

2021 Annual Report

Submitted to Canyon County Board of County Commissioners

Authority: Idaho Mosquito and Vermin Act of 2007

Idaho Code: Title 39 Health and Safety, Chapter 28

As per **Section 39-2804 (p) 9**, the Canyon County Mosquito Abatement District (**CCMAD**) is submitting our annual report that documents the accomplishments, methods employed, and allocation of resources by the District.

Operational Challenges:

- Protecting District staff and the public from COVID-19.
- Meeting the conditions of the Clean Water Act National Pollution Discharge Elimination System (NPDES) continues to be a significant obstacle with added pre- and post-treatment inspections and paperwork.
- Urbanization of traditionally agriculture areas has created a reduced tolerance level to mosquitoes. The species of mosquitoes occupying these areas has also shifted to those closely related to man made habitats which are more difficult to control and likely to transmit diseases.
- Meeting labor demands. With a robust economy and higher wages, it has become a challenge to meet our labor demands and to compete for qualified employees.
- Staff Training: Training opportunities were greatly reduced do COVID restrictions.

Operational Highlights:

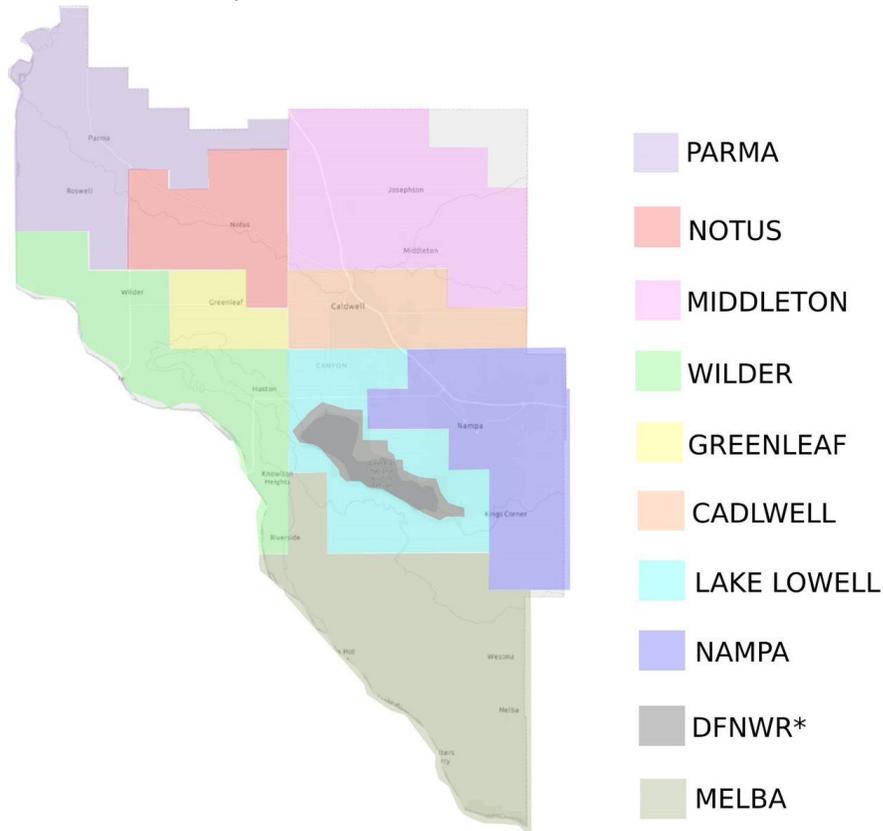
- Cooperation from the U.S. Fish and Wildlife Service and approval of a mosquito management plan to perform mosquito abatement activities on Deer Flat National Wildlife Refuge remains to be the District's highest priority. High vector mosquito numbers around Deer Flat National Wildlife Refuge continue to be a challenge to the district as well as residents who live around the wildlife refuge and recreate there.
- Introduction of UAS (drone) operations allowed for efficient application of larval control products to previously inaccessible areas.
- The full implementation of our Mosquito Management Plan with emphases on:
 1. Combatting potential pesticide resistance in the mosquito population.
 2. Verifying mosquito service requests.

