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Beyond the Blaze: Strategies for Improving Forest Service Fire Suppression Policies

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BEYOND THE BLAZE: STRATEGIES FOR IMPROVING FOREST SERVICE FIRE SUPPRESSION POLICIES

Aurora R. Janke*

Abstract: Current Forest Service fire management policies restrict NEPA's application to fire suppression actions and contribute to a lack of detailed information about the effectiveness and environmental impact of suppression efforts. Decisions by the U.S. District Court for the District of Montana in the *Forest Service for Environmental Ethics v. U.S. Forest Service* litigation suggest that NEPA review applies to commonly used fire suppression tactics and that the Forest Service should conduct this review before fires occur. Other recent federal district court decisions and congressional concern with current fire suppression efforts support the need for NEPA review in the fire suppression context. This comment explores this case law and analyzes Forest Service compliance with NEPA procedures in its fire suppression practices.

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I. INTRODUCTION

“Keep this question in mind: What creates the greater impact, the fire suppression effort or the fire?”¹

Wildland fires² are a part of the fabric and existence of the American West. Fire naturally occurs in most terrestrial ecosystems³ and can be an important tool for protecting, maintaining and enhancing natural resources.⁴ Wildland fire

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1. NAT’L WILDFIRE COORDINATING GRP., NFES 1831, RESOURCE ADVISOR’S GUIDE FOR WILDLAND FIRE, Appendix I Minimum Impact Suppression Tactics (MIST) Guidelines 3 (2004) [hereinafter RA Guide].

2. Wildland fires are non-structure fires occurring in wildland areas. See PHILIP N. OMI, FOREST FIRES 326 (2005).

3. JAN L. BEYERS, ET AL., ROCKY MOUNTAIN RESEARCH STATION, WILDLAND FIRE IN ECOSYSTEMS: EFFECTS OF FIRE ON SOIL AND WATER vii (Daniel G. Neary, Kevin C. Ryan, Leonard F. DeBano eds., 2008).

4. See DEP’T OF THE INTERIOR AND DEP’T OF AGRIC., NFES 2724, INTERAGENCY STANDARDS FOR FIRE AND FIRE AVIATION OPERATIONS 01-3 (2011) [hereinafter REDBOOK] (discussing agency policy for allowing fire to function in its natural

can also have catastrophic impacts on forests and people alike.⁵ Intense and fast-moving wildfires can threaten valued public lands and endanger communities.⁶

Over the past twenty years, fire activity has increased in intensity.⁷ A recent U.S. Government Accountability Office (GAO) report acknowledged the dramatic worsening of the nation's wildfire problem, attributing the increase in fires to a number of factors, including drought, climate change, increased human development near wildlands and an accumulation of flammable vegetation resulting from overmanagement of state and federal lands.⁸ Indeed, from 1999 to 2008, the nation experienced 242 large wildfires (those exceeding 50,000 acres), compared to just 119 large fires in the last two decades of the twentieth-century.⁹ In 2002, several western states, including Colorado and Oregon, experienced their worst fire seasons in modern history.¹⁰ Such extreme fires can destroy homes, damage forests and threaten human lives.¹¹ These risks to lives and property increase in the

ecological role).

5. U.S. GOV'T ACCOUNTABILITY OFFICE, GAO-02-158, WILDLAND FIRE MANAGEMENT: IMPROVED PLANNING WILL HELP AGENCIES BETTER IDENTIFY FIRE-FIGHTING PREPAREDNESS NEEDS 5-6 (2002) [hereinafter GAO WILDLAND FIRE MANAGEMENT 2002] (discussing the 2000 fire season during which intense and catastrophic fires burned out-of-control and threatened communities. The intensity of the 2000 fire season led local, state and national policymakers to call for federal action to address the growing threat of catastrophic fires.).

6. See Robert B Keiter, *The Law of Fire: Reshaping Public Land Policy in An Era of Ecology and Litigation*, 36 ENVTL. L. 301, 309 (2006) (discussing public reaction to 1988 Yellowstone fires that burned over 1.5 million acres).

7. See U.S. DEP'T OF AGRIC. ET AL., A NATIONAL COHESIVE WILDLAND FIRE MANAGEMENT STRATEGY 2 (2011) (discussing the rapid increase in fire severity and its impact on communities and the land) [hereinafter A NATIONAL COHESIVE WILDLAND FIRE MANAGEMENT STRATEGY].

8. U.S. GOV'T ACCOUNTABILITY OFFICE, GAO-11-423T, FOREST SERVICE: CONTINUED WORK NEEDED TO ADDRESS PERSISTENT MANAGEMENT CHALLENGES 2 (2011) [hereinafter GAO FOREST SERVICE 2011] (discussing recent improvements in fire management, while highlighting ongoing challenges in Forest Service wildfire management, data collection, and financial and performance accountability).

9. See FIRE EXEC. COUNCIL ET AL., QUADRENNIAL FIRE REVIEW 8 (2009) (The QFR is a strategic management document that reviews the joint efforts by five federal natural resource management agencies operating under the Departments of the Interior and Agriculture: The Forest Service, Bureau of Land Management, U.S. Fish and Wildlife Service, National Park Service, and the Bureau of Indian Affairs. The QFR aims to create a unified strategic vision for fire management.).

10. See Keiter, *supra* note 6, at 310-311.

11. GAO FOREST SERVICE 2011, *supra* note 8, at 2.

Wildland Urban Interface, residential areas adjacent to undeveloped wildlands,¹² especially as more people move to these areas.¹³ Additionally, more intense fires typically require more expensive fire suppression efforts, costing federal agencies billions of dollars.¹⁴

The Forest Service, a land and resource management agency within the Department of Agriculture, is a leading federal agency in forest fire management.¹⁵ Over the last century, the Forest Service's approach to fire suppression fluctuated based on public concern for human safety and property and on scientific understanding of fire's role in nature. The Forest Service continues to develop its fire policy based on these concerns but, as fire danger increases, maintaining a balance between human safety and ecological health becomes more difficult. To achieve this balance, the Forest Service must determine the best fire management approach to reduce the ecological, human and economic threats that extreme fires present.

In the past decade, various environmental groups sued the Forest Service over the agency's fire prevention and post-fire restoration activities alleging violations of the National Environmental Policy Act (NEPA) and the National Forest Management Act (NFMA).¹⁶ These cases typically challenged either the Forest Service's decision to reduce potential fire danger through thinning projects¹⁷ or the agency's decision to contract with logging companies to "salvage" (harvest) burned timber after a fire occurs.¹⁸ A series of recent cases, *Forest*

12. See FIRE EXEC. COUNCIL ET AL., *supra* note 9, at iii (explaining regional shifts in population that increased development and residential areas near public lands).

13. DEP'T OF THE INTERIOR ET AL., 2001 REVIEW OF 1995 FEDERAL WILDLAND FIRE MANAGEMENT POLICY 3 (2001) (discussing the unique problems presented by the Wildland Urban Interface, including landowner expectations of urban emergency services for wildland fire threats).

14. See *id.* at 2 (highlighting increases in Forest Service spending in relation to increased fire danger).

15. GAO WILDLAND FIRE MANAGEMENT 2002, *supra* note 5, at 6.

16. See, e.g., *League of Wilderness Defenders – Blue Mountains Biodiversity Project v. Forsgren*, 184 F. Supp. 2d 1058, 1062 (D. Or. 2002) (challenging Forest Service award of salvage logging contract); *League of Wilderness Defenders v. Allen*, 615 F.3d 1122 (9th Cir. 2010) (challenging Forest Service fire reduction thinning projects for failure to comply with NFMA and NEPA).

17. See *Allen*, 615 F.3d 1122.

18. See *Forsgren*, 184 F. Supp. 2d 1058.

*Service Employees for Environmental Ethics (FSEEE)*¹⁹ v. *U.S. Forest Service I, II, and III*,²⁰ shifted this fire management discussion to focus on the Forest Service's approach to fighting fire, instead of focusing on the agency's pre- and post-fire activities. Specifically, the cases challenged the Forest Service's use of long-term fire retardant²¹ without adequately analyzing its potential environmental impact.²² These cases represent a novel challenge to the Forest Service's fire management and highlight the tension between the Forest Service's responsibility to protect human health and property²³ and its duty to care for the land.²⁴ In shifting the discussion to fire suppression, *FSEEE I, II, and III* raise the question of whether the Forest Service adequately considers the environmental impacts of all its suppression tactics.

Existing literature on the legal and policy framework of federal fire management discusses the policy tension between

19. Forest Service Employees for Environmental Ethics is a national organization comprised of present and former Forest Service employees and concerned citizens working to hold the Forest Service accountable for responsible land stewardship. For more information see <http://www.fseee.org/>.

20. See *Forest Serv. Employees for Env'tl. Ethics v. U.S. Forest Serv. (FSEEE I)*, 397 F. Supp. 2d 1241 (D. Mont. 2005); *Forest Serv. Employees for Env'tl. Ethics v. U.S. Forest Serv. (FSEEE II)*, 530 F. Supp. 2d 1126 (D. Mont. 2008) (finding a contempt hearing warranted when the Forest Service failed to comply with the 2005 Decision and Order); *Forest Serv. Employees for Env'tl. Ethics v. U.S. Forest Serv. (FSEEE III)*, 726 F. Supp. 2d 1195 (D. Mont. 2010). These cases also address several Endangered Species Act (ESA) issues that are not the focus of this comment, although the ESA may provide another avenue for increasing accountability in fire suppression.

21. Long-term fire retardants are made of fertilizer salts which affect the way fuels burn. These fire retardants are generally applied to fuels via large air tankers, single engine airtankers, or helicopter buckets. See REDBOOK, *supra* note 4, at 12-1. The Forest Service lists six types of long-term fire retardant on its Wildland Fire Chemical Systems website. Each product has a different chemical make-up. For example, Phos-Chek 259-F contains a diammonium phosphate base, a fugitive coloring agent, a low concentration of gum thickeners, and bactericide and corrosion inhibitors. This long-term retardant is recommended for helicopter use because it is the only long-term retardant that will not corrode magnesium. See USDA Forest Service, *Phos-Check 259-F*, Product Information, <http://www.fs.fed.us/rm/fire/wfcs/products/index.htm> (last visited October 18, 2011).

22. See *FSEEE I*, 397 F. Supp. 2d at 1244, 1246 (In 2003, the Forest Service and other federal and state land management agencies, used over 23 million gallons of retardant in their fire suppression activities).

23. A NATIONAL COHESIVE WILDLAND FIRE MANAGEMENT STRATEGY *supra* note 7, at 7 (discussing that every fire land management organization must work to protect lives, property and resources).

24. The Forest Service Mission is "caring for the land and serving the people." For more information see <http://www.fs.fed.us/aboutus/mission.shtml>.

managing forests for ecological health and protecting communities. In this literature, scholars call attention to the need for a comprehensive legal structure that recognizes fire's role as a resource management tool. Robert Keiter²⁵ and Sara Jensen²⁶ argue that the existing fire management framework is not unworkably flawed, but it is in need of changes including better guidance, consistency and incentives for implementing sound fire management practices.²⁷ While these articles explore existing fire management laws and policies generally, this comment focuses on a specific, crucial issue of fire management—the Forest Service's use of fire suppression tactics—highlighting the need for more comprehensive environmental analysis to inform fire suppression decisions.

