

**U.S. Army
Environmental
Center**

Guidelines to Prepare

Pest Management Plans for Army Installations and Activities

September 1996

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Foreword

This users guide is one of a proposed series to be published by the United States Army Environmental Center (USAEC). It addresses key Department of Defense (DOD) and Department of Army (DA) policy requirements and objectives that concern Installation Pest Management Plans (IPMP) and should be useful to preparers and users of IPMPs within the Total Army, to include Reserve and National Guard organizations and activities.

Acknowledgments

The USAEC developed this user's guide with support from the United States Army Center for Health Promotion and Preventive Medicine (USACHPPM). A model installation pest management plan, prepared by Mr. Jim Harrison of USACHPPM Direct Support Activity (DSA) West, served as the basis for all of the format examples in this users guide.ⁱ Contributions by Mr. Karl Neidhart and Mr. Ben Pagac of USACHPPM DSA-North, Mr. Denny Kuhr of USACHPPM DSA-South, and Mr. Brian Zeichner of USACHPPM-Edgewood significantly improved the early drafts of this document. Ms. Teri Shirnia and Mr. Chuck Loehner of SRA International, Incorporated provided exemplary editorial support.

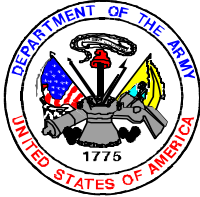
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ⁱ Copies of this model IPMP, which served as the source for excerpts and examples illustrated in this users guide, are available from any of the USACHPPM-DSA offices, or by calling the USACHPPM Pesticide Hotline at 410-671-3773, or DSN 584-3773.



Guidelines to Prepare Pest Management Plans for Army Installations and Activities

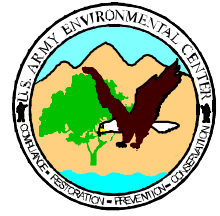


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1. Introduction

Objective

The goal of this users guide is to help you prepare or revise a pest management plan for your installation or activity that meets Department of Defense (DOD) and Department of the Army (DA) standards for approval.¹ In addition, and perhaps most importantly, the information in this guide may help you (or your supervisors) to manage your program more effectively.

This guide has been prepared and reviewed by pest management professionals at all Army levels of command and reflects their consensus about **what** a pest management plan should address and **how** it should be written. We have explained the reasons behind this advice, and have provided examples whenever possible. While we recognize that there is no single format that will meet the planning needs of all installations and activities, the information in this guide was developed to help you select a format that is most responsive to your specific planning needs and requirements.

Background

When used as a verb, "to plan" means to arrange events of a process in an orderly fashion. When used as a noun, "a plan" is the written evidence that the planning process has occurred. Written plans, including pest management plans, should never be ends in themselves, i.e., a way to meet a requirement; rather plans are a means *to* an end, i.e., useful management tools.

The ability to plan (and to write a plan) is a necessary skill for anybody charged with the responsibility to develop or manage government projects or programs. Not surprisingly, the Department of Defense places a premium on planning and considers planning as a tool to describe 1) a program's needs and assets and 2) ways in which to solve problems. In fact, DOD policy now includes milestones and guidelines for

¹ DOD pest management policy is provided in DOD Instruction 4150.7, *DOD Pest Management Program*, 22 April 1996. Program requirements of this instruction supersedes those of Army Regulation 420-76, *Pest Management*, 3 June 1986, where inconsistencies occur.

completion of pest management plans at all DOD installations as one of three pest management program measures of merit.²

Regulatory Requirements for Pest Management Plans

Department of Defense Policy establishes pest management planning requirements for the component services.³ The Army and other component services can promulgate additional requirements in their own regulations if consistent with DOD policy objectives.

DOD Requirements

DOD policy for IPMPs is given in DOD Instruction (DODI) 4150.7 and applies to all DOD operations and installations worldwide, to include appropriated and non-appropriated fund (NAF) activities, government-owned-contractor operated (GOCO) facilities, and commercially contracted services by these activities. DODI 4150.7 does not apply to civil works functions of the Army Corps of Engineers (ACE) or to State-owned or operated installations and facilities used by the National Guard. These agencies, however, often incorporate provisions of DOD pest management policy into their regulations and procedures.

DOD requires all installations with pest management requirements to have pest management plans. Installations or activities with more than 0.5 productive work years of pest management work (to include program administration, quality assurance evaluation, and contract supervision) must have their own plans. Installations or activities with less than this level of effort must also have separate plans unless their pest management operations are included within the scope of the plan of a *supporting installation*. Other DOD requirements or recommended procedures will be described elsewhere in this document as appropriate.

² Measure of Merit #1 requires all DOD installations by FY 97 to have pest management plans reviewed and approved annually by MACOM pest management consultants, and as specified in DOD Instruction 4150.7, *DOD Pest Management Program*, 22 April 96.

³ There are no direct statutory requirements for pest management plans under the Federal Insecticide Fungicide and Rodenticide Act (FIFRA). However, DOD has been granted authority by the Environmental Protection Agency under FIFRA [40 CFR 171.8] to promulgate training and certification requirements for DOD pest management personnel on DOD installations. One of these requirements is for pesticide applicators to perform their duties under standards established by installation pest management plans that have been reviewed and approved by DOD pest management consultants.

Army Requirements

Army pest management planning requirements are given in AR 420-76, chapter 3, and are entirely consistent with the DOD policy. Army policy grants much authority to Army Major Command (MACOM) pest management consultants to review and approve pest management plan formats, and to provide guidance for small or otherwise atypical installations on ways to meet program planning goals and objectives

Users Guide Elements

This guide has been organized as follows:

- **Getting Started** provides you with helpful hints for planning your pest management program and developing your IPMP.
- **Developing Your Installation Pest Management Plan** describes the basic components for documenting your pest management program.
- **The Model IPMP Format** provides guidance for developing each section of your IPMP according to your pest management program needs, and includes examples.
- **Installation Pest Management Plan Quality Assurance Checklist** provides a method for evaluating your IPMP goals and the requirements of DOD and Army pest management policy.

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2. Getting Started

Read Through the Users Guide

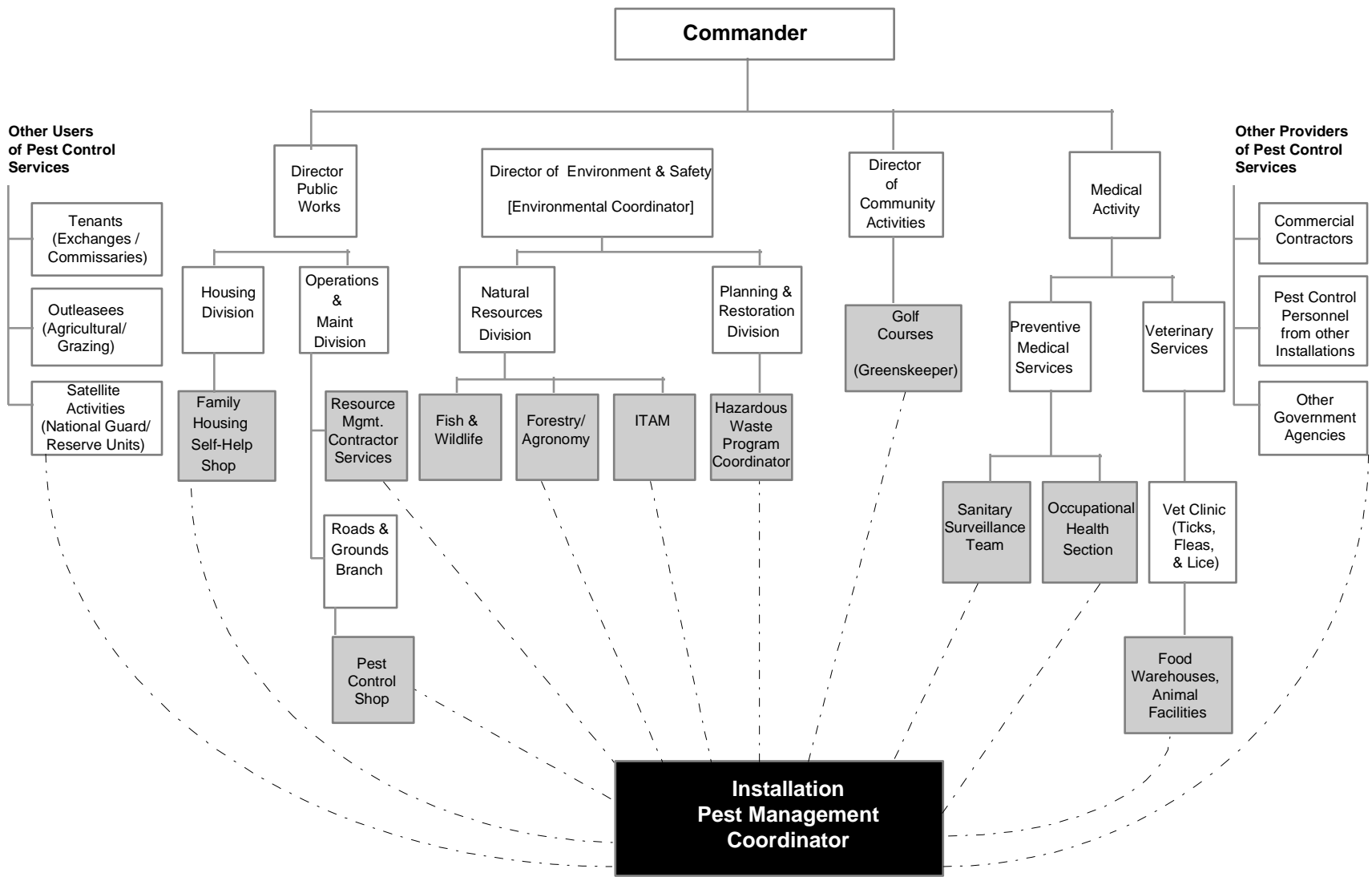
This guide provides you with the DOD and Army pest management goals and objectives that will help you identify **what** information needs to be included in an IPMP and **why**; **who** your best resource is for the information; **where** you can get the information; and **how** you can organize your IPMP to effectively document your pest management program strategy.

