

# **NORTHEASTERN AREA PARTICIPATION GUIDELINES**

## **FOR OAK WILT COOPERATIVE PREVENTION AND SUPPRESSION PROJECTS**

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**USDA Forest Service**  
State and Private Forestry  
Northeastern Area  
Forest Health Protection



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# Cooperative Oak Wilt Suppression Projects

*Federal Guidelines for Participating State and Federal Agencies within the Northeastern Area*

## I. INTRODUCTION

The general policy of the U.S. Forest Service is to protect forest-related values from damaging insect and pathogen outbreaks. This policy stems from the Cooperative Forestry Assistance Act of 1978 ([appendix A](#)), as amended (P.L. 95-313), which incorporates provisions of the Forest Pest Control Act of 1947. The Cooperative Forestry Assistance Act recognizes that the capacity to produce renewable forest resources is significantly dependent on non-Federal forest land, and therefore, it provides authority for Federal and State cooperation in managing forest insects and pathogens. The 1990 Farm Bill (P.L. 101-624) authorized Federal financial assistance for **forest pest prevention** and **suppression** on forested lands in all ownerships. This assistance may be used to protect trees, forests, wood products, stored wood, and wood in use from natural and manmade causes. Financial assistance is also provided to State officials and others to monitor and protect forested lands.

Examining the types of projects the U.S. Forest Service has funded in the past further clarifies this policy with regard to suppression. In general, the U.S. Forest Service has provided funds for cooperative projects for major insect and disease pests that have caused widespread timber mortality or other significant losses. **These participation guidelines focus only on oak wilt suppression and eradication.**

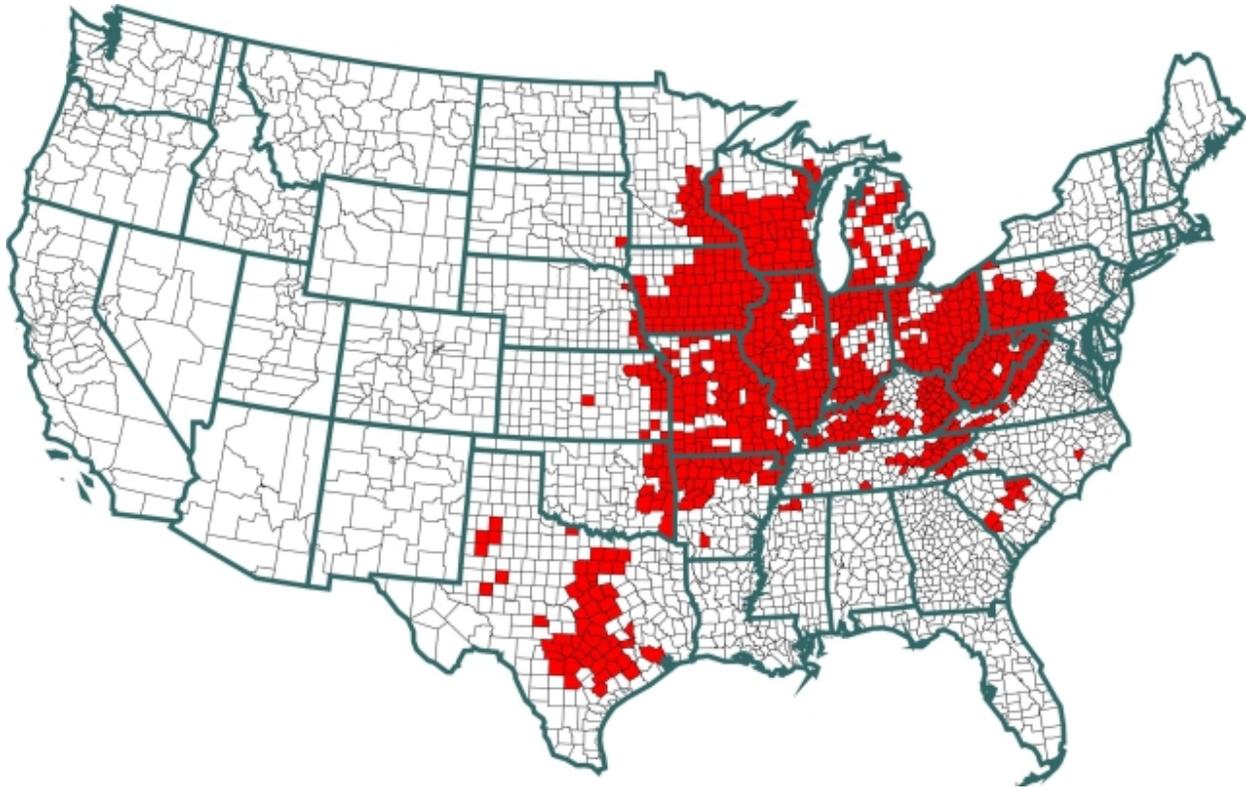
State agencies normally request Federal cost-share funding for a suppression or eradication project because the anticipated costs of the project exceed available State, local, or private funds. These guidelines were compiled to provide one reference for State agencies participating in suppression or eradication projects funded by the U.S. Forest Service, Northeastern Area State and Private Forestry.

Federal agencies also request Federal assistance with oak wilt suppression when necessary activities cannot be funded from their normal operating budget. The funding process used for Federal lands is quite distinct from that used for State agencies, and is further described in section VI of this document.

## II. HISTORY AND STATUS OF OAK WILT DISEASE

Oak wilt is the single most important disease of oaks in the eastern half of the United States. Since the 1950s, millions of trees have been killed by oak wilt in an area from Pennsylvania to Minnesota, southward to Texas and South Carolina (figure 1). The disease has increased in importance in recent years as people move into wooded areas dominated by oak stands and as high-value forested areas have become infected. Powerful spring storms in the Upper Midwest have also created wounds during the critical infection period that have resulted in an increase in the number of infection centers in many areas. Trees in residential, recreation, and forest production areas have become infected through wounding and insect-vectored spread. Many of these infection centers involve multiple ownerships and cover large areas, making control efforts

difficult. Preventing initiation of new disease centers and controlling the spread of existing centers can only be achieved by a coordinated effort involving key partners and affected landowners.



**Figure 1. Distribution of oak wilt by county, 2005.**

### **III. FEDERAL ROLE IN OAK WILT SUPPRESSION**

According to Forest Service Manual (FSM) 3430, section 3433, one condition under which the Forest Service can participate in a cooperative suppression project is when Forest Service coordination, technical assistance, and/or financial assistance will improve the efficiency of the control operation. Other conditions that might apply to oak wilt include avoidance of adverse regional impacts from a pest, pest outbreaks on Federal lands potentially affecting adjacent non-Federal lands, or pest outbreaks on non-Federal lands potentially affecting adjacent Federal lands. The Federal financial role in State oak wilt programs is to provide funding for a specific set of treatment alternatives that are biologically efficacious. Treatment methods have included root graft disruption, spore tree removal, and treat-to-the-line tactics. In addition, technical assistance is provided for detection (aerial survey and photography), writing the biological evaluation that precedes any suppression project, assistance in meeting NEPA requirements, treatment monitoring, and assistance in post-suppression evaluations.

A listing of criteria for establishing the Federal role in suppression is included in [appendix B](#).

## **IV. OAK WILT SUPPRESSION PROGRAMS: MISSION, GOALS, PREVENTION ACTIVITIES AND SUPPRESSION TREATMENTS, SUGGESTED PRIORITIES, AND PRIORITIZATION OF FUNDS**

### ***A. Mission: Protect the Resource***

If oak wilt is allowed to develop unchecked, it can have a severe impact on the presence of red oaks in areas where these species are a major component of the tree flora. The mission of Federal prevention and suppression cost-share grants is to protect the resource where insect pests and pathogens are threatening important ecosystem components. In the case of oak wilt disease, this is accomplished by controlling individual infection centers in areas where the oak resource is threatened. Oak wilt infection centers often develop in areas where oaks have been injured during the spring by windstorms or human activities such as pruning, thinning, or construction damage. Movement of infected firewood or logs can be an important means by which the oak wilt fungus is introduced into new areas.

