pertaining to ecosystem management. See, e.g., Chief's Letter, *supra* note 76, at 2 (outlining the basic principles directed to be applied to future management); Framework for a Shared Approach, *supra* note 90, at 3, 4 (discussing scale and discussing shared expectations); Letter from David F. Jolly, Northern Region Forester, U.S. Forest Service, to all regional employees 2 (June 28, 1993) (discussing "Key Points" of ecosystem management).

143. AGGREGATION REPORT, *supra* note 3, at 4-2.

as broad-scale efforts in the Greater Yellowstone Area. The Chief's ecosystem management letter directed each region to submit a strategy for implementing ecosystem management.¹⁴⁴ A common element of the strategies submitted by the regions includes pledges to develop ecosystem management implementation efforts with neighboring regions.¹⁴⁵ In their strategies, the regions agreed to come to a common understanding of 1) the meaning of ecosystem management; 2) what it is supposed to accomplish; and 3) how management programs will incorporate ecosystem management techniques.¹⁴⁶

Splitting the Greater Yellowstone Area into three Forest Service regions forces the three regions to duplicate coordination efforts by having to come together at two different times to carry out their ecosystem management strategies. They first have to come together for broad-scale coordination with other western regions to develop uniform ecosystem management ideas and tools across the regions.¹⁴⁷ Then, as the regions with national forests in the Greater Yellowstone Area focus on their respective portions of the Greater Yellowstone Area, they again have to try to coordinate their planning so they can achieve, for example, standardized Greater Yellowstone Area mapping and databases essential to implementing ecosystem management.

Regions One, Two, Three, and Four, in conjunction with two Forest Service research stations, formed the Ecosystem Management Coordination Group (after submitting their implementation strategies to the Chief as required by the Chief's letter).¹⁴⁸ The October 1993 Westwide Ecosystem Management Coordination Meeting notes show that the Coordination Group expanded to include Forest Service Regions Five and Six and their respective research stations, thus creating a true West-wide, broad-scale coordination group.¹⁴⁹

The fact that in the West, "many of our ecosystems and management issues extend beyond administrative boundaries" spurred the formation of this group.¹⁵⁰ The group's charter outlines four objectives: 1) to ensure that "[e]cosystem [m]anagement philosophies are consistent;" 2) to coordinate ecological mapping; 3) to coordinate ecosystem management support

144. Chief's Letter, *supra* note 76, at 3.

145. See, e.g., INTERMOUNTAIN REGION STRATEGY, *supra* note 141, at 4.

146. *Id.*

147. Northern Region Interview, *supra* note 104.

148. REGIONS 1-6, DEP'T OF AGRIC., CHARTER OF INTERREGIONAL ECOSYSTEM MANAGEMENT COORDINATION GROUP (1993).

149. Notes from Regions 1-6 Westwide Ecosystem Management Coordination Meeting (Oct. 27, 1993) (on file with *Public Land Law Review*) [hereinafter Westwide Coordination Meeting Notes].

150. COORDINATION GROUP CHARTER, *supra* note 148.

databases and analysis programs; and 4) to identify transboundary natural resource issues.¹⁵¹ The "Action Plan Items" of the interregional Westwide Ecosystem Management Coordination Group reflect positive action on issue identification, standardization of techniques and terms and consolidation of resources.¹⁵² These action items, which comport with the ecosystem management guidelines identified in Section III, include:

1. identifying issues needing interregional coordination;
2. developing a common approach for describing "Desired Future Condition;"
3. identifying key indices for monitoring;
4. developing a list of key terms and concepts;
5. coordinating development of ecological unit and subsection maps;
6. developing common data bases (work on a "Common Vegetation Data Base" is already underway); and
7. general efforts to pursue coordination opportunities with outside groups.¹⁵³

Recognizing transboundary issues and developing regional mechanisms to deal with them is clearly a positive step toward ecosystem management. However, coordination across six regions entails generalizations. Focusing on a particular ecosystem such as the Greater Yellowstone Area requires refinement of coordination with respect to that ecosystem. Thus, achieving coordination at the Greater Yellowstone ecosystem level¹⁵⁴ means that the three Greater Yellowstone Area Forest Service regions must collaborate apart from their efforts with the other Western regions. An April 1993 memo (Data Coordination Update) summarizes the frustration of the present arrangement, noting that "[a]ll units within the Greater Yellowstone Area continue to develop [Geographic Information System] data layers specific to their own immediate needs."¹⁵⁵ The three-part regional level management over the Greater Yellowstone Area unnecessarily compounds the administrative complexity of an ecosystem divided between federal agencies, agencies of three different states, and

151. *Id.*

152. *See generally* Westwide Coordination Meeting Notes, *supra* note 149.

153. *Id.* at 1-4.

154. The Forest Service works with three scales of analysis—broad-scale, mid-scale, and small-scale (site-specific)—for ecosystem management. At the risk of oversimplifying ecosystem science, note that as analysis moves up the scale from small to broad, the site-specific data should be carried along also. *See* Northern Region Interview, *supra* note 104, at 2. The point is that where a mid-scale site, e.g., the Greater Yellowstone Area, is broken up by administrative boundaries, synchronized upward flow of relevant data would be impaired.

155. Data coordination update notes obtained from Bridger-Teton National Forest (Apr. 1993) (on file with *Public Land Law Rev.*).

numerous local governments.

The results of a request for examples of specific Greater Yellowstone Area coordination efforts between Regions One, Two, and Four reveal little other than what the 1986 *CRS Report* showed. Much of the information given relates to the West-wide ecosystem management coordination efforts discussed above. In response to the request for "any evidence you have of collective agreement among the three regions on ecosystem management in the Greater Yellowstone Area," the regions noted their membership on the Greater Yellowstone Coordinating Committee and on the Interagency Grizzly Bear Study Team. The regions reported two examples of coordination agreements since the 1986 *CRS Report*. One is a Memorandum of Understanding (MOU) between The Nature Conservancy and the Northern, Rocky Mountain, and Intermountain Regions. The other is a supplement to a 1986 MOU between the Rocky Mountain Region of the National Park Service and the three Forest Service regions for coordinating and sharing geo-referenced data for use with Geographic Information System mapping.¹⁵⁶

It is difficult to draw tangible conclusions regarding the substance of coordination at the regional level except to note the absence of a focused formal three-region agreement addressing coordination and common goals for the Greater Yellowstone Area. Even though the *Aggregation Report* recommended regional guide amendments, not one unit referenced coordinated regional guides or these regional guide amendments.

