7.1 What is the purpose of this chapter? This chapter outlines the Service’s requirements and responsibilities for implementing a Pesticide Users Safety Program for those involved in pesticide-related activities on and off Service lands.

7.2 What is the Service policy for pesticide user safety? The Occupational Safety and Health Administration (OSHA) requires that the Service protect personnel from on-the-job exposure to pesticides (e.g., insecticides, fungicides, herbicides, or rodenticides) that can cause adverse health effects.

7.3 To whom does this chapter apply?

A. This chapter applies to the following whose work involves mixing, formulating, loading, applying, transporting, storing, and disposing pesticides:

(1) Service employees and staff,

(2) Volunteers,

(3) Youth Conservation Corps enrollees and supervisors, and

(4) Seasonal workers.

B. Contractors, such as cooperative farmers, and others, such as Mosquito Abatement Districts, are responsible for their own safety and health program and must comply with OSHA and Environmental Protection Agency requirements.

7.4 What is the scope of this chapter?

A. This chapter covers the following pesticide-related activities:

(1) Mixing, formulating, loading, applying, transporting, and storing pesticides;

(2) Disposing of pesticides and emergency spill clean-up activities; and

(3) Developing and monitoring contracts or permits involving the application and use of pesticides by non-Service personnel on Service-owned or leased property.

B. This chapter does not cover the incidental use of "general use" aerosol pesticides sold for home use or over-the-counter repellents intended for direct application to humans or pets. All pesticide uses, including those excluded from this policy, are subject to Departmental and Service Pesticide and Integrated Pest Management policies.

7.5 What are the authorities for this chapter?


D. Occupational Safety and Health Standards (29 CFR 1910, Table 1000).

E. Pesticide Programs, Worker Protection Standard (40 CFR subchapter E, Part 170).


G. 517 DM 1, Department of the Interior Integrated Pest Management Policy.


7.6 Who is responsible for the Pesticide Users Safety Program?

A. The Director:

(1) Ensures that we maintain an effective and comprehensive occupational safety and health program, and

(2) Approves our pesticide users safety policy.

B. The Assistant Director – Business Management and Operations ensures that:

(1) We have a pesticide users safety policy, and

(2) Headquarters provides sufficient support and resources to implement the policy.

C. The Chief, Division of Safety and Health:

(1) Revises and updates this chapter, as necessary, and

(2) Provides interpretation of the requirements of this chapter and serves as a consultant to resolve Servicewide issues or questions.

D. Regional Directors and the Director, National Conservation Training Center:

(1) Provide sufficient support and resources to effectively implement the requirements of this chapter within their Regions.

(2) Ensure that staff in their Regions provide the following services:

(a) Evaluate implementation of the requirements of this chapter during safety and environmental program audits, and

(b) Assist Project Leaders/Supervisors/Facility Managers in developing a pesticide user’s safety program that includes job hazard assessments, emergency spill response plans, medical surveillance procedures, storage and disposal procedures, identification of appropriate personal protective equipment, and proper training.

(3) Ensure that staff implement procedures for protection of personal medical information in accordance with the Privacy Act and other applicable authorities.
E. The **Chief, Division of Environmental Quality** provides oversight and recommendations consistent with the safety and health requirements of this chapter when reviewing Pesticide Use Proposals (PUPs) that require approval by Headquarters.

F. **Regional Integrated Pest Management (IPM) Coordinators** provide oversight and recommendations consistent with the safety and health requirements of this chapter when reviewing PUPs that require approval by the Regional Office.

G. **Regional Safety Managers:**

(1) As requested, provide technical support to Project Leaders/Supervisors/Facility Managers, Regional IPM Coordinators, Regional Environmental Contaminants Coordinators, or other appropriate personnel to interpret the requirements of this policy and assist with the development of job hazard assessments; and

(2) Evaluate the implementation of the requirements of this chapter during field station safety audits.

