

Healthy Forests Restoration Act—Will It Really Protect Homes and Communities?

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“This Act is doomed to failure in not protecting either small towns or big trees.”¹

—Representative Jay Inslee

The U.S. wildfire problem is currently a volatile issue due to the highly destructive nature of forest fires that have occurred over the past few years. The Healthy Forests Restoration Act seeks to solve this wildfire problem through prescribed burning and hazardous fuel reduction projects. Many proponents of the Act were legislators from states severely affected by fires, with a profound personal interest in finding a solution. However, inadequate funding means that the areas in actual need of thinning, the forests neighbored by and affecting communities, will not be treated. Instead, timber companies will be able to harvest valuable old growth from isolated forests, in reality worsening the effects of fires on communities. Overall, HFRA is an ugly, imperfect solution that may cause more harm than good.

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1. Molly Villamana, *House Passes Wildfire Bill After Fierce Debate*, ENVT & ENERGY DAILY, May 21, 2003 (quoting Representative Jay Inslee of Washington).

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INTRODUCTION

Years of a misguided policy that called for the suppression of forest fires has led to a fire problem that is greater in scope than anyone imagined possible. The western wildfires that took place over the past two years caused tremendous amounts of devastation to homes, communities, watersheds, and endangered species habitat. During the 2002 summer fires alone, 6.3 million acres of forests burned, approximately 2100 homes were destroyed, and twenty-one people died.² Future seasons are expected to be even more devastating, displacing thousands more people, destroying thousands more homes, and requiring large expenditures of money, man-hours, and even human lives to eliminate the blazes.³ While Congress vacillated in its effort to push through appropriate legislation, the terrible fires that took place in the San Diego, California, area last year were the proverbial straw that broke the camel's back, serving as a catalyst for compromise in the search for a solution in Congress.⁴

This Comment explores the solution that Congress enacted, the Healthy Forests Restoration Act of 2003 (HFRA).⁵ Part I of the

2. Zachary Coile, *Limit Sought on Logging Appeals: New Bush Rule Would Cut Public Input in Fire Areas*, S. F. CHRON., Sept. 20, 2002, at A1.

3. Gregory Alan Gross, *Report Says Fires Could Return Soon; Agency: County Units Were Ill-Prepared To Work Together*, SAN DIEGO UNION-TRIBUNE, Jan. 15, 2004, at B1.

4. H.R. REP. NO. 108-96(1), at 21-22 (2003) (statement of Mark Udall).

5. 108 Pub. L. No. 148, 117 Stat. 1887 (codified at 16 U.S.C.A. §§ 6501-91 (West Supp. 2004)).

Comment first puts HFRA into context by exploring the historical and scientific background of the wildfire problem. This section sheds light on some common misconceptions concerning the state of forests and the causes of wildfires, many of which are internalized by HFRA. Then, Part I goes on to provide an overview of HFRA's various provisions and their purposes. Since HFRA was introduced in response to the perceived need to develop a comprehensive plan focused on giving land managers the tools to respond to what Congress characterizes as a "growing forest health crisis,"⁶ Part II provides analysis of the Act's efficacy as a solution to this problem, its ability to fulfill its stated goals, and its policy implications. Finally, this Comment concludes that HFRA will not be able to fulfill its goals and solve the wildfire problem, and it proposes solutions to the defective law in Part III.

I. OVERVIEW OF HFRA

The devastating effects of the current wildfire problem can be traced back to three causes. First, Forest Service fire control efforts over the past century have been misguided, actually exacerbating the problem rather than remedying it. Second, the ever-increasing population of Americans living in forested areas can turn an otherwise healthy and rejuvenating fire into a serious threat to lives and property.⁷ Finally, although states and localities currently employ programs to address these issues, they lack the resources to do so effectively.

A. Background

1. Forest Service Action Before HFRA

Although statistically the numbers and sizes of wildfires have not increased significantly over the past forty years, their devastation has.⁸

6. H. R. REP. NO. 108-96(II), at 2 (2003); Scott McInnis, *Containing the Environmental Threat of Wildfire*, THE HILL, Apr. 9, 2003, available at http://www.thehill.com/news/040903/ss_mcinnis.aspx.

7. *Healthy Forests Restoration Act: Hearing on HR 1904 Before the House Comm. on Agric., Nutrition, and Forestry*, 108th Cong. (2003) (testimony of Michael Petersen, Executive Director, Lands Council) [hereinafter *Petersen Testimony*]. As the director of the Lands Council, Michael Petersen has, for several years now, overseen efforts of the Council to work in conjunction with local authorities and private landowners in wildfire education, and on what are known as defensible space projects, discussed in Part III, *infra*, of this Comment. He and the Lands Council have a tremendous amount of expertise and field experience in dealing with wildfire threats, particularly in the Western states where the Lands Council has implemented and overseen more than 145 defensible space projects.

8. NATIONAL INTERAGENCY FIRE CENTER, *Total Fires and Acres 1960-2003*, at <http://www.nifc.gov/stats/wildlandfirestats.html> (last visited Sept. 14, 2004). The National Interagency Fire Center is the country's largest and leading authority on wildfire collaboration. NIFC is composed of representatives from nine federal and state agencies, including Bureau of

For over a hundred years the Forest Service has fought to suppress fires. One of the government's more effective tools against forest fires actually found its form in a cartoon bear. The Forest Service launched the Cooperative Forest Fire Prevention campaign in 1944 as the result of heightened concern over forest fires during the war.⁹ The agency began its Smokey the Bear campaign in 1945 with resounding success, and by 1950 the average acreage burned each year dropped by over fifty percent, likely due at least in part to the agency's admonition that "only you can prevent forest fires."¹⁰

Successful in its efforts to suppress forest fires, the Forest Service has learned in the past decade or so that total suppression is ill-advised, both for the health of the forests and the safety of neighboring communities.¹¹ In reality, periodic fires are the mechanism for maintaining forest health.¹² Fires burn off dead and dying trees and brush, thereby adding nutrients to the soil and making room for the root systems of the trees that remain.¹³ In some forests, fires are actually the catalysts for the production of new plant life.¹⁴ Prevention of fires alters this natural

Land Management, Bureau of Indian Affairs, U.S. Fish and Wildlife Service, National Parks Service, U.S. Forest Service, National Oceanic and Atmospheric Association, Office of Aircraft Services, National Association of State Foresters, and U.S. Fire Administration. *See also* USDA Forest Service Report: *Integrated Scientific Assessment for Ecosystem Management in the Interior Columbia Basin*, 1999. "Fire severity has generally increased and fire frequency has generally decreased over the last 200 years. The primary causative factors behind fire regime changes are effective fire prevention and suppression strategies, selection and regeneration cutting, domestic livestock grazing, and the introduction of exotic plants." *Id.*

9. SMOKEY'S VAULT: HISTORY OF CAMPAIGN, available at <http://www.smokeybear.com/vault/history.asp> (last visited Sept. 14, 2004).

10. NATIONAL INTERAGENCY FIRE CENTER, *Frequently Asked Questions, "Throughout History, What Are Some of the Most Memorable Fires?"*, at <http://www.nifc.gov/faq.html#history%20fires> (last visited Sept. 17, 2004) (table identifying average acreage burned over the past hundred years in ten-year increments). During the 1940s, the average annual burn was roughly 22.9 million acres. In the 1950s, that number dropped to 9.5 million, and in the 1960s the number dropped to 4.6 million.

11. U.S. Department of Agriculture, Forest Service, *Science Basis for Changing Forest Structure to Modify Wildfire Behavior and Severity*, April 2004, at http://www.fs.fed.us/rm/pubs/rmrs_gtr120.pdf [hereinafter *Science Basis for Changing Forest Structure*]; *see also* Jack D. Cohen, *Reducing the Wildland Fire Threat to Homes: Where and How Much?*, Fire and Economics Symposium, Rocky Mountain Research Station, (1999), available at <http://www.firelab.org/fbp/fbpubs/fbpdf/cohen/reducingwfire.pdf>; U.S. Department of Agriculture, Forest Service, *Historical and Current Forest Landscapes in Eastern Oregon and Washington: Part II: Linking Vegetation Characteristics to Potential Fire Behavior and Related Smoke Production*, at 20, October 1995, available at <http://www.fs.fed.us/pnw/pubs/gtr355/gtr355a.pdf> [hereinafter *USDA Forest Service Study*].

12. *See* PACIFIC BIODIVERSITY INSTITUTE, *Wildfire Information Center: Fire Ecology*, at http://www.pacificbio.org/Projects/Fire2001/fire_ecology.htm (last visited Sept. 14, 2004) [hereinafter *Fire Ecology*]; Ray Ring, *A Losing Battle*, HIGH COUNTRY NEWS, vol. 35 no. 10, May 26, 2003.

