

Douglas County Mosquito Abatement District Minden, NV

1. Introduction by – Krista Jenkins, Douglas County Mosquito Abatement District Manager.
The DCMAD is an improvement district under the NRS 318.
2. District Boundaries -
 - a. Total district boundaries are 291,238 acres or 455 Square Miles
 - b. Working Area which includes the floor of the Carson Valley -
65,890 acres or 102 Miles
 - c. Contract with Douglas County – Tahoe / Topaz
The Nevada portion of Lake Tahoe is not within the boundaries of the district, therefore there is a limited contract with Douglas County. It runs from Stateline to Glenbrook.
The Lake Topaz area is also out of the district and encompasses the Topaz Ranch Estates and surrounding homes and a small portion of the actual Lake.
3. Five Person Elected Board – there are two members with two-year terms and three members with four-year terms. The board meets at least four times per year. The mosquito season runs typically from March through October depending on the weather and clean-up of vehicles is done in the off season.
4. Funding –
In Douglas County there are three towns and seventeen special districts. The tax cap has limited the tax rate for each district. If a district is abandoned, the tax rate is split between the remaining districts. That is the only way in which to raise the rates.
 - a. Ad Valorem - .0345%. Tax Cap
 - b. Consolidated Taxes
 - c. Interest LGIP
 - d. Contract Douglas County
5. 1969 – A veterinarian had been artificially inseminating a local ranchers' cows and was being attacked by mosquitoes. He asked if there was anything that could be done to control the little buggers. That is how DCMAD was born.
6. Dipper / Box - The district started out with a box of materials and a mosquito dipper. At that time the mosquito products were very limited.
 - a. Treated w/ Oil, briquettes and adulticided with a fixed wing aircraft
7. 1 Truck - to – The district started out with one Ford Bronco and over the years have acquired the following.
7 trucks, 4 foggers, 4 side x sides, 1 atv, 2 drones and 1 boat

8. Surveillance –
The employees monitor irrigation water patterns looking for mosquito larvae to be treated. We also treat detention and retention ponds, catch basins, any types of standing or trapped water and respond to service requests. This is done either by ground or by air. A mosquito season is totally dependent on the weather, the snowpack and by agricultural irrigation.
9. Technology – The district started out keeping records on paper and now keeps records with modern technology using phones, ipads, and computers.
 - a. Fieldseeker – captures data from larvicide, ground fogging, drone events for the district's records and for reporting agencies.
 - b. Mapping – handheld computers used in the adulticide ground vehicles record the nights events. The software shows what streets were fogged or not fogged. If a person does not want to be fogged, the address is recorded with a three-hundred-foot radius around that address and is noted in the software alerting the driver to shut down the fogger.
10. Lavicide – 1st line of defense.
A granular larvicide is deposited into the larvae filled water to kill the larvae preventing the emergence of adults. We use a product that has anywhere between 30 up to 150 day residual. This is done either by hand, by ground equipment. By air with a drone, helicopter or fixed wing airplane.
11. Trapping – Traps are set to capture mosquitoes to monitor adult populations and for testing for virus. We test for West Nile, St. Louis Encephalitis, Eastern and Western Encephalitis.
 - a. Traps use dry ice and lights for attraction.
 - b. Physical identification is done to identify mosquito species. In May the district will acquire an ID machine to do the identification.
 - c. The mosquitoes are sent to the Nevada Dept. of Agriculture for testing. As of July first, the district will begin to test their own mosquitoes with PCR equipment that tests.
12. Adulticide – Killing the flying adults
As adults emerge, they are killed by ground fogging equipment, by drone or by a fixed wing airplane. Residents are notified with signs, notices in the Record Courier that comes out two days a week or by phone calls.
13. Cost of Product - Mosquito Abatement is very expensive.
Last season the district spent \$400,839 in just larvicide and adulticide products alone.
 - a. Larvicides - \$13 – \$20 per lb, the rate is 5 to 8 lbs/ac, can cost up to \$160 per acre
 - b. Adulticides - \$85 – 350 per gal. 1 oz per ac. Put into perspective, the district uses ultra-low volume adulticides. This means that the depending on the product used, there would be an ounce or less of active to cover one acre. This could cost up to \$273 per acre.