Decision Diagram Key

Using Decision Diagrams With the Field Guide

START HERE

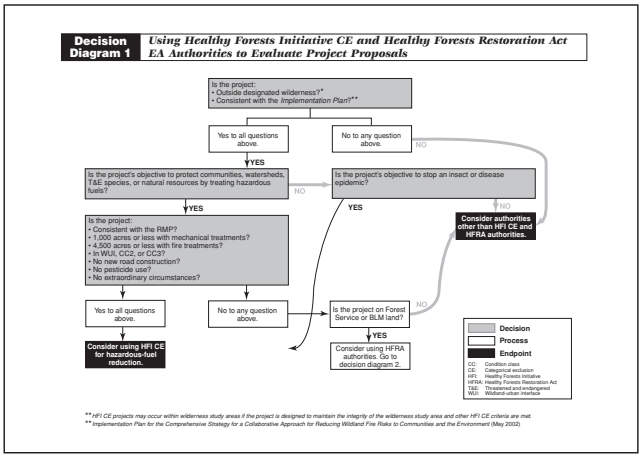


Diagram 1 helps you determine whether your project qualifies for HFI CE or HFRA authorities.

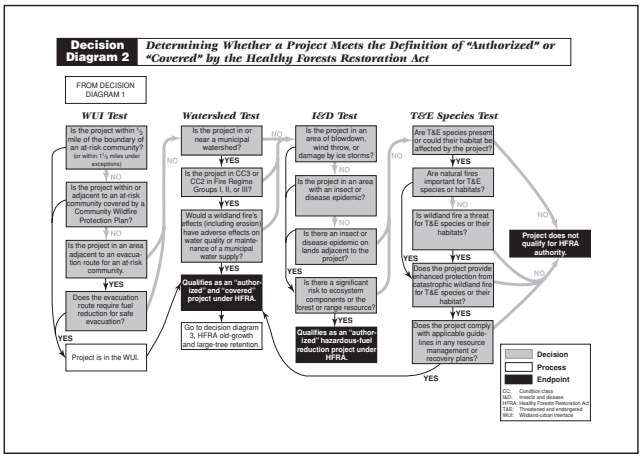


Diagram 2 helps you determine whether your project qualifies as an "authorized" or "covered" project under HFRA authorities.