Determine the Operational Scope of Your Installation Pest Management Plan

Do the pest control operations to be addressed in your IPMP all occur at your installation, or do they occur in part at *satellite* facilities outside installation legal boundaries? Are pest control requirements at your installation or activity low enough (less than 0.5 man-year of effort, see Introduction, page 1-2) to be included within the scope of another *supporting* installation? The answers to these important questions will allow you to determine the effective operational scope of your IPMP. Figure 2-1 illustrates many of the providers and users of pest control services or pesticides at large Army installations, and should help you to determine the true scope of pest control operations that need to be addressed in your IPMP.

This is particularly true for plans that address pest control programs at National Guard and Army Reserve activities, many of which are located in armories or other isolated facilities that have limited pest control needs, and are not *true installations* in the traditional sense of the word. In such cases it may make sense to work with your MACOM pest management consultant to define “installation” in less traditional, but more practical terms. For example, it may be possible to define “installation” as all of the National Guard activities within a state, or all of the Army Reserve Activities within a Regional Support Command. Inactive or less active depots, arsenals, and supply points may possibly be grouped administratively into *installations* in ways that allow their continuing pest control needs to be addressed within a single IPMP.

We advise that you work with your MACOM pest management consultant for solutions to such potential problems.



**Figure 2-1. Pest Management Operations at a Large Army Installation
(based on a 1995 schematic developed for Fort Riley, Kansas)**

Contact Appropriate Personnel and Gather Necessary Information

To develop or revise your IPMP you will need to contact key personnel who can assist you to gather the information necessary to plan, design, and document your pest management program. The following section identifies a short list of documents relevant to pest management planning and the installation personnel most familiar with such documents.

- **Installation Master Plans** provide a physical description of your installation and installation assets. This document should help you to identify assets that could be adversely affected by unmanaged pests. Installation Master Plans (IMP) are commonly found with the directorates of public works or facilities engineers.
- **National Environmental Policy Act (NEPA) Documents** (i.e., installation Environmental Assessments or Environmental Impact Statements) typically include summaries of environmental consequences of installation operations and the mitigating actions to lessen these consequences. Many installations have not adequately addressed the environmental impacts of their pest management programs, but may address impacts of related activities such as threatened and endangered species, sensitive habitats and wetlands, and disposal of pesticides and other potentially hazardous wastes that may be a consequence of this program.⁴ Installation NEPA documents are maintained by the installation environmental coordinator.
- **DD Form 1532-1 Records and 1532 Reports or equivalent formats** provide daily, monthly, and or quarterly summaries of pest control activities including surveillance, trapping, and pesticide applications. These records and reports should provide you with an historical and present day perspective to identify pests, their locations, and the pesticides used on your location. They are commonly kept by pest control shop supervisors, or by the installation pest management coordinator, who serves as the commander's point of contact for all installation pest management records, reports, and plans.
- **Performance Work Statements (PWS) for Commercial Pest Control Services** describe legal and technical agreements between an installation and pest control contractors. Copies of installation pest control PWSs are kept by the installation contracting offices that provide contract support for the users of pest control services. Large installation may have several contracting authorities, e.g., DPW, DPCA-golf courses, tenant organizations, etc., that may need to be contracted for these documents.
- **Installation Pest Management Plans** describe the full scope of pest management activities at the installation. Even if not recently approved, an IPMP should still contain much of the information necessary to develop a more effective IPMP. The IPMPs are maintained by the installation pest management coordinator.
- **Installation Natural Resource Management Plans (INRMP)s** describe the natural resource programs at an installation, e.g., fish and wildlife, forestry, agriculture and grazing, wetlands, threatened and endangered species, outdoor recreation. The INRMPs include the conservation

⁴ Army Policy (i.e., AR 420-76, paragraph 3-19) requires appropriate NEPA documentation for all pest control operations on Army property, especially those operations that involve applications of pesticides by air.

strategies and approaches to mitigate harmful effects of the management approaches (to include pesticide applications) and are maintained by installation natural resource managers, who usually are assigned to installation directorates of public works or environmental offices.

- **Spill Prevention Plans**, which include the Spill Prevention, Control and Countermeasures (SPCC) Plan and the Installation Spill Control Plan (ISCP), describe the types and locations of stored chemicals (to include pesticides) at an installation and the procedures to be followed in event of spills or other unintended releases of these materials into the environment. These plans are maintained by installation environmental coordinators, but copies should also be available at installation safety offices and fire departments.

Funding Your Installation Pest Management Plan

Like every other project or operation at an Army installation, efforts to prepare or revise a pest management plan must be adequately funded. One of the jobs of an installation pest management coordinator is to make sure that funds are identified and programmed for this purpose in a timely manner, which usually means at least one-year before you plan to write or revise the document.

Sources of Funding

Pest management plans are fundable under Army environmental program requirements (EPR), but funding needs must be identified in the EPR reports (formerly 1383 report) submitted each year by your installation environmental planners.⁵ If funding is not obtained through this mechanism, then installation resource managers may be able to justify OMA (Operations and Maintenance, Army) or other fund codes to underwrite your IPMP expenses.

IPMP Costs

Costs to prepare and update IPMPs will vary greatly depending on the following factors:

- Size and complexity of the pest management program
- Existence (and completeness) of an earlier IPMP
- Preparer (in-house staff or commercial contractor)

In general, the cost to prepare the first pest management plan for an installation or activity should be \$25,000 or less. Costs to update an approved plan should be a fraction of this cost, i.e. less than ten percent of initial expenses, unless an existing plan requires extensive revisions to reflect major program changes or reviewer comments.

⁵ Detailed guidance on EPR reports is provided in the HQDA ODEP memorandum/enclosure *Policy and Guidance for Identifying U.S. Army Environmental Program Requirements (EPR) Report*, 22 December 1995.

3. Developing Your Installation Pest Management Plan

Overview

To develop an IPMP that complies with DOD and Army Policy, you must fully understand your installation's pest management program. A well-designed and executed program will greatly simplify your efforts to write an IPMP, as there is a direct relationship between well-planned programs and well-written IPMPs. Developing your IPMP will simply be a case of documenting your program in a user-friendly format that assists personnel in carrying out their pest management operations. Further, in developing your IPMP you may identify sections of your pest management program that need improvement. Figure 3-1 illustrates the components of a successful pest management program.

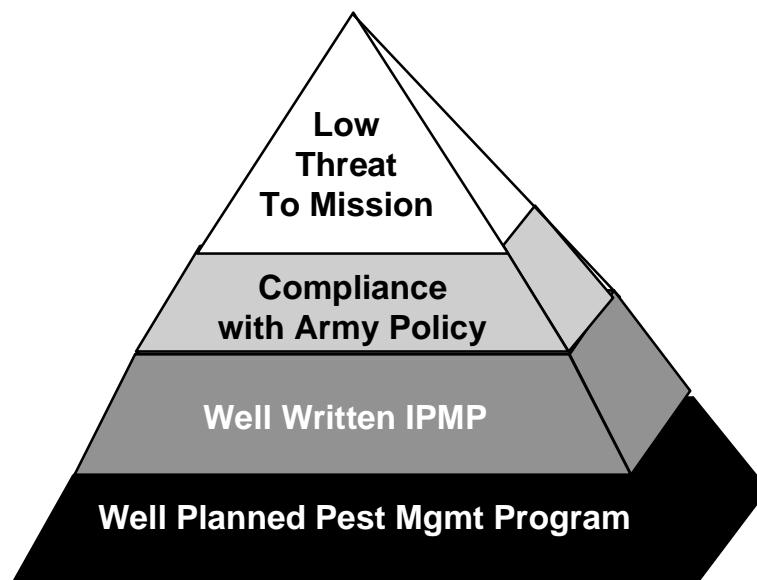


Figure 3-1. Components of a Successful Pest Management Program

Designing Your Installation Pest Management Plan

Army installations have different pest management requirements. To help you address these requirements effectively, we recommend that you consider the following steps as part of your planning process:

- Step One: Identify Your Installation Program Components
- Step Two: Complete Your Integrated Pest Management (IPM) Outlines
- Step Three: Write Your Installation Pest Management Plan

Step One: Identify Your Installation Program Components

One of the first issues you must address concerns the *operational boundaries* of the installation your plan will address. You can gather the essential data to develop your IPMP by answering six key questions:

- What are the potential human and veterinary health risks from pests at your installation?
- What are the property assets and/or natural, cultural, historical resources at potential risk of pest damage at your installation?
- What pest-related threats to these assets and resources occur at your installation?
- What assets do you need to manage pest species to acceptable levels?
- How will you control the pests at your installation?
- What regulatory requirements influence your program?

