

**Armed Forces Pest Management Board
Technical Guide No. 1**

AFPMB Publications

July, 2011



**Published and Distributed by the
Armed Forces Pest Management Board
Information Services Division
Fort Detrick Forest Glen Annex
Bldg. 172, Forney Road
Silver Spring, MD 20910-1230**

**Office of the Deputy Under Secretary of Defense
for Installations and Environment**

AFPMB Technical Guides

This is one of a series of Technical Guides (TGs) published by the Information Services Division (ISD), Armed Forces Pest Management Board (AFPMB). The AFPMB is a directorate within the Office of the Deputy Under Secretary of Defense (Installations and Environment) that recommends policies and procedures, provides guidance, and coordinates the exchange of information related to pest management throughout the Department of Defense (DoD). As a unit of the AFPMB, ISD collects, stores and disseminates published and unpublished information on arthropod vectors and pests, natural resources, and environmental biology important to the DoD. Other ISD products include country- or region-specific Disease Vector Ecology Profiles (DVEPs). All TGs and DVEPs, as well as ISD's database of over 200,000 articles on pest management and medical zoology, are available at the AFPMB Web site <<http://www.afpmb.org>>.

TGs (formerly Technical Information Memoranda or TIMs) are not policy documents; rather, they provide technical guidance for the use of the DoD pest management community and others. Accordingly, TGs should not be construed or referenced as policy. DoD pest management policies may be found in DoD Instruction 4715.1, "Environmental Security," DoD Instruction 4150.7, "DoD Pest Management Program," other DoD directives and instructions, and implementing component directives/instructions/regulations.

Inquiries, comments or suggestions for improving TGs may be directed to the Chief, ISD, at
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Section 1. Introduction

a. Purpose.

The purpose of this guide is to provide an overview of the mission of the Armed Forces Pest Management Board (AFPMB) and to provide a single reference document listing AFPMB publications relevant to executing the Department of Defense (DoD) pest management program.

b. Background

1) It is DoD policy to establish and maintain a safe, effective, and environmentally sound integrated pest management program to prevent or control disease vectors and pests that may adversely impact military readiness or operations ([reference 2.a](#)). The DoD pest management program applies to all DoD operations, activities, and installations worldwide including appropriated fund activities, non-appropriated fund activities, contracted activities, and Government-owned, contractor-operated facilities.

2) The AFPMB is the organization responsible for coordinating the DoD pest management program ([reference 2.b](#)). The AFPMB does this by recommending policy, providing guidance, and coordinating the exchange of information on all matters related to pest management. The Board accomplishes its mission by developing and recommending policy to the Under Secretary of Defense for Acquisition, Technology and Logistics through the Under Secretary of Defense for Installations and Environment.

3) Tasks associated with the AFPMB mission include:

a) Developing and maintaining manuals and other guidance necessary to implement the technical requirements of the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA) ([reference 2.c](#)).

b) Implementing the DoD plan for certification of pesticide applicators and develops comprehensive training guidance for DoD pest management personnel ([reference 2.d](#) and [reference 2.e](#)).

c) Coordinating DoD contingency disease vector and pest management activities with the Joint Staff, the Combatant Commands and other contingency planning organizations.

d) Serving as an advisory body to the DoD Components and providing timely scientific and professional pest management advice.

e) Developing and distributing technical information and guidance on pest management to the Components by means of Technical Guides (TGs), formerly known as Technical Information Memoranda (TIMs), Bulletins (TIBs), Disease Vector Ecology Profiles (DVEPs) and similar publications ([Section 3](#)).

f) Reviewing and approving the acquisition, stocking, and deletion of pest management materiel (excluding disinfectants and biocides) by the Defense Logistics Agency (DLA) into the DoD supply system ([Section 3](#)).

g) Coordinating and developing requirements for pest management research, development, testing and evaluation in the DoD.

h) Operating the Defense Pest Management Information Analysis Center (ISD).