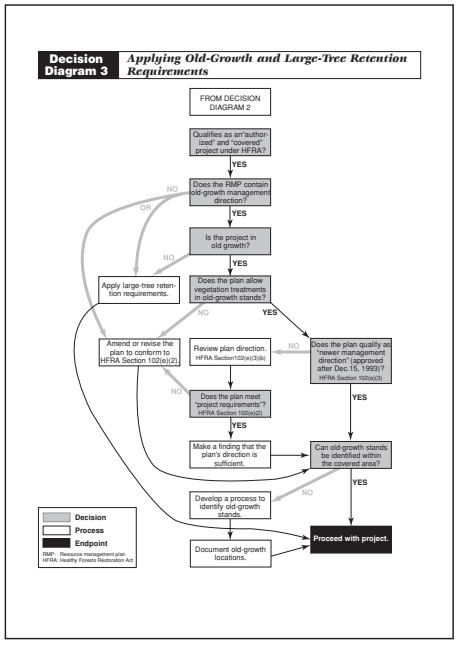
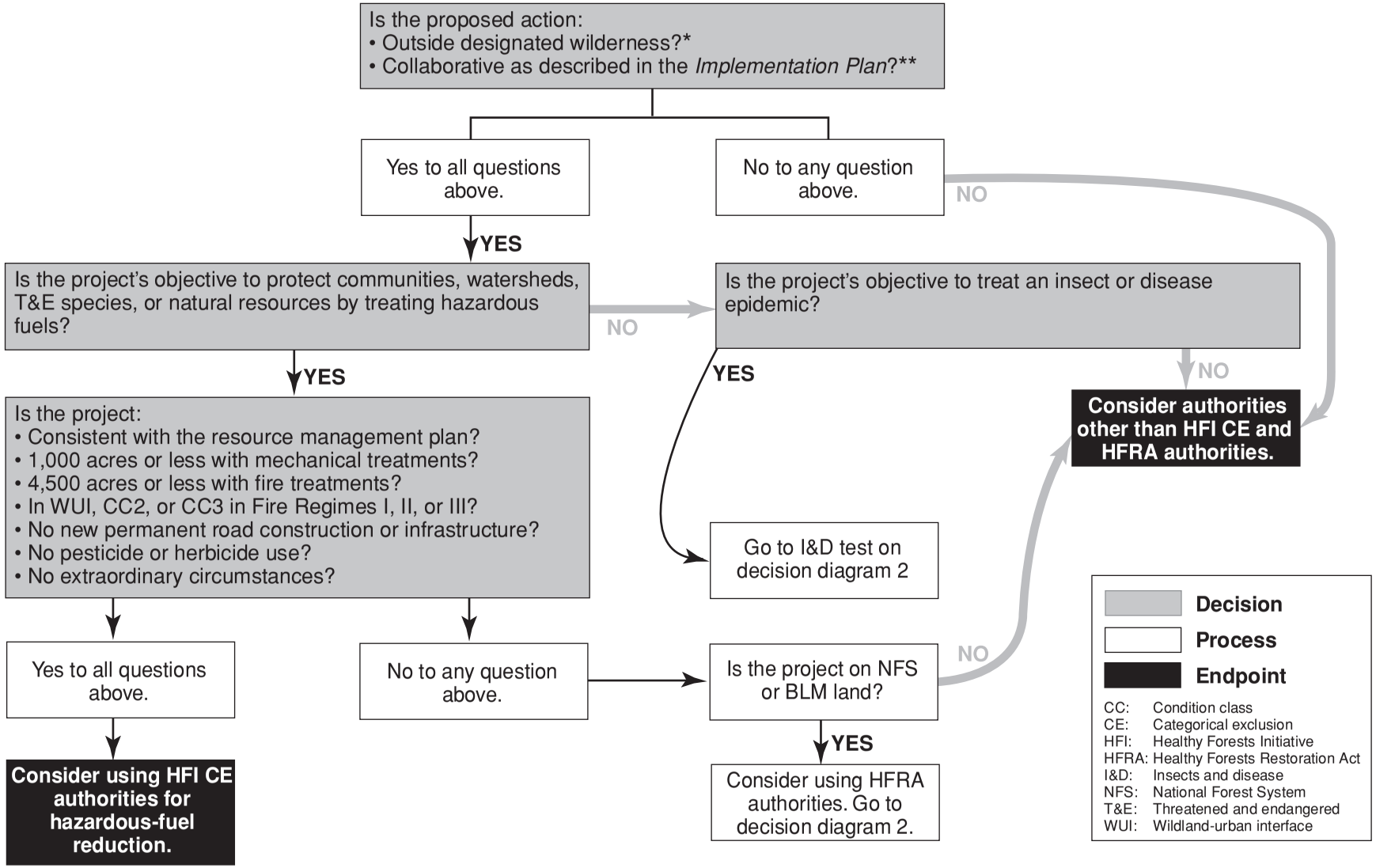


Diagram 3 helps you determine whether the old-growth or large-tree retention guidelines apply to "covered" projects.

CE: Categorical exclusion
HFI: Healthy Forests Initiative
HFRA: Healthy Forests Restoration Act

