

**Civil Engineering**

**PEST MANAGEMENT PROGRAM**

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This instruction implements AFPD 32-10, Installations and Facilities, and Department of Defense (DoD) Directive 4150.7, DoD Pest Management Program, October 24, 1983. It provides guidance for pest management at Air Force installations.

**SUMMARY OF CHANGES**

This is the initial publication of AFI 32-1053, substantially revising AFR 91-21. It updates, clarifies, and streamlines previous guidance on pest management and more fully emphasizes environmental impact. It makes AF Form 290, DD Form 1080, and DD Form 1224 obsolete.

**1. Program Objective, Definitions, and Methods:**

**1.1. Program Objective.** It is DoD policy to conduct effective pest management programs. This instruction gives responsibilities and procedures for pest management at Air Force installations and other operating locations. Provisions in this instruction are consistent with pertinent Environmental Protection Agency (EPA), Occupational Safety and Health Administration (OSHA), and Air Force Occupational Safety and Health (AFOSH) standards.

**1.2. Definitions:**

**1.2.1. Pest Management.** The effective, economical, and environmentally sound prevention or control of animal pests and vectors, undesirable terrestrial and aquatic plants, and plant diseases. It includes such methods as:

- Education.
- Inspection (surveys).
- Sanitation and proper waste management (such as use of pressure washing and self-closing compactors).
- Proper storage of food and other pest-susceptible items.
- Exclusion, trapping, and other mechanical or physical means of containing pests (such as using portable vacuum cleaners).
- Pest preventive building construction and maintenance (caulking).
- Biological control.
- Minimal use of pesticidal chemicals in a manner (such as containerized baits and crack and crevice applications) that causes the least harm to the environment.

**1.2.2. Pest.** A plant or animal out of place.

**1.2.3. Vector.** An arthropod or other organism that transmits a disease agent to another organism.

## 2. Responsibilities:

2.1. Headquarters United States Air Force/Civil Engineer (HQ USAF/CE). Approves Air Force pest management policy. (National Guard Bureau/Civil Engineer [NGB/CE] approves Air National Guard [ANG] pest management policy.)

2.2. Headquarters Air Force Civil Engineer Support Agency's (HQ AFCESA) Pest Management Program Coordinator:

- Sets standards, develops procedures, and provides technical assistance to implement Air Force pest management policy and programs.
- Coordinates with engineering and medical services to ensure that the Air Force has adequate combat pest management capability, including deployment of medical entomology and pest management teams.
- Develops and maintains a computerized work information management system (WIMS) for Air Force pest management programs.
- Establishes the Air Force self-help pest management program.
- Coordinates with Headquarters Air Force Medical Operations Agency/Surgeon General Professional Affairs and Quality Assurance (HQ AFMOA/SGPA) on aspects of the pest management program that present potential health or environmental contamination hazards.

NOTE: ANGR/CEVP provides comparable services for ANG installations.

2.3. Major Commands (MAJCOM)

- Implement pest management policies and programs for their installations.
- Use the Environmental Compliance Assessment and Management Program Pesticide Management Checklist and applicable sections of Armed Forces Pest Management Board Technical Information Memorandum No. 18, Installation Pest Management Program Guide, to help assess the effectiveness of installation pest management programs.

NOTE: All Armed Forces pest management documents to which this AFI refers are available from the Armed Forces Pest Management Board, Forest Glen Section, Walter Reed Army Medical Center, Washington DC 20307-5001.

- Certify only military and civilian pest management personnel who have met the requirements (in-residence training, correspondence course, and OJT) for certification training as specified in the Armed Forces Pest Management Board document, DoD Plan for Certification of Pesticide Applicators.
- Provide all certified pest management personnel with DD Form 1826, Certificate of Competency, and a DD Form 1826-1, Pesticide Applicator, that are valid for 3 years from certification date, unless revoked for cause.
- Help installations to implement the Air Force WIMS computerized pesticide data base, and at least quarterly (within 30 days of the end of the quarter), forward to HQ AFCESA Airfield Support Division (DMP) the consolidated pesticide applicator certification, inventory, and application data by computer. If the installation doesn't yet have WIMS, report using DD Form 1532, Pest Management Report.

2.4. The Air Force Installation Pest Control Supervisor:

2.4.1. This person works for the Base Civil Engineer (BCE) and is responsible for the installation's pest management program. As overall responsibilities:

- Works closely with other BCE, Services, and medical personnel, and the MAJCOM to produce an effective pest management program.
- Coordinates with EPA, state, local, or host nation pest management and environmental personnel as necessary.

