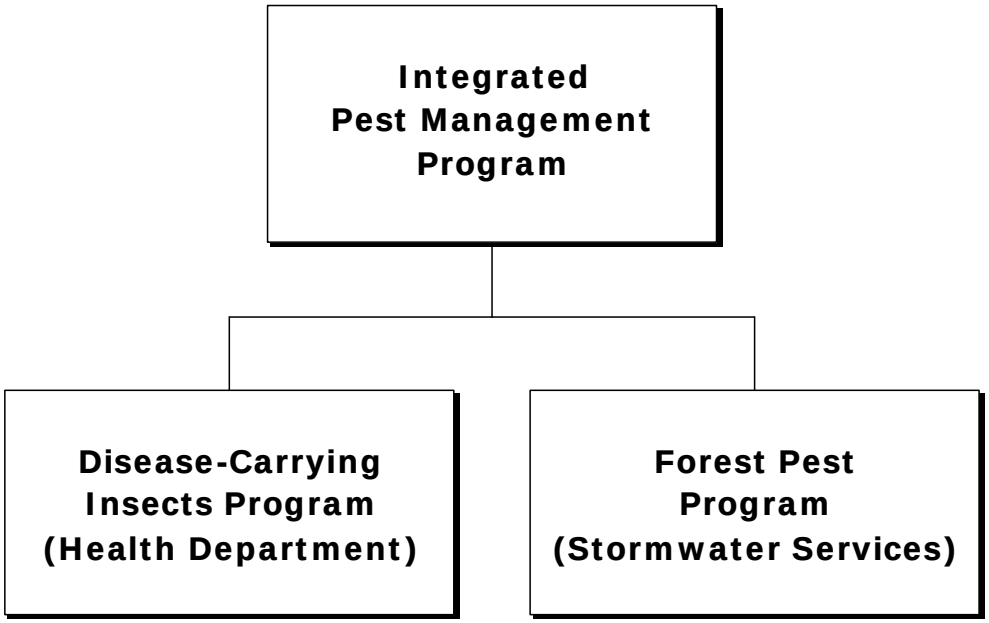
Fund 40080
Integrated Pest Management Program



Mission

To suppress forest pest infestation and pests of public health concern throughout the County through surveillance, pest and insect control, as well as public information and education, so that zero percent of the County tree cover is defoliated and human morbidity and mortality are minimized while protecting the environment.

Focus

Fund 40080, Integrated Pest Management Program, includes two separate programs – the Forest Pest Program managed by Stormwater Services and the Disease-Carrying Insects Program managed by the Health Department. Integrated Pest Management (IPM) is an ecological approach to pest control that combines appropriate pest control strategies into a unified, site-specific plan. The goal of an IPM program is to reduce pest numbers to acceptable levels in ways that are practical, cost-effective, and safe for people and the environment. The Forest Pest Program focuses on preventing the spread of state approved forest insects and diseases in the County. The Disease-Carrying Insects Program focuses on protecting citizens from public health pests and maintaining a low incidence of the West Nile virus, Lyme disease, and other tick-borne diseases—as the prevention of epidemics and spread of disease is one of the core functions of the Health Department.

A countywide tax levy financially supports Fund 40080 activities and this levy is subject to change annually due to funding requirements based on the level of infestation. Since FY 2001, the Board of Supervisors-approved tax rate has been $0.001 per $100 assessed value and has provided support for both the Forest Pest and the Disease-Carrying Insects Programs. In FY 2016, the same tax rate, along with the existing fund balance, will continue to support both programs.

Fund 40080
Integrated Pest Management Program

Forest Pest Program (FPP)

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, five insects and two diseases are listed: the gypsy moth, cankerworm, emerald ash borer, hemlock woolly adelgid, Asian long-horned beetle, sudden oak death and thousand cankers disease of black walnut.