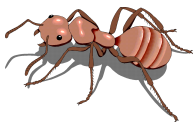
Step One
Identify Your
Program Components



Health & Welfare



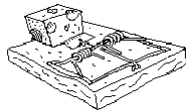
Assets



Pests



Resources



Procedures



Regulatory
Requirements

Step Two
Complete Your
IPM Outlines

Integrated Pest Management
Outlines

PEST: Mosquitoes
SITE: Cantonment Area

Purpose:
To manage adult mosquitoes
on the main post area, including
family housing.

Surveillance:
Conducted by pest management
technicians and Preventive Medicine
Personnel.

Step Three
Write Your
IPMP

**Installation Pest
Management Plan**

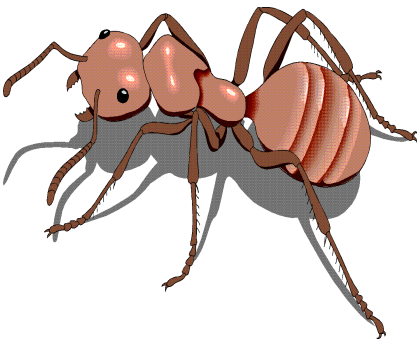
Figure 3-2. Installation Pest Management Planning Process



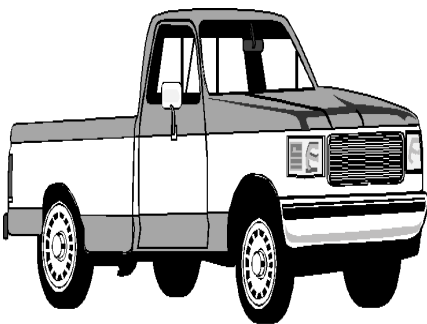
Question One: What are the potential human and veterinary health risks from pests at your installation? This information should be available from annual health reports prepared by your installation or activity medical authority or public health officials. USACHPPM also provides summaries of installation surveillance data for medically important arthropods and vertebrate pest species.



Question Two: What are the property assets and/or natural, cultural, historical resources at potential risk of pest damage at your installation? Installation Master Plans and Natural, Cultural, and /or Historical Resource Management Plans (and the personnel who prepare and maintain these documents) should be excellent sources for such information. In certain cases environmental assessments and/or other environmental documents (endangered species or wetlands management plans) may have been prepared to address resource management problems of particular concern to the installation and local community.

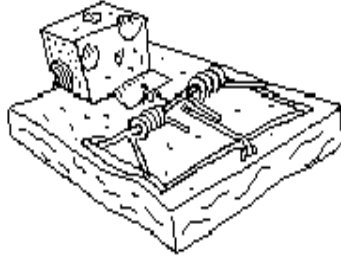


Question Three: What pest-related threats to these assets and resources occur at your installation? You probably already know the pests in your area. Sometimes, and especially in cases involving exotic or noxious weed or rare or infrequent arthropods and vertebrates, you may need to consult local experts at state or federal agencies or university extension services for assistance. Installation pest control records, e.g., DD Form 1532-1 and 1532 Reports, can also provide useful historical documentation of the types, frequency, and distribution of pests at your installation.



Question Four: What assets do you need to manage pest species to acceptable levels? This two-part question is tricky because it often is difficult (some say impossible!) to define *acceptable* levels of control for many species. Sometimes you control a pest simply because the commander tells you to do so. Still, it is important that program managers try to establish criteria for when pest species are abundant enough to commit resources for their control.

You should already know your current pest control assets, i.e., equipment, supplies, and personnel, but are these assets enough of the right kind to limit pest damage to acceptable levels? If not, then you should use your IPMP to identify the assets that you will require to do the job correctly. This first step is essential if you are to obtain the funding to procure these additional program assets.



Question Five: How will you control the pests at your installation? If you don't already know how to control your pest populations to acceptable levels, you can consult MACOM, CHPPM, other Army pest management professionals, or local authorities or reference the vast pest control literature available (much of it for free) from government or commercial sources. The Defense Pest Management Information Analysis Center (DPMIAC) will provide DOD installations with pest control references and literature free of charge. Simply call 301-295-7479 [DSN 295-7479] for assistance.



IPMPs. To be safe you

Question Six: What regulatory requirements influence your program? The answer to this question is very important as federal, state or local statutes not listed in Army or DOD regulations may nevertheless affect your (and your Commander's!) criminal and civil liabilities with respect to the way you conduct your program. Government regulations increasingly influence all aspects of installation pest management programs. Such statutes might address health of workers, installation residents and personnel, pesticide applications near wetlands and species habitats, pesticide releases into ground water or navigable waterways, and disposal of pesticides as hazardous wastes. This question often is inadequately addressed in

should consult the local experts (e.g. environmental coordinators, resource managers, occupational health specialists) for appropriate guidance with respect to these requirements.

Step Two: Complete Your Integrated Pest Management (IPM) Outlines

IPM outlines contain a detailed description of target pests and the manner in which pest management professionals will control those pests. Pest management professionals prepare separate outlines based on pest species, locations of infestation, or pest management methods. For example German cockroach surveillance and control would be addressed in separate outlines for family housing, food service areas, or hospitals because the surveillance and control procedures are substantially different at each site, even though the pest remains the same.

The outlines, commonly found as an IPMP appendix, should state the extent to which the installation adopts IPM practices including mechanical, physical, cultural, biological, and chemical control techniques. The information gathered during step one is helpful for completing the IPM outlines. Appendix A in section four of this guide presents guidance to help you prepare IPM outlines.

Step Three: Write Your Installation Pest Management Plan

Once you have completed steps one and two, you will have much of the information necessary to write your IPMP. Your IPMP should reflect the approach that your installation will implement to manage its pests and protect installation resources and human health. The next section presents a model IPMP format and provides a brief description of the type and level of information that you should include in the sections of your IPMP.

4. The Model IPMP Format

Overview

In the past, the design for an IPMP has taken many forms. The goal of this section is to present you with a model format to help you to 1) prepare or revise your IPMP, while making it more useful as an installation planning document and 2) insure that your IPMP meets DOD and DA program objectives.

While we recommend the model format, we realize that your IPMP may be approved with some other format. If so, it is not necessary to redraft your plan. However, you may wish to revise sections in your plan to either fit the format in the table of contents illustrated in Figure 4-3 or to more appropriately address an area as illustrated in the excerpts shown in Figures 4-5 through 4-19.

If you should have questions or comments about any of the guidance or excerpts in this section, please contact the authors of this document, or better yet, your Army Major Command (MACOM) pest management consultant who ultimately must review your plan and recommend its approval.

Copies of the model IPMP, which served as the source for excerpts and examples illustrated in this users guide, are available from any of the USACHPPM-DSA offices, or by calling the USACHPPM Pesticide Hotline at 410-671-3773, or DSN 584-3773.

Cover Page

Include the name of your installation/activity and its location, the MACOM to which it is assigned, and the date (month and year) when it was last approved by the commanding officer. Other dates, such as the “date prepared”, or “date sent for MACOM review” should be so identified on draft cover pages to indicate the current status of the draft document.

Figure 4-1 provides you with an example of a model Cover Page.

