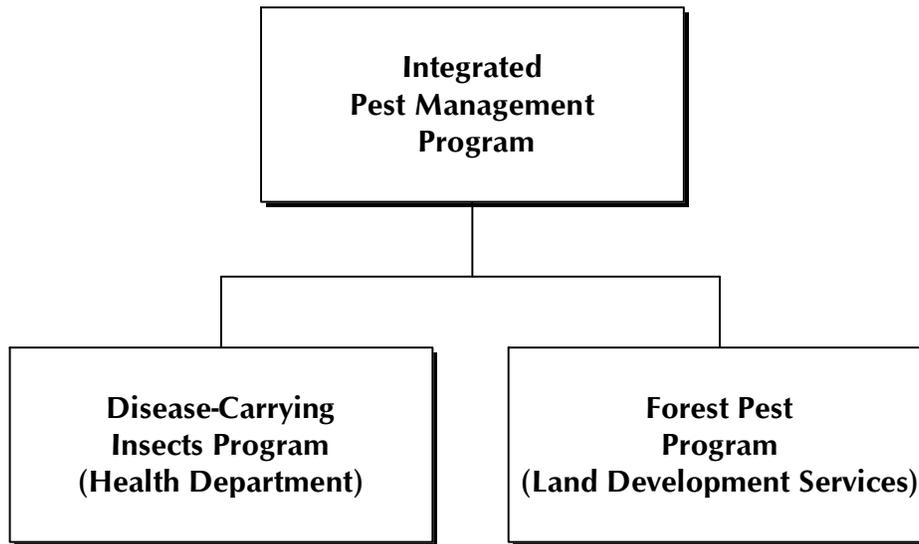


Fund 116

Integrated Pest Management Program



Mission

To suppress forest pest infestation and insect transmitted human disease throughout the County through surveillance, pest and insect control, and public information and education, so that no more than one percent of the County tree cover is defoliated and human morbidity and mortality is minimized while protecting the environment.

Focus

Fund 116, Integrated Pest Management Program, includes two separate programs – the Forest Pest Program managed by Land Development Services (Department of Public Works and Environmental Services) and the Disease-Carrying Insects Program managed by the Health Department. The Forest Pest Program currently focuses on preventing the spread of gypsy moth caterpillars, fall cankerworms, and emerald ash borers in the County. The Disease-Carrying Insects Program focuses on controlling the spread of the West Nile virus. The prevention of epidemics and the spread of disease is one of the core functions of the Health Department.

All programs within Fund 116 are funded by a countywide tax levy, which may change annually due to the cyclical nature of forest pest populations. For example, the rate was \$0.001 per \$100 assessed value in FY 1997. From FY 1998 through FY 2000, no tax assessment was necessary. For FY 2001, FY 2002 and FY 2003, the Board of Supervisors-approved tax rate was \$0.001 per \$100 assessed value. The FY 2004 and FY 2005 tax rate remained at \$0.001 per \$100 assessed value, and provided support for both the Forest Pest Program and the Disease-Carrying Insects Program. In FY 2006, the same tax rate, along with existing fund balance, will continue to support both programs. FY 2006 revenues are expected to increase by \$114,025 to \$1,472,706, primarily due to increases in residential assessments based on current real estate market activity.

THINKING STRATEGICALLY

Strategic issues for the Department include:

- Coordinating inter-jurisdictional and multi-agency activities to maximize program results;
- Preventing/minimizing the occurrence of West Nile virus cases through surveillance, management, public education activities and inter-jurisdictional cooperation ; and
- Preventing defoliation from forest pests while minimizing any resulting environmental impacts.