13. *See Fire Ecology*, *supra* note 12; Ring, *supra* note 12.

14. *Fire Ecology*, *supra* note 12; Ring, *supra* note 12; *Science Basis for Changing Forest Structure*, *supra* note 11, at 3-5.

process: deadfall is not removed, no new nutrients are added to the soil, and plant life in the forests becomes crowded.¹⁵ In this way, suppression activities have allowed deadfall to accumulate, which functions as fuel and increases the intensity and severity of periodic fires.¹⁶

One way to improve forest health is through prescribed burning. Prescribed burning involves setting controlled fires in areas with large amounts of deadfall in order to burn off these potential fuels.¹⁷ This not only improves the health of the forest, but it also eliminates much of the fuel that might otherwise result in a wildfire.¹⁸ While the Forest Service stated an interest in using prescribed burning as a means to control wildfires, it was taking little action to support that interest before the enactment of HFRA.¹⁹ Rather, the Service's approach to fire safety continued to involve suppression—dealing with fires after they are already burning—rather than researching ways for people, particularly inhabitants of the wildland/urban interface (WUI),²⁰ to protect their

15. *Science Basis for Changing Forest Structure*, *supra* note 11, at 3-5.

16. *Id.*

17. *Id.* at 24-25.

18. *Id.*

19. *Id.* One reason for this may be that prescribed burning is very costly. In 1999, federal agencies treated roughly 2.24 million acres of federal land at a cost of almost one hundred million dollars. National Interagency Fire Center, Fire Statistics, available at <http://www.nifc.gov/stats/prescribedfirestats.html> (last visited Oct. 13, 2004).

20. There are numerous different definitions of the "wildland/urban interface." The Bush Administration has defined the wildland/urban interface as "an area of Federal lands that: (A) meets or intermixes with areas containing humans and their homes, structures, or other human developments; and (B) may be vulnerable to wildfire." Victoria Sutton, *Environmental Law Symposium: The First Year of the Bush Administration: The George W. Bush Administration and the Environment*, 25 W. NEW ENG. L. REV. 221, 234 (2003). However, the Secretary of the Interior defined the WUI more broadly, not limiting it to "an area of federal lands," but rather any area "where humans and their development meet or intermix with wildland fuel." 66 Fed. Reg. 751, 753 (2001). HFRA defines WUI much more specifically as:

(16) Wildland-urban interface. The term "wildland-urban interface" means—

(A) an area within or adjacent to an at-risk community that is identified in

recommendations to the Secretary in a community wildfire protection plan; or

(B) in the case of any area for which a community wildfire protection plan is not in effect—

(i) an area extending 1/2 -mile from the boundary of an at-risk community;

(ii) an area within 1 1/2 miles of the boundary of an at-risk community, including any land that—

(I) has a sustained steep slope that creates the potential for wildfire behavior endangering the at-risk community;

(II) has a geographic feature that aids in creating an effective fire break, such as a road or ridge top; or

(III) is in condition class 3, as documented by the Secretary in the project-specific environmental analysis; and

(iii) an area that is adjacent to an evacuation route for an at-risk community that the Secretary determines, in cooperation with the at-risk community, requires hazardous fuel reduction to provide safer evacuation from the at-risk community.

homes and communities from inevitable future forest fires.²¹ The reason behind this policy decision is unclear, especially in light of the fact that many of the scientists advocating alternatives to suppression are Forest Service scientists.²²

2. *The Wildland Urban Interface*

In earlier years of the nation's history, it mattered less that forest fires were taking place because much of the land in what now constitutes the western states was then wilderness. However, with a rising population, increasing numbers of Americans are building their homes and communities in or near forested areas, creating a phenomenon now referred to as the WUI.

Essentially, the WUI includes any area of the country where communities are located in or on the fringe of forested areas. The WUI developed from the migration of people relocating from highly concentrated urban areas to outlying areas—"getting back to nature," so to speak—and has resulted in an increasing number of individuals desiring to make their homes in forested areas.²³ This migration necessitated that the Forest Service address forest fires in a new and different way, because fires could not be allowed to burn at will, as they did historically. "[N]ow we have several million people living in the path of these fires, and the effect of recent droughts and wildfires can no longer be ignored."²⁴ In essence, the ever increasing number of people making their homes and communities in or near forested areas has greatly exacerbated the wildfire problem by eliminating the possibility of allowing the fires to burn themselves out. The question for legislators thus becomes: what should be done to protect the millions of Americans who have established their homes in the path of inevitable and potentially devastating fires?

3. *State and Local Government Efforts*

Absent a comprehensive federal program that addressed the welfare of homes and communities in the vicinity of wildfires, state, regional, and local governments and private groups began to combat the problem. However, these efforts vary dramatically between affected areas. Some areas currently employ thinning²⁵ and prescribed burning strategies, while

16 U.S.C.A. § 6511(16) (West Supp. 2004).

21. *Petersen Testimony*, *supra* note 7; Cohen, *supra* note 11.

22. *Petersen Testimony*, *supra* note 7; Cohen, *supra* note 11.

23. *Id.*

24. *Id.*

25. See Section I.A.1 *supra*. Thinning involves the removal of deadfall—fallen trees and branches that have accumulated on the forest floor—and also the removal of trees with trunks

others have defensible space projects, such as those described in Part III of this Comment, all with varying degrees of efficacy.²⁶ Even the most effectively safeguarded areas of the country, however, lack the protective means available to the federal government.²⁷ Localities acting independently simply do not have the resources required to address the WUI/wildfire problem.

Thus, it is the combined effects of fire suppression, colonization of the WUI, and the lack of resources to safeguard these recently-established homes that have created the current fire problem. In the wake of this escalating problem, a centralized Forest Service plan for safeguarding lives and homes with the resources to do so became increasingly important.²⁸

B. HFRA's Solution: The Hazardous Fuel Reduction Plan

The Healthy Forests Restoration Act was enacted on December 3, 2003.²⁹ The purpose of HFRA is essentially two-fold. First, the Act is intended to empower the Secretary of Agriculture and the Secretary of the Interior to protect communities and watersheds from wildfire through the use of hazardous fuel reduction projects, the logistics of which will be explained in detail below.³⁰ The second purpose of HFRA is the promotion of other efforts to safeguard communities and watersheds, and to address threats to forest health, specifically wildfire and insect infestation.³¹

less than four inches across. See also, generally, *Science Basis for Changing Forest Structure*, *supra* note 11. However, “[t]hinning can describe practices ranging from light removal of small understory trees to heavy removal of dominant overstory trees,” so even the terminology of the Act leaves a tremendous amount of interpretation to the enforcing agencies. RICK BROWN, THINNING, FIRE AND FOREST RESTORATION: A SCIENCE-BASED APPROACH FOR NATIONAL FORESTS IN THE INTERIOR NORTHWEST 9 (Defenders of Wildlife 2000). Rick Brown, an independent biological consultant when his paper was published, is currently the senior resource specialist at Defenders of Wildlife. He has also worked as a biologist for the US Forest Service and the National Wildlife Federation during the twenty-five years he has spent working in the Pacific Northwest.

26. See *Petersen Testimony*, *supra* note 7.

27. *Id.*; see also *Ring*, *supra* note 12.

28. *Ring*, *supra* note 12 (discussing the development three years ago of a National Forest Plan devoted to forest fire control).

29. 108 Pub. L. No. 148, 117 Stat. 1887 (codified at 16 U.S.C.A. §§ 6501-91 (West Supp. 2004)); see also, *President Bush Signs Healthy Forests Restoration Act Into Law*, GLOBAL NEWSWIRE, Dec. 3, 2003.

30. 16 U.S.C.A. § 6501.

31. *Id.*

Title I,³² the focal section for the purposes of this Comment, is the most comprehensive section of HFRA. Title I is effectively a codification of the bipartisan Western Governors Association (WGA) prioritization scheme for its ten-year forest strategy plan.³³ The WGA is a group comprised of twenty-one western-state governors and representatives of the Pacific Islands, organized to address important policy and governance issues in the West, advance the role of the Western states in the federal system, and strengthen the social and economic fabric of the region.³⁴ In 2000, the WGA, in conjunction with public interest groups and some federal agencies, began developing a strategy for achieving the goals of improving fire prevention and suppression programs, reducing hazardous fuels, restoring fire-adaptive ecosystems, and promoting community assistance with these issues.³⁵ Although several federal agencies collaborated in the development of this ten-year plan, they made no efforts to implement it until now, with HFRA. One key difference between HFRA and the WGA plan is that monitoring and maintenance are key components of the WGA plan, while HFRA only addresses monitoring in passing and does not provide for maintenance.³⁶

32. *Id.* at §§ 6511-18. Other titles not discussed in this Comment are found at §§ 6531-59. A brief summary of these titles is as follows:

Title II of HFRA establishes incentives to encourage research into energy uses of biomass resulting from hazardous fuel reduction projects, including otherwise valueless wood and brush. *Id.* at § 6531.

