



annual report 2012

FOREWARD

SHASTA MOSQUITO AND VECTOR CONTROL DISTRICT

19200 Latona Road, Anderson, CA 96007 Telephone: (530) 365-3768 Fax: (530) 365-0305 Web: shastamosquito.org

To the Residents of the Shasta Mosquito and Vector Control District:



BOARD OF TRUSTEES

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Tom Mancuso REDDING

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ADMINISTRATION Peter Bonkrude Manager As we come to the close of a very busy year, we often stop to reflect on the many things accomplished. This year is marked by the response from mosquito and vector control officials locally, statewide and nationally to the highest level of West Nile virus (WNv) human cases since 2003. Although Texas leads the country with 1,739 human cases, California came in second, with 451 human WNv cases. With numbers that large it sometimes can be lost that amongst those statistics people became ill, severely debilitated, and in the worst cases succumbed to the illness. This year alone, we have seen 243 fatalities in the US. The strong recurrence of WNv across the country showed that when the proper conditions exist, WNv is still a severe public health threat.

Even while busy combating WNv this season our staff has completed many successful projects. We completed and posted our Programmatic Environmental Impact Report which highlights that the District recognizes the balance between the highest levels of environmental stewardship and public health mosquito and vector control. We also hosted an open house at our District for National Mosquito Control and West Nile virus Awareness week. District staff enjoys showing the public the interesting and important work we do on a daily basis. Finally the laboratory staff, in coordination with the operations staff, completed a comprehensive analysis of dusk versus dawn adult mosquito control efficacy and presented the information at the Mosquito and Vector Control Association of California Annual Conference.

In addition to these District accomplishments; we have seen some significant changes in both staff and leadership. This year we celebrated the career of our Operations Supervisor Audie Butcher; Audie spent over 30 years with the District and is largely responsible for the innovative and efficient spirit that is apparent at Shasta Mosquito and Vector Control. We thank Audie for his service and wish him the best as he enjoys his retirement. As we could never replace Audie, we reorganized the Operations Department and were lucky enough to hire Guangye Hu, PhD. to be Shasta MVCD's new Assistant Manager. He brings with him a different perspective as he was the Manager of a county program in Florida. Additionally, we saw a switch in Board leadership as Trustee Charles Ryan left and we welcomed Trustee Tom Mancuso a retired school administrator; he brings a wealth of experience to the District.

Sincerely,

Peter Bonkrude District Manager

John Dunlap 2012 President, Board of Trustees

Am & Dunkap

Our Mission: "To protect the public's health from vector-borne disease and nuisance, through a comprehensive mosquto and vector control program focused on innovation, experience and efficiency."

BOARD OF TRUSTEES



THE STAFF



Back Row: Audie Butcher Al Shabazian Joe Mimbs Mike Alexander Betty Willis Peter Bonkrude Kelly Cleland Kevin Pearson Geoff Taylor

Front Row: Corey Boyer Catherine Hasher Tim Mickela John Albright Valerie Peterson Kendra Angel-Adkinson

DISTRICT HISTORY

The first local mosquito control district was formed in 1919 in the Redding area. Mosquitoes were transmitting malaria, a mosquito borne disease that was prevalent in the region. The formation of other districts in the Anderson and Cottonwood areas quickly followed. The Anderson, Cotton-



Dipping for mosquito larvae, 1952

wood and Redding areas had some of the highest malaria rates in the continental United States.

Through the years, the local mosquito control districts evolved to meet the needs of the growing communities.

In the mid 1950s, the three districts consolidated into one comprehensive district. When it became necessary, the district expanded its boundaries to include surrounding areas; effectively providing public health protection to a larger number of Shasta County residents.

In 2004 when West Nile virus (WNv) was first detected in Shasta County, the District encompassed 384 square miles. Due to the need to provide protection

against WNv beyond those boundaries, the District was expanded through an election that annexed and provided a benefit assessment to fund services in outlying areas. Today, Shasta Mosquito and Vector Control District serves 1086 square miles of Shasta County.

INTEGRATED VECTOR MANAGEMENT

What's a Vector

A vector is an insect or living carrier that transmits an infectious agent.