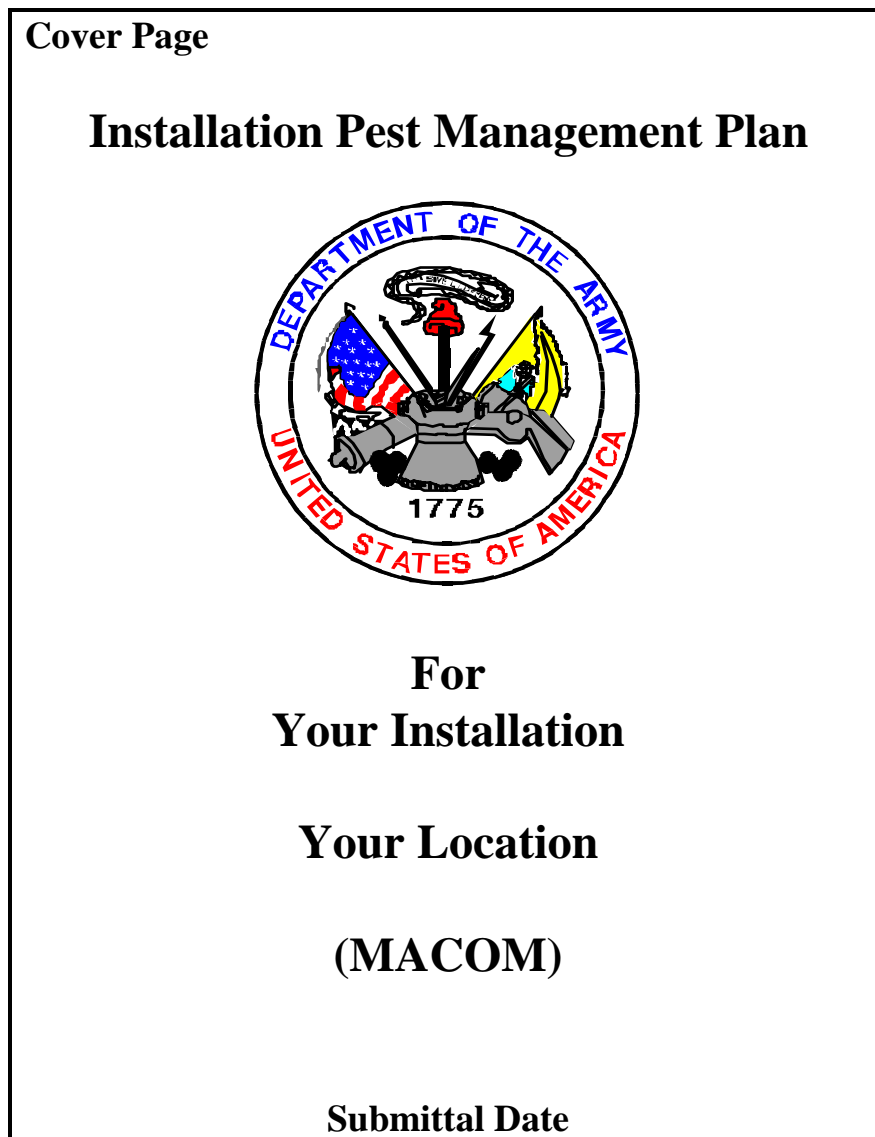


Figure 4-1. Example of a Cover Page

Signature Page

Before your IPMP is submitted for MACOM review we strongly recommend that you first have it reviewed by personnel from installation programs that your pest management program supports, or who otherwise oversee its environmental compliance and occupational health and safety. The reason for this is to assure the commander's staff is familiar with your plan and recommends its approval. Remember, once approved it becomes the COMMANDER'S PLAN (and program), which describes command legal, financial, and other responsibilities to resource and execute its provisions.

The number of individuals who review an IPMP will vary from installation to installation. Although there is no formal requirement that all reviewers appear on the signature page (they could indicate their comments and recommendations by memorandum), it is traditional that they do so. Thus although the signature page should include the names and titles of the key individuals who have reviewed your document, at a minimum it should include 1) the preparer, 2) the installation pest management coordinator (if not the preparer), 3) the senior installation medical and engineering officers, 4) the environmental coordinator, and 5) the commander-approval authority.

DOD policy requires the plan to be reviewed by a pest management professional (usually the MACOM pest management consultant) before it can be approved by the commander. The consultant should sign the signature page to indicate recommended approval, but can also indicate this by way of a memorandum. As the final IPMP approval authority, Commanders should make every effort to incorporate recommendations of MACOM professional consultants into their plans and programs.

Figure 4-2 provides you with an example of a model Signature Page.

Signature Page

Prepared by: Mark Phillips (date)
Pest Management Coordinator

Reviewed by: Larry Broderick (date)
Director of Environment and Safety

Reviewed by: William Burton, CPT, MC (date)
Chief of Health Services

Reviewed by: Thomas Morgan, LTC, QM (date)
Director of Personnel and Community Activities

Reviewed by: Bobby Jones (date)
Pest Control Supervisor

Submitted by: Roger Stanhope, LTC, EN (date)
Director of Public Works

Approved by: Michael Forbes, COL, EN (date)
Commander

Figure 4-2. Example of a Signature Page

Table of Contents

The table of contents should allow the reader to find specific information of interest. Figure 4-3 provides you with an excerpt from a model Table of Contents.

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Figure 4-3. Excerpt from a Table of Contents

Executive Summary

An IPMP Executive Summary should provide the reader with a concise description of the installation mission and environment and the pest management Program's targeted pests, resources, and regulatory requirements. The summary should also mention any real or potential program challenges or short comings and the ways in which these will be addressed in the future. As a rule, the executive summary should not exceed two pages. Figure 4-4 provides you with an excerpt from a model Executive Summary.

Executive Summary

Yucca Proving Ground (YPG) consists of approximately 1,500 square miles located in the Sonora Desert in the southwest corner of Arizona. As part of the Army's Test and Evaluation Command (TECOM), YPG is responsible for planning, conducting, and evaluating development tests before reporting the results to TECOM. YPG also reviews testing programs and monitors testing performed by equipment developers, producers, and government contractors. The favorable climate ...

The content of this IPMP applies to all activities and individuals working, residing or otherwise doing business on this installation, and will be implemented to the maximum extent possible. At no time will pest management operations be done in a manner that will cause harm to personnel or the environment. Pest management responsibility will begin with those individuals that occupy or maintain buildings or open spaces on the installation. Non-chemical control efforts will be used to the maximum extent possible before pesticides are used. This plan will be a working document and will be continually updated to reflect actual pest management practices.

The pest management plan for YPG describes the installation's pest management requirements, outlines the resources necessary for surveillance and control, and describes the administrative, safety and environmental requirements of the program. The program uses certified Government and contract pest management technicians to control pests. Pests addressed in the plan include weeds and other unwanted vegetation, termites, mosquitoes, crawling insects (ants, crickets, cockroaches, etc.), spiders, mice, gophers, and other vertebrate pests. Without control, these pests could interfere with the military mission, damage real property, increase maintenance costs and expose installation personnel to diseases.

Figure 4-4. Excerpt from an Executive Summary

Introduction

An introduction should describe the purpose of your IPMP. It should also provide an overview of the plan's scope and how it will be used and updated. As a rule this section will be less than a page in length. Figure 4-5 provides you with an excerpt from a model Introduction section.

Introduction

This IPMP is a framework through which pest management is defined and accomplished on the installation. The plan identifies elements of the program including health and environmental safety, pest identification, pest management, and pesticide storage, transportation, use, and disposal. This plan is to be used as a tool to reduce reliance on pesticides, to enhance environmental protection, and to maximize the use of integrated pest management techniques.

This IPMP is written under the auspices of:

- DOD Dir. 4150-7, *DOD Pest Management Program*, 22 April 1996.
- AR - 420-76, *Pest Management*, 3 JUNE 1986.

The IPMP provides guidance for operating and maintaining an effective pest management program. Principles of integrated pest management are stressed in the plan. Integrated Pest Management (IPM) consists of the judicious use of both non-chemical and chemical control techniques to achieve effective pest management with minimal environmental contamination. Adherence to the plan will ensure effective, economical, and environmentally acceptable pest management and will maintain compliance with pertinent laws and regulations.

The Installation Pest Management Coordinator maintains this IPMP. Pen and ink changes are made to the plan throughout the fiscal year. It is reviewed and updated annually to reflect all changes made in the pest management program during the fiscal year. Annual updates of this plan will be sent to the US Army Environmental Center Pest Management Consultant not later than 30 October.

Figure 4-5. Excerpt from an Introduction Section

Responsibilities

In this section you should identify the personnel at your installation who manage or oversee the execution of the installation pest management program and/or its compliance with applicable health, safety, and environmental regulations. In addition, this section should minimally include a brief summary of the major responsibilities of these individuals. Remember, the commander is ultimately responsible for your program's compliance with all government regulatory requirements. The individuals listed in this section are responsible to the commander for the program's compliance status and effectiveness.

Figure 4-6 provides you with an excerpt from a model Responsibilities section, which indicates the appropriate level of detail for describing the responsibilities of the pest management coordinator and the installation commander. The same level of detail should be applied when describing the pest management responsibilities for other individuals or groups. Appendix B of this guide provides a summary listing of staffing responsibilities.

Responsibilities

Pest Management Coordinator.

- Prepare, monitor, and update the installation pest management plan.
- Coordinate with activities conducting pest surveillance or controlling pests to ensure proper recording and reporting of pest control operations.
- Function as a point of contact between those individuals who store and apply pesticides.
- Oversee the technical aspects of the self-help program.
- Monitor certification and continuing pest management training for pesticide applicators on the installation.
- Coordinate and monitor contracts dealing with pesticide application and keep a copy of each contract on file.
- Coordinate with local, state and federal agencies, as necessary, to conduct the installation's pest management program.
- Provide answers to pest management questions from the Commander, MACOM, and DA.

Commander

- Designate a Pest Management Coordinator for all pest activities.
- Approve and support the installation pest management plan.
- Ensure that installation pest control personnel are adequately trained and certified, if required.
- Ensure safe conduct of pest management operations with minimal impact on the environment.