Title III is intended to support community-based watershed forestry partnerships that address critical forest stewardship, watershed protection and restoration needs by providing monetary and technical assistance to private forest landowners in order to make water-protection improvements on their lands. *Id.* at §§ 6541-42.

Title IV provides for a categorical exclusion of silvicultural assessment projects from NEPA review in order to gauge the effectiveness of the various types of treatments. Title IV authorizes Federal land managers to develop early detection programs against disease and insect infestation. *Id.* at §§ 6551-56.

Title V of HFRA establishes the Healthy Forest Reserve Program (HFRP) in order to enhance forest ecosystems by promoting the recovery of threatened and endangered species, improving biodiversity, and enhancing carbon sequestration. *Id.* at §§ 6571-78.

Finally, *Title VI* contains more general provisions for maintaining local vegetation and agriculture against invasive plant species, with an invitation for private entity participation in efforts to improve hardwood health. *Id.* at § 6591.

33. Western Governors' Association, *A Collaborative Approach for Reducing Wildland Fire Risks to Communities and the Environment 10-Year Comprehensive Strategy Implementation Plan*, May 2002, available at http://www.westgov.org/wga/initiatives/fire/implement_plan.pdf [hereinafter *WGA 10-year Comprehensive Strategy*].

34. For more information about the Western Governors' Association and current projects, visit their website at <http://www.westgov.org> (last visited Sept. 14, 2004).

35. WGA 10-year Comprehensive Strategy, *supra* note 33, at 10-16.

36. *Id.*; 16 U.S.C.A. § 6591.

Title I outlines processes for the proposal, review and implementation of hazardous fuel reduction programs.³⁷ The basic idea behind Title I is to streamline the process³⁸ through which government agencies approve and execute forest health projects.³⁹ The provisions require “the timely implementation of scientifically-supported management activities to protect the health and vibrancy of Federal Forest ecosystems.”⁴⁰ There are several steps laid out in Title I for this process.

The first step in the process is identification of public lands affected by HFRA.⁴¹ The projects approved under HFRA are intended to encompass Forest Service and Bureau of Land Management (BLM) lands that fall into four basic categories:

- 1) lands near communities in the WUI;
- 2) lands that are in close proximity to municipal water sources;
- 3) lands that encompass habitat for endangered species, particularly where officials; have identified catastrophic wildfire as a threat to species viability
- 4) lands that are especially susceptible to disease or insect infestation.⁴²

The Act places the highest priority on lands that are in the WUI and lands that are near municipal watersheds.⁴³ The Forest Service is directed to identify and prioritize federal lands in need of forest health projects, and develop and propose such projects accordingly.

Once lands are identified and projects are determined, the Forest Service must undertake environmental assessment of the projects to ensure that they will not cause more harm than good. However, Title I limits the National Environmental Policy Act (NEPA)⁴⁴ procedures that the Forest Service would ordinarily follow when implementing HFRA. The agency is still required to produce an Environmental Impact

37. The Act defines “hazardous fuels reduction programs” as the measures and methods described in the definition of “appropriate tools” contained in the glossary of the Implementation Plan, on Federal land. 16 U.S.C.A. §§ 6512-14.

38. H. R. REP. NO. 108-96(II), at 3 (2003); 16 U.S.C.A. §§ 6514-16.

39. The phrase “forest health project” is a phrase used throughout the Act. Although no specific definition is give to the term, generally, it means projects undertaken in accordance with the Act, particularly thinning projects and prescribed burns.

40. H. R. REP. NO. 108-96(II), at 2.

41. HFRA does allow for the use of federal monies to fund projects on private lands, but such uses are highly restricted and the landowner must meet specific criteria to be included. *See* 16 U.S.C.A. § 6572. Likewise, tribal lands adjacent to watersheds may also be included in the program. But there is no discussion of whether, when the government provides aid, biomass and other products reaped belong to the government or the tribe. *See* 16 U.S.C.A. § 6542. In either case, the allotted budgets are very small portions of the overall HFRA budget, and there is no special provision for the protection of state lands.

42. 16 U.S.C.A. § 6512.

43. 16 U.S.C.A. §§ 6512-13.

44. 42 U.S.C. §§ 4321-47 (2000).

Statement (EIS) or Environmental Assessment (EA).⁴⁵ While NEPA normally requires three to five alternative actions to be researched and included in the EIS or EA,⁴⁶ however, under HFRA the Forest Service is not required to research alternatives to the proposed project.⁴⁷ The law eliminated this step in order to expedite implementation of projects developed by the Forest Service.⁴⁸ Once the environmental review is complete, the project plan is submitted for public comment.⁴⁹

In the interests of streamlining hazardous fuel reduction projects, HFRA places limits on the public comment stage. A notice and comment period for a proposed action is ordinarily open to anyone who wishes to comment, and the comments may be made orally or submitted in writing to the Forest Service.⁵⁰ Under HFRA, however, comments may only be submitted during a limited time period and only in writing.⁵¹ Once the Forest Service has received and considered these comments, it may implement its final plan, unless it is appealed.

Usually, anyone with an actual interest in the decision being made by an agency may appeal that decision,⁵² but under HFRA this is not the case.⁵³ Title I provides a limited waiver of the Appeals Reform Act,⁵⁴ the statute codifying the administrative appeals process.⁵⁵ Therefore, only individuals involved since the original development of the plan, who submitted written comments may appeal the decision.⁵⁶ HFRA directs the agency to establish "an alternative review process by which persons could seek administrative redress against such projects,"⁵⁷ and allows ninety days for the agency to draft, take comment on, and finalize its new process.⁵⁸ Finally, judicial review of administrative decisions is also limited under HFRA, both in scope and in timeframe.⁵⁹

Many legislators considering the bill were concerned by HFRA's cursory appeal and review process, particularly with respect to protected,

45. 16 U.S.C.A. § 6514.

46. 42 U.S.C. § 4332.

47. 16 U.S.C.A. § 6514.

48. *Id.*

49. *Id.*

50. 42 U.S.C. § 4332; *see also* Administrative Procedure Act, 5 U.S.C. §§ 552-53 (2000).

51. 16 U.S.C.A. § 6514; 36 C.F.R. § 218 (2004).

52. 42 U.S.C. § 4322, 5 U.S.C. §§ 552-53.

53. 36 C.F.R. § 218.3; 16 U.S.C.A. § 6515.

54. Department of The Interior and Related Agencies Appropriations Act (commonly referred to as the Appeals Reform Act), Pub. L. No. 102-381, § 322, 106 Stat. 1374, 1419 (1992); *see also* 36 C.F.R. § 218.3(A).

55. § 322; *see also*, Dan Berman, *Forests: First Rule Under Healthy Forest Bill Limits Appeals*, ENV'T & ENERGY DAILY, GREENWIRE, Jan. 12, 2004.

56. 36 C.F.R. § 218.3-218.6.

57. H. R. REP. NO. 108-96(II), at 4 (2003); 16 U.S.C.A. § 6515.

58. 36 C.F.R. § 218.9.

59. 16 U.S.C.A. § 6516.

special status, forested areas.⁶⁰ Accordingly, several measures were put in place to check the expediting powers afforded by the Act. First, the expedited review process employed under this title does not extend to procedures in wilderness areas or lands where a Presidential proclamation or a congressional Act prohibits removal of vegetation.⁶¹ Likewise, projects undertaken in National Parks, Wilderness Study Areas, or Wildlife Refuges may not be approved through the expedited process.⁶² The second protective measure explicit in Title I mandates that the streamlined process enunciated in this title be used on no more than twenty million acres of eligible land total.⁶³

In theory, given the provisions of the statute, Title I should result in the following agency actions: first, the Forest Service will identify the acreage in the most desperate need of treatment and begin developing strategies for executing the most effective treatment possible.⁶⁴ Most likely these treatments would be primarily thinning projects and occasionally prescribed fires as well. Next, the agency would research the ecology of the area to determine what kind of impact treatment will have on the environment to ensure that the benefits of the exercise outweigh the costs. Then, the agency would propose the projects, receive and incorporate comments, and then implement the treatment. The newly-thinned forested areas would be revitalized and pose less of a threat to communities and watersheds. Ideally, then, the agency would have sound monitoring practices, and localities and regional authorities would maintain these areas to prevent future forest health deterioration. Unfortunately, due to a lack of funding and a loophole to benefit the timber industry, HFRA has no chance of achieving this ideal.