What is Integrated Vector Management (IVM)

Shasta Mosquito and Vector Control utilizes an Integrated Vector Management approach to controlling mosquitoes within our District boundaries. IVM is defined as "a rational decision-making process for the optimal use of resources in the management of vector populations, so as to reduce or interrupt transmission of vector-borne diseases." (WHO)

Its characteristic features include:

- Selection of proven vector control methods based on knowledge of local vector biology and ecology, disease transmission and morbidity;
- Utilization of a range of interventions, separately or in combination and often synergistically;
- Collaboration within the health sector and with other public and private sectors that impact on vector breeding;
- Engagement with local communities and other stakeholders;
- A public health regulatory and legislative framework;
- Rational use of insecticides;
- Good managment practices.

An IVM approach takes into account the available health infrastructure and resources and integrates all available and effective measures whether chemical, biological or environmental (WHO).



WEST NILE VIRUS HISTORY

1999

West Nile virus was named for the location in which it was first isolated, the West Nile region of Uganda. Although it was discovered in 1937, its true potential for distribution and mortality went unrecognized for decades. By the mid-1990s, West Nile virus was on the move. Major epidemics appeared in countries such as Romania, Morocco, Tunisia and Israel between 1996 and 1998. In 1999, West Nile virus had made the journey to North America arriving in New York City.

From New York, West Nile virus made a steady progression across North America. By 2005, each state in the continental US had experienced WNv infection either in animal or human.

The virus first appeared in southern California in 2003. The following year, Shasta Mosquito discovered West Nile virus infection within the District. Since this discovery, the District expanded its boundaries to protect neighboring communities such as Lakehead, Castella, Shingletown, Viola, Igo & Ono and expanded surveillance for the virus.

West Nile virus Reaches the Northstate, July, 2004

By September of 2004, the Shasta Mosquito & Vector Control District had sprayed 89,000 acres, compared to 8,700 acres the previous year.

> WNv is a type of encephalitis (inflammation of the brain) which severely affects horses and certain types of birds. Humans are also susceptible, and although symptoms are often undetected or very mild. death can occur.



w 5

WEST NILE VIRUS NATIONWIDE

2012 West Nile virus Update:

As of December 11, 2012, 48 states have reported West Nile virus infections in people, birds, or mosquitoes. A total of 5,387 cases of West Nile virus disease in people, including 243 deaths, have been reported to CDC. Of these, 2,734 (51%) were classified as neuroinvasive disease (such as meningitis or encephalitis) and 2,653 (49%) were classified as non-neuroinvasive disease.

The 5,387 cases reported thus far in 2012 is the highest number of West Nile virus disease cases reported to CDC through the second week in December since 2003. Eighty percent of the cases have been reported from 13 states (Texas, California, Louisiana, Illinois, Mississippi, South Dakota, Michigan, Oklahoma, Nebraska, Colorado, Arizona, Ohio, and New York) and a third of all cases have been reported from Texas.

West Nile virus (WNV) activity reported to Arbonet, by state, United States, 2012 (as of December 11, 2012)

No WNV activity Any WNV activity* WNV human disease case WNV presumptive viremic blood donor*

It's mosquito season, and that means that West Nile virus is back. The Midwest outbreak this summer is the worst in U.S. history, with 50 deaths so far in Texas alone. Fewer people have gotten sick in California, but the disease showed up here earlier than usual. And scientists are concerned that as the climate warms, West Nile and other mosquito-borne illnesses will gain a stronger foothold here. **Reporter: Molly Samuel** September 12, 2012

Public health officials this past summer

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U.S. history.

and prevention.

September 11, 2012 Highest Levels of West Nile Virus Found in

Tetos Mest Me cases double in 2 weeks Nearly on Case reported in state this yea West Nile outbreak on track to being JAVMANewsSubsection Infection rate outpacing previous years worst in US history Posted on October 3, 2012 By R. Scott Nolen

announced that this vears west Nile US bistory as shaping up to be the worst in By September a nearly 2000 sile disease. 82 ending in death had been By September 7, nearly 2000 cases of Mess econrect to the centing in death, 1000 cases of Mess for Disease Control Nile disease & ending in dealth had been the centies for Disease Control NEW ORLEANS (AP) - The West Nile virus continues to infect and kill Article content: people in the worst year for the disease in Louisiana since 2002.

WEST NILE VIRUS STATEWIDE

Human cases Total # of Neuroinvasive West Nile Unknown Infections Total # of Neuroinvasive West Nile Other/ Asymptomatic Total # of Neuroinvasive West Nile Other/ Asymptomatic Year Cases Disease Fever Unknown Infections Total (2003-2012) 3622 1687 1777 158 305 Zoll 2 2012 476 308 1600 7 47 Zoll 2 2010 111 73 38 0 20 Zoll 4 2010 111 73 38 0 20 Zoll 5 2009 112 67 45 0 17 Zoll 6 2009 112 67 45 0 17 Zoll 7 380 156 220 4 30	
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	21
Serie Merced Merced Cases 2006 278 83 190 5 14	7
2005 880 305 534 41 55	19
2004 779 289 385 95 51	29
Monuery View 7 Line 2003 3 2 0 1 0	0
Counties with West Nile virus activity (no human cases)	nce in plied iwide,

states hit hard by West Nile virus.