Director of Public Works

Director of Personnel and Community Activities

US Army Health Clinic-Preventive Medicine Service

Veterinary Services

Building Occupants

Pest Management Personnel

Figure 4-6. Excerpt from a Responsibilities Section

Installation Description

The purpose of this section should be to summarize information about your installation that directly influences the scope of your pest control program. At a minimum you should include enough information about your installation's location, size, and mission to allow readers to locate the installation assets that are at risk of attack by the pests you have described in other sections of the plan. This can be done effectively with diagrams and maps included in an appendix. Other information (e.g., topography, hydrology, climate, soil types, vegetation, etc.) may influence the way you control certain of these pests, but its inclusion is optional. Whenever possible you should refer the reader to other installation or local documents. (e.g., environmental impact statements or assessments; natural and cultural resource management plans, USDA soil surveys, etc.)

Installation description sections are often too long. Remember the key from a planning perspective is that you have access to the kinds of information you need to identify and control the pest threats at your installation. An "installation description" section tells the reader that you know where such information can be found. Figure 4-7 provides you with an excerpt from a model Installation Description section.

Installation Description

Yucca Proving Ground (YPG) is located in the southwest corner of Arizona, and occupies areas of both Yucca and LaPaz counties. YPG is bordered on the west by the Imperial National Wildlife Refuge and the Colorado River. The northernmost boundary of the installation is approximately 10 kilometers (6.2 miles) south of Arizona's Interstate 10 and the southern boundary...

The 467 kilometer (290 mile) perimeter is an irregular "U" shape. The installation occupies 339,153 hectares (838,180 acres; 3310 square miles). The Kofa National Wildlife Refuge is situated between the west and the east arms of the base. In addition, YPG is bordered by the Imperial National Wildlife Refuge and the Cibola National Wildlife Refuge. The Cabza Prieta National Wildlife Refuge is located south of the Barry M. Goldwater Bombing and Gunnery Range.

The geology, hydrology, climate, major soil association, wetland delineations, vegetation, and soil types found on YPG are recorded in the Soil Survey of Yucca County, Arizona (reference N4e, this plan). This document is used whenever pesticide application is considered in order to evaluate the potential fate and impact on natural resources. Topographical maps of the installation are on file in the Environmental Office, Building 37.

For more information on the installation and an installation map, see Appendix XX.

Figure 4-7. Excerpt from an Installation Description Section

Pest Management Priorities

The pest management priorities section summarizes 1) All of your installation's major target pests in order of importance, 2) the reasons for managing the pests, and 3) the assets preserved by controlling the pests. In sum, this section defines WHAT pests your staff is controlling and WHY these procedures are necessary to the installation mission.

The pest management priorities listed below may differ your installation's priorities, depending on pest cycles, regional priorities, etc. Therefore, you should outline your annual priorities, as described below, but also include any specific priorities that may be unique to your installation every XX number of years. Factors influencing your installation's priorities include the relative threat of damage or mission disruption that pests can cause.

The outline sections: *Target Pest, Life Stage(s) and Purpose* will provide you with most of the information to develop this section. DD Form 1532-1 and 1532 reports, or other pesticide records, are another source of information to help develop this section. Personnel who support the Division of Public Works should be able to help you identify and describe why specific pests are being controlled on your installation.

Figure 4-8 provides you with an excerpt from a model Pest Management Priorities section. It lists the different categories of pest requirements and illustrates the appropriate level of detail to describe each requirement.

Pest Management Priorities

- **Disease Vectors and Medically Important Arthropods.**
Mosquitoes are the primary pests on YPG. The majority of mosquito breeding takes place in an extensive marsh adjacent to the south boundary of main post, a secondary source includes standing water on the installation, e.g., artificial containers and small temporary pools of water. Several viruses may be transmitted by species found on YPG. Control of adult mosquitoes includes fogging or use of residual insecticides.
- **Quarantine Pests.**
- **Real Property Pests (Structural/Wood Destroying Pests).**
- **Stored Products Pests.**
- **Ornamental Plant and Turf Pests.**
- **Undesirable Vegetation.**
- **Animal Pests.**
- **Household and Nuisance Pests.**

Figure 4-8. Excerpt from a Pest Management Priorities Section

Health and Safety

This section should summarize safeguards to ensure the health and safety of 1) pesticide applicators and other pest management personnel and 2) customers at risk of exposure from pest control operations. Such information may include shop standard operating procedures to include pest control vehicles, listing of material safety data sheets (MSDS), and customer notifications and or postings. In addition, this section should describe or reference the level of training and/or certification plus the level of medical surveillance for pest management personnel.

We recommend that you reference any health and safety plans and cleanup or mitigation plans prepared for your installation. Appendix C of this guide provides an excerpt of a model Pesticide Spill Prevention and Cleanup Plan prepared for YPG. The installation safety officer, medical authority, or pest management coordinator should be able to provide you with information to complete this section.

Figure 4-9 provides you with an excerpt from a model Health and Safety section.

Health and Safety

Medical Surveillance of Pest Management Personnel.

All personnel who apply pesticides on the installation (excluding self-help pest management) are included ...

An initial, pre-employment physical examination is conducted to establish that the individual is physically capable of wearing a respirator (if required) and to establish a baseline red blood cell (RBC) cholinesterase level. This physical examination also includes liver and kidney function tests, a complete blood count and a respiratory evaluation....

When cholinesterase inhibiting substances (CIS) (e.g., carbamate or organophosphate pesticides) are used, the RBC cholinesterase levels are monitored at least twice a year (before and after the summer spray season) and more

All Government pesticide applicators are medically monitored by the Occupational Health Section at the Health Clinic.

- **Hazard Communication.**
- **Personal Protective Equipment.**
- **Fire Protection.**
- **Pest Control Vehicles.**
- **Protection of the Public.**

Figure 4-9. Excerpt from a Health and Safety Section

Environmental Protection: Natural and Cultural Resources

This section should describe your awareness of the Federal, State, and local requirements that regulate environmental and other resource-related issues or impact the way in which you conduct pest management operations at your installation. The Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) addresses only a proportion of these requirements. (e.g., training qualifications for pesticide applicators; safe handling and pesticide application guidelines). Other Federal and state regulations address pesticides as sources of ground, air, or water pollution or as hazardous wastes. Still other regulations may specify constraints on pest control approaches in the vicinity of wetlands, threatened and endangered species habitats, and historical or cultural sites or structures.

You should discuss these issues with knowledgeable installation or MACOM authorities to ensure that your planned pest control methods are consistent with their programs and policies. In cases where these requirements are relevant to the pest management program, we recommend that you refer to existing documents containing this information. (e.g., environmental assessments, the installation natural resource management plan). If you choose to include some of this information in your plan, such as a table of endangered or threatened flora or maps of critical habitats, you can do so in an appendix. Figure 4-10 provides you with an excerpt from a model Environmental Protection section.

Environmental Protection: Natural and Cultural Resources

- **Sensitive Areas.** Sensitive areas listed on pesticide labels are considered before pest control operations are conducted. No pesticides are applied directly on wetlands or water areas unless use in such sites is specifically approved on the label and the proposed application is approved by DES Environmental Services.
Special care is given when pesticides are applied in the child development center, in patient areas of the health clinic, or in family quarters where newborn infants are present. Pesticide label instructions and guidance provided in the *AFPMB TIM No 20, Pest Management Operations in Medical Treatment Facilities* are followed.
- **Endangered/Protected Species and Critical Habitats.** Protected migratory birds, which periodically occur on the installation, cannot be controlled without a permit if they become a pest problem. No such control has been conducted. Ospreys and bald eagles migrate through YPG and are occasionally seen around the sewage lagoons; most of the other species listed with the exception of the mountain lion are found off-post... See Appendix X for a table of endangered/protected and threatened species
- **Environmental Documentation.**
- **Pesticide Spills and Remediation.**
- **Prohibited Activities.**

Figure 4-10. Excerpt from an Environmental Protection Section

Commercial Contracts, Support Agreements and Outleases

This section should describe pest management services at the installation which are performed by commercial contractors or by other installations or government agencies via formal inter-service support agreements (ISA). Whenever possible, you should summarize the key attributes of contract Performance Work Statements (PWS)s and/or include them in an appendix to the plan. Remember that PWSs for installation pest control contracts or ISAs should be entirely consistent with respective pest management outlines in your IPMP. If they are not, i.e., if PWSs for contracted services differ from your plan outlines, then either the PWS or the plan outlines need to change, or else you need to explain the reasons for the discrepancies in this section.

Tenant and outlease agreements, e.g., for agriculture or grazing, should be addressed in this section if tenants and/or outleasess apply pesticides or otherwise control pests on Army lands. Commanders are required by DOD policy to report all pest control activities occurring on their installations, to include pesticide applications by tenant and outlease activities. In addition, because DOD policy requires a 50% reduction of pesticides from FY 93 levels by the end of FY 2000, you should use this section to describe how this goal will be managed on your installation's outleased property. Figure 4-11 provides you with an excerpt from a model to Commercial Contracts, Support Agreements and Outleases section.

Commercial Contracts, Support Agreements and Outleases

Contracts.

Pest control in family housing is performed under contract with J&J Pest Control. One J&J employee conducts all pest surveillance and control. A copy of this contract and the supporting quality assurance surveillance plan are on file in the office of the Pest Management Coordinator.

TECOM INC. is the contractor for family housing support services that include the Family Housing self-help program. Pest control in family housing, other than self-help, is conducted by the J&J pest management technician.