II. HFRA INADEQUACIES

There are a number of problems that will inhibit the Act's ability to fulfill its goals of protecting homes, communities, and endangered species from wildfires. HFRA's adoption of thinning is not a full solution to the fire threat. The current budgeting crunch and the EPA's shortage of resources will inhibit effective treatment of many at-risk areas. Moreover, a "logging loophole" will serve as a perverse incentive for companies involved in the projects to log rather than thin. Finally, the relaxed standards for endangered species review will result in harm to species habitat.

60. H. R. REP. NO. 108-96(I), at 23-24, (2003); H. R. REP. NO. 108-96(II) at 81.

61. 16 U.S.C.A. § 6512(d).

62. *Id.*

63. 16 U.S.C.A. § 6512(c).

64. USDA Forest Service, *The Healthy Forests Initiative and Healthy Forests Restoration Act Interim Field Guide* (2004), available at <http://www.fs.fed.us/projects/hfi/field-guide/web/toc.php>.

A. HFRA's Thinning Solution is Insufficient

A few years ago, foresters began exploring thinning as a means of reducing density in some of these forests, thereby reducing the intensity of a potential fire.⁶⁵ The effectiveness of thinning depends on the type of forest being thinned, the thinning procedure employed, and the maintenance of thinning efforts after the fact. Successful thinning projects are primarily human efforts to correct human error in areas where suppression previously took place.⁶⁶

Effective thinning projects remove dead and dying brush—normally removed by fire—from the forest floor, along with standing trees with a trunk diameter of less than nine inches, often smaller.⁶⁷ Thinning may also involve small, prescribed fires to eliminate brush and small trees not easily removable by other means.⁶⁸ The purpose of thinning is to eliminate quick-burning fuel from an area so that what remains is a stand of more fire-resistant vegetation that prevents a fire from spreading.⁶⁹ Fuel reduction can have a major impact on fires, especially where forests are choked with small diameter trees. Removal of some of these trees can lessen the severity of fires.⁷⁰ By removing the “fuel ladder”⁷¹ created by small trees, thinning can prevent ground fires from becoming crown fires⁷² that could potentially kill large trees.⁷³

65. Cohen, *supra* note 11 (discussing the vegetation clearance required for reducing home ignitions).

66. *Id.*

67. *Petersen Testimony*, *supra* note 7; Cohen, *supra* note 11. Matthew Hall, *A Forester Looks at the Healthy Forest Initiative*, WEST BY NORTHWEST.ORG, Feb. 11, 2003, available at http://westbynorthwest.org/artman/publish/article_260.shtml. Matthew Hall is an eco-forester and a teacher of ecological forestry at the Aprovecho Research Institute.

68. Wilderness Society, *Fire and Fuels: Does Thinning Stop Wildfires?*, SCIENCE & POLICY BRIEF 4 (2003), available at <http://www.wilderness.org/Library/Documents/upload/Fire-and-Fuels-Does-Thinning-Stop-Wildfires.pdf> [hereinafter *Fire and Fuels*].

69. See generally, *Science Basis for Changing Forest Structure*, *supra* note 11; Hall, *supra* note 67.

70. *Fire and Fuels*, *supra* note 68, at 4.

71. The term “ladder fuels” is used to describe the role that forest characteristics play in turning a ground fire into a crown fire: “The shrub/small tree stratum is also involved. . .by increasing surface fire line intensity and serving as “ladder fuels” that provide continuity from the surface fuels to canopy fuels, thereby facilitating crown fires. These essentially bridge the vertical gap between surface and crown strata.” *Science Basis for Changing Forest Structure*, *supra* note 11, at 11.

72. The Forest Service describes the ignition of crown fires—fires that occur in the tops of trees rather than on the ground—in this way:

Crowns are ignited after the surface fire reaches critical fireline intensity relative to the height of the base of the aerial fuels in the crown. This crown ignition can become an “active” crown fire if its spread rate is high enough to surpass the second threshold based on the crown density (often referred [to] as canopy bulk density—canopy weight for a given volume).

Id.

73. *Id.* at 23.

Thinning is especially effective within a quarter mile of the buildings in a community because ground fires do not usually spread further than that distance without fuel.⁷⁴ Fuel projects are most effective in conjunction with efforts to fire-proof homes by replacing flammable building materials with fire-resistant ones.⁷⁵ This combination of efforts is most commonly referred to as “defensible space.”⁷⁶

One factor to consider regarding fuel reduction projects, however, is that they do not work with all forest types. For example, in old-growth and high-elevation forests, fires occur very infrequently, so build-up naturally occurs on the forest floor.⁷⁷ When fires do occur in these forests, they are often stand-replacing fires, which actually improve the forests’ health dramatically by releasing seeds that produce new saplings.⁷⁸ Accordingly, thinning projects in these forests can have adverse effects on habitat for wildlife and watersheds by replacing a natural process with an unnatural one.⁷⁹ Thus, in order for thinning projects to be effective as a means to reduce wildfires, they must be administered judiciously.

Just as thinning only works for some types of forests, it also only works against some types of fires, while other types of fires behave in such a way as to make thinning ineffective.⁸⁰ For example, thinning works well with ground fires because it eliminates the fuel on which they feed.⁸¹ By contrast, thinning does little to prevent crown fires, often the result of lightning strikes or other ignition activities that occur at the treetop level, because crown fires have the ability to jump from treetop to treetop.⁸² There is little disagreement that forest thinning, when conducted

74. *Id.*; see also *Petersen Testimony*, *supra* note 7; See also BROWN, *supra* note 25, at 29.

75. See Part III *infra*; see also *Fire and Fuels*, *supra* note 68, at 3.

76. *Petersen Testimony*, *supra*, note 7; Cohen, *supra* note 11; Jack D. Cohen, *Preventing Disaster - Home Ignitability in the Wildland Urban Interface*, 98 JOURNAL OF FORESTRY (2000). *Science Basis for Changing Forest Structure*, *supra* note 11, at 27.

77. *Science Basis for Changing Forest Structure*, *supra* note 11, at 12. See also, BROWN, *supra* note 25, at 13-16.

78. Wilderness Society, *Dead Trees and Healthy Forests: Is Fire Always Bad?*, SCIENCE & POLICY BRIEF 3 (2003), available at <http://www.wilderness.org/Library/Documents/upload/Dead-Trees-and-Healthy-Forests.pdf> (last visited Aug. 16, 2004). [hereinafter *Dead Trees*].

79. *Dead Trees*, *supra* note 78, at 2-3.

80. *Fire Ecology*, *supra* note 12. See also Ring, *supra* note 12:

Alarmed scientists get more attention than those who are not alarmed, so it can seem that the science aligns with homeowners and businesses, championing the firefighting and forest thinning. But actually, the science is not so clear. No two fires are alike, and every forest type reacts differently, but all forests evolved with fire.

Id.

81. “A wildland fire does not spread to homes unless the homes meet the fuel and heat requirements sufficient for ignition and continued combustion.” Cohen, *supra* note 11. See also *Science Basis for Changing Forest Structure*, *supra* note 11, at 22-27.

82. Cohen, *supra* note 11; See also *Science Basis for Changing Forest Structure*, *supra* note 11, at 11, 15-16.

properly, has the potential to improve forest health. But differences in the way fires behave means that thinning is not a forest fire cure-all.

Finally, thinning must be maintained to be effective. HFRA calls for budgetary allotments over the next few years to thin acreage, but has no provision for the maintenance of forest health once the initial program has taken place.⁸³ Within the time it takes to thin the acreage prescribed by the Act, the first acres cut will have started to re-grow and require thinning anew.⁸⁴ Unfortunately, HFRA ignores this biological fact. HFRA calls for conducting forest health projects over at least the next five years, more probably ten. Yet the shelf-life for a thinning project—that is, the length of its effectiveness before it needs to be re-thinned—is generally not more than ten years and in fact can be as short as four years.⁸⁵ Consequently, even if the thinning funded by the Act does provide some immediate protection for WUI communities, their future safety is left in doubt. It should be noted, however, that even the possibility of immediate protection is an unreliable premise because Title I of HFRA only allows funding for projects on federal lands, and less than ten percent of the WUI is actually situated on federal lands.⁸⁶

B. Budget Deficiencies

Although HFRA was only recently enacted, budget problems have already begun to surface. The Forest Service and the Bureau of Land Management (BLM) recently indicated that planned thinning projects for the 2004 fiscal year will constitute 3.7 million acres, more than double the 1.7 million acre yearly average between 2000 and 2003.⁸⁷ But President Bush has requested an increase in the budget for such projects of only 14%.⁸⁸ This requires the Forest Service and BLM to do more than twice the previous year's work with only a fraction of the increase in funding necessary to do so. Unless these agencies recently found a way to

83. See, generally, 16 U.S.C.A. §§ 6501-91 (West Supp. 2004).

84. See *Fire and Fuels*, *supra* note 68.

85. *Id.*; see also *Science Basis for Changing Forest Structure*, *supra* note 11, at 28-29.

