FINAL

INTEGRATED PEST MANAGEMENT PLAN

FOR

FORT GEORGE G. MEADE, MARYLAND

October 1, 2005

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PEST MANAGEMENT PLAN FOR FORT GEORGE G. MEADE, MARYLAND

Prepared by:	Kevin R. Fay Installation Pest Management Coordinator Directorate of Public Works	Signature	14 NOV 2000 Date
Reviewed by:	Paul Robert Chief Environmental Management Office Directorate of Public Works	Signature	1/17/01 Date
Reviewed by:	Colleen M. Hart MAJ, AN Chief, Preventive Medicine Service	Signature	2/8/01 Date
Reviewed by:	W.E. Kelley Director Personnel and Community Activities	Signature	4/5/01 Date
Submitted by:	Daniel Hopkins Director of Public Works	for Signature	4/11/01 Date
Approved by:	MICHAEL J. STEWART Colonel, Military Intelligence Commanding	Signature	2001 0618 Date
Reviewed by:	Joseph Tarnopol MDW Pest Management Consultant	Signature	10 May 01 Date

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TABLE OF CONTENTS

PAGE

APPENDICES

EXECUTIVE SUMMARY

Fort George G. Meade (FGGM) is located almost midway between the cities of Baltimore and Washington D.C. The major roads accessing FGGM are Maryland Routes 32, 198 and 175. FGGM is located near the communities of Odenton, Laurel, Columbia and Jessup. Virtually a city in itself, FGGM lies on approximately 5,506 acres of land, has 66 miles of paved roads, and about 1,575 buildings. The installation falls under the command of the Military District of Washington. FGGM's mission is to provide a wide range of support to 57 tenant organizations from all four services and to several federal agencies. Major tenant units include the National Security Agency, the U.S. Army Intelligence and Security Command, the Naval Security Group Activity, the 694th Intelligence Group (U.S. Air Force) and the Defense Information School.

The contents of the FGGM Installation Pest Management Plan apply 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 which will cause harm to personnel or the environment. Pest management responsibility will begin with those individuals who occupy or maintain buildings or open space 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 electronic document and will be continually updated to reflect actual pest management practices.

This plan is published in CD format incorporates data from the Integrated Pest Management Information System (IPMIS). This format gives users access to a greater amount of information, a better understanding of the principals of Integrated Pest Management and a web based reference library that can be continually updated to reflect new pest management processes.

The pest management plan for FGGM 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 included in the plan are weeds and other unwanted vegetation, termites, ticks, mosquitoes, crawling insects (ants, crickets, cockroaches, etc.) spiders, mice, 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. Actual pest management procedures are found in the Integrated Pest Management Outlines included as Appendices A and B.

1.0 INTRODUCTION

1.1 Purpose.

The Integrated Pest Management Plan (IPMP) provides a framework through which pest problems can be effectively addressed at Fort George G. Meade (FGGM). Elements of the program, including health and environmental safety, pest identification, pest management, pesticide storage, transportation, use and disposal are defined within the plan. Used as a tool, this plan reduces reliance on pesticides, enhances environmental protection, and maximizes the use of integrated pest management techniques.

1.2 Authority

a. DoD Dir 4150.7, DoD Pest Management Program, 27 April 1996.

b. AR 200-5, Pest Management, 29 October 1999.

1.3 Program Objective.

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

2.0 RESPONSIBILITIES

(Restated from AR 200-5) See Appendix C for an organizational diagram of the major activities or individuals on the installation involved in the pest management program.

2.1 Commander

a. Designate a Pest Management Coordinator for all pest management activities.

b. Initiate requests for aerial application of pesticides when necessary.

c. Approve and support the pest management plan.

2.2 Director of Public Works

a. Determine the pest management requirements for the installation.

b. Request and monitor contract pest management operations.

c. Ensure that installation personnel performing pest control receive adequate training, and achieve pest management certification as required.

d. Ensure that all pest management operations are conducted safely and have minimal impact on the environment.

e. Obtain and maintain adequate supplies of pesticides and pesticide dispersal equipment, and ensure that equipment is properly maintained.

f. Maintain adequate records of pest management operations.

2.3 Director of Personnel and Community Activities

a. Obtain and maintain adequate Golf Course supplies of pesticides and pesticide dispersal equipment, and ensure that equipment is properly maintained.

b. Ensure that Golf Course personnel performing pest control receive adequate training, and achieve pest management certification (if required).

c. Maintain adequate records of pest management operations.

2.4 U.S. Army MEDDAC

a. Preventive Medicine Service. (Restated from AR 40-5)

(1) Conduct surveillance for pests which could adversely affect the health and welfare of the installation.

(2) Coordinate with local health officials to determine the prevalence of disease vectors and other public health pests in the area surrounding the installation.

(3) Monitor pesticide selection, storage and sales at the Commissary and the Post Exchange IAW AR 40-5.

(4) Evaluate the health aspects of the pest management program.

b. Veterinary Services

(1) Conduct surveillance for pests which destroy food stored in installation facilities.

(2) Provide advice to pet owners concerning pests which may adversely affect their animals.

2.5 Pest Management Coordinator

a. Prepare, monitor, and update the installation pest management plan.

b. Coordinate and conduct pest surveillance or pest control activities to ensure all applicable information is recorded and reported as required by this plan. Monitor the sale and distribution of pesticides on the installation.

c. Function as a point of contact between those individuals who store and apply pesticides (e.g., public works, golf course, pest control contractors, tenant activities, agricultural lessees) and activities or individuals who document or deal with pesticide use in their programs (e.g., Environmental Management Office, Safety Office, Fire Protection and Prevention, Industrial Hygienist).

d. Oversee the technical aspects of the self-help program with respect to pest control items and training of family housing residents.

e. Monitor certification and continuing pest management training for pesticide applicators on the installation.

f. Coordinate and monitor contracts dealing with pesticide application and keep a copy of each contract on file.

g. Coordinate with local, State and Federal agencies, as necessary, to conduct the installation's pest management program.

h. Provide answers to questions concerning pest management from the Installation Commander, the Major Command, and Department of the Army (DA).

i. Request pest management supplies and equipment in a timely manner.

j. Maintain effective liaison with installation health and environmental officials.

2.6 Building Occupants

a. Apply good sanitary practices to prevent pest infestations.

b. Use all non-chemical and chemical pest control techniques available through the self-help program to the fullest extent before requesting further assistance from Public Works.

c. Apply only those pesticides approved for use by Public Works.

d. Cooperate fully with Public Works personnel and contractors in scheduling pest management operations, to include preparing the areas to be treated.

2.7 Pest Management Personnel

a. Use integrated pest management techniques to the maximum extent possible.

b. Control pests according to the provisions of the IPM plan.

c. Operate in a manner that minimizes risk of contamination to the environment and personnel.

d. Ensure that supervisors are kept informed of changes in pest management requirements.