WEST NILE VIRUS SMVCD

(number of human cases)



Locally, the Shasta Mosquito and Vector Control District experienced the highest levels of West Nile virus evidence since 2007. This level of WNv meant that the District responded in full force treating 5 times the level of larval control treatments and over 100 more adult mosquito control applications when compared to 2011. We expect next year to be similar to the one we just experienced, so early on staff will begin aggressively treating the areas that have mosquitoes present.

SERVICE REQUESTS

Each year the District receives hundreds of requests for services. These calls can be for free mosquito fish delivery, dead bird calls, insect identification, and issues with biting adult mosquitoes. District personnel routinely inspect and treat thousands of recorded mosquito sources, but new sources are constantly being found or created. These calls are an important source of information on new mosquito problems and a means of preventing mosquito production. Members of the public are encouraged to call or submit a service request online. Every effort is made to rapidly respond to these calls, usually on the next business day.



2012 Service Requests	
Number of	
Requests Reason	Requests
Mosquito Service Requests	354
Mosquito Fish Requests	429
Neglected Pool Requests	89
Dead Bird Requests	98
TOTAL	970

This map is an image of the District's mosquito operating system. The District is divided into zones and each one is assigned to a service technician. The red telephone icon indicates where a service request has been generated.



NEGLECTED POOLS

Neglected pools typically contain abundant organic matter or bacterial growth, often with leaves or other debris, resulting in green to blackishcolored water. These pools are not properly maintained with filtration and chemicals and are generally neglected by the property owner. Thousands of unmaintained swimming pools across District boundaries associated with the nationwide foreclosure crisis continue to be a focus of the Shasta Mosquito and Vector Control District because of their ability to produce mosquitoes capable of spreading disease including West Nile virus. Just one swimming pool can produce more than one million mosquitoes and affect people up to five miles away.





2012 Aerial Pool Program

Biological Control
Chemical Control
Clean

👅 Dry



2012 Neglected Pool Program			
Aerial Surveillance Identified	Service Request Identified	Resolution	
63	36	Biological Control	
15	24	Chemical Control	
308	16	Clean	
153	3	Dry	
539	75	TOTAL	

BIOLOGICAL CONTROL



Visitors at the District's fish rearing pond



Gambusia affinis

The mosquito fish is a small guppy-like fish used to control mosquito larvae. The fish have a large appetite, and a single female (which normally is larger than a male) can devour several hundred mosquito larvae per day.

The fish are hardy and can live in many types of water habitats for several years. If added to ornamental ponds, they are compatible with gold fish, carp and koi. However, they are not compatible with bass, bluegill, catfish, perch, turtles, crayfish and frogs.

Gambusia can reproduce rapidly and are unlike other fish in that they do not lay eggs; they bear live young. Each female can produce three or four broods in her lifetime, and each brood can vary from 40 to 100 young. Birth usually occcurs during the warm spring and summer months. When the young (about 3/8"long) are born, they are active and immediately swim for the nearest cover and will soon feed. Biological control of mosquitoes range from naturally occurring organisms such as birds, bats, fish, dragonflies, copepods and mosquito larvae. In an Integrated Vector Management Program, biological control of mosquitoes is an integral component. Biological control is based on the introduction of organisms that prey upon, parasitize, compete with or otherwise reduce populations of the target species.

The Shasta Mosquito and Vector Control District currently utilizes the most successful biological tool against larval or immature mosquitoes; *Gambusia affinis* or better known to the public as mosquito fish.

District staff will deliver and sto*ck Gambusia affinis* in water sources throughout the District. This includes ornamental ponds, natural ponds, waste water treatment plants, stock ponds, water troughs and other water features. The District received 429 mosquito fish requests; over 50,000 fish were planted in 2012.





These photos are an example of water sources in the District where mosquito fish can be used

PHYSICAL CONTROL



Physical Control, sometimes referred to as source reduction, is a critical component of an Integrated Vector Management Program. This control measure can be as simple as turning over a bucket or as involved as using heavy equipment to clear a network of drainage ditches. This goal is simple, to eliminate or reduce the number, size and frequency of mosquito breeding sites. Over the years Shasta MVCD has employed physical control quite successfully.