2.4.2. For regulatory compliance:

- Makes sure pest management programs and facilities comply with all applicable Federal, state, and local laws; DoD directives; and Air Force requirements.
- Reviews the most recent Environmental Compliance Assessment and Management Program Pesticide Management Checklist for guidance in this area.
- For overseas installations outside US jurisdiction, applies the final governing standards as developed under DoD Directive 6050.16, DoD Policy for Establishing and Implementing Environmental Standards at Overseas Installations, September 20, 1991.
- Follows guidance in Military Handbook 1028/8A, Design of Pest Management Facilities, in designing new facilities or renovating existing facilities.

2.4.3. For personnel management:

- Makes sure that only certified personnel (or their direct subordinates that are within line of sight) apply restricted-use pesticides or state-limited use pesticides.
- Allows uncertified but trained pest management personnel to apply general-use pesticides when supervised by certified personnel.
- Assigns the appropriate number of certified pest management personnel according to guidance in DoD Directive 4150.7.
- Oversees the training and certification of peacetime and wartime pest management personnel (DoD and nonappropriated funded) according to the Armed Forces Pest Management Board document, DoD Plan for the Certification of Pesticide Applicators.
- Identifies personnel needing certification or recertification during the annual training survey.
- Schedules certification and recertification training available from DoD schools using information in the Armed Forces Pest Management Board's most recent Technical Information Bulletin.
- Sends requests for certification or recertification, based on successful completion of training, to the MAJCOM.

NOTE: The losing MAJCOM will recertify permanent change-of-station personnel before their departure if the certification expires 6 months before or after their departure date.

- May not assign prisoners or volunteer workers to apply pesticides
- After receiving training from pest management personnel, non-pest management personnel may apply pesticides in the following situations:
  - Adult military housing occupants and facility building managers may apply approved self-help pesticides.
  - Military personnel may apply approved arthropod repellents (aerosol, creme, lotion, stick).

- Military personnel may apply approved aerosol insecticide for quarantine insect extermination on aircraft.

#### 2.4.4. For preventing the spread of pests:

- Takes measures to prevent the movement of pests and disease vectors requiring quarantine in accordance with the following, as appropriate:
  - AFI 48-104, Medical and Agricultural Foreign and Domestic Quarantine Regulations for Vessels, Aircraft and Other Transports of the Armed Forces (formerly AFR 161-4) (Joint Departmental Publication).
  - AFPD 24-4, Customs and Border Clearance (formerly AFR 75-12).
  - AFI 24-401, Customs--Europe.
  - AFI 24-402, Customs--Pacific.
  - AFI 24-403, Customs--Southern.
  - AFI 24-104, Customs--Domestic.

NOTE: AFIs 24-401 through 24-404 replace AFRs 75-12 and 400-21.

- Inspects at the overseas point of origin any retrograde cargo shipments after contingencies or other deployments to ensure that the cargo is pest-free.

NOTE: US Department of Agriculture and US Customs personnel provide critical assistance on retrograde pest prevention procedures.

- Disinfects aircraft using MAJCOM guidance and DoD Foreign Clearance Guides.
- Coordinates with state agencies on cooperative agreements for managing undesirable plants on Air Force lands when state or private lands in the same area have such programs.

#### 2.4.5. For the installation pest management plan:

- Makes sure the plan addresses annual requirements, such as labor and pest management measures to be used against each pest.
- Includes necessary attachments such as pesticide labels, material safety data sheets, and agreements between appropriate state pesticide organizations and DoD.

NOTE: Include any other unique pest management programs in this plan.

- Base the planned pest management operations on appropriate surveillance data.
- If endangered species are present, coordinates the plan with the regional US Fish and Wildlife Service Office.
- Ensures that the plan complies with applicable EPA requirements, the Resource Conservation and Recovery Act, the Endangered Species Act, and other pertinent environmental directives by coordinating with:
  - The installation environmental coordinator.
  - The installation natural resources manager (if assigned).

- The military public health officer.
- The bioenvironmental engineer officer.
- Follows the guidance in Section II of Armed Forces Pest Management Board Technical Information Memorandum No. 18 in preparing this plan.
- Asks the MAJCOM to approve the plan.

