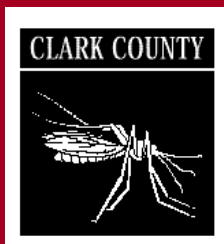




CLARK COUNTY  
MOSQUITO CONTROL DISTRICT  
2008 ANNUAL REPORT



*Mosquito Control District*



Dear Citizens:

On behalf of the Board of Trustees of the Clark County Mosquito Control District, I am pleased to present to you this 2008 annual report.

In 2008, Washington State experienced three cases of West Nile Virus in humans and 41 in horses. Given the possibility of a more severe 2009 West Nile Season, including cases in Clark County, the Mosquito Control District is implementing rigorous prevention and abatement programs to minimize the impact of nuisance and disease carrying mosquitoes.

In partnership with Clark County Public Health, we are conducting an outreach campaign to inform citizens and enlist their help in reducing mosquito habitat. We applaud citizens who have taken measures at home such as emptying gutters and outdoor containers that hold water. Their efforts help to minimize mosquito populations in Clark County, including mosquitoes that may carry West Nile Virus.

Despite tough economic times, the Mosquito Control District is fortunate to be in sound financial condition and has sufficient reserves to respond to emergencies created by mosquitoes and their related diseases. This has been accomplished through taking meticulous care of equipment, years of good old-fashioned penny-pinching, and using creative solutions in the field.

One of these solutions is the use of Go-4 vehicles. These three-wheeled vehicles are mounted with specialized applicators to safely and easily access and treat catch basins throughout Clark County. The recent addition of a third Go-4 has allowed the crew to increase catch basin treatments from roughly 28,000 in 2005 to more than 74,000 in 2008. The Go-4s are less expensive than the pickup trucks we used previously, and allow crews to make additional catch basin treatments. Only one person is needed to operate a Go-4, compared with two people needed when trucks were used to treat catch basins. This frees up staff for other activities. This season we expect to make even more biorational larvicide catch basin treatments to control the mosquito that carries West Nile Virus.

The accomplishments and goals achieved by our organization are made possible by the dedicated teamwork and collective efforts of Clark County Public Health, the staff of the Mosquito Control District, and citizens in our community. We are fortunate to have a mosquito control district in our community, and are proud of the professional service the district provides the citizens of Clark County.

Sincerely,

Wade Holbrook  
President, Board of Trustees

## **SURVEILLANCE REPORT**

The Clark County mosquito crew conducts surveillance and abatement activities through the active mosquito season, usually April 1 through October 1 each year. The priority is to attack mosquitoes at their source, by treating mosquito larvae as they hatch. The Mosquito Control District's surveillance program consists of three major components: West Nile Virus testing, larva sampling and adult mosquito trapping.

### *West Nile Virus Testing*



Early identification of the virus will allow us to notify the public.

West Nile Virus (WNV) testing takes place when a set number of suspect mosquitoes (*Culex pipiens* or *Culex tarsalis*) are found in an adult trap. In 2008, the Washington State Department of Health required us to send our samples to UC Davis for WNV testing. UC Davis will alert the state to any Positive WNV tests, though to date, we have not had a positive WNV test in Clark County.

Early Identification of the virus will allow us to notify the public and remind them about the precautions they should take for their personal protection.

## Larva Sampling

Larva sampling is done on a daily basis by the crew. Larva samples are taken in the field and brought back to the testing facility. In 2008, 179 larva samples were collected and identified by genus and species either as larvae or reared to adults. This is a 15 percent increase from last year when we identified 152 larvae samples. This information is used to alert us to possible health risks to the public due to disease carrying mosquitoes. It also helps prioritize our treatment areas.

Two important areas of larva sampling are catch basins/storm drains and retention ponds. Crews actively check catch basins and retention ponds throughout the

year for mosquito larva. As Clark County grows in population, so does the number of these habitat areas for mosquitoes. In 2005, Clark County Mosquito Control District monitored approximately 291 retention ponds. In 2008, the District monitored 359 retention ponds, a 23 percent increase since 2005.

The number of catch basins monitored and treated increased from 28,673 in 2005 to 30,376 in 2006, a 5.6 percent increase. In 2007, with the help of the Go-4 vehicles, the number of catch basins monitored and treated was 69,727 - a notable increase of 130 percent.

In 2008, a wet spring with high river levels brought about a large increase in floodwater mosquitoes.

Treating these nuisance mosquitoes resulted in a late start for treating catch basins. Even with a late start, in 2008, we treated 74,649 catch basins, up 7 percent from last year. Catch basins are the prime habitat in late summer for West Nile Virus carrying mosquitoes. All catch basins were treated at least twice during the year. Areas with hospitals, nursing homes and retirement homes were treated more often to minimize risk to vulnerable populations .



Mosquito larva are the focus of much MCD activity in early summer.

Larviciding is more effective and more efficient than spraying adult mosquitoes.