3.0 GENERAL

3.1 Installation Description

a. The mission of FGGM is to provide leadership in Base operations supporting tenant activities, which includes all services, Department of Defense activities, and Federal agencies. The installation also provides for the quality of life of the service members and families, civilian workforce and retirees within the Fort Meade community.

b. FGGM is located approximately halfway between Baltimore, MD and Washington, DC. MD Rt. 32 borders the western portion of the installation. Along the south the installation shares a border with the Patuxent Wildlife Research Center. The eastern border is MD Rt. 175 and to the north is Interstate 295.

c. FGGM is situated on 5,506 acres of land, consisting of the main Administrative area, seven family housing areas, the National Security Agency complex, an industrial/maintenance area, the exchange mall complex, a 36 hole golf course, and Kimbrough Ambulatory Care Center.

d. FGGM lies in the transitional zone between the Coastal Plain and the Piedmont. This transition is reflected in the soil composition and differences in vegetation. The topography is gently sloping over a large portion of the installation. Elevations range from 10 to 90 feet above sea level. The geology, hydrology, major soil association, wetland delineations, vegetation, and soil types found on FGGM are recorded in the Soil Survey of Anne Arundel County, Maryland. Topographical maps of the installation are on file in the Pest Management Office, Building 294.

e. The climate of FGGM is characterized as moderate. Temperatures range from a mean daily maximum of 85 °F in summer to 30 °F in winter with annual precipitation averaging 48 inches, with over 50 percent falling between March and August. Spring is characterized by high winds and moderate thunderstorms which occur early in the season. Summers are moderately hot and humid. Autumn is very pleasant with temperatures ranging as high as the mid-60s until November.

f. Many areas of critical habitats exist on the installation. For a complete discussion of these areas, their locations and their contents see Appendix O, Critical Habitats.

3.2 Inventory of Land Use and Layout of Facilities

a. Inventory of Land Use. There are three categories of grounds on FGGM: improved, semi-improved and unimproved grounds.

(1) Improved Grounds.

(a) Improved grounds include acreage on which intensive maintenance activities are planned and performed annually as fixed requirements. These activities include pest management, mowing, irrigation, dust and erosion control, drainage, planting for landscape effect and other intensive practices.

(b) There is approximately 3922 acres of developed land with about 1183 acres requiring intensive annual maintenance. A summary of Improved Land Areas and developed land is found in Table 1, below.

Table 1. Improved Land Area Requiring Annual Maintenance

	Hectares	Acres
Lawns	86.7	215
Athletic Fields	35.5	88
Golf Courses	158.0	395
Parade and Drill Fields	18.1	45
Post Cemeteries	2.4	6
Playgrounds and Parks	86.3	24
Other	62.5	155
Total	449.5	1118

(2) Semi-Improved Grounds

Semi-improved grounds include areas on which periodic maintenance is performed but to a lesser extent than on improved grounds. Activities on semi-improved grounds normally include soil sterilization, weed and brush control, drainage maintenance and mowing for fire protection. Periodic maintenance is necessary on approximately 772 acres of semi-improved land on FGGM.

(3) Unimproved Grounds

(a) Unimproved grounds include forested land, areas under buildings and surfaced areas and involve all other acreage not classified in the two previous categories. Activities on unimproved grounds do not occur on a regular basis and are generally unpredictable depending upon mission activities and changing conditions due to flood, fire, insects and other variables.

(b) The approximately 1306 acres of unimproved land at FGGM requires little or no maintenance. The bulk of the land surface is urban forest, pavement, building structures, and landfill.

b. Layout of Facilities. The majority of present installation activities and most base improvements and facilities are located throughout the installation. The geographic regions on FGGM are:

(1) Main Administrative Area and Associated Facilities.

The Main Administrative Area is located in the south-central portion of FGGM. Formal entry to the base is via Mapes Road and MD Rt. 32 on the west and Mapes Road and MD Rt. 175 on the east. This portion of the installation is intensively developed. Facilities include First U.S. Army Garrison Hqs, Post Theater, Post Chapel, Post Library, Burba Lake recreation area, officer and senior NCO quarters and tenant administrative offices.

(2) Army Family Housing.

There are 2,862 units of family housing on the installation. Argonne Hills lies on the installations northern boundary and contains 1,400 units. Meade Heights is situated on FGGM's eastern boundary and contains 365 units. MacArthur Manor and Shea Courts lie in the northcentral portion of the installation and contain 937 units. Croft Place is considered part of the main administrative area and contains 112 units. Geraghty Village is adjacent to the exchange mall area and contains 48 units.

(a) Family Housing is privatized under the Residential Communities Initiative (RCI). All interior pest management services are provided by the partner developer by way of contractor pest management firms.

Services are only provided for the interior of the dwellings. No pesticide use is being reported to the installation because the government no longer owns the dwellings proper.

(3) Golf Course.

There are two 18 hole courses located on the installation golf course. The course occupies 395 acres of land and boasts a modern club house and associated facilities.

(4) National Security Agency.

The National Security Agency occupies 660 acres on FGGM's western boundary. NSA maintains exclusive use of this area. An Inter-Service Support Agreement exists between the Agency and FGGM Garrison. DPW technicians have received security clearances and perform pest management within the NSA exclusive use areas.

3.3 Plan Maintenance

a. The Installation Pest Management Coordinator maintains this pest management plan. Changes are made electronically as they occur. At the end of the fiscal year, the plan is reviewed and officially updated (see the 5-year plan) to reflect all changes made in the pest management program.

b. The revised plan changes will to be sent to the U.S. Army Environmental Center Pest Management Team not later than 30 October of each year

4.0 PRIORITY OF PEST MANAGEMENT

4.1 Disease Vectors and Medically Important Arthropods

a. Mosquitoes

(1) Approximately twenty different species of mosquito are indigenous to FGGM. Of these, twelve species are recognized human pests. The primary disease threat comes from Eastern Equine Encephalitis (EEE). Five indigenous species are recognized vectors of EEE.

While no cases of EEE have been reported locally, the Maryland Department of Agriculture has isolated the virus from mosquitoes collected on the Patuxent Wildlife Refuge, which borders FGGM's southern perimeter. A listing of mosquito species, which occur, their habits, breeding sites and the diseases they are capable of transmitting may be found in Appendix E.

(2) West Nile Virus (WNV) is the primary vector borne disease threat on the installation. At this time Culex mosquitoes have been implicated in the spread of the disease but both Culex and Aedes mosquitoes are species of concern. The DPW along with FGGM Preventive Medicine Services and USACHPPM-North combine forces to institute a comprehensive larval surveillance and control program, followed up with adult surveillance, trapping and testing of mosquitoes for WNV. Dead birds, especially crows and jays are picked up and sent out for testing.

Up to date information concerning the disease in Maryland Can be found at the National Atlas website. The installation will respond to positive cases of the virus in accordance with the CDC's publication Guidelines for Surveillance, Prevention and Control of WNV.

A public education campaign is carried out throughout the breeding season with news releases regularly published in the installation newspaper *SOUNDOFF!* These news releases educate the FGGM community on the prevention of mosquito bites and how to control breeding sites around their buildings or quarters.