Inter-service Support Agreements.

Pest management services are provided to the Naval Reserve Center, located along the southwest corner of YPG. One outlying site, the Blaisdell Railroad Siding, requires periodic weed control (see paragraph K2, this plan).

Agricultural Outleases.

One crop lease has been awarded to a local farmer for melon production. This 10-acre lease is irrigated and pesticides are applied by the lessee. All pesticide applications conform to the requirements in this plan and are reported to the pest management...

Although grazing leases would be an excellent management program in years when the Indian wheat is high (i.e., years with abundant winter rains) it is prohibited because of the danger involved with munitions from weapons.

Figure 4-11. Excerpt from a Commercial Contracts, Support Agreements, and Outleases Section

Equipment, Supplies, and Installation Pest Control Facilities

The purpose of this section is to describe the facilities in which pesticides are stored, mixed, and disposed of at your installation, as well as the equipment, pesticides and other supplies used by installation personnel to control pests identified elsewhere in the plan. You can also use this section to identify outdated structures or equipment in need of repair or replacement, to estimate costs and to describe funding strategies and timetables to acquire these needed assets.

- **Equipment and Supplies.** See discussion in Appendix D of this guide. Note that DoD policy now requires all pesticides used at an installation to be identified in IPMPs by respective EPA registration numbers.
- **Facilities.** All installation facilities should be described, to include buildings and areas at golf courses, self-help outlets or other sites in which pesticides are stored or used. Indicate the location of each facility and describe in enough detail to indicate design characteristics and weaknesses. Diagrams can be used effectively for this purpose either in this section or in an appendix.

Figure 4-12 provides you with an excerpt from a model Equipment, Supplies, and Installation Pest Control Facilities section. Appendix D of this guide provides an Equipment and Pesticides Inventory from YPG.

Equipment, Supplies, and Installation Pest Control Facilities

Materials and Equipment.

All materials, buildings and equipment are furnished by the Government. These facilities are also used by the contractor because of the remote location of the installation. Only pesticides and pesticide application equipment required by the program are maintained on the installation. Pesticides are ordered as required to maintain a three month supply but not more than one year supply. Pesticides required for use during a specific time of year (e.g., herbicides applied in the spring when weeds are emerging) are ordered in timely manner.

Facilities (Mixing and Storage Sites).

All pesticides used by the Buildings and Structures Section, the Roads and Grounds Section, the Golf Course, and the contractor are stored under a covered, open-sided area within the Public Works work yard. This facility is surrounded by a climb-proof chain link fence. The surface of the area, which is made of cement, is curbed to contain pesticide spills. A small wooden building (Bldg. 416), located within the covered area, is used to store aerosol pesticide formulations; all other pesticides are stored on pallets in the open area adjacent to the building.

Figure 4-12. Excerpt from a Equipment, Supplies, and Installation Pest Control Facilities Section

Program Administration

This section is meant to describe the planning, record keeping, and other procedures used at your installation to administer its pest management program. Examples of such administrative procedures would include: how to use work plans and job orders to prepare work schedules; how to keep and collect pesticide use data and report pesticide usage to higher headquarters;⁶; how to train and/or certify pesticide applicators and quality assurance evaluators; and how to identify and fund future needs for facilities, equipment, supplies and pest control services.

This section needn't be long, especially if such information is already available in Standard Operating Procedures, which can be referenced or enclosed in an appropriate appendix. Remember, the key from a planning perspective is that your program is being managed in ways that attempt to anticipate its various pest and other needs (e.g. for personnel, training, budgeting, etc.) so that it can respond more effectively to those needs in a timely fashion. Figure 4-13 provides you with an excerpt from a model Program Administration section.

Program Administration

Reports and Records. Adequate records of all pest management operations performed by ... are contained on the installation. Daily pesticide application and surveillance records are maintained by the Buildings and Structures pest management supervisor for work ...DD Form 1532-1 is maintained by the superintendent for pest activities performed on the golf course.

Job Orders. The Public Works pest management technicians perform pest surveillance and control under six Standing Service Orders (SSOs). The SSOs cover work performed indoors and outdoors in 1) family housing units, 2) food handling buildings, the Health Clinic and Child Development Center, and 3) all other buildings.

Training. YPG employees who apply or oversee the application of pesticides are DOD certified. Training and certification is conducted by the state annually. Certification records are kept in...A list of certified personnel, along with their certification expiration dates can be found in appendix XX.

Quality Assurance: The QA for pest management contracts is DOD certified in the pesticide categories in which work is performed. A QA plan is in effect for contract work performed by J&J. program for those years

Figure 4-13. Excerpt from a Program Administration Section

⁶ DOD Policy requires daily records of pest control activities - including applications of all pesticides by pesticide applicators -to be kept on DD Form 1532-1 (or in a similar format). DA policy no longer requires this information to be summarized and reported to Headquarters using DD Form 1532. DA policy does require installations to meet DOD and Army data call requirements, such as annual pesticide use summaries in "pesticide pounds active ingredient" formats.

Interagency Cooperative Agreements

Pest management activities under formal agreements with other Federal, State or Local Agencies should be described here. Examples of such agreements might include collaborative projects with Federal or State agencies to limit emergency outbreaks of disease vectors, noxious weeds, or forest pests, e.g. Gypsy Moth, over large areas that include Army installations. In such cases pest management strategies and practices are often managed by other government agencies and not by Army installation personnel. The purpose of this section is to identify these agreements and to explain agency and installation responsibilities when such emergencies occur, to include key points of contact at these other agencies. Figure 4-14 provides you with an excerpt from a model Interagency Cooperative Agreements section.

Interagency Cooperative Agreements

The Army Pest Management Program is responsible for protecting personnel and material from illness and damage by pests, wherever in the world they may be. The program includes both medical and operational responsibilities. While these responsibilities do overlap, Medical Command's (MEDCOM) focus is to prevent and minimize medical consequences of pests and pest management operations; the Assistant Chief of Staff for Installation Management and the AEC concentrate on safe, effective implementation of day to day pest management operations...

The AEC Pest Management Consultant approves the pest management plan, and gives special attention to any pesticide application that: uses restricted use pesticides; uses any pesticide that may significantly contaminate surface or ground water; includes 259 or more hectares (640 acres) in one pesticide application; may adversely affect endangered or other protected species or habitats; or involves aerial ...

Liaison is maintained between the Pest Management Coordinator and Preventive Medicine personnel at the Health Clinic to determine the prevalence of disease vectors and other public health pests in the area surrounding the installation.

The Military Police are responsible for capturing and removing stray dogs and cats on the installation.

Control of mosquito larvae on the large marsh adjacent to the installation is coordinated with the following agencies:

States of Arizona and California - the marsh is divided between these two states. Proposed actions are coordinated with health officials and personnel from each state...

See Appendix XX for a list of organizations, their address, and a description of the cooperative agreement between each organization and the Installation's Pest Management Program.

Figure 4-14. Excerpt from an Interagency Cooperative Agreement Section

Sale and Distribution of Pesticides

This section should describe the sources of pesticides and other supplies or equipment available to housing and building residents for pest control along with your installation's procedures to insure that these materials meet all DOD and government requirements. Typically, sources of consumer pest control products at installations include 1) self-help programs, which distribute limited selections of (mostly non-chemical) pest control supplies to installation residents; 2) veterinary or medical clinics, which dispense pesticide/drug formulations to control fleas, ticks and lice; and 3) commercial outlets (post exchanges or commissaries) that sell pest control products for profit.

Remember, pest control supervisors are responsible to the Commander to insure that the chemical pesticides distributed or sold at their installation meet all regulatory requirements. For example, Army policy strictly limits the kinds of pest control materials distributed via self help programs, and requires monthly reporting of all chemical pesticides dispensed through self-help and medical/veterinary programs. Pesticides sold at post exchanges and commissaries must be labeled for general use by the US Environmental Protection Agency and by the state in which the installation/activity is located. Figure 4-15 provides you with an excerpt from a model Sales and Distribution of Pesticides section.

Sales and Distribution of Pesticides

- **Family Housing self-help.** Pest control items are available to family housing residents through the self-help store, operated under contract with TECOM-Family Housing Support Services. Located in Building 1000, self-help is open from 1230-1700, Tuesday-Friday and from 0800-1200 on Saturday. Classes, which instruct residents about pests and the use of pest control items, occur on the first Monday of each month. Records are kept of items issued to housing occupants; this information is provided monthly to the Pest Management Coordinator. Self-help items include:
 - ⇒ Maxforce bait stations - for cockroach control
 - ⇒ Glue traps - for cockroach and mouse control
 - ⇒ Boric acid (PT 240, PermaDust) aerosol - for cockroach control
 - ⇒ Snap traps - for mouse control
 - ⇒ Mechanical traps - for gopher control
 - ⇒ Aerosol insecticides - for crawling and flying insect control
- **Self Service Supply Center.** The SSSC, located in Building 53, is open from 0800-1300, Monday-Thursday. The only pesticide available from SSSC is: Insecticide, d-trans Allethrin + Resmethrin.
- **AAFES.** Pesticides sold in the Post Exchange, Building 123, are registered by the EPA for general use; restricted use products are not sold. Pesticide products are grouped into several separate categories: products applied to pets for ectoparasite control, repellents, household, and lawn and garden products. A spill cleanup kit is on hand in the immediate vicinity of the home and garden pesticide storage area. Store personnel are familiar with the use of the cleanup kit and with installation spill contingency procedures.
- **Commissary.**
- **Veterinary Clinic.**

Figure 4-15. Excerpt from a Sale and Distribution of Pesticides Section

Installation Pest Management Support for Non-Installation Activities

Recall figure 2-1 of this guide, which identified the various pest control users and providers at a large installation. Sometimes installation personnel will provide pest control services to other government agencies or tenant activities not under control of their installation commander. Examples would include local installations under other commands, National Guard and Reserve units, and commissary and exchange facilities. Use this section to identify and summarize these arrangements (rather than the "Commercial Contracts, Support Agreements, and Outleases" section, which addresses services provided by others to your installation). Remember, DOD policy requires all pesticides applied by DOD personnel to be reported, even when these applications do not occur on DOD property.