Fund 116

Integrated Pest Management Program

Forest Pest Program

The Forest Pest Program is a cooperative program with the United States Department of Agriculture (USDA) Forest Service and the Virginia Department of Agriculture and Consumer Services (VDACS). VDACS maintains a list of insects that are eligible for control by this program. Currently, three insects are listed – the gypsy moth, the fall cankerworm, and the emerald ash borer. The emerald ash borer was added to the list of at the end of CY 2003, following the emergence of this pest in Virginia. The cooperative program investigates tree damage due to forest pests by conducting annual insect monitoring surveys throughout the County. Forested areas with high gypsy moth and cankerworm populations are identified for possible treatment the following spring. The proposed treatment plan and resource requirements for those pests are submitted annually to the Board of Supervisors for approval in February. Treatment is conducted in late April through early May before the gypsy moth and cankerworm can damage trees. Throughout the year, staff educates Fairfax County communities regarding pest suppression methods and measures that they may take to alleviate potential forest pest population explosions.

The emergence of the emerald ash borer in Fairfax County was identified by VDACS in late 2003. In an effort to ensure that the insects did not spread any further, guidance was given by the USDA Animal Plant Health Inspection Service (APHIS) regarding eradication, and eradication efforts took place in spring 2004 before the adult borers emerged. Those efforts were coordinated among Fairfax County Forest Pest program staff, APHIS, and VDACS, and federal funding for eradication efforts was provided to the state. Forest Pest program staff will continue to assist in eradication efforts through continued monitoring and surveying of the treated area; however, County assistance in these efforts is not expected to have an impact on the Fund 116 balance due to the relatively low emerald ash borer populations found in FY 2004.

It is noted that the size of pest populations for gypsy moths and cankerworms is cyclical in nature. Populations will be high for a period of years, and then drop for a period, only to rise again. For example, in the early to mid 1990s, annual treatment requirements for the gypsy moth fluctuated from 3,000 to 45,000 acres. Gypsy moth populations have moderated in recent years, with 200 acres treated in FY 2000, 1,800 acres in FY 2001, 5,500 acres in FY 2002, 2,100 acres in FY 2003, and no treatment necessary in FY 2004. Based on field surveys conducted in the fall, staff estimates approximately 150 acres will require treatment in FY 2005. Cankerworm populations have also moderated, with 7,000 acres treated for cankerworm infestation in FY 2000, 250 acres in FY 2001, 300 acres in FY 2002 and 1,400 acres in FY 2003. Treatment was not necessary in FY 2004 and does not appear to be necessary in FY 2005. The proposed FY 2006 budget plan provides sufficient capacity to treat 2,500 acres of gypsy moths and 2,500 acres for cankerworms, should the egg mass surveys conducted between August and January of that fiscal year indicate that requirement. Prior to treating, the confirmed number of acres requiring treatment will be presented to the Board of Supervisors for approval.

Disease-Carrying Insects Program

The West Nile virus (WNV), transmitted from birds to man through the bite of infected mosquitoes, continues to be a public health concern. The first sign of the virus in Fairfax County occurred in 2000 when a positive bird was detected. Subsequently, it has been found in mosquitoes, horses, and eventually in humans. To date there have been 17 human cases detected in the County (13 in FY 2003, three in FY 2004, and one in FY 2005), with one fatality occurring in FY 2003 and one in FY 2005.

In order to address this emerging disease, the County established a multi-agency mosquito surveillance and management committee and the Health Department secured contracted services in 2002 to carry out specialized activities in avian (bird) and mosquito surveillance and mosquito control. In FY 2003, the County hired a medical entomologist to further develop and guide the WNV program. Currently, the program consists of three major components: surveillance, control, and outreach/education. Inter-jurisdictional cooperation is also a key component of the WNV program, allowing for coordination of surveillance and management activities in surrounding jurisdictions and on public lands.