(3) FGGM Preventive Medicine Services routinely conduct Mosquito surveillance. Adult mosquitoes rarely require fogging for control on the installation. Larvaeciding operations are conducted based on Preventive Medicine survey findings.

b. Ticks

(1) On FGGM the primary, medically important pest is the black-legged tick (Ixodes scapularis). This tick is the recognized vector of Lyme disease. Other ticks may carry Lyme disease, but it is the black-legged tick, (half the size of a dog tick as an adult and approximately the size of a period on a printed page in its nymphal stage), that is primarily responsible for the spread of the disease. The nymphal stage is usually active in late spring and early summer.

(2) Newly hatched tick larvae are uninfected and may pick up Lyme disease bacteria from their first host, usually a woodland mouse. The nymph stage of the black-legged tick usually waits in low shrubs for a host. Then they are able to pass the disease on to another host such as

white-tailed deer during the succeeding stages of their life-cycle. Edge habitats, such as where grassy fields meet stands of trees, bushes and shrubs, are favorite places for deer to browse and mice to burrow or nest. These areas, therefore, are likely to be infested with ticks as well. View Lyme Disease Risk Map.

(3) Preventive Medicine and DPW Pest Management technicians conduct surveys, such as tick drags, in habitat areas around family quarters, child care facilities, and other areas where personnel have expressed concerns about the presence of ticks. Threshold criteria are established and control measures are formulated based upon survey results. However, providing information to personnel about where these ticks are found, avoidance of such areas, use of repellents, and if bitten, prompt removal and diagnosis of the tick is the primary preventive control measure.

c. Rodents

The recognition of white-footed mice and Norway rats as potential vectors of hantavirus has elevated the importance of rodents as pests of medical significance. Structural rodent control and the use of proper personal protection when handling rodents is essential to prevent the spread of the disease, specifically hantavirus pulmonary syndrome,(HPS), and hemorrhagic fever with renal syndrome (HERS). A good source of information on HPS, its detection and prevention can be found at the Centers for Disease Control's web site. Rodents are controlled primarily by excluding them from facilities. Where necessary rodents are controlled by trapping and poisonous baiting.

d. Black widow spiders

(Latrodectus mactans) are sometimes found in undisturbed places in warehouses, family housing storage areas, and in and around other buildings. Although these spiders are poisonous, few, if any, problems are encountered by FGGM personnel.

e. Bees and wasps are found throughout the installation. The stings are painful and cause allergic reactions in some people. These insects are considered a minor problem on FGGM.

4.2 Quarantine Pests

FGGM is within the USDA quarantine area for Gypsy Moth. Pest Management technicians are certified USDA inspectors and inspect household goods exiting the installation for the presence of larvae and egg masses.

4.3 Real Property Pests (Structural/Wood Destroying Pests)

Subterranean termites (image2) cause damage to wooden buildings and other structures on the installation. Annual surveys of wooden structures and treatment when termites are found has kept damage to a minimum. Carpenter ants occasionally invade wooden structures, particularly where wet conditions exist.

4.4 Stored-Products Pests

Food items stored in the Commissary and Commissary warehouses, the Troop Issue Support Activity, the AAFES Shoppette, and food stored in food service facilities may become infested by stored-product pests. Occasional complaints are received from family housing residents, but insect infestations usually originate in the home. Cleanup and insecticide treatments eliminated this problem. Some of the pests found in stored food include: saw-toothed grain beetles, red flour beetles, carpet beetles and other dermestids.

4.5 Ornamental Plant and Turf Pests

a. Trees and shrubs on FGGM can be infested by various insect pests, resulting in damage or destruction of the plants. Tent caterpillars, bagworms, orange striped oakworms and spittlebugs cause problems annually.

b. Gypsy Moth has been a major defoliator of hardwood trees on FGGM. Aerial spray programs were put in place in 1990, 1991 and 1992. Historically, these programs have encompassed thousands of acres. Egg mass plots are monitored and evaluated annually and control measures are considered when egg mass/acre counts exceed the threshold limits established by the USDA Forest Service. All aerial spray projects are accomplished in accordance with AR 200-5.

c. Various insect and fungal pests damage the fairways tees and greens of the Golf Course. Cutworms, Green June Beetles, Brown Patch, Dollar Spot and Pythium are just a few examples of pests that may cause problems. For a more complete discussion of golf course operations see Appendix B.

4.6 Undesirable Vegetation

a. Weeds along fence lines, on road shoulders, paved surfaces, etc. require control using appropriate herbicides. Some control of unwanted plants is done mechanically (mowing, weed-eaters, etc.).

b. An edging program has been established in improved and semi-improved turf areas. To reduce more costly weed-eating efforts, herbicides are used to edge around buildings, signposts, fire hydrants, utility poles, etc.

c. Goose grass, White Clover and Smooth Crabgrass are examples of undesirable vegetation found on the golf course. The presence of these weeds

would diminish the quality of play of the course. For a more complete discussion of control strategies see Appendix B.

d. Broadleaf and grassyweeds require control in areas of high visibility. Selective pre-and post-emergent herbicides are used to control undesirable vegetation in these areas. Different areas are selected each year and cultivated into wildflower plots. This method of cultural control reduces the high costs of mowing and herbicide applications while creating areas of high aesthetic value.

4.7 Animal Pests

a. Mice occasionally invade buildings. In family quarters only trapping and exclusion pest management techniques are used because of the problems associated with using poisons in these areas. In other areas where poison use is permitted, they are placed in tamper-proof bait stations.

b. There are occasional problems with Norway and Roof Rats on the installation. The same techniques used to control mice are used to control rats.

c. Birds

(1) Pigeons cause problems by roosting on buildings and structures because the accumulation of droppings create health hazards. Pest management technicians use screening, netting, post and wire, and bird barrier type products to discourage pigeons from roosting. Repellents, and on rare occasion avicides are used when populations exceed what normally can be dealt with using mechanical control methods.

(2) Starlings and sparrows nest in dryer vents, exhaust fans, etc. The nests are removed and screening is put in place to discourage nesting.

(3) Barn Swallows and Purple Martins nest under porch columns, on high patios and other different areas. These birds are protected under the Migratory Bird Treaty Act and are not to be disturbed.

a. Raccoons will sometimes take up residence in the attics of older wood constructed buildings. Live traps are set and the captured animals are relocated.

b. Stray dogs and cats occasionally need to be captured on the installation. Stray animal control on the installation is the responsibility of the Military Police.

4.8 Household and Nuisance Pests

Crawling insects (ants, cockroaches, crickets, earwigs, etc.) and spiders may require control in billets, family housing, food service facilities, warehouses, offices and other administrative buildings. Cockroaches make up approximately 15 percent of the pest management workload which is divided between surveillance and control activities.

The remainder of the pests in this category create relatively minor pest problems on the installation. Proper sanitation and housekeeping do much to discourage these pests.

4.9 Other Pest Management Requirements

Pest management technicians are responsible, in conjunction with the Military Police, for carcass removal. In addition, the pest management technicians provide services for odor control in buildings and other structures on the installation. Odors may arise from dead animals in walls and crawl spaces.

4.10 Pest Management and Control Assets

By controlling pests throughout the installation many benefits are afforded. Buildings of historic significance are protected from structural damage. Open spaces are made safer for resident activities. The risks of injury or contracting diseases caused by pests are minimized.