Oak wilt disease spreads in two ways: overland via the establishment of new infection centers by insect transmission of the pathogen, and below ground by the expansion of existing infection centers through pathogen spread via root grafts. The mission of protecting the oak resource from oak wilt will be accomplished by interrupting the biological pathways (both establishment of new infection centers and expansion of existing infection centers) of the oak wilt disease to reduce the number and size of oak wilt infection centers on a community, township, or larger resource level. Oak wilt suppression programs should favor treatments in high-priority areas where the density of oak wilt is within manageable levels and the probability of successfully protecting the oak resource and sustaining it as an important component of the urban/suburban or woodland ecosystem is feasible.

Although treatment of oak wilt infection centers in urban/suburban or rural home landscapes may sometimes result in the protection of individual trees, the intent of the program is to protect the oak resource on a community, township, or larger resource scale; concerns about individual trees are secondary.

### ***B. Goals of Federally Funded Oak Wilt Suppression Programs***

Because oak wilt suppression programs conducted through the Northeastern Area are federally funded, the goals of these programs are related to biological effectiveness and financial accountability. Specific goals of the oak wilt suppression program (with notation of where they are addressed in this document) are as follows:

- Ensure that oak wilt treatment plans are designed to have a high probability of success. (Establish high-priority treatment areas and fund treatments with a high rate of success, as described in section IV.D.)

- Ensure that treatments are implemented correctly and on a timely basis. (Develop technical guidelines for treatment implementation and establish treatment-tracking processes, as described in section V.D.1, ‘Treatment Tracking and Cost-share Reimbursements.’)
- Ensure that the program is accomplishing biological goals by evaluating treatment efficacy. (Establish processes to track infection centers and treatments implemented, and collect data needed to determine treatment efficacy, as described in section V.D.2, ‘Measures of Success,’ and section V.D.3, ‘FHP Program Reporting.’)
- Ensure proper reimbursement of treatment costs. (Treatments that are eligible for Federal cost-share funds are implemented correctly and are reimbursed, as described in section V.D.1, ‘Treatment Tracking and Cost-share Reimbursements.’)

### ***C. Prevention Activities and Suppression Treatments of Importance in Oak Wilt Management***

Federal suppression and prevention funds may be used for activities and treatments to reduce the impacts of oak wilt disease. This section will discuss prevention activities and suppression treatments that the Northeastern Area has determined to be eligible (biologically effective) or ineligible for Federal cost-share reimbursement. A tabular presentation of suppressive treatment options that have been tried for oak wilt control and their relative effectiveness is included in [appendix D](#). The oak wilt disease cycle, with points of potential control, is presented in [appendix C](#). Relevant literature is listed in [appendix E](#). The priority of eligible activities and treatments is further discussed in section IV.D.

#### **1. Prevention Activities Eligible for Federal Cost-share Reimbursement**

Preventing the establishment of new oak wilt infection centers is very efficient economically because it avoids the cascading costs of suppression treatments. Prevention activities specific to oak wilt may include an education and public information component, e.g., public service announcements, billboards, fliers, and other information products. Public information campaigns usually aim at avoiding the establishment of oak wilt infection centers that occur because of human activity or lack thereof. For example, programs for preventing oak wilt disease rely principally on avoidance of unnecessary injury to trees during the spring of the year. Because the nitidulid beetles that vector the pathogen are attracted to fresh wounds, avoiding unnecessary wounding of oak trees during the critical period each spring when the beetles are flying and oak wilt spore mats are present can effectively limit the development of new oak wilt infection centers. If mat production and nitidulid activity in the spring are monitored in a region, the beginning of the high-risk time period for overland transmission can be precisely identified. Making this information available to landowners, green industry professionals, land developers, homebuilders, and utility companies allows them to avoid wounding oaks during this critical period. Public information campaigns that promote “Do Not Prune Oaks in April, May, or June” can be very effective in preventing the establishment of new oak wilt infection centers. Similar campaign slogans should target land developers and homebuilders to

stress the need to avoid injuring oaks during land development and construction projects that are completed during the spring.

Although storms that damage and create wounds on oak trees can require pruning to protect public safety during the critical period in the spring, all other pruning should be avoided in the spring in areas where oak wilt is present. Alerting people to the risk posed by wounding oaks in spring and informing them of the proper way to treat wounds that do occur during this critical infection period can be a very effective management tool in local or regional areas where oak wilt is a high risk.

Programs for preventing oak wilt disease should also educate people about the threat posed by oaks killed by oak wilt. For example, when trees in the red oak group (and sometimes bur oak) die from oak wilt during the summer months, and are left standing, there is a good possibility that they will produce spore mats during the spring of the following year. Informing people about the risks posed by these trees, and the need to remove potential spore-producing trees (PSPTs) before they can produce spore mats, is critical to avoiding new infections of oak wilt. Proper treatment and disposal of wood from PSPTs must also be addressed. Of paramount importance to any effective oak wilt public information campaign is the need to convey the importance of not moving infected firewood offsite.

Federal support for a public information campaign to increase awareness of oak wilt may be available through prevention/suppression funds, or from regional U.S. Forest Service Forest Health Protection funds. Contact the Forest Health Protection staff in the [Northeastern Area Headquarters Office](#) or local [Field Office](#) for assistance with funding prevention activities related to oak wilt management. (Note: Contact information is provided on pages 24-25 of this document.)

## 2. Suppression Treatments Eligible for Federal Cost-share Reimbursement

To be eligible for Federal cost-share funds, a suppression treatment method must have demonstrated biological effectiveness in reducing the spread and/or impact of oak wilt disease. Since oak wilt disease spreads both above ground by insect vectors and underground via root grafts, an effective oak wilt management program must include a two-tiered treatment approach that addresses both modes of disease transmission. In addition to a public information effort to increase public awareness of how to avoid oak wilt, a viable oak wilt suppression strategy includes **both** of the following action steps:

- Installation of a root graft barrier (RGB) line(s) to disrupt root graft connections
- Removal of potential spore-producing trees (PSPTs) to prevent insect transmission

### a. *Installation of a Root Graft Barrier*

The underground spread of oak wilt is reduced by installing root graft barrier (RGB) line(s) to disrupt root graft connections. The RGB line(s) should be installed according to an accepted method of barrier line placement to disrupt root

graft spread. See [appendix F](#) for examples of methods and models that have been used to effectively locate barrier lines. The methods of establishing RGB line(s) that are eligible for Federal cost share are:

- Vibratory plow (recommended effective depth of root disruption 60 inches or greater).
- Trenching (recommended effective depth of root disruption 60 inches or greater).
- Root rupture at the stump or root collar with backhoe/bulldozer. Complete 360° root disruption of each tree is recommended.

*b. Removal of Potential Spore-producing Trees (PSPTs)*

Reducing the overland spread of oak wilt is accomplished by preventing the insect transmission of the disease, and removing and properly treating or disposing of PSPTs. While all trees inside the primary RGB have a chance of becoming infected and supporting the development of spore mats, and are thus considered PSPTs, the most critical PSPTs are infected red oaks (and in some situations bur oaks) that wilted within the previous year. Removal of PSPTs is eligible for Federal cost-share reimbursement, provided these trees are removed prior to spore production and the nitidulid flight period.