The Forest Pest Program provides control activities for gypsy moth and the cankerworm. Surveys are conducted annually to determine both population levels and which suppression activities are warranted. The surveys check egg masses and larval densities, are conducted systematically throughout the County and are USDA Forest Service approved. The proposed treatment plan and resource requirements for these pests are submitted annually to the Board of Supervisors for approval in February. The County may also be eligible for partial reimbursement for aerial treatment costs from the federal government (assuming funding is available). Treatment is conducted in late April through early May before the gypsy moth and cankerworm can damage trees. Throughout the year, staff conducts an extensive outreach program with the goal of educating Fairfax County communities about pest suppression methods and measures that they may take to alleviate potential forest pest population infestations.

It is noted that the size of pest populations for gypsy moths and cankerworms is cyclical. Populations will be high for a period of years, 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. In recent years, gypsy moth populations have been very low. Based on field surveys conducted in the fall of 2014, staff estimates that no acres will require treatment in calendar year 2015. Cankerworm populations have increased in recent years and 2,000 acres of aerial treatment were required in calendar year 2014. Staff anticipates a moderate aerial treatment program in FY 2016. The FY 2016 budget provides capacity to treat 500 acres of ground treatment and up to 5,000 acres of aerial, should insect surveys conducted between August and January of that fiscal year indicate the need.

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. 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. In July 2008, staff identified three new infestations in the Newington, Herndon and Bailey's Crossroads areas. Since the infestations appeared to be spread over a large geographic area and because neighboring states were identifying infestations it was determined that no further eradication efforts would take place. As a result of these infestations, USDA and VDACS have established a quarantine in Virginia which prohibits ash wood material from leaving the state. Fairfax County staff has implemented an outreach program to inform public and private entities of the relevant state and federal regulations.

On average, County staff annually treats 2,100 acres to combat the gypsy moth infestations.

Fund 40080
Integrated Pest Management Program

In March 2011, the Forest Pest Program added monitoring and outreach activities for two additional tree diseases (thousand cankers disease of black walnut and sudden oak death) and one additional insect (Asian long-horned beetle) to its suppression plan.

Black walnut (*Juglans nigra*) is a tree native to Fairfax County. In the summers of 2010 and 2011, black walnut trees were observed to be declining near Knoxville, Tennessee and Richmond, Virginia. Foresters confirmed that a disease called thousand cankers disease and the walnut twig beetle (*Pityophthorus juglandis*) that spreads it had been artificially introduced to the eastern United States from the west. During the summer of 2012, staff captured the walnut twig beetle at various sites in Fairfax County. VDACS isolated the thousand cankers disease fungus from these trees and has placed Fairfax County under quarantine status, similar to the conditions in place for the emerald ash borer. Staff has concentrated on providing outreach programs in order to continue monitoring for this disease. Key targets of the outreach efforts are homeowners and private tree care companies.

Sudden oak death is caused by a fungus (*Phytophtora ramorum*) that has caused wide-scale tree mortality in the western United States since 1995. Fortunately, this disease has been found only in isolated locations in the eastern United States and officials feel that these infestations have been contained. Diligent monitoring is critical in slowing the spread of this disease and recent testing methods that are simple and cost-effective have been developed. Consequently, staff has implemented these monitoring methods in areas of the County where nursery stock is being sold. Staff continues to educate private and public groups on this disease and its control.

The Integrated Pest Management Program supports the following County Vision Elements:

- ***Maintaining Safe and Caring Communities***
- ***Creating a Culture of Engagement***
- ***Connecting People and Places***
- ***Practicing Environmental Stewardship***
- ***Building Livable Spaces***
- ***Exercising Corporate Stewardship***

The Asian long-horned beetle (*Anoplophora glabripennis*) is an invasive, wood-boring beetle that, like the emerald ash borer, has the potential to have drastic economic and social impacts should it be introduced in Fairfax County. The larvae will infest and kill trees by boring into the heartwood of a tree and disrupting its nutrient flow. Imported into the United States via wood packing material used in shipping, infestations of this insect in or near Chicago, New York, Boston, and Ohio have been discovered since the mid 1990's. These pests will infest many hardwood tree species but seem to prefer maple species, one of the predominant trees in Fairfax County's urban forest ecosystem. According to the United States Forest Service, most of the infestation found in the United States have been identified by tree care professionals and informed homeowners. Staff has developed a basic management plan to address such monitoring and outreach for this invasive species.