3. Controlling urban mosquito production.

Public Relations and Public Outreach:

- In person public outreach was severely limited due to COVID-19. The District put out numerous press releases regarding WNV and mosquito bite prevention. In cooperation with University of Idaho Extension, the District presented “Mosquito Control An Integrated Approach”, via Zoom Webinar.
- **CCMAD** webpage: The (www.canyoncountymosquito.com) webpage provides valuable information on mosquitoes, updates of West Nile Virus activity locally and state-wide. Also, there are valuable links to the Center of Disease Control and Prevention web page called Arbor-Net which tracks West Nile Virus and other mosquito borne disease activity. The CCMAD webpage also contains an easy-to-use online service request form that may be submits directly into our program.
- CCMAD Facebook page provided updates on local mosquito abatement treatments as well as national news regarding mosquitoes and virus transmission.

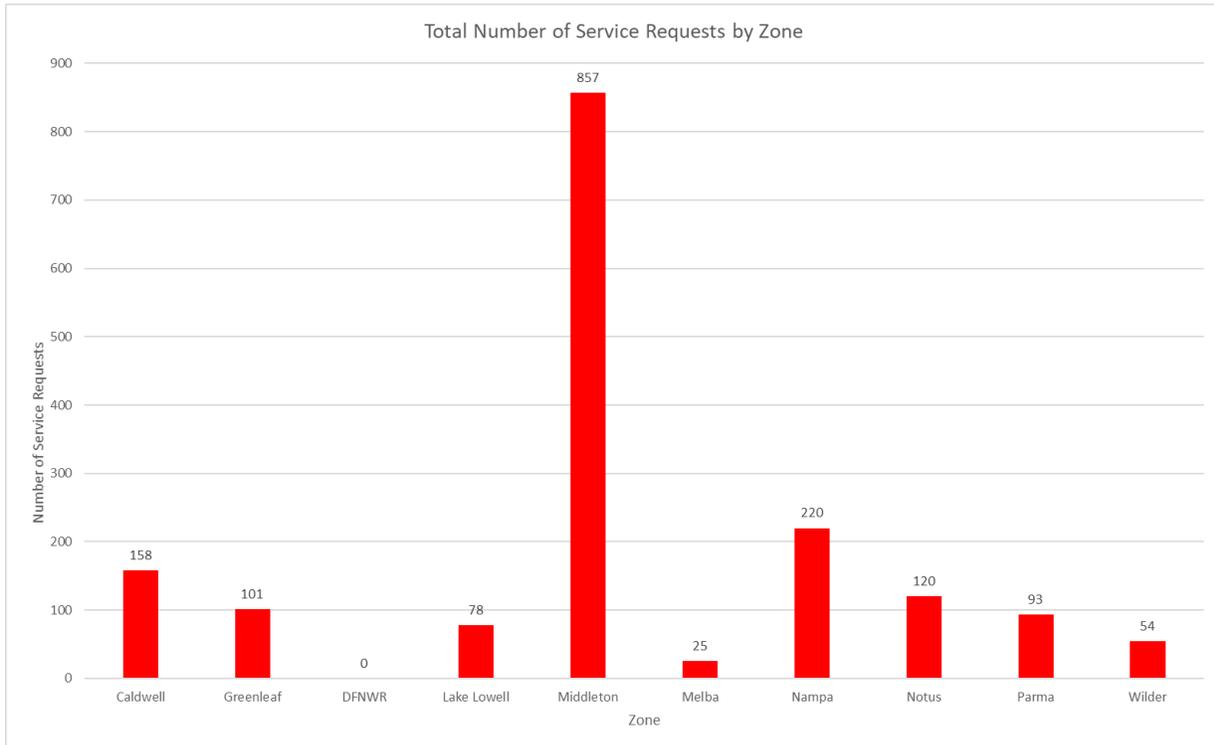
CANYON COUNTY MOSQUITO ABATEMENT DISTRICT CONTROL ZONES



*Deer Flat National Wildlife Refuge

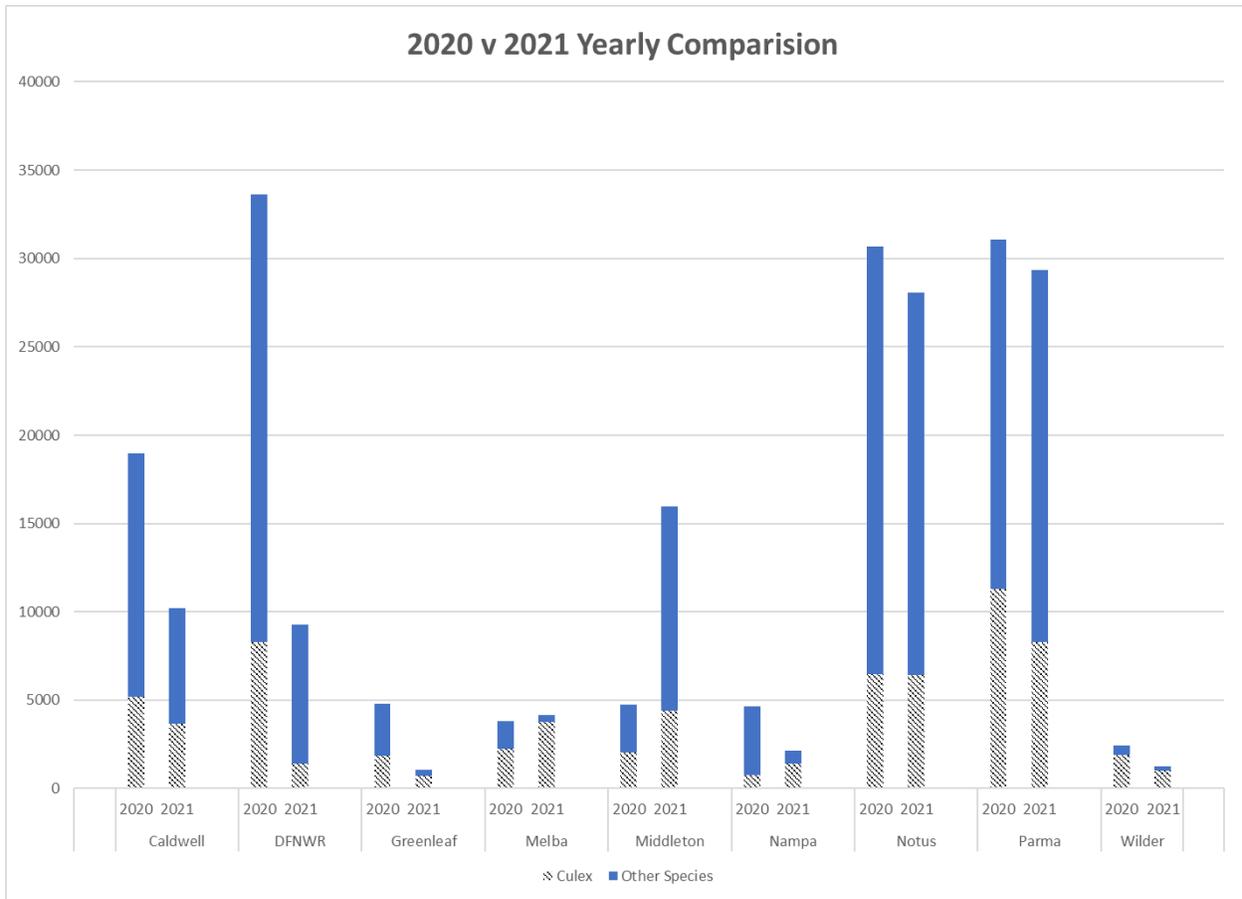
Service Requests

Reports from the public regarding mosquito problems, standing water, bee hives, etc., provide valuable information to the District. The below table shows the number of service requests by zone for the 2021 season.