Spore mats have been reported to form on bur oaks, but are cited to be smaller and form less frequently. Currently, in situations where oak wilt disease is present and bur oak is an affected oak species, it may be advisable to inspect bur oaks as well as red oaks that have wilted within the previous year, and mark appropriate trees for PSPT removal.

To reduce the chance of RGB failures, stumps of removed PSPTs and trees that are removed in cut-to-the-line procedures can be treated with a State-approved herbicide. Herbicide treatment of stumps helps prevent sprout development on cut trees. Since sprouts nourish and sustain the root system of a cut tree, they may increase the chance of diseased roots growing and regrafting across the RGB line, and thereby contribute to “jumps” or failures of the RGB. For this reason, treatment of stumps with an approved herbicide is eligible for Federal cost-share reimbursement, provided this treatment was approved by the U.S. Fish and Wildlife Service during development of the project Environmental Analysis.

The methods of PSPT removal eligible for Federal cost-share reimbursement are:

- (1) Cut-to-the-line: Oaks of the affected group that are within the primary RGB have a high probability of succumbing to oak wilt via root graft spread within 2 to 3 years, and thus are future PSPTs. These trees should be cut to prevent them from becoming PSPTs. There are two schools of thought regarding cut-to-the-line treatments: remove only oaks within the affected species group(s), or remove all oak species regardless of what oak group(s) are affected. These are designated below as (a) and (b), respectively.

**Monitoring Requirements: Annually inspect all treated infection centers to detect failures in the primary RGB line. Annual inspection for PSPTs is not mandatory.**

**Post-treatment Evaluation Requirement: Inspect 30 percent of all treated infection centers for treatment efficacy at the end of 3 years.**

(a) Modified cut-to-the-line: Remove all oaks of the **affected group(s)** (white or red oak) within the primary RGB line, and, if applicable, treat stumps with approved herbicide.

(b) Cut-to-the-line: Remove **all species** of oak within the primary RGB line and treat stumps with approved herbicide. Some jurisdictions may opt to remove all species of oak within the RGB, in hopes of achieving the highest probability of preventing the spread of oak wilt disease. Although we support a jurisdiction's choice to remove all oak species within the RGB, this option can result in the unnecessary removal of trees, and we rate it as a lower-priority treatment than the modified cut-to-the-line treatment. For example, in a mixed-species stand where only red oaks were infected, this option requires the removal of all white and bur oak trees, even though white oaks would never become PSPTs and bur oaks have a low probability of ever becoming PSPTs.

(2) RGB/PSPT Removal/Monitoring: This option involves annual inspection and removal of all PSPTs within the RGB for a 3-year period, whether or not residual oaks are treated with a fungicide. Note that fungicide injection can be used as a component of treatment within the RGB, but fungicide costs are not eligible for Federal cost share. (See section IV.C.3, 'Suppression Treatments Not Eligible for Federal Cost-share Reimbursement.')

**Monitoring Requirements: Annually inspect all treated infection centers to mark and remove PSPTs and detect failures in the primary RGB line.**

**Post-treatment Evaluation Requirement: Inspect 30 percent of all treated infection centers for treatment efficacy at the end of 3 years.**

Appropriate methods for disposal and treatment of PSPTs and infected wood include:

- Utilization of all wood greater than 2 inches as firewood, as long as the firewood is cut and split prior to mid-September or sealed beneath a tarp from late winter through late summer.
- Utilization for timber products, as long as trees are removed and processed or debarked in a timely manner (before spore production and the nitidulid flight period in the spring.)
- Removal to a waste disposal site where material is buried or chipped.

- Onsite burning of felled trees, as long as logs burn completely and the burning occurs before spore production and the nitidulid flight period in the spring.

c. *Special Cases*

There may be cases where conventional oak wilt treatments are not feasible. This is considered a special case that requires a consultation with a State agency forest health specialist regarding the proposed alternative treatment and a letter from the U.S. Forest Service approving the treatment and authorizing cost-share funds for the specific situation. The decision to approve alternative treatments cannot be made by city foresters or individual landowners. If an alternative treatment is implemented, appropriate post-treatment evaluations must be conducted to determine treatment efficacy. Only treatments that prove to be effective will receive future Forest Service funding.

**Fungicides: Special Note**

Treatments with fungicides, including propiconazole, are no longer eligible for Federal cost-share reimbursement for the following reasons:

1. They **do not** prevent root-to-root transmission of the pathogen and are ineffective in preventing the expansion of existing infection centers. Fungicides have limited basipetal movement capacity and do not effectively move down into the root system of the tree. This allows the oak wilt pathogen to survive in the root system of treated trees and be translocated through root grafts to adjacent noninfected trees.
2. Although propiconazole appears to suppress the development of aboveground symptoms of oak wilt, its long-term effectiveness has not been proven. Propiconazole must be re-applied to prevent symptom development in oak trees. In the case of red oaks, it must be re-applied every 2 years and only to healthy, nonsymptomatic trees. Therefore, if red oaks are not retreated every 2 years, they may become infected, produce spore mats, and contribute to the overland spread of oak wilt.
3. Fungicide-treated trees may actually contribute to failures in the RGB line. By temporarily suppressing the development of aboveground symptoms of oak wilt, fungicide treatments may prolong the life of an infected tree long enough to allow roots to re-graft across the established root graft barrier line and promote the expansion of existing infection centers.

All things considered, fungicidal treatments have demonstrated very limited success in preventing the spread of oak wilt, and in some cases may actually contribute to root-to-root and overland spread of the disease. Fungicide treatments appear to be feasible only for the protection of individual high-value trees, located in intensely managed home or park settings, where the cost of repeated fungicide applications is not prohibitive. Since the overall goal of an oak wilt prevention/suppression program is to halt the spread of the disease on a resource level, concerns about individual trees are considered to be of secondary importance. Individual State programs may opt to allow fungicide injections as a component of an overall treatment plan; however, any associated costs must be paid by the State or individual landowner(s) and cannot be reimbursed from the Federal oak wilt suppression grant.

### **3. Suppression Treatments Not Eligible for Federal Cost-share Reimbursement**

Other suppression treatments can be attempted in the management of oak wilt disease, but they are not eligible for Federal cost-share reimbursement, nor can the cost of applying these other treatments be used to meet the requirement of matching funds. These treatments are not eligible for Federal cost-share reimbursement, either because they have not demonstrated biological effectiveness, they have limited or negative effects on the overall status of oak wilt disease on a landscape scale, or the use of suppression funding for the stated purpose is prohibited by Federal mandate.

**Examples of treatments that are not eligible for Federal cost-share reimbursement include:**

- Cutting a buffer zone of living trees to establish an RGB.
- Herbicide treatment to establish an RGB.
- RGB installation without removal or treatment of PSPTs.
- Removal or treatment of PSPTs without RGB installation.
- Removal of dead, non-PSPTs (dead for over 1 year) or other treatments not specified in the treatment plan.
- Stump grinding.
- Replanting or reforestation.

#### ***D. Suggested Priorities for Oak Wilt Prevention Activities, Suppression Treatments, and Priority Treatment Areas***

In the interest of efficient use of Federal suppression and matching State funds, it is useful to examine different prevention activities and suppression treatments, determine the best use of such funds under a variety of management scenarios, and set priorities. In this section, we discuss prevention activities that should have a high to moderate rate of success. We identify suppression treatments that are biologically effective, and priority treatment areas that demonstrate a high probability of success in protecting the oak resource and sustaining it as an important component of the ecosystem.

##### **1. Priorities for Prevention Activities Related to Oak Wilt**

In terms of economic efficiency, preventing the establishment of new oak wilt infection centers is a very high priority because it avoids the cascading costs of treating and removing trees that become infected in an expanding disease pocket. Prevention activities to increase public awareness of how to avoid oak wilt are considered a critical component of any successful suppression program.