H. **Project Leaders/Supervisors/Facility Managers** must:

(1) Ensure that:

(a) Pesticide users under their supervision are enrolled in an appropriate medical monitoring program based on the parameters in section 7.12;

(b) A physician or physician’s assistant has determined that employees who will be mixing, formulating, loading, applying, transporting, storing, and disposing pesticides are medically able to accomplish assigned tasks (see section 7.12); and

(c) Staff implement procedures for protecting personal medical information in accordance with the Privacy Act and other applicable authorities (see section 7.12).

(2) Ensure that pesticide users under their supervision use the appropriate personal protective equipment as described on the pesticide label and in accordance with an approved job hazard assessment. If personal protective equipment requirements call for a respirator, see 242 FW 14, Respiratory Protection for guidance.

(3) Prepare a job hazard assessment (240 FW 1), including tasks to be performed, associated hazards, and required personal protective equipment for personnel subject to this policy.

(4) Ensure that the Material Safety Data Sheets (MSDSs) for all pesticide products used at the station are readily available and accessible to all workers. In addition, personnel who are mixing, formulating, loading, applying, transporting, storing, and disposing pesticides must have appropriate labels and MSDSs at the job site.

(5) Ensure the proper handling, storage, management, and disposition of pesticides.

(6) Notify their Fire Management Officer or contracted fire fighting entities if a prescribed burn occurs or is planned to occur or a wildlife occurs in an area treated with pesticides within 90 days of the treatment.

(7) Consult with the Regional Safety Manager regarding the interpretation of the requirements of this chapter.

I. **Pesticide Users:**
(1) Participate in medical monitoring programs (see section 7.12);

(2) Attend required training (see section 7.18) and maintain State-required certification. Provide training completion information and copies of training certificates to the Project Leader/Supervisor/Facility Manager;

(3) Follow all policies and procedures required for the tasks assigned;

(4) Wear the appropriate personal protective equipment as described on the pesticide label and in accordance with an approved job hazard assessment. If personal protective equipment requirements call for a respirator, see 242 FW 14, Respiratory Protection for guidance;

(5) Notify the Project Leader/Supervisor/Facility Manager if their physical or medical conditions preclude assignment in pesticide-related field activities involving mixing, loading, formulating, transporting, applying, storing and disposing pesticides; and

(6) Take corrective action within their limits of authority and report to their Project Leader/Supervisor/Facility Manager those hazards that they cannot safely abate.

7.7 What terms do you need to know to understand this chapter?

A. Frequent Pesticide Use means when a person applying pesticide handles, mixes, or applies pesticides, with a Health Hazard rating of 3 or higher, for 8 or more hours in any week or 16 or more hours in any 30-day period. We consider any less frequent pesticide use to be infrequent use. Because there are no restrictions on the frequency of using pesticides with a health hazard rating of 1 or 2 other than what the manufacture requires on the label/MSDS, they aren’t included when we discuss frequent use.

B. General Use Pesticides are those products that will not cause unreasonable adverse effects when used according to widespread and commonly recognized practices.

C. Health Hazard is the potential for acute or chronic adverse health effects that can result from exposure to a chemical or mixture of chemicals as documented through one or more scientific studies. Chemicals can be hazardous if they are:

(1) Carcinogens;
(2) Reproductive toxins;
(3) Irritants;
(4) Corrosives;
(5) Sensitizers;
(6) Hepatotoxins;
(7) Nephrotoxins;
(8) Neurotoxins;
(9) Agents that act on the blood forming system;
(10) Agents that damage the lungs, skin, eyes, or mucous membranes; and
Other toxic agents.

D. Health Hazard Rating, as defined by the National Fire Protection Association, is the degree of health hazard of a chemical or material based on the form or condition of the material and its inherent properties. The degree of health hazard of a material should indicate the degree of personal protective equipment required for working safely with the material. Health hazard ratings can be found on most MSDSSs in either the “Other Information” or the “Fire & Explosives Hazard” section. Consult the MSDS for specific health hazards and proper personal protective equipment to use with all materials.

1 is for slightly hazardous (toxic) material that requires only minimal protection (e.g., safety glasses and gloves) and normal work clothing to work with safely.

