

ERIE COUNTY HEALTH DEPARTMENT ENVIRONMENTAL HEALTH (PHLEEH)



2007 ANNUAL PROGRESS REPORT

VECTOR CONTROL PROGRAM

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VECTOR CONTROL PROGRAM

Mission Statement:

“Control of vector and pest species to minimize the transmission of disease and improve the quality of life for county residents and their pets.”

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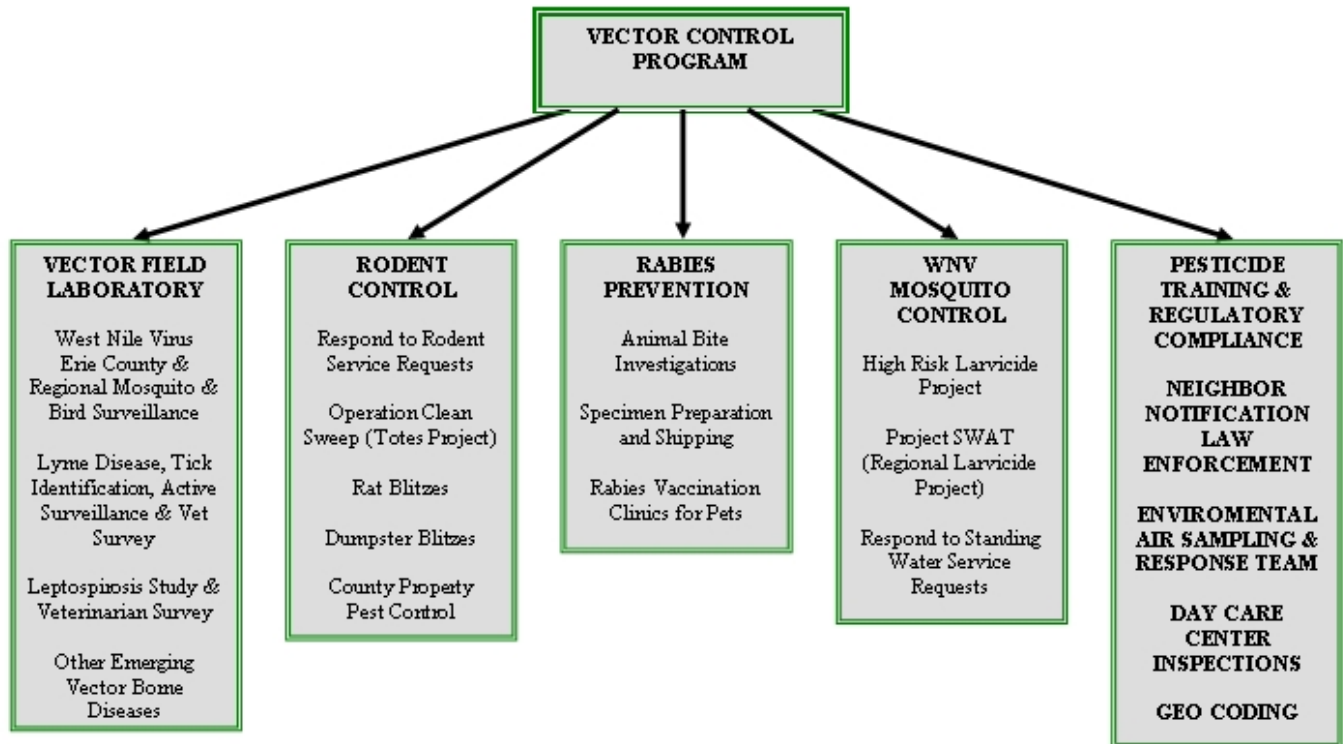
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Program Overview

The Vector Control Program is a part of the Environmental Health Component of the Erie County Health Department, Division of Public Health Laboratory, Epidemiology and Environmental Health (PHLEEH). Our program partners with many agencies within Erie County Government as well as numerous municipalities, professional organizations, businesses and private citizens. The Vector Control Program focuses its efforts on Education, Surveillance and Control as a strategy to achieve its objectives in protecting the Public Health of Erie County Residents.

ERIE COUNTY DEPARTMENT OF HEALTH
Public Health Laboratory, Epidemiology, Environmental Health



I. Rabies Prevention Program – NYS Mandated Program

In order to effectively prevent Rabies, the Vector Control Program partners with Investigating Sanitarians in each District Office of the Erie County Health Department to perform **Animal Bite Investigations**. A total



of **2653** investigations were conducted by our Sanitarians in 2007. These Sanitarians utilize a network of veterinarians for both information regarding an animal's vaccination status and services including specimen preparation for rabies testing at NYSDOH Wadsworth Lab. Dog



Control/Animal Control Officers within each municipality often assist in the investigation process. In 2007 the Vector Control Program coordinated the submission of **885** specimens for rabies virus testing through Wadsworth Lab of which **40** were found positive for the rabies virus.

| 2007 Rabies Prevention Program | | |
|--|--|--|
| Rabies Investigations Conducted by Sanitarians | Animal Specimens Sent for Rabies Testing | Animal Specimens Testing Positive for Rabies |
| 2653 | 885 | 40 |