Although it can be very difficult to quantify accomplishments or define the success of programs that address prevention, reduction in the rate of establishment of new infection centers should be at the core of any program for suppressing oak wilt. In practical terms, this means reducing or eliminating the number of potential spore-producing trees (PSPTs) that arise and harbor spore mats of the pathogen, and rapid treatment of wounds on trees to prevent new infections, especially during the spring

and early summer. The following prevention activities may be eligible for Federal cost sharing:

- a. Education and public information (**moderate to high success rate; high priority**)
- b. Establishing a program to monitor spore mat production and nitidulid activity in the spring to delineate the beginning of the high-risk period for overland spread (**high success rate; moderate priority**)

## 2. Priorities for Suppression Treatments Related to Oak Wilt

### a. *Priority Treatment Methods*

Root graft disruption is the primary tool for controlling the local spread of oak wilt once an infection center has been established. However, root graft disruption alone is not an effective and efficient method of controlling or suppressing oak wilt because it does not substantially reduce the risk of PSPTs harboring spore mats that contribute to overland spread of the pathogen. To be effective, a root graft disruption technique should be coupled with methods that reduce or eliminate the development of PSPTs and minimize the chance for overland spread of the disease. Those methods that minimize the chances for a root graft barrier failure should also be favored.

The following treatments, ranked by priority, may be used to treat existing oak wilt centers.

(1) RGB with “cut-to-the-line” procedures:

- (a) Modified cut-to-the-line (**High success rate; high priority**)
- (b) Cut-to-the-line (**High success rate; moderate priority**)

(2) RGB with PSPT Removal/Monitoring: Root graft disruption with annual monitoring and removal of PSPTs for a 3-year period (with or without fungicide treatment on residual trees). (**Moderate success rate; high priority**)

Refer to section IV.C.2 for details on these treatments.

The need to ensure that RGB treatments will be effective (adequate placement of lines around infection centers) and that PSPTs are removed in a timely manner can pit homeowner interests against the best biologically mandated treatments. Often an infection center will span an area that includes multiple landowners, requiring the forest health specialist to enlist participation from all affected landowners in order to ensure the RGB is properly placed and biologically effective. Additionally, since treatments often require the removal of seemingly healthy trees (trees within an RGB), homeowners are understandably resistant to this approach, especially in the landscaped areas adjacent to their homes. For

these reasons, effective treatment and control of oak wilt can be difficult and time consuming for forest health agencies, particularly in urban and suburban settings.

Nevertheless, implementing biologically effective treatments that protect the oak resource must remain the top priority. Forest health specialists must be committed to educating landowners about the biology of oak wilt, explaining the need for proper placement of RGB lines and timely removal of PSPTs, and seeking the cooperation and full participation of multiple landowners when infection centers span multiple land ownerships.

*b. Priority Treatment Areas*

To protect the oak resource and sustain it as an important component of the urban/suburban or woodland ecosystem, suppression treatments should be targeted to high-priority areas where the density of oak wilt is within manageable levels and the probability of successfully protecting the resource is high.

The following example lists treatment areas, ranked by suggested priority, that may be used to target oak wilt treatments (1 = highest priority, 6 = lowest priority):

- (1) Areas with a high red oak component, small numbers of recent introductions of oak wilt, and an oak wilt eradication plan.
- (2) Areas with a high red oak component where oak wilt is established in limited areas and a treatment plan that demonstrates that eradication in a local or regional area is feasible as a long-term goal.
- (3) Areas where oak wilt is established, but recent outlier infection centers exist that can be eradicated.
- (4) Areas where oak wilt is established and communities have a city forester or forestry consultant on staff and a resource-level treatment plan in place that includes a nuisance tree ordinance that can be used to mandate the removal of PSPTs.
- (5) Areas where oak wilt is established and communities have a city forester or forestry consultant on staff and a resource-level treatment plan in place, but do not have a nuisance tree ordinance that can be used to mandate the removal of PSPTs.
- (6) Areas where oak wilt is established and treatments are applied on an ad hoc or individual landowner basis.

### ***E. Forest Service Process for Prioritizing Funds for Oak Wilt Prevention and Suppression Proposals***

When requests for prevention and suppression funding are received from States, a plant pathologist (or team of plant pathologists) from the Forest Health Protection staff of the U.S. Forest Service will review the proposals. They will determine the likelihood that the proposed actions will accomplish the mission of protecting the oak resource from oak wilt on a community, township, or larger resource level through the implementation of high-priority prevention activities and suppression treatments that have demonstrated a high probability of success.

To accomplish the mission of protecting the oak resource, oak wilt suppression proposals should:

- Include both prevention and suppression components in their management approach.
- Implement biologically effective treatments (high priority and high success rate) that manage the disease on a resource level. Top priority for Federal cost-share funding will be given to proposals that include a two-tiered treatment approach (installation of an RGB and removal and proper treatment of PSPTs) and implement treatments on a community, township, or larger resource scale.
- Target suppression treatments in high-priority areas where the density of oak wilt is within manageable levels and the probability of successfully protecting the oak resource and sustaining it as an important component of the urban/suburban or woodland ecosystem is feasible.

Lower priority for funding will be designated for proposals that do not address the above criteria.

## **V. HOW STATES PARTICIPATE IN A COOPERATIVE PREVENTION OR SUPPRESSION PROGRAM**

In September of each year, the U.S. Forest Service Forest Health Protection (FHP) Program requests that State agencies identify Federal cost-share funding needs for prevention or suppression projects in the coming year. FHP requests that the agency identify the pest problem, the anticipated acres of suppression or eradication, the estimated total costs, and the amount of Federal funds requested. [Appendix G](#) provides a list of costs that are eligible for cost-share funding in an oak wilt suppression project. **Currently, the maximum Federal share of project costs is 50 percent for projects of all sizes on all land ownerships.** If a State decides to apply for Federal prevention and suppression cost-share funding, there are different sets of requirements to meet for different parts of the process. These requirements include documentation to comply with NEPA and other Federal acts, project planning documents, request for financial assistance documentation, and accountability/reporting documentation. Each of these is discussed below.

## ***A. Documentation to Comply with NEPA and other Federal Acts***

Because Federal funds are involved, State suppression or eradication projects must address several different Federal acts: the National Environmental Policy Act of 1969 (NEPA), the Threatened and Endangered Species Act (TESA), the National Historic Preservation Act (NHPA), and the Civil Rights Act of 1964 (CRA). Since the time necessary to address these acts may be significant, it is highly recommended that States begin working with the [Field Office](#) and other agencies 9 to 12 months in advance of initiating an oak wilt suppression program.

### **NEPA**

The level of Forest Service involvement dictates the appropriate level of NEPA documentation. If the U.S. Forest Service is funding a program and is not responsible for determining the locations where treatments are applied, then NEPA compliance does not necessarily require an environmental assessment (EA). However, if the Forest Service is funding specific individual projects (and is involved in determining the location of treatments), there is a need for an EA. See the section on NHPA below for further discussion on the need for an EA. Whether or not an EA is required, there is still a minimum need to conduct a biological evaluation (BE) and keep an analysis file.

### **TESA**

To comply with the Threatened and Endangered Species Act (TESA), the U.S. Forest Service must consult with the Fish and Wildlife Service (F&WS) to determine whether the proposed oak wilt suppression activities have the potential to significantly impact federally listed threatened and endangered (T&E) species. The F&WS may provide an official response that the proposed treatment has no significant impact on T&E species. In that case, no further action is needed. However, the F&WS may respond that additional information and documentation are needed. The F&WS will provide a listing of species of concern. If additional documentation is needed, the Forest Service or its designee will conduct a biological assessment (BA) to address the potential impact of suppression activities on listed T&E species. In addition, the State agency must work with the State F&WS to ensure that no State-listed threatened and endangered species are affected.