Physical control involves clearing vegetation around or near water sources to improve drainage and provide access for other types of mosquito control. The District works with the local California Department of Fish & Game and other agencies in physical control.



CHEMICAL CONTROL

Chemical Control measures are one part of a comprehensive and Integrated Vector-Management Program. Control measures, including the decision to use chemical adulticides and larvicides, should be based on surveillance data and the risk of human disease. Larvicides are products used to kill immature mosquitoes (in the water) before they become adults. They can be either biological or chemical products, such as insect growth regulators, surface films, or organophosphates. Larvicides are applied directly to water sources that hold mosquito eggs or larvae. When used effectively, larvicides can help reduce the overall mosquito burden by limiting the number of new mosquitoes that are producers. Adulticides are products used to kill adult mosquitoes and are typically applied from truck-mounted sprayers. They can have an immediate impact to reduce the number of adult mosquitoes in an area, with the goal of reducing the number of mosquitoes that can bite people and possibly transmit mosquito-borne diseases like West Nile virus. Both larvicides and adulticides are regulated by the US Environmental Protection Agency.



Truck mounted adulticide sprayer

Chemical Control





Chemical application equipment



Larvicide treatment at lumber mills with a Maruyama backpack granular applicator

LARVAL & IMMATURE CONTROL



Technician dipping for mosquito larvae





Treehole

Mosquito Control technicians regularly inspect mosquito sources throughout the District. The photos show a dipper that is used to check for mosquito larvae. This dipper was filled with larvae from a treehole in December. The larvae will most likely hatch in the spring.

Treehole filled with larvae

Immature Mosquito Control			
Community	Applications	Est. Acres Treated	
Anderson	406	1,505.3	
Bella Vista	15	2.1	
Castella	13	3.0	
City of Shasta Lake	234	61.7	
Cottonwood	288	532.4	
Enterprise	206	1,027.0	
French Gulch	19	4.8	
Happy Valley	2	0.4	
Igo	8	1.6	
Jones Valley	6	0.4	
Lakehead	5	0.1	
Millville	27	14.7	
Mountain Gate	39	1.4	
Palo Cedro	54	397.6	
Redding	712	2,292.4	
Shasta	11	3.1	
Shingletown	39	30.3	
Summit City	1	0.1	
Totals	2085	10,486	





Mosquito larvae and pupae

ADULT CONTROL



Adult Mosquito Control					
Community	Applications	Miles Driven	Est. Acres Treated		
Anderson	119	831	30,763		
Bella Vista	7	61	2,250		
Castella	4	48	1,786		
City of Shasta Lake	38	350	12,949		
Cottonwood	18	130	4,819		
Enterprise	47	554	20,525		
Happy Valley	4	38	1,410		
Igo	6	52	1,943		
Lakehead	6	37	1,363		
Millville	4	48	1,786		
Mountain Gate	1	8	285		
Redding	160	1,379	51,060		
Totals	414	3,535	130,938		

Water Quality Monitoring





The National Pollutant Discharge Elimination System (NPDES) permit is a permit that authorizes a person, agency or corporation to release "pollutants" into a public waterway (Water of the US). Public Health pesticide applications have never fallen under this category until a 6th circuit court decision in 2009. Instead of only being regulated by FIFRA (the Federal Insecticide, Fungicide, and Rodenticide Act) we are now being regulated again under the Clean Water Act and the California State Water Resource Control Board. This permit brought with it many costly and labor intensive requirements. These include visual monitoring of pesticide applications, which takes critical time away from Vector Control professionals protecting the public we serve.

OTHER VECTORS

The District began its tick surveillance program in 2009. Twenty locations throughout the District are sampled on a weekly basis between November and March. Ticks are collected in vegetation along trails and at the interfaces between habitat types (ecotones). In 2012, the District modified two and added one sampling site. *Ixodes pacificus* ticks were sent to Shasta County Public Health for testing. Of the 128 samples submitted, 5 samples from 2 locations were positive for *Borrelia spp.* bacteria. More samples from 2012 are still pending submission and testing.