| Animals Testing Positive for Rabies in Erie County in 2007 | | | | | | | |
|--|------------------------|-----------|-------------|-------|------------------------|---------|---------------|
| Count | Date Reported Positive | Animal | Township | Count | Date Reported Positive | Animal | Township |
| 1 | 01/19/2007 | Bat | Evans | 21 | 07/23/2007 | Raccoon | Sardinia |
| 2 | 01/23/2007 | Raccoon | Boston | 22 | 07/26/2007 | Bat | Buffalo |
| 3 | 03/07/2007 | Bat | Buffalo | 23 | 08/01/2007 | Raccoon | North Collins |
| 4 | 04/25/2007 | Raccoon | Sardinia | 24 | 08/24/2007 | Raccoon | Orchard Park |
| 5 | 05/21/2007 | Dog | Irving | 25 | 08/29/2007 | Bat | Buffalo |
| 6 | 05/23/2007 | Raccoon | Boston | 26 | 08/30/2007 | Bat | Boston |
| 7 | 05/25/2007 | Raccoon | Elma | 27 | 08/31/2007 | Bat | Elma |
| 8 | 05/25/2007 | Bat | Lancaster | 28 | 09/04/2007 | Bat | Buffalo |
| 9 | 06/06/2007 | Raccoon | West Seneca | 29 | 09/19/2007 | Bat | Amherst |
| 10 | 06/06/2007 | Raccoon | West Seneca | 30 | 09/20/2007 | Bat | Buffalo |
| 11 | 06/07/2007 | Raccoon | Boston | 31 | 09/25/2007 | Raccoon | Collins |
| 12 | 06/11/2007 | Raccoon | Wales | 32 | 09/26/2007 | Cat | Hamburg |
| 13 | 06/14/2007 | Bat | Tonawanda | 33 | 10/22/2007 | Bat | West Seneca |
| 14 | 06/15/2007 | Skunk | Buffalo | 34 | 10/29/2007 | Skunk | Concord |
| 15 | 06/28/2007 | Bat | Newstead | 35 | 11/06/2007 | Raccoon | Eden |
| 16 | 06/28/2007 | Raccoon | Buffalo | 36 | 11/14/2007 | Skunk | Marilla |
| 17 | 07/05/2007 | Woodchuck | Elma | 37 | 11/14/2007 | Raccoon | Eden |
| 18 | 07/06/2007 | Raccoon | Collins | 38 | 11/14/2007 | Skunk | Alden |
| 19 | 07/17/2007 | Deer | Concord | 39 | 11/26/2007 | Cat | Elma |
| 20 | 07/17/2007 | Raccoon | Marilla | 40 | 12/10/2007 | Raccoon | Evans |

We partner with Epidemiology for the human aspects of determining the need for Rabies Post Exposure Prophylaxis and with the Erie County Medical Center Emergency Department to administer the inoculations. In addition, Epidemiology administers pre-exposure rabies

vaccinations to county employees and at-risk partners in the veterinary and animal control professional community.

Free Rabies Vaccination Clinics, mandated by NYS Public Health Law, have been the responsibility of the Vector Control Program since its inception. Nine clinics are held throughout the year allowing Erie County residents the opportunity to have a veterinarian administer the rabies vaccine to their dogs, cats and ferrets free of charge. All equipment and supplies are provided by the Erie County Health Department. The Vector Control Program operates the clinics partnering with the SPCA and the Niagara Frontier Veterinary Society. In 2007, 3812 animals were vaccinated through these clinics.

| Erie County Health Department – Environmental Health Services Free Animal Rabies Clinics - 2007 Results | | | | | | | | |
|---|-------------|-------------|-------------|-------------|-------------|-------------|---------------|----------------------------|
| Clinic Location & Date | 1 Year Cats | 3 Year Cats | Total Cats | 1 Year Dogs | 3 Year Dogs | Total Dogs | Total Ferrets | Total Cats, Dogs & Ferrets |
| NORTH BUFFALO COMM. CTR. 203 Sanders Road Buffalo January 31, 2007 2-4pm | 30 | 8 | 38 | 84 | 60 | 144 | 0 | 182 |
| AMHERST HIGHWAY GARAGE 1042 N. Forest Road Amherst May 23, 2007 5-7pm | 65 | 34 | 99 | 119 | 177 | 296 | 4 | 399 |
| NEW COLDEN FIRE COMPANY 8448 Gutekunst Road Colden May 30, 2007 5-7pm | 99 | 62 | 161 | 118 | 143 | 261 | 2 | 424 |
| ELMA HIGHWAY GARAGE 2170 Bowen Road Elma August 22, 2007 5-7pm | 85 | 67 | 152 | 129 | 211 | 340 | 0 | 492 |
| SPCA 205 Ensminger Road Tonawanda August 29, 2007 2-4pm | 133 | 70 | 203 | 232 | 282 | 514 | 0 | 717 |
| LAKEVIEW FIRE COMPANY 2005 Lakeview Road Lakeview September 5, 2007 5-7pm | 115 | 58 | 173 | 113 | 244 | 357 | 4 | 534 |
| Broadway market 999 Broadway Buffalo September 12, 2007 2-4 pm | 29 | 57 | 86 | 222 | 99 | 321 | 7 | 414 |
| WEST SENECA HIGHWAY GARAGE 39 South Ave (Off Union Near NYS400) West Seneca September 19, 2007 5-7pm | 123 | 79 | 202 | 184 | 258 | 442 | 6 | 650 |
| GRAND TOTALS | 679 | 435 | 1114 | 1201 | 1474 | 2675 | 23 | 3812 |



Community Partnerships for Rabies Prevention are also utilized. The Vector Control Program partners with Feral Cat Focus, a not-for-profit organization that spays, neuters and vaccinates feral cats throughout Erie County. Vector Control provides anti-rabies vaccine and syringes allowing more than 500 additional cats to be vaccinated against the spread of rabies.

| Community Partnerships | |
|-------------------------------|--------------------------------|
| Not-for-Profit Organization | Number of Cats Vaccinated 2007 |
| Feral Cat Focus | 500 |

The Vector Control Program, partnering with Cornell University, participated in the regional Oral Rabies Vaccine Drop in 2007. This program utilizes a bait block impregnated with oral rabies vaccine in order to inoculate primarily raccoons to protect them from rabies thereby breaking the transmission cycle in the wild. Erie County Health Department Staff distributed the bait from fixed wing aircraft and helicopter in areas targeted by Cornell.

II. Rodent and Nuisance Control Program

Rodent problems, primarily from the Norway Rat, have been on the increase and on the move in Erie County. What was primarily an urban problem has migrated to the first ring suburbs of Buffalo and beyond. Rat Blitzes, Dumpster/Garbage Compliance Blitzes, rodent control service requests and addressing rodent harborage complaints is just a part of the strong effort to bring the rat population down to a manageable level. The Vector Control Program is winning the “War on Rats” through our “Operation Clean Sweep” program efforts community by community.



The **Erie County Rat Blitz Program** has proven to be highly effective. It utilizes an integrated approach to rat control by simultaneously eliminating food sources and rodent harborages while applying rodenticide in a targeted 8 to 12 block residential area. Great success was realized when the Rat Blitz was coupled with the distribution of Garbage Storage Totes in Buffalo. The absence of improperly stored garbage eliminated the primary food source to the rats, and as a result, rodenticide bait was readily consumed. This effectively reduced the rat population in the blitz area over the long term. Evaluation is performed by using GIS to track Rodent Complaint data to determine short and long term effectiveness.