As a beginning point, pretty much all fire scientists agree: Forest thinning and the other mechanical treatments will never replace the role of fire in recycling nutrients, or take the place of everything else that fire achieves. "We cannot thin our way to nirvana," says Jack Cohen, a researcher at the federal Fire Sciences Lab in Missoula, Mont. And prescribed fires will never replace the beneficial effects of true wildfires.

Ring, *supra* note 12.

86. Greg Aplet & Bo Wilmer, *Communities at Risk of Fire: How Much is on Federal Land?*, March 11, 2003.

87. USDA Forest Service Fact Sheet, *Implementation of the Healthy Forest Initiative*, April 5, 2004, available at <http://www.usda.gov/news/releases/2003/12/fs0405.htm>. [hereinafter *USDA Forest Service Fact Sheet*].

88. *Id.* See also, Dan Berman, *Largest Request Ever Not Without Controversy Over ESA, Land Acquisition*, ENVT & ENERGY DAILY, Feb. 3, 2004.

decrease the cost of thinning projects dramatically, the 3.7 million acre number is simply unreachable. What's worse, in order to reach the paltry 14% increase, the Department of the Interior plans to cut funding for endangered species recovery projects by more than nine million dollars, effectively robbing Peter to pay Paul.⁸⁹

C. *The "Logging Loophole"*

Unfortunately, the Forest Service and BLM *did* find a way to supplement its unrealistically low budget—by selling trees.⁹⁰ Without the funds to pay for hazardous fuel reduction projects, Forest Service officials were forced to allow private companies to log on the lands they were contracted to treat.⁹¹ Indeed, government officials early on suggested that the Forest Service owed large trees to logging companies for their services rendered.⁹² Then, Forest Service officials moved beyond suggestion to assurance with the implementation of what the agency refers to as "stewardship contracts," agreements of up to ten years duration between the Forest Service and private companies under which the companies conduct thinning projects free of charge or at a discounted rate in exchange for being allowed to keep whatever is cut.⁹³ This is what has come to be known as HFRA's "logging loophole."⁹⁴ The logging loophole, initially included to enable HFRA, actually threatens to undermine it by 1) creating more deadfall to fuel destructive fires, 2) removing large trees which actually protect the forest from fires, 3) ignoring the true threat to WUIs from small, low-elevation trees and

89. According to the government, the justification for this cut is that HFRA projects do not need ESA consultation, so the resources that otherwise would have been diverted to HFRA can be used to address the current backlog of endangered species issues. See Berman, *supra* note 88. This is illogical because the government does not take into account the fact that in previous years the number of forest health projects undertaken was lower, making divertable resources smaller. This oversight, coupled with a cut in funding means not only that species are not protected under HFRA, but also that the ESA backlog will increase as a result of the Act. *Id.*

90. Press Release, USDA Forest Service, Federal Agencies Announce Guidelines for Stewardship Contracts and Agreements: Key Element of Healthy Forests Initiative will Improve Forest and Rangeland Health While Increasing Collaboration (Jan. 15, 2004), available at <http://www.doi.gov/news/040115a.htm>; see also, *USDA Forest Service Fact Sheet*, *supra* note 86.

91. *USDA Forest Service Fact Sheet*, *supra* note 86; see also Dan Berman, *Forests: Bush Signs Bill to Speed Logging Projects Meant To Stem Wildfires*, ENVT & ENERGY DAILY, Dec. 4, 2003.

92. Hall, *supra* note 67.

93. *USDA Forest Service Fact Sheet*, *supra* note 87.

94. "Logging loophole" is the colloquial phrase that has been coined in the media to describe the very broad discretion given to BLM and the Forest Service in determining the types of trees to be removed in thinning projects. *Id.* See also, *Veiled Assaults on the Environment*, ROANOKE TIMES & WORLD NEWS, Dec. 26, 2003, at B8; Charles Seabrook, *New Forest Plan, Same Old Dispute: Environmentalists Fear "Healthy" Logging Rules*, ATLANTA JOURNAL-CONSTITUTION, Feb. 9, 2004, at A1; Dave Muhly, *Act Puts Forests in Jeopardy*, THE HERALD, (ROCK HILL S.C.), Dec. 13, 2003.

vegetation, and 4) reducing incentives for timber companies to research the use of biomass in lieu of large trees.

Logging can increase the threat of forest fires by creating more deadfall. When a forest is going to be logged, some of the forest must be cut away in order to create an avenue by which the machinery can reach the trees to be harvested.⁹⁵ Often this means knocking down small trees to create a path, or logging road. The result of this effort is disruption of the soil and vegetation on the forest floor, and a new accumulation of deadfall—needles, leaves, branches and sometimes the actual trees that have been knocked down—where healthy vegetation was before.⁹⁶ In addition, the very process of removing trees for timber results in some of the same deadfall. If small trees are in the way, they may be removed and cast aside. Branches and needles on trees being harvested may also be cast aside and left in the forest after logging crews leave, creating even more deadfall.⁹⁷ As a result, the next time a fire moves through such an area, it will be fueled by the by-products of logging.

The “logging loophole” not only allows destructive and counter-productive logging practices, it provides an incentive for companies hired for thinning projects to take the very large, fire-resistant trees that provide protection to the forest.⁹⁸ Larger trees are more fire-resistant because they take a longer time to burn than smaller trees, and can effectively outlast a fire that might burn through an area.⁹⁹ In addition, large trees shield smaller trees, preventing them from being destroyed in a blaze. Unfortunately, fire resistance is the very characteristic that makes these varieties of trees the most profitable to harvest for timber. This is one reason why mid-elevation forests affected by human activity, particularly logging, are quite susceptible to fire.¹⁰⁰ Thus, once large trees are removed, a fire will be far more destructive because the forest’s defense mechanisms have been removed in the process.

Moreover, there is no provision in HRFA that dictates which types of trees are to be removed during the thinning process; rather, that decision is left to the Forest Service, which in recent years has gained a

95. See Patti A. Goldman & Kristen L. Boyles, *Forsaking the Rule of Law: The 1995 Logging Without Laws Rider and Its Legacy*, 27 ENVTL. L. 1035, 1053-55 (1997).

96. See *id.*

97. See *id.* The Forest Service’s silvicultural response actually promotes, rather than cures, forest health problems. Michael Axline, *Salvage Logging: Point and Counterpoint: Forest Health and the Politics of Expediency*, 26 ENVTL. L. 613, 627 (1996).

98. Peter J. Gardner, *Owl Redux*, 28 VT. B. J. 33 (2002); see also Hall, *supra* note 67. In fact, generally speaking, large trees in undeveloped areas, such as roadless areas, are three times less likely to erupt in wildfires, primarily because old growth stands have not been heavily managed by human effort as have logged areas and areas thinned communities. Axline, *supra* note 97, at 627-28.

99. “President Bush’s goals were quickly criticized as “more of a smokescreen for the logging industry than a serious attempt to address the problem.”” Gardner, *supra* note 98.

100. Axline, *supra* note 97, at 615.

reputation for being attuned to logging interests.¹⁰¹ With the new stewardship contract policy, old growth forests stand to lose in two ways. First, with the contract a logging company would be removing trees as its fee. Second, if there were no stewardship contract, the company would be paid from the budget originally allocated in the Act which is currently so low that it will likely resort to timber sales to subsidize itself.¹⁰²

[T]he government's primary purpose is to undertake hazardous fuel reduction activities on these lands, its secondary purpose is to attach timber sales to these projects to provide the money to pay for the primary objective. This is the reason that so many environmental groups are opposing the Healthy Forest Initiative. It is a backdoor means to higher levels of timber harvesting. In particular, a likely excuse to harvest mature forests.¹⁰³

This inevitable focus on harvesting large trees will ignore the urgent threat to the WUI communities from forest fires, because forests in the WUI tend to have fewer large trees. Less than one percent of the forests in the WUI are old growth forests, which contain large trees, and, in most WUI areas, less than half of one percent of the land is composed of old growth, primarily because areas near homes have been thinned previously to make room for houses.¹⁰⁴ Because the WUI lacks old growth and large trees, concentrating efforts in those areas would not be as profitable for logging companies as focusing on old growth exclusively.¹⁰⁵ Not only that, but the few large trees that do still exist around homes and communities are a major natural defense against fires that would otherwise spread to the communities, so their removal would be completely counter to the Act's stated intention to protect communities.¹⁰⁶

HFRA is too inadequately funded to permit much thinning of the unprofitable WUI, and so without providing more funding, Congress could not mandate that a large percentage be spent on the WUI. The obvious solution here would be to provide more funding to make thinning in the WUI feasible. The focus on harvesting large trees also

101. See generally 16 U.S.C.A. §§ 6501-91 (West Supp. 2004). HFRA leaves specific project decisions to the discretion of the agency. This is especially clear in the implications of the enrollment section. § 6572.