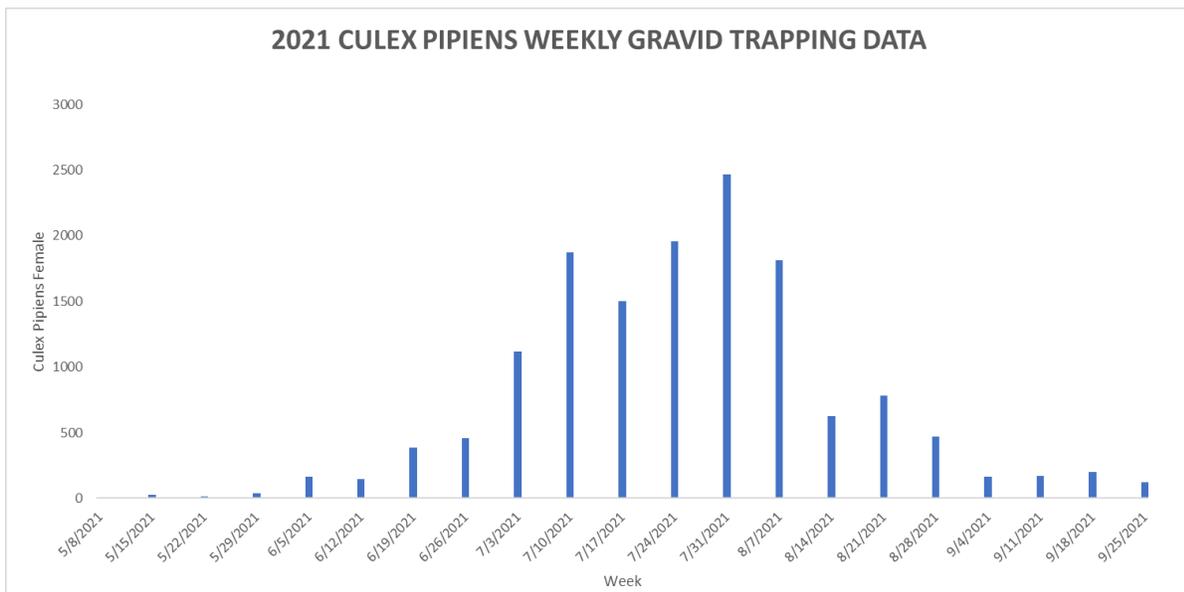


Surveillance and West Nile Virus Testing

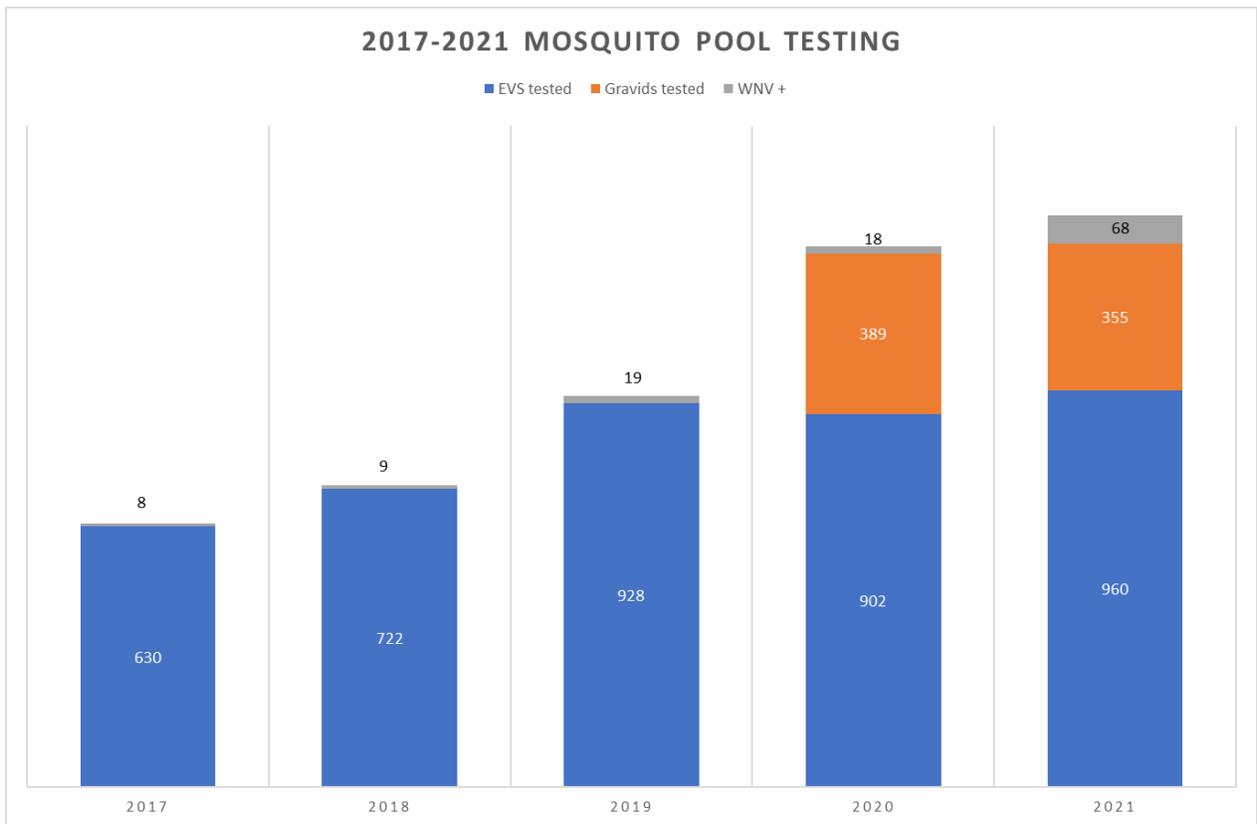
CCMAD deploys approximately 120 EVS traps a week throughout the county to monitor mosquito activity and track WNV vectors. These traps catch a broad range of both pestiferous and vector species making them the workhorse of our surveillance program. The following table shows a comparison of mosquito trapped by zone the past two season.



In 2020, gravid traps were added to enhance our surveillance program. In urban settings, eleven traps ran continuously throughout the 2021 season. Gravid traps collect primarily Cx. pipiens in urban areas where other trapping methods are less effective. The following graph shows the weekly gravid trapping data for 2021.



To better respond to both mosquito populations and potential mosquito borne disease outbreaks the District has placed additional emphasis on our surveillance program over the last two seasons. The following graph shows a historical perspective of disease surveillance and mosquito-borne virus activity over the past 5 years:

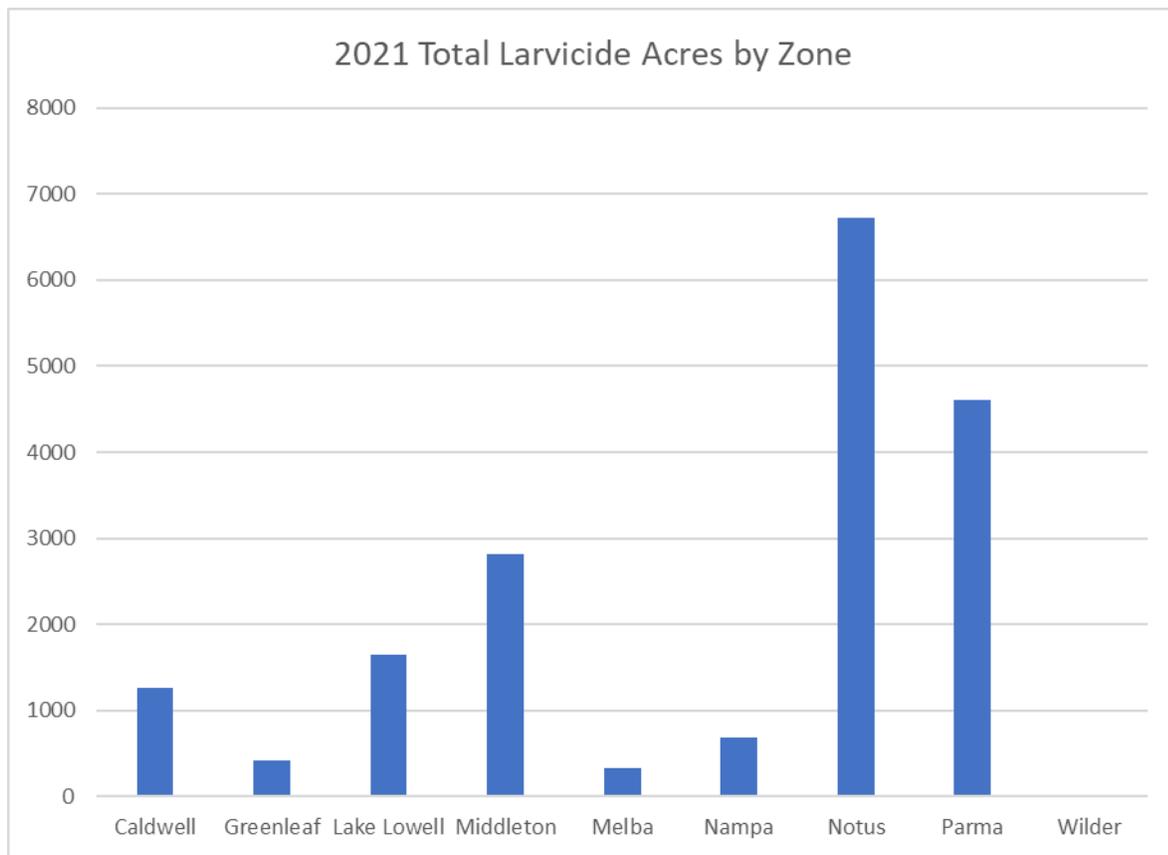


Pesticide Use Report

The District strives to control mosquitoes in the larval stage before they become biting, flying adults. The products used and the manner in which they are being applied are constantly being evaluated to ensure they are applied in the most efficiency. During the 2021 season, a total 18539.73 acres were treated. The following table shows the name, quantity, and acres treated with each larval control product over the last season.

2021 Larvicide Used			
Product	Amount	Acres Treated	EPA Reg. No.
Altosid Briquets	5266 briquets	11.88	2724-375
Altosid XR-G	5246.64 lbs	1086.17	2724-451
BVA2	3940.00 oz	10.26	70589-1
Fourstar Briquets	63 briquets	0.14	83362-3
Metolarv SP-T	3437.02 lbs	1125.83	73049-475