Section 2. References

- a. DoD Directive 4715.1, *Environmental Security*
<http://www.dtic.mil/whs/directives/corres/pdf/471501p.pdf>
- b. DoD Instruction 4150.7, *DoD Pest Management Program*
<http://web7.whs.osd.mil/pdf/i41507p.pdf>
- c. Chapter 6, Section 136 et seq. of title 7, United States Code, *Federal Insecticide, Fungicide, and Rodenticide Act 1976 (FIFRA)*, as amended
<http://www.epa.gov/agriculture/lfra.html>
- d. DoD Instruction 4150.7-P, *DoD Plan for the Certification of Pesticide Applicators*
<http://www.afpmb.org/content/directives-instructions-and-mous-important-afpmb>
- e. DoD Instruction 4150.7-M, *DoD Pest Management Training and Certification*
<http://www.afpmb.org/content/directives-instructions-and-mous-important-afpmb>

Section 3. AFPMB Publications

The latest versions of all the publications mentioned herein, as well as other valuable pest management information and links, are available on the AFPMB web site at <http://www.afpmb.org/>.

a. Technical Guides (TGs) {formerly Technical Information Memoranda (TIMs)}

TGs are technical guidance documents prepared by the AFPMB on specific pest management and disease vector control topics. They are located at <http://www.afpmb.org/content/technical-guides>. TGs are reviewed annually by their sponsoring AFPMB standing committee to determine if they need to be updated.

1) **TG 1**, *AFPMB Publications*, 2003. This document provides an overview of the mission of the Armed Forces Pest Management Board (AFPMB) and to provide a single reference document listing AFPMB publications relevant to executing the Department of Defense (DoD) pest management program.

2) **TG 6**, *Delousing Procedures for the Control of Louse-borne Disease During Contingency Operations*, 2002. This guide provides guidance on safe, effective and efficient procedures for controlling outbreaks of louse-borne disease such as epidemic louse-borne typhus (*Rickettsia prowazekii*), epidemic relapsing fever (*Borrelia recurrentis*), trench fever (*Bartonella quintana*) in enemy prisoners of war and displaced persons camps under control of the Department of Defense (DoD).

3) **TG 7**, *Installation Pesticide Security*, 2003. This document is designed to inform command and staff personnel on military installations about potential security problems related to pest management, including storage and transportation of pesticides (toxic substances), application of pesticides, sale and distribution of pesticides, and public health and agricultural implications. Measures to safeguard pesticides and pesticide application equipment are discussed as they relate to installation security. Information on the toxicity of pesticides and basic first aid measures associated with pesticide exposure or poisoning is provided.

4) **TG 11**, *Hydrogen Phosphide Fumigation with Aluminum Phosphide*, 1998. The primary sources of complete instructions for the safe use of aluminum phosphide are the manufacturer's pesticide label and fumigation applicator's manual. This guide provides information expanding on the information provided in those primary documents.

5) **TG 13**, *Ultra Low Volume Dispersal of Pesticides with Ground Equipment*, 1999. This guide provides information concerning ULV ground dispersal techniques, equipment, maintenance considerations, and methods for required equipment operation evaluation. Equipment and techniques utilized for indoor or aerial ULV dispersal of insecticides are not included.

6) **TG 16**, *Pesticide Fires: Prevention, Control and Cleanup*, 1981. This guide has been prepared to aid installation personnel to prevent, control, and cleanup a pesticide fire. It is not intended to supercede or preclude existing responsibilities and requirements outlined in military component regulations.

7) **TG 17**, *Military Handbook: Design of Pest Management Facilities* (= MIL-HDBK-1028/8A, *Design of Pest Management Facilities*), 1991. *Under Revision*

8) **TG 18**, *Pest Management Installation Program Guide*, 2003. This guide provides information on installation pest management programs and guidance for evaluating them. It serves to establish uniformity in DoD pest management programs, and to help both the personnel responsible for executing the programs and those responsible for their oversight.

9) **TG 20**, *Pest Management Operations in Medical Treatment Facilities*, 2002. This TIM provides guidance on appropriate control measures for use against pests found infesting medical treatment facilities.

10) **TG 21**, *Pesticide Disposal Guide for Pest Control Shops*, 1986. The purpose of this guide is to provide specific guidance on procedures for the minimization and disposition of excess pesticides, pesticide-related wastes, and pesticide containers.

