THE SOUTHERN NEVADA HEALTH DISTRICT'S WEEKLY WASTEWATER SURVEILLANCE REPORT

September 24, 2025

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Contents

Definitions

Clade: A group that includes a common ancestor and all its descendants.
Dominant Variants: Versions of a virus, gene, or trait that are currently the most widespread or prevalent in a population.
Grab Sample: A single, discrete sample of wastewater collected at a specific time and location.
Liquid matrices: refers to the **fluid portion** of sewage collected for testing and analysis.
Solid matrices: Water refers to the **solid material (biosolids or sludge)** that is separated from liquid wastewater during the treatment process.
Wastewater Scan: An organization focused on sewage, community, and network-based efforts that conducts wastewater surveillance to detect pathogens present in wastewater.
Variants of Interest (VOI): Viral variants with genetic changes that may affect transmissibility, diagnostics, or immune escape and are showing signs of increased spread.
Variant of Concern (VOC): A mutated form of a virus that demonstrates one or more of the following characteristics: increased ability to spread, greater severity of illness, reduced effectiveness of treatments, vaccines, or diagnostic tools, and the ability to evade immune protection.
Variants Under monitoring (VOM): KS.1.1, KP.3.3, LP.8.1, NB.1.8.1, KP.3, XFG
Verily: A private laboratory vendor contracted by CDC to test wastewater across the country for pathogen markers.
PMMoV (Pepper Mild Mottle Virus): It is a plant virus commonly found in human feces due to widespread consumption of pepper-containing foods.
Concentration levels: The viral concentration levels classify them into Low, Medium, and High based on tertile cutoffs from the data's distribution. It then identifies the minimum and maximum values within each group to define the range for each concentration level.

Symbols: Increasing: ↑ Decreasing: ↓ No change: →

Purpose

This report highlights the changes in wastewater concentration for selected pathogens within Clark County, Nevada. This report includes data for SARS CoV-2, Influenza (Flu) A, Influenza (Flu) B, Respiratory syncytial virus (RSV), Measles, *Candida Auris,* Rotavirus, Adenovirus group F, Hepatitis A, Parvovirus, Norovirus, and Mpox (clade II). All data was obtained from the Clark County Water Reclamation District, Flamingo Water Resource Center, City of Mesquite, City of Boulder, selected Utah wastewater treatment facilities and California wastewater treatment facilities and is analyzed and reported by **Wastewater Scan** (https://www.wastewaterscan.org/en) a collaborative project led by **Stanford University, Emory University[2,3],** and **Verily[1]**, funded through philanthropic support to Stanford. and Verily laboratories (https://verily.com/). The map below visualizes the wastewater treatment facilities in Nevada. A map of wastewater treatment facilities in Nevada is provided in the appendix.

Note: The Southern Nevada Health District (SNHD) uses PMMoV microbial normalization, while the CDC and the state rely on viral-activity normalization.

Executive Summary of September 29, 2025, Report

This report summarizes the latest wastewater pathogen surveillance results for Clark County, Nevada, and surrounding regions. The analysis focuses on three key facilities, the Flamingo Water Reclamation Facility (FWRF), Mesquite Wastewater Treatment Plant, and Boulder Wastewater Treatment Plant—with comparisons to selected sites in Utah and California. Surveillance was carried out by WastewaterSCAN and Verily, targeting a wide range of pathogens, including SARS-CoV-2 and its variants, seasonal respiratory viruses (Influenza A, Influenza B, RSV), and gastrointestinal pathogens (Norovirus, Rotavirus, Enterovirus D68, Hepatitis A). The study also accounts for site-level differences, noting that variations in sampling and analytical methods may influence results.

Key Findings (as of September 24, 2025)

Absent or Minimal Detection: Measles, Mpox clade 1b, Influenza H5, and RSV was undetectable across all sites. Influenza A and B were nearly absent, with only trace detections in Provo, Ontario, Indio, and Boulder. Candida auris was undetectable except at FWRF (3.25 ↑). Hepatitis A remained minimal, though Ontario RP-1 (21.62 ↑) showed the only rising trend.

Low but Mixed Activity: Parvovirus levels were near zero, with stable detections at A.K. Warren, Central Valley UT, and Riverside. Enterovirus D68 remained low, with a small increase at A.K. Warren (2.54 ↑). Rotavirus mostly declined, except localized increases at FWRF (80.00 ↑) and Ontario RP-1 (15.74 ↑).

Elevated Circulation: Norovirus remained widespread at high levels (e.g., Central Valley UT 14,299.56 ↓, Provo 9,581.97 ↓) but trended downward overall. Adenovirus Group F showed sharp increases at several sites, including Ontario RP-1, Riverside, FWRF, and Provo.

SARS-CoV-2: Most facilities showed declining concentrations (FWRF 117.63 ↓, Provo 352.27 ↓). Boulder City showed very high levels (1,774.14 ↑). Variant analysis revealed rapid Omicron diversification, with early XFG dominance giving way to NB.1. *, LP, and XFC sub lineages across Flamingo, Mesquite, and Boulder.

Summary: Overall, pathogen activity remains stable across most sites. However, rising Adenovirus Group F, persistently high Norovirus, localized increases in Rotavirus and Hepatitis A, and Boulder City's SARS-CoV-2 surge warrant close monitoring.

Methodological Notes

Sampling approaches differed by site. FWRF collected 24-hour composite solid samples analyzed by WastewaterSCAN, while Mesquite relied on liquid grab samples analyzed by Verily. Boulder Mesquite relied on liquid grab samples analyzed by Verily. These methodological differences likely influenced pathogen measurements and should be considered when comparing results across facilities.

Note: The last data point for the City of Boulder Wastewater Treatment Plant is from September 10, 2025, which may make them an outlier in the SARS-CoV-2 results.

Summary of Select Pathogen Concentrations

- Latest data point for Flamingo Water reclamation district plant is September 24, 2025
- Latest data point for City of Mesquite Wastewater Treatment Plant is September 23, 2025
- Latest data point for City of Boulder Wastewater Treatment Plant is September 10, 2025

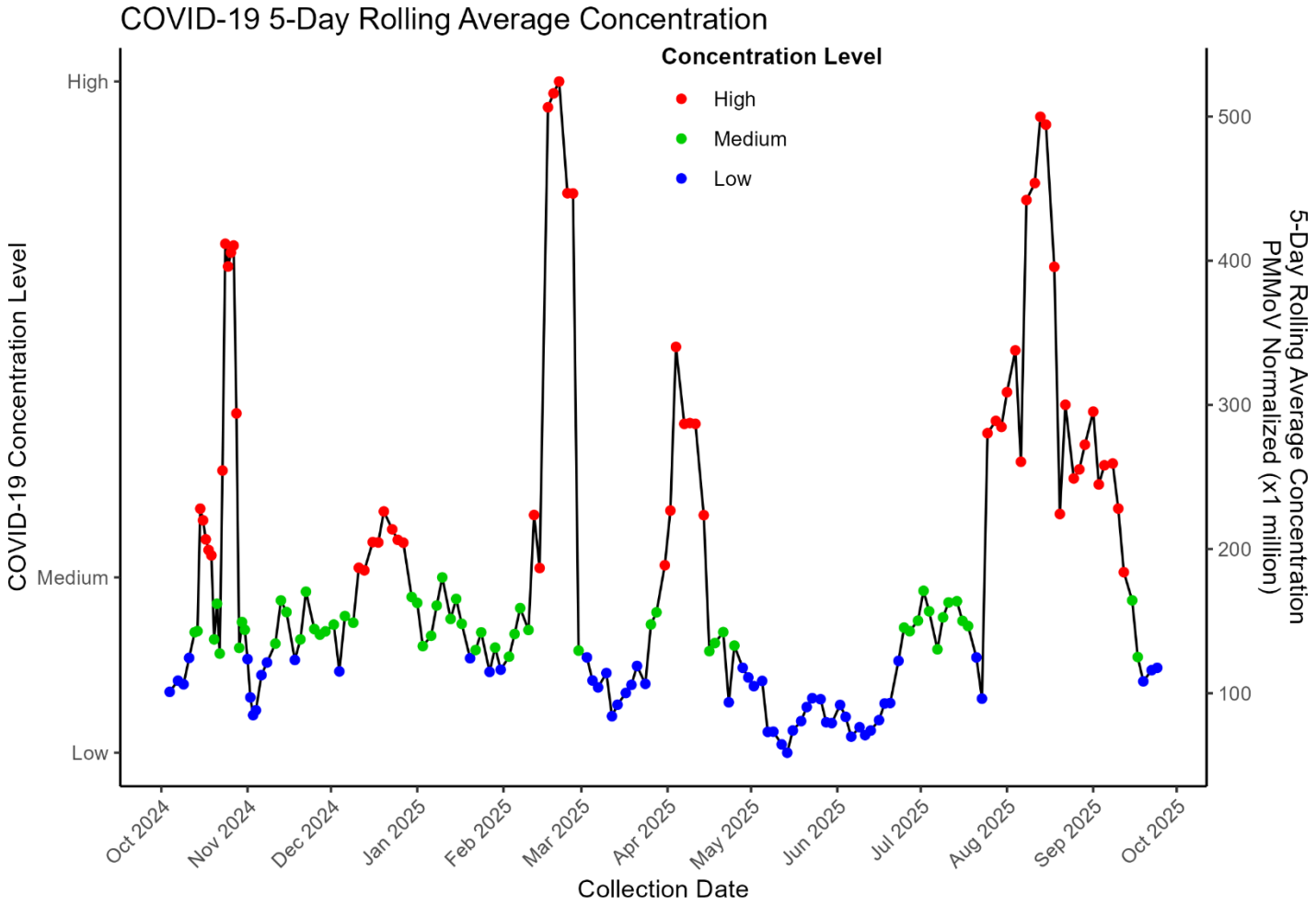
Pathogen	Concentration Level / Presence- Flamingo	Concentration Level / Presence- Boulder	Concentration Level / Presence - Mesquite
SARS-CoV-2	Low	High	Medium
Influenza A	Low	Low	Low
Influenza B	Low	Low	Low
Respiratory Syncytial virus (RSV)	Low	Low	Low
Norovirus	Low	Not Tested	Not Tested
Rotavirus	Medium	Not Tested	Not Tested
Enterovirus D68	Low	Not Tested	Not Tested
Hepatitis A	Low	Not Tested	Not Tested
Candida Auris	High	Not Tested	Not Tested
Adenovirus Group F	High	Not Tested	Not Tested
Parvovirus	Low	Not Tested	Not Tested
Mpox – Clade I	No Presence	No Presence	No Presence
Measles	No Presence	No Presence	No Presence
Mpox – Clade II	No Presence	No Presence	No Presence
Influenza H5	No Presence	No Presence	No Presence

Note: The wastewater data for Las Vegas was collected from the Flamingo Water Reclamation District Plant, where samples were analyzed on solids and sourced from Wastewater SCAN. In contrast, data for the City of Mesquite and City of Boulder was analyzed on liquid samples by Verily and provided by the State Wastewater Epidemiology Team. Due to the differences in sample matrices (solids vs. liquids) and analytical methods, variations in virus concentrations between the two facilities are expected. Mesquite and Boulder sampling is conducted using grab sampling and is not performed over a 24-hour period.