Quarantine Status

Agricultural quarantines are implemented for invasive pests in order to eradicate or slow their spread. The quarantines currently in effect in Fairfax County are intended to slow the spread of the target insects and not intended to eradicate them. In the United States, eradication is only attempted when an invasive species is discovered early and its populations are small enough to be contained. There are no set end dates to the quarantines in Fairfax County.

Typically, a quarantine is established by a state and by the United States Department of Agriculture on a county by county basis. Once a sufficiently large enough area is infested, the state will determine that all of the state is generally infested and the issue is taken over by USDA. Forest pest quarantines are not an unusual or a historically recent method of controlling the spread of pests. The gypsy moth was first quarantined by state and federal governments in 1912 and continues to be quarantined today. Research has proven that by slowing the spread of an invasive insect, uninfested localities can avoid the extraordinary costs of attempting to control it.

Emerald ash borer (EAB) was first quarantined in northern Virginia in 2008. Since that time numerous sites around the state have been confirmed as infested with EAB. In the summer of 2012, the Virginia Department of Agriculture and Consumer Services determined that the entire state is generally infested and is now part of the USDA quarantine. It is anticipated that this quarantine will stay in effect indefinitely.

Thousand cankers disease (TCD) is relatively new in regard to forest health issues. This disease is spread by a tiny bark beetle and is very difficult to detect. Staff found the bark beetle in Fairfax County in the summer of 2012, and VDACS reacted by implementing a quarantine of all walnut products. Currently, several counties in Virginia are under quarantine for TCD. If the disease/bark beetle is found in sufficient numbers it is expected that VDACS will quarantine the entire state. There is no existing federal regulation in regard to TCD. It is unclear what will happen if the entire state or other states detect this disease.

Outreach

The Forest Pest Program has used outreach as a management tool since the early 1980's. With the addition of TCD, EAB, and the potential for the appearance of sudden oak death (SOD) and Asian long-horned beetle (ALB), staff has modified the program's outreach activities. During the last fiscal year, staff has:

- Modified the County Internet site to include updated information about the new pests. Slide share presentations have been included that give seasonal tree care information. Online information is intended primarily for homeowners and provides pest identification tools and contact information for staff.

- Offered educational programs to school children. During the 2013-2014 school year, staff conducted school outreach activities to 2,777 pupils. Different curriculum were developed to address age groups as appropriate and these programs satisfied Science Standards of Learning requirements for 3.5c, 3.5 (d), 3.8, 3.10, 4.4, 4.5, 4.8 (a,b,d), LS.4 (a), LS.6, LS.9 (b), LS.11 (b), BIO 3 (d), BIO 9 (d,e). Staff also presented education programs for 100 children at various School-Age Child Care program sites.

- Hosted a Project Learning Tree workshop for Northern Virginia educators. Project Learning Tree is an environmental education curriculum that promotes the importance of trees and the environment.

- Attended County functions such as Celebrate Fairfax, Fall for Fairfax, Arbor Day, and the 4-H Fair. Emphasis at these events was directed towards the new emerging forest pest issues of the County. During Arbor Day and Fall for Fairfax, staff organized community volunteers to plant 24 trees with the goal of educating the public on proper tree planting techniques.

- Continued to participate in the Capital Region Invasive Pest Symposia (CRIPS). This group, which is composed of public and private professionals in the forest health field, gathers to exchange ideas and ensure that all are aware of emerging pest issues. CRIPS hosted two meetings regarding invasive species management.

- Assisted in updating, "A Field Guide to Fairfax County's Plants and Wildlife." This field guide is to be used as part of the fifth grade Field of Science curriculum and other scholastic activities.

- Helped create Channel 16 Public Service Announcements for gypsy moth and cankerworm.

