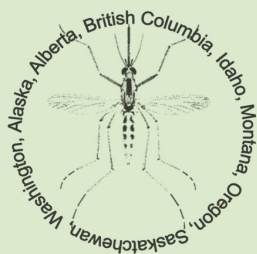




# Vector News

A Publication of the Northwest Mosquito and Vector Control Association

Sep. 2024



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## Executive Director's Report

Hello all,

It's September, the days are getting shorter and the time is running out on another mosquito season. This season seemed pretty ordinary and felt like it went by fast but maybe it's just because most things seem to these days. Hopefully some of you had a more interesting season and can share your stories at the upcoming fall meeting. Michael has chosen a great location in Leavenworth and Nikki has put together a great agenda. In fact, the agenda is already complete weeks ahead of the deadline. I think that's a first, great job Nikki!

I have been trying to think about what to write in this newsletter article. I don't want to talk about Covid, don't even like saying the word. I know one topic I have mentioned a few times has been staffing. I think it's starting to get better but at least here in Yakima we had to open up the wallet to get it done. We have more than doubled the starting wage from when I started here ten years ago. Which is kind of ridiculous, it's a crazy world we live in.

I know I've spoken a lot about working together and contributing to things like the NWMVCA but I'd like to reiterate it. I've always felt like one of the best ways to learn something in mosquito control is through failure. If you missed a hatch in an area and you have to deal with all the calls and conduct adult control efforts you are much less likely to miss that hatch in following years. If a weather event negatively effects how well an adult control spray performs, you learn to avoid those conditions. Just as it's important to share success stories, it may be more important to share mistakes, so that others can learn from them.

I hope everyone had a safe and successful season. I look forward to seeing everyone in Leavenworth and am ready for a great meeting, travel safe.

*Kelly Beehler,  
NWMVCA Executive Director*



Icicle Village Resort, Leavenworth WA

## President's Message

Welcome to fall everyone,

I hope everyone's summers went well and the mosquitoes are dying down in your districts. As we step into the cold months, I want to reflect on the critical work you do in the realm of public health. Your dedication to controlling mosquitoes and other vectors is indispensable to the well-being of your communities.

Know that your tireless work is at the forefront of preventing the spread of WNV, SLEE, WEE, and EEE that these vectors cause. Each day, you confront the challenges posed by these tiny adversaries with ingenuity, resilience, and a commitment to safeguarding lives and keeping your districts free from nuisances. By your impact you enhance the quality of life for countless residents under your care, allowing them to live healthier and more productive lives.

Thank you all for your service, your passion, and your commitment to making the world a healthier place.

I will see you all in Leavenworth next month. Stay safe!

Sincerely,

*Michael McKeague-Foster, President NWMVCA*

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## Thank You to Our Sustaining Members!

Ada County Mosquito Abatement District  
Adams County Mosquito Control District

AMGUARD

Benton County Mosquito Control  
Canyon County Mosquito Abatement District  
Central Life Sciences

Clarke

Frontier Precision, Inc.

Leading Edge

North Morrow Vector Control District  
Peststop

Target Specialty Products  
Three Rivers Mosquito & Vector Control  
Valent BioSciences

Veseris

West Umatilla Mosquito Control District

## **NWMVCA Officers**

President: Michael McKegue-Foster  
President Elect: Nikki Harris  
Vice President: Shaun Calver  
Past President: David Boggs  
Secretary/Treasurer: Chris Law  
Executive Director: Kelly Beehler

## **NWMVCA Representatives**

Alaska: Vacant  
Alberta: Vacant  
British Columbia: Cheryl Phippen  
Idaho Rep: Chris Ocegueda  
Montana Rep: Jessica Bushnell  
Oregon Rep: Ken Carver  
Saskatchewan: Vacant  
Washington Rep: David Beus  
North Pacific AMCA Director: Angela Beehler  
Industry Rep: Nate Hill  
Trustee Rep: Doug Shinn  
Newsletter Editor: Cheyenne Keel  
Webmaster: Kevin Shoemaker