A **Dumpster/Garbage Compliance Blitz** consists of a door to door inspection of commercial dumpsters that emphasizes keeping the dumpster lids closed and dumpster area clean in order to lockout the food source for rats. It has both educational and code enforcement components.





The educational component includes the use of Dumpster Labels that are secured to every dumpster and which serve as a reminder to “Keep the Lids and Doors Closed.” Each business is inspected, proper garbage storage discussed personally with the operator and an educational slinger is distributed. Businesses in violation are issued a notice as part of the enforcement component. Dumpster Blitzes were conducted in two towns in 2007 with **810** inspections in the Town of Tonawanda with **166** properties in violation, and **798** inspections in the Town of Amherst with **143** properties in violation. Through reinspection and enforcement action, **100%** of properties were brought into compliance.

| DUMPSTER/GARBAGE STORAGE BLITZ 3- SUMMER 2007 | |
|--|----------|
| START DATE 05/15/2007 (TONAWANDA) | |
| Inspections | |
| Total Properties Inspected in Blitz Area | 810 |
| Total Initial Properties in Violation | 166 |
| Initial Inspection Violation Rate | 20.5% |
| Food Service Facilities | |
| Total Permitted Facilities In Blitz Area Inspected | 111 |
| Food Service Facilities in Blitz Area | 98 |
| Food Service Facilities in Violation at Initial Inspection | 51 |
| Food Service Facility Initial Inspection Violation Rate | 52.0% |
| Enforcement Action | |
| Regulated Facilities - Stipulations/Fines Paid | \$150.00 |
| Non-Regulated Commercial Properties - Stipulations/Fines Paid* | \$0.00 |
| *No system in place to fine Non-Regulated Commercial Properties at time of blitz | |

| DUMPSTER/GARBAGE STORAGE BLITZ 4- FALL 2007 | |
|---|----------|
| START DATE 11/14/2007 (AMHERST) | |
| Inspections | |
| Total Properties Inspected in Blitz Area | 798 |
| Total Initial Properties in Violation | 143 |
| Initial Inspection Violation Rate | 17.9% |
| Food Service Facilities | |
| Total Permitted Facilities In Blitz Area Inspected | 130 |
| Food Service Facilities in Blitz Area | 119 |
| Food Service Facilities in Violation at Initial Inspection | 52 |
| Food Service Facility Initial Inspection Violation Rate | 43.7% |
| Enforcement Action | |
| Regulated Facilities - Stipulations/Fines Paid | \$600.00 |
| Regulated Facilities - Stipulations/Fines Outstanding | \$450.00 |
| Non-Regulated Commercial Properties - Stipulations/Fines Paid | \$150.00 |

Examples of 2007 Dumpster Blitz Successes:

Tonawanda Blitz Before:



Tonawanda Blitz After:



Amherst Blitz Before:



Amherst Blitz After:



Amherst Blitz Before:



Amherst Blitz After:



Vector Control responds daily to **Service Requests** from the public regarding **Rodent Control Nuisance Issues**. Properties are inspected and notices are issued to eliminate violations regarding rodent issues including evidence of infestation, improper garbage storage, improper bird feeding, ground feeding of animals, other food sources available to rodents and rodent harborage. Rodenticide bait is applied where appropriate to eliminate the rodent infestation. The Vector Control Staff responded to **3708** rodent related service requests in 2007 all of which were brought into compliance. Inspection for each Rodent Related Service Request typically requires an initial visit and approximately 3 to 5 revisits for the purpose of replenishing rodenticide and/or reinspecting violations.

| Rodent Related Service Requests in 2007 | | |
|--|---------------|--------------|
| Category of Service Request | Number | Total |
| Rats Outside | 1856 | |
| Rodent Harborage | 1353 | |
| Rats Inside | 180 | |
| Mice Inside | 254 | |
| Other | 65 | |
| Rodent Related Service Request Total | | 3708 |
| Total of All Service Requests on HealthNet in 2007 | | 14034 |
| Rodent Service Requests as Percentage of Total Service Requests | | 26.4% |

The following table shows the quantity of Rodenticide bait applied at properties in Erie County by Certified Pesticide Applicators, Technicians and Apprentices in the Vector Control Program of the Erie County Health Department.

| Rodenticide Applied in 2007 | | | | |
|------------------------------------|-------------------|-----------------------|---------------------|-----------------------|
| Product Name | Type | Ounces Applied | Unit Applied | Purchase Units |
| Contrac | Pellets | 7230 | 452 pounds | 18 (25 Lb pails) |
| Contrac | All Weather Block | 27153 | 27153 blocks | 94 (18 Lb pails) |
| Contrac | Place Packs | 4304.88 | 4892 packs | 24.5 (200 pack boxes) |
| Total All | All | 38687.88 | --- | --- |

All rodenticide was applied according to the Product Label and in conjunction with NYSDEC laws, rules and regulations. The procedures used are in place in order to “do no harm” to non-target species. Pelletized bait is used when baiting a burrow directly. Packets or blocks may be pushed out of a burrow by the rat. The use of bait boxes to house the block formulation of rodenticide is another method used to prevent exposure to non-target species. Traps are also used when the use of rodenticide is not appropriate.

“Operation Clean Sweep” is a comprehensive regional system of partnering with municipalities and is the center point of the Vector Control Program efforts to wage a “war on rats.” With the encouragement of the Vector Control Program, several municipalities have implemented garbage storage tote programs and rodent control laws were enacted as the principle means to eliminate the primary food supply for rats. Data has been and will continue to be collected to monitor the severity of the rat problem and the effectiveness of the means used to control them.