4.11 Emergency Procedures

Pest management technicians are on call 24 hours a day. Technicians are equipped with pagers and respond to emergency requests initiated through the emergency work order number 677-1629. Examples of emergency work requests may include live bats and hornets in family housing quarters.

5.0 INTEGRATED PEST MANAGEMENT (IPM)

Integrated pest management incorporates the use of multiple techniques to prevent or suppress pests in a given situation. Although IPM emphasizes the use of nonchemical strategies, chemical control may be an option used in conjunction with other methods. IPM strategies depend on surveillance to establish the need for control and to monitor the effectiveness of management efforts. The four basic IPM principles described below are the heart of IPM, and are descriptive of the pest management philosophy used at FGGM.

5.1 Mechanical and Physical Control

This type of control alters the environment in which pests live, traps and removes pests where they are not wanted, or excludes pests. Examples of this type control include: harborage elimination through caulking or filling voids, screening, mechanical traps or glue boards, and nets and other barriers to prevent entry into buildings.

5.2 Cultural Control

Strategies developed for this method involve manipulating environmental conditions to suppress or eliminate pests. For example, spreading manure from stables onto fields to dry, prevents fly breeding. Other good examples include: elimination of food and water for pests through good sanitary practices to prevent pest populations from becoming established or from increasing beyond a certain size or the cultivation of wildflower plots in areas to avoid applying herbicide.

5.3 Biological Control

In this control strategy, predators, parasites or disease organisms are used to control pest populations. For instance: sterile flies may be released to lower reproductivity; viruses and bacteria may be used which control growth or otherwise kill insects; or parasitic wasps may be introduced to kill eggs, larvae or other life stages. Biological control may be effective in and of itself, but is often used in conjunction with other types of control.

5.4 Chemical Control

Pesticides kill living organisms, whether they be plants or animals. At one time, chemicals were considered to be the most effective control available, but evolved pest resistance rendered many pesticides ineffective. In recent years, there is an increasing trend to use pesticides that have limited residual action. While this has reduced human exposure and lessened environmental impact, the cost of chemical control has risen due to the need for more frequent application. Since personal protection and special handling and storage requirements are necessary with the use of chemicals, the overall cost of using chemicals as a sole means of control can be quite costly when compared with nonchemical control methods.

While any one of these methods may solve a particular pest problem, often several methods, if used concurrently, are more effective over the long term. For example, screens may be used to prevent mosquitoes from entering buildings, breeding areas may be filled in or drained to eliminate larval habitat, and pesticides may be used to kill adult mosquitoes. Screens will protect people inside, but do little to keep people from being bitten outdoors. Larval control may eliminate mosquito breeding on the installation, but may not prevent adult insects from flying onto the installation from surrounding areas. Chemicals may kill most of the flying mosquitoes, but may miss others.

Although chemical control is an integral part of IPM, nonchemical control is promoted. Chemical control is almost always a temporary measure and, in the long run, more expensive. Nonchemical control, which may initially be more expensive than chemicals, will usually be more cost effective in the long run. Most importantly, nonchemical controls are nontoxic, thereby reducing the potential risk of adverse effects to human health and the environment.

5.5 IPM Outlines

Integrated Pest Management Outlines may be found in Appendices A and B. Each major pest or pest category is addressed, by site, in separate outlines. New outlines will be added to Appendices A or B as new pests or sites are encountered that require surveillance or control.

6.0 HEALTH AND SAFETY IN ACCORDANCE WITH 29 CFR 1910

6.1 Medical Surveillance of Pest Management Personnel

All personnel who apply pesticides on the installation (excluding self-help pest management) are included in the medical surveillance and respiratory protection program. This program consists of the following elements:

- A pre-employment physical examination
  This initial 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. The baseline examination also includes liver and kidney function tests, a complete blood count and a respiratory evaluation. A physical examination of the same scope as the initial examination is conducted annually. A list of pest control personnel who are monitored can be found in Table 4.

- Annual physical examinations
  Personnel are required to undergo annual physical examinations of the same scope and parameters as the initial baseline examination.

- Annual Respirator fit tested

- Cholinesterase inhibiting substance testing
  New pest management personnel are required to undergo initial and annual RBC cholinesterase level tests. Additionally, testing can be done to rule out exposure, as required. For personnel who use cholinesterase-inhibiting substances (CIS), e.g., carbamate or organophosphate pesticides, the RBC cholinesterase level is monitored at least once a year there after. Personnel informed of the common symptoms produced by cholinesterase inhibiting substances (listed in Table 2), are instructed to immediately report such symptoms if they occur in order to expedite medical treatment.

- Rabies prophylaxis.

Personnel who handle or otherwise come into contact with wild animals on the installation receive rabies prophylaxis. This includes military police, wildlife biologists, and pest management technicians.

Table 2. Common Symptoms Produced by Cholinesterase Inhibiting Substances.		
Mild Poisoning	**Moderate Poisoning**	**Severe Poisoning**
Anorexia	Nausea	Diarrhea
Headache	Salivation	Pinpoint, non-reactive pupils
Dizziness	Lacrimation	Respiratory difficulty
Weakness	Abdominal cramps	Pulmonary edema
Anxiety	Vomiting	Cyanosis
Tremors of tongue and eyelids	Perspiration	Loss of sphincter control
Miosis	Muscular tremors	Coma
Impairment of visual acuity		Heart block

6.2 Medical Monitoring Guidance

a. United States Army Center for Health Promotion and Preventive Medicine (USACHPPM) Technical Guide No. 114 (Reference 3j) provides guidance for medical monitoring of pesticide applicators. The Occupational Health Section at the Health Clinic medically monitors all Government pesticide applicators.

b. Contractor personnel are monitored in accordance with in accordance with Maryland Occupational Safety and Health regulations.

6.3 Hazard Communication. In Accordance With 29 CFR 1910

a. Installation pest management personnel are given hazard communication training, to provide workers with information concerning the hazardous materials used and stored in their workplace. DD1556 Record of Training are kept on file in the Installation Pest Management Coordinator's office, Bldg. 294. Following initial hazard communication classes, additional training is given to new employees or when new hazardous materials are introduced into the workplace. The following personnel have received hazards communication training:

(1) Kevin Fay, Pest Management Coordinator - 12 September 1996

(2) Donald Mcduffie, DPW Pest Management - 11 July 1996

(3) Jill Bunt, DPW Pest Management - 11 July 1996

(4) Mike Doltzer, DPCA Golf Course - December 1990

(5) James Ladebush, DPCA Golf Course - 17 April 1996

(6) Ted Guy, DPW Pest Management - 30 September 1994

b. Material Safety Data Sheets (MSDS) for all pesticides and other toxic substances used in the pest management program can be found in the Installation Pest Management Coordinator's office, Bldg. 294. All employees have access to the office and continuous access to Material Safety Data Sheets. MSDS are also maintained electronically within this plan. Employees have full access to IPMIS electronic workstations and this plan. Additionally, MSDS are kept in each facility where pesticides are stored or handled. This includes the golf course maintenance facility. Golf course employees have full access to MSDS files located in the Break Room.