SARS–CoV-2 Viral Concentration Trends in Clark County

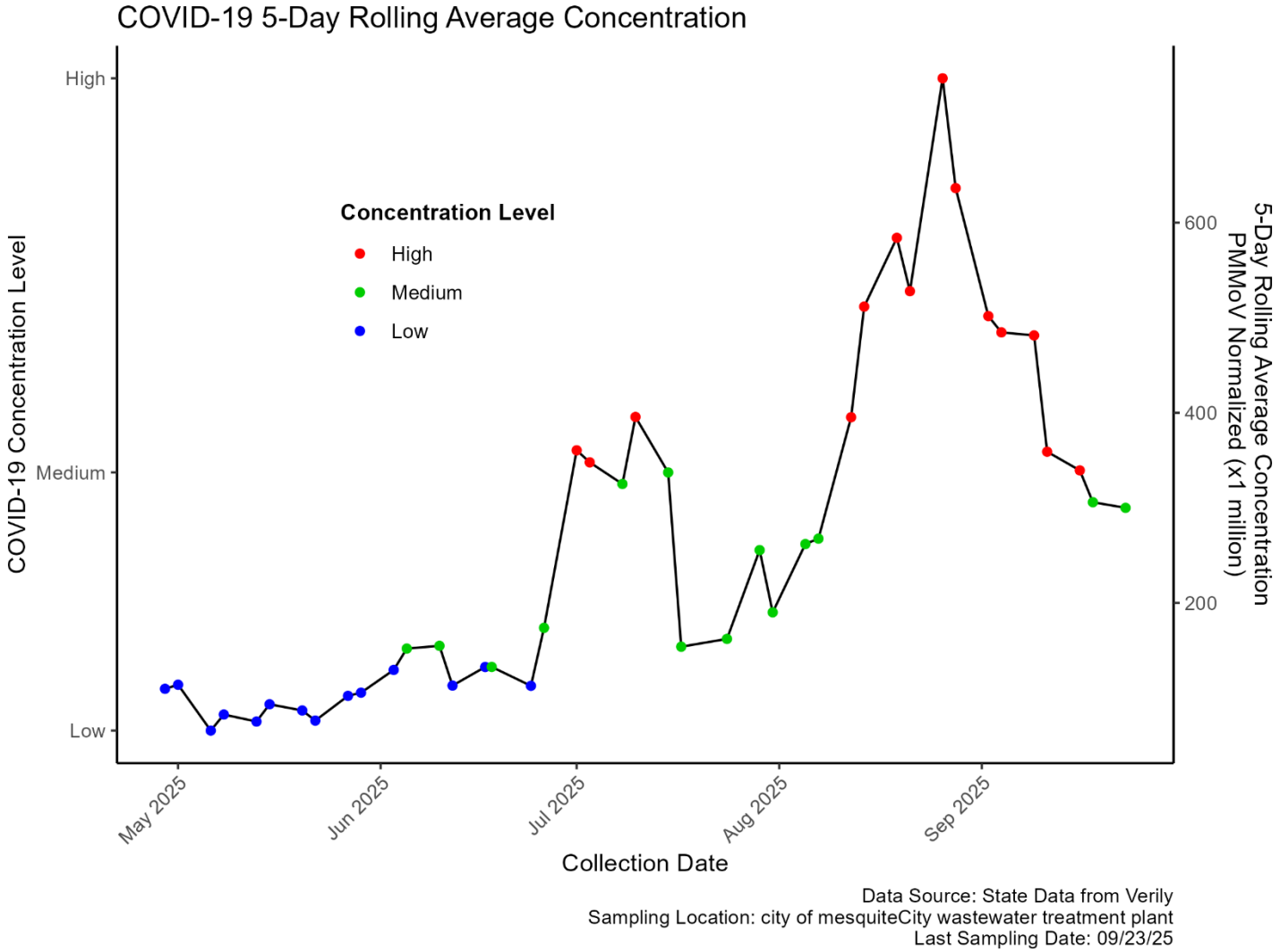
Flamingo Water Reclamation District Plant

This chart tracks SARS-CoV-2 concentrations in Clark County's wastewater (Flamingo Water Resource Center) from October 2024 through September 24, 2025, using a 5-day rolling average normalized by PMMoV. Concentration levels varied between low (blue), medium (green), and high (red). Notable peaks appeared in November 2024, February 2025, April 2025, and especially August 2025, which recorded the most intense spike. After this surge, concentration declined steadily into September. Periods of reduced activity were also seen in March, June, and July. As of the last sampling date on September 24, 2025, concentrations had decreased to the low range.



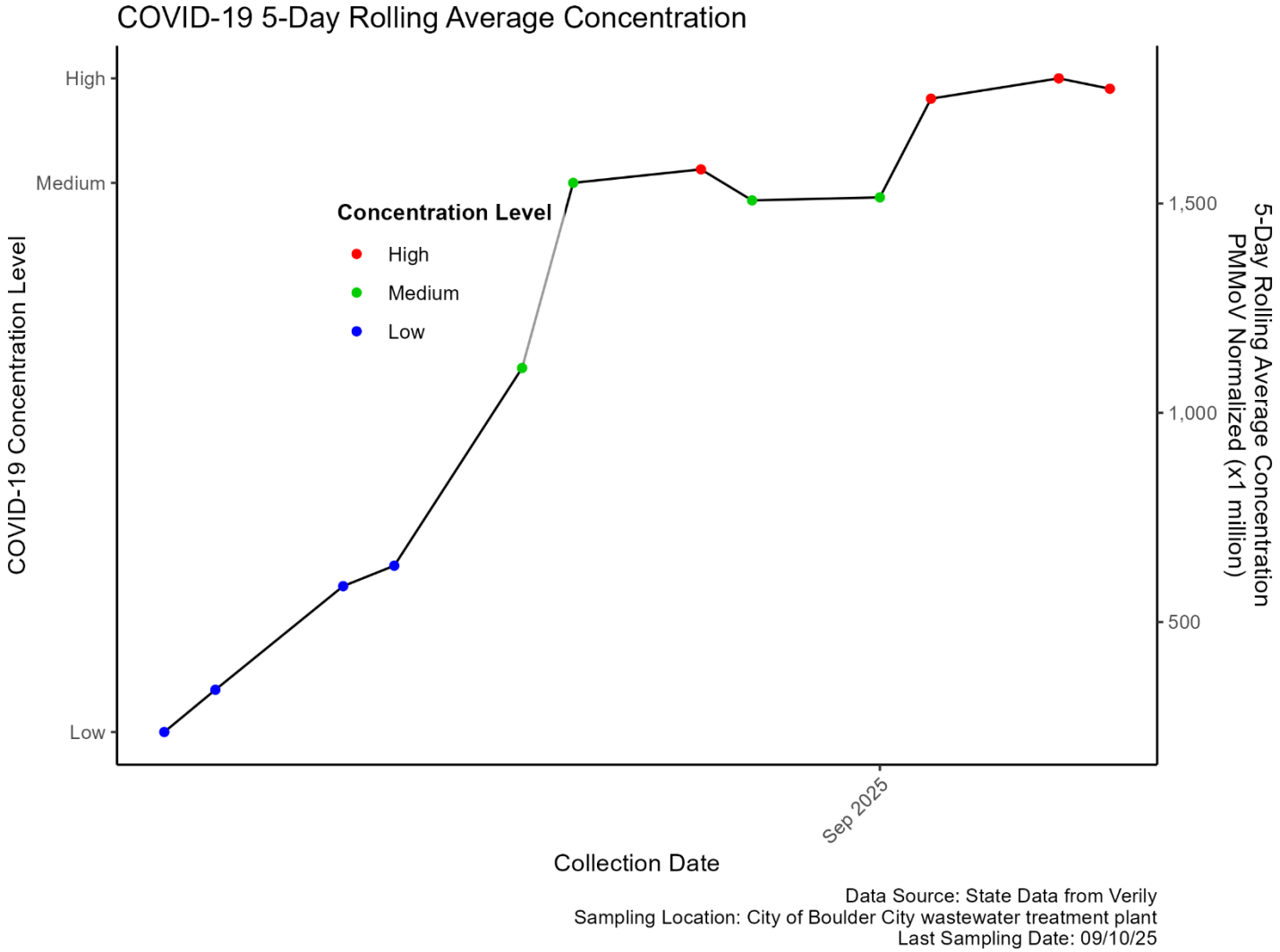
City of Mesquite Wastewater Treatment Plant

This chart shows SARS-CoV-2 concentrations in wastewater from the City of Mesquite, NV between May and September 2025, using a 5-day rolling average normalized to PMMoV. Levels were low through May and June with minor fluctuations, then rose in early July to medium and high by mid-July. After a brief dip in late July, concentrations surged in August, peaking in early September at the highest observed levels. Since then, values have declined but remain elevated compared to spring baselines. The most recent sample, collected on September 23, 2025, indicates a downward trend in community transmission.



City of Boulder Wastewater Treatment Plant

This chart shows SARS-CoV-2 concentrations in Boulder City wastewater for September 2025, using a 5-day rolling average normalized to PMMoV. Concentrations began at low levels (blue), increased to medium (green), and have remained consistently high (red) in recent weeks. Levels peaked above 1,500 normalized units, indicating a strong upward trend. The tertile classification highlights this shift from low to medium, and ultimately to sustain high concentrations. The most recent sample, collected on September 10, 2025, reflects an elevated risk of community transmission at that time.



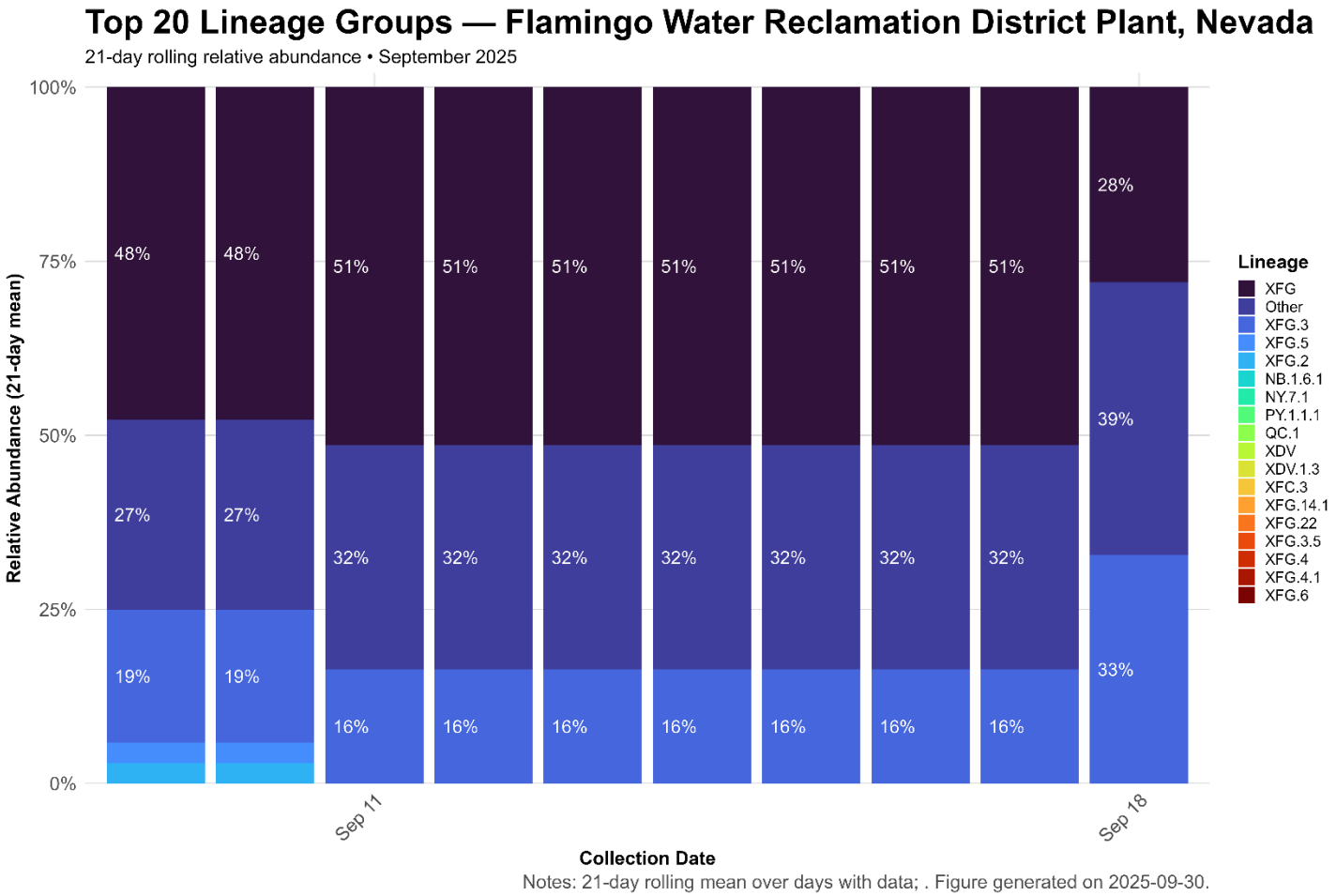
SARS–CoV-2 Concentrations Interpretation
As of September 24, 2025, wastewater surveillance across Nevada, California, and Utah shows mostly declining SARS-CoV-2 concentrations. Las Vegas (Flamingo WRC) reports 117.63 (↓), Mesquite 300.00 (↓), Boulder City remains the outlier hotspot at 1774.14 (↑), Los Angeles County's A.K. Warren Facility 64.51 (↓), Hyperion Plant 67.82 (↓), Central Valley UT 135.85 (↓), Provo UT 352.27 (↓), Ontario RP-1 74.59 (↓), Riverside 107.68 (↓), and Indio Valley Sanitary District 50.53 (↓). With most sites declining, Boulder City continues to demand close monitoring due to its exceptionally high concentration and upward trajectory.