“Operation Clean Sweep” Objectives

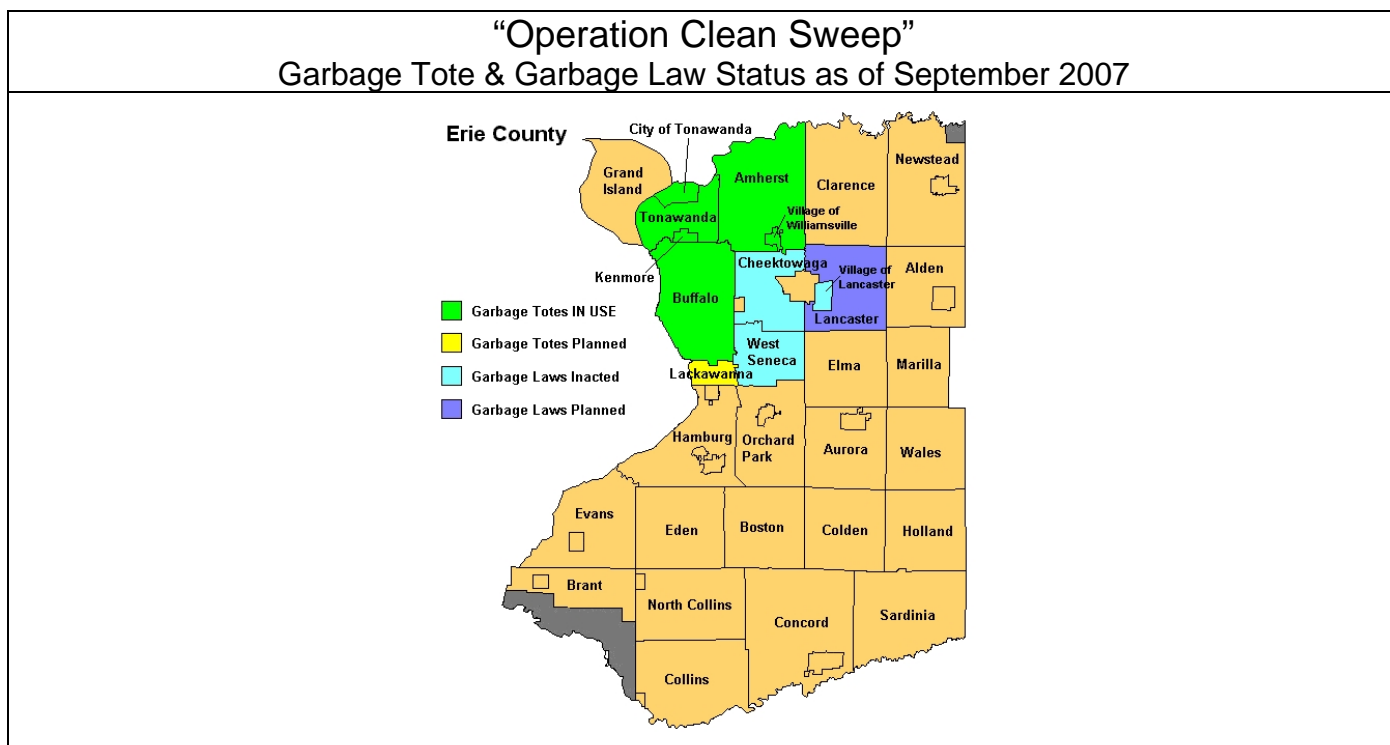
- Regionalized Rodent Control Awareness
 - Encourage Municipalities to Enact Laws that parallel the existing Erie County Sanitary Code regarding Rodent Issues
- Education
 - Educate General Public and Municipal Officials
 - Develop educational materials for use by municipalities and ECHD
- Surveillance
 - Collect Rodent Complaint Data from several Government Agencies as well as Service Requests within the ECHD (see table “Regional Tracking of Rat Baiting Requests in 2007”)
 - Provide Geo-Coded Maps for Municipalities
- Sanitation
 - Promote Proper Garbage storage and the Effectiveness of Totes (See map of Totes and Garbage Laws on page 9)
- Control
 - Targeted Rodenticide Application at residential and public properties
- Evaluation
 - Assess changes over time of Rodent Complaint Data and the involvement of municipalities in fighting the “War on Rats”

| Regional Tracking of Rat Baiting Requests in 2007 | | |
|--|---------------|--------------|
| Category of Rat Baiting Request | Number | Total |
| Rat Complaints Received by the Erie County Health Department | 2036 | |
| Rat Complaints Received by the Town of Amherst | 529 | |
| Rat Complaints Received by the Town of Cheektowaga | 1263 | |
| Grand Total (ECHD Vector Control and Municipalities) | | 3828 |
| Note: This does not include complaints regarding mice or rodent harborage. | | |

Operation Clean Sweep Successes to date:

- Full Garbage Tote Program implemented in Village of Kenmore and the Town of Tonawanda during the summer of 2006.
- Rat complaints decreased 64% for 2007 in comparison to 2006 in the Village of Kenmore and the Town of Tonawanda.
- Full Garbage Tote Program implemented in Town of Amherst and Village of Williamsville during Spring/Summer of 2007.
- Full Garbage Tote Program implemented in City of Tonawanda Summer of 2007.
- West Seneca adopted Garbage Container Laws for garbage at curbside.
- Village of Lancaster adopted Garbage Container Laws for garbage at curbside.
- Currently Lackawanna, Depew, and Sloan reviewing possibilities of adopting Garbage Container Law and/or implementing a Garbage Tote Program.
- Cheektowaga adopted Garbage Container Law but does not require a lid while at curbside pending collection.

NOTE: County and NY State Laws require Garbage to be stored in Covered Containers at ALL times including while pending collection.



III. West Nile Virus and Other Arbovirus Surveillance and Control Program

Following the detection of West Nile Virus in Erie County, the Vector Field Lab was established in 2001. Through education, surveillance and control, an effort has been made to minimize the likelihood of West Nile Virus infections in the human population. Educational efforts include using radio, television, and print materials to disseminate the message that “You can protect yourself from West Nile Virus” through mosquito larval habitat reduction, proper home maintenance, and preventing mosquitoes from biting. In addition, surveillance activities are the first line of defense against any emerging infectious diseases.



Culex pipiens-restuans
Primary West Nile Virus Vector

Surveillance includes weekly **Adult Mosquito Trapping** at nine fixed locations and supplemental locations for submission of mosquitoes for viral testing. **775** Mosquito Pools were submitted by the Vector Field Lab and West Nile Virus was detected in **21** of these pools. Testing for other arthropod-borne viruses is performed but none have been detected in Erie County in 2007. The surveillance program partners with the Town of Amherst Highway Department.