Through an examination of recent cases challenging Forest Service fire management, this comment will demonstrate the need for the Forest Service to conduct detailed planning and environmental analysis before engaging in fire suppression activities. Part I describes the history of Forest Service fire management and summarizes current laws and policies governing fire management. Part II explores the environmental and economic costs of fire suppression. Part III discusses the role of NEPA in the Forest Service's land management plans and fire management programs. Part IV considers the recent *Forest Service Employees for Environmental Ethics v. U.S. Forest Service*²⁸ decisions within the broader context of litigation challenging forest service fire management practices. Finally, Part V makes recommendations for increasing Forest Service environmental accountability and consistency in its fire management practices.

25. Keiter, *supra* note 5. Robert Keiter serves as the Wallace Stegner Professor of Law and Director of the Wallace Stegner Center for Land, Resources and the Environment at the University of Utah S.J. Quinney College of Law.

26. Sara Elizabeth Jensen, *Policy Tools for Wildland Fire Management: Principles, Incentives, and Conflicts*, 46 NAT. RESOURCES J. 959, 999–1001 (2006). Sara E. Jensen served as Assistant Staff Scientist at the University of Arizona's Institute for the Study of Planet Earth.

27. *See generally* Keiter, *supra* note 6, at 304–322; Jensen, *supra* note 26, at 999–1001.

28. *Forest Serv. Employees for Env'tl. Ethics v. U.S. Forest Serv. (FSEEE III)*, 726 F. Supp. 2d 1195, 1195 (D. Mont. 2010).

II. UNDERSTANDING FOREST SERVICE FIRE MANAGEMENT

The Forest Service controls 192 million acres of America's public lands²⁹ and is charged with protecting forests and communities from catastrophic wildfires.³⁰ In addition to fire management, the Forest Service must manage its lands to support a variety of interests and activities, including protecting wilderness, watersheds and wildlife; facilitating rangeland use and timber sales; and promoting recreational use.³¹ The Forest Service's duty to manage and protect forests, coupled with the human, property and ecological risks of wildfires, makes fire management and suppression complex and challenging.³² Understanding the multifaceted process of fire management requires a review of the Forest Service's fire management history, the environmental laws that influence fire policy and the economic and environmental impact of fire and fire suppression.

A. *Developing Forest Service Fire Management Policy*³³

Forest Service fire management has an extensive history in the United States, especially in the West. Through the 1891 Forest Reserve Act and the 1897 Organic Act, Congress³⁴ established national forests and created a plan for their management.³⁵ Specifically, the Forest Reserve Act of 1891 created forest reserves out of public domain lands and the Organic Act created management standards for these lands, which required the government to improve forest health and

29. History, U.S. FOREST SERVICE, <http://www.fs.fed.us/aboutus/history/> (last visited Sept. 21, 2011).

30. GAO WILDLAND FIRE MANAGEMENT 2002, *supra* note 5, at 6.

31. GAO FOREST SERVICE 2011, *supra* note 8, at 2.

32. *See id.* at 9 (discussing the "daunting challenge" of protecting lives, property, and federal resources from fire); *see also* Jensen, *supra* note 26, at 960–961.

33. For a more comprehensive history of Forest Service fire policy see Keiter, *supra* note 6, at 304–322.

34. *See* 16 U.S.C. § 475 (2006); Forest Service at a Glance, U.S. FOREST SERVICE, http://www.fs.fed.us/plan/par/2003/final/html/fs_glance/founding_legislation.shtml (last visited Feb. 27, 2011).

35. *See* Aaron Shapiro, *Contextual History of the Forest Service Mission and Motto* 1–2, http://www.fs.fed.us/fstoday/080808/LOOKING_BACK_Mission.pdf (last visited Feb. 27, 2011).

provide timber and water resources.³⁶ In 1905, Congress officially created the United States Forest Service within the Department of Agriculture to manage the nation's forest reserves.³⁷ In 1910, the West, including these newly created Forest Service lands, experienced a catastrophic fire season during which wildfires ravaged much of Idaho and Montana, claiming eighty-five lives and burning over three million acres.³⁸ The 1910 fires shaped Forest Service fire policy. In an attempt to ward off the recurrence of such widespread calamity, the Forest Service implemented a blanket fire suppression policy,³⁹ putting out small remote fires based on fears these fires could spread out of control and threaten surrounding communities.⁴⁰ Continual fire suppression stifled natural fire regimes⁴¹ and threatened the ecological resilience of the landscape by allowing the build-up of flammable vegetation (fuels) that can cause more extreme and unmanageable fires.⁴²

During the 1960s, in response to changing public attitudes about preserving wilderness areas, the Forest Service reevaluated its fire policies and began allowing some natural fires to promote healthy forest and wildlife management.⁴³ However, these practices were criticized in the wake of the

36. *See id.*

37. U.S. Forest Service History: Agency Organization, THE FOREST HISTORY SOCIETY (Mar. 25, 2010), http://www.foresthistory.org/ASPNET/Policy/Agency_Organization/index.aspx.

38. *See Keiter, supra* note 6, at 305–306.

39. *See id.* at 306; *see also* William B. Greeley, “Piute Forestry” for the Fallacy of Light Burning, 1920, reprinted in FOREST HISTORY TODAY (Spring 1999), available at <http://www.foresthistory.org/Publications/FHT/FHTSpring1999/PiuteForestry.pdf> (emphasizing the need to “put an end to the destruction of forests by fire” and condemning those who argue for “light” or prescribed burning as a fire prevention tool).

40. *See Keiter, supra* note 6, at 306–307 (discussing the Forest Service’s adoption of a blanket suppression policy in the wake of the 1910 fires which burned over three million acres and claimed eighty-five lives); *see also id.* at 365–366.

41. The term “natural fire regime” classifies the “role fire would play across a landscape in the absence of modern human mechanical intervention but including the influence of aboriginal burning.” Classes of fire regimes are differentiated by the number of years between fires and the severity of the fire. David C. Powell, *Estimating Crown Fire Susceptibility for Project Planning*, 70 FIRE MANAGEMENT TODAY No. 3 9 (2010).

42. *See Keiter, supra* note 6, at 309.

43. *See id.* at 308.

1988 Yellowstone fires, which burned more than 1.5 million acres of national park and national forest lands.⁴⁴ The Yellowstone fires initiated another shift in Forest Service policy and the Forest Service suspended its use of natural fires, later allowing the use of prescribed fire policies only after extensive fire management planning.⁴⁵

In 1994, powerful fires burned over five million acres in the West and claimed thirty-four lives.⁴⁶ This tragic summer forced the Forest Service to once again reexamine its fire management policies.⁴⁷ The following year, an interagency team released the 1995 Federal Wildland Fire Management Report, which recognized the need to reintroduce fire in forest ecosystems and encouraged planning systems that incorporated the best available science on forest health and fire prevention.⁴⁸ The Forest Service began reintroducing natural fire cycles into ecosystems in an attempt to counteract the fuels buildup created by continual suppression of fire.⁴⁹ To reintroduce these natural fire cycles, the Forest Service implemented tools such as fire use, allowing fires to burn for ecological benefits, and fuels reductions activities, such as thinning forests and conducting prescribed burns to thin underbrush as a means of preventing fire and fostering forest health.⁵⁰ In 2001, after another severe fire season an interagency team updated the 1995 Report.⁵¹ The 2001 Review of the 1995 Federal Willand Fire Management Report placed emphasis on science and forest health,⁵² drawing attention to one of the most difficult and hotly contested debates in fire management: whether fire is a threat or a tool to create

44. *Id.* at 309.

45. *See id.*

46. *See id.* at 309–310.

47. *See id.*

48. *See id.*; *see also* U.S. DEPT OF THE INTERIOR ET AL., 2001 REVIEW OF 1995 FEDERAL WILDLAND FIRE MANAGEMENT POLICY 1–3 (2001) *available at* http://www.nwcc.gov/branches/ppm/fpc/archives/fire_policy/history/index.htm.

49. *See Keiter, supra* note 6, at 310.

50. *See* U.S. DEPT OF THE INTERIOR ET AL., *supra* note 48, at 2 (discussing the need to reintegrate fire as an essential ecosystem process).

51. *See id.* at 3–4.

52. *See id.* at 2 (discussing the need to accept wildland fire as an essential ecosystem process).

healthier forests.⁵³

Forest Service fire suppression policy faces a complex dilemma: how can the agency actively engage in fire suppression to protect forests and communities while reintroducing fire in its natural role in the ecosystem?⁵⁴ This conflict is evident in Forest Service and interagency reports on fire policy. For example, a recent interagency⁵⁵ report on fire suppression preparedness describes fire suppression resources, such as bulldozers and handcrews, as part of the “militia” that works to suppress fire⁵⁶ while at the same time highlighting the need to restore fire-adapted ecosystems.⁵⁷ Similarly, the Interagency Guidance for Implementation of Federal Wildland Fire Management Policy indicates that fire is “a critical natural process” that should be integrated into fire management plans, but emphasizes the primary role of community safety in decisionmaking.⁵⁸ These agency documents indicate the Forest Service’s attempt to suppress fires to protect human safety while using fire as a tool to improve ecological health. As fires increase in intensity and size, the Forest Service will have to determine how to most effectively account for both safety and ecological needs.

Several laws regulating Forest Service fire management serve as a foundation for these Forest Service policy documents, including NEPA,⁵⁹ the Endangered Species Act (ESA) of 1973,⁶⁰ the NFMA,⁶¹ the Healthy Forests Restoration

53. See Jensen, *supra* note 26, at 959, 962; see also Lauren Wishnie, *Fire and Federalism*, 17 N.Y.U. ENVTL. L.J. 1006, 1008–1009 (2008) (discussing the wide range of issues implicated by fire management, including protecting ecological and property values).

54. See Keiter, *supra* note 6, at 315.

55. This guidance is developed by several firefighting agencies including the Department of Agriculture and the Department of Interior.

56. See FIRE EXECUTIVE COUNCIL ET AL., *supra* note 9, at 31 (explaining the increasing costs of fire suppression due to dramatic weather conditions, hazardous fuels build up and urban encroachment in forested areas).

57. See *id.* at 4.

58. See U.S. FOREST SERVICE ET AL., GUIDANCE FOR IMPLEMENTATION OF FEDERAL WILDLAND FIRE MANAGEMENT POLICY 6, 8 (2009) [hereinafter GUIDANCE FOR IMPLEMENTATION OF FEDERAL WILDLAND FIRE MANAGEMENT].

59. 42 U.S.C. §§ 4321–4370h (2006).

60. 16 U.S.C. §§ 1531–1599 (2006).

61. *Id.* §§ 472a, 521b, 1600, 1611–1614 (amending Forest and Rangeland Renewable Resources Planning Act of 1974, Pub. L. No. 93-378, 88 Stat. 476).

Act (HFRA) of 2003 and the Federal Land Assistance, Management, and Enhancement (FLAME) Act of 2009.⁶²

B. *The Laws and Policies of Fire Management*

Forest Service fire management functions under a network of environmental laws and agency policies.⁶³ These laws and policies govern both the general approach to fire management and the decisions made during specific instances of fire suppression. First, NEPA requires all agencies to analyze the environmental impact of a proposed action. Second, the ESA restricts agency actions that harm listed species. Third, the NFMA governs the Forest Service's general land management activities. Fourth, the HFRA attempts to reduce fire danger through fuels reduction projects. Fifth, as discussed in the next section on the financial impacts of fire management, the FLAME Act regulates funding and requires fire management agencies to create a cohesive wildfire management strategy. In addition to these laws, Forest Service and interagency fire management policies play an important role in fire management.

i. *The National Environmental Policy Act*

The National Environmental Policy Act (NEPA) governs all federal agency actions affecting the environment, requiring agencies to follow certain procedures before taking action that might significantly impact the environment.⁶⁴ The goal of NEPA's procedural mandate is to "foster better decision-making" and "facilitate informed public participation for actions affecting humans and nature."⁶⁵ Several Supreme Court decisions⁶⁶ narrowly construe the law's mandate and,

62. 17 U.S.C. §§ 6501 et. seq. (2006); *see also* Keiter, *supra* note 6, at 313.