Management Plans
The nature of invasive insects and diseases is such that it is difficult to make long-term predictions on monitoring techniques and response plans. USDA has drafted a management plan for ALB; it outlines a role for localities consistent with what staff had envisioned. For example, County staff can play a critical role in public meetings, notification and mapping. VDACS and the Forest Pest Program have drafted basic management plans for ALB and EAB. The management plans will act in concert with plans in place by USDA and VDACS.

Disease-Carrying Insects Program (DCIP)

West Nile virus and other mosquito-transmitted pathogens of public health concern
The West Nile virus (WNV) is transmitted from birds to humans through the bite of infected mosquitoes and has continued to be a public health concern since it was first detected in humans in New York City in 1999. Nationwide through calendar year (CY) 2013, there have been 39,557 human WNV cases and 1,668 deaths. The first sign of WNV in Fairfax County was in CY 2000 when a dead bird was found infected. The first human cases were identified in CY 2002 and, to date, 37 human cases have been reported. More recently, eight human cases were detected in CY 2012, three in CY 2013 and zero in CY 2014. In total, three WNV associated deaths have occurred—one each in CY 2002, CY 2004, and CY 2012.

Chikungunya virus (CHIKV) is a mosquito-borne disease transmitted from person-to-person by the yellow fever mosquito (*Aedes aegypti*) or the Asian tiger mosquito (*Aedes albopictus*). It was first discovered during a small outbreak in east Africa in 1953, but several outbreaks have been reported since 2004 in Africa, Asia, Europe, and islands in the Indian and Pacific Oceans. An epidemic of locally transmitted CHIKV was detected in the Caribbean beginning in December 2013, and is ongoing. This is the first time this virus has been transmitted in the western hemisphere, with more than 1.16 million probable cases reported to date from the Americas. As of January 2015, the Centers for Disease Control and Prevention (CDC) has reported 2,333 imported cases of CHIKV in the U.S. from travelers returning from areas of active transmission. To date, 11 locally acquired cases of CHIKV have been reported in Florida. DCIP staff routinely conducts surveillance for the Asian tiger mosquito and are continuing to

develop plans to respond to CHIKV in case the virus appears in our local mosquito population. A brochure about CHIKV is currently under development.

A female Asian tiger mosquito (*Aedes albopictus*), the main nuisance mosquito found in Fairfax County.

Adult Mosquito Surveillance Activities

Adult mosquito surveillance is a vital component of integrated pest management that aids County staff in determining the infection rate of mosquitoes that act as vectors of WNV. This surveillance provides an early warning system that can trigger control efforts to prevent outbreaks of diseases to Fairfax County residents. Adult mosquito and WNV surveillance activities are performed weekly at 68 sites by County staff from May through October. Mosquito surveillance activities also allow the DCIP to monitor for invasive mosquito species. Inter-jurisdictional cooperation is a key component of the program, allowing for coordination of surveillance and management activities on public lands and with surrounding jurisdictions. In FY 2012, the Health Department lab began testing mosquitoes for WNV using molecular diagnostics (Reverse-Transcriptase Polymerase Chain Reaction or RT-PCR). This relationship is expected to continue in FY 2016 as the DCIP continues to track WNV infection rates in local mosquitoes.

Larval Surveillance and Control Activities

Larval mosquito surveillance and control efforts help protect public health by identifying aquatic habitats that support the development of mosquitoes and, when indicated, treating those habitats with a larvicide that kills mosquito larvae. Contracted services have been retained for preemptive larval mosquito control activities that require a significant fleet of vehicles and specialized equipment, as well as pesticide storage and supply. The County continues to proactively treat storm drains in an effort to reduce the population of *Culex* mosquitoes that transmit WNV. Approximately 36,500 storm drains are treated with a larvicide during three separate six-week cycles from May through October. Larvicides are rotated periodically to minimize pesticide resistance according to the tenets of integrated pest management. Weather conditions are the principal factors that determine the number of storm drains that will be treated during a given year. Inspection and larviciding activities are carried out routinely in targeted areas of the County identified as significant mosquito breeding areas. These programs and services will continue in FY 2016.