Fund 116 Integrated Pest Management Program

In the 2004 WNV season (May to October), avian and mosquito surveillance activities were performed by County staff in lieu of contracted services. The in-house surveillance program is considered more comprehensive and cost-effective than in previous years. However, the contracted services were retained for the more labor-intensive preemptive control activities that require a significant fleet of vehicles and specialized equipment. The County continues to proactively treat storm water catch basins in an effort to reduce the populations of the mosquitoes that transmit WNV. Catch basins are treated in several six week cycles every season (May to October). Inspection and larviciding activities are carried out in targeted areas of the County identified as significant mosquito breeding areas.

The outreach and education component of the WNV program is aimed at increasing residents' awareness of the actions they can take for self protection and the reduction of potential mosquito breeding areas on private property. In early CY 2004, the County conducted a survey of the population's baseline knowledge, attitudes, and practices relative to WNV and mosquito control, in order to measure the effectiveness of the program. Outreach material was translated into Chinese, Korean, Spanish, and Vietnamese in order to reach more County residents. It should be noted that, while education and outreach programming is a critical component of this program, the cost of these activities is less than ten percent of the total program budget, with the majority of funding allocated for surveillance, monitoring, and treatment efforts.

This Disease-Carrying Insects Program (West Nile virus activities) was added to Fund 116 as part of the FY 2004 Adopted Budget Plan. At that time, \$1.0 million dollars in support of West Nile virus surveillance and management was appropriated in this fund from fund balance, pending the Board of Supervisors' later adoption in June 2003 of amendments to Appendix I of the Fairfax County Code. The amendments expanded the purpose of the current special service district for infestations of gypsy moths and cankerworms to include insects that may carry a disease that is dangerous to humans. In FY 2004, the \$1.0 million appropriated within Fund 116 was used in combination with \$0.6 million budgeted in the Health Department (General Fund), for total West Nile virus support of \$1.6 million.

In FY 2005, General Fund support was decreased by \$511,535, and that amount moved to Fund 116, which had the capacity for additional program support within the current tax structure and existing fund balance. In FY 2006, the WNV program budget remains \$1.6 million, including the \$1.5 million budgeted in Fund 116 and \$0.1 million remaining in the General Fund to meet program needs associated with County areas that are not a part of the special service tax district of the Integrated Pest Management Program.

New Initiatives and Recent Accomplishments in Support of the Fairfax County Vision

 Maintaining Safe and Caring Communities	Recent Success	FY 2006 Initiative	Cost Center
Continue to conduct a comprehensive in-house mosquito surveillance program that serves as an indicator for the presence of the West Nile virus, its distribution throughout the County, the mosquito species involved in transmission, and the magnitude of infection rate of these mosquitoes.	☑	☑	Health Dept. Disease-Carrying Insects Program
Implement a pilot tick surveillance program in cooperation with the Virginia Department of Health. The objectives of the pilot are to understand potential severity for tick-borne diseases and where the risks are the greatest. The pilot program will involve surveillance of tick species in May and October, including the identification of tick species and their geographic distribution.		☑	Health Dept. Disease-Carrying Insects Program