<u>RESEARCH</u>

Vector ecology is a dynamic field of study that is affected by advances in diagnostic methods, development or lack of new control products and techniques, regional environmental conditions, introduction of new species and diseases, short term weather conditions and long-range changes in climate. In addition to the routine compilation of statistics on past and current mosquito populations and disease transmission, the District undertakes short and long-term research projects to assess and develop strategies to deal with important factors such as the development of pesticide resistance in local mosquitoes, and assessing and improving the efficiency and effectiveness of control methods.



Evening ULV application

The District is in its second season of trying to assess the comparative effectiveness of ultralow volume (ULV) applications of pesticides to control adult mosquitoes depending on whether applications occur in the morning or the evening. Between May 15 and August 30, 2012 sixty-one ULV treatment events were monitored. Of these, 32 were in the evening and 29 were morning treatments. Mosquito traps were set the evening before and the evening after each treatment occurred, and the number of mosquitoes caught pre- and posttreatment was compared to assess the extent to which the population was reduced by each ULV application. On the average mosquito populations were reduced by approximately 52.8% compared to 52.4% for morning and evening treatments respectively.

Percent Mosquito Population Reduction Following Adulticide Treatment (Averages by Month of 29 Morning and 32 Evening Treatments in 2012)



RESEARCH

Control of Mosquito Larvae 0' to 400' from Point of Application ULV Aerosol Application of Methoprene in Dense Oak Woodland 100% 90% 80% 70% 60% Treated Grid 50% Untreated Grid 40% 30% 20% 10% 0% 0' 100 200' 300' 400'

Another experiment was done to assess whether ultralow volume (ULV) applications of larval control products could be applied as very fine aerosols to drift into thick vegetation and control mosquitoes larvae in cryptic sources such as treeholes and standing water sources hidden beneath dense undergrowth. Plastic cups with mosquito larvae were distributed in a grid pattern throughout a dense stand of scrub oak trees. A truckmounted ULV device was used to dispense a larval control product into the air drifting through the oak grove. Despite very serious problems with the equipment and low wind speed, significant mortality occurred in larvae in the cups within the grid.



Ae. sierrensis AKA "treehole mosquitoes" male (left) and female (right)



District staff monitor weather conditions before an experimental larvicide treatment



The District also provides assistance to outside researchers when requested and as time permits. In 2012 local mosquitoes were sent to the University of California at Davis and the U.S. Department of Agriculture for studies of mosquito behavior and genetics.

VECTOR & DISEASE SURVEILLANCE

One of the most essential components of a successful Integrated Vector Managment Program is the surveillance of vectors and the diseases they transmit. The risk of discomfort and/or disease transmission by mosquitoes within the District depends on space, time and the prevalence of certain species of mosquitoes and incidence of disease. By effectively monitoring the abundance of vectors and the occurrence of disease, the District is better able to direct its operations and provide efficacious and focused public health intervention. Historically malaria, Saint Louis encephalitis, western equine encephalomyelitis, canine heartworm and West Nile virus have been transmitted by mosquitoes within the District. This year the District utilized two trap types to gather abundance and disease data; New Jersey light traps and encephalitis virus surveillance (EVS) traps.



New Jersey light trap collecting unsuspecting mosquitoes drawn to the light

NEW JERSEY LIGHT TRAPS

Anopheles
Aedes
Culiseta
Cx. pipiens
Cx. tarsalis

New Jersey light traps are set at 21 fixed locations throughout the District. Mosquitoes from these traps are collected weekly, and then sorted by species and sex. Mosquito population data from these traps is used to assess pest and disease risk posed by mosquitoes in different areas of the District.

EVS TRAPS

Encephalitis virus surveillance (EVS) traps are another means to monitor mosquito population. EVS traps are set for one night at each of the 27 fixed locations throughout the District. The following morning they are collected, counted and identified. In addition to the fixed locations, staff place variable or "floating" trap sites on an as-needed basis. In 2012, there were 89 unique "floating" trap locations used.

Mosquitoes of the appropriate species collected from EVS traps are submitted to UC Davis to be tested for the presence of infectious agents. In 2012, the District submitted 679 samples, far surpassing the number of samples from 2011 (389) and 2010 (325). There were 17 samples which were positive for West Nile virus.



Encephalitis virus surveillance trap

EVS captured mosquitoes await sorting



VECTOR & DISEASE SURVEILLANCE

SENTINEL CHICKENS

Birds are important reservoir hosts of several mosquito-borne diseases. Unlike crows or magpies, chickens infected with West Nile virus (WNv) rarely experience any adverse effects from the virus and make excellent sentinels. Chicken flocks generally consist of 10 birds at five locations. The District takes small samples of blood from the birds every two weeks from mid-April through mid-October. The blood samples are then shipped to a public health lab in Richmond where they are tested. In 2012, six chickens from three different flocks had acquired WNv infections.