63. *See* Keiter, *supra* note 6, at 304.

64. *See* Blue Mountains Biodiversity Project v. Blackwood, 161 F.3d 1208, 1212 (9th Cir. 1998).

65. *See* League of Wilderness Defenders–Blue Mountains Biodiversity Project v. Forsgren, 184 F. Supp. 2d 1058, 1063 (D. Or. 2002).

66. *See e.g.* Kleppe v. Sierra Club, 427 U.S. 390, 406 (1976) (interpreting the "procedural duties" imposed by NEPA and limiting court authority to force agency action outside of the clear statutory procedures); Vermont Yankee Nuclear Power Corp. v. Natural Res. Def. Council, Inc., 435 U.S. 519 (1978) (recognizing NEPA has some substantive elements, but emphasizing that the Act's mandate is "essentially procedural" and that courts may only set aside agency decisions based on substantial

thus, NEPA's requirements are only procedural, not substantive, in nature.⁶⁷

Nevertheless, NEPA mandates that federal agencies evaluate, "to the fullest extent possible,"⁶⁸ the environmental impact of a proposed "major federal action."⁶⁹ Major federal actions are those actions "potentially subject to Federal control and responsibility" that may have a major effect.⁷⁰ If the major federal action will significantly affect the quality of the human environment, agencies must issue a detailed Environmental Impact Statement (EIS).⁷¹ The EIS discusses the environmental impact, any adverse environmental effects, alternatives to the proposed action, and the short and long-term benefits of the project.⁷² By requiring this environmental analysis before an agency takes action, NEPA "ensures that important effects will not be overlooked or underestimated only to be discovered after resources have been committed or the die otherwise cast."⁷³ Thus, an EIS grants notice of the anticipated consequences of an action and allows for, but does not require, implementation of alternative or corrective measures.⁷⁴

In the alternative, the Council of Environmental Quality (CEQ), which issues regulations interpreting NEPA, allows agencies to prepare an Environmental Analysis (EA) when the proposed action does not clearly require an EIS and is not

procedural violations).

67. See WILLIAM H. RODGERS, JR., ENVIRONMENTAL LAW 810 (Hornbook Series, West Publishing 2d ed. 1994).

68. 42 U.S.C. § 4332 (2006).

69. *Id.* § 4332(2)(C) (requiring federal agencies to "include in every recommendation or report on proposals for legislation and other major Federal actions significantly affecting the quality of the human environment, a detailed statement by the responsible official on (i) the environmental impact of the proposed action, (ii) any adverse environmental effects which cannot be avoided should the proposal be implemented, (iii) alternatives to the proposed action, (iv) the relationship between local short-term uses of man's environment and the maintenance and enhancement of long-term productivity, and (v) any irreversible and irretrievable commitments of resources which would be involved in the proposed action should it be implemented.").

70. See 40 C.F.R. § 1508.18 (2010).

71. *Id.*; see also *Dep't of Transp. v. Pub. Citizen*, 541 U.S. 752, 757 (2004).

72. 42 U.S.C. § 4332(2)(C)(i)-(v).

73. See *Robertson v. Methow Valley Citizens Council et al.*, 490 U.S. 332, 349 (1989) (interpreting §§ 101 and 102 of NEPA).

74. *Id.* at 350.

categorically excluded from NEPA requirements.⁷⁵ The EA is a brief document that analyzes whether an EIS is appropriate or whether the proposed action will have no significant impact, which is explained in a “finding of no significant impact” (FONSI) document.⁷⁶ In some cases, agency regulations categorically exclude certain agency actions from NEPA procedures.⁷⁷ A categorical exclusion applies to “actions which do not individually or cumulatively have a significant effect on the human environment and which have been found to have no such effect in procedures adopted by a Federal agency . . . and for which, therefore, neither an environmental assessment nor an environmental impact statement is required.”⁷⁸ In other words, NEPA regulations allow agency actions with minimal environmental effect to bypass the EA and EIS process.⁷⁹

Additionally, some emergency situations receive temporary exemption from NEPA’s procedural mandate.⁸⁰ In an emergency, agencies may consult with the CEQ for an alternative compliance method that allows the agency to take the emergency action.⁸¹ In the fire context, Forest Service NEPA regulations allow “responsible officials” to determine whether an emergency exists that requires urgent action before NEPA review can be conducted.⁸² When such an emergency event occurs, Forest Service officials may take necessary action to prevent harm to “life, property, or important natural or cultural resources,” but the official should also account for the likely environmental consequences of the emergency action and mitigate the impact as practicable.⁸³ These regulations attempt to balance the nature

75. See *Dep’t of Transportation*, 541 U.S. at 757–758 (interpreting 40 C.F.R. §§ 1504.1 (a)–(b) (2003)).

76. *Id.* (interpreting 40 C.F.R. §§ 1501.4(e), 1508.13 (2003)).

77. See *Summers v. Earth Island Inst.*, 129 S.Ct. 1142, 1147 (2009) (discussing Forest Service regulations that categorically excluded certain fire-rehabilitation activities from EA or EIS procedures).

78. 40 C.F.R. § 1508.4 (2010) (emphasis added).

79. See *California ex. rel. Lockyer v. U.S. Dep’t of Agric.*, 575 F.3d 999, 1012–13 (9th Cir. 2009) (describing the Forest Service’s adoption in its Forest Service Handbook of a variety of categorical exclusions from environmental analysis).

80. See CEQ Guidelines, 40 C.F.R. § 1506.11 (2010) (discussing procedures for emergency situations).

81. See *id.*

82. See 36 C.F.R. § 220.4(b) (2011).

83. *Id.* § 220.4(b)(1).

and threat of the emergency with the probable environmental consequences, but fall short of requiring a full NEPA review.

ii. *Endangered Species Act*

In addition to NEPA, the ESA requires agencies to consult with either the Fish and Wildlife Service (FWS) or the National Ocean and Atmospheric Administration Fisheries Service⁸⁴ (NOAA Fisheries) before taking action to avoid jeopardizing or harming endangered or threatened species or destroying critical habitat for these species.⁸⁵ If formal consultation occurs, the FWS or the NOAA Fisheries must prepare a biological opinion analyzing the likeliness of the jeopardy to the species or critical habitat and develop reasonable and prudent alternatives to the proposed action where necessary.⁸⁶ As an exception to the ban on harming listed species, FWS or NOAA Fisheries may issue an incidental take statement that allows an agency to “take” or harm a listed species if the harm is incidental to an otherwise lawful agency action.⁸⁷

Because of this emergency exception to consultation, the Forest Service has sometimes applied ESA retroactively to its fire suppression activities. For example, when using aerial fire retardant as a fire suppression tool, the Forest Service first dropped the retardant and then later attempted to comply with the ESA.⁸⁸ At least one federal court held that this post-emergency consultation did not excuse the Forest Service’s failure to consult prior to retardant use when the Forest Service knew waterway drops could harm listed species and post-emergency ESA consultation would be the only forum for evaluating the use of retardant.⁸⁹

84. See *Forest Serv. Employees for Envtl. Ethics v. U.S. Forest Serv. (FSEEE I)*, 397 F. Supp. 2d 1241, 1255 (D. Mont. 2005) (explaining that ESA requires an agency to engage in formal consultation with the FWS or NMFS if the initial agency determines the proposed action may adversely affect a listed species).

85. See 16 USC § 1536(a)(2) (2010).

86. See *Forest Serv. Employees for Envtl. Ethics v. U.S. Forest Serv. (FSEEE III)*, 726 F. Supp. 2d 1195, 1219 (D. Mont. 2010); see also 50 C.F.R. § 402.02 (2010).

87. 50 C.F.R. § 402.02.

88. See *FSEEE I*, 397 F. Supp. 2d at 1256–1257.

89. *Id.* (stating that “[t]he unique temporal considerations arising from USFS’s procedures for the use of fire retardant mean that . . . the agency can evade ESA compliance . . .”).

iii. *National Forest Management Act of 1976*

The NFMA recognizes the complex challenge of managing the country's renewable resources.⁹⁰ The NFMA requires the Forest Service to be a leader in promoting natural resource conservation that will serve future generations⁹¹ and creates a tiered management system on a national, regional, and local level.⁹² Under the NFMA, the Forest Service is responsible for managing environmental and economic resources related to recreation, range, timber, watershed, wildlife and fish.⁹³ To facilitate better leadership on the national level, the NFMA requires the Forest Service to promulgate national regulations for the development of regional and local land management plans.⁹⁴ Regional Land and Resource Management Plans (LRMPs) guide and limit actions at the regional level, but they do not plan for any specific actions.⁹⁵ The NFMA requires other site-specific LRMPs that govern on-the-ground activities that must comply with both the national and regional plans.⁹⁶ These site-specific plans govern all subsequent agency actions in that area.⁹⁷ Under the NFMA, agency officials must write these national, regional and local plans to facilitate public participation and to consider "environmental aspects" of managing renewable resources.⁹⁸ The NFMA highlights the importance of balancing the use of renewable resources with an understanding of the environmental impacts of such use.⁹⁹

90. 16 U.S.C. § 1600(1) (2006) ("the management of the Nation's renewable resources is highly complex and the uses, demand for, and supply of the various resources are subject to change over time").

91. *Id.* § 1600(6).

92. *See* Ohio Forestry Ass'n. Inc. v. Sierra Club, et al., 523 U.S. 726, 728–729 (1998); *see also* Citizens for Better Forestry v. US Dep't of Agric. (*Citizens I*), 341 F.3d 961, 965 (9th Cir. 2003).

93. 16 U.S.C. § 1604(g)(3)(A).

94. *See Citizens I*, 341 F.3d at 965–67 (discussing the three tiered regulatory system under NFMA that requires uniform national regulations of the forest management system to govern development and revision of regional and local plans); *see also* 16 U.S.C. § 1604(g).

95. *Citizens I*, 341 F.3d at 966.

96. *Id.*

97. *League of Wilderness Defenders v. Allen*, 615 F.3d 1122, 1125 (9th Cir. 2010) (interpreting § 1604(a) and § 1604(i)).

98. *See* 16 U.S.C. § 1604(d), (g)(1), (g)(3)(A).

99. *See id.* § 1600(1)–(4).

The NFMA does not specifically cover fire management, but National Forest personnel develop fire management plans for individual national forests in conformance with the site-specific LRMPs.¹⁰⁰ The 1995 Federal Willand Fire Management Report requires the Forest Service to identify and integrate wildfire management and related activities in a Fire Management Plan (FMP) for each national forest.¹⁰¹ FMPs are strategic documents required in all geographic areas that have “burnable vegetation”¹⁰² and aid fire personnel in making “informed decisions on the management of wildland fires.”¹⁰³ When a wildfire occurs, FMPs and LRMPs provide guidance to Forest Service officials as to whether or not they will base suppression activities solely on protection objectives or on both resource and protection objectives.¹⁰⁴ The Forest Service manages some fires for resource benefits to allow fire to serve its natural ecological purpose based on predetermined resource management objectives and in predefined areas.¹⁰⁵ If an area does not have an approved FMP, the fire must be suppressed.¹⁰⁶

The Forest Service emphasizes that these plans address environmental laws and regulations, but no longer requires

100. See *Forest Serv. Employees for Envtl. Ethics v. U.S. Forest Serv. (FSEEE I)*, 397 F. Supp. 2d 1241, 1245 (D. Mont. 2005).

