Utah Arboviral Surveillance weekly report

MMWR Week 41, October 11–October 17, 2026

Department of Health & Human Services

This report contains preliminary data through the week ending **October 17, 2026**.

Background:

Utah public health conducts surveillance for reportable arboviral diseases[1] year-round. The focus of these surveillance efforts is to primarily monitor endemic mosquito-borne diseases such as West Nile virus (WNV), Saint Louis encephalitis (SLE), and Western Equine encephalitis (WEE) which includes routine testing of the mosquito vector that causes these endemic diseases along with tracking human and horse cases. WNV is the leading cause of mosquito-borne disease in the continental United States,[2] as well as Utah. Due to the abundance of this virus, this report will primarily contain information regarding WNV human, mosquito, and animal detections.

West Nile virus (WNV) is carried by mosquitoes and commonly found in Africa, West Asia, and the Middle East. The virus first appeared in the U.S. in 1999 and in Utah in August 2003. WNV can cause disease in humans, birds, horses, and some other mammals. WNV is most commonly spread through the bite of an infected *Culex* mosquito. Most people (70–80%) who become infected with WNV do not develop any symptoms. Those people who do become ill may experience headache, body aches, joint pain, vomiting, diarrhea, or rash. Fewer than 1% of people infected with WNV will develop a serious neurologic illness, such as encephalitis (inflammation of the brain) or meningitis (inflammation of the membranes that surround the brain and spinal cord).[2] There are no vaccines to prevent or medicines to treat WNV in humans. However, there is a WNV vaccine for horses that is strongly recommended for all healthy horses.[3]

St. Louis encephalitis (SLE) virus is spread to people by the bite of an infected mosquito. Most people infected with SLE virus do not have symptoms. Those people who do become ill may experience fever, headache, nausea, vomiting, and tiredness. Some people may develop a more serious neuroinvasive disease. In rare cases, long-term disability or death can occur. There are no vaccines to prevent or medicines to treat SLE.[4]

Beginning in 2023, this report has been expanded to enhance awareness of other mosquito-borne diseases that have been historically travel-associated. These include chikungunya, dengue, yellow fever, zika, and malaria. These enhanced efforts resulted from recent locally-acquired malaria (2023)[5] and dengue (2022)[6] cases reported in other states. Utah has not seen locally-acquired transmission of these diseases. Utah does have the mosquito vectors that can transmit malaria (*Anopheles* species) and dengue (*Aedes aegypti*) across the state. We consider the risk of local transmission to be very low, because our vector numbers in the state are very small and the *Anopheles* vectors we have in the state are not the most efficient mosquito vector for the malaria parasite. However, it is important we remain vigilant in our surveillance efforts.

Anopheles (the vector for malaria) mosquito detection has been reported by every mosquito abatement district across the state and, in most cases, since the start of each district's inception. The two species of *Anopheles* found most commonly in Utah are *A. freeborni* and *A. franciscanus*; other *Anopheles* species are also found each year in Utah, but are usually found in small numbers.

Aedes aegypti, the vector for dengue and zika, has been detected in multiple areas of the Southwest health jurisdiction, as well as in Moab, Utah. *A. aegypti* was first detected in 2013 in Southwest, and since then, has been found every year since 2020 in that jurisdiction. In 2023, Southwest detected *A. aegypti* in a new location. *A. aegypti* was first found in Moab in September 2019, and has since been found in 2021, 2022, and 2023. In 2023, *A. aegypti* was found at 3 sites and there have been 8 detections, totaling 13 mosquitoes.

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Data presented in this report are based on currently available data and are subject to change. Mosquito abatement districts (MADs) report positive WNV, SLE, and WEE results to the Utah Department of Health and Human Services (DHSS) by end of day Friday during each MMWR week. However, testing varies by county and not all counties actively test for arboviruses in mosquitoes and animals. Additionally, mosquito-borne disease case reports done by local health districts (LHDs) might still be under investigation and may not be included in the report in a timely manner. Therefore, these data should not be used to assess the current risk of contracting arboviruses in any particular location.