2. Forest Level Coordination

Because each national forest has wide latitude in creating and carrying out its forest plan, regional level coordination will not by itself guarantee coordination between national forests. Examination of coordination between the national forests of the Greater Yellowstone Area (Beaverhead, Custer, Gallatin, Targhee, Bridger-Teton, and Shoshone) shows that coordination with adjacent land managers is left to the discretion of each national forest supervisor.¹⁵⁷ More precisely, it reveals varying levels of attention to ecosystem management and coordination, a wide range of approaches to ecosystem management, and the absence of an overall policy for coordination of ecosystem management tasks.

156. The success of this MOU is questionable. Paul Grigsby requested a Geographic Information System map with forest boundaries of the Greater Yellowstone Area but one did not exist—at least as far as Region One knew of.

157. GREATER YELLOWSTONE COALITION, AN ENVIRONMENTAL PROFILE OF THE GREATER YELLOWSTONE ECOSYSTEM 98 (Dennis Glick et al. eds. 1991).

Responses¹⁵⁸ to a five-question letter¹⁵⁹ form the basis of this examination of ecosystem management and coordination of the six national forests in the Greater Yellowstone Area. The information received fits into categories generally relating to the components of ecosystem management listed in Section III. The categories include: the types of approaches to ecosystem management, initial ecosystem projects, status and organization of forest plans, data sharing, data standardization, and cooperative agreements.

Each national forest has a different approach to ecosystem management. The national forests of the Northern Region, the Beaverhead, Custer, and Gallatin generally list the same objectives, but their actual implementation efforts offer a truer representation of how they interpret ecosystem management. Each national forest stated the importance of certain ecosystem objectives. All three noted broad-scale analysis objectives, with the Beaverhead and Gallatin expounding on details such as "historic range of natural variations" and "disturbance regimes."¹⁶⁰ The Custer only generally referred to ecosystem management objectives using statements such as "provide awareness" and "develop analysis tools."¹⁶¹ All three national forests noted the reality of having to work within the framework of multiple-use mandates and existing forest plans as a hinderance to implementing ecosystem management.

With respect to implementation efforts, the Gallatin referred to developing "projects to manage for sustainable ecosystems while providing for [traditional] resource outputs."¹⁶² Additionally, the Gallatin is already involved in a substantial interforest (Gallatin, Beaverhead and Targhee) and interagency (Yellowstone National Park, the Interagency Grizzly Bear Study Team, the Forest Service Intermountain Research Station, and two universities) integrated research and management project in the

158. Letter from William P. Levere, Acting Forest Supervisor, Targhee Nat'l Forest to Paul Grigsby (Sept. 20, 1993); Letter from Ronald C. Prichard, Forest Supervisor, Beaverhead Nat'l Forest to Paul Grigsby (Sept. 22, 1993); Letter from Stephen J. Solem, Forest Supervisor, Custer Nat'l Forest to Paul Grigsby (Sept. 28, 1993); Letter from Barry Davis, Forest Supervisor, Shoshone Nat'l Forest to Paul Grigsby (Sept. 28, 1993); Letter from David P. Garber, Forest Supervisor, Gallatin Nat'l Forest to Paul Grigsby (Oct. 18, 1993); Telephone interview with Bridger-Teton Ecology Resource Group Leader (Oct. 8, 1993). All letters and interviews on file with the *Public Land Law Review*.

159. Letter from Paul Grigsby to the Forest Supervisors of the Beaverhead, Custer, Gallatin, Targhee, Bridger-Teton and Shoshone National Forests (Sept. 9, 1993) (on file with *Public Land Law Rev.*). The questions addressed how the forests are going about ecosystem management, the extent to which it is being implemented and the assistance the regional offices are providing. The letters also asked for examples of coordination with other national forests and with Yellowstone and Grand Teton National Parks.

160. Beaverhead Letter, *supra* note 158; Gallatin Letter, *supra* note 158.

161. Custer Letter, *supra* note 158.

162. Gallatin Letter, *supra* note 158.

126,000-acre Hebgen Lake area.¹⁶³ Similarly, the Beaverhead response focused on efforts to fit ecosystem concepts into forest plan implementation. In addition to the Hebgen Lake project, the Beaverhead is analyzing the Tobacco Root Mountains as a beginning point for incorporating ecosystem management concepts into its forest plan.¹⁶⁴

The Custer response, however, is not as specific. In reference to proposed projects, the Custer notes that its emphasis in 1993 "was on ecological classifications and inventory in addition to development of ecological relationships to wildlife and threatened and endangered species."¹⁶⁵ With respect to fitting ecosystem management into the framework of forest plans, the Custer notes that "[t]here have been no Forest Plan Amendments that deal specifically with ecosystem management. The monitoring reports done to date have not specifically addressed ecosystem management."¹⁶⁶

The Targhee National Forest of the Intermountain Region and the Shoshone National Forest of the Rocky Mountain Region provided detailed information of initial ecosystem management tasks and projects. The Targhee referenced the National Hierarchical Framework as a guide for the revision of its 1985 forest plan.¹⁶⁷ Though it did not mention the National Hierarchical Framework, the Shoshone prepared an ecosystem management brochure which includes general terms and concepts, an interdisciplinary team charter, and specific project descriptions.¹⁶⁸

The Bridger-Teton National Forest of the Intermountain Region is unique among the six national forests of the Greater Yellowstone Area. Because the Bridger-Teton has the youngest (1990) of the forest plans, it reflects an integrated rather than functional approach to resource management.¹⁶⁹ Instead of grouping the monitoring items by resource, the monitoring reports integrate resources into categories reflecting, for example, different types of habitats or broad management goals. Thus, at the time of the Chief's letter, the Bridger-Teton was closer to implementing ecosystem management.¹⁷⁰ As part of its effort to achieve ecosystem focused management, the Bridger-Teton has developed its *Pocket Plan Field Book*, which enumerates goals and objectives, forest-wide standards,

163. *Id.*

164. Beaverhead Letter, *supra* note 158.

165. Custer Letter, *supra* note 158.

166. *Id.*

167. Targhee Letter, *supra* note 158, at 4.

168. SHOSHONE ECOSYSTEM MANAGEMENT INTERDISCIPLINARY TEAM, U.S. DEP'T OF AGRIC., ECOSYSTEM MANAGEMENT ON THE SHOSHONE NATIONAL FOREST (1993).