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### **Registration for AMCA's 91<sup>st</sup> Annual Meeting is Now Open!**

March 3 - 7, 2025  
The Puerto Rico Convention Center  
San Juan, Puerto Rico

Registration information can be found online at:

<https://members.mosquito.org/ap/Events/Register/mwFqaz2umC3Ce>

## 2024 NWMVCA Fall Meeting in Leavenworth, WA October 21<sup>st</sup> - 24<sup>th</sup> at Icicle Village Resort



Join us for our annual Northwest Mosquito and Vector Control Association's Fall Conference! The workshop will take place October 21<sup>st</sup>- 24<sup>th</sup> at the Icicle Village Resort.

Address: 505 Highway 2, Leavenworth, WA 98826  
Hotel Phone #: (509) 548-7000

Schedule:

Monday, October 21<sup>st</sup> Golf Outing

Tuesday, October 22<sup>nd</sup> - Half day of presentations.

Wednesday, October 23<sup>rd</sup> - Full day of presentations.

Each individual guest must make their own reservations by calling (509) 548-7000 before 9/23/2024 and identifying themselves as members of the Group (i.e., the Northwest Mosquito and Vector Control Association).

Room Rates: Single Queen, Double Queen or King beds is \$149.00 plus tax. Rates are available for the nights of 10/21 through 10/23.

Leavenworth Visitor Guide: <https://leavenworth.org/leavenworth-visitor-guide/>

## 2024 NWMVCA Fall Meeting in Leavenworth, WA October 21<sup>st</sup> - 24<sup>th</sup> at Icicle Village Resort



### **Agenda:**

#### **Monday, October 21, 2024**

1:00 PM Golf Outing – Leavenworth Golf Club, 9101 Icicle Rd.

#### **Tuesday, October 22, 2024**

7:00 AM Breakfast provided with stay at the resort

9:00 AM Executive Committee Meeting, Wedge Mountain Rm.

9:00 AM Exhibitor Set up

10:30 AM Registration

1:00 PM Afternoon Session, Tumwater Ballroom

4:30 PM Annual Business Meeting

6:00 PM Welcome Reception, Icicle Ridge Rm.

#### **Wednesday, October 23, 2024**

7:30 AM Exhibits open

7:30 AM Registration open

8:15 AM Morning Session

11:30 AM Lunch provided

12:45 PM Afternoon General Session

6:00 PM President's Reception

7:00 PM Annual Awards Banquet, Enchantments Ballroom

8:00 PM Meeting Adjourns





The NWMVCA has organized a golf outing  
for Monday, October 21st at 1 PM.

All attendees are welcome to attend regardless  
of experience.

Come join us for an afternoon of fun on the links!

