

**Forest Service Handbook  
National Headquarters (WO)  
Washington, DC**

**Forest Service Handbook 2109.14 – Pesticide-Use Management And Coordination Handbook**

**Chapter 30 - Project Type and Personnel**

**Amendment:** 2109.14-2016-5

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**Duration:** This amendment is effective until superseded or removed.

**Approved by:** James E. Hubbard, Deputy Chief, S&PF

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**Responsible Staff:**

**Last Change:** 2109.14-2016-4 to 2109.14\_20

**Superseded Document(s):** 2109.14,30 Contents, Amendment 2109.14-94-1, December 6, 1994; 2109.14\_30, Amendment 2109.14-94-1, December 6, 1994

**Digest:** Following is an explanation of the changes throughout the directive by section.

**30:** Makes minor technical, formatting, and editing changes throughout the chapter.

**31.1:** Adds reference to the function of research in developing pesticide application techniques and strategies.

**31.12:** Changes caption and references from the National Agricultural Pesticide Impact Assessment Program to Forest Service Pesticide Impact Assessment Program, with changes in the text to reflect the shift in management and administration from a Department program to an Agency program.

**31.2:** Changes caption from Housekeeping-Type Pesticide-Use Projects to Household-Type Pesticide-Use Projects. Removes paragraph 1 (g) from the list (a generic category dealing with human and pet health in and around Forest Service facilities).

**31.4:** Clarifies direction that if an operational project cannot be accomplished within either State or Forest Service requirements, it must not be brought into the planning process.

**31.41:** Removes direction and caption “National Forest System Lands” and recodes to this section caption and direction previously set out in section 32.21. Clarifies direction describing ground-based pesticide operational applications.

**31.5:** Establishes code and recodes to this section direction and caption previously set out in 31.41. In Exhibit 01, removes obsolete references to staffs and staff responsibilities and adds the Ecosystem Management Coordination staff.

**31.51:** Removes direction and caption “Cooperative Pest Management” and recodes to this section caption and direction previously set out in 32.22. Clarifies direction describing aerial pesticide operational applications.

**31.6:** Establishes code and recodes to this section direction and caption previously set out in 31.42. Clarifies direction that State laws or regulations might restrict the activities of Forest Service employees in providing pesticide-use information to landowners.

**32:** Changes caption from “Personnel Needs on Minor-Use and Other Small Projects” to “Personnel Needs on Minor-Use Projects” to focus on minor uses, and removes references to small-scale projects. Changes the description of a pesticide “minor-use” project to indicate that it is focused on the amount of active ingredient applied, not the acres involved or the active ingredient used.

**32.1:** Clarifies direction that the application of household-type pesticides by a contractor requires the contractor to have a State licensed or certified Pesticide Applicator as a Supervisor.

**32.2:** Changes caption from “Small Operational Projects” to “Other Minor Uses”, removes existing text, clarifies other minor uses of pesticides from household-type pesticides, and states that supervision of a contracted application is the responsibility of the contractor, not the Forest Service.

**32.21:** Removes code, caption, and direction and recodes to section 31.41.

**32.22:** Removes code, caption, and direction and recodes to section 31.42.

**33:** Changes caption from “Personnel Needs on Large and Complex Projects” to “Personnel Needs on Complex Projects”. Removes references to “large” projects and focuses on complex projects.

**34:** Clarifies that all pesticide training must be documented in writing.

**34.2:** Adds direction that Pesticide Applicator Certification can involve State certification instead of, or in addition to, Federal certification.

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**35.2:** For pesticide exposures, adds references to the appropriate Forest Service Health and Safety Code Handbook sections, as well as FSH 2109.14, chapter 60 for guidance on documentation of medical emergencies.

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This chapter provides guidelines to Managers who are responsible for planning and selecting qualified project personnel (FSM 2150) and conducting efficient pesticide-use projects.