169. Bridger-Teton Interview, *supra* note 158. *See, e.g.*, BRIDGER-TETON NAT'L FOREST, U.S. FOREST SERV., DEP'T OF AGRIC., 1991 MONITORING AND EVALUATION REPORT (1991).

170. Bridger-Teton Interview, *supra* note 158.

and desired future conditions.¹⁷¹ The opinion of the Bridger-Teton Ecology Resource Group Leader that "measurement [of ecosystem management] will be how we coordinate" demonstrates recognition of the connection between ecosystem management and coordination.¹⁷²

The six forest plans provide an opportunity for collaboration and synchronization. The Bridger-Teton monitoring format might be a good model for this. Between 1995 and 1997, revisions for the other five national forest plans come due, with the Targhee scheduled for 1995. Regional policies, as found in the various Regional Implementation Strategies, dictate incorporating ecosystem management concepts into the forest plans.¹⁷³ The responses from the national forests do not reflect any intentions to standardize the format.

The six forest plans were propagated at different times (Targhee-1985; Gallatin, Shoshone, Beaverhead-1986; Custer-1987; Bridger-Teton-1990) in six different formats. As a consequence, the forests also monitor and revise their plans at different times. This disjointed timing of the six plans is a glaring example of uncoordinated interforest planning. Just as the Bridger-Teton plan exhibits an integrated style different from the other five national forests because of its later propagation, so too will each successively amended forest plan continue to differ from its Greater Yellowstone Area counterparts.

Though each national forest is required to complete annual and five-year monitoring reports, this has not occurred on all the Greater Yellowstone Area national forests. The Custer has not completed any monitoring since 1989. The Shoshone has not yet completed a five-year summary (due 1991) and is not sure if it will be completed in 1994. The monitoring reports provided do not show standard monitoring items. For example, the Beaverhead monitoring report lists as coordination monitoring categories "Adjacent Lands, Resources, Communities and Issues," the Gallatin lists "Wildlife Coordination" and "Management Coordination," and the Targhee lists nothing.

A request for examples of coordination among the forests elicited three basic examples. First, all the national forests cited membership in the Greater Yellowstone Coordinating Committee. Second, two of the forests gave examples of landscape-specific projects. The Gallatin referred to the Hebgen Lake Project involving the Beaverhead and the Targhee.¹⁷⁴ The

171. BRIDGER-TETON NAT'L FOREST, U.S. FOREST SERV., DEP'T OF AGRIC., FOREST PLAN FIELD BOOK (No date provided).

172. Bridger-Teton Interview, *supra* note 158.

173. See, e.g., ROCKY MTN. REGION STRATEGY, *supra* note 141, Item 7; INTERMOUNTAIN REGION STRATEGY, *supra* note 141, Item 4.

174. Gallatin Letter, *supra* note 158.

Targhee also noted plans to coordinate with the Gallatin on its Island Park Caldera Project and Avian study.¹⁷⁵ Third, the Shoshone and Bridger-Teton National Forests cited examples of general coordination tools that would be appropriate for use by all the Greater Yellowstone Area national forests. First, they both responded that they intend to look for ways to share information and develop Geographic Information System data bases with each other.¹⁷⁶ Second, they have met to try to identify common issues and develop goals, such as data coordination strategies and common data standards, for ecosystem management implementation.¹⁷⁷

Joint projects like these would be appropriate for all the national forests of the Greater Yellowstone Area. Yet, other than references to the Greater Yellowstone Coordinating Committee, these national forests did not give examples of broad-based ecosystem management coordination efforts.

V. CURRENT TRENDS—PRESENT DAY ECOSYSTEM MANAGEMENT EFFORTS AND POLITICS

The principles of the *Vision for Future* were politically ahead of their time. A new political atmosphere—one more conducive to change and ecosystem principles—has evolved. The trend of ecosystem projects, reinvention, and ecosystem rhetoric within the Clinton Administration demonstrate this. Forest Service Chief Dr. Jack Ward Thomas has said that bold moves are in order for implementing ecosystem management. This article contends that, while the conditions permit, the Forest Service should take bold steps to implement ecosystem management by reorganizing the Greater Yellowstone Area national forests.

A. Present Day Ecosystem Management Examples

The Forest Service has adopted ecosystem management as part of an overall trend to utilize ecosystem principles. The approach offered at the Pacific Northwest "timber summit" has been termed ecosystem management. The summit offered an ecosystem management approach to the spotted owl conflict because the approach preserved the habitat needs of a species.¹⁷⁸ The summit, however, also showed that different groups

175. Targhee Letter, *supra* note 158, at 3.

176. Bridger-Teton Interview, *supra* note 158; Shoshone Letter, *supra* note 158.

177. Meeting notes of ecosystem management coordination meeting between Shoshone National Forest and Bridger-Teton National Forest (Sept. 9, 1993) (on file with *Public Land Law Review*).

178. Dennis Glick, *Saving All the Pieces: An Ecosystem Management Primer*, GREATER YELLOWSTONE REP., Spring 1993, at 1.

interpret ecosystem management differently.¹⁷⁹

Land managers have applied ecosystem management in other locales as well.¹⁸⁰ These include the Columbia River Gorge, parks in Costa Rica,¹⁸¹ and, recently, the Clinton Administration has been considering an ecosystem management project in the Florida Everglades.¹⁸² A coalition of agencies has been planning an extensive ecological assessment of the Columbia River Basin, including the Snake River headwaters in Yellowstone National Park.¹⁸³ A major ecosystem effort is underway to protect the habitat of Pacific anadromous salmonids (including salmon, steelhead, and sea-run cutthroat trout and dolly varden). Called PACFISH, the joint effort of five Forest Service regions and four Bureau of Land Management (BLM) state administrative units will take a proactive ecosystem approach to management of watersheds of these fish in Alaska, California, Idaho, Oregon, and Washington.¹⁸⁴ The states of Colorado, Nebraska, and Wyoming, Interior Secretary Bruce Babbitt, and the United States Fish and Wildlife Service are discussing a regional approach to addressing the problems related to endangered species in the Platte River Basin.¹⁸⁵

The National Biological Survey (NBS) and the BLM also demonstrate a national level focus on ecosystem management principles. The BLM has prepared a draft blueprint on ecosystem management which focuses on assessment by watersheds.¹⁸⁶ As an agency of the Department of Interior, the newly formed NBS will conduct a biological inventory of the United States.¹⁸⁷ The purpose of the NBS is to "gather, analyze, and disseminate the information necessary for the wise stewardship . . . of natural resources and to foster an understanding of our biological system."¹⁸⁸

Thus, the Forest Service ecosystem management policy is consistent with the national trend. As a national treasure and a recognized ecosystem, the Greater Yellowstone Area belongs in the list of regions where the

179. *Id.*

180. Lang Smith, *Some Management Attempts Only Smoke, But Not All of Them*, GREATER YELLOWSTONE REP., Spring 1993, at 6-7.