# LEAVENWORTH GOLF CLUB

1901 Icicle Road  
Leavenworth, WA

CONTACT KEVIN McCLURE TO RESERVE  
YOUR SPOT (509) 781-2327

## State and Providence Reports

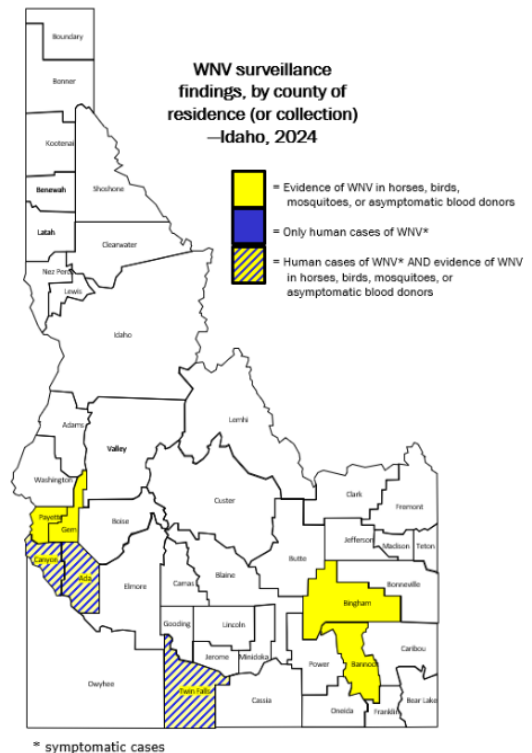
### Idaho

Is that the smell of fall in the air? No, it's the smell of smoke everywhere! While the season is finally showing an end here in Idaho, numbers wise, there is still active virus throughout the State that technicians are battling. This battle has been eased somewhat by the adoption of drones for mosquito control. Canyon County Mosquito (CCMAD) has made 50% less adulticide applications compared to last year, a large contribution to that is attributed to the use of technology to better and more completely treat breeding sources. This wasn't a universal outcome for all Districts in Idaho, unfortunately. Cody John, Director of Gem County Mosquito (GCMAD,) for the 2024 season saw some challenges. "Early in the season GCMAD larvicide drone had a short and caught fire. It managed to land itself and no property damage was sustained. All our residual this summer has been put out by backpack or atv mounted spreader, which after having a drone is a giant step back in efficiency." Up in Payette County Nikki Harris had "a rough year for field mosquitoes but a mild West Nile year" which seemed to be echoed throughout the state. Ada County MAD has had relatively full season which includes staffing, drone applications, normal mosquito counts and low WNV positive pools, especially compared to the 2023 season. Desiree Keeney said "Ada currently has 18 positive pools (vs 176 positive pools in 2023) and 2 human cases as reported by IDHW. With the fall weather approaching, it has been an overall better summer for mosquito control for Ada County MAD." All WNV information for Idaho can be found at <https://healthandwelfare.idaho.gov/health-wellness/diseases-conditions/west-nile-virus>.

With the detection of *Aedes aegypti* in Oregon, Directors and laboratories throughout the state of Idaho are on high alert. *Aedes aegypti*, commonly referred to as the Yellow Fever mosquito, ranges globally in tropic and subtropic areas. Now firmly established in California, it has expanded its range northward all the way to Jackson Co Oregon. Mosquito Abatement Districts in Idaho have mosquito traps designed to lure and trap *Aedes aegypti* for early detection and are on the lookout.

IMVCA had a bottle bioassay workshop this summer for local districts to test resistance in local mosquito populations and for new district employees to learn the process with the help of Dr. Casey Crockett, Azelis, and Dr. Dan Markowski, AMCA Technical Advisor. IMVCA will also be having the late fall, early winter conference again this year, watch the website for updates on location and final dates! [www.idmvca.net](http://www.idmvca.net)

Chris Ocegueda, Idaho State Rep, NWMVCA



Last updated 9/11/24 by Idaho Department of Health and Welfare

## Washington

I apologize in advance, this is less of a report from Washington and more of a report on Adams County, Washington. I'm sure everyone is still very busy and didn't have time to send in any updates. I look forward to getting together in Leavenworth and hearing about how the season went outside of Adams County.

Here, like the rest of Eastern Washington, the sun cranked up the temperature around the 4<sup>th</sup> of July and didn't let up. We've had a very busy and hot season. Our crew and drone have been going non-stop, but it looks like the weather should finally be turning next week.