Lyme disease and other tick-borne diseases

Lyme disease is the most commonly reported vector-borne illness in the United States. The bacterium that causes Lyme disease is transmitted from small mammals to humans through the bite of an infected deer tick, also known as the black legged tick (*Ixodes scapularis*), and continues to be a growing public health concern. In Fairfax County, 150 human cases of Lyme disease were reported in CY 2012, 260 cases in CY 2013 and 233 cases in CY 2014. Other tick-borne diseases reported in Fairfax County include: Spotted Fever Group Rickettsias (26 cases in CY 2012, 20 cases in CY 2013, and 19 cases in CY 2014); and Ehrlichiosis/Anaplasmosis (six cases in CY 2012, 10 cases in CY 2013 and five cases in CY 2014).

Tick Surveillance Activities

The County tick surveillance program was initiated to determine the distribution and infection rate of deer ticks (*Ixodes scapularis*) carrying the bacterium (*Borrelia burgdorferi*) that causes Lyme disease. It provides valuable data about the presence of pathogens in local ticks that are capable of causing disease. Tick surveillance is performed via carbon dioxide-baited trapping at five sites in the County each week during the calendar year.

Ticks collected in weekly surveillance activities are identified to species, counted and sent for testing. Contract services have been obtained for the molecular identification (Polymerase Chain Reaction or PCR) of the various pathogens that may be transmitted by the four human-biting tick species in the County. These services are expected to continue in FY 2016. With the establishment of a molecular diagnostic laboratory in the Health Department, the DCIP hopes to bring tick pathogen testing in-house. The data generated by tick surveillance and testing are used to inform the public about the pathogens present in local ticks, and reinforce messaging about the importance of preventing tick bites.

In CY 2010, the DCIP detected the presence of an isolated population of Gulf Coast ticks (*Amblyomma maculatum*) at the I-66 landfill. This non-native tick species is the vector of a bacterium (*Rickettsia parkeri*) capable of causing a spotted fever disease. Following detection, targeted pesticide applications and continuous surveillance were performed at the landfill during CYs 2010, 2011, 2012 and 2013. Control efforts during those years appear to have significantly reduced the population of Gulf Coast ticks at the I-66 landfill. Pesticide applications were not performed in CY 2014 but surveillance is ongoing.

In FY 2010, the groundwork was laid for a collaborative three year tick control pilot project between the Police Department and the Health Department's Disease-Carrying Insect Program. Supplemental feeding stations, known as four-poster deer treatment stations, were deployed to two areas of the County. These devices apply an insecticide to the deer while they are feeding, killing the ticks that are on the deer. Two test and two control areas are being utilized for a total of 20 stations in the two test areas of the County. Tick surveillance in the two test and two control areas began in FY 2010 and will continue until the end of the three year project. The four-poster stations were deployed in the two test areas in the spring of CY 2012 and the pilot study project will continue through the spring of CY 2015.

Additional Services

The DCIP offers a free tick identification service for County residents. Residents learn what type of tick they found, its basic biology, the pathogens it is capable of transmitting, symptoms of tick-borne illnesses, and ways to reduce exposure to ticks when outdoors. The tick identification service allows DCIP staff to track which ticks are actually being found on humans within the County. This is useful data that allows County staff to monitor tick populations that citizens encounter in their everyday lives. During the previous three years, the following numbers of tick identifications were performed: 378 in CY 2012, 382 in CY 2013 and 394 in CY 2014.

The DCIP receives service requests from Fairfax County residents about standing water concerns, and typically performs an inspection within one week. If standing water is found, the preferred way to resolve the issue is source reduction—the elimination of aquatic habitats that have potential to support larval mosquito development. Residents learn about turning over or routinely emptying containers around the home that can produce large numbers of mosquitoes, especially the Asian tiger mosquito. Emphasis is also placed on mosquito bite prevention through the use of proper clothing and repellents. Additionally, information is provided about mosquito control options that can be performed by

homeowners. The following numbers of service requests were performed by DCIP staff during the past three years: 134 in CY 2012, 113 in CY 2013, and 107 in CY 2014.