2 is for moderately toxic or a hazardous or moderately toxic material that requires additional personal protective equipment or other equipment (e.g., chemical goggles, lab/work smock, local ventilation) in addition to that required for less toxic material. Consult the MSDS for specific health hazard and proper personal protective equipment to use with this material.

3 or 4 is for highly to extremely toxic (deadly) materials (and any carcinogen, mutagen, or teratogen). These materials require specialized equipment (e.g., respirator or exhaust hood, full face shield, rubber apron, specialized gloves, handling tongs, etc.) beyond that required for moderately toxic material. You must consult the MSDS and other safety information to determine the hazard (acute or chronic) and the proper personal protective equipment and engineering controls to safely use this material.

E. Integrated Pest Management (IPM) is a sustainable approach to managing pests by combining biological (e.g., natural predators), cultural (e.g., crop rotation), physical (e.g., traps), and chemical tools in a way that minimizes economic, health, and environmental risks.

F. Permissible Exposure Limit (PEL) is the maximum amount of exposure to, inhalation of, or skin contact with chemical or physical agents under the Occupational Safety and Health Act.

G. Pest is:

(1) Any insect, rodent, nematode, fungus, weed; or

(2) Any other form of terrestrial or aquatic plant or animal life or virus, bacteria, or other microorganism (except viruses, bacteria, or other microorganisms on or in living man or other living animals) that the Environmental Protection Agency declares to be a pest under FIFRA.

H. Pesticide is any substance or mixture of substances intended for controlling, preventing, destroying, repelling, or mitigating any pest, and any substance or mixture of substances intended for use as a plant regulator, defoliant, or desiccant.

I. Pesticide Users are those whose work involves mixing, formulating, loading, applying, transporting, storing, and disposing pesticides.

J. Restricted Use Pesticide (RUP) is a pesticide that is available for purchase and use only by those certified to apply pesticide or people under their direct supervision. Pesticides are designated as RUPs because of their relatively high degree of potential human or environmental hazard even when used according to label directions.

K. Threshold Limit Values are airborne concentrations of substances and represent conditions under which the safety and health industry believes that nearly all workers may be repeatedly exposed without adverse health effects. The American Conference of Governmental Industrial Hygienists establishes threshold limit values.
7.8 What are the safety and health issues Service employees should consider when addressing pesticide user's safety? All offices involved with pesticide-related activities must consider a large amount of safety and health information before starting field work.

A. Those applying pesticides and their Project Leaders/Supervisors/Facility Managers must consider, at a minimum, the following types of health and safety information:

(1) Job hazard assessments,

(2) Pesticide application guidelines,

(3) Medical monitoring programs,

(4) Training,

(5) Certification,

(6) Storage and disposal, and

(7) Documentation.

B. We encourage employees to use pesticide products that deliver the intended effect and pose the least hazard.

7.9 What are the elements of a Job Hazard Assessment?

A. The Project Leader/Supervisor/Facility Manager evaluates projects requiring the use of pesticides to identify specific hazards including those related to the pesticide, method of application, site to be treated, and personal protective equipment required. We must be careful to ensure that employees and the public are not exposed to harmful quantities of chemicals that are known or suspected of causing adverse human health. Before using pesticides, managers must comply with the requirements of this chapter, pesticide labels, and other applicable Service policies (also see 240 FW 1). For an example of job hazard assessment for pesticide-related activities see Exhibit 1 (PDF file).

B. Project Leaders/Supervisors/Facility Managers must maintain MSDSs for each hazardous chemical used during pesticide-related activities and ensure they are readily accessible to employees engaged in pesticide-related activities.

7.10 What are the guidelines for Service pesticide users? We must:

A. Consider the use of pesticide products that deliver the intended effect and pose the least hazard to human health.

B. Mix, formulate, load, apply, transport, store, and dispose of pesticides in a manner consistent with the methods, rates, and equipment specified on the label and applicable State and local requirements.

C. Select application methods that minimize exposure to the people applying them, other employees, the general public, and non-target organisms.