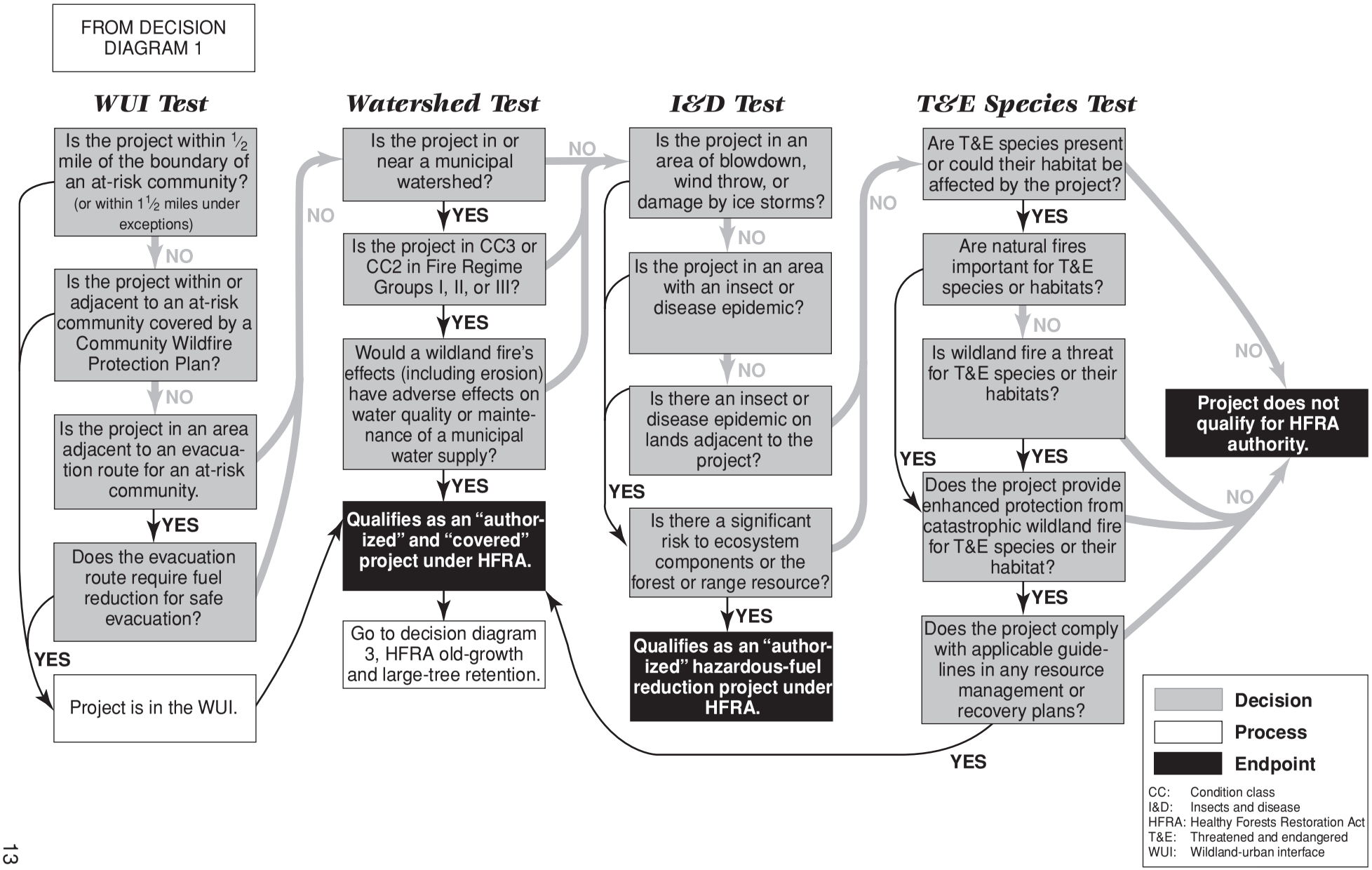
Decision Diagram 1 — *Using Healthy Forests Initiative CE and Healthy Forests Restoration Act Authorities to Evaluate Project Proposals*