181. *Id.*

182. *Id.*

183. Derived from informal conversations with Forest Service personnel and local (Missoula, Mont.) individuals involved in Geographic Information System mapping. As of this writing we had not obtained official information on this regional project.

184. PACFISH Strategy Executive Summary prepared by the Northern Region fisheries staff (1993) (on file with *Public Land Law Review*).

185. *Colorado to Lead Platte River Regional Water Effort*, THE COLORADOAN, Dec. 20, 1993.

186. Sandy Gates, *BLM Defines the Process of Ecosystem Management*, WATERSHED (N.W. Water Watch, Inc.), Winter 1994, at 6.

187. Internal U.S. Forest Service status report on the Dep't of Interior's National Biological Survey (Nov. 1993) (on file with the *Public Land Law Review*).

188. *Id.*

Forest Service practices ecosystem management and should serve as a national model for ecosystem management. As noted, ecosystem management requires a spatially conscious focus; objectives should be focused on land and ecological units as a whole rather than on specific targets for the resources from those units. The obstacles presented by the present organization in the Greater Yellowstone Area underscore the need to examine new organizational possibilities.

B. *Present Day Ecosystem Endorsement*

The most recent rhetoric and critique by land management academicians, land managers, and administrators within the Clinton Administration reflect recognition of the need for reorganization. A paper presented at the 1992 Society of American Foresters Convention identifies artificial political boundaries as one of the thorny obstacles facing ecosystem management.¹⁸⁹ The authors concluded that organizational structures must be examined and alternative institutional arrangements explored.¹⁹⁰ Forest Service Chief Dr. Jack Ward Thomas, in one of his first communications to Forest Service employees, explicitly described the status of ecosystem management implementation and the possibility for structural change. Regarding ecosystem management implementation, Thomas notes first, "I say 'going to be' because—let's face it—right now it's more a concept than a practice." He went on to state that "[i]t is possible the underlying structures of the Forest Service will change."¹⁹¹ Among the "six messages" he directs the Forest Service management to use is "[w]e will: . . . build a Forest Service organization for the 21st century."¹⁹²

During the current congressional session administrators have been advocating change. In February 1994 subcommittee hearings, Jim Lyons, Assistant Secretary for Natural Resources and Environment, testified that one of his goals for the Forest Service is "implementing ecosystem management."¹⁹³ In his statement prepared for the same hearing, Dr. Jack Ward Thomas noted that successful implementation will affect the way the Forest Service is organized.¹⁹⁴ Thomas further pointed out that the Forest

189. H.J. Corner & M.A. Moote, *Sustainability and Ecosystem Management Forces Shaping Political Agendas and Public Policy* 313 (1993) (presented at the Economics, Policy and Law Working Group Session at the Society of American Foresters National Convention in Richmond, Va. on Oct. 24-28, 1992); (on file with the *Public Land Law Review*).

190. *Id.* at 315.

191. *Reinventing Conservation*, THE FRIDAY NEWSLETTER (U.S. Dep't of Agric., Washington, D.C.), Dec. 3, 1993, at 2, 3.

192. Letter from Dr. Jack Ward Thomas, Chief of U.S. Forest Service, to Deputy Chiefs, Regional Foresters, et al. (Dec. 9, 1993) (on file with the *Public Land Law Review*).

193. *Reform Hearing*, *supra* note 21, at 3.

194. *Id.* at 6 (prepared statement of Dr. Jack Ward Thomas, Chief, U.S. Forest Serv.).

Service is organized "to meet the management objectives of the 1950s and 1960s."¹⁹⁵

The National Performance Review is another strong factor in the conclusion that the Forest Service should seriously examine the Greater Yellowstone Area as a model for ecosystem management implementation. Vice President Gore's National Performance Review has designated the Forest Service a "reinvention laboratory."¹⁹⁶ The initial step was to create a Forest Service Reinvention Team which has been instructed to "be bold in thinking and execution."¹⁹⁷ One of the goals of the reinvention team is "program coordination, both within the Forest Service and with other land management agencies."¹⁹⁸

In the past, the Forest Service has had similar opportunities to examine its coordination and organization. The history of the Forest Service's performance in ecosystem management is modest, and its current on-the-ground efforts demonstrate the obstacles to ecosystem management implementation. The current policy and rhetoric suggest not only that reorganization is needed but that the current managers and leaders will consider alternative structures. The push by the Clinton Administration for administrative reinvention and the strong ecosystem language by the Department of Agriculture and the Forest Service Chief provide an opportunity for the Forest Service to take the bold moves required to implement true ecosystem management and apply the *Vision for the Future's* ecosystem principles to the Greater Yellowstone national forests.

VI. ADMINISTRATIVE PROPOSAL FOR THE GREATER YELLOWSTONE AREA NATIONAL FORESTS

This article identifies the barriers presented by the existing administrative structure within the Greater Yellowstone Area national forests. The proposal offers a streamlined solution to these barriers. A discussion of the existing administrative structure puts the proposal in perspective.

A. *Present Organization of the Greater Yellowstone Area and Past Organizational Changes of National Forests*

A national office of the United States Forest Service administers regional offices.¹⁹⁹ There are nine regional offices numbered one to ten with no Region Seven. The regions operate within broad guidelines contained in

195. *Id.* at 11.

196. *Id.*

197. *Id.*

198. *Id.* at 12.