Outreach and Education

The outreach and education component of the DCIP is aimed at increasing residents' awareness of personal protection actions that can be taken against mosquitoes and ticks, and the reduction of mosquitoes, ticks, and mosquito breeding areas on private property. The DCIP is also in the process of developing new outreach materials that address other pests of public health concern, such as cockroaches. DCIP personnel are working with the Consumer Protection Program to track the presence of cockroaches in food service establishments and produce educational content that can be shared with business owners to help reduce pest populations in their establishments.

The program continues to distribute a variety of outreach material in English, Chinese, Farsi, Korean, Spanish, Urdu and Vietnamese. In FY 2014, DCIP staff produced and printed the tenth edition 18-month "Fight the Bite" calendar with complementary captions, facts, figures, important dates, and helpful reminders of things for readers to do around the home to manage mosquitoes and ticks. In addition, the calendar provides helpful hints to protect residents from mosquito- and tick-borne diseases. General facts, local figures and brief descriptions of the County's efforts were included to educate the public about basic mosquito and tick biology and inform them specifically about mosquitoes, ticks, West Nile virus and Lyme disease in Fairfax County. Calendars are distributed annually to every fourth grade student in Fairfax County Public Schools. A sixth children's book about mosquitoes and ticks entitled, Martians Meet the Mosquitoes/Titan Takes on Ticks!, was printed in FY 2014.

During CY 2014, DCIP staff was present at 28 outreach events, distributing educational materials and advising citizens about how to reduce their exposure to mosquitoes and ticks. Events attended include Celebrate Fairfax, Herndon Festival, Fall for Fairfax KidsFest, and the 4-H Fair. By request, DCIP staff also performs training modules or educational sessions for County workers, neighborhood and home-owners associations, and other interested groups. Presentations are tailored specifically to each target audience. All the educational material is available on the County's website. In FY 2014, the DCIP received a Grand Award in the 2013 APEX Awards for Publication Excellence competition. The award was for the submission entitled, "Fight the Bite: Teaching Kids about Mosquitos and Ticks," in the campaigns, programs, and plans category.

Pests of Public Health Importance

A wide range of pests threaten public health in Fairfax County because they can transmit pathogens, or their stings or bites can cause reactions. Some of the most common public health pests in Fairfax County include: mosquitoes, house-frequenting insects (e.g. lice, fleas, bed bugs, and cockroaches), ticks, mites, flies, and venomous arthropods (e.g. yellow jackets, hornets, wasps, bees, ants, spiders, centipedes, and urticating caterpillars). The manner in which public health pests are managed depends on the pests that are causing the problems so proper identification is essential. Effective pest management also depends on knowledge of their ecology, biology, and life history. It is critical that pest populations are monitored routinely so that infestations can be detected as early as possible when they are smaller and easier to control.

Management Plans

The DCIP Annual Report and Plan of Action provides a summary of program activities for each year and provides a framework for the upcoming year. The report highlights mosquito and West Nile virus surveillance and control activities, tick and tick-borne disease surveillance, and a review of outreach and

education activities. The report also provides the program's integrated mosquito management plan. The DCIP also maintains relationships with professional organizations such as Virginia Mosquito Control Association, Mid-Atlantic Mosquito Control Association, and the American Mosquito Control Association. Publications like "West Nile Virus in the United States: Guidelines for Surveillance, Prevention, and Control," written by the CDC, and "Preparedness and Response for Chikungunya Virus Introduction in the Americas," developed by the CDC and the Pan American Health Organization, provide guidance on these important vector-borne disease issues.