## Adult Mosquito Trappings

When the district receives reports of adult mosquitoes from crew or from the public, dry ice traps are set in problem areas for 24 hours. The traps are then collected and the crew counts and identifies the mosquitoes. This information gives us the population density in a given area and also identifies the habitat that may be causing the problem. It also helps in identifying the treatment options available for that area.

In 2008, we set 78 traps beginning in June and continuing through mid September. Approximately 26,200 mosquitoes were trapped, an increase of almost 230 percent over 2007, when only about 8000 mosquitoes were

trapped in 79 traps. Of those trapped, about 1200 were Culex species capable of transmitting West Nile Virus compared to about 2600 Culex species trapped in 2007. This represents a substantial decrease in the percentage of Culex species mosquitoes. In 2008, the ratio of Culex species to total number of mosquitoes trapped was 4.5 percent. In 2007, that ratio was 32 percent. In actual numbers, we saw a 116 percent reduction in Culex species trapped in 2008 vs. 2007.

Six pools of mosquitoes were sent for West Nile Virus testing this in 2008 compared with 34 pools in 2007.

There are three reasons for the reduction of pools:

- The proper shipping containers were not available from the state until mid-July. By this time, we had missed the opportunity to send in approximately 15 pools.
- The state changed who does our WNV testing. In 2007, USACHPPM tested our mosquito samples. In 2008, we sent them to UC Davis for testing. Two pools were denied because a different buffer solution was required with the change.
- The number of pools sent for testing was also down from last year because of the relatively small number of Culex species trapped.



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## Summary of Mosquito Pools Sent to UC-Davis for West Nile Virus Testing

Date	Location of sample	Species	Number	Test results
7/15/08	Big Tire	Cx tarsalis	50	Negative
7/15/08	Vancouver Lake Park	Cx tarsalis	50	Negative
7/15/08	Green Gate	Cx tarsalis	50	Negative
7/15/08	Frenchman's Bar Park	Cx tarsalis	50	Negative
8/27/08	Knapp Retention Pond	Cx pipiens	15	Negative
8/27/08	20600 Lake Rd	Cx pipiens	23	Negative



## Methods of Control

**Aerial application** is an efficient and affordable method to control mosquito populations near large wetland/floodwater areas. In 2008, we used two separate aerial treatments to treat 939 acres with 6988 pounds of Bti.

**Hand Application** is utilized to treat small areas to strategically place product for maximum benefit.

**Backpack Granular** applicator is used to treat areas accessible by foot, such as retention ponds, sewage treatment plants, and small wetland areas.

**Fogger** systems are vehicle mounted systems used to treat areas for adult mosquitoes. Citizens are notified in the area prior to fogging being done in the early morning or evening when mosquitoes are most active.

**Mozzie Granular** applicators are mounted on three GO-4 vehicles and used to apply product to catch basins and storm drains. This is the primary control method for all catch basins in Clark County.

**Amphibious ATV** is a versatile vehicle that allows us to get to areas that would otherwise be inaccessible. It allows us to cover and treat more area than we can treat on foot, and in a shorter amount of time. This is important because time is critical when larviciding - there is a short window of opportunity to apply before mosquito larva emerge as adults.

Aerial application is an efficient and affordable method to control mosquito populations in floodwater areas.

## Financial Report



Crews spend considerable time treating floodwater mosquitoes, which thrive in low-lying areas near rivers, such as this.

### Revenue

Real/personal property tax	\$335,264
Other tax income	\$ 32,630
Investment income	\$ 8,424
Total revenue:	\$376,318

### Expenditures

Personnel	\$151,561
Operating	\$ 38,818
Services	\$ 40,123
Administration	\$ 17,979
Capital Outlay	\$ 29,029
Total expenditures:	\$280,510

**Reserve fund balance** \$228,755

## 2008 Board of Trustees

Mosquito control districts are formed by procedures outlined in Chapter 17.28 of the Revised Code of Washington (RCW). The Clark County Mosquito Control District was formed by general election in 1982.

The Board of Trustees is responsible for oversight of the Clark County Mosquito Control District. The Board establishes policy; prepares, approves and reviews the annual budget; and approves expenditures for the Mosquito Control District. The Board contracts with Clark County Public Health for administration of operations.

The ten-member Board is composed of one member appointed by each County Commissioner for the county at large, and one member appointed by and representing each of the cities and towns of Vancouver, Camas, Washougal, Ridgefield, LaCenter, Battle Ground and Yacolt.

Jurisdiction	Board Office	Representative
Commissioner District 1		Randall King
Commissioner District 2		Roger Seekins
Commissioner District 3	Vice President	Mark Rees
City of Battle Ground		Alex Reinhold
City of Camas		Linda Dietzman
City of LaCenter		James Irish
City of Ridgefield	Secretary-Treasurer	Raul Moreno
City of Vancouver	President	Wade Holbrook
City of Washougal		Stacey Sellers
Town of Yacolt		Karen Holyk

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