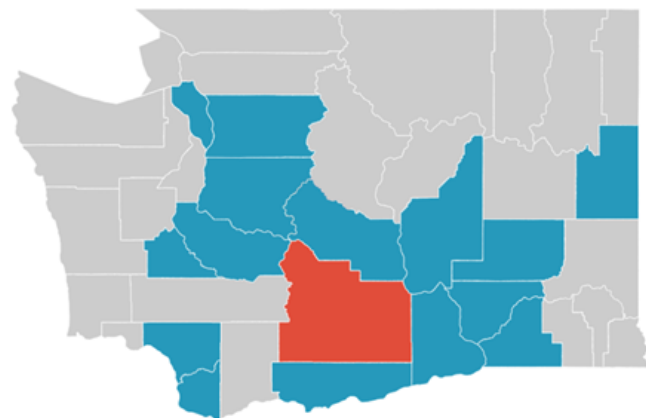
The biggest event of the summer was the August 5<sup>th</sup> breach of the East Low Canal in Grant County, which feeds thousands of acres of farm land in Grant and Adams County. Water had to be shut off for a week in order to complete the repairs. A lot of our farmers were impacted. I'm told that the greatest risk was to onions, potatoes and beans. The irrigation district did a great job working 24 hours a day to get the water going. Most of our mosquito water is a direct result of irrigation and much of that water disappeared that week. The majority of our areas are west of that canal and were not impacted, but it was a little eerie to visit many pastures that do get their water from the East Low that were dry by the middle of the week and to see their ditches completely empty. Many mosquito areas that slowly build up water due to seepage even dried up and are just now getting that water back in them. Hopefully the impact on farmers will be minimal in the end, but it is definitely worrisome to many of our citizens.



Canal Breach, PC: Slade Caldwell Jr.

As far as I know, and from what the DOH page shows, there have only been positive WNV samples found in Yakima County. This is according to their website on September 6<sup>th</sup>.

### Map of West Nile Virus Surveillance in Washington, as of 9/11/24



● Trapping data not available ● Trapping sites, 2024 ● WNV-positive mosquitoes detected

I look forward to seeing everyone next month and hope this finds you all well!

David Beus, Washington State Rep,  
NWMVCA



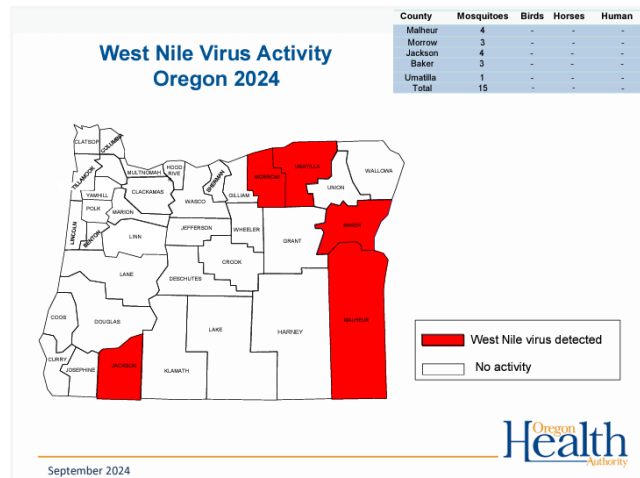
## Oregon

### WEST NILE VIRUS ACTIVITY - 2024 Year

to Date (as of September 4, 2024)

So far in Oregon, four (4) local mosquito control districts have reported a total of 11 West Nile Virus (WNV) positive mosquito pools. The mosquito control districts which have detected WNV include Malheur County VCD (4 mosquito pools), Jackson County VCD (3 mosquito pools), North Morrow VCD (2 mosquito pools) and Baker County VCD (2 mosquito pools). For a complete overview of WNV activity within Oregon, you can review this information on our state health authority website

(<https://www.oregon.gov/oha/PH/DISEASES/CONDITIONS/DISEASESAZ/WESTNILEVIRUS/Pages/survey.aspx>).



### AEDES AEGYPTI IN OREGON

On July 23, 2024, a single *Aedes aegypti* was found in Talent Oregon, marking the first time this species has been found in Oregon. Since the initial detection, Jackson County Vector Control District (JCVCD) has detected 80+ *Aedes aegypti* mosquitoes from 18 trap locations throughout the city of Talent. Some of the specimens collected have been sent to Yale University for genetic testing to determine where they came from.