6.4 Personal Protective Equipment

OSHA approved masks, respirators, chemical resistant gloves and boots, and protective clothing (as specified by applicable laws, regulations and/or the pesticide label) are provided to pesticide applicators by the Government. These items are worn as required by FGGM pest management protocols during the mixing and application of pesticides. Pesticide-contaminated protective clothing is, under no circumstances, laundered at home. All reusable protective clothing is laundered commercially. Severely contaminated clothing is considered a pesticide-related waste and disposed of by the Defense Reutilization and Marketing Office (DRMO) in accordance with current Environmental Office requirements. Information concerning the proper use and maintenance of personal protective equipment can be found in Appendices F (Pest Management Operations) and G (Maintenance and Care of Respirators).

6.5 Fire Protection

a. Usual fire hazard potential is compounded in the case of a pesticide fire by the danger of pesticide poisoning and contamination. The IPMC conducts pre-fire coordination with appropriate Fire Protection and Prevention officials. This coordination is formalized in the installation fire plan. The Pre-Fire plan includes a floor plan of the pesticide storage areas, evacuation routes, water runoff control, a map of the surrounding area, emergency telephone numbers, medical assistance information, salvage/hazard assessment and provisions for safety briefings of appropriate personnel.

b. The plan is updated annually. A copy of the Pre-Fire Plan and current pesticide inventory are provided to the FGGM Fire Protection and Prevention

Division yearly or when any significant changes occur in the listing Copies of both the pre-fire plan and pesticide inventory are maintained by the IPMC in his office and are also provided to other emergency officials, as appropriate. A detailed discussion of Pre-Fire planning can be found in paragraph 2 of AFPMB TG No. 16 (Appendix P, References).

6.6 Pest Control Vehicles

The pest control vehicles currently available to pest control personnel are Dodge pickup trucks equipped with utility beds with secured external storage compartments (see Appendix H). To avoid damage to pesticide containers and prevent spillage, all chemicals are secured within the storage compartments. At no time are pesticides left unlocked in unattended vehicles. Pesticides or contaminated equipment are not placed in the cabs of the vehicles. A portable eye lavage, spill kit, product MSDS, label and two way mobile communications are carried in each pest control vehicle when in use. Under no circumstances are these vehicles used for any purpose other than pest control and management.

7.0 ENVIRONMENTAL CONSIDERATIONS

7.1 Protection of the Public

Precautions are taken during pesticide application to protect the public, on and off the installation. The public is notified of any major exterior pesticide application through press releases in the installation newspaper *SOUND-OFF*. Signs indicting application on the golf course area are posted at the 1st and 10th tees for 48 hours after application as per regulations. Whenever pesticides are applied outdoors, care is taken to make sure that any spray drift is kept away from individuals, including the applicator. Pesticide application indoors is accomplished by individuals wearing the proper personal protective clothing and equipment. Pesticides are not applied outdoors when the wind speed exceeds five miles per hour. At no time are personnel permitted in a treatment area during pesticide application unless they have met the medical monitoring standards and are appropriately protected.

a. Pesticides and pesticide application techniques that have the potential to contaminate ground and/or surface water are not used.

b. Pesticide applications that involve aerial spraying are accomplished only after the proper environmental documentation is prepared and in strict adherence to AR 200-5.

c. Restricted-use pesticides are rarely used on the installation. The IMPC closely monitors any application where infestations or conditions are such that stronger chemicals are required insure effective treatment. Contingency operations or outbreaks of vector borne diseases may be examples of where restricted-use pesticides might be used.

7.2 Sensitive Areas

a. Sensitive areas on base, identified in Appendix O, are considered before pest control operations are conducted. No pesticides are applied directly to wetlands or surfaces waters unless the product label specifically recommends its use on these sensitive areas. The proposed pesticide application to sensitive areas is coordinated with the DPW Environmental Management Office. The proper permits from the State of Maryland (if needed) are obtained. For example, the Burba Lake area, defined as sensitive within the FGGM installation, requires coordination with the DPW Environmental Office and a state permit before pest control measures are implemented.

b. Child Development Centers (CDC). Pesticides are not applied in or around child development centers unless the pest is an immediate threat to the health and safety of the children and staff. For example, a wasps' or hornets' nest found at a center may be a situation where personnel would apply small quantity of contact insecticide, only enough to neutralize the hazard. The following University of Florida presentations are indicative of the way pest management is conducted in schools and CDC's on FGGM.

c. Children Play Areas. Pesticides are not applied in areas where children play. For example, herbicides are not applied to playgrounds, sandboxes or child athletic fields. Insecticides may be used when the health and safety of children may be threatened as cited in paragraph b. above.

1. What is IPM in schools?

2. A tour of pest problem areas in schools

3. Cockroach IPM in schools

4. Head Lice IPM in schools

5. Ant IPM in schools

d. Kimbrough Ambulatory Care Center. Special care is given when pesticides are applied in patient areas of Kimbrough Ambulatory Care Center. Pest Control personnel follow pesticide label instructions with special attention given to the guidance provided in the AFPMB TG No. 20, Pest Management Operations in Medical Treatment Facilities are followed.

7.3 Endangered/Protected Species and Critical Habitats

a. Currently no United Stated Department of Interior threatened or endangered species are known to occur on the installation. The State of Maryland threatened and endangered and watchlist species list identifies several

species that occur on FGGM. See Appendix O for a full description of species, their habitat and site maps. As pesticide applications are potentially dangerous to endangered or threatened species or their habitats, application strategies are evaluated by the Installation Pest Management Coordinator prior to implementation. Projects that may impact threatened and endangered resources are discussed in local Environmental Assessments and addressed by the appropriate AEC and MACOM points of contact.

Maryland RT&E Plants

Maryland RT&E Animals

b. In accordance with the Migratory Bird Treaty Act, all species of migrating birds found on base are to be protected, and their nesting places are not to be disturbed. Two predominate species, the Barn Swallow (Hirundo rustica) and the Purple Martin (Progne subis) do cause occasional problems, but are handled in accordance with their protected status.

c. Careful planning and consideration is given to pesticide applications conducted in or around critical habitat areas. No herbicides are used in areas where direct application or drift may damage rare or endangered plant species. No pesticides are used in areas where endangered animal species occur. The DPW Environmental Management Office has described and mapped these habitat protection areas (see Appendix O, Critical Habitats) FIFRA PL 100-464

7.4 Environmental Documentation

An environmental assessment is being prepared for FGGM, which specifically addresses the pesticide use program on the installation. This plan is referenced in the assessment as documentation of pesticide use.

Table 3. Endangered and Threatened Wildlife Species Likely to Occur in and Around FGGM

Scientific Name	Common Name	Maryland			
		Endang.	Threat.	Watch	Rare
Etheostoma vitreum	Glassy darter	X			
Carex tonsa	Shaved sedge				X
Cyperus grayi	Asa Gray's Cyperus			X	
Carex leavenworthii	Leavenworth's sedge	X			
Lespedeza stuevei	Downy bushclover	X			
Carex atlantica	Eastern sedge			X	
Rhododendron atlanticum	Dwarf azela			X	
Senecio anonymous	Small's ragwort			X	

Aronia prunifolia	Purple chokeberry				X
Carex seorsa	Weak stellate sedge				X

7.5 Cultural Resources

Pest management personnel should be cognizant of the importance of cultural resources at FGGM. A range of cultural resources represents the history of occupation and use at the facility; these include known and suspected archeological sites, as well as architectural resources associated with the military development of the installation. The existence of cultural resources within FGGM's boundaries confers special stewardship responsibilities on the installation to consider the impacts of installation activities on historic properties. If pest control activities involve any cultural resources structures areas, careful planning and consideration should be given to the type of pest control implemented.