Ochlerotatus trivittatus
Blood-fed female

| 2007 West Nile Virus Positive Mosquito Lab Results | | |
|---|---------------------------------------|-------------------------------|
| West Nile Virus | 21 Positive Mosquito Pools in Amherst | <i>Culex pipiens-restuans</i> |
| Other Arbovirus Lab Results | | |
| Note: No other Arthropod Borne Viruses were detected from mosquito pools collected in Erie County . | | |

Vector Control operates a **Regional Vector Field Lab** providing as many as nine county health departments in the Western Region of New York State the service of identifying, sorting and submitting mosquitoes for testing that are trapped in those counties. **164** mosquito pools were submitted for Western Region Counties in 2007.

Mosquito Pools Submitted for WNV Testing in 2007 By the Vector Lab

| County | # Pos. Pools | # Neg. Pools | % Pools Positive | Total # Pools |
|---|--------------|--------------|------------------|---------------|
| ERIE | 21 | 754 | 2.8 | 775 |
| ORLEANS | 0 | 66 | 0 | 66 |
| SENECA | 0 | 98 | 0 | 98 |
| Total Pools Submitted by the Vector Field Lab | | | | 939 |

West Nile Virus also has a **Dead Bird Surveillance** component. The virus effects many bird species notably crows, blue jays and raptors. Phone reports of ill or dead birds are taken by each district office as well as the USDA Dead Bird Hotline. These calls are triaged for acceptable birds to be picked up by Vector Staff and submitted for testing. Of the **33** birds submitted, **8** were found positive for West Nile Virus in Erie County.



| 2007 West Nile Virus Bird Surveillance | | | | |
|---|-----------------|-------------------------|-----------------|-----------------|
| Ill/Dead Birds | Reported | Sent for testing | Positive | Negative |
| Crow | 62 | 10 | 7* | 3 |
| Other | 182 | 23 | 1** | 22 |
| Total | 244 | 33 | 8 | 25 |
| *7 Crows, 1 in Buffalo, 3 in Tonawanda, 1 in Depew, 1 in Amherst, 1 in Clarence | | | | |
| **1 Bluejay in Amherst | | | | |

The **Human Surveillance** component is the responsibility of Epidemiology. The Vector Control Program partners with Epidemiology in any human disease investigation regarding Rabies, Lyme Disease and West Nile Virus as well as other emerging infectious diseases. Any detection of the virus in the human population is reported to the Vector Control Program staff to conduct an environmental field investigation to determine if mosquito habitat exists and controlling or eliminating it. The following table shows human data provided by the Erie County Health Department, Epidemiology Program.

| Human Specimens Submitted for West Nile Virus Testing to Wadsworth Laboratory Erie County, 2007 | Sent for testing | Positive | Negative |
|---|-------------------------|-----------------|-----------------|
| | 7 | 0 | 7* |
| *Of the 7 specimens tested: 1 tested positive for enterovirus and 1 tested positive for dengue virus by the CDC. | | | |

Mosquito Vector Control utilizes larval habitat elimination and targeted application of larvicide products as an effective means of reducing adult mosquito populations and preventing West Nile Virus as well as other Arthropod borne Viruses. The Vector Control Staff blitzed approximately **800** locations where populations at **High Risk for West Nile Virus** live or frequent including Adult Homes, Children's Camps, Daycare Centers, Healthcare Facilities, Nursing Homes, Parks and Schools. Mosquito larval habitats were eliminated or controlled through the application of larvicide products.

| Locations with High Risk Populations for West Nile Virus 2007 | | | | | | | |
|--|---------------------|--|-----------|--------------|------------|----------|-------------|
| Targeted High-Risk Locations | Number of Locations | Additional Sites Contained Within Location | | | | | GRAND TOTAL |
| | | Children's Camps | Day Care | Nursing Home | Sofa Sites | Schools | |
| Adult Homes | 37 | -- | -- | 2 | -- | -- | 813 |
| Children's Camps | 42 | -- | -- | -- | -- | -- | |
| Daycare Centers | 182 | 9 | -- | -- | 1 | -- | |
| Hospitals/Healthcare Facilities | 42 | 1 | 2 | 6 | -- | 1 | |
| Nursing Homes | 33 | -- | -- | -- | -- | -- | |
| Parks/Water Parks | 124 | 6 | 1 | -- | 1 | -- | |
| Schools | 230 | 13 | 12 | -- | 2 | -- | |
| Senior Citizen Feeding Sites (SOFA) | 53 | 5 | 8 | -- | -- | -- | |
| Total | 743 | 34 | 23 | 8 | 4 | 1 | |

Standing Water that acts as a mosquito larval habitat is also targeted through Mosquito Vector Control. **97 Service requests** received from the public regarding standing water, unmaintained swimming pools or other mosquito issues were investigated, violation notices issued, habitat eliminated and larvicide applied where appropriate.

Examples of Standing Water:

Unmaintained Ornamental Pond:



Unmaintained swimming pool:



Container holding water



Unmounted Tires



Woodland Swamps and Pools



Tire Ruts

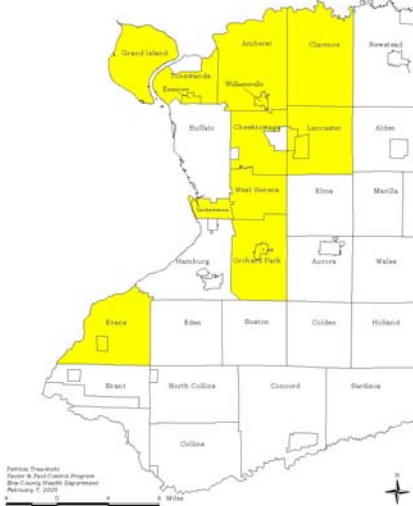


Project SWAT (Share the Work to Eliminate the Threat) is a regional



initiative operated by the Vector Control Program where **13** Municipalities volunteered to partner with Erie County to apply larvicide in storm receiver catch basins, the primary habitat for *Culex* mosquitoes, the species most likely to transmit West Nile Virus. The municipalities provide the manpower and the knowledge of their geographical area. The Vector Control Program provides NYSDEC mandated training and permits as well as the larvicide product to be applied at no cost to the municipalities. Project SWAT Participating municipalities are Amherst, Angola, Cheektowaga, Clarence, Evans, Grand Island, Kenmore, Lackawanna, Lancaster, Orchard Park, Tonawanda, West Seneca, Williamsville

Municipalities Participating in Project SWAT



Larvicide Applied in 2007

| | Altosid XR (Briquets) | Altosid Briquet (Briquets) | Altosid XRG (Ounces) | Agnique/Arosurf (Fluid Ounces) |
|----------------|-----------------------|----------------------------|----------------------|--------------------------------|
| Vector Control | 3824 | 472 | 640 | 8 |
| Project SWAT | 32890 | 0 | 0 | 0 |
| Total | 36714 | 472 | 640 | 8 |
| Cases | 166.9 | 1.18 | 1 (bags) | -- |

The **Regional Annual Pesticide Applicator Certification Training** provided by the Vector Control Program partnering with Univar, USA has been attended by municipalities and health departments throughout New York State.