101. See GAO WILDLAND FIRE MANAGEMENT 2002, *supra* note 5, at 1 (stating that the 1995 policy “required that each burnable acre of federal land be covered by a fire management plan”); see also GUIDANCE FOR IMPLEMENTATION OF FEDERAL FIRE POLICY, *supra* note 58, at 16 (defining a Fire Management Plan as “a plan that identifies and integrates all wildland fire within the context of approved land/resource management plans. It defines a program to manage wildland fires (wildfire and prescribed fire). The plan is supplemented by operational plans, including but not limited to preparedness plans, preplanned dispatch plans, prescribed fire burn plans and prevention plans. Fire Management Plan’s assure that wildland fire management goals and components are coordinated.”).

102. U.S. DEP’T OF THE INTERIOR ET AL, *supra* note 48, at 12, 26–27 (discussing the need for all land management agencies to develop Fire Management Plans).

103. NATIONAL WILDFIRE COORDINATING GROUP, INTERAGENCY FIRE MANAGEMENT PLAN TEMPLATE 1 (2009), available at www.nwgc.gov/branches/ppm/ifpc/fmp/ifmp-template.pdf.

104. See GUIDANCE FOR IMPLEMENTATION OF FEDERAL FIRE POLICY, *supra* note 58, at app. B at 18.

105. USDA FOREST SERVICE SEQUOIA NATIONAL FOREST, *Fire Use for Resource Benefits*, http://www.fs.fed.us/r5/sequoia/fire/wildland_fire_use/wfu_resource_benefit.html (last visited Oct. 15, 2011).

106. NATIONAL WILDFIRE COORDINATING GROUP, *supra* note 103, at 1.

NEPA compliance for FMPs.¹⁰⁷ While FMPs must consider the best available science and incorporate “environmental quality considerations,”¹⁰⁸ the Forest Service does not interpret FMPs as decisional documents.¹⁰⁹ As a result, FMPs are not considered “major federal action”¹¹⁰ under NEPA and do not trigger environmental review procedures.¹¹¹ However, the 2001 Review and Update of the 1995 Federal Wildland Fire Management Policy notes that inconsistent and incomplete guidance for addressing environmental impacts hinders adequate FMP preparation.¹¹² Despite inconsistent implementation and lack of NEPA review, FMPs serve as the basis for making decisions about whether and when to suppress fires.¹¹³

iv. *Healthy Forests Initiative and Healthy Forests Restoration Act of 2003*

In 2002, the Bush Administration launched the Healthy Forests Initiative (HFI) and the following year Congress passed the HFRA. Both the HFI and HFRA attempt to address increasing fire danger by making it easier to remove highly flammable vegetation buildup and other hazardous fuels.¹¹⁴

107. See Keiter, *supra* note 6, at 368–69 (“at the planning level, the Forest Service’s revised NFMA rules have eliminated NEPA compliance from planning level decisions . . . effectively insulating most fire-related and other forest planning decisions from judicial review.”).

108. GUIDANCE FOR IMPLEMENTATION OF FEDERAL WILDLAND FIRE MANAGEMENT POLICY, *supra* note 58, at 9.

109. See Keiter, *supra* note 6, at 368–69; *but see* People of California v. U.S. Forest Serv., No. C 04-02588 CRB, 2005 WL 1630020, at 11 (N.D. Cal. Jul. 11, 2005) (finding that the Forest Service was required to conduct an environmental review on a Fire Management Plan when the fire plan set forth concrete policies that constituted a major federal action).

110. 42 U.S.C. § 4332(2)(C) (2006) (discussing the procedures required for “major federal actions significantly affecting the quality of the human environment”).

111. WILDLAND FIRE LEADERSHIP COUNCIL, INTERAGENCY STRATEGY FOR THE IMPLEMENTATION OF FEDERAL WILDLAND FIRE MANAGEMENT POLICY 49 (Jun. 20, 2003) available at http://www.nwccg.gov/branches/ppm/fpc/archives/fire_policy/pdf/strategy.pdf (discussing fire management plans and stating that an FMP “does not prescribe decisions; rather it provides the operational parameters a fire manager needs to implement the LRMP and other NEPA decisions”).

112. See U.S. DEP’T OF THE INTERIOR ET AL., *supra* note 48, at 12.

113. See *id.*

114. Forest Service Technology & Development Program, *The Healthy Forests Initiative and Healthy Forests Restoration Act Interim Field Guide* (Aug. 9, 2011), <http://www.fs.fed.us/projects/hfi/field-guide/web/page02.php#initiative>.

The Act and the Initiative, however, diminished the environmental protections NEPA and the ESA provided.¹¹⁵ The HFI directed the Department of Agriculture, along with the Department of the Interior and the CEQ, to “improve regulatory processes to ensure more timely decisions, greater efficiency, and better results in reducing the risk of catastrophic wildfires by restoring forest health.”¹¹⁶

In accordance with the HFI, the Departments of the Interior, Agriculture and Commerce altered their ESA consultation regulations to establish alternative informal consultation for certain actions unlikely to have an adverse effect on listed species or critical habitat.¹¹⁷ Similarly, HFRA set forth categorical exclusions¹¹⁸ from NEPA for some fire-prevention fuel treatment projects, including prescribed fire and mechanical thinning, and for post-fire rehabilitation projects, including tree planting and timber salvaging.¹¹⁹ While the HFI and HFRA address many issues of fire prevention and post-fire rehabilitation, they offer less direction on fire suppression decisions. Because this comment focuses on Forest Service fire suppression activities, the HFI and HFRA are less helpful to this analysis, but are still important for understanding the larger regulatory scheme governing Forest Service fire management.

v. *Additional Forest Service Guidance, Policies and Manuals*

Decisions made during fire suppression must also comport with national suppression principles and practices established through a series of guides, policies and manuals issued at the

115. See Keiter, *supra* note 6, at 370.

116. OFFICE OF THE PRESIDENT, HEALTHY FORESTS: AN INITIATIVE FOR WILDFIRE PREVENTION AND STRONGER COMMUNITIES Executive Summary (2002), available at www.fs.fed.us/projects/.../HealthyForests_Pres_Policy%20A6_v2.pdf.

117. See *id.* at 4.

118.

A categorical exclusion is ‘a category of actions which do not individually or cumulatively have a significant effect on the human environment and which have been found to have no such effect in procedures adopted by a Federal agency . . . and for which, therefore, neither an environmental assessment nor an environmental impact statement is required.’

Citizens for Better Forestry v. U.S. Dep’t of Agric., 632 F. Supp. 2d 968 (*Citizens III*) (N.D. Cal. 2009) (quoting 40 C.F.R. § 1508.4).

119. See U.S. DEP’T OF AGRIC. ET. AL., FS-799 THE HEALTHY FORESTS INITIATIVE AND HEALTHY FORESTS RESTORATION ACT INTERIM FIELD GUIDE 6 (2004).

federal level.¹²⁰ The most important of these documents are A National Cohesive Wildland Fire Management Strategy,¹²¹ the Forest Service Manual on fire management and the 2001 Review of the 1995 Federal Wildland Management Policy.¹²² While these documents are likely not legally binding,¹²³ they provide insight into the Forest Service's planning process.

The National Cohesive Wildland Fire Management Strategy of 2011, discussed *infra* Part II, sets forth a national vision for present and future fire management.¹²⁴ The Forest Service Manual governs all aspects of Forest Service activity, including fire management,¹²⁵ and outlines wildland fire suppression and planning operations.¹²⁶ The 2001 Review of the 1995 Federal Wildland Fire Management Policy articulates the key components of Federal Wildland Fire Management Policy, emphasizes the need to reintroduce fire into forests and promotes the evaluation and incorporation of environmental quality considerations and best science into decision-making surrounding fire suppression and prevention activities.¹²⁷

II. FINANCIAL AND ENVIRONMENTAL IMPACTS OF FIRE

The economic and environmental costs of suppressing forest fires also inform fire policy.¹²⁸ Each year, fire suppression

120. See *Forest Serv. Employees for Envtl. Ethics v. U.S. Forest Serv. (FSEEE I)*, 397 F. Supp. 2d 1241, 1244 (D. Mont. 2005) (discussing the national guidelines and policies for fire management).

121. A NATIONAL COHESIVE WILDLAND FIRE MANAGEMENT STRATEGY, *supra* note 7, at 2.

122. *FSEEE I*, 397 F. Supp. 2d at 1244.

123. *Western Radio Servs. Co., Inc., v. Espy*, 79 F.3d 896, 901 (9th Cir. 1996) (stating that the Forest Service Manual does not have independent force of law because it is not promulgated in accordance with APA procedures such as notice and comment, nor is the Manual published in the Federal Register).

124. See *id.*

125. See *FSEEE I*, 397 F. Supp. 2d at 1244 (explaining that the Forest Service Manual 5100 provides overall guidance on fire management).

126. See generally U.S. FOREST SERVICE, FOREST SERVICE MANUAL 5130: FIRE SUPPRESSION (2004).

127. See U.S. DEP'T OF THE INTERIOR ET AL., *supra* note 48, at 1–3, 7–8.

128. See U.S. DEP'T OF AGRIC. AND U.S. DEP'T OF INTERIOR, THE FEDERAL LAND ASSISTANCE, MANAGEMENT, AND ENHANCEMENT ACT OF 2009 – REPORT TO CONGRESS 25 (March 2011) (discussing the different costs associated with wildfire management, including establishing healthier ecosystems through reintroducing fire and reducing hazardous fuels).

activities require a significant amount of federal funding, triggering congressional efforts to cut these costs. Understanding the actual costs of fire suppression also requires analysis of the environmental consequences of certain suppression tactics and the impact of the fire itself.

A. *The Federal Government Spends Millions of Dollars on Forest Service Fire Suppression Efforts*

Fire suppression requires significant federal funding. From 2004 to 2008, federal public lands experienced fifty wildfires that each cost at least ten million dollars.¹²⁹ Ninety-five percent of these fires fell under the Forest Service's jurisdiction.¹³⁰ These expensive fires stressed federal coffers and required the federal government to transfer significant funds from the annual budgets of other Forest Service and Department of Interior programs to cover costs.¹³¹ Given the anticipated increase in extreme weather, these costs are likely to increase.¹³² The GAO recently reported that the Forest Service's fire-related funding increased to a nearly \$2.3 billion average over the past five years, up from just over \$700 million in 1999.¹³³

In 2009, Congress addressed the increasing cost of suppressing wildfires by passing the FLAME Act.¹³⁴ FLAME requires the Departments of Agriculture and Interior to create a “. . . cohesive wildfire management strategy” based on recommendations from the Government Accountability Office.¹³⁵ These recommendations, based on a 2007 GAO

129. See FIRE EXECUTIVE COUNCIL, *supra* note 9, at 1, 3 (discussing the increasing costs of fire suppression due to dramatic weather conditions, hazardous fuels build-up and urban encroachment in forested areas as well as the expense of fires for years 2004–2008).

130. See *id.* at 3.

131. *Id.* at 15 (stating that more the federal government had to transfer more than three billion dollars was transferred from other Department of the Interior and Forest Service program accounts to support fire suppression).

132. *Id.* at 6 (discussing the increase in fire activity from 2004 to 2008 and increasing risk levels in general).