WNV testing protocols:

Human cases

All arboviral and parasitic diseases included in this report are reportable to the Utah Department of Health & Human Services.[1] Healthcare providers across the state submit human samples to both the Utah Public Health Laboratory (UPHL) and private laboratories. The 3 major blood banks serving Utah (American Red Cross, ARUP, and Mountain Star) coordinate screening of donated blood for identification of viremic donors. All LHDs in Utah are involved in dissemination, investigation, and response to surveillance data which indicates of local arboviral activity.

Horse cases

West Nile virus in horses is also reportable to the Utah Department of Agriculture and Food (UDAF)[7] in the state of Utah. All laboratory reports of positive cases are sent to the state veterinarian at UDAF, who shares the cases with DHHS to report out statewide WNV activity.

Bird cases

Even though routine sentinel chicken surveillance is no longer funded statewide, a few MADs continue to maintain this surveillance activity and report the positive chickens identified through this method to DHHS. In addition, while routine wild bird surveillance is no longer funded statewide, the Utah Department of Wildlife Resources (UDWR) reports any wild bird identified through passive surveillance that tests positive for WNV throughout the season.

Mosquito pools

Mosquito pooling is a collection and testing method where mosquitoes are grouped in numbers of up to 100 mosquitoes, and the grouped mosquitoes are then tested for mosquito-borne pathogens. Local MADs and tribal abatement districts, in conjunction with the Utah Mosquito Abatement Association, perform necessary trapping and identification for mosquito surveillance. Mosquito pool confirmatory testing is conducted at the UPHL.

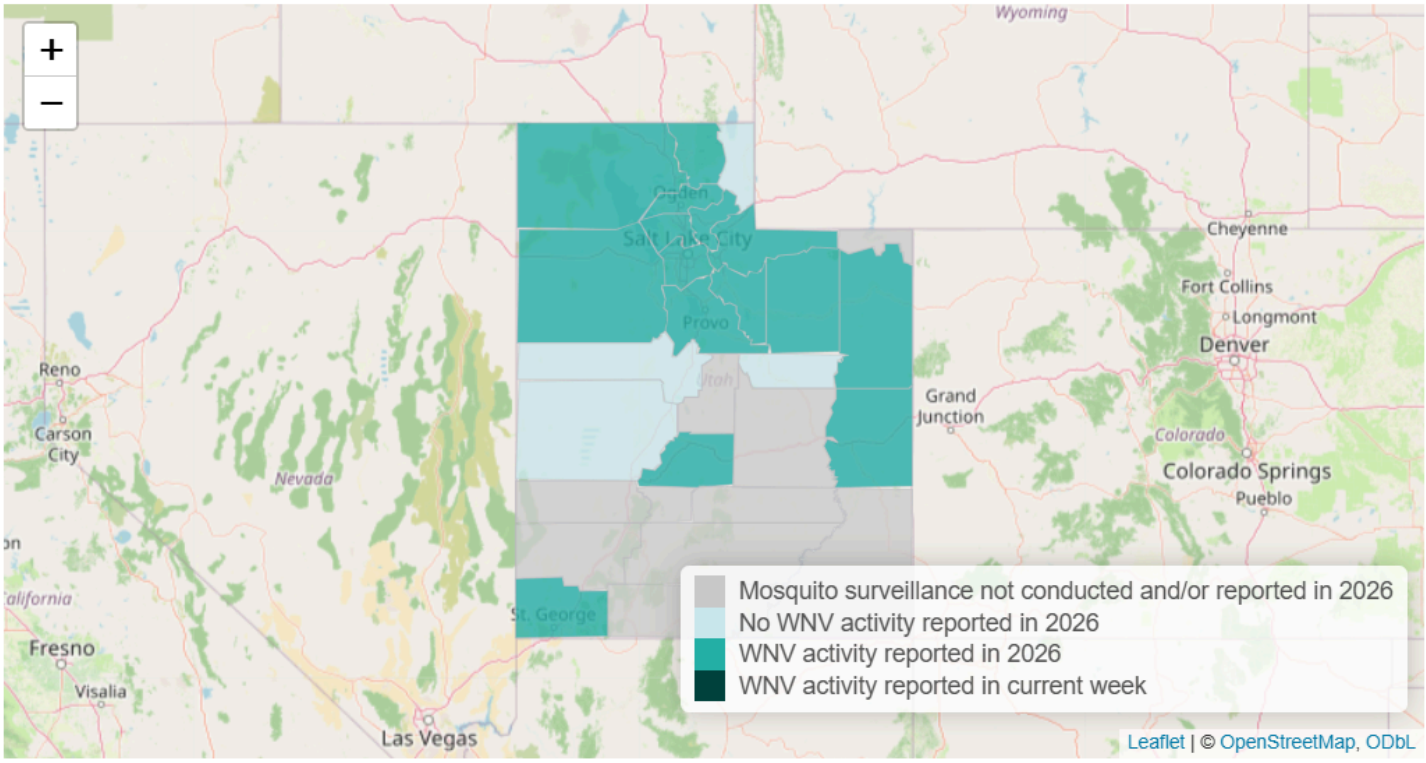
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Week Ending: October 17, 2026