### **NHPA**

To comply with the National Historic Preservation Act (NHPA), the State Historic Preservation Officer (SHPO) and an equivalent Federal counterpart must sign documentation that cultural resources will not be adversely impacted by the proposed program or projects. The State agency that is implementing the oak wilt control program is responsible for a written description of the scope of the project, and the proposed treatment actions and treatment locations. This information will be provided to the SHPO for review of the proposed project for any potential impacts on historic properties pursuant to Section 106 of the NHPA.

Depending on the State's process and the scope of the oak wilt control program, this may be done in one of two ways: the SHPO may do a site-specific review of each project area and approve the treatment, or the SHPO may request a programmatic agreement for

addressing cultural resources. The site-specific review of individual project areas may be feasible for a limited number of sites in a very small program, but a larger program will probably require a programmatic agreement.

The programmatic agreement provides the process that will be implemented to ensure that there is no impact on cultural resources. This process must be agreed to by the State agency, the Forest Service, and the SHPO. Unfortunately, the U.S. Forest Service State and Private Forestry does not have a staff position with authority to sign off on this type of agreement. The Field Representative in each [Forest Service] [Field Office](#) has the authority to sign off on an EA, which can legally be substituted for an NHPA programmatic agreement (pursuant to the Procedures of the Advisory on Historic Preservation (36CFR800.8[c])). Therefore, it is generally necessary to do an EA for an oak wilt suppression program that documents the process that will be used to protect cultural resources, unless the SHPO does site-specific reviews of each project area. We strongly recommend a meeting at the onset of any oak wilt control program to determine how the NHPA will be addressed. This meeting would involve a Forest Service FHP representative, the State agency forest health person who will be working with the suppression program, and the State [DNR] archaeologist (who will be a liaison with the SHPO).

#### CRA

State agencies that participate in the cooperative suppression or eradication program must demonstrate that they are in compliance with Title VI of the Civil Rights Act of 1964. Title VI protects persons from discrimination based on their race, color, or national origin.

### **1. More about the Analysis File**

As soon as a State agency decides to initiate an oak wilt suppression project, they should begin an analysis file to document all steps taken to comply with NEPA. The analysis file is important if the project is challenged in court. Should litigation occur, the court will demand full disclosure of all records relating to the project being litigated. The agency has an obligation to prepare a complete, well-indexed, and understandable file of materials as background for the analysis. At a minimum, the analysis file should include the following:

- Public comments (by phone and open house meetings)
- Comments from other agencies
- Internal communications
- Draft of EA
- Laws and regulations
- Maps
- Biological data
- References cited in the environmental analysis

**A list of what is included in the analysis file should be sent to the U.S. Forest Service by August 1 of the year funding is to be received. The final EA must be completed and the decision notice signed before any treatments can be implemented.**

For more detailed information about preparing and organizing an analysis file, refer to [appendix H](#).

## **2. What is involved in a Biological Evaluation**

In general, a biological evaluation (BE) of a forest pest problem is the process of gathering, analyzing, and interpreting technical data, and presenting it in such a way that the resource manager can decide if action is needed, and if so, to help decide what action is best suited to meet management objectives. An outline of what might be included in a BE is included in [appendix K](#).

The evaluation considers the entire biological and ecological situation, including pest condition and status (e.g., number of pockets, number of trees affected, expected spread if no action is taken); stand conditions; species composition; land use (e.g., timber, forested recreation areas and parks, forested residential areas); management plans for the area (applicable to forest areas); and current and potential biological and economic impacts (e.g., tree mortality, aesthetics). The BE should be started in July or August of the year (N-1) in which funding is requested for the projects the following year. A copy of the BE should be provided to the Forest Service no later than March of year “N.”

## **3. More about the Environmental Analysis**

An environmental assessment (EA) is often necessary to meet requirements of Section 106 of the National Historic Preservation Act. An EA also becomes part of the NEPA documentation. An example of a multiyear EA for oak wilt suppression is included in [appendix J](#). [Appendix I](#) contains a preparation guide for environmental documents and a detailed outline of an EA.

The EA uses information from the biological evaluation to describe the purpose and need for action, and the proposed alternatives. It then describes the scoping process used, public involvement efforts, issues and concerns provided by the public that relate to the proposed action, alternatives considered, the environment affected, and the environmental consequences of implementing the various alternatives. The document should be as site specific as possible. While preparation of an EA is a Federal responsibility, most are jointly prepared documents, with the bulk of the technical or biological information provided by the unit requesting U.S. Forest Service funds. This happens because the land managing unit has the greatest familiarity with the local area and existing land management plans, among other aspects. U.S. Forest Service personnel are available to assist or advise and can serve as interdisciplinary (ID) team members as well.

The decision made in conjunction with the EA is documented in a Decision Notice (DN) and Finding of No Significant Impact (FONSI). The DN presents the alternatives considered, issues raised through scoping and how they were used in the development of the alternatives, decision of the responsible official (alternative selected for implementation), rationale for the decision, and any mitigation measures that will be implemented.

The FONSI, which is attached to the DN, provides an assessment of the expected environmental impacts of the selected alternative, the mitigation measures that will be implemented, and the rationale as to why the impacts are not significant and therefore why an Environmental Impact Statement (EIS) is not needed. The DN must address 10 specific aspects of the selected alternative:

- a. Beneficial and adverse effects*
- b. Public health and safety*
- c. Unique characteristics and ecologically critical areas*
- d. Highly controversial impacts*
- e. Uncertain impacts*
- f. Precedent-setting actions*
- g. Cumulative actions and impacts*
- h. Compliance with the National Historic Preservation Act*
- i. Compliance with the Threatened and Endangered Species Act*
- j. Nonviolation of Federal, State, or local law*

In addition, the proposed project must comply with Executive Order 12898 on Environmental Justice (Federal actions to address environmental justice in minority populations and low-income populations).

The DN is signed either by the responsible land manager (e.g., Park Superintendent, Forest Supervisor) in the case of Federal lands, or by the U.S. Forest Service in the case of State and private lands in the Northeastern Area. **A copy of the Draft EA should be sent to the U.S. Forest Service by August 1 of the year in which treatments are to occur.** It is understood that the final EA cannot be approved until consultations and approvals have been received by the SHPO and the U.S. Fish and Wildlife Service. The final EA should be submitted as soon as is feasible given the constraints imposed by the need for interagency cooperation. **The EA must be signed before treatment begins.** The Forest Health Protection staff in each [Forest Service] [Field Office](#) has trained staff to assist in the NEPA process. For specific help, contact the [Field Office](#) that serves your area.

#### **4. More about the Biological Assessment**

A biological assessment is prepared to determine what effects, if any, implementation of the proposed project might have on either federally or State-listed threatened or endangered (T&E) species, or critical habitat within the proposed treatment areas. An outline and example of components of a biological assessment are included in [appendix L](#).

Under the Endangered Species Act of 1973 (ESA), as amended, the U.S. Forest Service is required to ensure that any action it authorizes, funds, or carries out is not likely to jeopardize the continued existence of federally listed endangered or threatened species, or result in adverse modification or destruction of critical habitat for such species. Regulations pertaining to the implementation of this responsibility are located in 50 CFR Part 402.

State law may or may not require agencies to avoid jeopardy or to consult or conduct an effects determination, but most States have laws that protect State-listed species from harm. Therefore, State agencies are responsible for consultation with their State endangered resource personnel. If all agencies agree, the biological assessment may be constructed as a single document that addresses both State- and federally listed T&E species.