DEAD BIRD SURVEILLANCE

West Nile virus (WNv) often kills infected birds, especially corvids such as crows and magpies. Recently deceased birds are tested for WNv and other viruses. Positive samples indicate active virus transmission in the general area and closer inspection or treatment may be necessary. Residents reported 260 dead birds to the District and the WNv hotline. Further testing resulted in the detection of WNv infection in 36 birds from various areas of the District.



OUTR<mark>EACH</mark>

Public information is a key component in any Integrated Vector Management Program. The Shasta Mosquito & Vector Control District strives to educate District residents through a variety of media.

Online @ www.shastamosquito.org

The District website provides information and service 24/7. Visitors can find details on scheduled adult mosquito control applications, request an inspection for their homes and report dead birds. Other links include information on non-mosquito vectors, vector borne diseases, Board agendas and minutes.



4,198 visits 2,234 guests 12,212 views Classroom Presentation by our Vector Ecologist SHASTA MOSQUITO AND VECTOR CONTROL DISTRICT

Open House 2012 Refreshments & Tours

2012 District Press Releases

02/02/2012

Federal order impedes public health mosquito control

08/10/2012 First indication of West Nile virus in Shasta County

08/23/2012

Shasta County continues West Nile virus positives with first dead birds and additional infected mosquitoes

09/11/2012

Highest levels of West Nile virus found in Shasta County since 2007

10/04/2012

First Human West Nile case in Shasta County

10/19/2012

West Nile virus activity persists as mosquito season winds down



Public Events

District staff participated in more than 20 events or presentations in 2012. Some of the newest events the District has attended include:

- Love your Pet Expo
- Norcal Boat, Sport & RV show
- Redding Rancheria Earth Day Fair
- Redding Rancheria Health Fair
- Whole Earth & Watershed Day Festival

Local Media

The District has over fifty print brochures on a variety of topics concerning mosquito and vector control. Brochures are available at the District office and public events the District attends. SMVCD issued press releases on several topics, including increased regulation affecting mosquito control, events the District attended and the high level of West Nile virus activity. These press releases sparked further interest in District operations, resulting in articles in the Record Searchlight, A News Cafe (www.anewscafe.com), and several interviews on KQMS radio with the Vector Ecologist.

Statement of Financial Position: FY 2011-2012 (June 30, 2012)

FINANCIAL HIGHLIGHTS

2010-2011			
Assets			
Cash and cash equivalents		2,496,379	
Restricted cash and cash equivalents		759,020	
Accounts Receivable		9,501	
Due from other governments		61,661	
Property tax receivable - long term		93,064	
Inventories		156,208	
Other postemployment benefit asset		11,315	
Non-depreciable capital assets		51,273	
Depreciable capitals assets, net		715,792	
	TOTAL	4,354,213	

Liabilities	
Accounts payable	14,842
Deferred revenue	-
Compensated absences	115,037
TOTAL LIABILITIES	129,879

Change in Net Assets	
Total Revenue	2,206,120
Total Expenditures/Expenses	2,375,717
Change in Net Assets	(169,597)
Fund Balance/Net Assets - Beginning of Year	4,393,931
Fund Balance/Net Assets - End of Year	4,224,334

Net Assets	
Invested in capital assets - net	767,065
Unrestricted	3,457,269
Total Net Assets	4,224,334

2011-2012 REVENUES				
Property Taxes		1,026,690	46.66%	
Assessments		1,141,795	51.89%	
Interest & Miscellaneous	-	31,950	1.45%	
	TOTAL	2,200,435	100%	

2011-2012 EXPENDITURES				
Salaries and Benefits	1,599,275	67.48%		
Service and Supplies	676,724	28.55%		
Utility Expense	15,355	0.65%		
Capital Outlay	-	0.00%		
Depreciation	78,713	3.32%		
	TOTAL 2,370,066	100%		

Funding Sources

Property taxes represent 46.6% of the District's funding. This includes Current Secured, Current Supplemental, and Current Unsecured property tax. The District's other main source of revenue is through two benefit assessments that assess individual properties. Benefit Assessment revenue represents 51.89% of District Funding. The remaining 1.45% of revenue comes from interest earned and miscellaneous sources.











Shasta Mosquito & Vector Control District 19200 Latona Road Anderson, CA 96007 (530) 365-3768 www.shastamosquito.org