Budget and Staff Resources

Category	FY 2014 Actual	FY 2015 Adopted	FY 2015 Revised	FY 2016 Advertised	FY 2016 Adopted
FUNDING					
Expenditures:					
Personnel Services	$1,132,612	$1,300,245	$1,300,245	$1,335,700	$1,339,080
Operating Expenses	803,261	1,827,847	1,903,149	1,827,847	1,827,847
Capital Equipment	0	0	61,472	0	0
Total Expenditures	$1,935,873	$3,128,092	$3,264,866	$3,163,547	$3,166,927
AUTHORIZED POSITIONS/FULL-TIME EQUIVALENT (FTE)					
Regular	12 / 12	12 / 12	11 / 11	12 / 12	11 / 11

Summary by Program

Category	FY 2014 Actual	FY 2015 Adopted	FY 2015 Revised	FY 2016 Advertised	FY 2016 Adopted
Forest Pest Program					
EXPENDITURES					
Total Expenditures	$833,181	$1,111,631	$1,139,859	$1,128,060	$1,129,614
AUTHORIZED POSITIONS/FULL-TIME EQUIVALENT (FTE)					
Regular	7 / 7	7 / 7	6 / 6	7 / 7	6 / 6
Disease-Carrying Insects Program					
EXPENDITURES					
Total Expenditures	$1,102,692	$2,016,461	$2,125,007	$2,035,487	$2,037,313
AUTHORIZED POSITIONS/FULL-TIME EQUIVALENT (FTE)					
Regular	5 / 5	5 / 5	5 / 5	5 / 5	5 / 5

FOREST PEST PROGRAM
1 Urban Forester III
4 Urban Foresters II
1 Administrative Assistant III

DISEASE-CARRYING INSECTS PROGRAM
1 Environmental Health Supervisor
1 Environmental Health Specialist III
2 Environmental Health Specialists II
1 Administrative Assistant III

TOTAL POSITIONS
11 Positions / 11.0 FTE

Fund 40080
Integrated Pest Management Program

FY 2016 Funding Adjustments

The following funding adjustments from the FY 2015 Adopted Budget Plan are necessary to support the FY 2016 program. Included are all adjustments recommended by the County Executive that were approved by the Board of Supervisors, as well as any additional Board of Supervisors' actions, as approved in the adoption of the budget on April 28, 2015.

- **Employee Compensation** **$38,482**
  An increase of $38,482 in Personnel Services includes $14,303 for a 1.10 percent market rate adjustment (MRA) for all employees and $24,179 for performance-based and longevity increases for non-uniformed merit employees, both effective July 2015.

- **Other Post-Employment Benefits** **$353**
  An increase of $353 in Personnel Services reflects required adjustments associated with providing Other Post-Employment Benefits (OPEBs) to retirees, including the Retiree Health Benefits Subsidy. For more information on Other Post-Employment Benefits, please refer to Fund 73030, OPEB Trust Fund, in Volume 2 of the FY 2016 Adopted Budget Plan.

Changes to FY 2015 Adopted Budget Plan

The following funding adjustments reflect all approved changes in the FY 2015 Revised Budget Plan since passage of the FY 2015 Adopted Budget Plan. Included are all adjustments made as part of the FY 2014 Carryover Review, FY 2015 Third Quarter Review, and all other approved changes through April 30, 2015.

- **Carryover Adjustments** **$136,774**
  As part of the *FY 2014 Carryover Review*, the Board of Supervisors approved funding of $136,774 in encumbered funding for Operating Expenses for contractual obligations for the treatment of storm drains and the tick testing program within the Disease Carrying Insect Program.

- **Position Adjustment** **$0**
  The County Executive approved the transfer of 1/1.0 FTE position from the County position pool to the Department of Finance due to workload requirements.