West Nile virus mosquito and animal activity map by county, Utah, 2026



Link to interactive WNV mosquito and animal activity map by county, Utah, 2026

Department of Health & Human Services

New this week

Utah WNV updates

Humans

As of October 17, 2026, 50 WNV positive human cases have been reported in Utah. The first case was reported on 6/29/2026.

Horses

As of October 17, 2026, 26 WNV positive horses have been reported out of Box Elder (4), Cache (4), Duchesne (3), Morgan (1), Salt Lake (2), Sevier (1), Summit (2), Tooele (1), Utah (2), Wasatch (1), Weber (5) and counties. The first positive WNV horse was reported by UDAF on 8/6/2026.

Birds

As of October 17, 2026, 6 WNV positive birds have been reported in Utah in 2026. DWR has reported 3 crows, 2 magpies, and 1 raptor.

Mosquito pools

As of October 17, 2026, 1,322 WNV positive mosquito pools have been reported in Utah by Box Elder (24), Cache (28), Davis (509), Grand (1), Salt Lake (550), Tooele (30), Uintah (13), Utah (36), Ute Indian Tribe (11), Washington (52), and Weber (67) counties or tribal nations. To date in 2026, the UPHL and mosquito abatement laboratories have tested a total of 11,197 mosquito pools. The first positive pool was identified in Grand County on 6/3/2026.

West Nile virus comparisons, Utah, 2026, 2025, and 2024 YTD

	2024 YTD	2025 YTD	2026 YTD
Counties where WNV has been detected (human, animal, or mosquito cases)/Total Utah counties	10/29	14/29	15/29
Human WNV cases	14	49	56
Horse WNV cases	16	21	26
Positive mosquito pools/Number tested	319/9,885 (3.2%)	557/10,845 (5.1%)	1,322/11,197 (11.8%)

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WNV testing summaries

YTD West Nile positive samples by local health district and tribal nation, 2026

Health jurisdiction/ Tribal nation	WNV positive humans	WNV positive horses	WNV positive mosquito pools (% positive)
Bear River	**10**	**8**	**52 (7.7)**
Central	0	**1**	0 (0.0)
Davis County	**9**	0	**509 (14.5)**
Salt Lake County	**21**	**2**	**550 (13.5)**
San Juan County	0	0	NA
Southeast	0	0	**1 (2.3)**
Southwest	**<5**	0	**52 (7.3)**
Summit County	0	**2**	**1 (0.6)**
Tooele County	0	**1**	**30 (7.2)**
TriCounty	0	**3**	**13 (7.7)**
Utah County	**<5**	**2**	**36 (4.5)**
Ute Indian Tribe	NA	NA	**11 (6.9)**
Wasatch County	0	**1**	NA
Weber Morgan	**12**	**6**	**67 (15.1)**
Total	**56**	**26**	**1,322(11.8)**