199. U.S. FOREST SERV., DEP'T OF AGRIC., F.S. ORGANIZATIONAL DIRECTORY 1-3 (1992).

manuals and handbooks which cover all aspects of agency policy.²⁰⁰

Each chapter of the manuals outline the authorization for each level of the Forest Service. The level of authority corresponds to the organizational level. The Forest Service has four levels of authority: Chief, Regional Forester, Forest Supervisor, and District Forest Ranger. The manuals detail the responsibility assigned each level of the organization and they detail forest planning. The forest supervisor's office prepares a forest plan pursuant to the NFMA's implementing regulations.²⁰¹ The manuals dictate what the plans address and the regional forester then has the responsibility of approving the plans.²⁰²

On the other hand, handbooks direct the method of performance of projects and jobs.²⁰³ For example, Chapter Twenty of the *Environmental Policy and Procedures Handbook* instructs the Forest Service on how to inform the public, how to develop alternatives, how to estimate effects of alternatives, and how to identify preferred alternatives.²⁰⁴ Within these broad guidelines, the regions have some latitude to conduct activities that fit localized conditions.

Each region is divided into national forests. Each national forest is then broken down into ranger districts which have the on-the-ground responsibilities to manage forest resources on a day-to-day basis. Each national forest operates under a management plan prepared pursuant to the NFMA.²⁰⁵ The act states that National Forest System Plans shall provide for the multiple use and sustained yield of goods and services in a way that maximizes long-term net public benefit in an environmentally sound manner.²⁰⁶

The Greater Yellowstone Area overlaps three Forest Service regions and six national forests in the states of Wyoming, Montana, and Idaho. The three regions of the United States Forest Service that collectively administer the national forests of the Greater Yellowstone Area are

200. See generally U.S. FOREST SERV., DEP'T OF AGRIC., FOREST SERVICE MANUAL, TITLE 1900-PLANNING, CHAPTER 1950 (1985 Amendment 21); U.S. FOREST SERV., DEP'T OF AGRIC., FOREST SERVICE HANDBOOK, FSH 1909.15-ENVIRONMENTAL POLICY AND PROCEDURES HANDBOOK (1985 Amendment 2). The manuals set out the appropriate procedures that the Forest Service must follow to comply with NEPA. The manual for environmental policy and procedures is found in Title 1900 Planning in Chapter 1950. The authority and requirements concerning NEPA are covered in this chapter.

201. 36 C.F.R. § 219.10 (a)(2) (1993).

202. 36 C.F.R. § 219.10 (a)(1).

203. For example, FSH 1909.15 is the *Environmental Policy and Procedures Handbook*. It was prepared in 1985 and has been updated or amended several times. See FSH 1909.15-ENVIRONMENTAL POLICY AND PROCEDURES HANDBOOK, *supra* note 200.

204. *Id.* at Chapter 20, §§ 21-25.

205. 16 U.S.C. § 1604 (1988).

206. 16 U.S.C. § 1600 (1988).

headquartered in the following locations: Region One, the Northern Region, is located in Missoula, Montana;²⁰⁷ Region Two, the Rocky Mountain Region, is located in Denver, Colorado;²⁰⁸ Region Four, the Intermountain Region, is located in Ogden, Utah.²⁰⁹

The Northern Region administers fifteen national forests (three in the Greater Yellowstone Area) from thirteen administrative offices. The Rocky Mountain Region administers sixteen forests (one in the Greater Yellowstone Area) from twelve administrative headquarters. The Intermountain Region oversees nineteen forests (two in the Greater Yellowstone Area) from sixteen headquarters.²¹⁰

Congress alone has the authority to create new forests, change forest boundaries, or transfer lands between agencies. Additionally, Congress reserved the authority to increase the number of forests (new purchases or exchanges), to change the names of forests, and to transfer or sell portions of national forests.²¹¹ Unofficial congressional protocol factors into gaining Congressional approval of changes affecting national forests.²¹²

In an effort to improve efficiency and reduce administrative costs, the Forest Service has made several administrative combinations with the approval of Congress. For example, the Apache National Forest in Arizona administered two ranger districts in New Mexico. The Forest Service transferred the administration of these ranger districts to the Gila National Forest in New Mexico. At the same time, the Forest Service combined the Apache National Forest, headquartered in Springerville, Arizona and the Sitgreaves National Forest, headquartered in Holbrook, Arizona. They are now the Apache-Sitgreaves National Forest headquartered in Springerville.

The Northern Region combined the Kanisku, Coeur d'Alene and St. Joe National Forests into one administrative unit, the Idaho Panhandle National Forests, located in Coeur d'Alene, Idaho. The Rocky Mountain Region has also combined several forests. It combined the Arapaho and Roosevelt National Forests, now administratively located in Fort Collins,

207. F.S. ORGANIZATIONAL DIRECTORY, *supra* note 199, at 31-43.

208. *Id.* at 45-56.

209. *Id.* at 69-80.

210. Because several forests have been administratively combined, there are more national forests than headquarters.

211. Wilkinson, *supra* note 124, at 5-6 (citing the Agriculture Appropriations Act of March 4, 1907, ch. 2907, 34 Stat. 1271). The imminent signing of this act led to the establishment of the famed "midnight reserves," so called because of round-the-clock efforts to prepare "32 presidential proclamations that either enlarged, modified, combined, or created new reserves" before Congress reserved the authority to create new forest reserves in six western states. *Id.* at n.17.

212. A general understanding exists that this protocol dictates that approval by powerful committees, such as the House Committee on Natural Resources, must be gained before the full Congress will approve the change.

Colorado; the Grand Mesa, Uncompahgre, and Gunnison National Forests now located in Delta, Colorado; and the Pike and San Isabel National Forests located in Pueblo, Colorado.

In the Rocky Mountain Region, there are two temporary consolidations of national forests. First, the Forest Supervisor of the Route National Forest, headquartered in Steamboat Springs, Colorado, also serves as the acting supervisor of the Medicine Bow National Forest, headquartered in Laramie, Wyoming. Second, the Forest Supervisor of the Rio Grande National Forest serves as the acting supervisor of the San Juan National Forest.²¹³

The Intermountain Region has also made administrative combinations. Within the Greater Yellowstone Area, the Bridger National Forest and the Teton National Forest combined in the early 1970s to form the Bridger-Teton National Forests. The Bridger Teton is now headquartered in Jackson, Wyoming. It comprises one of the largest land areas administered by a single unit of Forest Service in the contiguous United States.

