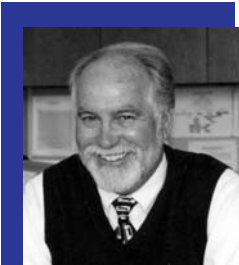


BUZZWORD

GREATER LOS ANGELES COUNTY VECTOR CONTROL DISTRICT

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*District Manager
Jack Hazelrigg, Ph.D*

MANAGER'S MESSAGE

2005-Will It Be A Long Hot Summer?

Last year, in the nation, California and Arizona had the highest incidence of West Nile virus (WNV) human infections--California experienced over 800 cases with 27 deaths. Los Angeles County had the lion's share with 309 cases and 7 deaths. I described this repressed visit (only 3 cases in 2003) of the virus as having the ferocity and abandonment of a Hell's Angeles convention languishing throughout the summer. Well, here we are on the cusp of mosquito season in 2005, with near-record rainfall, favorable to mosquito breeding, and already virus transmission in Los Angeles County (2 WNV+ dead birds) and proximate counties with WNV+ mosquitoes. These portents are indicative of another or more serious WNV outbreak for 2005. For the District, the challenge will be to prevent it, and if not, at least mitigate it as much as possible.

Accepting that challenge, the District has begun in earnest a "hit 'em early hit 'em hard" campaign, applying control agents in all accessible mosquito breeding sources, while continuously monitoring for presence of the virus. Coupled with that, the District is reaching out again to the public in its huge 1,300 square mile community, continuing the public relations "Wipe Out West Nile" campaign, urging homeowners to eliminate and prevent standing water around their residences. The most resourceful change to combating the virus in 2005, however, will be the addition of staff to the District's Underground Storm Drain System (USDS) program. The urban vector of WNV (Southern house mosquito) is the most prolific and predominant mos-

quito species, which occurs in virtually unknown numbers in the vast, nearly 9,000 miles tubes and conduits that conduct street water run off to the ocean. The additional staffing of this program, recently approved by the Board of Trustees, will help immeasurably in preventing and stemming the occurrence of WNV in 2005.

However, the key, the absolute indispensable element to protecting District residents and citizens from WNV are the efforts and dedication of the professional men and women at the District who work in the field to detect this virus and all that employ methods to control the mosquitoes that transmit it. Last year, these employees and the entire staff worked tirelessly in pursuit of a provision within the Mission Statement of the District, and that which defines its *raison d'etre*- "prevent human infection associated with mosquito transmitted disease." They are to be recognized and lauded for what prevailed-a remarkably low reported WNV human case rate (approximately 3/100,000). Compared to reported case rates associated with Phoenix, Arizona (approximately 11/100,000) and Colorado in 2003 (62/100,000), the District's case rate evidenced an enormous success by staff in curtailing WNV human infections.

In 2005, although it may be a long hot summer, staff will again do everything within their means and work arduously beyond expectation to ensure against WNV occurrence and protect the health of the citizens and residents within the District .

LA City Getting Tough With Mosquito Breeders

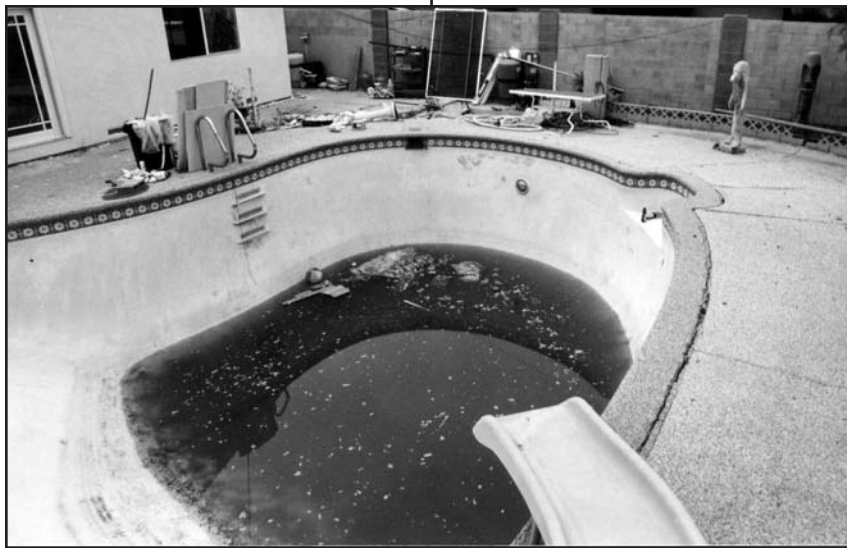
Are you at fault of not inspecting your property for standing water? If you are caught breeding mosquitoes in Los Angeles City, you can be fined and guilty of a misdemeanor. An ordinance was added to section 58.03 to the Los Angeles Municipal Code last year to allow the swift remediation of standing water, which has become a breeding area for mosquitoes and other conditions that lead to the spread of vectors. So why is LA city getting tough? With the threat of West Nile virus in the area, the city wants to do their part in preventing the spread of WNV. The ordinance is targeting large sources such as out-of-order swimming pools, spas, and ponds. At first the ordinance gives the impression that its going to pinpoint every little source. The objective is not to alarm residents who have stagnant water in minor sources such as a dog dishes, pots, buckets or other small containers, but to emphasize these sources as significant contributors to the