JCVCD are working with extensive list of stakeholders to eradicate *Aedes aegypti* with a combination of awareness, detection, and prevention strategies. Public outreach and support are vital, and JCVCD has set up a webpage for aegypti education, resources, and an online reporting form of day biting mosquitoes ([JCVCD webpage](#)).

### MOSQUITO RESEARCH

Dr. Heidi Pullmann-Lindsley and Eliana Harris from George Fox University have been conducting a research project concerning the diversity and host preferences of mosquitoes in the Willamette Valley. Over the summer, they collected mosquitoes from Yamhill and Marion Counties and received samples of blood-fed female mosquitoes from Multnomah and Washington Counties. So far, molecular analysis has revealed that the species *Culex pipiens*, *Culiseta incidens*, and *Aedes sierrensis* are found in Yamhill County, and that they have been feeding primarily on human hosts. Dr. Pullmann-Lindsley and Eliana Harris are continuing to process mosquito samples and will be presenting their work at the Murdock Undergraduate Research Conference in early November.

### UPCOMING MEETING

The Oregon Mosquito and Vector Control Association will hold their annual fall CEU and business meeting in Coos Bay Oregon. The meeting will take place on November 12<sup>th</sup> – 13<sup>th</sup>, 2024. Meeting details will be posted on the OMVCA website prior to meeting (<https://omvca.org/>).

Ken Carver, Oregon Rep, NWMVCA

## Neighboring Districts Join Efforts for Adulticiding App

The mosquito control world is interesting, especially in the Pacific Northwest. We have a range of Districts from the small to the relatively large, but in relation to Districts in other parts of the country we often do not have the budget nor the staff to take on certain projects; like building a custom app for mosquito adulticiding. Which means the choices are limited for Districts in the NW; either use an off the shelf product offered by a company or do not use anything and rely solely upon your paper records. There are pros and cons to either choice, but what about a third option?

In 2019, Benton County Mosquito Control District (BCMC) and Franklin County Mosquito Control District (FCMCD), decided that something was going to have to be done about the adulticiding options for both Districts. BCMC was using Sentinel Adulticiding; a great product, but it was nearing the end of its supported life, primarily due to ESRI deciding that ArcPad would be going away. FCMCD was still using DataMaster from Clarke; another great product but support had ended a number of years prior. The largest fear for both Districts was something going catastrophically wrong and not having anything to support adulticiding applications. 2019 seemed like a good year to start a joint project to design an app that could be used by mosquito control districts.

Then COVID hit. The project, which showed real promise with a local programming company, floundered. The company had transitioned many of their workers to at-home work, and higher priority projects took precedence (i.e., not an app for two local mosquito control districts). By the end of 2021, it was clear the project would not be completed by the initial programmers. The Districts transitioned to trying to find another programmer that might be hungry to take on this project and finish it; no such luck. Then in 2023 we realized there was a programmer that could take this on; it was the same programmer the Districts had used and continue to use for a different project, MMD or Mosquito MD (Management & Data). The new adulticiding app, called MMA (Mosquito Management: Adulticiding) would have a familiar look and feel but serve a new and needed purpose.