Plant Name	City	Time frame	5 Day Rolling Mean	14 Day Trend	Last Sampling Dates
Flamingo Water Resource Center	Las Vegas, NV	Current	117.63	↓	September 24 2025
Mesquite Wastewater Treatment Plant	City of Mesquite, NV	Current	300.00	↓	September 23 2025
Boulder Wastewater Treatment Plant	City of Boulder, NV	Current	1774.14	↑	September 10 2025
A.K. Warren Water Resource Facility	Los Angeles County, CA	Current	64.51	↓	September 24 2025
Hyperion Water Reclamation Plant (HWRP)	Los Angeles, CA	Current	67.82	↓	September 24 2025
Central Valley Water Reclamation Facility	Central Salt Lake Valley, UT	Current	135.85	↓	September 24 2025
Provo City Water Reclamation Facility	Provo, UT	Current	352.27	↓	September 24 2025
Regional Water Recycling Plant No.1 (RP-1)	Ontario, CA	Current	74.59	↓	September 23 2025
Riverside Water Quality Control Plant	Riverside, CA	Current	107.68	↓	September 23 2025
Valley Sanitary District	Indio, CA	Current	50.53	↓	September 23 2025

SARS-CoV-2 Variants Circulating

Flamingo Water Reclamation District Plant

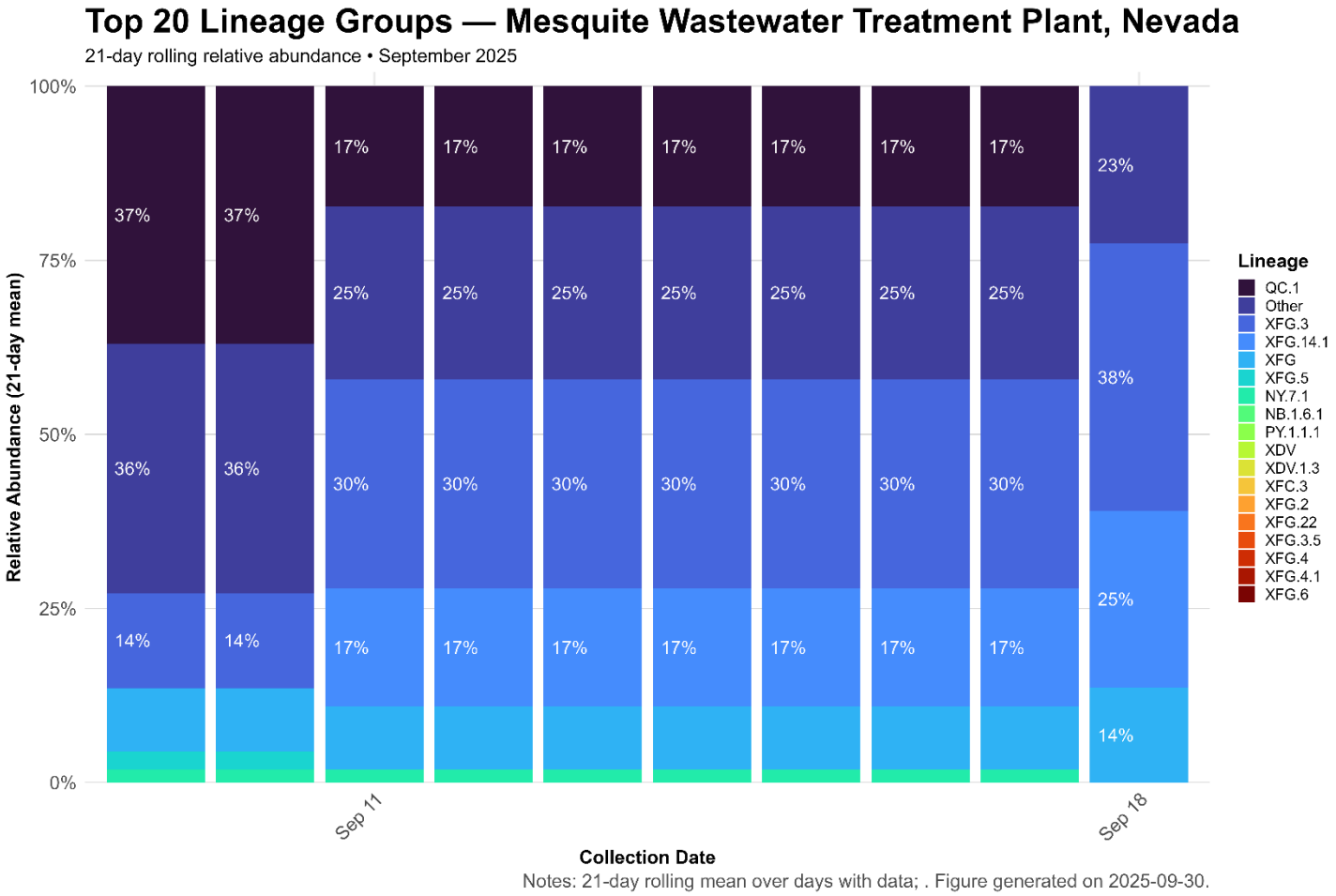
The stacked bar chart highlights the 21-day rolling relative abundance of SARS-CoV-2 Omicron subvariants detected in wastewater at the Flamingo Water Reclamation District Plant, September 2025. Early in the period, XFG lineages dominated, accounting for more than half of detections. By mid-August, diversity increased, with NB.1.* subvariants and other Omicron descendants gaining ground. By early September, the distribution stabilized across three main contributors: XFG (~28%), XFG .3 (~33%), and other sublineages (~39%). This transition from single-lineage dominance to multi-lineage co-circulation illustrates rapid viral evolution and aligns with CDC-reported nationwide variant surveillance patterns.



Notes: 21-day rolling mean over days with data; . Figure generated on 2025-09-30.

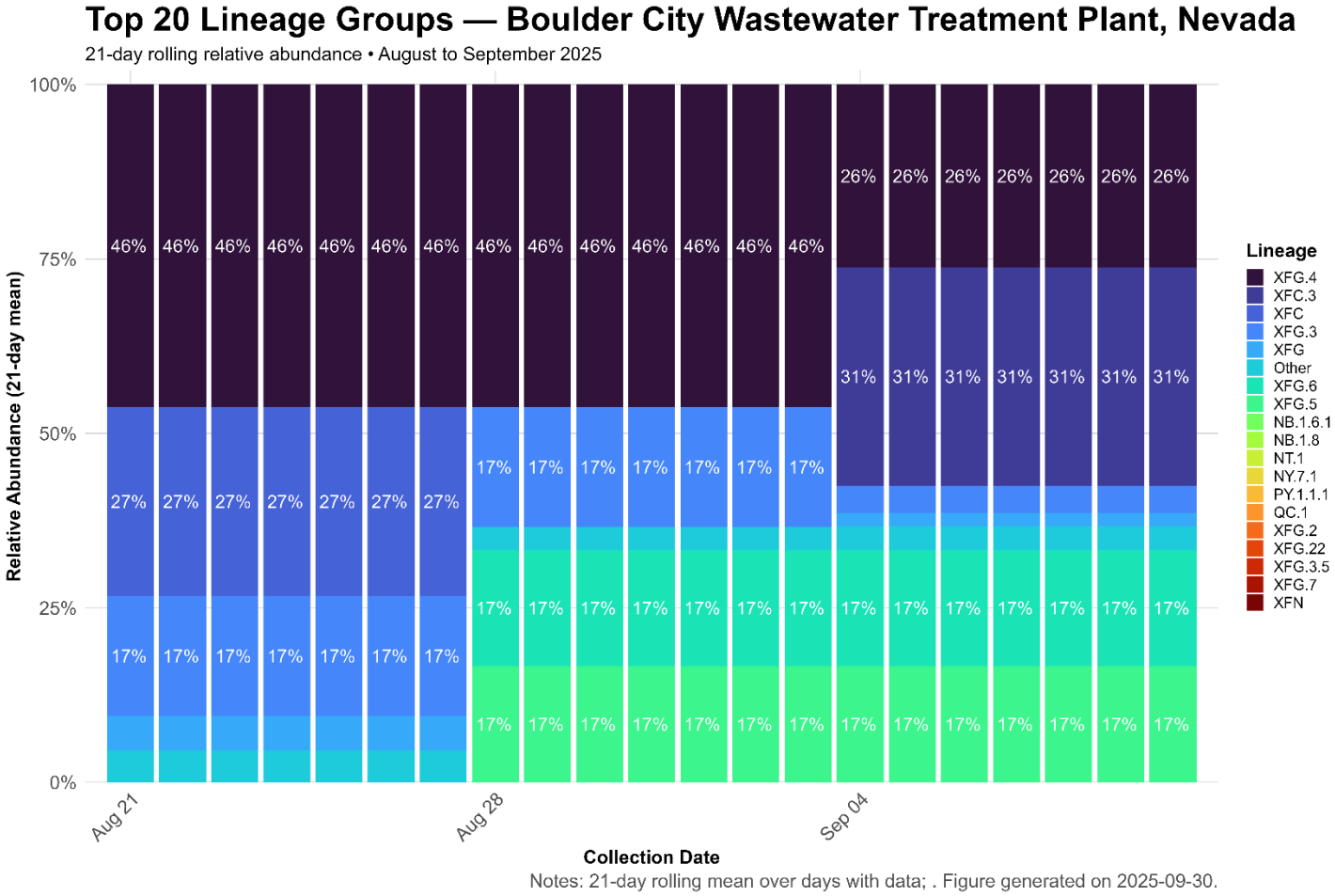
Mesquite Wastewater Treatment Plant

The stacked bar chart presents the distribution of SARS-CoV-2 Omicron subvariants in wastewater samples from the Mesquite Wastewater Treatment Plant (September 2025). Sequencing revealed notable shifts in variant dynamics across the month. Early in September, QC.1 (~37%) and "Other" lineages (~36%) were most common, while XFG.3 and related XFG sub lineages comprised ~14%. By mid-September, QC.1 declined sharply to ~17%, as XFG.3 and XFG.14.1 each increased to ~30% and "Other" dropped to ~25%. Toward the end of the month, "Other" rebounded to ~38%, QC.1 rose slightly to ~23%, and XFG.3 contracted to ~25%. These shifts underscore continuous lineage turnover, with no single variant maintaining dominance, mirroring national wastewater and genomic surveillance trends. Nationwide, CDC genomic surveillance (September 2025) confirms that sub lineages of Omicron dominate all circulating variants, with earlier non-Omicron lineages largely phased out.