Key Performance Measures

Indicator	Prior Year Actuals FY 2012 Actual	FY 2013 Actual	FY 2014 Estimate/Actual	Current Estimate FY 2015	Future Estimate FY 2016
Integrated Pest Management Program					
Percent of County tree defoliation resulting from gypsy moth and cankerworm infestation	0%	1%	1%/1%	1%	1%
Confirmed human cases of West Nile virus in Fairfax County, Fairfax City and Falls Church City as reported by the Virginia Department of Health	1	8	1/3	1	1

A complete list of performance measures can be viewed at www.fairfaxcounty.gov/dmb/fy2016/adopted/pm/40080.pdf

Performance Measurement Results

Forest Pest Program

There was no aerial treatment for the gypsy moth in the spring of 2014. Based on field surveys of the gypsy moth population in the fall of 2014, no acres required treatment in the spring of 2015. Based on surveys for the cankerworm, 70 acres of treatment were necessary in the spring of 2015 and staff anticipates less treatment in the spring of 2016. Defoliation surveys for both insects conducted in the summer of 2014 indicated that there was very little defoliation in Fairfax County during FY 2014, totaling approximately 1 percent.

Disease-Carrying Insects Program (DCIP)

The goal of DCIP in FY 2015 was to hold the number of human cases of West Nile virus as reported by the Virginia Department of Health to one case. In FY 2014, there were three human cases of WNV.

DCIP costs are based on the number of storm drain treatments and other larvicide treatments carried out by a contractor in a given year, as well as education, outreach and surveillance activities carried out in-house by DCIP. Treatments, although dependent on weather conditions, remain relatively constant throughout the years, maintaining a relatively stable program cost. The total DCIP cost per capita was $1.02 in FY 2014. This is lower than the budgeted estimate of $1.74 per capita due to fewer treatments being done as a result of unfavorable weather conditions. The estimated cost for FY 2015 was based on a higher cost per capita; however, actual spending will depend on environmental factors, insecticide treatments resulting from larval inspections and surveillance activities, as well as follow-up studies for the evaluation of the outreach program.

The tick surveillance program continued in FY 2015. This program increases the understanding of the magnitude and breadth of tick-borne diseases in the County. The DCIP has a contract in place to test the ticks for pathogens they may transmit. The increased testing of ticks for pathogens and the four-poster deer treatment pilot project also impacted DCIP cost per capita through FY 2015.

Fund 40080
Integrated Pest Management Program

FUND STATEMENT

Fund 40080, Integrated Pest Management Program

	FY 2014 Actual	FY 2015 Adopted Budget Plan	FY 2015 Revised Budget Plan	FY 2016 Advertised Budget Plan	FY 2016 Adopted Budget Plan
Beginning Balance	$2,756,702	$1,253,506	$2,733,857	$1,521,229	$1,521,229
Revenue:					
General Property Taxes	$2,048,178	$2,182,547	$2,182,547	$2,258,159	$2,258,159
Interest on Investments	2,850	7,691	7,691	7,691	7,691
Total Revenue	$2,051,028	$2,190,238	$2,190,238	$2,265,850	$2,265,850
Total Available	$4,807,730	$3,443,744	$4,924,095	$3,787,079	$3,787,079
Expenditures:					
Forest Pest Program	$833,181	$1,111,631	$1,139,859	$1,128,060	$1,129,614
Disease-Carrying Insects Program	1,102,692	2,016,461	2,125,007	2,035,487	2,037,313
Total Expenditures	$1,935,873	$3,128,092	$3,264,866	$3,163,547	$3,166,927
Transfers Out:[1]					
General Fund (10001) - Forest Pest Program	$65,039	$65,039	$65,039	$66,453	$66,453
General Fund (10001) - Disease-Carrying Insects Program	72,961	72,961	72,961	74,547	74,547
Total Transfers Out	$138,000	$138,000	$138,000	$141,000	$141,000
Total Disbursements	$2,073,873	$3,266,092	$3,402,866	$3,304,547	$3,307,927
Ending Balance[2]	$2,733,857	$177,652	$1,521,229	$482,532	$479,152
Tax Rate Per $100 of Assessed Value	$0.001	$0.001	$0.001	$0.001	$0.001

[1] Funding in the amount of $141,000 is transferred to the General Fund to partially offset central support services supported by the General Fund which benefit Fund 40080, Integrated Pest Management. These indirect costs include support services such as Human Resources, Purchasing, Budget and other administrative services.

[2] 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 West Nile Virus - carrying mosquito populations in a given year.