## ***B. Project Planning Documents***

In addition to NEPA documentation, project work and safety plans must be developed for all Federal and State cooperative suppression and eradication projects. These plans are submitted as separate documents from the completed application (SF-424) and its associated attachments. Copies of the work and safety plans should be sent to the appropriate U.S. Forest Service [Field Office](#) as soon as possible during year N so that these documents can be used during consultations regarding the Threatened and Endangered Species Act and the National Historic Preservation Act.

The project work plan is a detailed description of how the State agency intends to implement the oak wilt treatment program. It will include information on how the State intends to target and select treatment sites, the requirements of each site to qualify it for inclusion in the program, how sites will be monitored, what data will be collected, and how post-treatment evaluations will be conducted. This is much of the same information that is included in the “Program Narrative” portion of the “request for financial assistance” (see section V.C.2 below), so an appended project work plan can constitute the bulk of the Program Narrative. Project work plans will vary from agency to agency, as does the structure of the various organizations. However, the activities associated with planning and conducting prevention or suppression projects generally are quite similar. The outline for a work plan is included in [appendix M](#).

The project safety plan is a fairly simple report that documents how safety risks associated with oak wilt suppression will be addressed. An outline for a project safety plan is included in [appendix N](#).

## ***C. Documentation Required in a Request for Financial Assistance***

### **1. Standard Form 424 (SF-424)**

[Appendix O](#) presents an example of how to complete an Application for Federal Assistance, [Standard Form 424](#) (SF-424). Assistance is available by contacting the

Northeastern Area [Grants and Agreements Office](#). Other standard forms that must be completed and submitted with the SF-424 include:

- Budget Information (SF-424A) – Nonconstruction Programs
- Assurances – Nonconstruction Programs (SF-424B) – Certifies that the grantee will comply with various requirements directed by law and policy.
- Certification Regarding Debarment, Suspension, and Other Responsibility Matters (AD-1047) – Certifies that the grantee is not under debarment or civil judgments.
- Certification Regarding Drug-Free Workplace Requirements (AD-1049) – Certifies that the grantee will continue to provide a drug-free workplace.
- Certification Regarding Lobbying (SF-LLL) – If a grant is funded in excess of \$100,000, this form must be submitted that certifies the grantee will not use the funds for lobbying.

All of these forms and instructions are available on the Northeastern Area Grants and Agreements Web site at <http://www.na.fs.fed.us/fap/fap.shtm>. For more detailed instructions, please contact the Northeastern Area [Grants and Agreements Office](#).

## **2. Program Narrative**

A program narrative must be submitted with the SF-424 before a grant will be approved for cost-share funding. The narrative must include:

- Description
- Federal Role (The State agency must justify the project by addressing the Federal Role Criteria (FSH 3409.11, Chapter 10), as presented in [appendix M](#))
- Objectives of the Project
- Methodology/Timeline
- Accomplishment
- Budget Information

Because much of the information (except budget) required for the narrative has already been included in a project work plan, an agency may choose to have the narrative consist of the project work plan and appended budget information to meet the requirement of a narrative.

The [Field Office](#) should review program narratives. Program narratives are due to the [Northeastern Area Headquarters Office](#) as part of the grant application package prior to March 31. For more detailed information about preparing a program narrative, refer to [appendix M](#).

## ***D. Guidelines for Accountability and Reporting***

### **1. Treatment Tracking and Cost-share Reimbursements**

The State oak wilt program manager is responsible for designing a system to track oak wilt management treatments that are implemented and document Federal cost-share payments made to landowners for reimbursement of treatment costs. The

system must ensure that Federal cost-share funding is used to reimburse only those treatments that are eligible for Federal cost share, implemented correctly, and in compliance with the operating procedures for the Threatened and Endangered Species Act and National Historic Preservation Act (NHPA). This requires a tracking process where field foresters conduct site visits to inspect and approve treatments, prior to reimbursement. For a listing of treatments eligible for Federal cost share, see section IV.C.2 ('Suppression Treatments Eligible for Federal Cost-share Reimbursement'). For information on how to properly implement treatments within established timeframes, see [appendix F](#) ('Technical Guides for Implementation of Specific Oak Wilt Treatments'). Example contracts containing specifications for conducting vibratory plowing and other field work are included in [appendix Q](#) ('Example Oak Wilt Contracts').

A standard data collection form should be used to collect treatment summary and Federal cost-share reimbursement information. The Texas Oak Wilt Suppression Program designed a data collection form that is very effective in tracking this multistep process. A modified version, [Form OW-2006-P: Oak Wilt Administrative Summary Form](#), is available in [appendix P: Monitoring Forms](#). The following key steps can be used to effectively track treatments implemented on each infection center, ensure their compliance with the T&E Species Act and NHPA, and document Federal cost-share reimbursements:

- a. *Confirm that Necessary Operating Procedures for Compliance with the Threatened and Endangered Species Act and National Historic Preservation Act Have Been Followed:* Before meeting with the landowner, a field forester (State agency forest health specialist or qualified city forester or forestry consultant) should confirm with the State Program Manager that all necessary procedures have been followed (see Section V.A, 'Documentation to Comply with NEPA and other Federal Acts'). Compliance should be documented on Form OW-2006-P.
- b. *Meet with the Landowner and Select a Treatment Plan:* A field forester meets with the landowner, discusses treatment options, and selects a treatment plan. See Section IV.D.2 for a listing of treatment plans, ranked by priority. It is strongly recommended that you include the landowner's signature to confirm that he or she agrees to implement all treatments within established timeframes and in accordance with treatment guidelines. Used this way, Form OW-2006-P will also serve as a landowner agreement form.
- c. *Mark and Number Each Infection Center:* Each infection center should be assigned a unique identification number, and the primary RGB line should be marked with permanent (metal) tree tags. This will allow each infection center to be tracked for a 3-year monitoring period, and all treatments implemented during that time to be documented and recorded. For information on how to mark RGB lines, see [appendix F](#) ('Technical Guides for Implementation of Specific Oak Wilt Treatments').

- d. *Record Dates and Types of Treatments Implemented:* If the landowner coordinates treatment implementation, the field forester should be notified when treatments are completed. Dependent on which treatment plan is selected (3-year annual monitoring or treat to the line), the number of treatments implemented on a single infection center will vary. For example, with Treatment Plan 2, PSPTs will be removed in year N, year N+1, and year N+2, respectively. In order to compile a complete treatment history for each infection center, it is important that this information be recorded as multiple treatments that occurred on a single infection center. Note: This requires that Form OW-2006-P be updated, following implementation of each treatment on a given infection center, during the course of the 3-year treatment period. **Note: Landowners can be reimbursed after each treatment is implemented and approved during year N, year N+1, and year N+2.**

Collecting complete treatment history for each infection center will allow program managers to track and report the total number of infection centers treated and document specific treatments that were implemented. This information will be very important when post-treatment evaluations are conducted to determine the percentage of infection centers that were successfully treated and the efficacy of specific treatments. To effectively track treatments implemented and measure treatment success, a Field Data Collection Form should be filled out for each treatment or monitoring event that is implemented on a given infection center over the 3-year treatment period. **See [Form OW-2006-P1: Field Data Collection Form in appendix P](#)** as an example form to assist State program managers in documenting treatment activities and accomplishments.

- e. *Record Dates of Treatment Inspections:* The field forester inspects infection centers and approves or rejects treatments that have been implemented. This step is important to ensure treatments are implemented properly and within established timeframes, before cost-share reimbursements are made. For example, treatment guidelines mandate that PSPTs must be removed prior to spore production and nitidulid flight. If PSPTs are not removed within this timeframe, treatment costs are not eligible for Federal cost-share reimbursement.
- f. *Request Reimbursement for Approved Treatment Costs:* Submit Form OW-2006-P (or comparable form), completed and signed by the field forester, along with vendor receipts to document treatment costs. The landowner is reimbursed, the date and amount of payment are recorded, and the tracking form is kept on file with the State program director.