Boulder Wastewater Treatment Plant

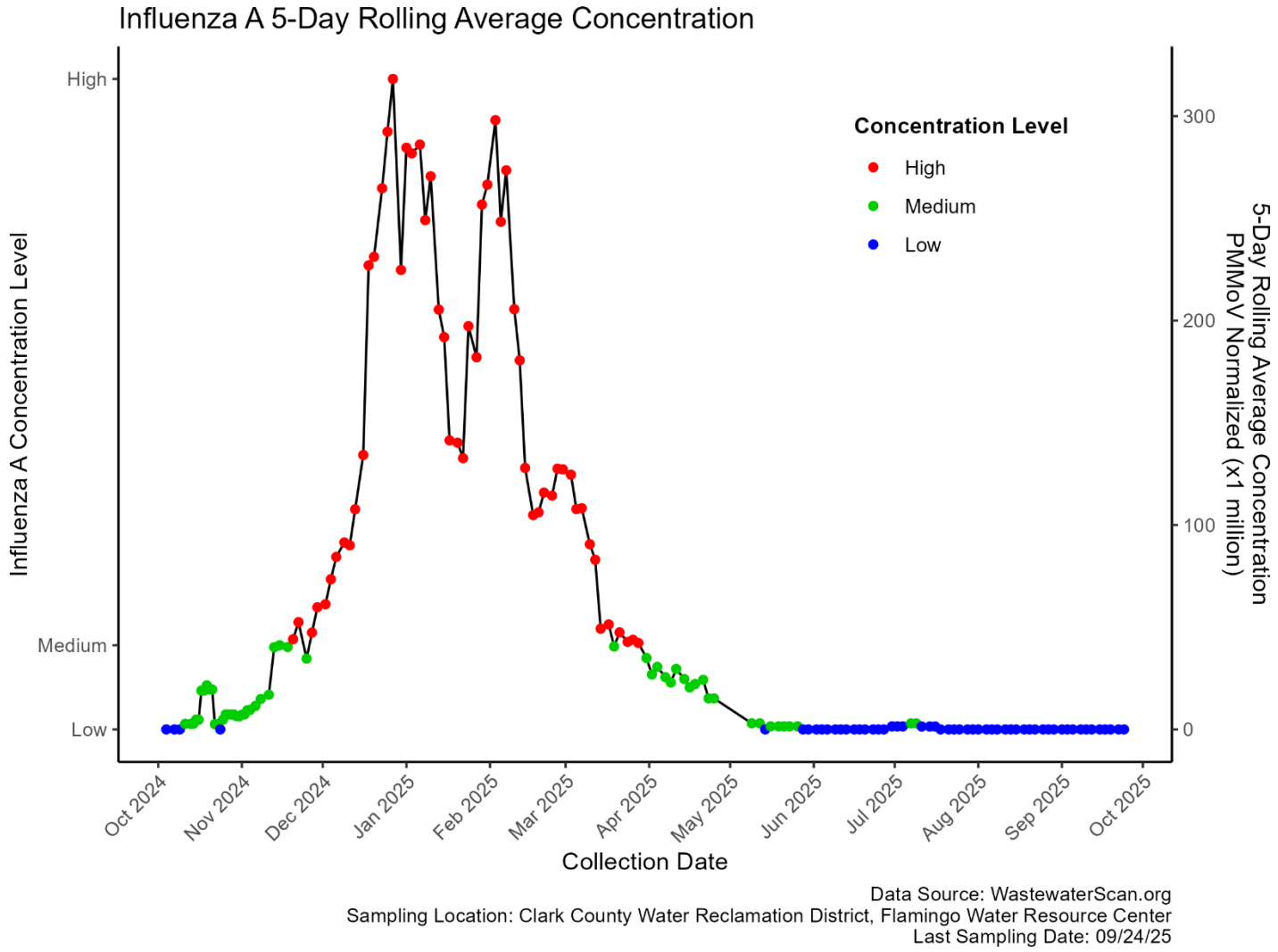
The stacked bar chart shows the 21-day rolling relative abundance of SARS-CoV-2 Omicron subvariants in wastewater from the Boulder City Wastewater Treatment Plant, August–September 2025. Early in the period, XFG.4 dominated (~46%), followed by XFC.3 sub lineages (~27%) and other XFG lineages (~17%). By late August, the “Other” group expanded to ~17%. By early September, XFG.4 declined to ~26%, while XFC.3 lineages rose to ~31% and “Other” lineages held steady near ~17%. This shift from XFG.4 dominance to a more balanced distribution underscores ongoing viral evolution and mirrors CDC findings of diverse Omicron co-circulation nationwide.



Influenza A Viral Concentration Trends in Clark County

Flamingo Water Reclamation District Plant

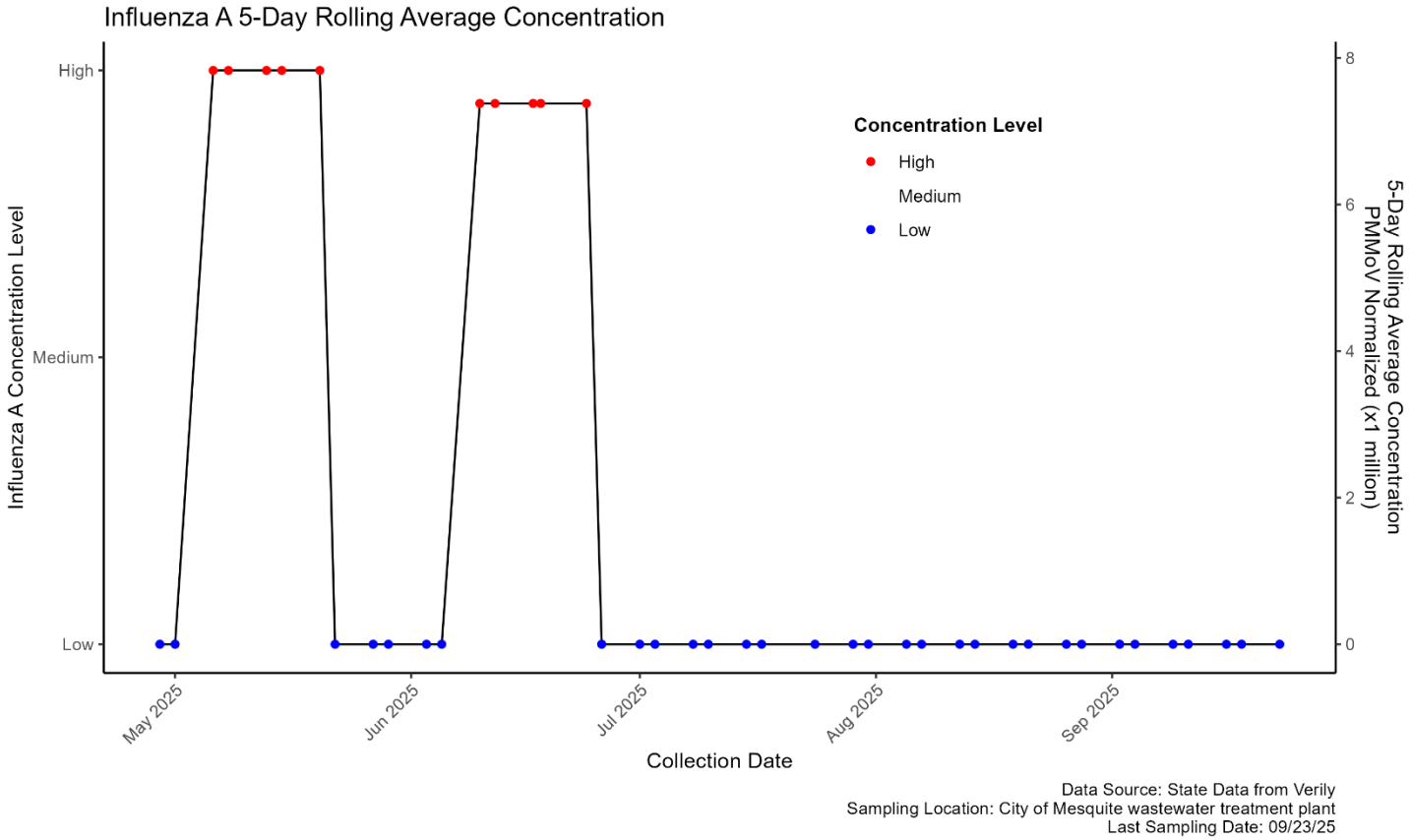
This chart tracks Influenza A concentrations in Clark County's wastewater (Flamingo Water Resource Center) from October 2024 to September 24, 2025, using a 5-day rolling average normalized by PMMoV. The levels were low through fall 2024, then rose sharply in December 2024, peaking at high concentrations from January 2025 through February 2025. Concentrations steadily declined in March 2025 and April 2025, returning to medium and then low levels by May. From June 2025 through September 24, 2025, levels remained consistently low with no notable resurgence. The last sampling date was September 24, 2025, showing minimal Influenza A activity in the community.



Data Source: WastewaterScan.org
Sampling Location: Clark County Water Reclamation District, Flamingo Water Resource Center
Last Sampling Date: 09/24/25

City of Mesquite Wastewater Treatment Plant

The chart shows Influenza A concentrations in wastewater from the City of Mesquite, NV between May and September 2025, based on a 5-day rolling average normalized to PMMoV. Levels were mostly low (blue) across the monitoring period, with two brief high spikes (red) observed in May and June. These peaks quickly subsided, returning concentrations to low levels by early July. From July through September, values remained consistently low, with no further medium-level signals detected. The most recent sample, collected on September 23, 2025, confirms that Influenza A activity in wastewater is currently minimal following earlier isolated surges.



Interpretation of Influenza A Concentrations

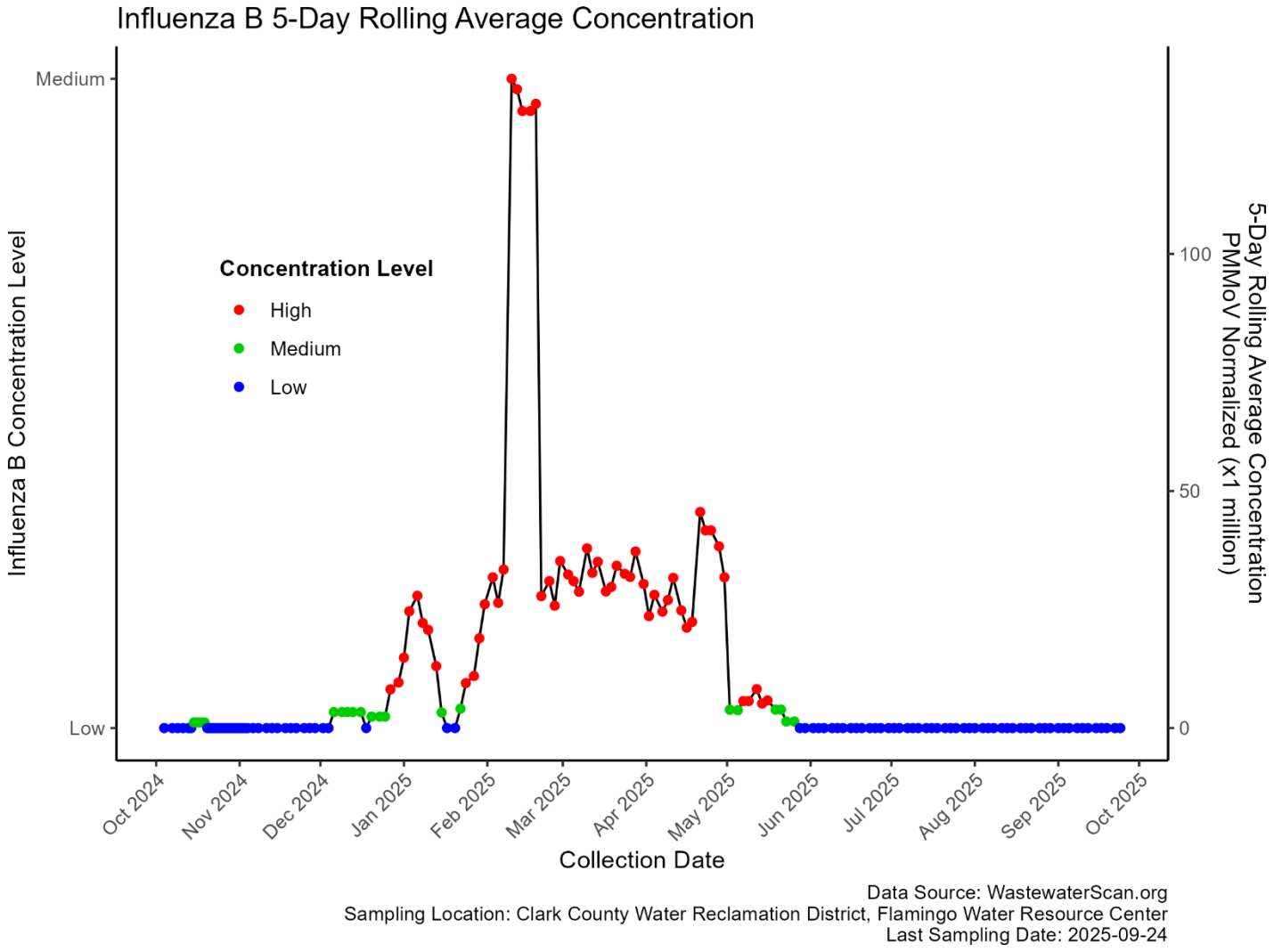
As of September 24, 2025, Influenza A wastewater surveillance across Nevada, California, and Utah indicate consistently low activity, with nearly all facilities reporting non-detectable levels. Flamingo (Las Vegas), Mesquite, Boulder, A.K. Warren (Los Angeles County), Hyperion (Los Angeles), Central Valley (Salt Lake), and Riverside each recorded 0.00 with stable trends. Minimal detections were observed in Provo (0.30), Ontario RP-1 (0.56), and Indio (0.25), all showing no directional change.