Fund 116 Integrated Pest Management Program

 Building Livable Spaces	Recent Success	FY 2006 Initiative	Cost Center
Continue to maintain and protect the forest cover in residential, public, and urban environments of Fairfax County. Tree mortality and caterpillar nuisance that result from forest pest infestation make outdoor areas unusable during certain times of the year. Dead trees in public parks and residential areas represent a safety issue that can be avoided. A healthy forest complex, in new and old neighborhoods, is critical in maintaining a quality of life that Fairfax County residence desire.	✓	✓	DPWES Forest Pest Program
 Practicing Environmental Stewardship	Recent Success	FY 2006 Initiative	Cost Center
Continue to utilize Integrated Pest Management (IPM) techniques for gypsy moth, emerald ash borer, and cankerworm control. IPM ensures that pesticide use is minimized and that residents are educated about alternative control options. Forest Pest Program staff monitors pest populations and determines the level of aerial pesticide application necessary, eliminating the need for individual homeowners to spray. The impact is that less spray material is delivered to an area because it is done in a controlled manner.	✓	✓	DPWES Forest Pest Program
Continue to ensure that the insecticides that are used in mosquito control are the most environmentally friendly and target-specific in order to minimize the effects on the environment and non-targeted organisms.	✓	✓	Health Dept. Disease Carrying Insects Program
 Creating a Culture of Engagement	Recent Success	FY 2006 Initiative	Cost Center
Continue to conduct public meetings and other educational activities on the gypsy moth and cankerworm programs. Extensive effort is made to ensure that residents are aware of County treatment activities and that they have ample opportunity to provide input into the planning process. Activities include making information available via web pages, mailings, fair exhibits, and meetings tailored to citizens' informational needs.	✓	✓	DPWES Forest Pest Program
Continue to enhance the public outreach campaign to elevate the awareness of WNV and steps individuals can take for personal protection. Educational materials are distributed and/or made available throughout the County at public meetings, community events, and at other targeted locations. Public messages in English, Chinese, Korean, Spanish and Vietnamese are disseminated through news releases, interviews, and public service announcements via several media outlets.	✓	✓	Health Dept. Disease- Carrying Insects Program

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Budget and Staff Resources

Agency Summary					
Category	FY 2004 Actual	FY 2005 Adopted Budget Plan	FY 2005 Revised Budget Plan	FY 2006 Advertised Budget Plan	FY 2006 Adopted Budget Plan
Authorized Positions/Staff Years					
Regular	10/ 10	10/ 10	10/ 10	10/ 10	10/ 10
Expenditures:					
Personnel Services	\$389,818	\$678,482	\$678,482	\$690,399	\$690,399
Operating Expenses	848,569	1,823,750	1,829,745	1,743,387	1,743,387
Capital Equipment	58,840	0	17,317	0	0
Total Expenditures	\$1,297,227	\$2,502,232	\$2,525,544	\$2,433,786	\$2,433,786

Summary by Program					
Category	FY 2004 Actual	FY 2005 Adopted Budget Plan	FY 2005 Revised Budget Plan	FY 2006 Advertised Budget Plan	FY 2006 Adopted Budget Plan
Forest Pest Program					
Authorized Positions/Staff Years					
Regular	7/ 7	7/ 7	7/ 7	7/ 7	7/ 7
Expenditures	\$458,820	\$999,089	\$1,016,406	\$932,212	\$932,212
Disease-Carrying Insects Program					
Authorized Positions/Staff Years					
Regular	3/ 3	3/ 3	3/ 3	3/ 3	3/ 3
Expenditures	\$838,407	\$1,503,143	\$1,509,138	\$1,501,574	\$1,501,574

Position Summary	
FOREST PEST PROGRAM 1 Urban Forester III 1 Urban Forester II 3 Urban Foresters I 1 Information Technology Technician III 1 Administrative Assistant II	DISEASE-CARRYING INSECTS PROGRAM 1 Environment Health Supervisor 2 Environmental Health Specialists II
TOTAL POSITIONS	
10 Positions / 10.0 Staff Years	

FY 2006 Funding Adjustments

The following funding adjustments from the FY 2005 Revised Budget Plan are necessary to support the FY 2006 program:

- ◆ **Employee Compensation** **\$11,917**
An increase of \$11,917 in salary adjustments necessary to support the County's compensation programs.
- ◆ **Carryover Adjustments** **(\$23,312)**
A decrease of \$23,312 due to the carryover of one-time Operating and Capital Equipment Expenses.
- ◆ **Forest Pest Treatment Requirements** **(\$80,363)**
A decrease of \$80,363 primarily due to reduced ground/aerial treatment requirements for the gypsy moth and fall cankerworm. Forest pest populations have moderated in recent years as a result of successful detection and suppression efforts, as well as the cyclical nature of pest populations.

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Integrated Pest Management Program

Board of Supervisors' Adjustments

The following funding adjustments reflect all changes to the FY 2006 Advertised Budget Plan, as approved by the Board of Supervisors on April 25, 2005:

- ◆ The Board of Supervisors made no adjustments to this fund.