133. See GAO FOREST SERVICE 2011, *supra* note 8, at 2.

134. Federal Land Assistance Management & Enhancement Act of 2009, Pub L. No. 111-88 § 503, 123 Stat. 2971 (2009).

135. GAO FOREST SERVICE 2011, *supra* note 8, at 3.

study,¹³⁶ directed that the Departments of Agriculture and Interior needed to develop more “clearly defined cost-containment goals and objectives,” because without these clear standards “federal land and fire managers in the field are more likely to select strategies and tactics that favor suppressing fires quickly over those that seek to balance the benefits of protecting the resources at risk and the costs of protecting them.”¹³⁷ Additionally, FLAME required agencies’ cohesive management strategy to improve risk assessment, incorporate climate factors and develop cost-effective strategies.¹³⁸

In March 2011, the Departments of Agriculture and Interior submitted their first National Cohesive Wildland Fire Management Strategy to Congress (Cohesive Strategy).¹³⁹ The Cohesive Strategy focuses on three main areas: maintaining resilient landscapes, creating fire-adapted communities and responding to wildfires.¹⁴⁰ Additionally, the Cohesive Strategy sets forth a three-phased approach beginning with the development of the Cohesive Strategy and the initial Report to Congress as required by FLAME, and followed by the Development of Regional Strategies and Assessments and finally the National Trade-Off Analysis and Execution.¹⁴¹ The Agencies indicate that this new Cohesive Strategy, which builds on existing fire management policies,¹⁴² will set forth a vision for the next century to “safely and effectively extinguish fire, when needed; use fire where allowable; manage our natural resources; and as a Nation, live with wildland fire.”¹⁴³

136. U.S. GOV’T ACCOUNTABILITY OFFICE, GAO-07-655, WILDLAND FIRE MANAGEMENT: LACK OF CLEAR GOALS OR A STRATEGY HINDERS FEDERAL AGENCIES’ EFFORTS TO CONTAIN THE COSTS OF FIGHTING FIRES (2007).

137. *Id.* at 32 (emphasis added).

138. FLAME Act § 503 (“Not later than one year after the date of the enactment of this Act, the Secretary of the Interior and the Secretary of Agriculture shall submit to Congress a report that contains a cohesive wildland fire management strategy.”); see also FORESTS AND RANGELANDS, COHESIVE WILDFIRE MANAGEMENT STRATEGY BRIEFING PAPER (Aug. 6, 2010), available at <http://www.forestsandrangelands.gov>.

139. Letter from Ken Salazar, Secretary, Dep’t of the Interior and Thomas J. Vilsack, Secretary, Dep’t of Agric., to the Honorable Senator Jack Reed, Chairman, Subcommittee on Interior, Environment, and Related Agencies (Mar. 25, 2011), available at <http://www.forestsandrangelands.gov/strategy/national.shtml>.

140. *Id.*

141. *Id.*; see also A NATIONAL COHESIVE WILDLAND FIRE MANAGEMENT STRATEGY, *supra* note 7, at 2.

142. See discussion *infra* Part I.B.iv.

143. A NATIONAL COHESIVE WILDLAND FIRE MANAGEMENT STRATEGY, *supra* note 7,

This new strategy indicates a shifted focus for the Forest Service and other land management agencies towards a more balanced approach to fire management and planning. To achieve this balance, the Forest Service will need to account for existing problems with suppression tactics and the role of NEPA. The careful analysis NEPA requires can inform the FLAME Act's cost-reducing mandate by analyzing the effectiveness and long-term ecological effects of suppression activities.¹⁴⁴

B. *Forest Service Management Practices Do Not Adequately Account for the Potential Environmental Harm of Fire Suppression*

Fire management can alter the natural role of fire in an ecosystem and negatively impact the environment. In the draft EIS for the updated national land management plan rule, the Forest Service discusses various stressors that threaten, degrade, or impair ecological health and biodiversity, including fire suppression activities.¹⁴⁵ Because land management plans play a significant role in fire management,¹⁴⁶ this statement suggests that the Forest Service recognizes and aims to minimize the environmental damage of fire suppression efforts. Current Forest Service mitigation strategies, however, fall short of reducing the overall environmental impact of fire suppression.

The Forest Service attempts to mitigate environmental damage caused by fire suppression by practicing light-handed suppression in sensitive areas and rehabilitating areas post-

at 2.

144. See GAO WILDLAND FIRE MANAGEMENT 2002, *supra* note 5, at 4 (indicating the Forest Service needs to measure the effectiveness an impact of fire-risk reduction fuel treatments to better allocate resources for community and forest protection).

145. HARRIS SHERMAN, U.S. DEP'T OF AGRIC. FOREST SERVICE, DRAFT PROGRAMMATIC ENVTL. IMPACT STATEMENT: NAT'L FOREST SYSTEM LAND MGMT. PLANNING ch. 3, at 62 (2011), *available at* <http://www.fs.usda.gov/planningrule> (noting that the stress and degree of impact can range "from the permanent impairment of severe compaction or erosion on soil productivity to stream sedimentation from a temporary road that can be decommissioned and rehabilitated to prescribed burning that can be used to replicate historic function of fire on the landscape").

146. *Citizens for Better Forestry v. U.S. Dep't of Agric. (Citizens I)*, 341 F.3d 961, 965-66 (9th Cir. 2003) (discussing the tiered land management system and emphasizing that national uniform regulations promulgated by the Secretary of Agriculture "govern the development and revision of regional and local plans").

fire.¹⁴⁷ For example, in designated wilderness and other ecologically sensitive areas, the Forest Service employs minimum impact suppression tactics (MIST) to reduce the long-term effects caused by suppression.¹⁴⁸ MIST guidelines include using natural barriers for fire line, using specific fire-line width and depth, and limiting use of fire retardant.¹⁴⁹ The Forest Service use of MIST guidelines can reduce the environmental harm caused by heavy-handed suppression, but the majority of public lands are not sensitive areas and thus do not trigger use of these guidelines.¹⁵⁰

To reduce the damage caused by fire and fire suppression, the Forest Service employs Burned Area Emergency Rehabilitation (BAER) procedures that include native grass seeding and surface raking to prevent erosion and flooding from fire and fire suppression methods.¹⁵¹ The purpose of these treatments is to reduce soil erosion and water runoff, which increase the risk of flooding and damage to natural resources.¹⁵² The effectiveness of these efforts remains unclear.¹⁵³ Additionally, the treatments themselves can spread non-native plants and increase erosion and sedimentation.¹⁵⁴

Fire suppression can reduce the natural role of fire in maintaining healthy ecosystems, which can result in significant ecological damage.¹⁵⁵ Near complete fire exclusion in Western coniferous forests increased the risk of catastrophic wildfires due to the buildup of hazardous fuels in these forests.¹⁵⁶ The 1995 Betscha Report emphasized that fire

147. See Dana M. Backer et al., *Impacts of Fire-Suppression Activities on Natural Communities*, 18 CONSERVATION BIOLOGY 937, 938, 940 (2004).

148. *Id.* at 937, 938.

149. See *id.* at 941, 943.

150. See *id.*

151. Daniel G. Neary et al., *Burned Area Emergency Watershed Rehabilitation: Program Goals, Techniques, Effectiveness, and Future Directions in the 21st Century*, RMRS-P-13 ROCKY MOUNTAIN RESEARCH STATION 375, 377 (2000).

152. See Backer, *supra* note 147, at 940–41; see also Neary, *supra* note 151, at 376–77.

153. See Neary, *supra* note 151, at 377.

154. Backer, *supra* note 147, at 941 (explaining that rehabilitation treatments can spread non-native plants, increase erosion and sedimentation and reduce of habitat).

155. See U.S. DEP'T OF INTERIOR ET AL., *supra* note 48, at 5–6 (noting that decreases in wildland fire can destabilize fire-adapted ecosystems and increase understory vegetation which can be a hazardous fuel and create more severe fires).

156. See Jon E. Keely et al., *Reexamining Fire Suppression Impacts on Brushland*

suppression activities should only be conducted when necessary for human safety.¹⁵⁷ Furthermore, it indicated that the practice of pumping surface water from small bodies of water is not particularly effective in suppressing fires and can increase the risk of ecological damage to aquatic ecosystems.¹⁵⁸ To prevent this from occurring, the Beschta Report recommended that agencies should restrict use of mechanical equipment in sensitive and wilderness areas.¹⁵⁹

Similarly, a U.S. Fish and Wildlife Service study found that use of aerial fire retardant likely causes an “increase in invasive species, loss of substantial fraction of population or habitat, and harm to soil chemistry and plant physiology,” as well as direct mortality to fish and amphibian populations.¹⁶⁰ Aerial fire retardant consists of eighty-five percent water and fifteen percent fertilizer, thickeners and corrosion inhibitors.¹⁶¹ Each year, firefighters drop millions of gallons of this substance on the nation’s forests, which may inadvertently land on people, on animals and in streams.¹⁶² The retardant’s effect on streams can be catastrophic and can kill fish, including some threatened species.¹⁶³ For example, in 2001

Fire Regimes, 284 SCIENCE 1829, 1829–32 (1999).

157. See ROBERT L. BESCHTA ET AL., WILDFIRE AND SALVAGE LOGGING 5, 11 (Mar. 1995) [hereinafter *Beschta Report*], <http://www.saveamericasforests.org/congress/Fire/Beschta-report.htm>. The Beschta Report is an independent scientific study that questioned about salvage logging in severely burned areas. See Keiter, *supra* note 6, at 336.

158. *Beschta Report*, *supra* note 157, at 12.

159. *Id.*

160. Forest Serv. Employees for Env’tl. Ethics v. U.S. Forest Serv. (*FSEEE III*), 726 F. Supp. 2d 1195, 1226 (D. Mont. 2010).

161. *Id.* at 1225.

162. See *id.* at 1244–45 (discussing Forest Service guidance on use of aerial fire retardants that prohibits drops within 300 feet of streams).

163. See *Restoration Project: Omak Creek*, WILD FISH HABITAT INITIATIVE, http://wildfish.montana.edu/Cases/browse_details.asp?ProjectID=48 (last updated Apr. 7, 2007) (According to a study by the Wildfish Habitat Initiative, a cooperative effort between US FWS and the Montana Water Center, Omak Creek in Eastern Washington State experienced catastrophic environmental harm from fire retardant drops. In 1992, the Confederated Tribes of the Colville Reservation began restoring Omak Creek to rehabilitate historic steelhead and salmon spawning grounds. The project involved removing large boulders and other barriers that tumbled into the stream as a result of decades of blasting from mining and expansion projects. In 2001, the project experienced a major setback. That summer a wildfire raged on the public lands near the creek. Firefighters called for retardant to be dropped to stop the blaze, but instead of blanketing the trees, the drop blanketed the fragile creek eventually killing a significant amount of the threatened steelhead in the creek. Only two years

and 2003, retardant drops landed on a recently rehabilitated creek in Eastern Washington, killing a significant population of threatened steelhead.¹⁶⁴

Scientific reports suggest that fire suppression tactics can damage soils, waterways and vegetation.¹⁶⁵ Often, fire suppression tactics employ heavy equipment such as tractors, bulldozers and wheeled skidders to create containment or fire lines or helicopter landing sites.¹⁶⁶ Hand crews, usually of twenty people, create containment lines by clearing all dead fuel from the ground, leaving only mineral soil exposed.¹⁶⁷ These lines present environmental concerns because they remove native vegetation and breakup wildlife habitat.¹⁶⁸ Potential impacts from constructing fire-line include erosion, spreading invasive species, and polluting of waterways.¹⁶⁹ Ecosystems in extremely dry, wet or cold areas experience more significant impacts from fire-suppression.¹⁷⁰ For example, fire-lines constructed in permafrost may cause melting when mineral soil is exposed to sunlight.¹⁷¹ Furthermore, fire suppression tactics can impact water quality. Water sources near to a fire often become draw points for helibucket drops or water pumps, which can impact habitat and increase turbidity.¹⁷²

Despite their impacts, these suppression efforts are often necessary to protect human safety and forest resources. Severe fires may cause unacceptable damage, themselves,

later, another fire raged in the area, more retardant was inadvertently dropped on the creek, and more endangered fish died as a result of the drop.)