7.6 Pesticide Spills and Remediation

All pesticide spills are reported immediately to the installation hazardous waste manager and the FGGM Fire Protection and Prevention Division. Pesticide spill cleanup procedures, notification procedures, and a list of components of the spill kit is provided in Appendix I of this plan. A spill cleanup kit is kept on each pest control vehicle. Additional information on pesticide spills can be found in AFPMB TG 15 (Reference N5b) and Appendix I.

7.7 Pollution Control/Abatement Projects

There are currently no pollution control or abatement projects on the installation that have a direct impact on pest management.

7.8 Pesticide Reduction/Measures of Merit

a. Fort Meade is fully committed to the Department of Defense's Measures of Merit for pesticide reduction. The installation has had a fully staffed and approved Pest Management Plan since 1990. All personnel applying or supervising the application of pesticides are DoD certified and the installation has reduced the amount of pesticides used by more than 50% of the 1993 baseline.

b. The following efforts have enabled FGGM to meet and in some cases exceed the DoD's Measures of Merit:

1. The Golf Course is employing fungicides with lower percentages of active ingredient. They have also has established a higher "take action" threshold for fairways than what is in place for greens and tees. This program has greatly reduced the amounts of pesticides used on the course.

2. The installation is testing using hot water to replace certain herbicide applications. We are testing a termite baiting system in hopes of reducing the amounts of termiticides used. Herbicides will only be used 0in those areas identified as high maintenance aesthetic areas, thus reducing the amounts of herbicides used.

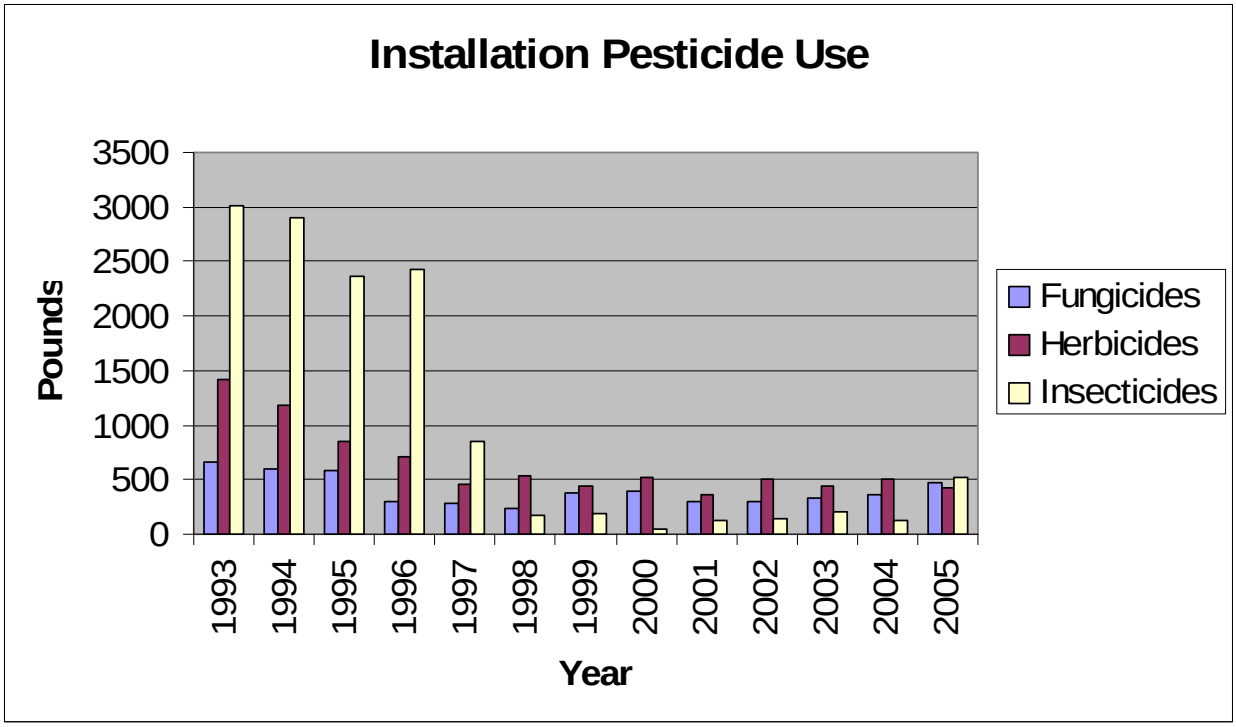
   Herbicides such as Arsenal and Oust are being employed for bare ground weed control. Although more expensive to use, the pounds of active ingredient used per acre with these products are considerable less than others.

3. Open fields traditionally treated with 2,4-D for broadleaf weeds are being reforested or turned into wildflower propagation areas.

4. A greater reliance is being placed on synthetic growth regulators, baits and biologicals.

5. The installation has instituted an extensive public relations campaign to educate our customers in IPM. Rather than demanding pesticide treatments, our customers expect us to seek other avenues of control. Having informed customers has allowed us to be more effective in implementing IPM and reducing the amounts of pesticides used.

Installation Pesticide Use Trends FY 93-05



7.9 Pollution Prevention (P2)

The pest management program, as outlined in this plan complies to Executive Order 12856 of August 3, 1993, Federal Compliance With Right-to-Know Laws and Pollution Prevention Requirements. Integrated pest management strategies which stress nonchemical control form the basic framework of the pest management program. The control of pests with pesticides are considered only after nonchemical control methods have been exhausted.

7.10 Prohibited Activities

a. At no time will a pesticide be used in any manner which is inconsistent with its label.

b. No pesticide will be used whose registration has been suspended or canceled by the EPA or the State of Maryland. When the EPA or State of Maryland issues an intent to cancel notice all remaining stocks of that pesticide are used for their intended purposes before the cancellation date. If use is not practical, the remaining stocks are disposed of in accordance with the EPA's instructions issued with the cancellation notice.

c. Herbicides will not be used to control weeds at the Child Development Center or in areas where children play. (AR 608-10)

d. No rodent baits will be placed without being secured in tamper proof bait stations.

8.0 ADMINISTRATION

8.1 Contracts

a. EcoLab Inc is currently preforming Pest management at the FGGM Commissary. The IPMC and the MACOM PMC provided a copy of an approved scope of work to the Defense Commissary Agency Sanitation Officer.

b. At the time of this writing Defense Commissary Agency has yet to submit a scope of work for review. It is anticipated that this process will be accomplished by this plan's next update.

c. All requirements placed upon contracts in AR 200-5 will be satisfied.