Note: For your convenience, we have developed a 5-Year Biological Timetable that summarizes treatment implementation, inspection/monitoring, and post-treatment evaluation activities that are required for each infection center. **See [Form OW-2008\\_P2: 5-Year Biological Timetable for Treatment and Monitoring Activities in appendix P](#)**.

## 2. Measures of Success

An oak wilt prevention/suppression program cannot be considered a success unless objective measurements are collected that document administrative and treatment accomplishments. Measurements that should be documented include:

### *a. Administrative Measurements*

- Number and type of treatment plans selected
- Number and type of treatments implemented and approved
- Number and type of re-treatments implemented and approved
- \$\$ reimbursed for cost-shared treatments (amount transferred to field for treatments)
- Compliance with the Threatened and Endangered Species Act and National Historic Preservation Act

See **Form OW-2006-P: Oak Wilt Administrative Summary Form in appendix P** as an example form to assist State program managers in documenting administrative accomplishments.

### *b. Treatment Measurements*

Oak wilt management treatments (including re-treatments) will be considered **successful** if 1) the RGB line holds (no failures or breakouts: no symptomatic oak trees within a 66-foot zone, outside the primary RGB line) and oak wilt does not spread outside the primary RGB line; and 2) all PSPTs were properly removed and treated over a 3-year treatment period.

Treatment measurements include:

- Number of infection centers **successfully** treated at treatment years N+1, N+2, and N+3.
- Number of infection centers successfully re-treated at treatment years N+1, N+2, and N+3.
- Number of PSPTs removed by April 1 (prior to spore production and the nitidulid flight period).
- Number of trees protected from local spread of oak wilt (trees within 1 chain outside the primary RGB).
- Acres protected from overland spread (i.e., the buffer zone around successful RGB/PSPT removal treatments).
- Post-treatment evaluation report to determine the efficacy of treatments implemented on each infection center, after a 3-year treatment period.

See **Form OW-2006-P1: Field Data Collection Form in appendix P** as an example form to assist State program managers in documenting treatment accomplishments. Note: To effectively track treatments implemented and measure treatment success, a Field Data Collection Form should be filled out for each treatment or monitoring event that is implemented on a given infection center, over the 3-year treatment period.

### 3. FHP Program Reporting

*a. Annual Accomplishment and Expenditure Reports*

State accomplishment reporting is required by **October 15** of each year. See **Form 3400-5 in appendix P**.

*b. Annual Program/Progress Reports*

**Due Date:** December 31 of years N, N+1, and N+2. At a minimum, the following information should be included:

- Number of infection centers treated
- Number of infection centers re-treated
- Number of infection centers monitored
- For each infection center, summarize treatment and monitoring activities:
  - RGB Line: date of installation or reinstallation
  - PSPT Removal: number of PSPTs removed and date of removal
  - Monitoring Activities: dates of inspections

*c. Post-treatment Evaluation Reports*

**Due Date:** December 31 of treatment year N+3.

Post-treatment evaluations are required to determine the effectiveness of the suppression program. How this is accomplished may vary from project to project because project objectives may differ. Post-treatment evaluations should measure the efficacy of treatments implemented and should be conducted 3 years after the installation of the first RGB line. A subsample, consisting of 30 percent of all infection centers treated, should be randomly selected and evaluated. After the data has been collected and analyzed, the information should be presented in a written report and submitted as part of the final grant report. See **Outline for A Post-treatment Evaluation Report in appendix P**.

### 4. Grant Reporting

Grant reporting requirements are in addition to and distinct from FHP program reports, although much of the information they contain may be the same. Program reports track program progress and accomplishments, whereas grant reports ensure fiscal accountability and track the expenditure of Federal funds.

*a. Financial Status Grant Report (See Form SF-269A)*

**Due Date:** Within 1 year of the grant start date, usually June 30.

Form SF-269A should be used to report the accrual of costs related to the project (and expenditure of funds) and to request reimbursement payments. Form SF-269A must be submitted at least once per year; however, the State can submit this form on a quarterly basis if they wish to be reimbursed more frequently.

*b. Final Grant Report*

**Due Date:** Within 90 days of the grant expiration date.

Once a grant is “closed” (i.e., all money has been awarded and spent, and no further work is being done on that project), a “Final Report” is due to the [Grants and Agreements](#) staff within 90 days of grant closure. The Final Grant Report should contain both a program narrative and a financial report. The program narrative can consist of the annual FHP program reports for treatment years N, N+1, and N+2, and the Post-treatment Evaluation Report for treatment year N+3. The financial report should consist of a final SF-269A. Project and grant reports should be submitted directly to the Northeastern Area [Grants and Agreements](#) staff, with copies provided to the appropriate Forest Service [Field Office](#).

### ***E. Summary of Process***

If participating State agencies are unfamiliar with the cooperative suppression process, the State pest management official should discuss the anticipated suppression or eradication project, project size, and related aspects with the U.S. Forest Service. Normally, the Forest Service will assign an individual from the appropriate [Field Office](#) to work with the State agency to provide technical assistance with completion of a biological evaluation ([appendix K](#)) and preparation of a site-specific environmental assessment ([appendix I](#)). The Forest Service may also provide guidance on documentation of an analysis file (scoping for NEPA) ([appendix H](#)), development of a project work plan ([appendix M](#)), development of a project safety plan ([appendix N](#)), preparation of the Application for Federal Assistance [Standard Form 424](#) (SF-424) ([appendix O](#)), and development of a program narrative ([appendix M](#)). Additional technical assistance is available through the Forest Service before and during the prevention or suppression project.

[Appendix S](#) provides a timeline of when various portions of the application and reporting process are due.

#### **Submitting the Completed Application Package for Federal Assistance**

The completed application package for Federal assistance should be submitted to the [Northeastern Area Headquarters Office](#) by March 31 of the year in which funding is to be received (year N). This package should include:

- SF-424 (including additional compliance forms)
- Program Narrative (or project work plan with appended budget information)

Northeastern Area Headquarters Office contact information:

USDA Forest Service, Northeastern Area State and Private Forestry  
11 Campus Boulevard, Suite 200  
Newtown Square, PA 19073  
ATTN: Area Director, Kathryn Maloney  
OR ATTN: Assistant Director for Forest Health Protection, Jerry Boughton  
Phone: 610-557-4103

### **Grant Reporting Documents**

Grant reporting documents should be submitted to the Northeastern Area [Grants and Agreements](#) staff and copied to the appropriate [Field Office](#). These documents include:

- FHP Annual Program/Progress Reports, including the final report
- Financial Status Grant Reports

Grants and Agreements contact information:

USDA Forest Service  
Northeastern Area State and Private Forestry  
11 Campus Boulevard, Suite 200  
Newtown Square, PA 19073  
ATTN: Grants and Agreements Group Leader, Kathy Duran  
Phone: 610-557-4196, e-mail: [kduran@fs.fed.us](mailto:kduran@fs.fed.us)

Documents to Submit to the Field Office

The following documents should be submitted to the appropriate [Field Office](#) according to the timeline in [appendix S](#):

- Biological Evaluation
- Environmental Assessment
- Analysis File
- Project Work Plan
- Safety Plan
- Post-treatment Evaluation Report

Field Office contact information:

**Midwest States** (Minnesota, Wisconsin, Michigan, Iowa, Illinois, Indiana, and Missouri):

St. Paul Field Office  
1992 Folwell Ave.  
St. Paul, MN 55108  
651-649-5243  
ATTN: Group Leader for Forest Health Protection, Mike Connor  
OR ATTN: Field Representative, Mike Prouty