11) **TG 22**, *Guidelines for Testing Experimental Pesticides on DoD Property*, 2001. This guide highlights actions that should, or are required to be taken when designing and conducting research with experimental pesticides on DoD property. This guidance is to ensure that researchers and project managers involved in the investigations are familiar with the applicable legal requirements not only within DoD, but also those of other federal and state agencies.

12) **TG 24**, *Contingency Pest Management Guide*, April 15, 2002. This guide provides basic information on using pesticides to control insects and other pests that transmit disease or otherwise negatively affect military operations overseas. It includes recommendations on pest management chemicals and equipment available for use during contingency operations.

13) **TG 24/TIM 25**, *'Devices for Electrocuting Flying Insects,'* was cancelled and incorporated into TG 29 in April 2001.

14) **TG 26**, *Tick-Borne Diseases: Vector Surveillance and Control*, 1998. This guide was written to consolidate information and procedures available for the surveillance and control of vectors of tick-borne diseases.

15) **TG 27**, *Stored-Product Pest Monitoring Methods*, 2000. This guide provides information on various monitoring and trapping devices for stored-product pests including pheromone-based products.

16) **TG 29**, *Integrated Pest Management In and Around Buildings*, 1994. This guide provides a sampling of techniques and procedures to illustrate the integrated pest management approach to pest control, but is not a cookbook on IPM.

17) **TG 30**, *Filth Flies: Significance, Surveillance, and Control in Contingency Operations*, April 15, 2002. This document provides basic information about the biology of several species of fly collectively known as filth flies. It discusses their medical importance and nuisance impacts within the context of military operations and exercises. It also provides guidance on preventing fly problems, and implementing control strategies using pesticides and traps.

18) **TG 31**, *Contingency Retrograde Washdowns: Cleaning and Inspection Procedures*, 1993. This guide provides guidance to individuals responsible for recommending or conducting washdowns in support of the USDA agricultural and public health inspections that are required for incoming ships, aircraft, and equipment returning from overseas.

19) **TG 34**, *Bee Resource Manual with Emphasis on The Africanized Honey Bee*, 1995. This guide was developed with the assistance of the Texas Agricultural Extension Service to provide DoD pest management and public health officials with an understanding of honey bee biology, the potential impact of Africanized honey bees (AHBs), and the measures required to ensure the safety of DoD personnel that may come in close proximity to AHBs.

20) **TG 35/TIM 35**, *Termite Inspections*, was cancelled and incorporated into TG 29 in December 2001.

21) **TG 36**, *Personal Protective Measures Against Insects and Arthropods of Military Significance*, April 18, 2002. This guide provides preventive medicine information and guidance to DoD personnel who may come into contact with nuisance or disease-carrying arthropods (disease vectors), or who are responsible for protecting the health of such personnel. It describes the DoD insect repellent system and other techniques that provide maximum, safe protection from arthropod attack such as the use of protective clothing and equipment, repellents, pesticides, and other strategies.

22) **TG 37**, *Guidelines for Reducing Feral/Stray Cat Populations on Military Installations in the United States*, 1996. This guide provides guidelines for the removal of feral/stray cat populations on military installations in the United States in order to prevent injury or disease to DoD personnel and pet animals kept on the installation. It also addresses methods to provide for the welfare of feral/stray cats themselves and of wildlife on the installation, and provides recommendations on how to develop a cat control program that obtains general public input and assistance.

23) **TG 38**, *Protecting Meal, Ready-to-Eat (MREs) Rations and Other Subsistence During Storage*, 1998. This guide implements guidance for the protection of MRE rations owned or under the custody of military installations and deployed forces. Although it is geared to MRE storage, most of the information in the TIM also applies to other stored subsistence.

24) **TG 39**, *Guidelines for Preparing DoD Pest Control Contracts Using Integrated Pest Management*, 1997. This document provides guidance on the preparation of DoD pest control contract specifications. It should be used as a tool for implementing Integrated Pest Management

practices and reducing pesticide use. A guide performance work statement (GPWS) is included and is also available on CD-ROM, disk, or from the AFPMB web site. These guidelines are applicable to installation and contingency pest control contracts.

25) **TG 40**, *Methods for Trapping and Sampling Small Mammals for Virologic Testing* (= CDC Manual), 1995. This CDC manual provides guidance on the conduct of ecological and epidemiological studies of rodents and other small mammals that may carry diseases. Although focused on hantavirus infections, the principles given are applicable to sampling and collection of any small mammals that may carry disease.