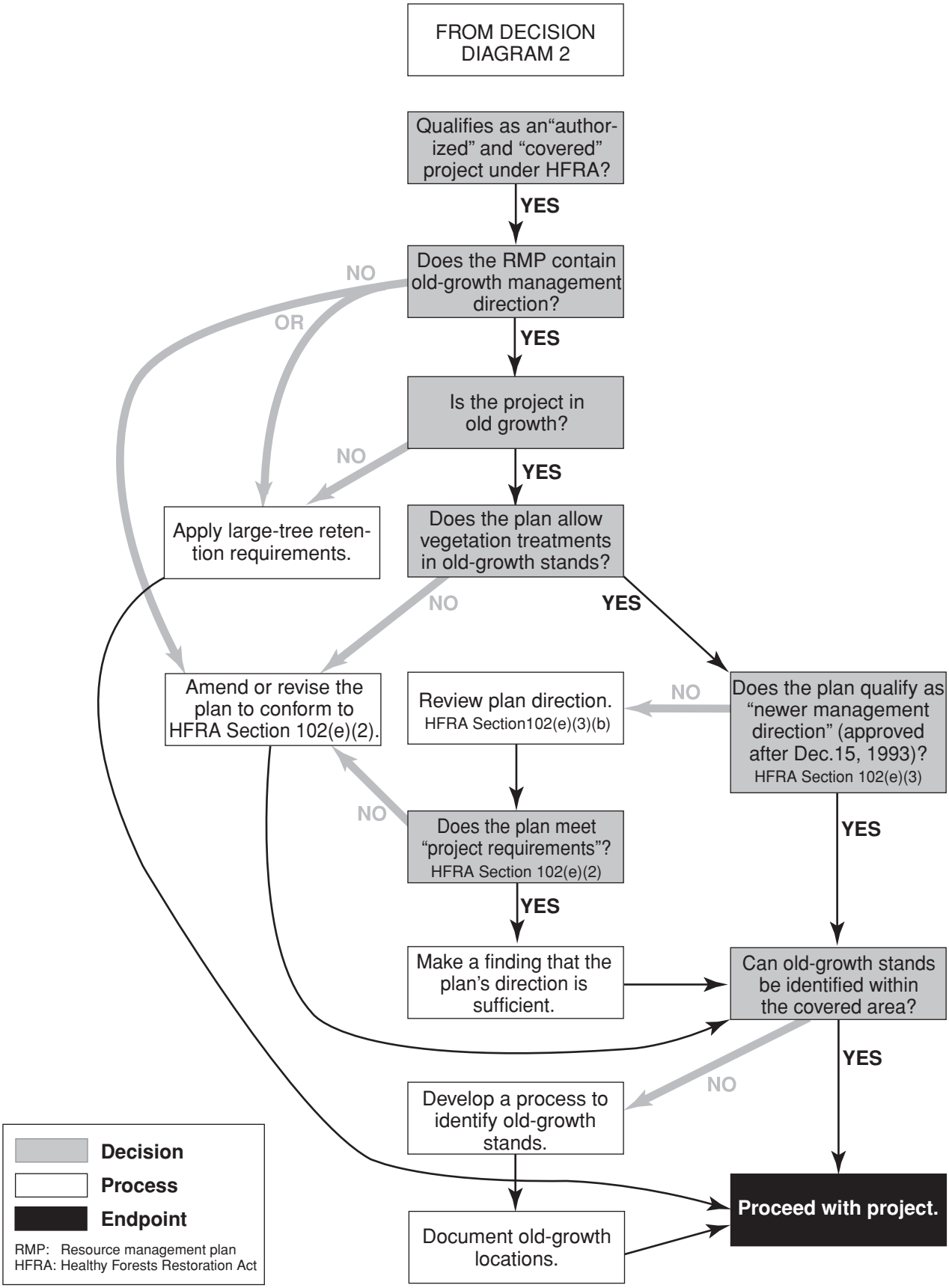
* *HFI CE projects may occur within wilderness study areas if the project will not impair the suitability of the wilderness study area for preservation as wilderness and other HFI CE criteria are met. HFRA projects may not occur in wilderness study areas.*

** *Implementation Plan for the Comprehensive Strategy for a Collaborative Approach for Reducing Wildland Fire Risks to Communities and the Environment* (May 2002). Implementing a Community Wildfire Protection Plan will fulfill the requirements for collaboration in the *Implementation Plan*.

Decision Diagram 2 — *Determining Whether a Project Meets the Definition of "Authorized" or "Covered" by the Healthy Forests Restoration Act*



Decision Diagram 3 — *Applying Old-Growth and Large-Tree Retention Requirements*



Title I of the HFRA—Hazardous-Fuel Reduction on NFS and BLM Land

Title I of the HFRA focuses primarily on expedited hazardous-fuel treatment on some NFS and BLM lands at risk of wildland fire and insect or disease epidemics. These lands include areas where vegetation treatment will provide long-term benefits to threatened and endangered species. The act encourages Federal agencies to involve State and local governments and citizens when developing plans and projects for vegetation treatment on Federal and adjacent non-Federal lands. The HFRA is consistent with community-based wildland fire planning, watershed planning, and related ongoing efforts under the *National Fire Plan* (*http://www.fireplan.gov*) and *A Collaborative Approach for Reducing Wildland Fire Risks to Communities and the Environment: 10-Year Comprehensive Strategy Implementation Plan (May 2002, http://www.fireplan. gov/reports/11-23-en.pdf*). The HFRA does not duplicate or replace these ongoing efforts.

Hazardous-fuel reduction projects on NFS and BLM lands in one or more of the following areas qualify for expedited NEPA review under the HFRA:

- WUIs of at-risk communities
- Municipal watersheds that are at risk from wildland fire
- Areas where wind throw, blowdown, ice storm damage, or the existence or imminent risk of an insect or disease epidemic significantly threatens ecosystem components or resource values
- Areas where wildland fire poses a threat to, and where the natural fire regimes are important for, threatened and endangered species or their habitat

The types of lands listed above define where the authorities of the HFRA can be used to expedite vegetation treatment, such as mechanical thinning or prescribed fire, on NFS and BLM lands.