164. *Id.*

165. *Backer, supra* note 147, at 939 (demonstrating the various impacts fire suppression can have on land, air and water. Fire camps, fire lines and road construction contribute to soil compaction and erosion. Similarly, these activities can impact water quality).

166. *Id.* at 939.

167. *See Omi, supra* note 2, at 204.

168. JACKIE R. HAFLA ET AL., ENVTL. SURVEILLANCE, EDUC., AND RESEARCH PROGRAM, ECOLOGICAL EVALUATION OF FIRE FIGHTING EFFORTS ASSOCIATED WITH THE TWIN BUTTE/MOONSHINER AND HIGHWAY 20 WILDLAND FIRES, November 26, 2008. 1–2, 11–13 (Nov. 26, 2008), *available at* <http://www.gsseser.com/PDF/FireLineSurveyTwinButte.pdf>.

169. *Backer, supra* note 147, at 940.

170. *Id.* at 939–940.

171. *Id.*

172. *Id.* at 942.

despite their ecological role.¹⁷³ For example, hot and intense wildfires create loss of vegetation that exposes mineral soil and causes increased risk of erosion.¹⁷⁴ The burning of the organic forest floor also impacts the soil's ability to absorb water, increasing the risk of flash floods¹⁷⁵ and sediment in streams.¹⁷⁶ Further, fires can also contribute to loss of forest productivity and impact communities.¹⁷⁷ While severe fires can have detrimental effects on ecosystems, the impact of fire suppression methods can, at times, cause even greater harm than simply allowing the fire to burn.¹⁷⁸ Decisions as to how and when to suppress fire should include careful consideration of both fire's beneficial and detrimental impacts, and should reflect the true cost of suppression.

III. CURRENT FOREST SERVICE POLICIES AND NEPA REVIEW PRACTICES LIMIT ACCOUNTABILITY FOR FIRE SUPPRESSION DECISIONS

On a national level, Forest Service policies and guidelines restrict the application of NEPA in land management and fire suppression. Under the NFMA, the Forest Service must develop national regulations that guide the development of LRMPs.¹⁷⁹ In accordance with the NFMA, the Forest Service first promulgated regulations in 1979, and subsequently amended them in 1982, 2000, 2005 and 2008.¹⁸⁰ Environmental groups successfully challenged each of the 2000, 2005 and 2008 amendments for failure to comply with

173. David w. Peterson et al., *Assessing the Effectiveness of Seeding and Fertilization Treatments for Reducing Erosion Potential Following Severe Wildfires*, RMRS-P-46CD ROCKY MOUNTAIN RESEARCH CENTER 465 (2007) (investigates the impact of BAER post-fire rehabilitation on the Pot-Peak-Sis Ridge wildfire complex of 2004).

174. *Id.*

175. See Neary, *supra* note 151, at 375.

176. See Peterson, *supra* note 173, at 465.

177. *Id.*

178. Backer, *supra* note 147, at 938.

179. See *Citizens for Better Forestry v. U.S. Dep't of Agric. (Citizens I)*, 341 F.3d 961, 965–67 (9th Cir. 2003) (discussing the three tiered regulatory system under NFMA that requires uniform national regulations of the forest management system to govern development and revision of regional and local plans); see also 16 U.S.C. § 1604(g) (2006).

180. See *Citizens I* 341 F.3d at 966–69; see also *Citizens for Better Forestry v. U.S. Dep't of Agric. (Citizens III)*, 632 F. Supp. 2d 968, 972–973, 981 (N.D. Cal. 2009) (striking down the 2008 regulation for failure to comply with NEPA and the ESA).

NEPA and the ESA.¹⁸¹ Taken together, this litigation suggests Forest Service resistance to NEPA procedures at the planning level. In the fire context, this resistance translates to a lack of environmental review.

A. *The Forest Service's 2005 and 2008 Amendments to NFMA Regulations Failed to Comply with ESA and NEPA*

Two cases challenging Forest Service amendments to the agency's NFMA land management rules of 2005 and 2008 found that the Forest Service did not comply with the ESA and NEPA in promulgating new regulations under the NFMA.¹⁸² In *Citizens for Better Forestry v. U.S. Department of Agriculture (Citizens II)*, several environmental groups challenged the 2005 Rule to the Forest Service's national uniform regulations for its failure to comply with NEPA and the ESA.¹⁸³ The complaint alleged, in part, that the agency violated NEPA by not performing an EIS or EA on the proposed amendments.¹⁸⁴ In response to this claim, the Forest Service argued that NEPA did not apply to the 2005 Rule because it would impact land management plans that were "strategic and aspirational in nature," which did not "include decisions with on-the-ground effects that can be meaningfully evaluated."¹⁸⁵ Thus, the Forest Service argued that a categorical exemption applied because the 2005 Rule, as a planning document, was unlikely to have a significant and real environmental impact.¹⁸⁶

The United States District Court for the Northern District of California (Northern District of California) rejected the application of the categorical exclusion¹⁸⁷ and ordered the Forest Service to conduct a programmatic EA on the 2005 Rule.¹⁸⁸ The court enjoined the use of the 2005 Rule until the

181. See *Citizens I*, 341 F.3d at 961; see also *Citizens for Better Forestry v. U.S. Dep't of Agric. (Citizens II)*, 481 F. Supp. 2d 1059 (N.D. Cal. 2007); *Citizens III*, 632 F. Supp. 2d 968.

182. *Citizens II*, 481 F. Supp. 2d 1059; *Citizens III*, 632 F. Supp. 2d 968 (challenging the 2008 regulation).

183. See *Citizens II*, 481 F. Supp. 2d at 1067.

184. *Id.*

185. *Id.* (quoting 70 Fed. Reg. at 1031–32).

186. *Id.* at 1067–68.

187. *Id.* at 1087.

188. *Id.* at 1090, 1085–86 (noting that several Ninth Circuit decisions recognize the need for programmatic EISs).

Forest Service complied with NEPA.¹⁸⁹ In response to this ruling, the USDA and the Forest Service attempted to comply with the court's decision by promulgating the 2008 amendments.¹⁹⁰ To create the 2008 Amended Rule, the Forest Service conducted an EIS on the 2005 Rule and accepted public comments.¹⁹¹ During the process, the Forest Service stressed that the 2008 Rule had no direct or indirect environmental impact because it merely outlined procedures for developing LRMPs and thus, was not connected to a specific, foreseeable action that could impact the environment.¹⁹²

In 2009, the Citizens for Better Forestry challenged the 2008 Rule alleging the EIS performed on the 2008 Rule merely reiterated earlier findings and did not consider the effects of eliminating certain environmental protection requirements that were found in the 2000 Rule.¹⁹³ The Northern District of California held that the 2008 Rule violated NEPA because the EIS merely insisted that no environmental effect would occur from the Rule, but failed to consider its actual environmental impact.¹⁹⁴ Based on this finding the court enjoined the use of the 2008 Rule and directed the agency to return to the most recent workable rule.¹⁹⁵ As a result, the Forest Service returned to the 2000 rules, and is currently working to develop new rules that comply with NFMA and other environmental laws.¹⁹⁶ These legal challenges to Forest Service land management plan regulations suggest a broader problem with the agency's willingness to adequately apply NEPA, including to its fire suppression activities. Put another way, the Forest Service's resistance to NEPA procedures for its planning decisions negates the law's important role of ensuring agency decisions account for potential environmental impacts.

In response to this litigation, the Forest Service released a

189. *Id.* at 1097, 1100.

190. *See* Citizens for Better Forestry v. U.S. Dep't of Agric. (*Citizens III*), 632 F. Supp. 2d 968, 973, 981 (N.D. Cal. 2007).

191. *Id.*

192. *Id.*

193. *Id.* at 980.

194. *Id.*

195. *Id.*

196. National Forest System Land Management Planning, 76 Fed. Reg. 30, 8482 (Feb. 14, 2011) (to be codified at 36 C.F.R. pt. 219) (discussing promulgation of the 2011 rule).

proposed land management rule in February 2011.¹⁹⁷ As the Forest Service works towards a new final rule, it will be important for the agency to emphasize NEPA's role as an important planning tool, especially for fire management.

B. *Forest Service NEPA Policies Allow Fire Suppression to Circumvent NEPA Review*

The Forest Service's reluctance to employ NEPA at the planning level extends to fire management where many fire suppression activities fall under emergency exemptions from NEPA.¹⁹⁸

In 2008, the Forest Service codified its NEPA policy, previously found in its Forest Service Manual and Forest Service Handbook, and clarified the role of the CEQ guidance as it applies to Forest Service NEPA implementation.¹⁹⁹ In codifying the rule, the Forest Service indicated its intent to increase the visibility of its NEPA procedures and to promote "the transparent nature of the Forest Service's environmental analysis and decision making."²⁰⁰

At the same time, the Forest Service provided exemptions for certain emergency situations in which the agency felt that applying traditional NEPA procedures would be impossible.²⁰¹ For a situation to be considered an emergency and exempt from NEPA procedures under the regulations, the emergency action must be "necessary to control the immediate impacts of the emergency and are urgently needed to mitigate harm to life, property, or important natural or cultural resources."²⁰² While the rule requires agency officials to account for and mitigate foreseeable environmental consequences of this action,²⁰³ it does not impose a full NEPA review process. While it is true that many emergency situations do not allow time for implementing the NEPA processes, the emergency exception allows fire suppression activities to continually evade NEPA

197. *Id.*

198. 40 C.F.R. § 220.4 (2008).

199. *See generally id.*

200. *Id.*

201. *Id.*

202. *Id.* § 220.4(b)(1).

203. *Id.*

review.²⁰⁴ Though some situations require emergency procedures, fire suppression should not be categorically labeled as emergency for the purpose of NEPA. For example, once a wildfire ignites, the agency must quickly determine the best approach to manage or suppress the fire. However, if the Forest Service previously conducted either a programmatic or site-specific NEPA review on the environmental impact of different suppression tactics then this environmental impact information could inform decisions once fires ignite.²⁰⁵

To some extent, the Forest Service recognizes the need for environmental and risk analysis during active fire suppression and requires a Resource Advisor to identify and evaluate potential impacts and benefits of fire operations on natural and cultural resources.²⁰⁶ In some fire situations, a Resource Advisor counsels the Incident Commander (IC), the person in charge of tactical fire-suppression decisions, about anticipated impacts of fire operations on natural resources and protection requirements that should be followed.²⁰⁷ The Resource Advisor's (RA) responsibilities extend to analyzing and advising the IC on various issues, including special status species and fisheries and special management areas, such as wilderness and conservation areas.²⁰⁸ While the RA plays an important role in monitoring ecological health during fire suppression, the Forest Service recommends but does not require RAs to attend training in NEPA screening procedures.²⁰⁹ The optional nature of this training for the person charged with monitoring the ecological health of forests suggests the Forest Service does not consider NEPA a key player in fire suppression.

When these fire suppression policies are viewed alongside the Forest Service's failure to comply with NEPA in promulgating land management program rules, the two suggest that the agency should reevaluate its NEPA policies in the broader land management context, and more specifically in

204. See *Forest Serv. Employees for Env'tl. Ethics v. U.S. Forest Serv. (FSEEE I)*, 397 F. Supp. 2d 1241, 1252 (D. Mont. 2005).