D. Apply pesticides in or around Service residences, dormitories, and offices at a time dictated by the product’s element of risk (i.e., high risk to low risk). Those products with a high risk to human health will often have a required “Re-entry Interval” (REI) indicated on the label or MSDS. Those with a low risk to human health (e.g., ant or cockroach bait traps) will not have such restrictions.
and require no occupancy limitations. Project Leaders/Supervisors/Facility Managers at facilities using products that have an REI indicated on their label must restrict access to that facility or area for the duration of the REI.

E. Ensure that procedures and necessary supplies are provided at the field stations to address pesticide mixing and loading areas for containment and cleanup of spilled chemicals and for backflow prevention (anti-siphoning devices) on water sources so that piped drinking water supplies aren’t contaminated (see 29 CFR 1910.151).

F. Notify employees, visitors, volunteers, and the public, as appropriate, before applying pesticides that have a required REI. This notification must be a posting that indicates a point of contact, the point of contact’s telephone number, and the REI.

7.11 What are the components of our medical monitoring program? We have implemented a medical program that requires personnel who engage in pesticide-related activities, as described in section 7.12, to undergo a medical examination and medical monitoring. The examinations are to assess an individual's ability to safely perform pesticide-related activities. Subsequent monitoring (i.e., laboratory testing) assists the occupational health professional to detect any absorption through the skin, gastrointestinal system, or by inhalation. Occupational health professionals also use medical examinations and monitoring results to assess body burden, reconstruct past exposure, monitor work practices, and assess the effectiveness of personal protective equipment and in-place controls.

7.12 Who is included in the medical monitoring program?

A. We include personnel in the medical examination and monitoring program if they:

(1) Have been exposed or may be exposed to concentrations at or above the published permissible exposure limits or threshold limit values (see 242 FW 4);

(2) Use pesticides in a manner that we consider “frequent pesticide use” (see section 7.7); or

(3) Use pesticides in a manner that requires a respirator (see 242 FW 14 for respirator use requirements).

B. Under some circumstances, we may include employees who use pesticides infrequently (see section 7.7), experience an acute exposure (sudden, short term), or use pesticides with a health hazard ranking of 1 or 2 in the medical examination and monitoring program. We base the decision about whether or not to include them in medical monitoring on the individual’s health and fitness level, the pesticide’s specific health risks, and the potential risks from other pesticide-related activities.

C. If you are using or considering the use of a product that does not have a National Fire Protection Association health hazard rating, consult with your Regional safety office or the Division of Safety and Health. Also consider the points in Table 7-1 to make informed decisions on setting a rating when one doesn’t exist.

<table>
<thead>
<tr>
<th>Table 7-1: Product Factors for Consideration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ask the following when a product doesn’t have a National Fire Protection Association Health Hazard Rating...</td>
</tr>
<tr>
<td>Does the product have any constituents that are carcinogens?</td>
</tr>
<tr>
<td>Where does the product’s technical information fall within the Health Hazard and Health Hazard Rating definitions?</td>
</tr>
<tr>
<td>How are you applying or planning to apply the product?</td>
</tr>
</tbody>
</table>
How much personal protective equipment is required?

7.13 Who determines if medical monitoring is necessary? The Regional Safety Manager, Project Leader/Supervisor/Facility Manager, and occupational health professional(s) should collectively make the decision about whether to include an employee in the medical monitoring program based on the criteria in section 7.12.

7.14 How does the Service use the results of medical monitoring? We use the results of medical monitoring to identify whether an employee has been exposed to pesticides, re-evaluate personal protective equipment selection and handling procedures, and determine if an employee is eligible for continued participation in pesticide-related activities. If examinations or monitoring test results indicate that an employee is not physically able to participate in routine pesticide-related activities because of occupational exposure to pesticides or other medical conditions, we remove the employee from exposure. These activities may not be resumed without a medical release.

7.15 Where do personnel go for pesticide-related medical services? We encourage the Regions to use the Federal Occupational Health (FOH) units of the U.S. Public Health Service (USPHS) to the extent possible. You can use other sources of occupational health services (i.e., local clinics or private physicians) if available. See Exhibit 2 for guidance on the examination process.