#### 2.4.6. For contingency pesticide stocks:

- Maintains, as a minimum, contingency pesticides and pest management equipment listed in AFI 10-210, Prime BEEF Program (formerly AFR 93-3), and in tables of allowance for Harvest Bare, Eagle, and Falcon fly away kits.
- Stores contingency pesticides under the same controlled temperature, security, and other conditions as daily use pesticides.
- Rotates contingency pesticide stocks back to pest management shop inventories and replaces them with fresh chemicals annually.
- Ensures that all deploying personnel have insect repellents and permethrin-treated clothing for protection against insect vectors.
- Coordinates with the medical intelligence officer to assess the health risks from insect vectors.
- Ensures that all deploying individuals are trained to use personal protective measures against the pests they are likely to encounter.

#### 2.4.7. For destructive pests:

- Monitors pests that damage or destroy property and documents the problem in WIMS.
- Includes termite inspection frequency in installation pest management plans.

#### 2.4.8. For facility maintenance,

- Operates a self-help pest management program for military housing occupants or helps the self-help store manager to perform this function following guidance from HQ AFCESA.
- Works with facility managers and occupants of buildings other than military family housing to control minor pests through good housekeeping (see paragraph 3.3).

#### 2.4.9. For protecting the health of personnel:

- Makes sure all BCE personnel who apply pesticides receive periodic occupational physical exams (including cholinesterase testing if working regularly with organophosphate or carbamate pesticides) at a frequency determined by the local Aeromedical Council.
- Ensures that all such personnel receive a baseline physical examination and interview by military public health within 30 days after they arrive.
- Protects the health and safety of pest management personnel through training, emphasis on good work habits (such as using protective clothing and equipment), and construction that reduces or eliminates hazards.
- Provides protective clothing and equipment to all pest management persons who mix and apply pesticides (see paragraph 3.4).

#### 2.4.10. For safety:

- Gives the fire department a hard copy of installation pesticide inventories quarterly.
- Notifies the military public health staff before starting any fumigation work.
- Removes dead and stray animals in cooperation with pest management, natural resources, security police, and veterinary or military public health personnel.
- Coordinates all fumigations with installation medical, fire, security police, and safety personnel.
- Doesn't use internal combustion or electrical power-driven spraying machines for aerosol or mist sprays inside buildings without approval from the bioenvironmental engineer and the installation fire chief.

#### 2.4.11. For environmental protection:

- Uses recyclable and refillable pesticide containers and closed pesticide mixing and transfer systems as much as possible.
- Doesn't inject insecticides into the soil to control subterranean termites in any military buildings with sub-slab or in-slab heating, ventilation, or air conditioning ducts, unless personnel first turn the systems off and block them.

#### 2.4.12. Coordinates with the Bioenvironmental Engineer

- Enrolling pesticide applicators into the respiratory protection program.
- Making sure that bioenvironmental engineering receives:
  - A hard copy of installation pesticide inventories.
  - Quarterly summary of pesticide application records.
  - Pertinent material safety data sheets.
- Notifying military public health before applying pesticides in food preparation and consumption facilities, medical facilities, and child development centers.

#### 2.4.13 For records:

- Obtains necessary computer hardware and uses the WIMS pesticide software to track pesticide inventories and pesticide applicator certifications.
- Records daily pesticide use on the WIMS pesticide software or on DD Forms 1532 and 1532-1, Pest Management Maintenance Record, if WIMS isn't on-line.
- Keeps historical data on pesticide application in accordance with AFMAN 37-139, Record Disposition--Standards (formerly AFR 4-20, volume 2).

#### 2.4.14. For quarterly reports (sent by 15 days after close of quarter to the MAJCOM or ANGRC/CEVP for ANG installations), includes:

- Pesticide inventory data.
- Pesticide applicator certification data.
- Pesticide application data (equivalent of RCS DD-P&L[A&AR]1080) for all pest management operations on Air Force real property:
- Pest management shop.
- Self-help pest control.
- Roads and grounds.
- Golf course.

- Contractors.
- Forestry.
- Lessee and land permit holders.

#### 2.4.15. For getting help from other Air Force agencies:

- Requests assistance on airfield wildlife control problems, through the MAJCOM, from the Bird Aircraft Strike Hazard (BASH) team personnel at Headquarters Air Force Safety Agency Flight Safety Wildlife (AFSA/SEFW), 9700 Avenue G, Suite 279A, Building 24499, Kirtland AFB NM 87117-5671. (ANG personnel request assistance from BASH personnel at ANGRC/CEVP.)
- Requests help from 910 Airlift Group/Director Operations Spray (AG/DOS) for aerial dispersal of pesticides when ground-based pest management measures fail, are not practical, or are not feasible from a safety viewpoint.