8.2 Work Orders

a. The Public Works pest management technicians perform pest surveillance and control by work order. The DPW has full IFS capabilities. Customers call the DPW service order section and submit a request for service. The following day a computer printout is generated describing the nature of work to be done, POC's, etc.

b. Preventive maintenance is performed under two standing service orders (SSO). One is for family housing and the other for all post buildings and grounds.

c. Reimbursable work is performed under individual job orders (IJO). Job orders are funded on a individual basis. Service at the National Security Agency is an example of this type of work.

8.3 Interservice Support Agreements

Pest management services are provided to the National Security Agency through an interservice support agreement. A separate funding site is established and all material and labor costs are reimbursed by the National Security Agency.

8.4 Agricultural Outleases

There are no outleases on the installation.

8.5 Department Resources (Current and Proposed)

For a more detailed discussion of resources than that found below, refer to Appendix J (5-Year Plan).

a. Staffing. The following personnel are involved with pest management on FGGM. See Table 4 for more detailed information.

(1) Installation Pest Management Coordinator

(2) DPW Public Works Branch Chief

(3) Golf Course Superintendent

(4) JCI (Johnson Controls) Grounds Supervisor

(5) Golf Course Foreman

(6) DPW Pest Management Technicians

(7) DPW Grounds Gardeners

(8) Preventive Medicine Specialists

(9) Veterinary Food Inspectors

(10) Golf Course Assistant Superintendent

b. Materials and Equipment.

All materials, buildings and equipment are furnished by the U.S. Government. Only those pesticides and pesticide application equipment required by the program are maintained on the installation. Pesticides are ordered as required to maintain at least a three month supply but not exceeding a one year supply. Pesticides which are required for use during a specific time of year (e.g., herbicides applied in the spring when weeds are emerging) are ordered in a timely manner to ensure effective application. The inventory of pesticides provided as Appendix M lists the pesticides on hand at FGGM. An inventory of pesticide application equipment used at FGGM is provided in Appendix H. These inventories are kept current, and updated as changes occur. At a minimum, a revised pesticide inventory is included in the IPM Plan's annually updated edition.

c. Facilities (Mixing and Storage Sites)

(1) Pesticides classified as moderately or highly toxic are stored in Building 294. This facility meets the standard set forth in Military Handbook 1028/8A and the criteria described in 40 CFR 165.

(2) Mixing is done either outside this building or on-site. Both large and smaller volumes can be mixed at this storage facility. Small hand-held sprayers are filled at the sink located within a curbed area on a cement pad. The water from the mixing sinks are drained into a closed trap. If a pesticide spill occurs in the sink, the trap is drained and rinsed. Only pure water passes from the sink into the sanitary sewer. Large volume spray equipment is filled in a curbed mixing pad directly adjacent to the building. The pipes which supply water to the building are equipped with a backflow prevention device.

(3) A pesticide spill kit is maintained in the pesticide storage and mixing areas.

(4) Pesticides used exclusively for the golf course are kept in a storage building located on the course. The mixing and storage areas in the building are curbed. There are backflow prevention devices in the building. Mixing is usually done on site.

8.6 Reports and Records

Records of all pest management operations performed by engineering personnel, golf course personnel, contractors, and self-help individuals are maintained on the installation.

a. Daily pesticide application and surveillance records are maintained by the DPW pest management supervisor for work performed by the Public Works Branch, the golf course and the family housing self-help pest control program using the Integrated Pest Management Information System (IPMIS). IPMIS provides a permanent historical record of pest management operations for each building, structure or outdoor site on the installation. The DD Form 1532-1 is maintained by the superintendent for pest management activities performed on the golf course. The IPMIS reporting system will be incorporated into the golf course operations as soon as the final release becomes available.

b. A yearly pesticide-use summary report is prepared at the end of each fiscal year and forwarded to the MACOM PMC if requested. This report depicts pesticide use in pounds of active ingredient broken down by category (herbicide, insecticide, fungicide, etc). Pesticide use for the golf course is also reported.

c. The DPW Pest Management supervisor maintains a current inventory of stored pesticides. Copies of the inventory are sent to the Fire Department, Health Clinic and the DPW Environmental Management Office annually.

8.7 Training

a. Government (FGGM) employees who apply or oversee the application of pesticides are DOD-certified. Training and certification is conducted by the State of Maryland for the contract pest management technicians. All certified personnel undergo re-certification every three years. Installation pest management personnel are certified in the appropriate EPA categories in order to perform pest management operations directly or to supervise other employees conducting pest control within these categories (see Table 4). A list of current personnel, along with their certification expiration dates, can be found in Appendix J (5-yr plan). Photocopies of training certificates are found in Appendix N.

b. In order to keep abreast of pest problems and pest management techniques which are unique to this area, certified personnel attend local pest management classes, workshops, seminars, etc. These local seminars, provide opportunities for FGGM personnel to meet other local pest management professionals who are familiar with many of the pest problems within this geographic area. The type of information garnered from these seminars is particularly helpful when dealing with vegetation control issues where local conditions dictate product concentration and herbicide labels indicate application strength technique.

c. Local pest management training consists of at least eight hours per year; this is in addition to any offsite re-certification training, such as the DOD course. Other personnel who deal directly with pest control operations, but who may not need to be certified, are also encouraged to attend. The time and labor expended in this type of training is easily recouped through improved efficiency in pest control operations on the installation.

8.8 Design/Review of New Construction

Engineering and medical personnel review the design of new buildings or other structures to assess planned pest control measures. An on-site pest control evaluation is conducted prior to completion of the project to ensure that insect and rodent entry points and potential harborage have been eliminated within the new facility.

8.9 5-Year Plan.

Many administrative elements of the program are addressed in the IPM 5-year plan (See Appendix J). This document serves as a tool to identify recurring and projected requirements and the timeframes for implementation. The 5-year plan also helps installation personnel to anticipate and plan for program changes.

Table 4. Certification Requirements for FGGM Pest Management Personnel.		
Name	**Activity/Function**	**EPA Categories***
Jill Bunt	DPW Entomology Section Pest Management Technician	3,5,6,7,8
Donald Mcduffie	DPW Entomology Section Pest Management Technician	3,5,6,7,8
Kevin Fay	DPW Entomology Section Pest Management Technician	2,3,5,6,7,8,11
Carl Foy	DPW Operations Division Public Works Branch Chief	3,5,6
Mike Doetzer	DPCA Golf Course Superintendent	3,5,6
James Ladebush	DPCA Golf Course Foreman	3,5,6
Ted Guy	DPW Entomology Section Pest Management Technician	3,5,6,7,8
*EPA categories: 2 Forest Pest Management 3 Ornamental and turf pest control 5 Aquatic pest control 6 Right-of-way pest control 7 Industrial, institutional, structural and health-related pest control 8 Public health pest control 11 Aerial		

9.0 COORDINATION - DOD, OTHER FEDERAL, STATE AND LOCAL

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 (MEDCOM) focuses on preventing and minimizing medical consequences of pests and pest management operations while the Assistant Chief of Staff for Installation Management and the Army Environmental Center concentrate on safe, effective implementation of day to day pest management operations and environmental considerations of pest management operations. A list of organizations associated with the Army Pest Management Program and a description of each with a current address is found in Appendix L.