30 Hour Pesticide Applicator Recertification Course - March 2007

| | Number in Attendance |
|--|----------------------|
| 30 Hour Certification Course (4 Days) | 16 |
| Recertification Portion of Course (2 Days) | 59 |
| Total | 75 |

**30 Hour Pesticide Applicator Recertification Course
Agencies in Attendance- 3/19 thru 3/22/2007**

| | |
|--|--|
| City of Buffalo | Town of Evans Parks Department |
| City of Lackawanna | Town of Grand Island Parks Department |
| Erie County Health Department | Town of Orchard Park |
| Erie County Parks Department | Town of Tonawanda Youth, Parks and Recreation |
| Niagara County Health Department | Town of West Seneca |
| Orleans County Health Department | Village of Angola Department of Public Works |
| Town of Amherst Highway Department | Village of Falconer |
| Town of Aurora Highway Department | Village of Kenmore |
| Town of Cheektowaga Highway Department | Village Of Williamsville Department of Public Work |
| Town of Clarence Parks Department | |

Success of West Nile Virus Education, Surveillance & Control

The mosquito trap data over the past six years has shown that education, surveillance and control have greatly reduced the number of *Culex* mosquitoes, the primary vectors of West Nile Virus. There were no reported human cases of West Nile Virus in Erie County in 2007.

The Vector Control Program approach targets the primary vectors of West Nile Virus, *Culex pipiens* and *Culex restuans* and their habitats to reduce the risk of Erie County residents contracting West Nile Virus.

IV. Lyme Disease Prevention and Surveillance Program

Regional Tick Identification Service is performed at the Vector Field Laboratory as a service for the Western Region of New York State for timely tick identification for the prevention of Lyme Disease and other tick-borne diseases. The Vector Control Program partners with hospitals, physicians and veterinarians who submit ticks for identification, as well as ticks submitted by private citizens. Of the **162** ticks identified by the Vector Field Lab in 2007, **60** were identified as *Ixodes scapularis*, pictured at right, commonly known as the Blacklegged Tick or the Deer Tick, the single vector of Lyme Disease east of the Mississippi. Lyme disease is most prevalent downstate and in the Hudson Valley but is on the move.



| Vector Lab Service Requests for Tick and Insect ID in 2007 | | | |
|---|---------------------------------------|-----------------------|-------|
| | <i>Ixodes scapularis</i> Deer Tick | Other Species of Tick | Total |
| Tick Identification | 60 | 102 | 162 |
| Insect Identification | | | 19 |
| Grand Total of All Specimens for Identification | | | 181 |

Lyme Disease Human Surveillance through Epidemiology has determined that 3 locally acquired human cases of Lyme Disease occurred in Erie County in 2007. The three human cases had no travel history outside of this county indicating the presence of Lyme Disease within Erie County borders.

Vector Control is currently planning to partner with the NYSDOH, Hudson Valley Community College and local physicians to conduct **Active Tick Surveillance** using tick dragging techniques to collect ticks in Erie County that are actively seeking a blood meal for identification and Lyme disease testing. This will be an ongoing surveillance technique projected to start in spring of 2008.

V. Day Care Facility Inspections Program

Day Care Facility Inspections has become a part of the Vector Control Program as of late 2007 and several changes have already been instituted to enhance our inspection services. The State of New York mandates that the local health department inspect Day Care Centers and School Age Programs that are not located in Public Schools. Full food service, sanitation and safety inspections are performed by Erie County Sanitarians at over 230 daycare centers and programs annually. All complaints received from the public are addressed through inspection by our Sanitarians or referred to other licensing agencies. This program communicates and partners with NYS Office of Child & Family Services and Erie County Department Social Services in this effort to provide a safe and healthy environment for the children of Erie County.

VI. Public Health Preparedness Program

As part of Public Health Preparedness, the Vector Control Program conducts Environmental Air Sampling at Mass Gatherings to determine if an attempt has been made to disperse a biological agent. Sanitarians perform this task at several venues in Erie County as a surveillance tool and when a credible threat to such an event exists. We partner with the Erie County Public Health Laboratory for the analysis of the samples and the Public Health Preparedness Program for technical assistance. In 2007, surveillance was conducted at Ralph Wilson Stadium and HSBC Arena during high profile sporting events.

| Public Health Preparedness (BT) – Environmental Air Monitoring 2007 | |
|--|--|
| Air Sampling for Biological Agents | 1 Pre-season and 5 Regular season Buffalo Bills NFL Football Games at Ralph Wilson Stadium |
| | 3 Regular season Buffalo Sabres NHL Hockey Games at HSBC Arena |