### **31 - Project Type**

Pesticides are used by Resource Managers for a variety of purposes for projects ranging from household-type uses to operational use for pest management (FSH 2109.14, ch. 10, sec. 14). Plan such a project according to its size and complexity.

#### **31.1 - Research**

Proponents of experimental pesticidal applications shall consult in advance with their Regional Pesticide Use Coordinator to identify any required authorizations from regulatory agencies (for example, experimental use permits). Research might be conducted on registered pesticides to:

1. Determine efficacy against a new pest;
2. Evaluate a pesticide's fate in the environment;
3. Field test a pesticide on a small scale; or
4. Field test deployment tools or strategies.
5. Determine non-target effects of pesticide applications or strategies.

Research might be conducted on an unregistered pesticide to:

1. Determine efficacy;
2. Identify proper dosages;
3. Identify a proper formulation;
4. Evaluate appropriate application methods;
5. Determine environmental fate; or
6. Field test deployment tools or strategies.
7. Determine non-target effects of pesticide applications or strategies.

#### **31.11 - Technology Development Projects**

Technology development projects involve research to evaluate effective pesticide uses (after laboratory screening and the field experiment stage). Technology development projects involving pesticide use on National Forest System lands require the preparation of a Pesticide-Use Proposal ([Form FS-2100-2](#)) (FSH 2109.14, sec. 13).

### **31.12 - Forest Service Pesticide Impact Assessment Program**

The Forest Service Pesticide Impact Assessment Program (FSPIAP) provides funding and coordination for studies that generate data and findings in support of continued registration by the EPA of pesticides that may be beneficial to Forest Service programs or develops knowledge of the benefits and risks associated with products that might be beneficial to, or improve, use of pesticides in forestry and related programs.

The Forest Health Technology Enterprise Team (FHTET) manages the FSPIAP program in concert with other Forest Health Protection pesticide and technology development programs. Washington Office Forest Health Protection (FHP) establishes eligibility requirements and national priorities for FSPIAP study proposals (FSH 2109.14, 77). Both Forest Service units and qualified non-Forest Service organizations and investigators may submit proposals that respond to FSPIAP national priorities. All proposals must be submitted to and endorsed by the region/Area FHP Director in order to be eligible for consideration by FSPIAP. An interdisciplinary national team reviews and recommends proposals for funding to the FHP Director annually.

### **31.2 - Household-Type Pesticide-Use Projects**

Household-type pesticides are non-restricted-use pesticides used for purposes of general maintenance of buildings and structures. Special precautions, other than those on the product label, are usually not required, unless otherwise directed by FSH 6709.11 or administrative unit Job Hazard Analysis or Risk Assessment.

1. Specific activities in this category include but are not limited to:
  - a. Fly, wasp, ant, and roach control;
  - b. Spot control of poison ivy/oak in developed recreation areas;
  - c. Use of disinfectants in toilets;
  - d. Spot treatments for weed control in or adjacent to lawns, parking lots, or sidewalks that are appurtenant to buildings;
  - e. Use of insect or tick repellents; and
  - f. Use of rat and mouse rodenticides that are not restricted-use .
2. The following activities are not considered household-type pesticide uses:
  - a. Subslab treatment for termite control;
  - b. Building fumigation;
  - c. Reduction of fire hazard with herbicides;

- d. Use of soil sterilants;
- e. Pest control in food handling areas, such as commercial kitchens; and
- f. Wood preservation.

### **31.3 - Demonstration Projects**

Demonstration projects are designed to show that a specific pesticide, deployment technique, or use strategy is effective for a particular pest management situation. Use demonstration projects as a follow-up to satisfactory field experimentation and/or pilot testing. Post signs near demonstration areas to inform the public of a project's purpose and intended results.

### **31.4 - Operational Projects**

Plan for the operational use of pesticides in pest management projects only when the materials are properly registered by the EPA, or otherwise allowed under FIFRA, and appropriate and applicable State and Forest Service requirements can be met. Complete a Pesticide-Use Proposal ([Form FS-2100-2](#)) for each project. Obtain review and approval of the proposed pesticide use by the appropriate Line Officer (FSM 2151). Special precautions are necessary when planning to use vehicles for applications, consult your local unit safety office for details. Decisions regarding appropriateness of tools, technologies, and application types on the landscape should be made situationally based upon local conditions and need.