The HFRA requires authorized projects to be planned and conducted consistent with resource management plans and other relevant administrative policies and decisions that apply to the Federal lands covered by the project (Section 102(b)). The HFRA also prohibits authorized projects in wilderness areas, formal wilderness study areas, and Federal lands where an act of Congress or Presidential proclamation prohibits or restricts removal of vegetation (Section 102(d)).

Wildland-Urban Interfaces Within or Adjacent to At-Risk Communities

The HFRA provides improved administrative procedures for hazardous-fuel-reduction projects on NFS and BLM lands in the WUIs of at-risk communities. The act encourages the development of Community Wildfire Protection Plans under which communities will designate their WUIs, where HFRA projects may take place. The HFRA will greatly accelerate the interest of listed at-risk communities (FR 66 160 Aug. 17, 2001; *http://www.fireplan.gov/content/reports*) in preparing wildland fire protection plans and designating their WUIs, as well as the interest of other communities in becoming listed as at-risk communities. Federal agencies and their State and local cooperators must be prepared to provide information and services to support these communities (figure 5).

This *Field Guide* includes information on planning and setting priorities for work in and around at-risk communities in the section on *Setting Priorities and Collaborating*.

At-Risk Municipal Watersheds

The HFRA authorizes projects that reduce the risk wildland fires pose to the quality of a municipal water supply or to its maintenance (figure 6). Specifically, in Sections 102(a)(2) and (3), the HFRA provides for expedited vegetation treatments on NFS and BLM lands in Condition Class 3 in all fire regimes and in Condition Class 2 in Fire Regimes I, II, or III that are:

> "…in such proximity to a municipal water supply system or a stream feeding such a system within a municipal watershed that a significant risk exists that a fire disturbance event would have adverse effects on the water quality of the municipal water supply or the maintenance of the system, including a risk to water quality posed by erosion following such a fire disturbance event."

At-risk watersheds do not have to be directly associated with at-risk communities or their WUIs under Section 102(a)(1) of the act. However, when managers work with communities to assess the risk of wildland fire, they should include the risk of wildland fire to municipal watersheds in the Community Wildfire Protection Plans described in Section 101(3).

Figure 5—High-intensity wildland fire on the Pueblo de Taos Indian Reservation near Taos, NM, shows the need for projects to reduce the risk of wildland fire to at-risk communities.

Determination of Significant Risk

The HFRA requires an evaluation that a significant risk exists that a wildland fire would have adverse effects on the quality of the municipal water supply or on maintenance of the system. Many NFS and BLM units have completed watershed analyses that should be utilized to the maximum extent possible to assess the potential adverse effects of a wildland fire event on the quality of municipal water supplies and system maintenance. This determination of adverse effects is the responsibility of the land-management agency and should be based on an examination of the relevant information. However, resource managers must seek to collaborate with and actively involve community leaders and citizens in providing information relevant to such determinations.

This determination of adverse effects of wildland fire should be made after an assessment that:

- Identifies and maps the municipal watersheds
- Identifies and maps the fire regimes and fire regime condition classes in and adjacent to the watershed
- Assesses the likely effects on water quality, sediment delivery, and water supply system infrastructure if a wildland fire occurs in or adjacent to the watershed

Protocols for assessing fire regimes and fire regime condition classes have been developed by the USDA Forest Service and

Figure 6—Within 48 hours after the Myrtle Creek fire burned in the municipal watershed for Bonners Ferry, ID, sediment from the watershed was degrading water taste and clarity.

the DOI for field use. These assessments should be conducted at the appropriate scale for determining the risk that a wildland fire event may pose to the quality of the municipal water supply or to maintenance of the system. More information on identifying fire regimes or fire regime condition classes is available at: *http://www.frcc.gov*.