mosquito population, which should not be overlooked or taken lightly. LA City is taking the lead with this ordinance, and LA County is also considering a similar ordinance. The District is encouraging all District member cities to follow suit and adopt a similar, if not the same, ordinance. If all cities had this ordinance, it would be a tremendous help in fighting mosquitoes. GLACVCD is doing its best to control mosquitoes in public sources, but the backyards pose a major problem, since the main culprit in transmitting WNV, the Southern house mosquito, is mostly found in these backyard sources. Approximately 1 out of 10 homes are breeding mosquitoes, and this is why it is so important to implement such as ordinance.

The abatement process starts when the Health Officer or an officer of the Los Angeles County Vector

Control District acting under vested authority finds any standing water on private property which has become a breeding source for mosquitoes. The officer may issue a written order to abate the standing water or other condition within the City of Los Angeles that endangers the public health, safety, and welfare of the citizens of Los Angeles. If ordered, the owner responsible for the private property where the breeding source was found shall have 72 hours to abate or eliminate the condition.

According to the ordinance, "If an officer who is lawfully on private property finds a nuisance as



Out-of-order swimming pools are prime targets for fines if not cleaned-up.

described above and is unable to contact the owner or person(s) responsible for the property in question within 24 hours, the officer may abate the nuisance at no cost to the owner. If a nuisance has been abated, then the abating officer shall post a notice on the property in a prominent place that explains exactly where and what steps were taken to abate the nuisance.

If the owner who has been cited to abate the nuisance within 72 hours and fails to do so, any officer may then summarily abate the nuisance. All costs incurred to abate the nuisance shall be a personal obligation against the owner, recoverable by the abating organization in an action before any court or competent jurisdiction. These costs include an amount equal to 40 percent of the cost to perform the actual work, but not less than the sum of \$100.00 to cover the costs for doing the work."

The LA City Council considers the threat to the public health posed by the breeding of mosquitoes severe. This ordinance greatly expedites the District's existing authority to remediate this threat and thereby protect public health.

Mosquito Hunters Have A New Tool In Their Arsenal

Tracking mosquitoes and the spread of West Nile virus (WNV) has evolved with the help of computer technology. A program called ArcView is assisting District staff by combining mapping capabilities and a database with mosquito trap sites, mosquito breeding sources, sentinel chicken coops, wild bird trap locations, WNV positive mosquitoes, dead birds, and human cases. Picturing the spatial relationship in this mapping program will assist the District in WNV prevention.

Vector Control Specialist (VCS) Bruce Cameron takes care of his normal duties, but has taken on the responsibility as resident ArcView expert. Bruce has generated an extensive database with maps in Arcview, and integrated the maps with the District's operations database.

ArcView is Global Information Systems software for visualizing, managing, creating, and analyzing geographic data. A picture is worth a 1,000 words and the benefit of ArcView is getting a visual perspective of the District's mosquito control and surveillance efforts. For example, a mosquito-breeding source layer is created in the mapping program, which can be stacked on top of another layer(s), such as sites with positive WNV mosquitoes to determine if a causal relationship exists.