Other regions have undergone similar administrative overhauls. The Forest Service dissolved Region Seven. The national forests formerly in that region are now in either Region Eight, headquartered in Atlanta, Georgia, the "Southern Region,"²¹⁴ or Region Nine, headquartered in Milwaukee, Wisconsin, the "Eastern Region."²¹⁵

In Region Five, the Pacific Southwest Region, a unique combination of administrative units has been underway for several years. The reorganization involves the area around Lake Tahoe Basin. Parts of several national forests shared the Lake Tahoe Basin. The Forest Service split off those national forest segments sharing the basin and coalesced them into one unit called the Lake Tahoe Basin Management Unit, headquartered in South Lake Tahoe, California. The Lake Tahoe Basin could serve as a model for the Greater Yellowstone Area because of the similarity between the fragmentation that existed in the Lake Tahoe Basin and the fragmentation that currently exists in the Greater Yellowstone Area.

Contrasted with the national forests that existed through the 1950s, today's national forests reflect a continual evolution of the administrative organization of the Forest Service since the establishment of the Yellowstone Timberland Reserves in 1891. Ranger districts have grown in size. Some present day ranger districts were, in the past, multiple ranger districts or entire national forests. The old ranger districts were conducive to coverage by one ranger on horseback. The size of present ranger districts indicate that the days of horseback and one person ranger districts are

213. The permanence of these temporary consolidations is still uncertain.

214. F.S. ORGANIZATIONAL DIRECTORY, *supra* note 199, at 112-132.

215. *Id.* at 133-143.

gone. Most recently, in 1993, in the Greater Yellowstone Area, the Beaverhead National Forest consolidated two ranger districts. It combined administration of the Sheridan Ranger District with the Madison Ranger District; now headquartered in Ennis, Montana. With modern electronic and informational capabilities, the ability to transcend larger areas, longer distances, and more complex workloads is enhanced. Thus, the established precedent of administrative changes and the development of ecosystem management, support further administrative reorganization within the Forest Service. The Greater Yellowstone Area presents an opportunity for progressive change embracing ecosystem management principles.

All three regional headquarters, each significantly removed from the Greater Yellowstone Area, have their own unique set of issues, challenges, priorities, and leadership styles. Each region has responsibility for several national forests outside of the Greater Yellowstone Area. This greatly reduces the amount of collaborative energy available to devote to the Greater Yellowstone Area.²¹⁶

In 1985, then Chief of the Forest Service, Max Peterson, delegated coordination responsibilities over the Greater Yellowstone Area national forests to the Rocky Mountain Regional Forester.²¹⁷ Coordination responsibility evolved largely as a result of the 1985 Greater Yellowstone Area Oversight Hearings. However, the Rocky Mountain Regional Forester has neither management authority nor veto-power over the other regions or forests for which the forester is responsible. Consequently, the regional forester has responsibility without authority. The lead is merely a delegated responsibility to ensure that the Forest Service regions, forests, and ranger districts coordinate within the Greater Yellowstone Area. The lack of delegated authority for ensuring coordinated and integrated policies creates an institutional barrier.

The Rocky Mountain Regional Forester was chosen due to its proximity to the Regional Director of the National Park Service and the Regional Director of the United States Fish and Wildlife Service in Denver. The regional headquarters of those three agencies are located in the Denver foothill community of Lakewood. Grizzly bear management was the major reason for this delegation. These regional officials work together as part of the Interagency Grizzly Bear Management Team; however, the Regional Director of the United States Fish and Wildlife

216. Forest supervisors in the Greater Yellowstone Area have discussed the desirability of having one regional forester to report to. Personal conversation/interview between John Mumma and two Greater Yellowstone Area forest supervisors at Greater Yellowstone Coalition meeting, West Yellowstone, Montana (May 14, 1993).

217. Letter from R. Max Peterson, Chief of the U.S. Forest Service, to the Rocky Mountain Regional Forester 1 (Nov. 5, 1985) (on file with the *Public Land Law Review*).

Service is not a participant of the Greater Yellowstone Coordinating Committee.

The Greater Yellowstone Coordinating Committee is the major land management coordinating entity in the Greater Yellowstone Area. Some have asserted that the area is the most coordinated area in the country.²¹⁸ The Park Service and the Forest Service do work to make this coordination as efficient as possible. However, the administrative boundaries, policies, and jurisdictions, as well as complex legal mandates, make management of the area one of the most challenging in the nation.

In 1986, the regional foresters of Regions One, Two, and Four signed a Memorandum of Understanding with the Regional Director of the Park Service.²¹⁹ This agreement listed fourteen items to facilitate coordinated management and planning in the Greater Yellowstone Area. Item ten calls for coordinating "planning and land management strategies within applicable statutes," while item twelve calls for coordinating schedules for developing and updating appropriate plans. Item thirteen specifically addresses making data bases and information systems compatible.

The Park Service and Forest Service had good intentions; however, the current administrative structure does not accommodate the agreements's intent. The three Forest Service regions lack agreement on fundamental components such as definitions of ecological terms. Instead of designing common definition, analysis, mapping, and planning of ecological systems, each region has developed a different approach.²²⁰ The three regions each have their own regional guides reflecting three approaches to broad scale planning and, consequently, three sets of regional policies, programs, and budgets.

Because each region's area of responsibility extends past the Greater Yellowstone Area, constituents from outside of the Greater Yellowstone Area, including Kansas, California, Washington, and North Dakota, vie for attention. This creates a complex set of time and energy constraints on the regional foresters, effectively diluting the amount of time they devote to the national forests of the Greater Yellowstone Area. There are different legal jurisdictions for the area which make for inconsistent rulings on such issues as oil and gas leasing, roadless areas and adequacy of National Environmental Policy Act compliance.

218. 1985 statement of R. Max Peterson, then Chief of the Forest Service. *Reform Hearing*, *supra* note 21, at 53.

219. For the full text of the MOU see the AGGREGATION REPORT, *supra* note 3, at 5-2 to 5-3.

220. A basic element of planning is to know what you have, where it is, how much there is and how it is described. When the most basic building block such as definition is missing, then all else will evolve in different directions. Such is the case in the Greater Yellowstone Area even with MOUs, GYCC annual meetings, coordination meetings and technical meetings. The above clearly highlights just another example of an administrative obstacle to ecosystem planning and management.

The three regions each have their own regional staff directors, traditionally organized around resources rather than ecosystems, to help set regional policies. As these staff directors typically represent national staffing patterns, they do not accurately represent the major resources for which the Greater Yellowstone Area is noted. For example, a majority of the Greater Yellowstone Area constitutes designated Wilderness, and a significant amount of roadless land adds to the *de facto* wilderness acreage.²²¹ Each region has a director of recreation, yet not one regional staff director or forest staff person has overall responsibility for wilderness in any region or on any national forest.