Changes to FY 2005 Adopted Budget Plan

The following funding adjustments reflect all approved changes in the FY 2005 Revised Budget Plan since passage of the FY 2005 Adopted Budget Plan. Included are all adjustments made as part of the FY 2004 Carryover Review and all other approved changes through December 31, 2004:

- ◆ **Carryover Adjustments** **\$23,312**
As part of the FY 2004 Carryover Review, the Board of Supervisors approved encumbered funding of \$23,312 in Operating and Capital Equipment Expenses for program supplies and vehicles which had been ordered but not yet received.

The following funding adjustments reflect all approved changes to the FY 2005 Revised Budget Plan from January 1, 2005 through April 18, 2005. Included are all adjustments made as part of the FY 2005 Third Quarter Review:

- ◆ The Board of Supervisors made no adjustments to this fund.

Key Performance Measures

Objectives

- ◆ To control the infestation of gypsy moths, cankerworms, and emerald ash borers through detection and abatement programs so that no more than one percent of County tree cover is defoliated in a given year.
- ◆ To suppress the transmission of West Nile virus from infected mosquitoes to the human population, holding the number of human infections to ten, which is less than the 13 experienced in FY 2003.

Indicator	Prior Year Actuals			Current Estimate	Future Estimate
	FY 2002 Actual	FY 2003 Actual	FY 2004 Estimate/Actual	FY 2005	FY 2006
Output:					
Gypsy moth/cankerworm field surveys completed annually in areas known or suspected to be infested	3,200	3,200	3,200 / 3,200	3,200	3,200
Mosquito larvicide treatments of catch basins to control West Nile virus	22,615	66,879	150,000 / 153,623	91,000	134,000

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Indicator	Prior Year Actuals			Current Estimate	Future Estimate
	FY 2002 Actual	FY 2003 Actual	FY 2004 Estimate/Actual	FY 2005	FY 2006
Efficiency:					
Gypsy moth/cankerworm field surveys conducted per staff	800	800	800 / 800	800	800
West Nile virus program cost per capita	\$0.30	\$0.71	\$1.85 / \$1.33	\$1.50	\$1.48
Service Quality:					
Percent of County households in gypsy moth and cankerworm treatment areas notified of abatement efforts	100%	100%	100% / 100%	100%	100%
Percent of targeted catch basin areas treated with mosquito larvicide within the scheduled timeframe	100%	100%	100% / 100%	100%	100%
Outcome:					
Percent of County tree defoliation resulting from gypsy moth and cankerworm infestation	0%	0%	1% / 0%	1%	1%
Confirmed human cases of West Nile virus in Fairfax County, Fairfax City, and Falls Church City as reported by VDH (1)	0	13	4 / 3	10	10

(1) VDH = Virginia Department of Health

Performance Management Results

Forest Pest Program: In FY 2004, treatment for the gypsy moth caterpillar and the fall cankerworm was not necessary. Staff surveys for caterpillars and egg masses conducted in mid-summer and early fall indicate that gypsy moth populations are slightly increasing, and some ground treatment is necessary (approximately 150 acres) in the spring of FY 2005. Surveys for the fall cankerworm completed this past winter indicate that no treatment is necessary this spring. Defoliation surveys for both insects conducted this summer (2004) indicated that there was no defoliation in Fairfax County during this timeframe.

Disease-Carrying Insects Program: West Nile virus control is in its fourth year. The goal in FY 2006 is to continue to hold the number of human cases as reported by the Virginia Department of Health to no more than ten cases, a number lower than the 13 cases reported for the County in FY 2003. This number is higher than the FY 2004 experience, when the County benefited from the unseasonably cool weather and very heavy spring rains flushing through storm water catch basins that inhibited mosquitoes from breeding in this environment.