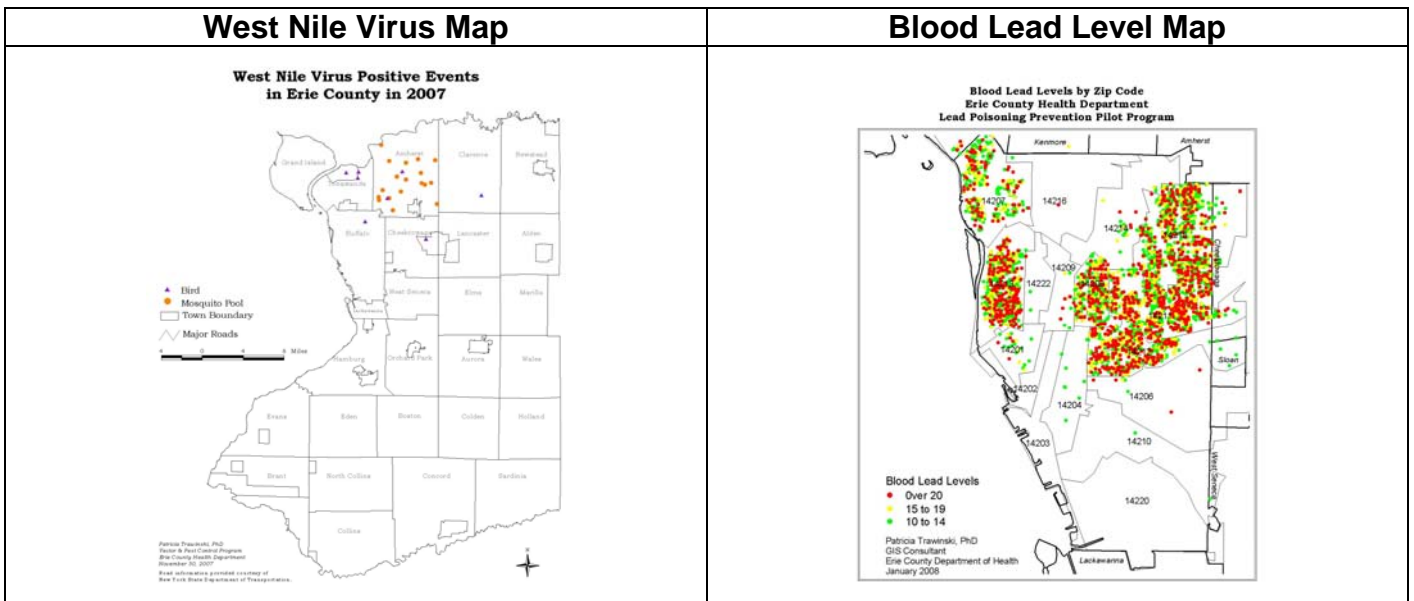
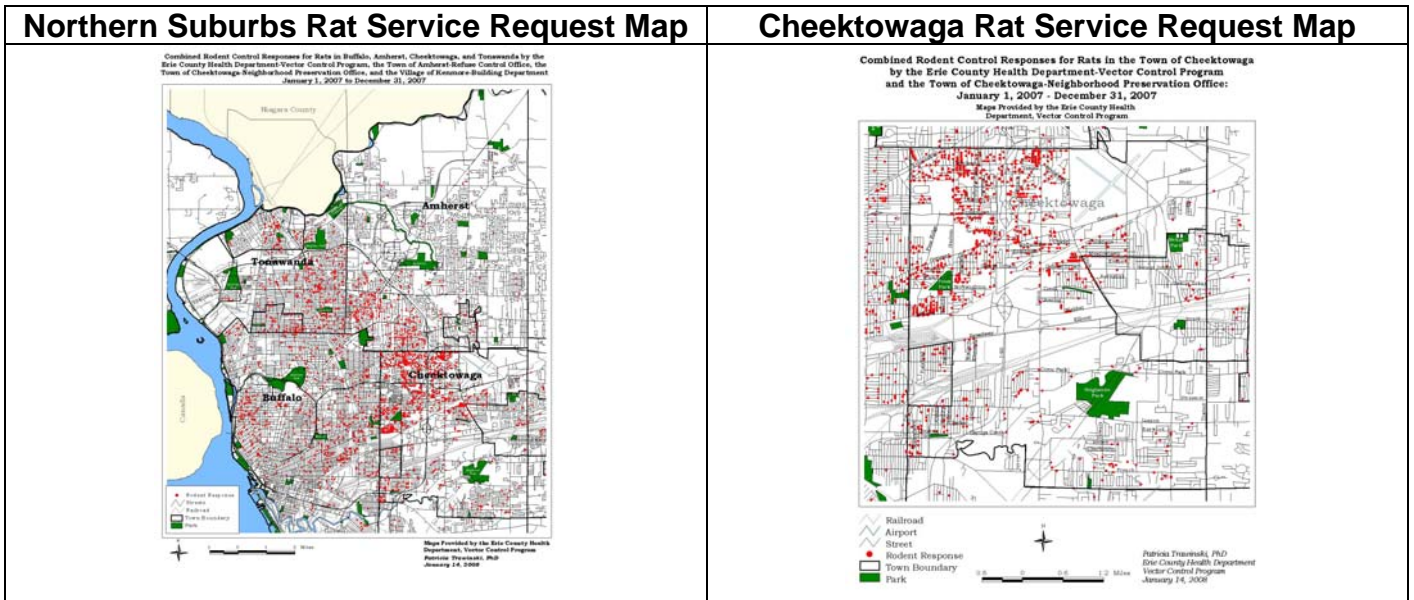
Sanitarians are also a part of SMART (Specialized Medical Assistance Response Team) and the Public Health Environmental Response Team. Compliance with Preparedness training is an ongoing task.

VII. Neighbor Notification Law Enforcement Program

Pursuant to the Erie County Mandatory Pesticide Notification Act, the Erie County Health Department, Vector Control Program has been mandated to investigate complaints regarding compliance with this local law. As of January 1, 2008, the Vector Control staff is tasked with receiving and responding to complaints from the public regarding the spraying of lawn pesticides without proper notification prior to application. This entails communication with and education of the Lawn Care Industry and the general public to facilitate compliance with the provisions of the law. It is anticipated that we will partner with the Erie County Department of Environment and Planning for retail pesticide business compliance with the law and for other technical assistance.

VIII. Geo-Coding & Mapping Program

The Vector Control creates **Geo-Coded Maps to analyze Public Health Issues** using Global Positioning Systems (GPS), address locations and other GIS Data. This process provides pinpoint accuracy of geographical locations of attribute data. These maps allow the Health Department to evaluate program initiatives, educate municipalities and the public, forecast public health trends and plan future activities to reach our goals. Vector Control partners with a Doctorate Level Geographer to assist in creating these specialized maps. In 2007, maps were created regarding **Rodent Related Service Requests, Regional Rodenticide Baiting, Mosquito Larvicide Application and West Nile Virus Surveillance Data**. Maps were also created for Childhood Lead Poisoning Prevention Program showing locations where **Elevated Blood Lead Levels** were detected in children.