26) **TG 41**, *Protection from Rodent-Borne Diseases with Special Emphasis on Occupational Exposure to Hantavirus*, 1999. This document provides guidance on the protection of individuals from rodent-borne diseases. Information on diseases associated with rodents is presented in tabular form. The contents of this manual address the prevention of diseases caused by hantaviruses, which are spread through inhalation or ingestion of materials contaminated with rodent saliva, urine, or feces.

27) **TG 42**, *Self-Help Pest Management*, 1999. This guide is intended for installation personnel who wish to establish and maintain a self-help pest management program. It presents some ideas and methods aimed at maximizing the ability of family housing residents to control pests in their quarters. This document may also serve as guidance where self-help pest management is extended beyond family housing to other installation activities, or in situations where self-help pest management would be beneficial, but there is no family housing (e.g., Military Reserve Centers, National Guard Armories).

28) **TG 43**, *Guide to Pest Surveillance During Contingency Operations*, July 2002. This guide is under revision with an expected new release date of November, 2011.

29) **TG 44**, *Bed Bugs - Importance, Biology, and Control Strategies*, 2006. The common bed bug, *Cimex lectularius* L., the tropical bedbug *C. hemipterus*, and a few closely-related species of blood-feeding true bugs (Hemiptera: Cimicidae) have been persistent pests of humans throughout recorded history. They probably evolved as cave-dwelling nest ectoparasites of mammals (probably bats), with at least one species later switching to feed mainly on cave-dwelling humans. As those humans moved from caves into tents, then houses; those bugs, especially the common bed bug, were probably brought along.

30) **TG 45**, *Storage and Display of Retail Pesticides*, 2006. The purpose of this Technical Guide is to provide basic information on storage and display of retail pesticides to ensure the safety of employees and customers, protect the environment, and conserve DoD funds. This TG is not a substitute for government laws and regulations or pesticide label instructions – in the U.S. and its territories, the pesticide label is law. Compliance with this TG ensures that retail operations are in compliance with pesticide storage and display requirements, as provided in DoD Instruction 4150.7, DoD Pest Management Program.

31) **TG 46**, *DoD Entomological Operational Risk Assessments*, 2011. This Technical Guide provides a basis for performing entomological operational risk assessments (EORAs) for deployed locations in support of force health protection and combat effectiveness.

b. Disease Vector Ecology Profiles (DVEPs)

DVEPs are concise summaries of vector-borne and other militarily significant diseases that occur in specific countries or regions. DVEPs focus on vector-borne diseases and emphasize essential epidemiology, vector bionomics, behavior, and pesticide resistance. Selected bibliographies of pertinent disease and disease vector literature are included. DVEPs are compiled from unclassified literature and are intended to provide a historical profile of arthropod-borne disease epidemiology in the recent past for selected geographical areas. DVEPs are located at <http://www.afpmb.org/content/disease-vector-ecology-profiles>.

- 1) Bolivia, 1998
- 2) Colombia, 1998
- 3) Ecuador, 1998
- 4) Haiti, 1994
- 5) Honduras, 1992
- 6) The Koreas, 1994
- 7) Peru, 1998
- 8) Somalia, 1993
- 9) Thailand, 1993
- 10) REGIONAL: Caribbean, July 2002
- 11) REGIONAL: Central Europe, April 2001
- 12) REGIONAL: East Asia, April 2002
- 13) REGIONAL: Middle East Regional, October 1999
- 14) REGIONAL: North Africa Regional, May 2000
- 15) REGIONAL: South Central Asia, September 2001

c. DoD Pest Management Materials Lists

- 1) *Standard Pesticides List*
- 2) *Contingency Pesticides List*
- 3) *DoD Pest Management Materials Other Than Pesticides*

d. Military Pest Management Handbook

The Military Pest Management Handbook has been discontinued, as of March 10, 2006.

- e. DoD Integrated Pest Management Methods Wall chart. This poster-sized wall chart provides practical suggestions for the control of many of the common pests on DoD installations. Paper copies of the wall chart are available by contacting ISD at (301) 295-7476 or DSN: 295-7476, or by FAX at (301) 295-7473.