Fund 116

Integrated Pest Management Program

The County has a comprehensive mosquito surveillance and management program that utilizes an integrated pest management, and multi-agency approach to suppress the mosquito population and the transmission of WNV to human populations. Storm water catch basins, a significant breeding area for mosquitoes, are treated with larvicide. Surveillance activity is conducted by the County to determine mosquito breeding locations and the degree of presence of the virus in County mosquitoes and birds. A limited number of catch basin larvicide treatments were initiated at the end of FY 2002, when the West Nile virus first emerged in the County. The number of catch basin treatments has steadily increased each year through FY 2004, when a total of 153,623 catch basins were treated. A similar preemptive catch basin treatment program is planned for FY 2005 and FY 2006. This level assumes the capacity for treatment response if there is a warm WNV season (May to October), which would enhance mosquito breeding and development of the virus in these mosquitoes. However, it should be noted that starting in FY 2005, program staff has decided to initiate the larger round of catch basin treatments later in the mosquito season. This will mean approximately 64,000 catch basin treatments will occur in FY 2006 rather than in FY 2005, causing the FY 2005 estimate to appear lower than the treatment level completed in the previous year. As previously mentioned, the number of mosquito larvicide catch basin treatments was low in FY 2003 due to the very rainy spring which made it difficult to move forward with a major treatment cycle at the end of the fiscal year. However, in FY 2004, weather conditions, especially rainfall, were very close to the average norm for the area, allowing the County to attain the goal of treating 150,000 catch basins with larvicide. The cost per capita reflects the combined funding for West Nile virus activities provided under the Department of Health (General Fund) and Fund 116, Integrated Pest Management Program.

As West Nile virus is an emerging disease in the County, the response to the virus is relatively new and will be adjusted as time progresses. This has already been demonstrated by the adjustment of the timing of catch basin treatment cycles. Program activities will continue to be modified in order to better conform to new information and data as it becomes available, allowing the West Nile virus program to have a more focused approach to managing WNV in the County.

Fund 116

Integrated Pest Management Program

FUND STATEMENT

Fund Type G10, Special Revenue Funds

Fund 116, Integrated Pest Management Program

	FY 2004 Actual	FY 2005 Adopted Budget Plan	FY 2005 Revised Budget Plan	FY 2006 Advertised Budget Plan	FY 2006 Adopted Budget Plan
Beginning Balance	\$2,003,577	\$1,143,551	\$2,127,943	\$961,080	\$961,080
Revenue:					
General Property Taxes	\$1,309,624	\$1,335,611	\$1,335,611	\$1,441,816	\$1,441,816
Interest on Investments	16,969	23,070	23,070	30,890	30,890
State Reimbursement	95,000	0	0	0	0
Total Revenue	\$1,421,593	\$1,358,681	\$1,358,681	\$1,472,706	\$1,472,706
Total Available	\$3,425,170	\$2,502,232	\$3,486,624	\$2,433,786	\$2,433,786
Expenditures:					
Forest Pest Program	\$458,820	\$999,089	\$1,016,406	\$932,212	\$932,212
Program	838,407	1,503,143	1,509,138	1,501,574	1,501,574
Total Expenditures	\$1,297,227	\$2,502,232	\$2,525,544	\$2,433,786	\$2,433,786
Total Disbursements	\$1,297,227	\$2,502,232	\$2,525,544	\$2,433,786	\$2,433,786
Ending Balance¹	\$2,127,943	\$0	\$961,080	\$0	\$0
Tax Rate Per \$100 of Assessed Value	\$0.001	\$0.001	\$0.001	\$0.001	\$0.001

¹ Due to the cyclical nature of pest populations, the treatment requirements supported by this fund may fluctuate from year to year. Therefore, Ending Balances may also fluctuate depending on the level of treatment necessary to suppress gypsy moth, cankerworm, emerald ash borer or WNV-carrying mosquito populations in a given year.