Figure 4-16 provides you with an excerpt from a model Installation Pest Management Support for Non-Installation Activities section.

Installation Pest Management Support for Non-Installation Activities

- **Tenant Activities.**
Pest control services are provided to all tenant activities on YPG. This includes:
 - ⇒ Health Clinic,
 - ⇒ Naval Reserve Center,
 - ⇒ Golf Course,
 - ⇒ Commissary,
 - ⇒ Post Exchange, and
 - ⇒ DRMO.

- **Activities Located Off the Installation.**
Control of weeds and other unwanted vegetation is occasionally required at the Blaisdell railroad unloading platform. The siding, used for unloading ammunition in transit to YPG, is located along Blaisdell-Fortuna Road, east of Highway 95, along the main line of the Southern Pacific Railroad. An Army Reserve Center located in the town of Belladonna is visited monthly by pest management personnel and surveyed for the presence of pests.

Figure 4-16. Excerpt from an Installation Pest Management Support for Non-Installation Activities Section

Appendix A: Integrated Pest Management Outlines

The outline in Figure 4-17 provides you with much of the information needed to develop your IPM outlines and implement your pest management program. You should prepare an outline for each target pest, pest category, and pest control requirement. However, use your discretion in deciding if you may combine pests in the same outline.

For example, if the procedures for treating crawling pest A and crawling pest B are similar in the mess hall and barracks then a separate outline is not necessary. However, if operating procedures vary for these pests and/or the pest's locations, then different outlines are necessary. See page 3-5, Step two: Complete Your IPM Outlines, for more information on preparing separate IPM outlines. Each outline should:

- Identify WHAT pest to survey, control, or treat; the pest's life stage; and describe WHY you survey, control, and/or treat the target pest.
- Describe in detail the potential damage to health, property, and resources from the pest.
- Describe HOW control will protect the assets on your installation and include support services.
- Identify WHO authorizes how to survey, control, and/or treat the target pest.
- Describe WHERE (the lands and facilities) on and around your installation that are settings for surveillance, control, and treatment activities for this target pest.
- Identify WHEN to survey, control and treat the target pest.
- Describe HOW you are using IPM procedures and pesticides for the surveillance, treatment, and control of the target pest.
- Describe HOW you will survey, treat, and control target pests in sensitive areas such as child care centers, wetlands, and hospitals. Sensitive areas include but are not limited to: child care centers, hospitals, wetlands, critical habitats, and drinking water supplies.
- Describe any special health and safety measures necessary because of the employed surveillance, treatment, and control procedures. List any surveillance, treatment, or control procedures that require PMC approval or coordination with the AFPMB.
- Identify the constraints inhibiting you from controlling the target pest to acceptable levels and any special control requirements applicable to the target pest.

Figure 4-17 provides you with an excerpt from a model IPM outline.

Appendix A - Integrated Pest Management (IPM) Outlines

PEST: Mosquitoes.

SITE: Cantonment area.

1. Purpose: To control adult mosquitoes on the main post area, including family housing.
2. Surveillance.
 - a. Conducted by: Pest management technicians and Preventive Medicine personnel.
 - b. Methods: Larval surveys in standing water, six light traps for night use in areas where people are most concentrated.
 - c. Frequency: Weekly larval surveys, adult light traps operated twice per week.
3. Pest Management Techniques.
 - a. Non-chemical.
 - (1) Type: Mechanical and Physical.
 - (a) Method and Location: Use window screens on buildings occupied at night. Eliminate standing water sites to reduce mosquito breeding. Precautions must be taken not to damage wetlands. Eliminate artificial container breeding sites.
 - (b) Conducted by: Public Works personnel.
 - (2) Type: Biological. *Bacillus thuringiensis* (Bt).
 - (a) Method and Location: Apply to mosquito larvae in standing water between front gate on main post and the canal.
 - (b) Conducted by: Pest management technicians.
 - (3) Type: Cultural.
 - (a) Method and Location: None.
 - (b) Conducted by: N/A
 - b. Chemical.
 - (1) Basis for Treatment: when finding 25+ females in light trap per single night.
 - (2) Method and Location: ULV sprayer - malathion fog in housing areas and recreation sites.
 - (3) Conducted by: Pest management technicians.
 - (4) Pesticide.
 - (a) Common Name: malathion.
 - (b) EPA Registration Number: 241-208-AA.
 - (5) Control Standard: Mosquito numbers are reduced in trap < the 25 mosquito level.
 - c. Chemical.
 - (1) Basis for Treatment: Treat tree line when finding 25+ females in light trap per single night.
 - (2) Method and Location: ULV sprayer - malathion fog in housing and Recreation sites.
 - (3) Conducted by: Pest management technicians.
 - (4) Pesticide.
 - (a) Common Name: carbaryl.
 - (b) EPA Registration Number: 1016-43.
 - (5) Control Standard: Mosquito numbers are reduced in trap < the 25 mosquito level.
4. Precautions for Sensitive Areas: Do not apply fog when wind speeds exceed 5 miles per hour. Refer to the local list of sensitive individuals before applying fog.
5. Prohibited Practices: Do not apply pesticides in areas where honey bees can be harmed.
6. Environmental Concerns: Do not damage or eliminate wetlands.
7. Remarks: Mosquito controls apply to larvae and adult mosquitoes.

Figure 4-17. Excerpt from Appendix A: IPM Outlines

Appendix B: Staffing Responsibilities and Annual Workload

Appendix B provides a summary of the level of effort and identifies the staffing responsibility to support each pest management activity and operation at your installation. It may be helpful to include an organizational schematic that illustrates the interaction of all the activities involved in pest management operations. The “*Responsible Organization or Official, Schedule, and Resource Requirements*” sections of the outlines will provide you with most of the information you need to complete this section. Other information to help you complete Appendix B includes annual work plans, DD Form 1532s, and lists showing the number of hours to perform specific tasks. Figure 4-18 provides you with an excerpt from a staffing chart, an organizational schematic, and an annual workload table.

Appendix B: Staffing Responsibilities			
<u>Pest Surveillance</u>	<u>Pest Control</u>	<u>Pesticide Storage</u>	<u>Pesticide Sale/Dist.</u>
Preventive Medicine Service	Public Works Buildings and Structures	Public Works Buildings and Structures	Post Exchange
Veterinary Services	Public Works Roads and Grounds	Self Service Supply Center (SSSC)	Veterinary Clinic (pet care products)
Public Works and Structures	Golf Course	Veterinary Clinic (pet care products)	Commissary
Public Works Roads & Grounds	Military Police (stray animals)	Post Exchange	Self Service Center (SSSC)
Golf Course	Agricultural	Commissary (Lessee)	Family Housing (self-help)
Military Police (stray animals)	J&J Pest Control (contract)	Family Housing (self-help)	

Figure 4-18. Excerpt from Appendix B: Staffing and Annual Workload

Appendix C: Pesticide Spill Prevention and Cleanup Plan

Appendix C provides either a copy of the installation's pesticide Spill Prevention and Cleanup Plan (SPCP), or a reference to the SPCP, or similar plan. Pest management technicians, coordinators, or supervisors may be able to provide you with a copy of the pesticide SPCP. Figure 4-19 provides an excerpt from a pesticide SPCP.

Appendix C - Pesticide Spill Prevention and Cleanup Plan (SPCP)

1. PURPOSE. To outline procedures for the containment, cleanup, and decontamination of pesticide spills and the safety precautions associated with these operations.
2. GENERAL.
 - a. Extreme caution shall be exercised by the pest controllers to prevent spillage of pesticides during storage, transportation, mixing, application, or any other handling of pesticides.
 - b. All pesticide spills shall be immediately reported to the Pest Management Coordinator, the Environmental Coordinator, and the Fire Department.
 - c. All pesticide spills shall be handled in accordance with this Appendix and the Installation Spill Contingency Plan (Reference 5c). Portions of the SPCP and ISCP pertaining to pesticides are found in Appendix L of this plan. Complete copies of these spill plans can be found ... Building 3021.
 - d. A pesticide spill cleanup kit will be maintained in Building 416. Contents of the kit are given in paragraph 3j, this Appendix. The cleanup kit shall be used to clean up pesticide spills.
 - e. The pest controllers must wear appropriate protective clothing and equipment while . . . personnel or cleaning up a pesticide spill. Protective clothing and equipment are stored in Building 408.
3. PROCEDURES: When a pesticide spill occurs or is discovered, the following procedures must be followed:
 - a. Reporting: The pesticide spill must be reported to the Pest Management Coordinator, the Environmental Coordinator, and the Fire Department. This may be done via telephone. The spill response team may be reached at extension 213. Any need for first aid or fire equipment must be reported.
 - b. Identification: Identify the pesticide involved in the spill. Retain the container and label for spill response personnel.
 - c. Care of injured and/or Contaminated Personnel: Immediately determine if the pest controllers or other individuals are injured or contaminated.