205. See *Robertson v. Methow Valley Citizens Council et al.*, 490 U.S. 332, 349 (1989) (discussing NEPA's role in more informed decisionmaking).

206. RA GUIDE, *supra* note 1, at 1.

207. See REDBOOK, *supra* note 4, at 11–17.

208. *Id.*

209. RA GUIDE, *supra* note 1, at 14.

its fire suppression activities. Recent federal case law supports this argument and indicates that Forest Service fire suppression activities are vulnerable to NEPA challenges.²¹⁰

IV. SEVERAL FEDERAL COURTS RECOGNIZE THE NEED FOR FOREST SERVICE ACCOUNTABILITY IN FIRE SUPPRESSION

Recent federal court decisions indicate that Forest Service environmental review of its suppression efforts falls short of the legal requirements.²¹¹ Prior to these recent decisions, most of the legal challenges to Forest Service fire policy involved NEPA, NFMA and ESA claims that aimed to enjoin either prescribed burns intended to reduce fire danger or post-fire burned timber salvage harvests.²¹² While these suits address important pre- and post-fire environmental concerns, *Forest Service Employees for Environmental Ethics v. U.S. Forest Service* represents a shift towards expanding the NEPA framework to embrace fire suppression tactics.

A. *The Forest Service Employees for Environmental Ethics Decisions Requires the Forest Service be Accountable for Its Fire Suppression Choices*

In *Forest Service Employees for Environmental Ethics v. U.S. Forest Service (FSEEE I)* the Forest Service Employees for Environmental Ethics (FSEEE) initiated a suit in the United States District Court for the District of Montana (District Court of Montana), alleging that the Forest Service acted arbitrarily and capriciously when it failed to conduct NEPA environmental reviews for its use of aerial fire retardant.²¹³ In 2005, the District Court found the Forest Service violated NEPA by failing to prepare either an EA or an EIS for the aerial retardant use.²¹⁴ Emphasizing that the Forest Service cannot narrowly construe statutes to avoid

210. See discussion *infra* Part IV.A and B.

211. See *e.g.* *Forest Serv. Employees for Env'tl. Ethics v. U.S. Forest Serv. (FSEEE III)*, 726 F. Supp. 2d 1195, 1218 (D. Mont. 2010); *Forest Serv. Employees for Env'tl. Ethics v. U.S. Forest Serv. (FSEEE I)*, 397 F. Supp. 2d 1241 (D. Mont. 2005).

212. See *e.g.* *League of Wilderness Defenders v. Allen*, 615 F.3d 1122 (9th Cir. 2010).

213. *FSEEE I*, 397 F. Supp. 2d at 1246.

214. *Id.* at 1247.

compliance, the court explained that the Forest Service had a duty to comply with NEPA when “substantial questions are raised as to whether a project may have a significant effect.”²¹⁵ Because the court found that the “annual dumping of millions of gallons of chemical fire retardant on national forests” raised these substantial questions, the court ordered the Forest Service to comply with NEPA.²¹⁶

The importance of this decision is three-fold. First, and most importantly, the decision recognizes that the emergency nature of fire suppression makes it impracticable to conduct case-by-case NEPA reviews, but mandates NEPA compliance before a fire ignites to evaluate the impact of individual suppression tactics.²¹⁷ Second, the court emphasizes NEPA’s principle that significant environmental impacts need only be likely to result from the action, not guaranteed.²¹⁸ Finally, the decision recognizes the cumulative environmental effect of multiple annual fire suppression actions.²¹⁹ Thus, the decision stands for the principle that when the impacts of fire suppression tactics raise substantial questions about environmental impact, either immediately or over time, then the Forest Service should apply NEPA to those tactics prior to emergency suppression efforts.

Addressing the need for programmatic review of fire suppression tactics, the court noted that Supreme Court precedent²²⁰ recommends “case-by-case” review of agency

215. *Id.* (quoting *Blue Mountain Biodiversity Project v. Blackwood*, 161 F.3d 1208, 1212 (9th Cir. 1998) (*cert. denied by Malheur Lumber Co v. Blue Mountains Biodiversity Project*, 527 U.S. 1003 (1999))).

216. *Id.* at 1254.

217. *Id.* at 1250 (“[I]t is impossible to do an EIS between the time that the person in charge of a particular fire-fighting operation orders the use of chemical fire retardant and the actual use of it.”).

218. *Id.* at 1254 (“To show that the agency violated its duty to prepare an EIS . . . a plaintiff need not show that a significant effect will in fact occur, only that substantial questions are raised as to whether a project *may* have a significant impact.” (emphasis in original)).

219. *Id.* (recognizing that the annual dumping of fire retardant, as well as site-specific applications of retardant, could have a significant effect).

220. *See id.* at 1249–1252. The court distinguishes *Lujan v. National Wildlife Federation*, 497 U.S. 871 (1990) (requiring plaintiffs to challenge particular agency actions that cause harm as opposed to programmatic NEPA review of a land withdrawal review program) and *Norton v. Southern Utah Wilderness Alliance (SUWA)*, 542 U.S. 55 (1990) (finding APA challenges require plaintiffs to assert the agency failed to take a discrete, required agency action) because the Forest Service’s

actions, but distinguished fire suppression activities from other, less time-sensitive agency activities because fire suppression requires fast-paced decisions under intense conditions.²²¹ The court rejected the Forest Service argument in favor of case-by-case NEPA reviews²²² because “it is impossible to do an EIS between the time the person in charge of a particular fire-fighting operation orders the use of chemical fire retardant and the actual use of the retardant.”²²³ In making this observation, the court conceded the impracticability of conducting site-specific, case-by-case NEPA review before each decision to use aerial fire retardant. Further, the court highlighted numerous Forest Service documents and policies, including a nationwide contract for retardant and long-time use of chemical fire retardant that demonstrated agency action occurred prior to the actual application of aerial fire retardant.²²⁴

The court’s reasoning applies to any decisions made by on-the-ground personnel during fire suppression activities because firefighters constantly face immediacy concerns.²²⁵ That is, it is virtually impossible for firefighting officials to conduct any environmental review before initiating fire suppression.²²⁶ FMPs provide the basis for many of the on-the-ground decisions, but as discussed *infra* Part I.B.iii, the Forest Service does not consider fire management plans “decisional documents” that are subject to NEPA review.²²⁷ As the *FSEEE I* court notes, failure to conduct programmatic EISs on a fire suppression tactic means that the tactic “will completely evade NEPA because it would be impossible to consult NEPA after a

decision to allow fire retardant use has a direct and immediate impact on the environment and, without a programmatic EIS the use of fire retardant would evade review.

221. *Id.* at 1250 (“In most situations time is not of the essence and the law generally requires a site specific plan before NEPA compliance is required.”).

222. *See id.* (The Forest Service argued that agency action did not occur until the on-site decision to use fire retardant).

223. *Id.* at 1250.

224. *Id.*

225. REDBOOK, *supra* note 4, at 1–7 (“While the magnitude and complexity of the fire itself and of the human response to it will vary, the fact that fire operations are inherently dangerous will never change.”).

226. *FSEEE I*, 397 F. Supp. 2d at 1250.

227. *See id.*

site-specific action is proposed and approved.”²²⁸ Allowing such a reading of NEPA “does not comport with the goals of NEPA and would allow federal agencies to evade NEPA by allowing final decisions to be made ‘on the ground’ by local officials.”²²⁹

Based on the *FSEEE I* holding, the Forest Service initiated an Environmental Assessment (EA) of its use of chemical aerial fire retardant to fight fire.²³⁰ After the Forest Service considered two alternatives, no action and the proposed action (use of fire retardant), the Forest Service issued a Finding of No Significant Impact (FONSI), allowing the agency to continue its retardant use without conducting the more in-depth EIS.²³¹ In 2010, FSEEE challenged²³² this EA and the Forest Service’s conclusion that use of aerial fire retardant results in no significant impact. First, FSEEE contended that the scope of the Forest Service’s EA on aerial fire retardant was too narrow because it failed to include indirect effects and cumulative impacts of other fire suppression tactics.²³³ Second, FSEEE argued that the Forest Service’s EA was inadequate because it did not thoroughly analyze effects on fish and plants, nor did it adequately explore alternatives.²³⁴ Third, FSEEE challenged the Forest Service decision not to prepare an EIS.²³⁵

The court rejected the first claim, finding that the Forest Service was not required to evaluate the agency’s entire fire suppression practices as either indirect or cumulative effects. The court found that evidence did not supported FSEEE’s argument that aerial fire retardant caused harm by altering natural fire regimes and that other fire suppression tactics were not connected actions to the use of fire retardant.²³⁶ That is, the use of fire retardant did not necessitate the use of other

228. *Id.* at 1252.

229. *Id.*

230. *See* Forest Serv. Employees for Env’tl. Ethics v. U.S. Forest Serv. (*FSEEE III*), 726 F. Supp. 2d 1195, 1205 (D. Mont. 2010).

231. *See id.* at 1205–1206.

232. FSEEE also brought ESA claims against the Forest Service and the Fish and Wildlife Service.

233. *See FSEEE III*, 726 F. Supp. 2d at 1208–1210.

234. *See id.* at 1211.

235. *See id.* at 1214.

236. *See id.* at 1209–1212.

fire suppression tactics.²³⁷ The court also rejected the second claim, finding that while brief, the discussion of effects on plants and fish from continued aerial retardant use met the EA standards.²³⁸ On the third claim, however, the court found that the Forest Service must perform an EIS for the use of aerial retardant because the ESA jeopardy findings indicated aerial fire retardant could create significant impacts, but failed to place any restrictions on retardant use.²³⁹ Thus, the Forest Service relied on insufficient determinations of the FWS and NOAA Fisheries when it should have made its own determinations under an EIS.²⁴⁰

This decision narrows the application of *FSEEE I* by finding that the Forest Service was not required to evaluate the cumulative environmental impacts of all its suppression tactics combined, but retains the *FSEEE I* holding that NEPA applies to individual fire suppression tactics.²⁴¹ Despite this narrower application, *FSEEE III* upholds the application of NEPA to suppression tactics on an individual basis. That is, where an individual suppression tactic, such as the use of bulldozers, has a significant impact on the environment and evidence suggests agency action on a broader level, the Forest Service should initiate NEPA review on that suppression tactic. This conclusion is further supported by other federal court decisions that recognize that some suppression activities can have adverse environmental impacts.

B. *Other Federal District Courts Recognized Potential Adverse Impacts From Fire Suppression*

Two federal courts, the United States District Court for the District of Oregon (District Court of Oregon) and the District Court of Northern California, recently recognized that certain fire suppression actions may cause adverse environmental effects that should be considered cumulative effects during salvaging projects.²⁴² While these two courts considered

237. *See id.*

238. *See id.* at 1212–1214.

239. *See id.* at 1218.

240. *See id.*

241. *See id.* at 1209–1212.

242. *See League of Wilderness Defenders v. Marquis-Brong*, 259 F. Supp. 2d 1115 (D.Or. 2003); *League of Wilderness Defenders-Blue Mountains Biodiversity Project v.*

slightly different legal questions than District Court of Montana in the *FSEEE* cases, they too indicate that fire suppression tactics require NEPA environmental review.