102. See generally §§ 6501-91. Money for forest maintenance projects under HFRA is not allocated in set amounts, but rather is left to the discretionary appropriations process, which provides no guarantee of funding. Despite the enactment of HFRA, this year, the Department of the Interior actually allocated \$302 million less to the Forest Service than last year. Dan Berman, *Large Request Ever Not Without Controversy of ESA, Land Acquisition*, ENVT & ENERGY DAILY, Feb. 3, 2004.

103. Hall, *supra* note 67.

104. *Id.*

105. See Gardner, *supra* note 99; Bettina Boxall, *Wildfire Logging Plan Rolls Forward; The Forest Service Wants To Salvage Trees Scorched in 2002 Oregon Blaze But Environmentalists And The Governor Object*, LOS ANGELES TIMES, June 2, 2004, at A12.

106. Brian Nowicki, *The Community Protection Zone: Defending Houses and Communities from the Threat of Forest Fire*, Center for Biological Diversity, August 2002; 16 U.S.C.A. § 6501.

ignores the fact that old-growth forests, where large trees occur, do not face much of a threat from fire. In the past three years, only about thirteen percent of all forest fires occurred in old growth and roadless areas, which are often composed of old growth.¹⁰⁷ Primarily, this is because they are unaffected by human activity.¹⁰⁸ This is true even though roadless areas constitute one third of all National Forest System land, and roughly two percent of all land in the U.S.¹⁰⁹ This is largely because older trees with thick trunks and bark withstand flames more effectively than do younger, thinner trees.¹¹⁰ In fact, in the 2002 Oregon Biscuit fire, Forest Service Officials believed that the trees in most of the land across which the fire spread did not survive.¹¹¹ However, the initially prescribed thinning project—which will constitute roughly four percent of the land affected by the fire—had to be scaled back by over 143 million board feet because the majority of the large trees actually survived the blaze.¹¹²

Typically, old growth areas are dominated by large, widely-spaced, fire resistant trees interspersed with smaller trees and vegetation.¹¹³ By contrast, more accessible lands—the dry, lowland forests that were once dominated by large trees—have been changed in composition due to timber production and grazing.¹¹⁴ These forests are now mostly composed of small-diameter trees. Trees with small trunk diameters are the most susceptible to fires because they burn quickly, thus spreading fire to neighboring trees.¹¹⁵ The resulting change in composition has given them a higher probability of fire than other areas.¹¹⁶ However, because these areas are now dominated by smaller trees, they are a less profitable focus for thinning efforts than areas with more resistant trees and less of a fire problem.

107. Bo Wilmer & Mike Anderson, *Roadless Areas Pose No Threat To Communities At Risk From Wildfire*, SCIENCE & POLICY BRIEF (2003), available at <http://www.wilderness.org/Library/Documents/upload/Roadless-Areas-Pose-No-Threat-to-Communities-at-Risk-from-Wildfire.pdf>.

108. “Logged areas generally showed a strong association with increased rate of spread and flame length, thereby suggesting that tree harvesting could affect the potential fire behavior within landscapes. In general, rate of spread and flame length were positively correlated with the proportion of area logged in the sample watersheds.” USDA Forest Service Study, *supra* note 12, at 22; *see also*, Axline, *supra* note 97, at 628.

109. *Roadless Areas Pose No Threat*, *supra* note 107.

110. *Id.*; *see also* Petersen Testimony, *supra* note 7.

111. Boxall, *supra* note 105. Unfortunately this is still enough timber to fill 74,000 logging trucks. *Id.*

112. *Id.*

113. *Fire Ecology*, *supra* note 12.

114. *Fire Ecology*, *supra* note 12; *see also* Science Basis for Changing Forest Structure, *supra* note 11, at 3.

115. *Fire Ecology*, *supra* note 12; *see also* Science Basis for Changing Forest Structure, *supra* note 11, at 3.

116. *Fire Ecology*, *supra* note 12.

Finally, the logging loophole fails to create any incentive for the timber industry to develop new technology that actually could help address the fire problem. Deadfall, brush and small trees—the materials the removal of which provides the most effective fire prevention—generally have no resale value, and are thus of no interest to timber companies. At present, the most profitable trees to remove are the oldest and most fire resistant trees that can be used for lumber.¹¹⁷ While Title II of HFRA seeks to encourage a market for biomass—energy derived from the use small trees and brush—no such market currently exists, so slash¹¹⁸ removal will likely not be a profitable venture for some time, if ever.¹¹⁹ By allowing the harvest of large trees, the logging loophole undermines the incentives of Title II by encouraging timber companies to continue their old practices of removing large trees.

The logging loophole in every way runs counter to the stated purposes of the Act.¹²⁰ First, the destruction caused by road-building and timber removal actually creates fuel by destroying small vegetation, leaving dead twigs and needles and other tree remnants—commonly known as “slash”—on the forest floor.¹²¹ In addition, removal of large trees translates into less protection from the spread of wildfire by canceling out this pre-existing natural defense to wildfire.¹²² The focus on taking large trees ignores the true threat to the WUI and focuses on old-growth forests that have no major fire problems. Further, the ability of companies to take large trees at will reduces their incentive to fund research on the uses of biomass, which is necessary to allow profitable harvesting of small, fire-fueling trees.¹²³ As a result, HFRA will not protect homes and communities. Indeed, it is likely to worsen the problem by loosening the current restraints on logging, which makes forests more susceptible to fire.

117. *Id. Petersen Testimony, supra* note 7.

118. “Slash” is the term that has been used by the timber industry for decades to describe the byproducts of logging, such as branches, needles, etc., that are generally left behind when large trees are removed. “It appears significant that many large fires in the western United States have burned almost exclusively in slash. Some of these fires have stopped when they reached uncut timber; none has come to attention that started in green timber and stopped when it reached a slash area.” G.R. Fahnestock, *Fire Hazard From Pre- Commercially Thinning Ponderosa Pine*, U.S. Forest Service (1968).

119. 16 U.S.C.A. §§ 6531 et seq. (West Supp. 2004). *See also* Hall, *supra* note 67.

120. 16 U.S.C.A. § 6501.

121. *Id.* The term slash is used to refer generally to the by-products of logging, such as branches, needles, etc., left on the forest floor.

122. *See* Part II.C.1 *supra*.

123. One provision of HFRA mandates that the Forest Service develop the Biomass Commercial Utilization Grant Program in order to encourage companies to use biomass as a raw fuel. 16 U.S.C.A. § 6531. However, the budget for this program is so small—\$5 million for projects thru 2008—that it will likely be more profitable to take and sell larger materials than to try and develop biomass-based energy technology. *Id.*

D. HFRA's Impact on Endangered Species

Aside from protecting homes and communities, another stated goal of HFRA is the rehabilitation and protection of endangered species habitat.¹²⁴ However, the Act's approach to accomplishing this goal leaves much to be desired. First, it makes scientific assumptions about species that are not necessarily accurate. Second, the most recent HFRA developments in response to species will actually result in decreased safeguards for species in the name of expedition.

HFRA assumes incorrectly that build-up on the forest floor and fires are bad for species. In fact, the effect of wildfire on species is a topic of contentious debate among ecologists and scientists.¹²⁵ This is primarily because different species react to fire differently. Although some species do not adapt well to the aftermath of a fire, dozens of species now inhabiting the western forests are there as a result of forest fires.¹²⁶ In fact, some of the large, "stand-replacing fires" (fires that burn away a large percentage of forest, including some normally resistant old growth)¹²⁷ of the early 1900s provided habitat to the dozens of fire-dependent species that now inhabit the western forests, such as the black backed woodpecker and the western larch.¹²⁸

Under HFRA, timber companies could harvest both dead and live trees.¹²⁹ However, large trees, whether dead or alive, do not generally

124. 16 U.S.C.A. §§ 6501(6)A, 6511(15).