Fisheries constitute another major resource in the Greater Yellowstone Area.²²² There are three regional wildlife and fisheries directors, but not one regional director with primary responsibility for Greater Yellowstone area fisheries. Likewise, there are three regional staff directors for timber management. Each region manages timber resources with a different approach. The same tripartite approach exists for all other program areas such as public affairs, range management, watershed and soils, engineering, minerals, lands, and data and information management.

Even with the current philosophical discussions and attempts to move toward ecosystem management, no region has a regional staff director responsible for this major landscape approach to natural resource management. Ecosystem management involves managing a number of resources such as watershed, soils, and vegetation, yet there is no regional staff director with vegetation management responsibility. The Forest Service has been the nation's largest employer of landscape architects, yet there are not even three primary staffs assigned to Greater Yellowstone Area landscape management at either the regional or forest level.

Before a meaningful approach to ecosystem management can begin, the existing organizational structure will need revamping—form should follow structure. Currently the three regions possess considerable autonomy. As long as they continue operating with the existing policies and organization, the institutional barriers to ecosystem management remain.

B. *The Proposal*

This article proposes a bold new approach to managing the national forests of the Greater Yellowstone Area.²²³ The proposed organization is

221. AGGREGATION REPORT, *supra* note 3, at 3-17 to 3-18.

222. Fisheries and fisheries habitat in the Greater Yellowstone Area are world famous.

223. This dramatic organizational approach was first presented at the annual meeting of the Greater Yellowstone Coalition in May 1993 and again in October 1993 to the Wyoming Outdoor Council. Presentation by John W. Mumma, former Regional Forester for the Northern Region, at the annual meeting of the Greater Yellowstone Coalition, West Yellowstone, Mont. (May 14, 1993);

unique because it would administer and manage the Forest Service lands of the Greater Yellowstone Area as a distinct regional component of the National Forest System. This proposal would cultivate ecosystem management in two ways. First, the Forest Service component of the Greater Yellowstone Area would focus solely on the Greater Yellowstone Area. This would eliminate discoordination at the regional level and provide one set of guidelines for the national forests. Second, one focused unit of the Forest Service at the regional level (instead of three dispersed units) would have the ability to more effectively cooperate with the Park Service and other agencies in the Greater Yellowstone Area.

The proposed structure would be a model for applying, testing, and evaluating ecosystem principles at a major landscape level. The proposal addresses the present organizational and institutional roadblocks to an effective ecosystem-based management structure. By eliminating the organizational barrier, the issues can be addressed from an ecosystem concept. The resources represented in the area could then be evaluated and managed using ecological concepts.

The proposed organization would place one administrative head (Greater Yellowstone Area Administrator) over the Greater Yellowstone Area national forests. This person would report to the national headquarters of the Forest Service in Washington, D.C. rather than to three regional foresters. The administrator would be comparable to a regional forester. The office of the Greater Yellowstone Area Administrator would be located in Bozeman, Montana. The support staff would be streamlined in relation to the existing regional staffs.

The Greater Yellowstone Area Administrator's staff would be organized around the values and interests that represent the area. The major staff at the administrator's level and at the forest level would be organized around four themes:

1. Ecosystem planning;
2. Ecosystem operations;
3. Human resources and administrative services; and
4. Customer services.

Within these program structures would be experts in wilderness, vegetation, landscape, wildlife, fisheries, and other disciplines. This would be different than the traditional, resource-oriented staffing.

The administrator would be complemented by a centralized personnel, administrative, and information staff group that would utilize sophisti-

cated electronics.²²⁴ Absent would be some of the traditional staff found at the regional, forest, or ranger district level, such as timber management and range staff. Some of the work currently performed by these staff would continue; however, it would be incorporated into an ecosystem management organization which emphasizes watersheds, landforms, and vegetation.

The forest level staffing would be reduced by as much as one-fourth to one-third while the ranger districts would increase staffing year-long as well as seasonally. The costs to administer this type of organization would be less than the present arrangement and services to the public would be greatly improved.

In addition to having only one head administrator for the area, there should be a major change in the current planning effort that has been in place since the passage of the NFMA. Rather than three regional guides there would be one regional guide for the Greater Yellowstone Area. Instead of having six national forest plans there would be four plans for the area. This would require consideration of the current plans and evaluating the monitoring results of those plans. From this information a new plan would be prepared with a uniform set of guidelines and standards as per NFMA. This contrasts with six different sets of standards, guidelines, and monitoring plans.

One set of standards and guidelines would be developed with more effort on identifying and recognizing the capabilities of specific watersheds and management areas. There would be guidelines for dealing with different geologic features, soil types, and other unique features. One annual monitoring summary and one set of monitoring practices would be prepared for the entire area.

Internal administrative adjustments would further refine management of the Greater Yellowstone Area national forests. For example, the Beartooth Ranger District of the Custer National Forest at Red Lodge, Montana, would be managed by the Gallatin National Forest Supervisor. This would remove one of the current six national forest supervisors (the Custer) from the Greater Yellowstone Coordinating Committee and contribute to more efficient management of the area. The other jurisdictional change would involve the newly combined Sheridan-Madison Ranger District of the Beaverhead National Forest. The Gallatin National Forest Supervisor would administrator the lands in this unit consisting of the Gravelly Mountains and Madison River Valley. This would remove another forest supervisor from the area and bring all Forest Service lands in

224. For example, Geographic Information Systems, Global Positioning Systems technology and Data General could be utilized.

Montana under the administration of a single supervisor.

The existing forests would remain unchanged, leaving four forest supervisors on the Greater Yellowstone Coordinating Committee. The Supervisor of the Shoshone and Bridger-Teton would remain in Wyoming. The supervisor of the Targhee would remain in Idaho and the supervisor of the Gallatin in Montana. The Bridger-Teton, Targhee, Shoshone, and Gallatin National Forests would constitute the four Greater Yellowstone Area national forests. A review of the current ranger districts' administrative boundaries would further assure that all of the smaller administrative units were efficiently arranged and oriented along watersheds.