Plant Name	City	Time frame	5 Day Rolling Mean	14 Day Trend	Last Sampling Dates
Flamingo Water Resource Center	Las Vegas, NV	Current	0.00	→	September 24 2025
Mesquite Wastewater Treatment Plant	City of Mesquite, NV	Current	0.00	→	September 23 2025
Boulder Wastewater Treatment Plant	City of Boulder, NV	Current	0.00	→	September 10 2025
A.K. Warren Water Resource Facility	Los Angeles County, CA	Current	0.00	→	September 24 2025
Hyperion Water Reclamation Plant (HWRP)	Los Angeles, CA	Current	0.00	→	September 24 2025
Central Valley Water Reclamation Facility	Central Salt Lake Valley, UT	Current	0.00	→	September 24 2025
Provo City Water Reclamation Facility	Provo, UT	Current	0.30	→	September 24 2025
Regional Water Recycling Plant No.1 (RP-1)	Ontario, CA	Current	0.56	→	September 23 2025
Riverside Water Quality Control Plant	Riverside, CA	Current	0.00	→	September 23 2025
Valley Sanitary District	Indio, CA	Current	0.25	→	September 23 2025

Influenza B Viral Concentration Trends in Clark County

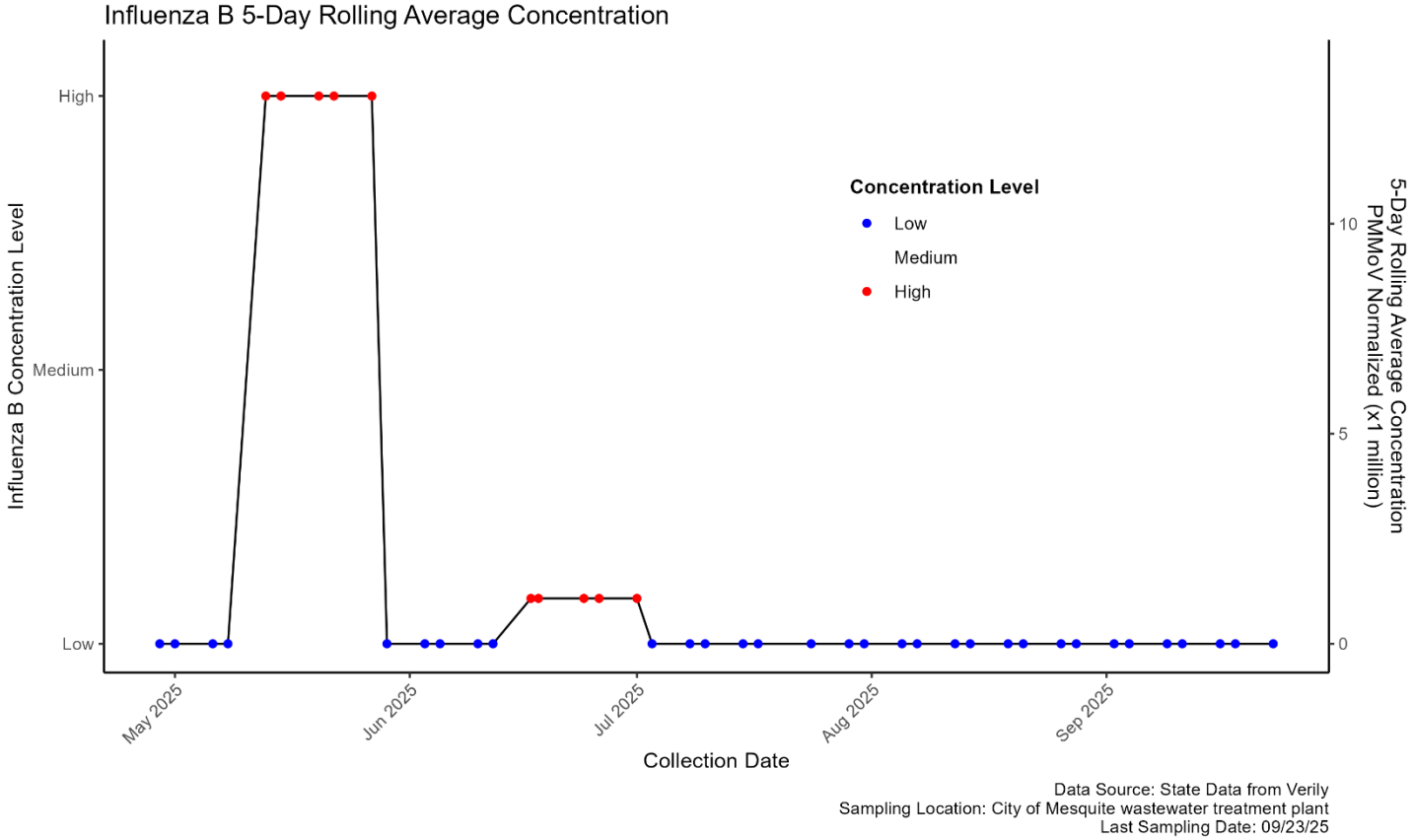
Flamingo Water Reclamation District Plant

The chart shows Influenza B wastewater trends at the Flamingo Water Resource Center (Las Vegas, NV) from October 2024 to September 24, 2025. Levels remained low through late 2024, with only brief medium detections in mid-December 2024. A sharp rise began in early January 2025, peaking in March 2025 with sustained high concentrations. Moderate but elevated activity persisted into April ,2025 and May 2025 before declining rapidly. By June 2025, signals returned to low or undetectable levels, where they remained through August. The last sampling date was September 24, 2025.



City of Mesquite Wastewater Treatment Plant

The chart tracks Influenza B concentrations in wastewater from the City of Mesquite, NV between May and September 2025, using a 5-day rolling average normalized to PMMoV. Concentrations were low (blue) for most of the monitoring period, with two briefly high spikes (red) one in late May to early June and another in late June. Both peaks quickly declined, and levels returned to low by early July. From July through September, concentrations remained consistently low, with no medium-level activity observed. The most recent sample, collected on September 23, 2025, confirms minimal Influenza B activity following earlier isolated surges.



Interpretation of Influenza B Concentrations

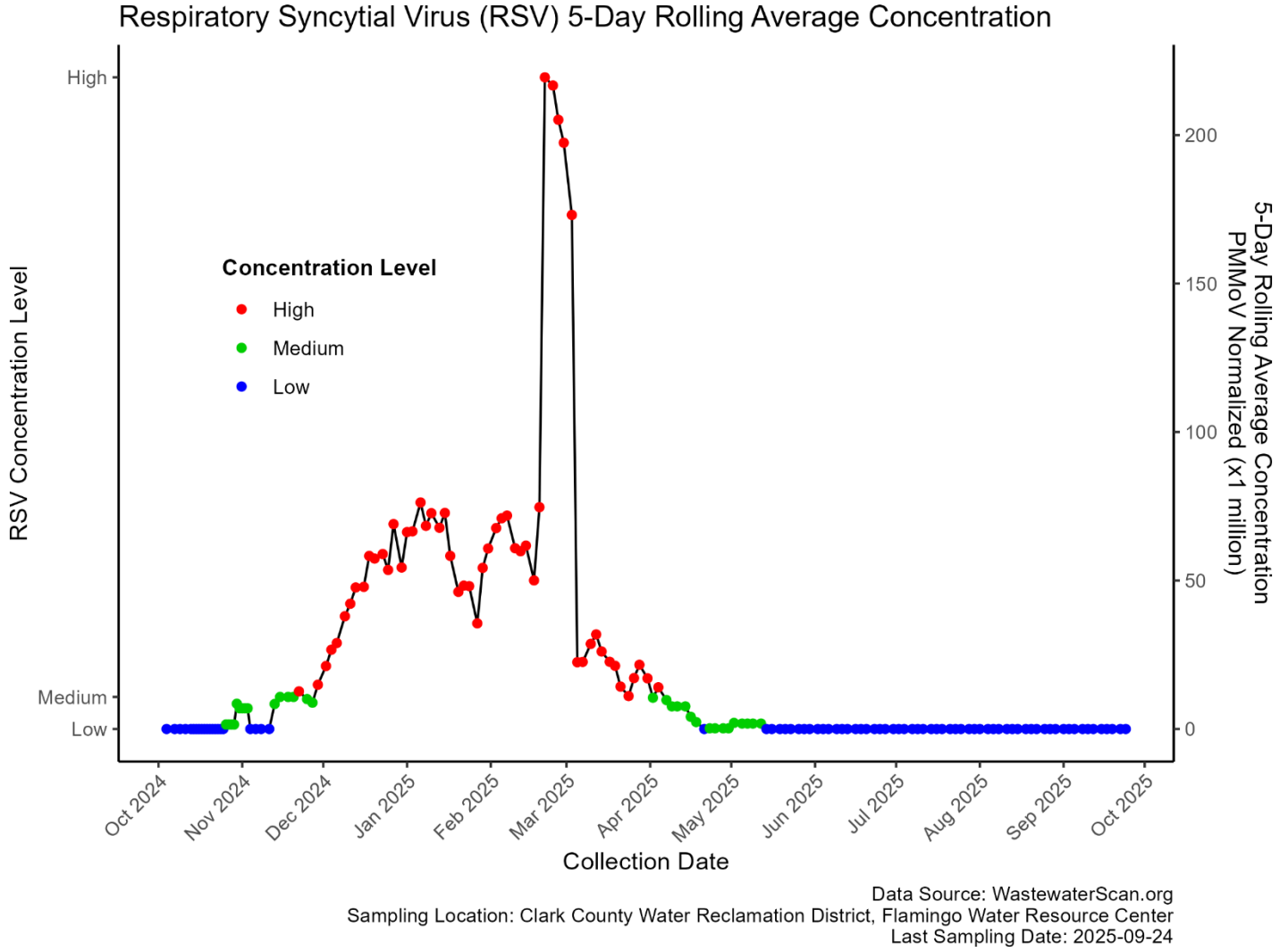
As of September 24, 2025, Influenza B wastewater surveillance across Nevada, California, and Utah showed minimal viral activity. Most facilities, including Las Vegas (Flamingo), Mesquite, Los Angeles (A.K. Warren and Hyperion), Central Valley UT, Provo, Ontario RP-1, Riverside, and Indio, recorded 0.00 with stable trends (→). The sole exception was Boulder Wastewater Treatment Plant, which reported a 5.20 rolling mean with an upward trend (↑) on its last sample from September 10, 2025.

Plant Name	City	Time frame	5 Day Rolling Mean	14 Day Trend	Last Sampling Dates
Flamingo Water Resource Center	Las Vegas, NV	Current	0.00	→	September 24 2025
Mesquite Wastewater Treatment Plant	City of Mesquite, NV	Current	0.00	→	September 23 2025
Boulder Wastewater Treatment Plant	City of Boulder, NV	Current	5.20	↑	September 10 2025
A.K. Warren Water Resource Facility	Los Angeles County, CA	Current	0.00	→	September 24 2025
Hyperion Water Reclamation Plant (HWRP)	Los Angeles, CA	Current	0.00	→	September 24 2025
Central Valley Water Reclamation Facility	Central Salt Lake Valley, UT	Current	0.00	→	September 24 2025
Provo City Water Reclamation Facility	Provo, UT	Current	0.00	→	September 24 2025
Regional Water Recycling Plant No.1 (RP-1)	Ontario, CA	Current	0.00	→	September 23 2025
Riverside Water Quality Control Plant	Riverside, CA	Current	0.00	→	September 23 2025
Valley Sanitary District	Indio, CA	Current	0.00	→	September 23 2025

Respiratory Syncytial Virus (RSV) Viral Concentration Trends in Clark County

Flamingo Water Reclamation District Plant

The chart shows Respiratory Syncytial Virus (RSV) levels at the Clark County Water Reclamation District (Flamingo site) from October 2024 to September 24, 2025. RSV concentrations remained low through October, began rising in November 2024, and peaked sharply in March 2025. Levels declined through April 2025 and returned to low by June 2025, remaining low through late September 2025. Data was normalized using PMMoV, with the last sampling recorded on September 24, 2025.