125. Although the precise effects of fire on species are debatable, Forest Service scientists now support the fact that ecological evolution occurs as a result of fire, and that fire can improve the biological make-up of an area. See *Science Basis for Changing Forest Structure*, *supra* note 11, at 15-16.

126. *Petersen Testimony*, *supra* note 7.

127. *Id.* See also, *Historical Wildland Fire Statistics*, NATIONAL INTERAGENCY FIRE CENTER, available at <http://www.nifc.gov/stats/historicalstats.html> (last visited Oct. 13, 2004).

128. *Petersen Testimony*, *supra* note 7.

"Douglas-fir has been dominant over [the Pacific Northwest] because of disturbance by fire and the species' adaptations to fire. . . Almost all of the old-growth Douglas-fir resource is a product of fire" In fact, "through the millenia, fire has greatly affected the composition, structure, and numerous ecological processes of forest ecosystems in the Pacific Northwest. All forest organisms of the Pacific Northwest are innately suited for survival in their environment, and this includes specific adaptations to ensure persistence following fire."

Axline, *supra* note 97, at 626-27. See also, Curt Wilson, *The 1995 Salvage Timber Sale Rider: A Recipe for Environmental Disaster*, 5 DICK. J. ENV. L. POL. 419, 428-9 (1996).

129. The Forest Service has a tremendous amount of discretion over in which areas thinning should take place and how much and what kind of trees should be removed in these projects. See generally, 16 U.S.C.A. § 6512. The very language of the statute leaves room for debate concerning whether large trees should be left or not. Indeed, the agency is to "maximize[] the retention of large trees, as appropriate for the forest type, to the extent that the trees promote fire-resilient stands." *Id.* This "as appropriate" and "to the extent" language is the very vague area environmentalists claim will be exploited by timber interests, who will argue that large trees are *not* appropriate in areas where they prefer to harvest them. *Ring*, *supra* note 12; *Hall*, *supra* note 67.

spread wildfires. When fires sweep through forested areas, smaller-sized fuels, such as pine needles, brush and small-diameter trees are consumed, while larger trees and logs remain.¹³⁰ Accordingly, species dwelling in large trees and logs are protected, even if they are normally sensitive to fire.

Removing dead trees in areas where fires occur infrequently would produce an unnatural forest structure that can be detrimental to wildlife and watersheds.¹³¹ In such forested areas, dead trees are a vital part of the ecosystem. When a tree dies, one of two things happens: either the tree remains standing and becomes a snag, or the tree falls, uprooting soil around its base.¹³² If the tree becomes a snag, it evolves into a new vital structure by providing habitat for local species. Young snags provide habitat for several types of bat, and woodpeckers create nest cavities in them as well.¹³³ In addition, at least forty-two types of North American birds are secondary cavity-nesters, building their nests in older snags.¹³⁴ These species of bird and bat are very important to local ecosystems because they keep insect populations in surrounding trees at bay, thereby enhancing the health of the forest.¹³⁵

If a tree falls, it creates important forest floor diversity through “pit-and-mound formation.”¹³⁶ This mixture of soil, organic debris and woody material creates microhabitat for small organisms that are vital to local ecosystems.¹³⁷ Large logs lying on the forest floor also create wildlife habitat. In Oregon alone, over one hundred seventy-nine species of animals have been identified that make their homes in dead trees on the forest floor—that is, over half of the total vertebrate population in the area.¹³⁸ Dead wood also supplies nutrients to fungi, worms, and other species at the bottom of the food chain; these creatures in turn provide food and habitat to wasps and ants, two predators of insects harmful to trees.¹³⁹

The final blow to HFRA’s effectiveness as a protector of species is that as a result of the legislation, federal land management agencies no longer have to conduct ESA consultations before initiating thinning

130. *Dead Trees supra* note 78, at 2-4; *Fire Ecology, supra* note 12; *Wilson, supra* note 120, at 427-28.

131. *Dead Trees, supra* note 78, at 2-4.

132. *Wilson, supra* note 120, at 428; *Dead Trees, supra* note 77, at 2.

133. *Wilson, supra* note 120, at 428.

134. *Dead Trees, supra* note 78, at 2.

135. *Id.*

136. *Id.*

137. *Id.*

138. *Id.* at 3.

139. *Id.*

projects.¹⁴⁰ The new rule would allow agencies to skip the section 7 “informal consultation” process in order to expedite projects.¹⁴¹ The Bush Administration indicated that rather than go through the consultation process, which usually takes 30 days, the biologists at the Forest Service and BLM will determine what the species implications will be to each project and advise accordingly.¹⁴² However, there are two problem with this new regulation. First, it thins an already slim layer of protection for wildlife as the result of HFRA’s expedited review process. Second, this rule will likely result in increased litigation which will eliminate any time gained by expediting the process, and that at the expense of endangered species protection.¹⁴³

HFRA’s misguided assumptions about what is good for endangered species coupled with its already limited review of Forest Service proposals suggests that the survival of endangered species was not, in fact, a key concern for the HFRA’s drafters. HFRA does not try to protect endangered species so much as it uses them as another reason to allow timber companies into old-growth forests.

III. PROPOSED ALTERNATIVE SOLUTION: FOCUS ON COMMUNITIES, RATHER THAN FIRE SUPPRESSION, BY EMPLOYING “DEFENSIBLE SPACE”

“We can’t and shouldn’t fireproof our forests, but we can work toward fireproofing our communities.”¹⁴⁴

There are a number of serious problems with HFRA, many of which have been discussed above: the Act’s misguided commitment to thinning, its limited funding, the perverse incentives for logging this limited funding creates, and its potential actually to disrupt the continued existence of endangered species more than wildfires. But perhaps the greatest of HFRA’s problems is its impracticality.

HFRA focuses on forests at the expense of communities, because it is based on two unsupported beliefs about forest history and ecology. First, the bill’s sponsor, Representative Scott McInnis of Colorado, and

140. Dan Berman, *Endangered Species: Bush Administration Says Wildfire Thinning Projects do Not Need ESA Consultation*, ENVT & ENERGY DAILY, GREENWIRE, Dec. 4, 2003.

141. *Id.*

142. *Id.*

143. Mike Leahy, counsel for Defenders of Wildlife states that this rule will cause interagency strife because “It bypasses the federal wildlife agencies who were given a mandate from Congress to ensure that all federal projects don’t negatively affect endangered species.” *Id.* Further,

Leahy said the informal consultation process often helps avoid more lengthy and costly formal consultations. “The Bush administration has portrayed it as a rubber stamp,” Leahy said, “but our experience is the Fish and Wildlife Service and the National Marine Fisheries Service have been able to get a lot done quickly and cheaply under informal consultations.”

Id.

144. *Petersen Testimony*, *supra* note 11.

President Bush both subscribe to a highly romanticized view of forest history.¹⁴⁵ According to this mythology, wildfires, such as those seen in recent years, never took place in the past because yesterday's forests, unlike today's, consisted of "widely spaced trees that had gentle ground fires come through every few years."¹⁴⁶ But forests were not necessarily less dense in the past than they are today. It is true that the Forest Service estimates that *on average*, forests are currently fifteen times denser than they were a century ago—increasing from thirty-five trees per acre to upwards of five hundred.¹⁴⁷ But historical evidence also indicates that just a century ago many forested areas were extremely dense and wrought with deadfall.¹⁴⁸ In fact, some forests of the late 1800s contained up to one thousand small trees per acre, more than double the density of today's densest forests.¹⁴⁹ This fact undermines one key premise supporting the belief that the present wildfire situation is due mainly to the poor health of today's forests.

The second misconception is that fires have become more severe in recent years. In fact, the acreage affected by forest fires has actually *decreased* during the second half of the twentieth century.¹⁵⁰ Statistics assembled by the National Interagency Fire Center indicate that from 1919 to 1959, an average of twenty-four million acres burned each year in an average of 138,000 fires of varying sizes per year, or 174 acres per fire.¹⁵¹ In 2002, when fire devastation catalyzed current actions against wildfires, roughly seven million acres burned in just under 88,500 fires, or 79 acres per fire.¹⁵² Thus, the total acreage burned, total number of fires, and acreage per fire have all dramatically decreased over the past 100 years. The facts simply do not support the popular belief that the wildfire problem is much worse today than it was in the past.¹⁵³

If, as discussed above, fires are a normal part of most forests' life-cycles, then the real problem with forest fires is not that they occur but

145. President's Remarks on Healthy Forests, Redmond Oregon, August 21, 2003, available at <http://www.whitehouse.gov/news/releases/2003/08/20030821-4.htm> [hereinafter *President's Remarks*]; McInnis, *supra* note 7.