Figure 4-19. Excerpt from Appendix C: Pesticide Spill Prevention and Cleanup Plan

Appendix D: Equipment and Pesticide Inventory

Appendix D provides an inventory of pest control equipment and supplies used to treat and control target pests. For example, Appendix D would include pesticides, pest control supplies, sprayers, and trucks. The *Chemical Procedures* section of the outline and the 1532 reports will provide you with most of the information you need to complete this section.

Remember that the purpose of this information is to indicate the types of equipment and supplies that you use at your installation for pest control. Static inventories (i.e., those done once a year) may not summarize this information accurately for pesticides or other pest control supplies if inventories change seasonally, or to the extent that materials are purchased and applied by contractors. In such cases, you may wish to summarize inventory information in other ways, for example via dynamic inventories that list pesticides used each year rather than on hand at a certain time of the year. DOD policy now requires installations to report annual pesticide usage each year in "pounds active ingredient" formats. Dynamic inventories would tend to simplify the calculations needed to report this information. Figure 4-20 provides you with an excerpt from a model Equipment and Pesticide Inventory appendix.

Appendix D: Equipment and Pesticide Inventory							
Nomenclature		Manufacturer	Model	Purchase Date	Qty		
Pressure duster		B&G	2200	unknown	1		
Backpack power		Echo, Inc.	DM-9	1989	1		
Power sprayer/duster		Buffalo Turbine	CS	unknown	1		
Boom sprayer(200 gal W/hose)		Smithco, Inc.		1979	1		
Power sprayer, (200 gal W/hose)		Wade Spraying	M207-20T	1988	1		
ULV fog generator		Micro-Gen	ED2-208	1979	1		
Sprayer, 0.5 gal hand-held,		B&G	unknown		1		
Sprayer, 2 gal. hand-held		B&G	unknown	1987	1		
Granular applicator, helicopter slung			unknown	1989	1		
Pickup truck w/utility body		Dodge	Ram	1988	2		
PESTICIDE INVENTORIES:				INSECTICIDES			
Product	Ingredient	% A.I.	Type	Container	Qty	EPA # /NSN	Manufacture
Diazinon 2D	diazinon	2.0	Dust	50-lb. bag	1	672-0198	ChemPlex
Diazinon 4E	diazinon	47.5	EC1-		gal jug 11	457-8612	B&G
Dursban 2E	chlorpyrifos	24.1	EC	1-gal jug	2	464-586	Dow Chemical
				RODENTICIDES			
Wilco	strychnine	0.35	Bait	50-lb. drum	1	36029-1	Wilco Distributor
				HERBICIDES			
Roundup	glyphosate	41.0	EC	1-gal jug	8	524-308-	AAMonsanto

Figure 4-20. Excerpt from Appendix D: Equipment and Pesticide Inventory

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5. The Installation Pest Management Plan Quality Assurance Checklist

Objective

This section presents a quality assurance checklist that includes many of the key elements described in the body of this guide. The checklist can be used as a tool to help you to judge the strengths, weaknesses, and/or completeness of your current or draft IPMP.

√	IPMP QUALITY ASSURANCE CHECKLIST
	Have you identified a source of funding to develop your IPMP?
	Have you designed a pest management program that addresses: <ul style="list-style-type: none"> • The impact on the health and welfare at your installation? • Potential damages to property or other resources at your installation? • Pests found at you installation and types of damage associated with those pests? • Personnel, Supplies, Equipment, and Installation Facilities needed to control pests to acceptable levels? • Regulatory requirements affecting your strategies to control pests? • The needs of all pest control service users and providers? (e.g., Tenants, National Guard Installations, Other local installations)
	Have you read or referenced: <ul style="list-style-type: none"> • DOD and Army Pest Management Regulations? (DODI 4150.7 and AR 420-76) • The Installation Master Plan? • NEPA documents? • Pest control activity records? (e.g., DD Form 1532-1, 1532 Reports, etc.) • Performance Work Statements for commercial pest control activities? • The Installation Natural Resource Management Plan? • The Installation Spill Control Plans? • Interagency Pest Management Agreements?
	Does your Cover Page include the current submittal date?

√	IPMP QUALITY ASSURANCE CHECKLIST
	<p>Does your Signature Page include signatures and the dates signed of all those responsible for:</p> <ul style="list-style-type: none"> • IPMP review? • IPMP approval? • Implementation of your pest management program?
	<p>Does your IPMP include a Table of Contents?</p>
	<p>Does your Executive Summary describe the:</p> <ul style="list-style-type: none"> • Installation mission? • Installation environment? • Pest management resources, requirements and responsibilities? • Program shortcomings?
	<p>Is your Executive Summary 2 pages or less?</p>
	<p>Does your Introduction describe the:</p> <ul style="list-style-type: none"> • Purpose of your IPMP? • Program objectives? • Approach for maintaining/updating your IPMP?
	<p>Is the Introduction approximately one page in length?</p>
	<p>Does your Responsibilities Section:</p> <ul style="list-style-type: none"> • List all personnel with pest management responsibilities? • Describe their position and responsibilities?
	<p>Does your Installation Description Section</p> <ul style="list-style-type: none"> • Describe mission, size, location, and boundaries? • Reference details that may also influence your pest management program? (e.g., historical significance? topography? climate? wetlands delineations? critical habitats?)
	<p>Does your Pest Management Priorities Section summarize:</p> <ul style="list-style-type: none"> • Pests in order of importance? • Reasons for managing these pests? • Assets preserved by controlling these pests? • Unique priorities occurring every XX years?
	<p>Does your Health and Safety Section describe or reference:</p> <ul style="list-style-type: none"> • Health and safety requirements? (i.e., as required by OSHA, etc.,) • Personnel and their levels of training and medical surveillance? • Safeguards that ensure the protection of personnel, the environment, and the public? • Vehicles supporting operations? • References to appendices containing health and safety guides? (e.g., MSDS)
	<p>Does your Environmental Protection: Natural and Cultural Resources Section describe or reference:</p> <ul style="list-style-type: none"> • Applicable Federal, State, Local, or Government regulatory requirements? • Installation environmental, natural, and cultural resource documentation that may influence the pest management program? • Pesticide spills and remediation?

√	IPMP QUALITY ASSURANCE CHECKLIST
	<p>Does your Commercial Contracts, Support Agreements, and Outleases Section describe or reference:</p> <ul style="list-style-type: none"> • All commercial pest management contracts and support agreements? • Agricultural outleases or other tenant agreements that involve pest management operations on your installation? (e.g., commissary operations, base exchanges.)
	<p>Does your Equipment, Supplies, and Installation Pest Control Facilities Section describe or reference:</p> <ul style="list-style-type: none"> • All facilities where pesticides are stored and mixed? • An inventory of pest management equipment and supplies? • All pesticides listed by respective EPA registration numbers?
	<p>Does your Program Administration Section describe or reference:</p> <ul style="list-style-type: none"> • Records of pest management operations? • Installation training and certification requirements? • Pesticide applicators by their EPA certification categories? • Installation training and quality assurance plan? • A strategy to provide repairs, replacements, and/or support unfunded or unplanned requirements?
	<p>Does your Interagency Cooperative Agreements Section:</p> <ul style="list-style-type: none"> • Identify pest management operations requiring cooperation among other government agencies and your installation or activity? • Include POCs for the cooperative agreements?
	<p>Does your Sale and Distribution of Pesticides Section describe how pest control items are:</p> <ul style="list-style-type: none"> • Distributed for self-help operations? • Sold through a commercial operation? (e.g., sold at the commissary) • Dispensed from medical and/or veterinary clinics?
	<p>Does your Pest Management Support for Non-Installation Activities Section describe pest control services by installation personnel to:</p> <ul style="list-style-type: none"> • Off-post operations. • Tenant activities.
	<p>Do your IPM for each pest describe:</p> <ul style="list-style-type: none"> • Surveillance methods and frequency? • Pest management techniques? (chemical and non-chemical) • Precautions for sensitive areas? • Prohibited practices? • Environmental concerns?
	<p>Have you checked your IPMP to make sure that you eliminated:</p> <ul style="list-style-type: none"> • Spelling errors? • Grammatical errors?
	<p>Does your IPMP:</p> <ul style="list-style-type: none"> • Make sense to you, your co-workers, and supervisors?

Figure 5-1: IPMP Quality Assurance Checklist

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