In most cases, the evaluation of the adverse effects of a wildland-fire event in, or adjacent to, a municipal watershed should be relatively straightforward. This evaluation should include:

- Changes in peak streamflow frequency or magnitude

- Sediment flows in municipal watersheds that could degrade water quality, reduce its quantity, and increase treatment costs

- Other relevant effects, such as the release of heavy metals

The effects of wildland fire on municipal water supplies include: changes in erosion hazard and erosion rates, debris and mud-flow hazards, the ability of channels to handle sediment, and the formation of water-repellent soil layers. In some watersheds, wildland fire may also mobilize substances toxic to human health, such as mercury, lead, arsenic, cadmium, and other metals. These materials may have entered the watershed from natural sources, abandoned or active mines, or through atmospheric deposition. After a fire, these materials may be dissolved in water or adsorbed (attached) to inorganic and organic particles, making the materials more mobile than they were before the fire. In watersheds where mobilization of these toxic materials is a concern, they may be identified and the risk of their mobilization could be included in estimates of risk from wildland fires (figure 7).

The condition of the watershed and other factors that may place the water quality or quantity at risk, such as landslide-prone areas, excessive roading, or the effects of past wildland fires, may be included in the watershed risk assessment.

Risks to municipal water supply infrastructure also may be influenced by the capacity of the municipal water system and the proximity of the municipal watershed system infrastructure to flammable vegetation.

Some other factors that could be considered in evaluating the risks associated with wildland fires include the:

- Vegetation type

- Predicted fire severity

- Soil texture

- Stream gradient

- Precipitation intensity

- Surface soil erodibility estimates (using the Revised Universal Soil Loss Equation) and mass failure risks

Figure 7—Soil damaged by fire is susceptible to extreme erosion if heavy rains occur shortly after the fire.

- Potential for increases in instantaneous peak streamflows
- Portion of the water system infrastructure that is within the 100-year floodplain
- Lands close to the watershed where conditions pose a significant risk from fire
- Number of people served by the community water system
- Percent of the municipal watershed area administered by the DOI BLM and USDA Forest Service
- Probability that the community water system would be disrupted

These evaluations should be performed at the local level, in an open forum including all interested parties as part of the normal NEPA process, before treatment areas are selected.

The HFRA does not require setting priorities among various at-risk municipal watersheds based on the relative risk of damage in the event of wildland fire. Some municipal watersheds are at more risk of fire than others, based on the likelihood of a wildland fire occurring, its potential damaging effects, the amount of Federal land in a condition class that increases the risk from wildland fire, and other factors. Resource managers should consider such factors when allocating funds.

The determination of "significant risk" referred to in HFRA Sections 102(a)(2) and (3) should not be confused with NEPA requirements to determine whether a Federal action will create a "significant impact" on the environment. A determination of significant risk under the HFRA does not dictate whether an agency should use an EA to document an action's effects.

The HFRA and the Safe Drinking Water Act have specific definitions for the terms *municipal watershed* and *municipal water supply system*:

- A *municipal watershed* is a community water system "that serves at least 15 service connections used by year-round residents of the area served by the system; or regularly serves at least 25 year-round residents" (Safe Drinking Water Act, Section 1401, 42 U.S.C.A. 300f.(15)).
- Under the HFRA, a *municipal water supply system* is "the reservoirs, canals, ditches, flumes, laterals, pipes, pipelines, and other surface facilities and systems constructed or installed for the collection, impoundment, storage, transportation, or distribution of drinking water" (Section 101).

For the purposes of this *Field Guide* "**… in such proximity to a municipal water supply system**" (HFRA Sections 102(a)(2) and (3)) would include:

—Those Federal lands in the municipal watershed drainage area.

—All Federal lands adjacent to the infrastructure of a municipal water system.

—A locally determined zone of protection around the perimeter of the municipal watershed that extends into the adjacent drainages. This zone could be delineated during development of a Community Wildfire Protection Plan or through discussions with managers of local municipal water systems. The degree that the zone extends into adjacent drainages, and the width of these extensions should take into account geographic features, the condition of the vegetation, and other characteristics of the adjacent lands.

Documentation

The analysis and documentation for threats of wildland fire to municipal water supplies and infrastructure under Sections 102(a)(2) and (3) of the HFRA are intended to be integrated with the analysis and documentation done under current NEPA guidance and other relevant guidance. This documentation should be included in the NEPA documents normally prepared during project planning, the Decision Records or Records of Decision prepared before project implementation, or in the project file itself.

This analysis and documentation for the threat of wildland fire referenced above should document the factors considered in determining that a wildland fire likely would have adverse effects on the quality of the municipal water supply or on system maintenance. If possible, when making the case for adverse effects, the hazards and risks should be quantified. The short- and long-term effects of proposed treatments and the effects of taking no action should be described as provided for in the *Judicial Review* section.