Mosquito pools positive/total tested, 2026

	WNV	SLEV	WEEV
Week	0/0 (0.0%)	0/0 (0.0%)	0/0 (0.0%)
YTD	1,322/11,197 (11.8%)	0/10,659 (0.0%)	0/10,642 (0.0%)

WNV = West Nile virus; SLEV = St. Louis encephalitis virus; WEEV = Western Equine encephalitis virus

Utah: other mosquito-borne disease updates

(including chikungunya, dengue, malaria, and zika)

This week, there were no new mosquito-borne disease cases reported. To date in 2026, there have been a total of 8 malaria cases, 6 dengue cases, 1 chikungunya cases, and 0 zika cases reported in Utah—all of these were acquired out of country and considered travel-associated cases.

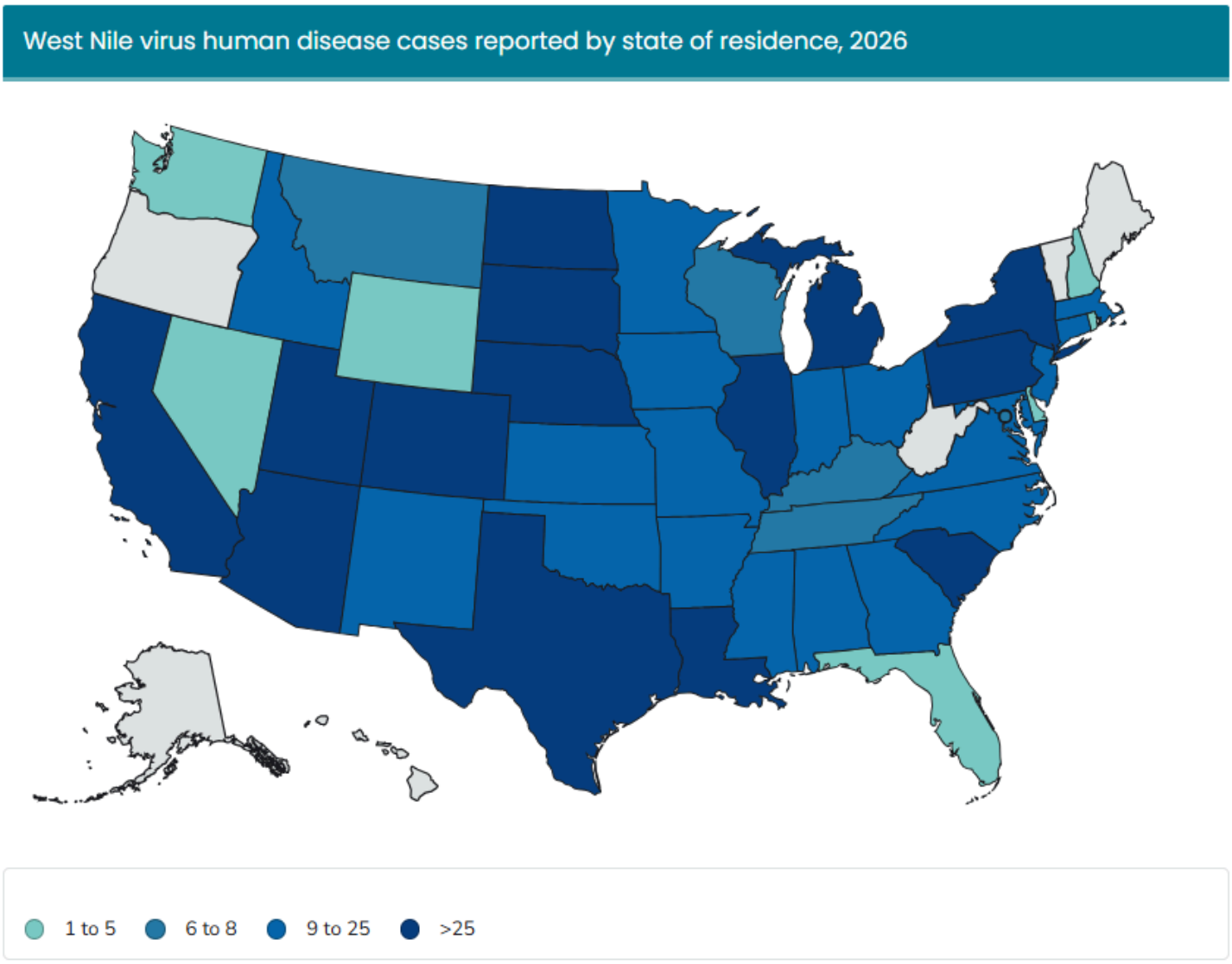
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Disease/infection	Number of new cases this week	Total number of cases in 2026	Locally acquired	Travel associated
Chikungunya	0	1	0	1
Dengue	0	6	0	6
Malaria	0	8	0	8
Zika	0	0	0	0