The USAEC Pest Management team reviews the pest management plan, and gives special attention to any pesticide application that: 1)uses restricted use pesticides; 2)uses any pesticide that may significantly contaminate surface or ground water; 3)includes 259 or more hectares (640 acres) in one pesticide application; 4)may adversely affect endangered or other protected species or habitats; or 5)involves aerial application of pesticides.

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 (MPs) are responsible for capturing and removing stray dogs and cats on the installation. The pest management technicians coordinate service requests for stray animal control in the main post area with the MPs.

Because of the scale of effort required to arrest and control Gypsy Moth larvae infestations, management efforts are coordinated with the following agencies:

a. State of Maryland Department of Agriculture - to insure safe aerial application of pesticides. Meetings and telephone conversations identify dates and times of applications and locations of spray blocks.

b. Anne Arundel County - to insure safe aerial application of pesticides. Meetings and telephone conversations are needed to identify dates and times of applications and locations of spray blocks and coordinated spray schedules with the state.

c. USDA Forest Service - to identify funding needs and solicit technical help in evaluating contract bids.

d. US Fish and Wildlife Service - to coordinate any aerial spray programs adjacent to the installation.

e. EPA Chesapeake Bay Liaison Office - to submit for review local Environmental Assessments.

Installation personnel coordinate with the Corps of Engineers to assure that pesticide application, such as termite pretreatment for new construction, is properly performed and documented.

Points of contact for these agencies are also found in Appendix K.

10.0 SALE AND DISTRIBUTION OF PESTICIDES

10.1 Family Housing Self-Help.

Pest control items are no longer available to family housing residents through the self-help store, Building 287. FGGM housing is now privatized under the RCI initiative.

10.2 Other Activities

a. AAFES. Only pesticides registered by the EPA for general use are sold in the Post Exchange, Building 2793. Restricted-use products are not available to the public. Pesticide products sold at the base exchange are grouped into several separate categories: 1) products applied to pets for ectoparasite control, 2) repellents, 3) household, and 4) 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. Additional guidelines on pesticides in post exchanges can be found in paragraph 10-4h, AR 40-5.

b. Commissary. Similar to the post exchange, pesticides sold in the Commissary, Building 2788, are registered by the EPA for general use and ready-to use. Restricted-use products are not available.

A spill cleanup kit is on hand. Store personnel are familiar with the use of the cleanup kit and with installation spill contingency procedures. Additional guidelines on pesticides in commissaries can be found in paragraph 10-4h, AR 40-5.

c. Veterinary Clinic. Products containing pesticides are sold to Veterinary Clinic customers for their own use. These pesticide products, available for home use, are registered by EPA for application to animals only. The clinic does not offer ectoparasitic treatments (flea or tick dips) to pets at the facility.

11.0 PEST MANAGEMENT SERVICES PROVIDED TO OTHER ACTIVITIES

11.1 Tenant Activities.

Pest management services are provided to all tenant activities on FGGM.

11.2 Agencies Located Off the Installation.

No FGGM pest management services are provided off the installation with the exception of the NSA Friendship Annex 2, 3 (FANX) located at Baltimore-Washington International Airport.

12.0 REGULATED PESTS

12.1 Quarantine Pests.

The DPW pest management technicians inspect outgoing household goods and other cargo for the presence of Gypsy Moth. There are no other requirements for plant or animal quarantine on FGGM.

12.2 Retrograde Cargo.

No retrograde cargo is received on the installation.

12.3 Noxious Weeds.

The installation complies with all Federal and State noxious weed laws. When noxious weeds are encountered on the installation, care is taken to ensure that nearby nontarget plants are not adversely affected.

13.0 PEST MANAGEMENT REFERENCES

13.1 Federal and State Laws

a. The Federal Insecticide, Fungicide and Rodenticide Act (thru PL 100-460, 100-464 to 100-526, and 100-532).

b. Title 29, Code of Federal Regulations, 1993 revision, Section 1910, Occupational Safety and Health Standards.

c. Title 40, Code of Federal Regulations, 1993 revision, Section 165.10, Recommended Procedures and Criteria for Storage of Pesticides and Pesticide Containers.

13.2 Regulations

a. DoD Dir 4150.7, DoD Pest Management Program, 22 April 1996.

b. AR 11-34, The Army Respiratory Protection Program, 15 February 1990.

c. AR 40-5, Preventive Medicine, 15 October 1990.

d. AR 200-1, Environmental Protection and Enhancement, 23 April 1990.

e. AR 200-2, Environmental Effects of Army Actions, 23 December 1988.

f. AR 200-3, Natural Resources Land, Forest, and Wildlife Management.

g. AR 200-5, Pest Management, 29 October 1999.

h. HSC Reg 40-30, HSC Operating Program - Preventive Medicine Guidelines for Implementation of a Preventive Medicine Program for MEDCEN/MEDDAC, 16 March 1989.

i. HSC Pam 40-3, 1 October 1997, Environmental Health Program.

13.3 Technical Manuals

a. TM 5-629, Weed Control and Plant Growth Regulation, 24 May 1989.

b. TM 5-632, Military Entomology Operational Handbook, December 1971.

13.4 U.S. Army Center for Health Promotion and Preventive Medicine

a. No. 114, Guide for the Medical Surveillance of Pest Controllers, March 1976.

b. No. 138, Guide to Commensal Rodent Control, December 1991.

13.5 Armed Forces Pest Management Board Technical Guide

a. No. 14, Protective Equipment of Pest Control Personnel, March 1992.

b. No. 15, Pesticide Spill Prevention Management, June 1992.

c. No. 16, Pesticide Fires: Prevention, Control, and Cleanup, June 1981.

d. No. 20, Pest Management Operations in Medical Treatment Facilities, October 1989.

e. No. 21, Pesticide Disposal Guide for Pest Control Shops, October 1986.

f. No. 29, Integrated Pest Management in and Around Buildings, 1994.

13.6 Other References, Manuals, Books and Guides

a. MIL-STD-903C, Sanitary Standards for Commissaries, 20 November 1986.

b. MIL-STD-904A, Guidelines for Detection, Evaluation and Prevention of Pest Infestation of Subsistence, 13 January 1984.

c. MIL-STD-909, Sanitation Standards for Food Storage Facilities, 31 August 1989.

d. MIL-HDBK-1028/8A, 1 November 1991, Design of Pest Management Facilities.

e. TB Med 561, Occupational and Environmental Health, Pest Surveillance, June 1992.

f. Mallis Handbook of Pest Control, 7th Edition, PCT Books, 4012 Bridge Ave, Cleveland, OH 44113, 1100 pp., $89.00

g. Soil Survey of Anne Arundel County, Maryland, USDA Soil Conservation Service, 1993.

13.7 Periodicals

a. Pest Control (Magazine Published Monthly, $22/YEAR), P.O. Box 6215, Duluth, MN 55806-9915.

b. Pest Control Technology (Magazine Published Monthly, $30/Year), PCT, 4012 Bridge Ave, Cleveland, OH 44113.

c. Pest Management Bulletin, Periodic Publication of U.S. Army Center for Health Promotion and Preventive Medicine, Entomological Sciences Division, Aberdeen Proving Ground, MD 21010-5422. (Phone DSN 584-3613)