Because of homeland security concerns, and as required by Title IV of the Public Health Security and Bioterrorism Preparedness and Response Act of 2002 (P.L. 107-188), personnel must avoid providing exact locations of water supply systems and associated infrastructure. All maps, information, and data related to these community water supply systems that are used to assess risk and set priorities for fuel treatments are to be exempt from Freedom of Information Act (FOIA) requests and must be stored in secure locations—**they are not public documents**. For further assistance regarding FOIA questions, contact your local FOIA coordinator.

Threats to Ecosystem Components or Forest or Rangeland Resources

Section 102(a)(4) of the HFRA authorizes expedited vegetation management projects on NFS and BLM lands where any one of three specified conditions is present that poses "…a significant threat to an ecosystem component, or forest or rangeland resource, on the Federal land or adjacent non-Federal land."

Those conditions are:

- Wind throw, blowdown, or ice-storm damage on NFS or BLM land
- The existence of an insect or disease epidemic on NFS or BLM land
- The presence of an insect or disease epidemic on immediately adjacent land (which may be non-Federal land) and the imminent risk that the epidemic will spread

The presence of one or more of these conditions does not trigger use of HFRA procedures. There must be a determination that the condition or conditions pose a significant threat to an ecosystem component or a forest or rangeland resource. For example, a stand where conditions rate a high hazard of loss or damage to an ecosystem component or forest resource would not qualify for HFRA procedures unless there was an actual insect or disease epidemic or other condition listed above. Such stands certainly could be treated to reduce risk using other authorities. In addition, significant threats caused by conditions other than the three conditions listed above do not qualify a project for HFRA authorization.

Note: Projects authorized under Section 102(a)(4) are exempt from the old-growth and large-tree retention provisions in Sections 102(e) and 102(f) of the HFRA. They do not constitute "covered" projects as defined in Section 102(e)(1)(B).

Determination of Significant Threat to an Ecosystem Component or Forest or Rangeland Resource

Examples of important forest or rangeland resources that can be harmed by wind throw, ice-storm damage, or insect and disease epidemics include: water quality and quantity, forest products, critical wildlife habitat, and threatened and endangered species. In addition to directly affecting these resources, epidemics and wind throw also can increase fuel buildups and the risk of destructive wildland fire.

Examples of ecosystem components that can be harmed include: increasingly rare environments such as whitebark pine ecosystems, riparian forests, sky islands, single-storied old forests, critical fish and wildlife habitat, and threatened and endangered species.

Resource managers are responsible for identifying important ecosystem components and resource values that may be threatened by wind throw, ice-storm damage, or insect or disease epidemics, and deciding the management actions that will be taken to address them. Forest health and other specialists, working together with resource managers, should provide expert advice whether a significant threat exists to ecosystem components or forest or rangeland resources.

The determination of "significant threat" referred to in Section 102(a)(4) should not be confused with NEPA requirements in the National Environmental Policy Act of 1969 to determine whether a Federal action may significantly affect the quality of the human environment. A determination of "significant threat" under the HFRA does not dictate whether an environmental analysis or environmental impact statement should be prepared. Rather, that determination should be made after developing alternative treatments and assessing their environmental effects.

Determining Whether Blowdown or Ice-Storm Damage Increases Risk to an Ecosystem Component or Forest Resources

The HFRA provides for expedited processes when wind throw, blowdown (figure 8), or ice-storm damage on NFS or BLM land poses a significant threat to an ecosystem component, or to a forest or rangeland resource, on the Federal land or adjacent non-Federal land.

Disturbance events such as ice storms (figure 9), wind events, blowdown, fires, or large-scale droughts, may affect population growth of insects or disease agents. Such events can be a factor triggering massive insect outbreaks. Large areas of blowdown provide a supply of stressed and dying trees where insects may feed and breed. They also can increase the risk of destructive wildland fire.

Ice storms or wind events knock down or damage trees that increase wildfire risk and often are colonized by insects, leading to rapidly increasing insect populations that can attack surrounding trees, if they are susceptible. Areas of scattered blowdown can result in insect epidemics in areas with moderate- to high-hazard conditions.

Assessing whether a particular wind throw or ice-storm event poses a significant threat to an ecosystem component or forest or rangeland resource is complex and depends on the specific ecological conditions and the context in which they occur. Some of these factors are discussed in the following sections. Assessments of significant threat should be made by specialists who