Respiratory Syncytial Virus (RSV) Concentrations Interpretation

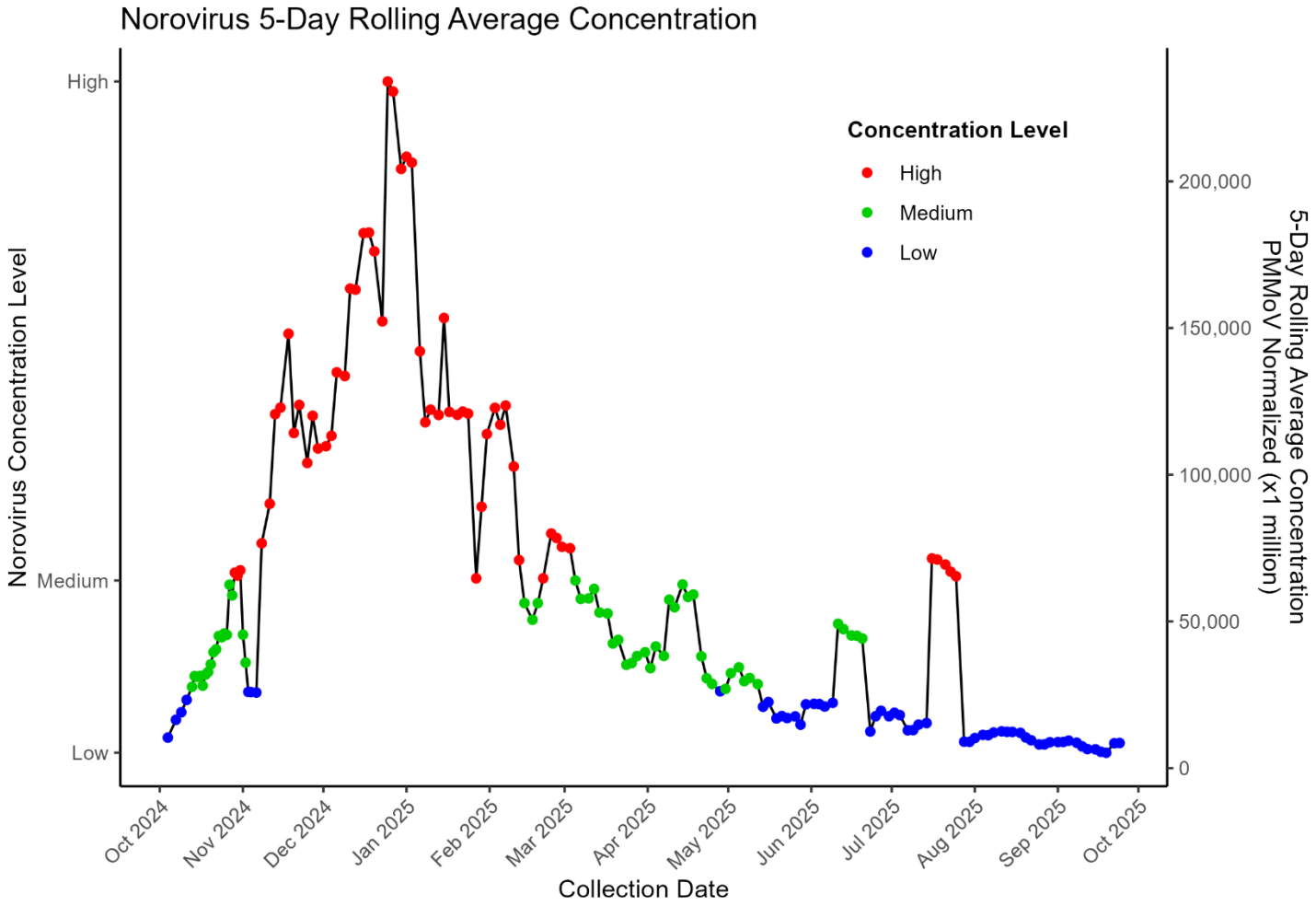
As of September 24, 2025, wastewater surveillance for Respiratory Syncytial Virus (RSV) across facilities in Nevada, California, and Utah showed no detectable concentrations. All monitored plants—including Flamingo (Las Vegas), Mesquite, Boulder, A.K. Warren (Los Angeles County), Hyperion (Los Angeles), Central Valley (Salt Lake), Provo, Ontario RP-1, Riverside, and Indio reported 0.00 in their five-day rolling means, with stable trends (→) and no upward signals. Sampling dates ranged from September 10 to September 24, 2025. The uniform absence of RSV across all sites suggests extremely low or nonexistent community circulation in the monitored regions during this period.

Plant Name	City	Time frame	5 Day Rolling Mean	14 Day Trend	Last Sampling Dates
Flamingo Water Resource Center	Las Vegas, NV	Current	0.00	→	September 24 2025
Mesquite Wastewater Treatment Plant	City of Mesquite, NV	Current	0.00	→	September 23 2025
Boulder Wastewater Treatment Plant	City of Boulder, NV	Current	0.00	→	September 10 2025
A.K. Warren Water Resource Facility	Los Angeles County, CA	Current	0.00	→	September 24 2025
Hyperion Water Reclamation Plant (HWRP)	Los Angeles, CA	Current	0.00	→	September 24 2025
Central Valley Water Reclamation Facility	Central Salt Lake Valley, UT	Current	0.00	→	September 24 2025
Provo City Water Reclamation Facility	Provo, UT	Current	0.00	→	September 24 2025
Regional Water Recycling Plant No.1 (RP-1)	Ontario, CA	Current	0.00	→	September 23 2025
Riverside Water Quality Control Plant	Riverside, CA	Current	0.00	→	September 23 2025
Valley Sanitary District	Indio, CA	Current	0.00	→	September 23 2025

Norovirus Viral Concentration Trends in Clark County

Flamingo Water Reclamation District Plant

The chart tracks Norovirus 5-day rolling average concentrations at the Flamingo Water Resource Center from October 2024 to September 24, 2025. Levels began low in fall 2024, rising sharply in November and peaking in December–January with sustained high concentrations. After January 2025, levels declined but fluctuated at medium to high levels through February and March. From April to June 2025, concentrations trended downward, returning mostly to low levels. A brief resurgence occurred in July 2025 to August 2025, before declining again.



Data Source: WastewaterScan.org
Sampling Location: Clark County Water Reclamation District, Flamingo Water Resource Center
Last Sampling Date: 09/24/25

Interpretation of Norovirus Concentrations

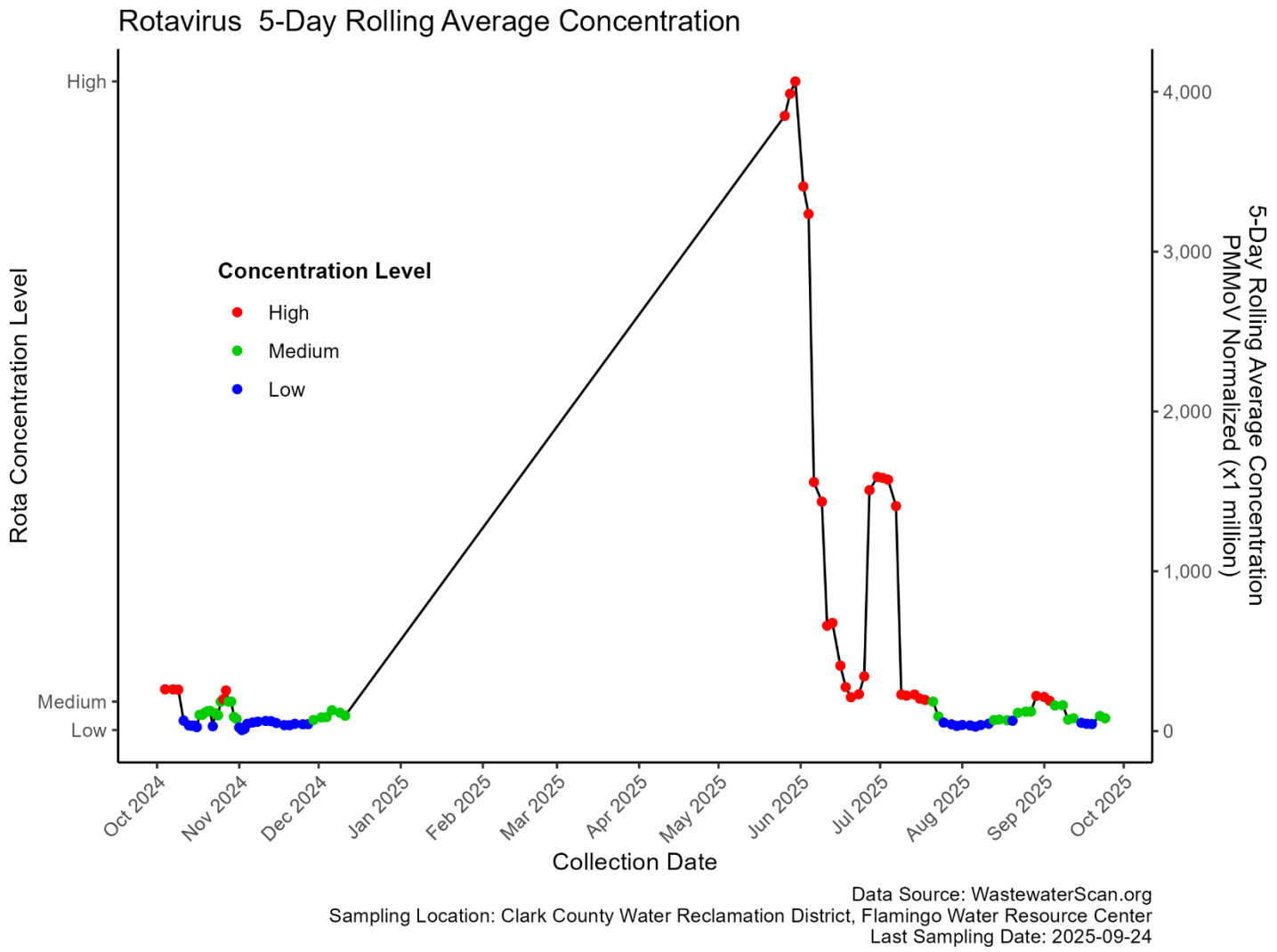
As of September 24, 2025, wastewater surveillance for Norovirus across Nevada, California, and Utah revealed elevated concentrations but mostly declining trends. Las Vegas (Flamingo) reported 8,551.06 (↓), Los Angeles County's A.K. Warren 3,686.65 (↓), Hyperion 3,672.12 (↓), Central Valley UT the highest at 14,299.56 (↓), Provo UT 9,581.97 (↓), Ontario RP-1 4,361.85 (↓), Riverside 3,910.86 (↓), and Indio 563.91 (↓). Mesquite and Boulder were not tested in the latest round. Despite widespread detection, the downward 14-day trends suggest Norovirus activity may be easing across the monitored regions, though levels remain notably elevated in several facilities.

Plant Name	City	Time frame	5 Day Rolling Mean	14 Day Trend	Last Sampling Dates
Flamingo Water Resource Center	Las Vegas, NV	Current	8,551.06	↓	September 24 2025
Mesquite Wastewater Treatment Plant	City of Mesquite, NV	Current	Not Tested		September 23 2025
Boulder Wastewater Treatment Plant	City of Boulder, NV	Current	Not Tested		September 10 2025
A.K. Warren Water Resource Facility	Los Angeles County, CA	Current	3,686.65	↓	September 24 2025
Hyperion Water Reclamation Plant (HWRP)	Los Angeles, CA	Current	3,672.12	↓	September 24 2025
Central Valley Water Reclamation Facility	Central Salt Lake Valley, UT	Current	14,299.56	↓	September 24 2025
Provo City Water Reclamation Facility	Provo, UT	Current	9,581.97	↓	September 24 2025
Regional Water Recycling Plant No.1 (RP-1)	Ontario, CA	Current	4,361.85	↓	September 23 2025
Riverside Water Quality Control Plant	Riverside, CA	Current	3,910.86	↓	September 23 2025
Valley Sanitary District	Indio, CA	Current	563.91	↓	September 23 2025

Rotavirus Viral Concentration Trends in Clark County

Flamingo Water Reclamation District Plant

This chart tracks the 5-day rolling average concentration of Rotavirus at the Clark County Water Reclamation District, Flamingo Water Resource Center, from October 2024 through September 24, 2025. Concentration levels were generally low to medium until late May 2025, when a sharp surge occurred, peaking above 4,000 normalized units in June. Following this peak, levels declined but showed a smaller resurgence in July before returning to low and medium levels by August. The pattern suggests seasonal or episodic increases, with June 2025 representing the highest risk period. Data was normalized using PMMoV, with the last sampling recorded on September 24, 2025.