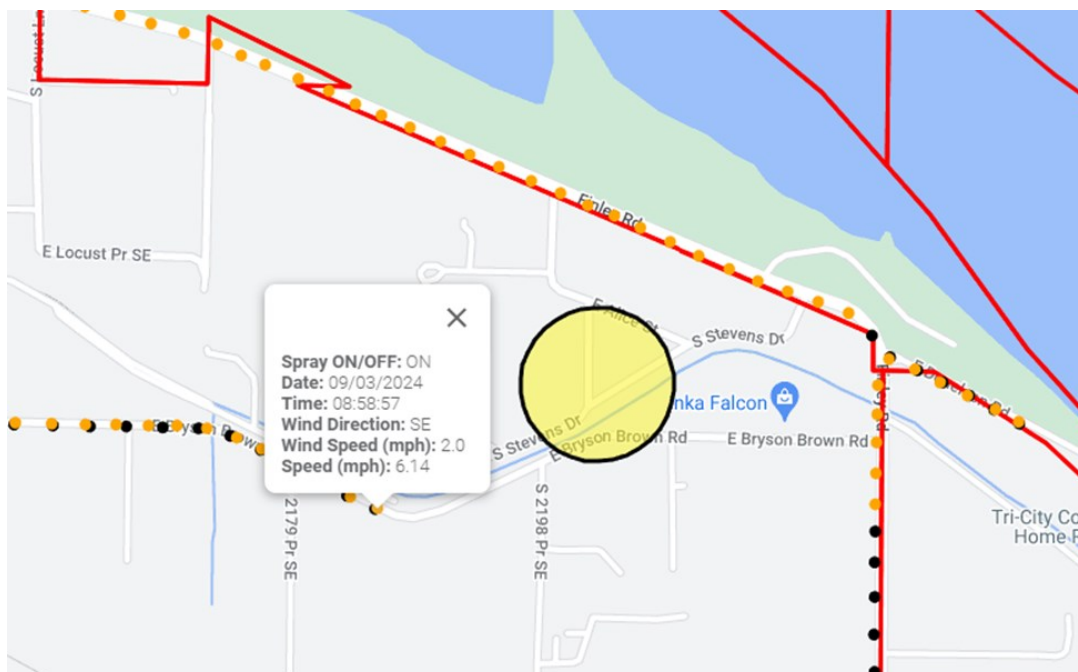
The MMA app has been used this season in a sort of working beta mode. The two Districts exclusively use this product but continue to offer up suggestions for fixes and improvements when they appear. MMA decided to take a different approach to recording adulticiding activities. The KISS approach was utilized. **Keep It Simple Stupid** meant pairing down the app and hardware to only what was needed. The Districts had learned from the past that every program out there has pros and cons, but that if you make a one size fits all app, often times you make something that doesn't really fit anyone. MMA was designed for Benton and Franklin Counties, but, by default, that meant it would fit a lot of other organizations as well.

## Neighboring Districts Join Efforts for Adulthooding App Continued

So, what were the “needs” of this app?

- Inexpensive tablets.
  - Technology changes quickly and neither District needed high-end tablets to perform a relatively straightforward task.
  - Android based tablets (we use Samsung Galaxy Tabs) offer a good tablet with built in GPS for a price point of around \$200 per tablet.
- Good visual display for the adulthooding applicator.
  - Maps are critical. A real time display of where you are (online or offline, street or satellite views), what you are doing, and what you need to be on the look out for are critical components.
- Desktop/Managerial review
  - Post spray route reviews (map view) and reports (database view) would be the only effective way of checking if a route was conducted properly.
- Quick learning curve.
  - Some Districts have annual turnover and having an app that would be quickly learned helps in getting workers up to speed and also reduces downtime if a step is forgotten.

One of the larger obstacles was figuring what data to record and how to record it. Once again, we decided that the KISS approach was best. The only information you truly need for an adulthooding application are: Where was the truck? When was the truck there? And, was the truck spraying at that time? Then throw in a few extras like Wind Direction, Wind Speed, and vehicle Speed, and you have a very good picture of what was happening at a moment in time. The most common question, or accusation, that we get is “You did, or did not, spray me!” MMA answers that question.



## Neighboring Districts Join Efforts for Adulthood App Continued

The system does NOT record spray output directly. Systems that do that either require very expensive hardware to measure flow, which is intrinsically difficult. Or, they use some type of calculation to determine amount used, which is prone to over or under estimation. MMA decided to rely upon existing equipment and have the user manually input this data. Your in-cab console is likely the most reliable tool for measuring output that you have, so it was decided to take advantage of this already available data.

And, the Districts did not want to lose variable spray options. The MMA system taps into the wire that sends a signal from the in-cab console to the spray unit so when the console says “spray on” the Bluetooth box tells the tablet “spray on”.