NOTE: This Air Force Reserve unit maintains and uses a large-area, fixed wing aerial application capability to safely control vectors and pests in combat areas and on DoD installations. When planning aerial pesticide dispersal operations, contact the 910 AG/DOS Entomologist, 3976 King Graves Rd, ARS OH 44473-0910.

#### 2.5. The Military Public Health Officer:

- Determines the type, source, and prevalence of vectors and medical nuisance pests, such as biting mosquitoes, that affect the health and efficiency of personnel.
- Recommends preventive and control measures and monitors the effectiveness of BCE pest management efforts.
- Reports to BCE pest management personnel the total hours pests of possible medical importance were surveyed by them so BCE can submit the data to the MAJCOM in the quarterly WIMS report.
- Schedules occupational physical examinations, including baseline exams before pesticide exposure, for all BCE and golf course personnel who apply pesticides.
- Provides HAZCOM training to pest management personnel.

#### 2.6. Bioenvironmental Engineer

- Evaluates industrial hygiene through periodic shop visits.
- Sets local standards for obtaining and using personal protective equipment for pest management personnel.
- Trains all pest management personnel in testing the fit of respiratory protection equipment.
- Makes sure that medical treatment facilities personnel neither store or use pesticides except disinfectants and germicides.

### 3. Procedures:

#### 3.1. Cooperating with Civilian Pest Management Projects:

3.1.1. When the Air Force and a civilian community have a common pest management problem, the Air Force involvement should be proportionate to the military interest.

3.1.2. When pest management work, including aerial spray, is solely for the benefit of persons, communities, states, or other Federal agencies in the United States a request from the appropriate Federal agency must go through DoD channels.

3.1.3. In overseas areas, give comparable assistance upon a request by the appropriate host nation authorities. Get Department of State approval per DoD Directive 5100.16, Foreign Disaster Relief, December 4, 1975.

### 3.2. Identifying Pests:

3.2.1. If you need to identify insects, ticks, rodents, and other pests or vectors, ask one of the units listed in AFI 48-102, Medical Entomology Program (formerly AFR 161-1) and AFI 48-129, Joint Utilization of Certain Armed Forces Medical Laboratory Facilities (formerly AFR 161-40) (Joint Departmental Publication), or another appropriate DoD or civilian agencies.

3.2.2. In the United States, send specimens to Armstrong Laboratory/Occupational and Environmental Medical Biology (AL/OEMB), 2402 East Drive, Brooks AFB TX 78235-5114.

3.2.3. Pacific Air Forces (PACAF) installations submit specimens to Detachment 3, Armstrong Laboratory/Environmental Consulting Branch (AL/ECB), Unit 5213, APO AP 96368-5213.

3.2.4. European installations submit specimens to Headquarters United States Air Forces Europe/Readiness Support Directorate, Operations Division (HQ USAFE/RSIOOF), Unit 3050, Box 10, APO AE 09094-5010.

3.3. Good Housekeeping Practices for Housing. The pest control supervisor, facility managers, and building occupants cooperate on pest management practices to keep pests under control without using pesticides. Such practices include:

- Inspecting buildings.
- Implementing proper sanitation.
- Eliminating pest harborage.
- Excluding pests.
- Storing food properly.
- Performing minor building maintenance.
- Cooperating in scheduling work.
- Arranging and protecting building contents before pest management jobs start.
- Rearranging furnishings after pest control operations.

3.4. Protective Clothing. Protective clothing and equipment for personnel who mix and apply pesticide include:

- Coveralls.
- Respirators
- Goggles.
- Nitrile or chemical- and oil-resistant rubber gloves.
- Rubber boots.
- Safety shoes.
- Special fumigation safety equipment.



3.4.1. Keep overalls clean at all times. To prevent pesticide contamination of other clothing, use shop washing machines and dryers or clearly identify any clothing sent to base laundry services.

3.4.2. Properly dispose of any clothing that is heavily contaminated by pesticides.

3.4.3. Pest management supervisors keep the current copy of AFOSH Standard 161-1, Respiratory Protection Program, in the shop and should be familiar with its contents.

### 3.5. Managing Pesticides and Equipment:

3.5.1. BCE and golf course pest management personnel obtain pesticides and equipment, except as provided by service contracts, through Air Force supply channels.

#### 3.5.2. Pest management personnel:

- Order standard pesticide application equipment from Federal supply catalogues.
- Use pesticides from Federal listings approved by Armed Forces Pest Management Board and the preapproved WIMS Air Force master inventory.
- Request and receive approval from the MAJCOM (for ANG, contact ANGRC/CEVP) before ordering or using nonstandard, locally purchased pesticides or application equipment.