**Mid-Atlantic States** (Ohio, West Virginia, Pennsylvania, Maryland, Delaware, New Jersey, and Washington DC):  
Morgantown Field Office  
180 Canfield Street  
Morgantown, WV 26505  
304-285-1542  
ATTN: Group Leader for Forest Health Protection, Dan Twardus  
OR ATTN: Field Representative, Bob Lueckel

**New York and New England States** (New Hampshire, Vermont, Maine, Massachusetts, Connecticut, and Rhode Island):  
Durham Field Office  
271 Mast Road  
Durham, NH 03824  
603-868-7600  
ATTN: Group Leader for Forest Health Protection, Mike Bohne  
OR ATTN: Field Representative, Anne Archie

## **VI. HOW NATIONAL FORESTS AND OTHER FEDERAL AGENCIES RECEIVE FUNDING FOR SUPPRESSION AND PREVENTION PROJECTS**

For Federal suppression and prevention projects, monies are transferred between agencies at the Washington Office (WO) level to the particular agency (Bureau of Indian Affairs, Fish and Wildlife Service, National Park Service, Army Corps of Engineers, and Forest Service). The local Forest Service [Field Office](#) (Forest Health Protection (FHP) staff) is responsible for conducting a biological evaluation (BE) to justify the need for treatment. The agency receiving funds is responsible for complying with their agency's NEPA requirements. In addition to assisting with the BE, the local FHP staff should ensure that a work plan and safety plan are prepared for the project, and a post-suppression evaluation is conducted. An example of a BE for an oak wilt suppression project on Federal lands is included in [appendix R](#).

### ***A. More about Work Plans and Safety Plans***

A work plan documents the logistics of completing a suppression project. A safety plan documents the steps that will be taken to ensure that safety concerns have been addressed in conducting a suppression project. Appendices M and N provide outlines of what should be included in a work plan and safety plan, respectively. Although the outlines in the appendices are specifically for State projects, the documents for projects on Federal lands should contain the same information. For oak wilt projects on Federal lands, both of these documents should be fairly simple.

### ***B. The Post-suppression Evaluation on Federal Lands***

When a Forest Service-funded suppression project has been conducted on Federal lands, Forest Health Protection will do followup evaluations of the treatments. The FHP staff will revisit the treated sites within 1 year of treatment to document the type of treatment

applied, evaluate whether it was done appropriately, determine whether the treatment was successful (so far), and identify additional treatment needs. They will revisit the site in 3 years following treatment to determine whether the treatments have been successful and whether additional treatments are needed. These site visits will be written up as post-suppression evaluation reports. An example of a post-suppression evaluation on Federal lands is included in [appendix R](#).

***C. Bonus Complication: Confusing Terminology for Projects on National Forest Lands***

In Forest Service Manual sections that address suppression projects on National Forest System lands, the term “biological evaluation” (BE) is used to describe Fish and Wildlife Service (F&WS) consultation regarding threatened and endangered species. However, the Forest Service Manual section describing the State and Private Forestry FHP role in suppression projects on all Federal lands uses the term “biological evaluation” to refer to the documentation that justifies the need for treatment, as described in the 3400 section on the assessment of biological need. Because of this confusion, the local FHP unit may choose to refer to the F&WS consultation type of BE as a biological assessment (BA) rather than a BE, since the term BA is consistent with the F&WS consultation terminology used on State and private lands.

## List of Appendices for Oak Wilt Suppression Guidelines

| # | Title   | Description   |
|---|---|---|
| A | Cooperative Forestry Assistance Act of 1978   | Copy of legislation that authorizes suppression funding.  |
| B | Federal Role Criteria   | Narrative description of the criteria used to determine whether there is a valid Federal role in a proposed project.  |
| C | Oak Wilt Disease Cycle with Potential Points of Control   | Diagram of the disease cycle of oak wilt disease that shows the means of spread of the pathogen and the points where the disease cycle can be disrupted to control the disease.   |
| D | Potential Control Methods for Oak Wilt Disease: Scientific Basis and Information about Practicality           | Tabular form. The potential points of control correspond to the points identified in the disease cycle diagram ( <a href="#">appendix C</a> ). The literature cited is listed in <a href="#">appendix E</a> .   |
| E | Listing of Relevant Literature  | This is a listing of “key references” that individuals working on oak wilt should be aware of and have access to as well as the citations from <a href="#">appendix D</a> .   |
| F | Technical Guides for Implementation of Specific Oak Wilt Treatments   | This section contains more detailed description of the methods used in oak wilt control and the biological reasoning behind them. <ol style="list-style-type: none"> <li>1) Bruhn method of RGB placement</li> <li>2) French method of RGB placement</li> <li>3) Root rupture method of RGB installation</li> <li>4) Marking RGB lines</li> <li>5) Identification of PSPTs</li> </ol>   |
| G | Prevention and Suppression Allowable Costs  | This is a listing of the practices that are eligible for cost sharing in an approved oak wilt suppression project.  |
| H | Preparation Guide for an Analysis File  | Detailed information about preparing and organizing an analysis file.   |
| I | Preparation Guide for Site-specific Environmental Analyses and Documentation                                  | Detailed information about preparing an environmental assessment (EA), and a sample outline for an EA.  |
| J | Example of an EA for Oak Wilt Suppression Submitted in Place of a Programmatic Agreement and Approved by SHPO | Decision Notice and Environmental Assessment; Cooperative Suppression of Oak Wilt in Minnesota, 2004-2008. See <a href="#">appendix B</a> [in EA]: Protection of Historic Properties.   |
| K | Biological Evaluation Outline   | Suggestions on the components of a biological evaluation document for a State oak wilt suppression project.   |
| L | Outline and Example of a Biological Assessment  | Outline of the suggested components for a biological assessment (BA) [for T&E species], and an example of a completed BA.   |
| M | Instructions and Outline for a Project Work Plan and Narrative  | Since the content of the “Project Work Plan” and “Narrative” are very similar, this appendix contains suggestions to facilitate using the same document for both purposes.  |
| N | Outline for a Project Safety Plan   | Brief outline of the items that should be addressed in a project safety plan.   |
| O | Application for Federal Assistance Standard Form 424 (SF-424)   | Copy of the <a href="#">SF-424 form</a> , and link to where the form is available electronically.   |
| P | Monitoring Forms  | Copies of several forms that assist with monitoring and reporting of oak wilt data. <ul style="list-style-type: none"> <li>• <a href="#">Form OW-2006-P: Oak Wilt Administrative Summary Form</a></li> <li>• <a href="#">Form OW-2006-P1: Field Data Collection Form</a></li> <li>• <a href="#">Form OW-2008-P2: 5-Year Biological Timetable for Treatment and Monitoring Activities</a></li> <li>• <a href="#">Form 3400-5: Forest Health Protection Accomplishment and Expenditure Report</a></li> <li>• <a href="#">Outline for Post-treatment Evaluation Report</a></li> <li>• <a href="#">Form SF-269A: Financial Status Report</a></li> </ul> |
| Q | Example Oak Wilt Contracts  | Example contracts of projects in Michigan: <ul style="list-style-type: none"> <li>• Vibratory Plowing Contract</li> <li>• Field Work Contract: Michigan State University Extension</li> </ul>   |
| R | Example Biological Evaluation and Post-suppression Evaluation on Federal Lands                                | Suggested outline for a biological evaluation on Federal lands, followed by an example of a completed biological evaluation and post-suppression evaluation, respectively.  |
| S | Timeline for all Documentation Needed in Oak Wilt Suppression/Eradication Projects                            | Simple table that indicates the annual dates by which various activities should be conducted and when various reports are due.  |