Each point source on the map has a record or a unique identifier. For example, a swimming pool on the map has invaluable information. If a cursor is placed on the pool, Arcview will provide a query of information on that source, such as when it was last inspected or treated, contact information, what control agent was used to suppress the mosquitoes, and the amount used. Another example is clicking on a street intersection,

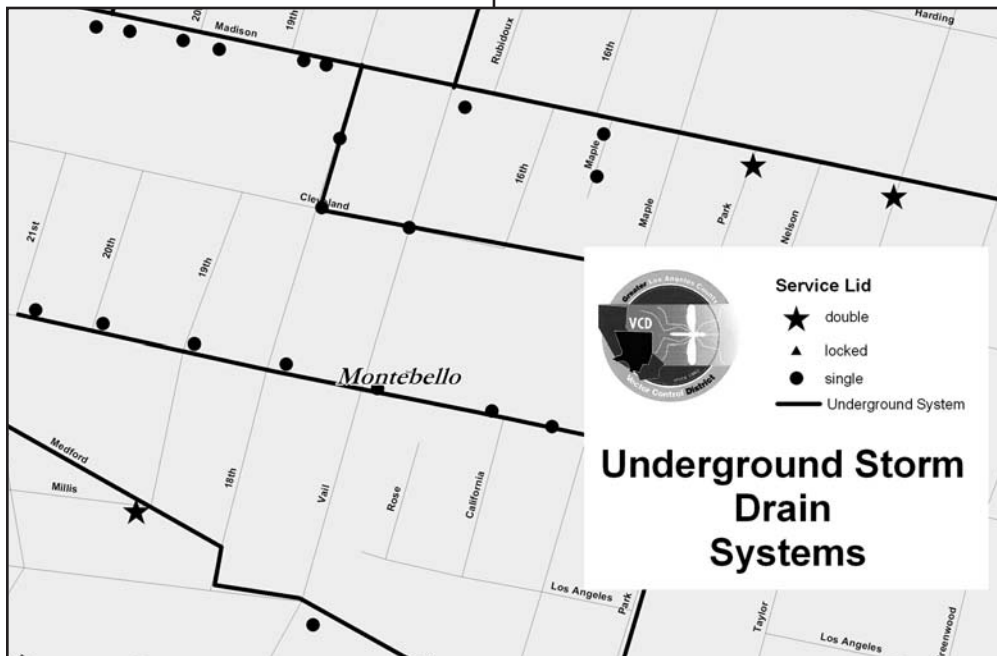
and Arcview will provide all the nearby sources that might be the cause of the mosquito problem in a particular area.

Gutters are a significant source for mosquitoes, and the District has thousands of miles of gutters to monitor and manage. Arcview has simplified the situation by assigning each gutter route a color-code for treatment. The gutter routes are spatially aged over time, and the goal is to treat the gutters every 5 to 10 days. If the routes surpass their treatment due date, Arcview assigns a color, such as red, which signifies urgency,

and notifies staff of the problem to treat the route as soon as possible. Also, when it comes to treating large standing bodies of water, such as lakes, GPS area calculations have become more precise, which has decreased larviciding costs.

ArcView plays a significant role in helping the District monitor the movement and trends of WNV. We can now track high-risk areas and decide the best form of intervention, response, and education to susceptible populations in these areas.

The program cost \$1,500-- a small price to pay for efficiency, money saved on control agents, less paperwork, and maximization of resources. Other Districts are also utilizing ArcView and have had tremendous success. As Bruce said, "Electronic mapping is an evolving technology that will provide GLACVCD with new tools for the tracking, inspecting, and treatment of sources."



Example of ArcView mapping USDS with points representing the different types of service lids.

District Is Testing Dead Birds For West Nile Virus

During the 2004 West Nile virus epizootic in Southern California, West Nile positive dead crows proved to be a good indicator in spreading and amplifying the disease. Last year, the CA Department of Health Services (CDHS) tested dead birds for West Nile by zip codes, but once a zip code had a few positive birds, there was no need to continue testing since the virus was already detected in that particular area. This year, CDHS has decided to continue the testing of dead birds from all District zip codes until five or more crows are confirmed positive from a particular zip code, and then testing will be suspended to conserve costs.

The process of shipping the dead bird carcasses, testing tissue samples, and receiving results takes approximately two weeks. The need to increase turn-around time has prompted the development of West Nile virus

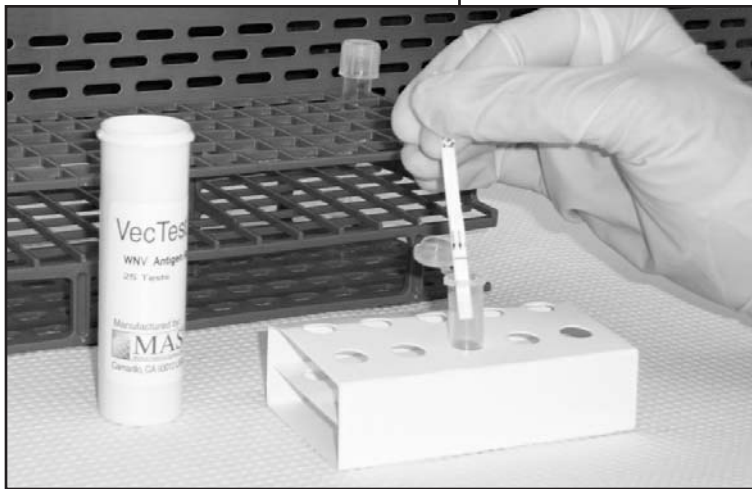
testing kits to be used by vector control districts.