These features also allow for the possibility of use with a wide range of equipment. All you need to know is where the wire is that tells the unit “spray on”. Both Benton and Franklin Counties run Clarke Cougar foggers, but we believe the system is compatible with many other types of equipment. The app has other features, it has proven to be an effective tool both for the user and supervisor.

If there is a moral to this story, it is that while it may be difficult and almost certainly will bring with it challenges, sometimes the best option may be to cut your own trail and see where it takes you. The MMA is a stand-alone application that likely meets the needs of a small or mid-sized District and also provides a lot of the wants. It certainly won't do everything you may want, but sometimes more isn't better and what you need is to just KISS.

If you would like to know more you can always reach out to Kevin Shoemaker ([kevin@MosquitoControl.org](mailto:kevin@MosquitoControl.org); Benton County Mosquito Control District) or David Dorsett ([ddorsett@fcmcd.org](mailto:ddorsett@fcmcd.org); Franklin County Mosquito Control District).

Thank you.

*-Kevin Shoemaker, BCMCD*

## Northwest Mosquito and Vector Control Association 2024 Annual Meeting Registration - **Standard Form**

**Dates and location:**

**October 21st-23rd, 2024**

Icicle Village Resort  
505 US Hwy 2  
Leavenworth, WA 98826



**Please return this form to:**

NWMVCA  
C/O: Chris Law  
PO Box 2943  
La Grande, OR 97850  
Or EMAIL: [nwmvca@gmail.com](mailto:nwmvca@gmail.com)

***Please use one form per person***

Full Name	Agency
Address	City, State, Zip Code
Phone Number	Email Address

Check Box	Item	Cost Each	Qty	Sub-Total
	NWMVCA Member Registrations (Includes receptions, breaks, and banquet)	\$200		\$
	Non-Member Registration	\$275		\$
	Guest Registration (Receptions and banquet only)	\$120		\$
	Extra Banquet Ticket	\$60		\$
	Late Registration Fee (After October 11th)	\$50		\$
	NWMVCA Annual Membership	\$50		\$
	NWMVCA Sustaining Membership (One membership)	\$250		\$
<b>Total:</b>				\$

Payment Enclosed    
  Will pay at the door (check or charge)    
  Bill me

**Make Checks Payable to: Northwest Mosquito and Vector Control**

Refund Policy: Registration fees will not be refunded unless a request is made prior to **October 11th, 2024**



## Northwest Mosquito and Vector Control Association 2024 Annual Meeting Registration - **Vendor Form**

**Dates and location:**

**October 21st-23rd, 2024**

Icicle Village Resort  
505 US Hwy 2  
Leavenworth, WA 98826



**Please return this form to:**

NWMVCA  
C/O: Chris Law  
PO Box 2943  
La Grande, OR 97850  
Or EMAIL: [nwmvca@gmail.com](mailto:nwmvca@gmail.com)

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Company Representative

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Additional Registrants

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Address City, State, Zip Code

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Phone Number Fax # Email Address

Check Box	Item	Member Cost	Non-Member Cost	Sub-Total
	<b>Vendor Booth Registration</b> (Includes 1 registration for meeting, receptions, breaks, and banquet)	<b>\$250</b>	\$500	\$
	<b>Additional Company Registrant</b> (Each)	<b>\$175</b>	\$250	\$
	<b>Guest Registrant</b> (Receptions and banquet only)	<b>\$120</b>		\$
	<b>NWMVCA Sustaining Membership</b> (Pre-approved by program director)	<b>\$250</b>		\$
	<b>Event Sponsorship</b> (See attached request)	Event _____		\$
<b>Total:</b>				\$

Payment Enclosed     Will pay at the door (check or charge)     Bill me

**Make Checks Payable to: Northwest Mosquito and Vector Control**

Refund Policy: Registration fees will not be refunded unless a request is made prior to **October 11th, 2024**