7.16 What are the requirements of medical examinations?

A. We require an exam (baseline, periodic, and termination) that constitutes a medical history, exposure history, and complete physical examination for all participants in the medical monitoring program. Typically the frequency of monitoring (e.g., blood counts) is annual, but the occupational health professional may require more or less.

B. Not participating in any phase of a required medical examination/monitoring program may result in disciplinary action, reassignment, or in a worse case scenario, dismissal from the job.

C. A Reviewing Medical Officer uses examinations and laboratory test results to determine whether to issue clearance for an employee to conduct pesticide-related activities. The clearance states whether or not the person is physically and medically able to perform his/her duties. If the official determines an employee is unable to perform his/her duties or places restrictions on activities, the clearance document states this and identifies the reasons.

D. See Table 7-2 for a list of the forms we use for pesticide medical exams.

<table>
<thead>
<tr>
<th>Table 7-2: Medical Exam Related Forms</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>FWS Form 3-2395</strong>, Recommended Exams &amp; Tests for Pesticide Users</td>
</tr>
<tr>
<td><strong>FWS Form 3-2396</strong>, Pesticide Use Profile</td>
</tr>
<tr>
<td><strong>FWS Form 3-2397</strong>, Pesticide Exam Medical Release &amp; Physician Clearance</td>
</tr>
<tr>
<td><strong>FWS Form 3-2399</strong>, FOH Medical History and Examination Form for Pesticide Workers</td>
</tr>
</tbody>
</table>

E. We set up these exams as a joint protocol so that we can also use them for people with additional duties, such as Arduous Duty Wildland Fire Fighters. (The requirements meet those of the fire medical standards annual exam.) The employee should take Exhibit 3 (PDF file) with them to the doctor as well as the other forms listed in Table 7-2.
F. Employees who have participated in the medical monitoring program described in this chapter must be provided with a termination physical examination before their separation date from the Service.

G. All examination and laboratory test results must be sent to the Service’s Reviewing Medical Officer for Pesticide Applicators for review (see Exhibit 2).

7.17 What are the requirements for mixing, storing and disposing of pesticides? We must:

A. Mix and store all pesticides in accordance with the pesticide labels and applicable Federal, State, and local laws and regulations.

B. Separate pesticides from flammable or incompatible chemicals and secure them from unauthorized access. Provide good ventilation and secondary containment in the storage, preparation, and mixing areas. Maintain in an accessible location chemical spill kits that are compatible for the pesticides stored or used.

C. Label portable pesticide containers with the name of the chemical and appropriate hazard warnings.

D. Dispose of all pesticide containers in accordance with the pesticide label. This may involve triple rinsing containers into the sprayer, if possible.

E. Protect storm and sanitary drains from spillage. Never put pesticides into the sewer or trash without proper clearance from regulatory agencies.

F. Ensure expired or unneeded pesticides are properly identified, managed, and disposed of in accordance with Federal, State, and local regulations. Contact local and State regulatory agencies for approved disposal options and facilities.

G. Maintain an inventory of pesticides, their use, and a record of the final disposition of any wastes.

7.18 What are the training requirements for applying pesticides? We must train personnel before they begin work with pesticides.

A. Pesticide users must have pesticide training and certification required by applicable policies and regulations. The Environmental Protection Agency (EPA) regulations require that people applying pesticides be certified as competent to apply Restricted Use Pesticides. States, territories, tribes, and some Federal agencies have EPA-approved certification programs. For safety reasons, we also encourage all personnel who conduct pesticide-related activities with general use pesticides to acquire pesticide applicator certification. Verify with the applicable State whether the certification requirement is for a commercial or private applicator.

B. Project Leaders/Supervisors/Facility Managers and other employees involved in pesticide-related activities (i.e., general use application) must be trained to recognize potential hazards and minimize personal exposure by using proper procedures and personal protective equipment. We achieve this through a comprehensive hazard communication program (see 242 FW 2). The hazard communication program must specifically address:

(1) Signs and symptoms of over-exposure to pesticides;

(2) Appropriate selection and use of personal protective equipment;

(3) Proper type and limitations for pesticide applications as outlined in an applicable job hazard
assessment;

(4) Proper use, storage, spill containment, and disposal of pesticides. The Regional Spill Coordinators can give you information on spill response training;

(5) Legal requirements for following all instructions on the pesticide label; and

(6) Users’ ability to read and understand MSDSs.