In *League of Wilderness Defenders v. Marquis-Brong*²⁴³ the District Court of Oregon held that the Bureau of Land Management's use of a pre-fire EA for logging in a certain area was inadequate because it failed to consider the impact of fire suppression as part of analyzing the cumulative impacts of salvage logging in a burned area.²⁴⁴ These fire suppression activities included aerial retardant drops and two miles of road-building in riparian areas.²⁴⁵ The court noted that while certain activities may not individually create a significant impact, the cumulative effects of related activities (e.g. fire suppression and timber salvaging) should be considered together in an EIS.²⁴⁶

In *League of Wilderness Defenders–Blue Mountain Biodiversity Project v. Forsgren*,²⁴⁷ the court considered a similar issue and found the Forest Service EA on a timber-salvaging project inadequate. The EA had failed to consider the cumulative impacts to soils from previous fire and fire suppression tactics that include fire-fighters' use of chemical fire retardants and construction of miles of bulldozer lines.²⁴⁸ The court did not decide whether these impacts had individual significance, but determined that the Forest Service should have considered the impact of these events in the prepared EA.²⁴⁹

Unlike in *FSEEE I* and *III*, which considered use of suppression tactics during an active fire, these courts considered whether the federal agencies sufficiently followed NEPA in post-burn timber salvaging. Due to the scope of this question, the courts' considerations of fire suppression impacts were relatively cursory. Yet, these two decisions demonstrate

Forsgren, 184 F. Supp. 2d 1058 (D.Or. 2002).

243. *Marquis-Brong*, 259 F. Supp. 2d 1115.

244. *Id.* at 1124.

245. *Id.*

246. *Id.*

247. *Forsgren*, 184 F. Supp. 2d 1058.

248. *Id.* at 1070; see also *Sierra Club v. Bosworth*, 199 F. Supp. 2d 971, 985–987 (N.D.Cal. 2002).

249. *Forsgren*, 184 F. Supp. 2d at 1070.

judicial recognition of fire suppression's environmental impacts, especially when combined with other forest management activities. In short, these federal district court cases collectively demonstrate that impacts of fire suppression activities, especially use of chemical fire retardant and heavy equipment, may cause significant impact on the environment, which imposes a legal duty on the Forest Service to adequately consider these impacts prior to fire suppression.²⁵⁰

V. FOREST SERVICE SHOULD REVISE ITS POLICIES TO INCREASE FIRE SUPPRESSION ENVIRONMENTAL ACCOUNTABILITY

The emergency nature of fire should not prevent the Forest Service, or other agencies, from evaluating the environmental impacts of fire suppression tactics. While the fast-paced, emergency aspect of fires hinders the agency's ability to conduct site-specific on-the-ground NEPA evaluations, this emergency response should not prevent the Forest Service from conducting an EA or EIS ahead of the blaze. Fire is a reality of western American summers, and while its exact time, place and intensity may be unpredictable, enough factors are certain²⁵¹ to adequately prepare agency officials making decisions on the ground.

Two key questions confront Forest Service wildland fire suppression: (1) whether or not fire should be suppressed and (2) if it should be suppressed, what suppression methods best conform with the Forest Service's dual role of managing the forests and protecting people. Answering these questions requires careful consideration of environmental impacts and human risks,²⁵² and these considerations cannot be adequately performed during emergency fire suppression activities.²⁵³

250. See 42 U.S.C. § 4332(2)(C) (2006) (discussing the procedures required for "major federal actions significantly affecting the quality of the human environment").

251. See e.g., REDBOOK, *supra* note 4, at 1-7 (discussing the need for fire preparedness through planning and implementing programs and developing infrastructure prior to fire ignitions, which includes "pre-positioning and deploying firefighters and equipment").

252. See A NATIONAL COHESIVE WILDLAND FIRE MANAGEMENT STRATEGY, *supra* note 7, at 2.

253. See *Forest Serv. Employees for Envtl. Ethics v. U.S. Forest Serv. (FSEEE I)*, 397 F. Supp. 2d 1241, 1252 (D. Mont. 2005) (discussing the impossibility of NEPA review during the application of a site-specific fire suppression tactic).

Rather, these questions must be analyzed before emergency fire situations in order for Forest Service fire officials to make better on-the-ground decisions. Using legal protections and scientific evidence to determine the best practices of fire suppression will create better fire management by considering all the relevant factors while maintaining an emphasis on human safety.²⁵⁴ Ideally, careful analysis of fire suppression tactics and their consequences will not only increase environmental considerations, but also enhance safety for people and property.

NEPA and Forest Service guidance already provide the framework for this informed decision-making. Further, the Forest Service and other land management agencies recognize the need for a more comprehensive, thoughtful approach to fire management by emphasizing the need for overarching goals and performance measures to govern regional decisions.²⁵⁵ Information developed through environmental assessments and environmental impact statements under NEPA can support and inform these goals and performance measures by providing valuable information on impacts to the environmental landscape. Likewise, the NEPA process will allow for an evaluation of costs that includes both ecological and economic impacts. Such measured analysis of the costs and impacts of fire comports with the philosophies that the Forest Service lists as its “Guiding Principles” in fire suppression.²⁵⁶

A. *The Forest Service Should Require Programmatic NEPA Review for Specific Suppression Tactics*

Given the judicial and scientific recognition that fire suppression tactics may cause significant individual or cumulative environmental impacts,²⁵⁷ the Forest Service should conduct programmatic environmental analysis of, and

254. See REDBOOK, *supra* note 4, at 1-1 (“Firefighter and public safety is the first priority in ever fire management activity.”).

255. A NATIONAL COHESIVE WILDLAND FIRE MANAGEMENT STRATEGY, *supra* note 7, at 7.

256. *Id.* at 1-1, 1-2 (indicating that fire management should carefully analyze the risks, costs, and ecological impacts of fire).

257. See *e.g.*, League of Wilderness Defenders-Blue Mountains Biodiversity Project v. Forsgren, 184 F. Supp. 2d 1058 (D.Or. 2002).

potentially prepare an environmental impact statement, on its suppression tactics.²⁵⁸ Applying these more extensive reviews to the Forest Service's fire suppression tactics will likely increase agency accountability and reduce the adverse environmental impacts caused by some suppression tactics by providing fire management decision-makers with more information.²⁵⁹ NEPA review can increase agency accountability by providing for public notice and comment to ensure that the Forest Service makes informed decisions and appropriately balances ecological, economic and human costs of fire suppression.²⁶⁰ In other words, analyzing the environmental impacts before fire ignition allows agencies to weigh the environmental costs and safety risks of different suppression tactics so that agencies make the best decision for both safety and the environment. Programmatic analysis can help ensure that the immediate response to fires is also the ecologically sound response.

Some may argue that applying NEPA to suppression tactics will reduce safety and increase costs by allowing environmentalist groups to sue to enjoin the use of suppression tactics. This argument fails to note two important facts. First, in the *FSEEE* litigation, the court did not enjoin the use of the retardant, but allowed the Forest Service to continue its use as long as it began complying with NEPA and ESA procedures.²⁶¹ The court's decision recognizes the importance of firefighting suppression tools in protecting forests, property and people, and indicates that the aim of the litigation was to require careful analysis of fire suppression tactics and not to inhibit the use of potentially life-saving suppression tactics. That is, requiring NEPA analysis for fire suppression activities ensures careful balancing of all the risks of a tactic and a conscious

258. See *Citizens for Better Forestry v. U.S. Dep't of Agric. (Citizens I)*, 481 F. Supp. 2d 1059, 1085–1086 (N.D. Cal. 2007) (discussing the need for programmatic EISs for land management plans).

259. See *Forest Serv. Employees for Env'tl. Ethics v. U.S. Forest Serv. (FSEEE I)*, 397 F. Supp. 2d 1241, 1252 (D. Mont. 2005) (indicating that the decision to apply a fire suppression tactic can have "a direct immediate effect on the environment.").

260. See *id.* at 1249 (stating that environmental harm occurs "when governmental decisionmakers make up their minds without having before them an analysis (with public comment) of the likely effects of their decision on the environment." (quoting *Citizens for Better Forestry v. U.S. Dep't of Agric.*, 341 F.3d 961, 971 (9th Cir. 2003))).

261. Cf. *Forest Serv. Employees for Env'tl. Ethics v. U.S. Forest Serv. (FSEEE III)*, 726 F. Supp. 2d 1195, 1232 (D. Mont. 2010).

choice between these potential risks; not the all-out ban of potentially necessary suppression tactics. Second, fire suppression costs are astronomically high and suits to ensure more reasoned Forest Service decisions on when and how it chooses to suppress wildfires could—if the Forest Service complies—save money in the long run.²⁶²

B. *The Forest Service Should Revise Its Fire Suppression Guidance And Manuals To Integrate NEPA Review More Efficiently And Effectively*

Because Forest Service manuals and guidance inform fire officials' on-the-ground decisions,²⁶³ the agency should revise these documents to integrate environmental considerations analyzed during the NEPA process. Integrating this information will allow agency officials making on-the-ground fire suppression decisions to consider all the necessary environmental risks, along with the potential human and property risks. Because interagency guidance already requires fire programs to be based on “the best available science”²⁶⁴ integrating this information should not be too onerous for the agency. Indeed, providing this information comports with key elements of Wildfire Management Policy, including sustaining ecosystems, integrating fire into land management and educating firefighters on wildland fire management policies.²⁶⁵

Providing guidance on the impact of fire suppression should not be viewed as placing environmental concerns above the safety of fire fighters and communities. Instead, agency officials and firefighters should view this information as another way to enhance fire suppression by increasing agency

262. *FSEEE I* and *FSEEE II* provide excellent examples of the agency itself running up costs by frustrating the court, failing to provide information to other agencies, and resisting compliance with environmental laws. While this may be an isolated incidence, the Forest Service resisted complying with the Montana District Court's mandate to take action until the plaintiffs filed for a contempt hearing. See *FSEEE III*, 726 F. Supp. 2d at 1201 (denying the motion for contempt after the Forest Service complied with the 2005 mandate, noting that contempt could not be used for punitive reasons).

263. *FSEEE I*, 397 F. Supp. 2d at 1244 (stating that Forest Service guidelines and policies “provide guidance on how to respond to fires once they occur and what tools are available to respond to wildfire”).

264. REDBOOK, *supra* note 207, at 1-4.

265. *Id.* at 2-4.

accountability and requiring the Forest Service to carefully analyze all of the relevant information before making important fire suppression decisions.

VI. CONCLUSION

Wildfires are a reality that is unlikely to fade. These fires can imperil lives and communities and this danger triggers Forest Service emergency suppression actions. Emergency suppression actions, while necessary, need not be conducted at the expense of forest health. Indeed, mechanisms exist that can inform Forest Service suppression actions and increase accountability so that agency suppression decisions adequately account for ecological concerns. Conducting NEPA review for individual suppression tactics that likely cause environmental harm will provide this information and allow the information to be used during on-the-ground emergency situations. Environmental concerns should not trump human safety. Ecological health and long-term sustainability should be considered in all suppression decisions.

The *FSEEE* decisions recognize the importance of evaluating the impact of these government actions so that the Forest Service can make better choices for communities and forests. By definition, emergency decision-making cannot thoroughly consider all of the relevant factors because decisions must be made quickly to ensure safety. Thus, pre-emergency planning can provide the necessary information about environmental impacts of various suppression tactics.

The Forest Service has a responsibility to manage the forests and its fire suppression activities in a way that ensures forest health. While increased NEPA requirements do place a heavier burden on fire officials, the law represents Congress' intent and should be incorporated into the agency's fire suppression responsibilities. Moreover, our forests are an increasingly delicate resource that must be carefully managed to prevent extensive damage to these resources. In the end, a balance must be struck between protecting forests and suppressing wildfires. These goals are not mutually exclusive and can be satisfied through the thoughtful application of NEPA's procedures.