IX. Education & Outreach

Education and outreach are an integral part of all of the Program Components of the Vector Control Program. The success of our programs depends on education and outreach. Support materials for the inspection staff are continuously reviewed for updates and improvement. Educational materials are directed toward the public, municipal employees and elected officials regarding our program objectives and best practices.

The Vector Control Program coordinates and provides much of the required training to our certified staff and other municipalities staff in Erie County and neighboring counties. Several examples of training conducted in 2007 are as follows:

- Presented Rodent Biology and Integrated Pest Management Module for the NYSDOH Basic Environmental Health Course
- Presented West Nile Virus Training to the Eastern Great Lakes Maritime Security Commission
- Conducted Regional 30 Hour Pesticide Applicator Certification Course in partnership with Univar, USA and NY State Department of Environmental Conservation for municipal partners and counties within the Western NY region.
- Develop educational material for public and for municipalities to use for outreach
- Use HAN System to alert and advise regarding West Nile Virus, Rabies, Bats, Notify Physicians, Law Enforcement and Veterinarians

Educational Handouts Developed and Used By Vector Control

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| <p><i>Fight West Nile Virus One Yard at a Time</i></p> <p>In your yard you should:</p> <ul style="list-style-type: none"> • Maintain pools by chlorinating and filtering. • Keep pool cover drained. • Maintain ornamental ponds. (Stock with fish. Bubblers and fountains prevent mosquitoes from laying eggs.) • Clean clogged house gutters of debris.  <ul style="list-style-type: none"> • Change water in birdbath and planter bases every 3 days. • Turn over containers, buckets, and wading pools. • Remove used tires from property. • Check window and door screens and repair if needed.  <p>When outdoors: at dawn and dusk you should:</p> <ul style="list-style-type: none"> • Wear long sleeve shirt and long pants. • Consider insect repellent. (Use according to label directions.) • Limit outdoor activities. (Mosquito activity is greatest during the hours of dawn and dusk.)   <p>ERIE COUNTY HEALTH DEPARTMENT VECTOR CONTROL PROGRAM 462 Gilder Street Room BB-112 Buffalo, NY 14215 716-893-3324</p> | <p>ERIE COUNTY DEPARTMENT OF HEALTH ENVIRONMENTAL HEALTH SERVICES VECTOR CONTROL PROGRAM</p> <p>RATS</p> <p>Improper Garbage Storage "Occupant to dispose of garbage. Every occupant of a dwelling or dwelling unit shall dispose of and store all his garbage or any other organic waste which might provide food for insects or rodents, in a clean, sanitary and safe manner. Rodent-proof, insect-proof, watertight refuse containers shall be used for storage pending collection." Erie County Sanitary Code, Article IX, Section 21.12</p>  <p>Bird Feeding "No person shall feed in the open any domestic or wild fowl, birds or animals other than in a suitable container and in such a manner so as to prevent scattering of food upon the ground or ground level which can or will provide food for rodents, insects, worms or other pests." Erie County Sanitary Code, Article IX, Section 21.16 (b)</p>  <p>Rodent Harborage "Every occupant of a dwelling or dwelling unit shall store and dispose of accumulated rubbish, boxes, lumber, scrap metal, or any other materials in such a manner as to prevent rodent harborage in or about any dwelling or dwelling unit. Materials shall be stacked neatly in piles elevated to a level high enough to permit effective cleaning." Erie County Sanitary Code, Article IX, Section 21.1 (c)</p>  <p>Rod Exports - Fruit Eaten from Trees "Every owner or occupant of a dwelling or dwelling unit shall not store, place, or allow to accumulate any materials that may serve as food or harborage for rodents in a site accessible to rodents." Erie County Sanitary Code, Article IX, Section 21.1 (e)</p>  <p>"Properly store garbage in rodent-proof containers with lids at all times." It's the law. Erie County Sanitary Code, Article IX, Section 21.12</p> | <p>Fight Rats One Yard at a Time</p> <p>RATS</p> <p>You can eliminate a rat's source of food and water:</p> <ul style="list-style-type: none"> • Store garbage in cans with tight fitting lids. • Remove uneaten pet food and store food in rat proof containers. • Clean up pet droppings on and around your property daily. • Use rat proof bird feeders and clean up any fallen seed daily. • Do not place food for squirrels, birds and ducks or any other wildlife on the ground. • Remove sources of water.  <p>You can eliminate a rat's shelter and harborage:</p> <ul style="list-style-type: none"> • Keep yards trash free and clean areas behind wooden steps, under decks or any other sites that may provide shelter. • Cut down high grass and weeds. • Pile wood and other storage materials away from walls and at least 18 inches above the ground. • Make sure windows and doors close tightly and place heavy screening on all basement windows. • Seal any exterior holes in your home's foundation and walls. • Fasten floor drains to keep rats from entering through sewers.  <p><i>Remember, if you eliminate a rat's food, water and shelter, you will eliminate the roots of the problem.</i></p> <p>Erie County Health Department Vector Control Program</p> |
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X. Goals & Objectives for 2008

The staff of Vector Control Program, since its inception, has assessed the goals and objectives of the program on a continuous basis. Some of our Goals for 2008 are as follows:

- Strive to make all program components meet the needs of Erie County residents and increase efficiency.
- Partner with the NYSDOH and municipalities to study over-wintering mosquitoes in an attempt to detect presence of West Nile Virus.
- Partner with the NYSDOH, UB School of Public Health, Hudson Valley Community College and Local Physicians to conduct active Tick Surveillance in Erie County to study the prevalence of Lyme disease.
- Partner with Doctorate Level Geographer to train vector control personnel in the use of ArcView GIS Mapping program and the process of geo-coding data to better assess the geographical nature of public health issues including but not limited to rodent control and West Nile Virus.
- Improve and expand on educational materials to be provided to groups, organizations and locations such as schools, senior centers and libraries. Providing postings to encourage good citizenship regarding sanitation for rodent control, mosquito breeding site prevention and reporting animal bites for rabies prevention.
- Determine the feasibility of centralizing the Rabies Prevention Program investigation staff to a single office. The Vector Control Investigative Staff was consolidated into one office in 2005 and has proven to be effective, efficient and provides better overall service to the public.

Report compiled by:

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