One VecTest kit, which includes 50 tests, has been provided by CDHS free of charge to all District's statewide to test dead crows for West Nile virus. All other bird species are being tested by California Animal Health and Food Safety (CAHFS). The VecTest uses a quick and easy dipstick test, which is read by a person conducting the test. The cost is approximately \$9.00 per test and detects the virus 70-85% of the time in crows, with 98% specificity if the test is West Nile virus positive.

A second test, called the RAMP (Rapid Analyte Measurement Platform) test is also available, but is more costly, approximately \$15.00 per test. The RAMP test requires a reader, which is approximately \$3,500.00 to interpret the results and detects 64-95% of the virus in crows, with 95% specificity.

Samples are collected by an oral swab from the dead bird. All West Nile virus positive tests do not have to be confirmed, but the results are sent to the CDHS Vector-Borne Disease Section (CVEC). If a crow tests negative, the VecTest buffer must be sent to the Center for Vector-Borne Diseases, U.C. Davis for confirmation.

Districts using in-house VecTests for testing, can provide additional data on the test's sensitivity, as well as provide an early season head start with finding positive dead birds, instead of sending crow carcasses to CAHFS for necropsy and waiting for test results from CVEC. A faster turn-around time will aid in pinpointing hot spots and alleviating the spread of West Nile virus.



Vector Ecologist Susanne Kluh reads a VecTest dipstick to determine if a dead crow is positive for West Nile virus.

Employee Profile: Kevin Vargas

Kevin Vargas is the District's Underground Storm Drain Foreman and will be celebrating his 20-year anniversary with the District in August of 2005. Kevin came on-board as a Vector Control Specialist in 1985, and after demonstrating his keen field expertise and strong interpersonal skills, Kevin was promoted to his current position in July of 2002.

As the Underground Storm Drain Foreman, Kevin supervises, directs, and assists nine Vector Control Specialists in their daily operational work activities associated with the District's Underground Storm Drain Program (USDP). The District manager made the recommendation to augment the program by adding an additional three staff members to the team in April, bringing the total to 13 staff members devoted to the USDP. This recommendation was made to the Board of Trustees because the Southern house mosquito is the primary WNV vector and predominately breeds in these systems. In 2004, the USDP crew inspected 4,000 miles and treated over 2,000 miles of undergrounds. The additional staff would make it possible to survey the remaining 4,000 miles and increase needed treatments.

Raised in Ontario, California, Kevin graduated from Chaffey High School, and pursued a B.S. degree in Recreation Administration at Humboldt State University. He then transferred and spent four years at Cal State University Long Beach, while working for the City of Lakewood Parks and Recreation Department as

a Recreation Specialist directing programs.

Being a family man is Kevin's main priority outside of work. He has been married for 17 years to his beautiful wife Donna, and they have a wonderful son Gavin, who is five years old. His hobbies include camping, skeet shooting, golf, attending sporting events, and hosting barbecue cookouts. He enjoys Mexican food, traveling to Las Vegas, and watching the Detroit Lions, Dodgers, NASCAR, and vacationing to any destination that has a beach.

Something many people may not know about Kevin is that he accomplished a 90-mile trek between Yosemite National Park and Mammoth Lakes on the John Muir Trail, located in the Sierra Nevada Range, which took seven days.

A positive attitude, honesty, loyalty, and a strong work ethic are just a few unique qualities that make Kevin an outstanding employee. He treats his staff with respect and rewards them for a job well done. The District is proud of Kevin's endeavors and looks forward to many more years of dedicated service.



Underground Storm Drain Foreman Kevin Vargas lifting a manhole cover

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Visit our website at...

www.glacvcd.org
Find out the latest information on West Nile virus and download **free** brochures.

District Mission

The Greater Los Angeles County Vector Control District is a California government and public health service agency. Its mission is to: reduce populations of Board-mandated vectors below nuisance levels; prevent human infection associated with mosquito-transmitted diseases; guard against human infection and discomfort associated with other vector-transmitted diseases; and prevent the loss of property values and commercial enterprise as the result of vector occurrence and activity.



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