Data Source: WastewaterScan.org
Sampling Location: Clark County Water Reclamation District, Flamingo Water Resource Center
Last Sampling Date: 2025-09-24

Interpretation of Rotavirus Concentrations

As of September 24, 2025, wastewater surveillance for Rotavirus across Nevada, California, and Utah showed mixed activity. Las Vegas (Flamingo) reported 80.00 (↑), while Ontario RP-1 also rose slightly at 15.74 (↑). In contrast, Los Angeles County's A.K. Warren (55.20, ↓), Hyperion (30.62, ↓), Central Valley UT (32.98, ↓), Provo UT (52.59, ↓), Riverside (36.81, ↓), and Indio (1.91, ↓) all trended downward. Mesquite and Boulder were not tested in the most recent round. Overall, most facilities show declining concentrations, but localized increases in Las Vegas and Ontario highlight areas for closer monitoring.

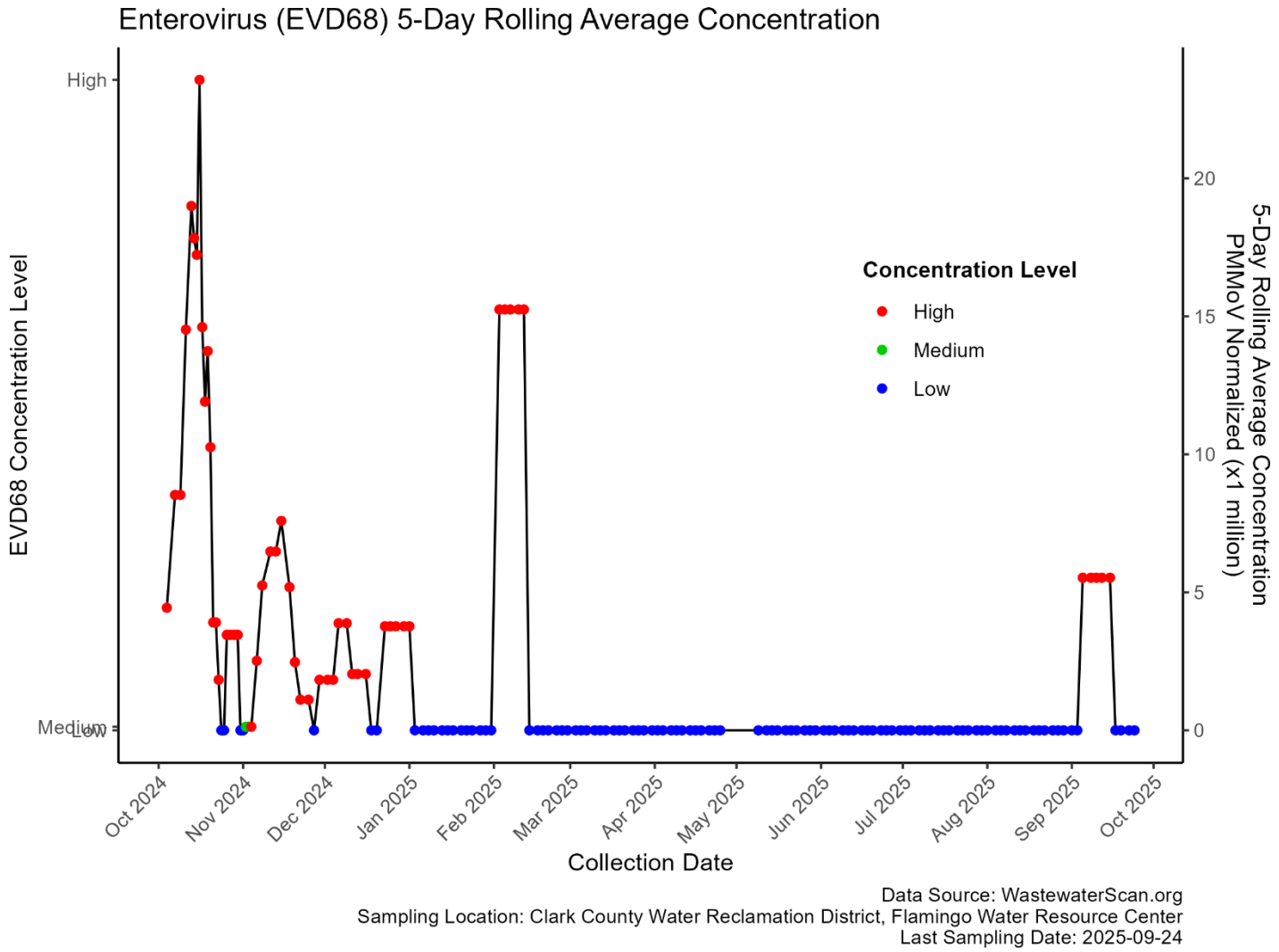
Plant Name	City	Time frame	5 Day Rolling Mean	14 Day Trend	Last Sampling Dates
Flamingo Water Resource Center	Las Vegas, NV	Current	80.00	↑	September 24 2025
Mesquite Wastewater Treatment Plant	City of Mesquite, NV	Current	Not Tested		September 23 2025
Boulder Wastewater Treatment Plant	City of Boulder, NV	Current	Not Tested		September 10 2025
A.K. Warren Water Resource Facility	Los Angeles County, CA	Current	55.20	↓	September 10 2025
Hyperion Water Reclamation Plant (HWRP)	Los Angeles, CA	Current	30.62	↓	September 24 2025
Central Valley Water Reclamation Facility	Central Salt Lake Valley, UT	Current	32.98	↓	September 24 2025
Provo City Water Reclamation Facility	Provo, UT	Current	52.59	↓	September 24 2025
Regional Water Recycling Plant No.1 (RP-1)	Ontario, CA	Current	15.74	↑	September 24 2025
Riverside Water Quality Control Plant	Riverside, CA	Current	36.81	↓	September 23 2025
Valley Sanitary District	Indio, CA	Current	1.91	↓	September 23 2025

Enterovirus D68 Viral Concentration Trends in Clark County

Flamingo Water Reclamation District Plant

The chart illustrates Enterovirus D68 (EVD68) concentrations in wastewater at the Flamingo Water Reclamation District in Clark County from October 2024 through September 24, 2025. Between September 2024 and January 2025, concentrations fluctuated sharply, reaching peak levels in late October and November. Additional spikes were observed in December 2024, though these were generally lower to moderate in intensity. From February 2025 onward, concentrations declined to consistently low levels, with notable resurgence on September 10, 2025. The data indicates a significant outbreak in late 2024, followed by a steady decline and minimal community circulation in 2025.

Enterovirus (EVD68)



Interpretation of Enterovirus D68 Concentrations

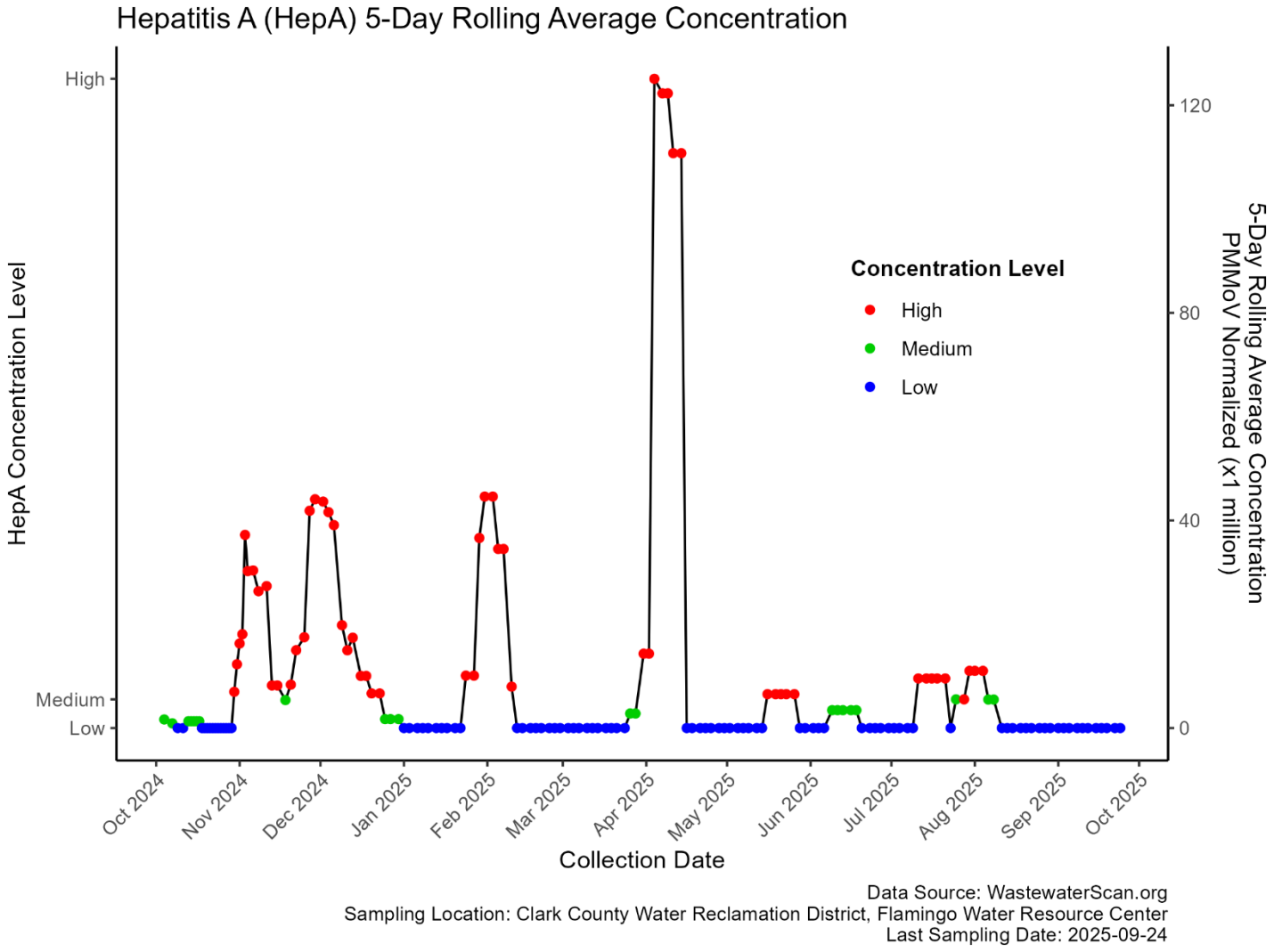
As of September 24, 2025, wastewater surveillance for Enterovirus D68 across Nevada, California, and Utah showed generally low concentrations with mixed trends. Las Vegas (Flamingo), Hyperion (Los Angeles), and Central Valley UT all recorded 0.00 with stable trends (→). Provo reported 0.56 (→), while Indio measured 0.70 (↓). Riverside showed 1.90 (↓), Ontario RP-1 3.69 (↓), and Los Angeles County's A.K. Warren 2.54 (↑). Mesquite and Boulder were not recently tested. Overall, detections remain low across facilities, with most sites stable or declining, though a slight increase at A.K. Warren highlights the need for continued observation.

Plant Name	City	Time frame	5 Day Rolling Mean	14 Day Trend	Last Sampling Dates
Flamingo Water Resource Center	Las Vegas, NV	Current	0.00	→	September 24 2025
Mesquite Wastewater Treatment Plant	City of Mesquite, NV	Current	Not Tested		September 23 2025
Boulder Wastewater Treatment Plant	City of Boulder, NV	Current	Not Tested		September 10 2025
A.K. Warren Water Resource Facility	Los Angeles County, CA	Current	2.54	↑	September 10 2025
Hyperion Water Reclamation Plant (HWRP)	Los Angeles, CA	Current	0.00	→	September 24 2025
Central Valley Water Reclamation Facility	Central Salt Lake Valley, UT	Current	0.00	→	September 24 2025
Provo City Water Reclamation Facility	Provo, UT	Current	0.56	→	September 24 2025
Regional Water Recycling Plant No.1 (RP-1)	Ontario, CA	Current	3.69	↓	September 24 2025
Riverside Water Quality Control Plant	Riverside, CA	Current	1.90	↓	September 23 2025
Valley Sanitary District	Indio, CA	Current	0.70	↓	September 23 2025

Hepatitis A (HepA) Viral Concentration Trends in Clark County

Flamingo Water Reclamation District Plant

The chart tracks Hepatitis A (HepA) concentrations in wastewater at the Clark County Water Reclamation District, Flamingo Water Resource Center, from October 2024 to September 24, 2025, using a 5-day rolling average. Levels peaked sharply in September 2024 and again in April 2025, reaching “High” concentrations. Between peaks, values fluctuated low to medium levels, with intermittent short-lived increases in late 2024 and early 2025. From May through September 24, 2025, concentrations were mostly low or medium, with no sustained spikes. The most recent sample, collected on September 24, 2025, showed low detection.