7.19 Are there any other safety requirements associated with applying pesticides? All personnel must follow these additional safety requirements and personal safety practices to minimize the risk of exposure during pesticide-related activities:

A. Employees must not eat, drink, chew gum or tobacco, smoke, etc. while conducting pesticide-related activities.

B. After conducting pesticide-related activities, employees must thoroughly wash their hands and face. If applying pesticides at a field location where there is no access to hand washing facilities, the applicators should carry hand wipes in their vehicle so they can wipe off their hands and face before eating and drinking.

C. We do not allow employees to apply pesticides that require tight-fitting, negative pressure respirators (see 242 FW 14) if their facial hair interferes with the mask-to-face seal.

D. Avoid contact with pesticide-contaminated surfaces or treated areas. For example, do not walk through puddles or other discolored surfaces, kneel on the ground, or place equipment on containers or on visibly contaminated surfaces. Adhere to a pesticide’s REI.

E. Provide suitable facilities for quick drenching or flushing of the eyes and body within the immediate work area where contact with materials occurs.

7.20 What are the personal protective equipment requirements? Personal protective equipment selection and use varies depending on the chemical you are mixing, loading, or applying; where it is used; and how it is used. Employees may use more personal protective equipment than what is required as long as it does not create additional hazards.

A. All personal protective equipment use and maintenance, including cleaning and storage, must comply with the pesticide label and 241 FW 3, Personal Protective Equipment.

B. Employees required to wear respirators during pesticide application must comply with all elements of their station’s Respiratory Protection Program (see 242 FW 14 and 29 CFR 1910.134).

C. If personnel wear non-disposable clothing (i.e., uniforms or coveralls, etc.) when applying pesticides, they must keep that clothing separate from the clothing they take home, and they must not wash that clothing at home. If suitable laundry equipment is not provided, then personnel who conduct pesticide-related activities must use disposable clothing (e.g., coveralls).

D. Personnel must change clothing they wear during applications before using vehicles or entering office locations. Personal protective equipment and other equipment must be decontaminated when operations are complete.

7.21 What are the documentation requirements for this chapter?

A. Project Leaders/Supervisors/Facility Managers must retain:
(1) A written record of all pesticide-related training and other training that addresses safe handling of pesticides that employees receive (see section 7.18).

(2) Job hazard assessments for as long as the related projects last,

(3) Exposure sampling results for a minimum of 30 years [29 CFR 1910.1048(o)],

(4) Respirator fit testing and medical clearance records until replaced by a more recent record,

(5) Medical clearance for doing pesticide-related activities until a new clearance is received, and

(6) A written record of routine monthly flushing of eyewashes and emergency showers, and any periodic maintenance performed per the manufacturer's standards for portable eyewash units.

B. The servicing Human Resources office must retain all medical evaluations such as physician opinions, physical exam results, physical exam supporting documentation, etc. for, at a minimum, the length of employment plus 30 years. Human Resources should retain these documents in the employee’s Employee Medical Records, SF-66D.

C. We must collect and maintain records containing personal information (e.g., medical evaluations and physician statements, etc.) in compliance with 5 U.S.C. 552a (The Privacy Act of 1974). Employees tasked with storing and maintaining such records must read and be familiar with OPM/GOVT-10. These records:

(1) Are sensitive and protected by The Privacy Act (see 204 FW 1 – 8 for more information on the Privacy Act),

(2) Must only be available to staff on a need-to-know basis,

(3) If electronic, must be password protected and only used in accordance with the routine uses identified in “OPM/GOVT-10, Employee Medical File System Records,” and

(4) If hard copy, protected in a locked file and locked room that is available only to staff who have a need to know this information in accordance with OPM/GOVT-10.

For information on the content of this chapter, contact the Division of Safety and Health. For information about this Web site, contact Krista Holloway in the Division of Policy and Directives Management.