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National updates

CDC reported WNV cases, 2026 (YTD)

Case count	Neuroinvasive	Deaths	Presumptive viremic donors
1,328	1,004	78	249

CDC reported arboviral diseases (excluding WNV), 2026 (YTD)

Disease	Case count	Travel-associated	Locally acquired*
Chikungunya	142	141	1
Dengue	2,330	640	1,690
SLE	4	0	4
Zika	5	5	0

**This includes cases from endemic U.S. territories including American Samoa, Puerto Rico, and U.S. Virgin Islands*

Travel advisories:

Dengue			Chikungunya	Malaria	Yellow fever		Zika
Africa/ Middle East	**Americas**	**Asia/Pacific Islands**	**Americas**	**Africa/Middle East**	**Africa/Middle East**	**Americas**	**Asia/Pacific Islands**
Kenya	Bolivia	Bangladesh	Costa Rica	Mayotte	Ghana	Colombia	Indonesia
	Colombia	Cambodia	French Guiana	Yemen			
	Costa Rica	Malaysia	Nicaragua				
	Cuba	Maldives					
	Ecuador	Marshall Islands					
	Panama	Sri Lanka					
		Vanuatu					
		Vietnam					

Level 1 Travel Health Notice, Level 2 Travel Health Alert: https://wwwnc.cdc.gov/travel/notices.

For a map of arboviral disease activity in the United States visit:

https://www.cdc.gov/west-nile-virus/data-maps/current-year-data.html

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References:

1. Utah reportable diseases: https://epi.utah.gov/wp-content/uploads/Rpt_Disease_List.pdf
2. WNV: https://www.cdc.gov/westnile/index.html
3. WNV vaccine for horses: https://aaep.org/guidelines/vaccination-guidelines/core-vaccination-guidelines/west-nile-virus
4. St. Louis Encephalitis: https://www.cdc.gov/sle/index.html
5. Locally acquired malaria: https://emergency.cdc.gov/han/2023/han00494.asp
6. Locally acquired Dengue: https://www.cdc.gov/mmwr/volumes/72/wr/mm7211a5.htm
7. UDAF reportable diseases: https://ag.utah.gov/wp-content/uploads/2021/07/Utah-Reportable-Animal-Disease-List-July-2021.pdf

Special thanks to the California Department of Health for their report format inspiration.

The Utah Department of Health and Human Services monitors reportable arboviruses year-round. If you have any questions about arboviruses, call 1-888-EPI-UTAH or send an email to onehealth@utah.gov.