These organizational changes would provide major improvements in the way the forests of the Greater Yellowstone Area are administered. The organization would reflect the ecosystem features of the area. Past obstacles, largely administrative in function, would be eliminated. It is our belief that the values of the Greater Yellowstone Area, as highlighted in the *Vision for the Future*, would be realized—management for future generations while “conserv[ing] a sense of naturalness.”

As Forest Service Chief Dr. Jack Ward Thomas, testified on February 24, 1994, before the Senate Committee on Energy and Natural Resources, major challenges and goals facing the Forest Service today include:

1. The rapid and successful implementation of ecosystem management;
2. Enhancing the role of science in implementing ecosystem management;
3. Increasing our collaborative efforts;
4. Establish and define desired outcomes from Forest Service management and development of programs to achieve the desired results; and
5. To quickly move towards organizational effectiveness.²²⁵

VII. CONCLUSION

The Greater Yellowstone Area ecosystem has been identified as an area where arbitrary agency jurisdictional lines fragment interconnected lands.²²⁶ These arbitrary boundaries present an obstacle to managing the Greater Yellowstone Area from an ecosystem perspective.

The 1985 Greater Yellowstone Area Oversight Hearing, the *CRS Report*, the *Aggregation Report* and the *Vision for the Future* and

225. *Hearings on FY 1995 President's Budget for the Forest Service Before the Senate Comm. on Energy and Natural Resources*, 103d Cong., 2d Sess. 1 (1994)(prepared statement of Dr. Jack Ward Thomas, Chief, U.S. Forest Service).

226. Keiter, *supra* note 2, at 1007.

Framework for Coordination demonstrate official recognition that fragmentation of the ecosystem prevents consistent management. These documents looked at the relationships among the numerous federal, state, and local agencies in the Greater Yellowstone Area—especially the relationship between the Park Service and the Forest Service. They show that the Park Service and Forest Service struggle with how to achieve a holistic approach to managing the Greater Yellowstone Area. While recognizing that the two agencies have fundamentally different missions, these documents acknowledged that coordination could be improved and suggested guidelines for making these improvements. These suggestions strongly implied that improvement in interagency coordination requires better coordination within the Forest Service itself.

The present organization of the Forest Service within the Greater Yellowstone Area, with six national forest headquarters that report upward to three regional forests, is not designed to manage the land in an ecologically effective or uniform manner. Each forest supervisor in the Greater Yellowstone Area is delegated authority over a national forest, and each national forest is a subunit of a Forest Service region overseen by a regional forester. Policies from the regions guide the forest supervisors, yet these regional policies reach far beyond the boundaries of the national forests in the Greater Yellowstone Area. These three separate regional policies covering the Greater Yellowstone Area complicate management and frustrate forest supervisors and district rangers.

The proposed administrative organization for the Greater Yellowstone Area calls for one administrator with accountability to the national office of the Forest Service. This administrator would have overall responsibilities for four national forests located, as follows, on the east, south, west and north boundaries of the ecosystem:

East: Shoshone National Forest in Cody, Wyoming

South: Bridger-Teton National Forest in Jackson, Wyoming

West: Targhee National Forest in St. Anthony's, Idaho

North: Gallatin National Forest in Bozeman, Montana.

The Gallatin Forest Supervisor would administer the Beartooth Ranger District now on the Custer National Forest. The Gallatin Forest Supervisor would also administer the Centennial Valley and Madison Valley portions of the Beaverhead National Forest. This would reduce the number of forest supervisors from six to four. By reducing the regional administrators having jurisdiction in the Greater Yellowstone Area from three to one, each forest supervisor would report to the same regional administrator and regional staff. Each would adhere to one set of policies, greatly enhancing management of the national forests in the Greater Yellowstone Area. This organization would allow the Greater Yellowstone

Administrator to focus entirely on the Greater Yellowstone Area. The American public would be the ultimate benefactor of these changes.

The new Greater Yellowstone Administrator would be located in Bozeman, Montana and have a staff responsible for developing and planning a regional approach to ecosystem management for the Greater Yellowstone Area. That staff would be organized to implement an ecosystem management process as opposed to the current functionally resource oriented management structures. Organizing the administrator's staff around ecosystem planning, ecosystem management operations, administrative services, and customer services would provide smoother and more effective ecosystem management implementation.

A regional guide specific to the Greater Yellowstone Area would be developed by the administrator to guide the national forests. Each of the forests would have a forest plan coordinated with the other forests utilizing consistent standards and guidelines and concurrent revisions.

The factors relevant to this proposal, and to the implementation of ecosystem management in the Greater Yellowstone Area, have lined up to create an atmosphere favorable to its adoption. In 1990 the *Vision for the Future* called for the Park Service and Forest Service to develop a joint ecosystem vision for the Greater Yellowstone Area. That vision met with considerable opposition. Since then, however, the Chief's 1992 letter has mandated ecosystem management of the national forests. The concept of ecosystem management, by definition, requires coordinated management of the interconnected components of an ecosystem spread across numerous administrative units. Thus, the forests of the Greater Yellowstone will have to improve intra-agency coordination. This official adoption of ecosystem management coupled with strong legal implications compels change. Increased awareness of ecosystems and the proliferation of ecologically focused management indicate that ecosystem management is considered an accepted and appropriate concept. Present public land policy formulation shows that the Clinton Administration desires to make changes in the way agencies manage public lands. The Forest Service Reinvention Team provides an ideal forum for considering this article's proposal for reorganization of the national forests of the Greater Yellowstone Area.

The Chief of the Forest Service, working in tandem with the Assistant Secretary of Agriculture, would be able to make these proposed administrative changes. The Secretary of Agriculture is currently evaluating reorganization proposals within the department. In addition, the General Accounting Office is undergoing an evaluation of several areas of the United States for potential demonstrations on ecosystem management. With the current interest of the Chairman of the House Natural Resources Committee, the Senate Agriculture, Nutrition and Forestry Committee and the Chairman of the Senate Environment and Public Works Commit-

tee (to mention only a few), Congress should look favorably upon this article's proposal.

This unique proposal will help the several initiatives currently underway meet their objective of ecosystem management. More importantly, it will help move forward the management of a truly remarkable and outstanding national asset. The time is ripe to change the basic organizational structure of the national forests of the Greater Yellowstone Area—to carry out this vision for the magnificent forests of the Greater Yellowstone Area. A 21st-century organization designed to meet the challenges of the 21st-century—a vision for the magnificent forests of the Greater Yellowstone Area.