### **31.5 - National Forest System Lands**

Programs to manage pests on lands administered by the Forest Service are the responsibility of Forest Service Land Managers. Certain kinds of pesticide-use activities on National Forest System lands can involve other Federal, State and local agencies such as those of the Animal and Plant Health Inspection Service (APHIS) for predator control (FSM 2650), or range insect control (FSM 2243.33). Forest Service personnel shall participate in the development of all plans and direct or monitor, as appropriate, these activities on National Forest System lands. The application might be done by specialists from another agency or by appropriately certified and licensed contracted personnel, such as for mosquito control in cooperation with an outside Mosquito Control District. In addition to the general direction for the use of pesticides in FSM 2150, the following program areas have specific guidelines for the use of pesticides (ex. 01).

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**31.5 - Exhibit 01**

**Program Area Guidance on Pesticides**

<b>Staff</b>	<b>Program Area</b>	<b>Reference</b>
Forest Management	Site preparation, release, thinning, and nursery and seed orchard management.	FSM 2470, and FSH 2409.17
Recreation and Heritage Resources	Recreation area management	FSM 2330, 2340, 2350
Wilderness & Wild and Scenic Rivers	Wilderness and river management	FSM 2320, 2350
Range Management	Rangeland insect vegetation control, and invasive plant management	FSM 2900, 2240
Watershed, Fish, Wildlife, Air, and Rare Plants	Predator, trash fish, and other animal damage control, and water quality impacts from hazardous materials	FSM 2160, 2630, 2650
Engineering	Rights-of-way vegetation control, equipment development, and storage facility construction, management of hazardous wastes and response to hazardous material spills and releases	FSM 2160, 7310, 7730
Lands	Use of pesticides by holders of special-use permits, leases, and grants	FSH 2709.11
Fire and Aviation Management	Use of pesticides in fuels and fuelbreak management programs	FSM 5140, 5150
Human Capital Management	Protection of employee health and management of hazardous materials	FSM 2160, 6710, 6730, 6740; FSH 6709.11 and 6709.12
Ecosystem Management Coordination	Preparation of NEPA and NFMA driven analyses and documentation	FSM 1900 FSH 1909.15 FSH 1909.12



### **31.6 - Cooperative Pest Management**

The operational use of pesticides for forest management often requires careful coordination and close working relationships among various landowners and managers. The application of pesticides is the Land Manager's responsibility on land administered by other Federal agencies, State agencies, and private individuals. However, within the constraints of State law and regulation, Forest Service Forest Health Protection field units shall furnish pesticide-use technical assistance, as appropriate, to other Federal agencies or non-Federal cooperators. This assistance is similar to the kinds of technical assistance provided to cooperative forest insect and disease suppression projects (FSM 3400).

Pesticide use on lands of intermingled ownership requires careful planning and coordination to ensure the intended pest control objectives are met without causing unreasonable adverse impacts on humans or the environment. Planning includes the development of a joint pest-control rationale to avoid any inconsistency in the decision-making process. Decisions as to who will administer pesticide application projects on adjacent lands of disparate ownership must be made early in the planning process. The lead agency or organization is often the organization administering the most land in the project area, although special expertise or other needs might dictate selection of another agency. In all situations, the Forest Service shall provide pesticide-use management expertise, as necessary and legal, to insure successful completion of cooperative pest management projects.

### **32 - Personnel Needs on Minor-Use Projects**

Minor-use projects usually involve limited numbers of personnel and very small amounts of pesticide active ingredient, typically less than one pound active ingredient of any pesticide.