146. *Petersen Testimony*, *supra* note 7.

147. USDA Forest Service, *Fact Sheet: The Healthy Forest Initiative* (2003), available at <http://www.fs.fed.us/projects/hfi/2003/august/documents/hfi-fact-sheet.pdf>.

148. For example, in Oregon and Washington many of the currently dense forested areas were historically dense as well. *USDA Forest Service Study*, *supra* note 11, at 12 tbls. A-C, 21.

149. *Id.* See also *Petersen Testimony*, *supra* note 7.

150. NATIONAL INTERAGENCY FIRE CENTER, *Frequently Asked Questions*, "Throughout History, What are Some of the Most Memorable Fires?" available at <http://www.nifc.gov/faq.html#history%20fires> (last visited Sept. 17, 2004) (table identifying average acreage burned over the past hundred years in ten-year increments).

151. *Id.*

152. Fire Season 2000, NATIONAL INTERAGENCY FIRE CENTER, available at <http://www.nifc.gov/fireinfo/2002/index.html> (last visited Oct. 13, 2004).

153. McInnis, *supra* note 7; *President's Remarks*, *supra* note 142.

that they increasingly affect communities. It makes sense, then, that instead of focusing on removing trees from isolated forests—something that, in any case, nature is more proficient at than loggers—efforts should be focused on protecting communities in and near forests. The best way of accomplishing this is by employing a technique scientists commonly refer to as “defensible space.”¹⁵⁴ The earliest settlers making their way westward across the plains understood the basic concept of defensible space and adapted it in protecting their homes:

When emigrants are surprised by prairie fire, they mow down the grass on a patch of land large enough for the wagon, horse, etc., to stand on. They then pile up the grass and light it. The same wind which is sweeping the original fire toward them now drives the second fire away from them. Thus, although they are surrounded by a sea of flames, they are relatively safe. Where the grass is cut, the fire has no fuel and goes no further. In this way, experienced people may escape a terrible fate.¹⁵⁵

The Lands Council is an organization that currently works on defensible space projects in the northwestern part of the country. Before the House of Representatives, the director of the Lands Council, Michael Peterson, testified to the almost universal agreement among experts that “making homes FireWise¹⁵⁶ and creating a defensible space around communities will dramatically improve homeowner and firefighter safety.”¹⁵⁷

Defensible space involves adapting to the fact that fires are going to take place and learning how to protect homes when such blazes occur, by redirecting the fires away from homes and communities.¹⁵⁸ Defensible space takes place in two steps. First, it involves clearing the space within thirty feet of a home or building by removing possible fire fuels, such as

154. Cohen, *supra* note 76. See also National Interagency Fire Center, *Frequently Asked Questions*, available at <http://www.nifc.gov/faq.html#homeowners%20protect> (last visited Oct. 13, 2004).

155. Cohen, *supra* note 11 (quoting C.P. Butler, *The Urban Wildland Fire Interface*, 74 Proc. of W. Sts. Sec./Combustion Inst. Papers (1974)).

156. Making a home “FireWise” is a colloquial term that simply means replacing ignitable materials on the home with fire resistant ones. In addition, the Lands Council refers to its fire-proofing projects as FireWise. See *Petersen Testimony*, *supra* note 7. In fact, the National Wildland/Urban Interface Fire Program is also called FireWise. See <http://www.firewise.org> (last visited Oct. 13, 2004).

157. *Petersen Testimony*, *supra* note 7.

158. The primary sources of the information in this Comment about defensible space comes from the Lands Council’s Wildfire Education Program, and the organization known as FireWise, an outgrowth of these and similar efforts. The Lands Council has been highly involved in defensible space projects in the Pacific Northwest. “Since our wildfire program started in 2001 we have visited over 1500 homes and written over 120 individual plans. It has also allowed us to partner with agencies and open dialogue with county commissioners and other elected officials about wildfire and resource issues.” Email from Michael Petersen, Executive Director of the Lands Council (May 21, 2004) (on file with author).

small trees, fallen leaves, branches, pine needles, and the like.¹⁵⁹ Second, it involves removing some of the ignitable building materials from the home and replacing them with fire-resistant materials.¹⁶⁰ This might involve, for example, replacing a wood shingled roof with a tin one, or bricking a home that is sided or made of logs.

There are several reasons why defensible space is an effective means of protecting homes and communities. First, eliminating the fuels around a home eliminates the fire's ability to spread to the structure itself.¹⁶¹ In addition, with a home that has been fire-proofed, even if the fire reaches a house the house is more able to withstand it.¹⁶² Finally, if the fire does reach a home, the space cleared around that home provides a safe means for firefighters to access the home and put out the fire.¹⁶³ Firefighting efforts are far more successful in fire-proofed communities than in others because, with space cleared around homes and buildings, they are able to reach the fires with their trucks and hoses and put them out more quickly.¹⁶⁴

Defensible space projects currently take place in some at-risk communities on a state and local level. Some states, such as New Mexico, receive federal grants to assist communities in performing these projects.¹⁶⁵ In addition, the Lands Council has been working with a similar federal allotment to fire-proof communities in Washington, although the recent debates over and the enactment of HFRA have

159. *Wildfire Education and Defensible Space Planning*, publication produced by the Wildfire Education Program, sponsored by The Lands Council (on file with author). See also The Lands Council's Wildfire Education Page, available at <http://www.landscouncil.org/wildfire/wildfire.htm>; Cohen, *supra* note 11.

160. *Wildfire Education and Defensible Space Planning*, *supra* note 151; see also The Lands Council's Wildfire Education Page, available at <http://www.landscouncil.org/wildfire/wildfire.htm>.

161. Alex Dobuzinskis, *Wider Brush Cuts Recommended*, LOS ANGELES DAILY NEWS, Jan. 22, 2004. See also BROWN, *supra* note 25, at 29. See also Gregory Alan Gross, *Report Says Fires Could Return Soon; Agency: County Units Were Ill-Prepared To Work Together*, SAN DIEGO UNION-TRIBUNE, Jan. 15, 2004, at B1.

162. *Wildfire Education and Defensible Space Planning*, publication produced by the Wildfire Education Program, sponsored by The Lands Council (on file with author). See also The Lands Council's Wildfire Education Page, available at <http://www.landscouncil.org/wildfire/wildfire.htm>.

163. *Id.*; See also Cohen, *supra* note 11. In addition, in the Burbank, California, area where brush fires consumed acreage of forests this past winter, the City Council is increasing the defensible space requirement from 100 to 200 feet because the larger amount of space firefighters have in which to work, the more effective their efforts are. Dobuzinskis, *supra* note 153.

164. *Id.*

165. Rene Romo & Tania Soussan, *Keeping Flames at Bay*, ALBUQUERQUE JOURNAL, May 12, 2002, at A1. In Florida, too, the state Forest Service officials are encouraging people to construct and maintain their homes in a FireWise fashion, although funds have yet to be allocated from the government for these projects. *Fire Season Demands Vigilance; Caution, Preparation Can Curtail Threat*, NEWS-PRESS (Ft. Myers, FL), Jan. 9, 2004, at 10B.

stalled some of these projects.¹⁶⁶ In areas where defensible space projects are taking place, they are reducing the damage to homes and communities dramatically, and have played a key role in saving them from recent wildfires.¹⁶⁷

The primary problem with defensible space in its current state is simply that the federal government is unwilling to spend very much money on it, and state and local agencies do not have the resources to fire-proof all of the at-risk communities that currently need help.

CONCLUSION

HFRA does not, as its goals purport, protect homes, communities, or species. Instead, HFRA provides a new means by which logging companies may turn a profit under Federal mandate while people in WUI communities continue to suffer the consequences. Not only will HFRA not accomplish its stated goals, it will instead exacerbate an already dangerous problem by allowing logging companies to remove the large trees that currently serve as the last defense to communities at risk of wildfires. If any comprehensive plan is to safeguard families and homes in the WUI, the plan must focus on fire-proofing communities rather than trying to fire-proof forests. Forcing the federal government to take such a focus is the only means of safeguarding communities against fires that have and will continue to burn both in spite of and because of efforts to stop them.

166. See email from Michael Petersen, *supra* note 163; *Wildfire Education and Defensible Space Planning*, publication produced by the Wildfire Education Program, sponsored by The Lands Council (on file with author). See also The Lands Council's Wildfire Education Page, available at <http://www.landscouncil.org/wildfire/wildfire.htm>

167. Dobuzinskis, *supra* note 158; Romo & Soussan, *supra* note 162; Cohen, *supra* note 11.