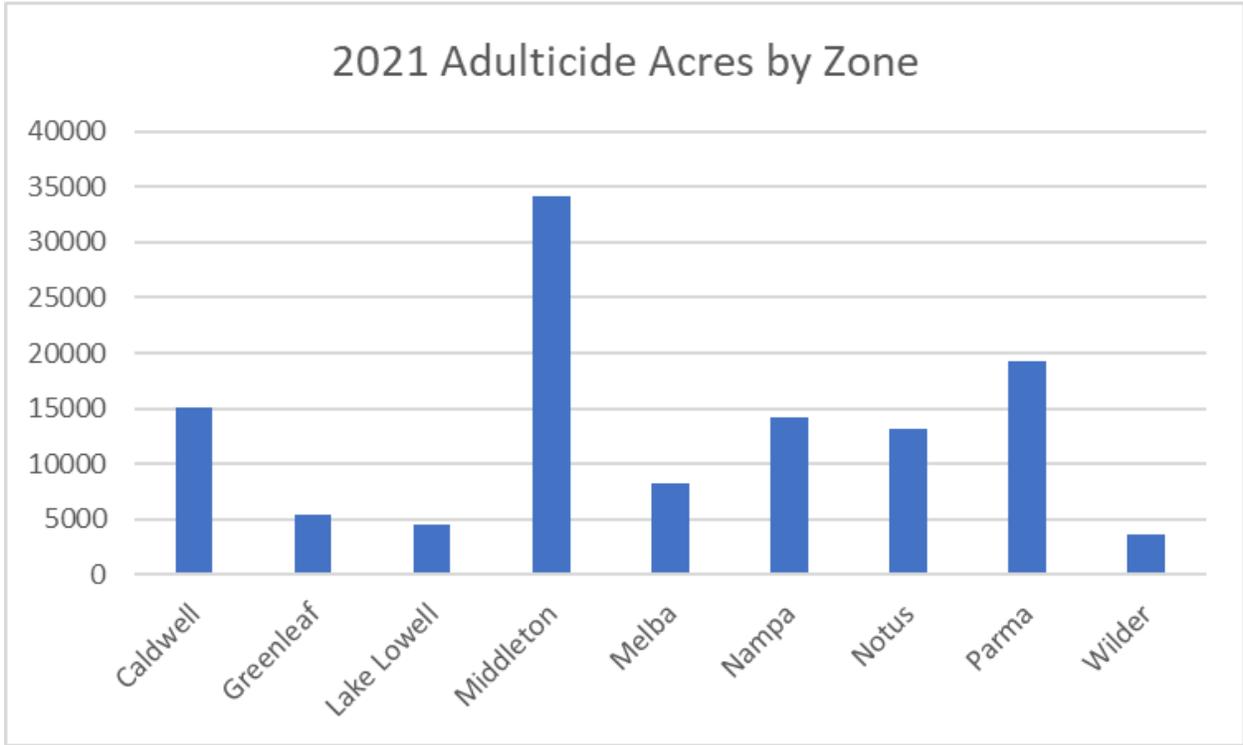
Product	Amount	Acres Treated	EPA Reg. No.
Natular G	62.75 lbs	10.5	8329-80
Natular XRT	6767 briquets	17.79	8329-84
Vectobac 12 AS	388.24 oz	26.21	73049-38
Vectobac GR	2585 lbs	517	73049-486
Vectobac GS	9648 lbs	1206	73049-10
Vectomax FG	3309.39 lbs	473.55	73049-429
VectoPrime FG	55059.04 lbs	14054.40	73049-501



Our last line of defense against mosquitoes and the diseases they carry is adult control. Due to a large number of positive mosquito pools and increased service requests, we conducted both ground and aerial applications totaling 118,842.78 acres. The following table shows the name, quantity, and acres treated with each adult control product over the last season.

2021 Adulticide Used

Product	Amount	Acres Treated	EPA Reg. No.
Duet	395.9 gal	49415.75	1021-1795-8329
DeltaGard	178.69 gal	36842.03	432-1534
Dibrom	170.56 gal	32585	5481-480



2021 Annual Report Summary:

- A strong surveillance program remains the backbone of our Integrated Pest Management Program.
- West Nile virus activity was up statewide. A robust surveillance program increased our ability to identify areas with West Nile virus activity.
- A cool, dry spring greatly reduced flooding, especially along the Boise River, limiting the need for aerial larval control activities.
- Our COVID-19 action plan limited the impact of the virus on our staff.
- The monitoring for invasive mosquito species has become an added challenge and responsibility of the district.

The Canyon County Mosquito Abatement District wishes to thank the Board of County Commissioners, County PIO Joe Decker, and other County personnel for their support.

Respectfully submitted,

James J. Lunders, District Director