#### **32.1 - Household-Type Pesticides**

Specialized personnel are usually not required when non-restricted-use pesticides are used for housekeeping purposes, such as general maintenance of Forest Service structures, offices, laboratories, greenhouses, dwellings, and campgrounds unless the work is performed under contract. If contracted, only State licensed and/or certified Applicators may supervise the application, as locally required. If restricted-use pesticides are involved in a contracted application, the Applicator shall be certified in the appropriate category(ies) or shall be supervised by a contracted certified Applicator (sec. 34.2).

#### **32.2 - Other Minor Uses**

Contract for the services of a commercial pest control operator for pest control activities such as those performed in food handling areas or for building fumigation or termite control. Personnel applying pesticides under contract for these types of uses should be supervised by an appropriately licensed contractor. District or Forest personnel should monitor compliance with the contract.

### **33 - Personnel Needs on Complex Projects**

Complex projects might require a well-structured organization or unified command. For this purpose, the Forest Service generally relies on the Incident Command System (FSM 5134, FSH 5109.17, ch. 10) as the basic organizational structure for managing complex projects involving pesticides. However, other organizational approaches can be used based on local need and circumstances.

### **34 - Pesticide Training**

Only personnel who are adequately trained and qualified in the proper use of pesticides shall implement pesticide-use projects (FSM 2154). Training must include appropriate instruction on pesticide handling, disposal, and equipment operation. Training can be informal or formal, but it must be planned and conducted by a certified Applicator or otherwise appropriately qualified person.

All training given, whether formal or informal, must be documented in writing.

#### **34.1 - Informal**

Informal training in the use of pesticides can include everything from tailgate sessions to supervised on-the-job training.

Use informal pesticide training to provide employees with how-to information in simple, understandable, non-technical terms. Goals of such training include giving project workers (Pesticide Handlers) an appreciation of the importance of their work, the significance of pesticides in helping to accomplish it, and the relevant safety precautions, including required personal protective equipment (PPE) (refer to FSH 6709.11, ch. 20, sec. 22).

Self-instructional texts are intermediate between informal and formal training. Use them as appropriate.

#### **34.2 - Formal**

Formal training in pesticide-use ranges from classroom instruction in an academic institution to advanced internal or external training. Formal training often includes testing or other evaluation, which, in turn, can result in formal certification. Use formal training when employees shall be certified prior to their use of restricted-use pesticides. When engaged in applying or supervising application of restricted-use pesticides, certification of these employees should follow the guidelines in the EPA-approved USDA Forest Service Plan for Certification of Forest Service Employees (available from the Region/Station/Area Pesticide use Coordinator) and/or State certification.

### **35 - Health Monitoring for Pesticide Project Personnel**

Establish procedures consistent with chemical health and safety requirements (FSH 6709.12) for monitoring the health of employees when necessary based on a risk assessment and safety plan for pesticide application. These procedures can be routine or emergency (FSM 2153) as required or identified in plans or per label direction. Also, in some cases, States may have additional requirements for medical surveillance.

#### **35.1 - Routine**

Perform appropriate, routine medical surveillance on employees who are exposed to pesticides on a regular basis, as identified in a Job Hazard Analysis (FSH 6709.11 and FSH 6709.12; use form [FS 6700-7](#)). Consistent with pesticide precautions and directions, obtain appropriate medical attention whenever individuals complain of pesticide-related symptoms. If severe reactions/symptoms develop or are evident, they shall be treated as emergencies.

#### **35.2 - Emergency**

Provide immediate attention by medical personnel to personnel who are involved with pesticide-use activities that involve accidental spills, splashes affecting the eye, sudden onset of rashes, or symptoms of pesticide poisoning. Provide follow-up health monitoring until symptoms clear.

When consulting a physician about symptoms believed to be related to pesticide use, always provide a copy of the relevant pesticide label and a Safety Data Sheet (sec. 41.11). One, or both, will be needed to identify appropriate follow-up action.

Refer to FSH 6709.11 and FSH 2109.14 chapter 60 for further instructions relating to necessary documentation of any medical emergency involving pesticides.