3.5.3. To make sure no one buys or issues nonapproved pesticides, use advice code 2B on the ordering documents to tell supply that it may not substitute another product for the requested item.

3.5.4. Pest management personnel use all pesticides according to label directions and use equipment according to the manufacturer's instructions.

3.5.5. The pest control supervisor, in coordination with the director of medical services staff and the base environmental coordinator, disposes of all pesticides or pesticide containers that have deteriorated or can't go back to depot stocks. The Defense Reutilization and Marketing Office processes excess stocks of pesticides for turn-in and disposal according to current environmental policy guidance.

### 3.6. Managing Pest Control Vehicles:

3.6.1. Only pest management personnel may use pest control vehicles.

3.6.2. Paint pest management vehicles with a chemical resistant coating (similar to fire department vehicles) and equip them with plastic bed liners.

3.6.3. Equip vehicles with locking compartments to ensure the safe handling, storage, and transport of pesticides and other chemicals. A telephone maintenance truck (NSN 2320-00-801-9193) will suit the purpose.

3.6.4. The truck must carry emergency phone numbers in case of spills or chemical exposures and carry a spill cleanup kit.

3.6.5. Attach placards to trailer-mounted sprayers identifying the pesticide that you are applying.

3.6.6. Keep all pesticide dispersal equipment in the BCE pest management section.

EXCEPTION: Equipment at base golf courses that have certified pesticide applicators.

3.6.7. Make sure that all prime movers used for fogging, misting, dusting, and ultra-low volume application are air-conditioned to protect the operator from excessive pesticide exposure.

3.7. Contracting for Pest Management Services:

3.7.1. When pest management service contracts are in the best interest of the Government, prepare them according to contracting regulations and the contract requirements in DoD Directive 4150.7.

3.7.2. The MAJCOM (or ANGRC/CEVP) reviews and approves all statements of work or performance work statements in coordination with the MAJCOM SG staff. The installation must receive MAJCOM approval before a request goes to the installation contracting office for procurement of a commercial pest management service.

3.7.3. The BCE's contract management office works with the installation contracting office to ensure that all prospective contractors send proof that all their personnel have current state certification (within the state of work performance) for the types of operations in the contract.

3.7.4. The prospective contractor must operate in compliance with all state and local regulations. For overseas installations outside US jurisdiction, the final governing standards under DoD Directive 6050.16 apply to pest management contract requirements.

3.7.5. The contractor complies with all applicable parts of 29 Code of Federal Regulations (CFR) 1910, 29 CFR 1925, 40 CFR 150-189 and 49 CFR 171 while on an Air Force installation, to ensure safe working conditions for contract personnel and a safe environment for the occupants of Air Force facilities.

3.7.6. Certified pest management shop personnel help quality assurance evaluators to evaluate pest management contracts.

3.7.6.1. Quality assurance evaluators themselves may receive training in pest management, according to current DoD guidance.

3.7.6.2. The contractor furnishes the quality assurance evaluator with labels and material safety data sheets for all contract pesticide materials. The contractor or quality assurance evaluator sends labels for nonstandard pesticides that are not in the WIMS master pesticide inventory to the MAJCOM for approval within 30 days after contract award.

3.7.6.3. The contractor provides data on daily pesticide use to put into the WIMS pesticide management database. The contractor or quality assurance evaluator inputs the data into WIMS and forwards it quarterly (by 15 days after close of quarter) to the MAJCOM.

3.7.6.4. The quality assurance evaluator maintains historical pesticide data according to AFI 37-139.

#### 4. Technical Publications:

4.1. Beneficial Publications. Every pest control shop should have this AFI and the following publications:

- AFMAN 32-1075, Weed Control and Plant Growth Regulation (formerly AFM 91-19).
- Armed Forces Pest Management Board publications (Technical Information Memorandums, Military Pest Management Handbook, Disease Vector Ecology Profiles) and MIL HBK 1028/8A.
- Pest control trade journals.
- State agricultural extension service pest management literature.
- Pest management textbooks.

NOTE: ANG personnel may contact ANGR/CEVP for additional guidance.

4.2. Sources. Contact your MAJCOM or HQ AFCEA/DMP for current specifics.

#### 5. Forms Prescribed:

- AF Form 646, US Air Force Pest Management Review.
- DD Form 1532, Pest Management Report.
- DD Form 1532-1, Pest Management Maintenance Report
- DD Form 1826, Certificate of Competency
- DD Form 1826-1, Pesticide Applicator

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The Civil Engineer