Interpretation of Hepatitis A Concentrations

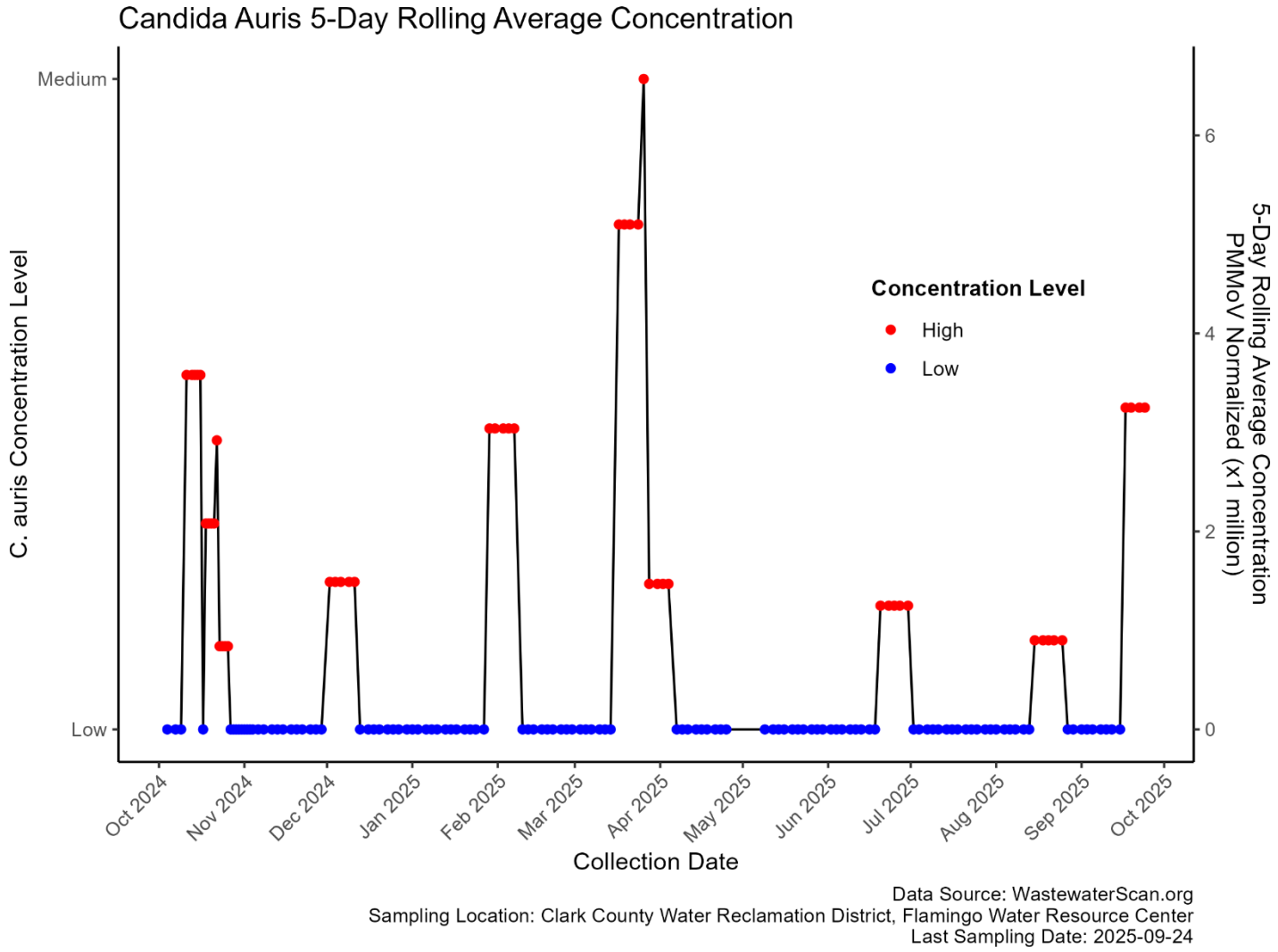
As of September 24, 2025, wastewater surveillance for Hepatitis A across Nevada, California, and Utah showed mostly non-detectable levels. Las Vegas (Flamingo), Central Valley UT, Provo, and Indio all recorded 0.00 with stable trends (→). Riverside showed a minimal 0.50 (→). Los Angeles County's A.K. Warren detected 2.63 (↓), while Hyperion reported 50.94 (↓). Ontario RP-1 registered 21.62 (↑), marking the only rising trend. Mesquite and Boulder were not recently tested.

Plant Name	City	Time frame	5 Day Rolling Mean	14 Day Trend	Last Sampling Dates
Flamingo Water Resource Center	Las Vegas, NV	Current	0.00	→	September 24 2025
Mesquite Wastewater Treatment Plant	City of Mesquite, NV	Current	Not Tested		September 23 2025
Boulder Wastewater Treatment Plant	City of Boulder, NV	Current	Not Tested		September 10 2025
A.K. Warren Water Resource Facility	Los Angeles County, CA	Current	2.63	↓	September 24 2025
Hyperion Water Reclamation Plant (HWRP)	Los Angeles, CA	Current	50.94	↓	September 24 2025
Central Valley Water Reclamation Facility	Central Salt Lake Valley, UT	Current	0.00	→	September 24 2025
Provo City Water Reclamation Facility	Provo, UT	Current	0.00	→	September 24 2025
Regional Water Recycling Plant No.1 (RP-1)	Ontario, CA	Current	21.62	↑	September 23 2025
Riverside Water Quality Control Plant	Riverside, CA	Current	0.50	→	September 23 2025
Valley Sanitary District	Indio, CA	Current	0.00	→	September 23 2025

Candida Auris Fungal Concentration Trends in Clark County

Flamingo Water Reclamation District Plant

The graph displays *Candida auris* (C. auris) 5-day rolling average concentrations at the Flamingo Water Resource Center from October 2024 through September 24, 2025. While most measurements remained at low levels, several notable spikes were observed: in late October 2024 to November 2024, mid-December 2024, February 2025, early April 2025, mid-July 2025, mid-August 2025 and late-September 2025. The highest concentration occurred in early April 2025. These surges suggest periods of elevated *Candida Auris* presence in the community, followed by returns to baseline low levels. Results are shown as 5-day rolling averages, normalized by PMMoV. The most recent sample was collected on September 24, 2025.



Interpretation of *Candida Auris* Concentrations

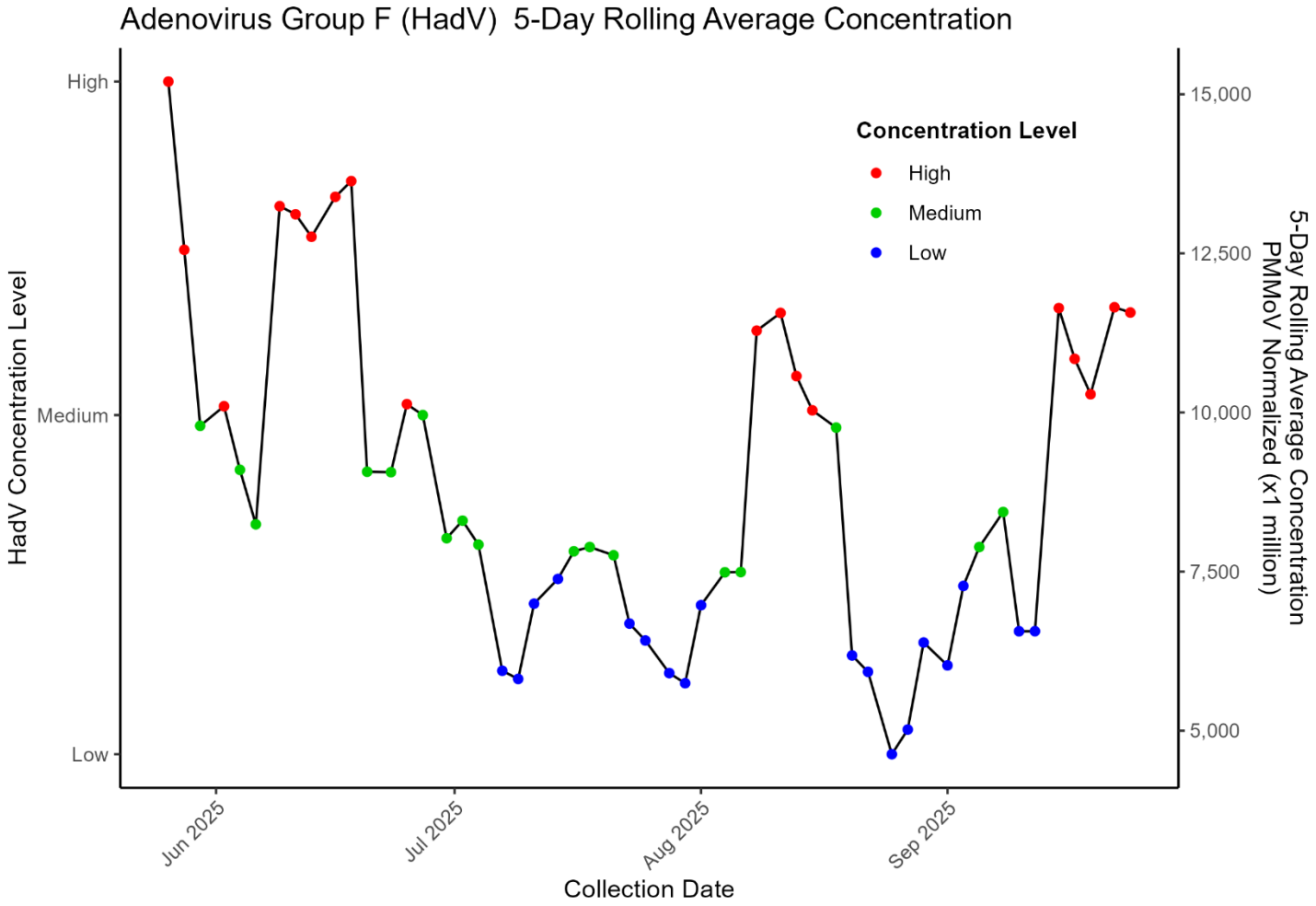
As of September 24, 2025, wastewater monitoring for Candida auris across Nevada, California, and Utah showed almost entirely undetectable levels. Most facilities including Los Angeles County's A.K. Warren, Hyperion, Central Valley UT, Provo, Ontario RP-1, Riverside, and Indio reported 0.00 with stable trends (→). The only detection occurred at Las Vegas' Flamingo Water Resource Center, which measured 3.25 with an upward trend (↑) on September 24, 2025. Mesquite and Boulder were not recently tested.

Plant Name	City	Time frame	5 Day Rolling Mean	14 Day Trend	Last Sampling Dates
Flamingo Water Resource Center	Las Vegas, NV	Current	3.25	↑	September 24 2025
Mesquite Wastewater Treatment Plant	City of Mesquite, NV	Current	Not Tested		September 23 2025
Boulder Wastewater Treatment Plant	City of Boulder, NV	Current	Not Tested		September 10 2025
A.K. Warren Water Resource Facility	Los Angeles County, CA	Current	0.00	→	September 24 2025
Hyperion Water Reclamation Plant (HWRP)	Los Angeles, CA	Current	0.00	→	September 24 2025
Central Valley Water Reclamation Facility	Central Salt Lake Valley, UT	Current	0.00	→	September 24 2025
Provo City Water Reclamation Facility	Provo, UT	Current	0.00	→	September 24 2025
Regional Water Recycling Plant No.1 (RP-1)	Ontario, CA	Current	0.00	→	September 23 2025
Riverside Water Quality Control Plant	Riverside, CA	Current	0.00	→	September 23 2025
Valley Sanitary District	Indio, CA	Current	0.00	→	September 23 2025

Adenovirus Group F Concentration Trends in Clark County

Flamingo Water Reclamation District Plant

This chart tracks Adenovirus Group F (HadV) concentrations in wastewater at Clark County's Flamingo Water Resource Center from June to September 24, 2025. The 5-day rolling average shows fluctuations between high, medium, and low concentration levels. In early June, levels were consistently high but dropped to medium and low by late June. July saw mostly medium levels, trending downward. In August, concentrations dipped into the low range, then rose back toward medium. By September, levels fluctuated widely, peaking again in high range mid- and late months. The last sample was collected on September 24, 2025.



Data Source: WastewaterScan.org
Sampling Location: Clark County Water Reclamation District, Flamingo Water Resource Center
Last Sampling Date: 2025-09-24

Interpretation of Adenovirus Group F Concentrations

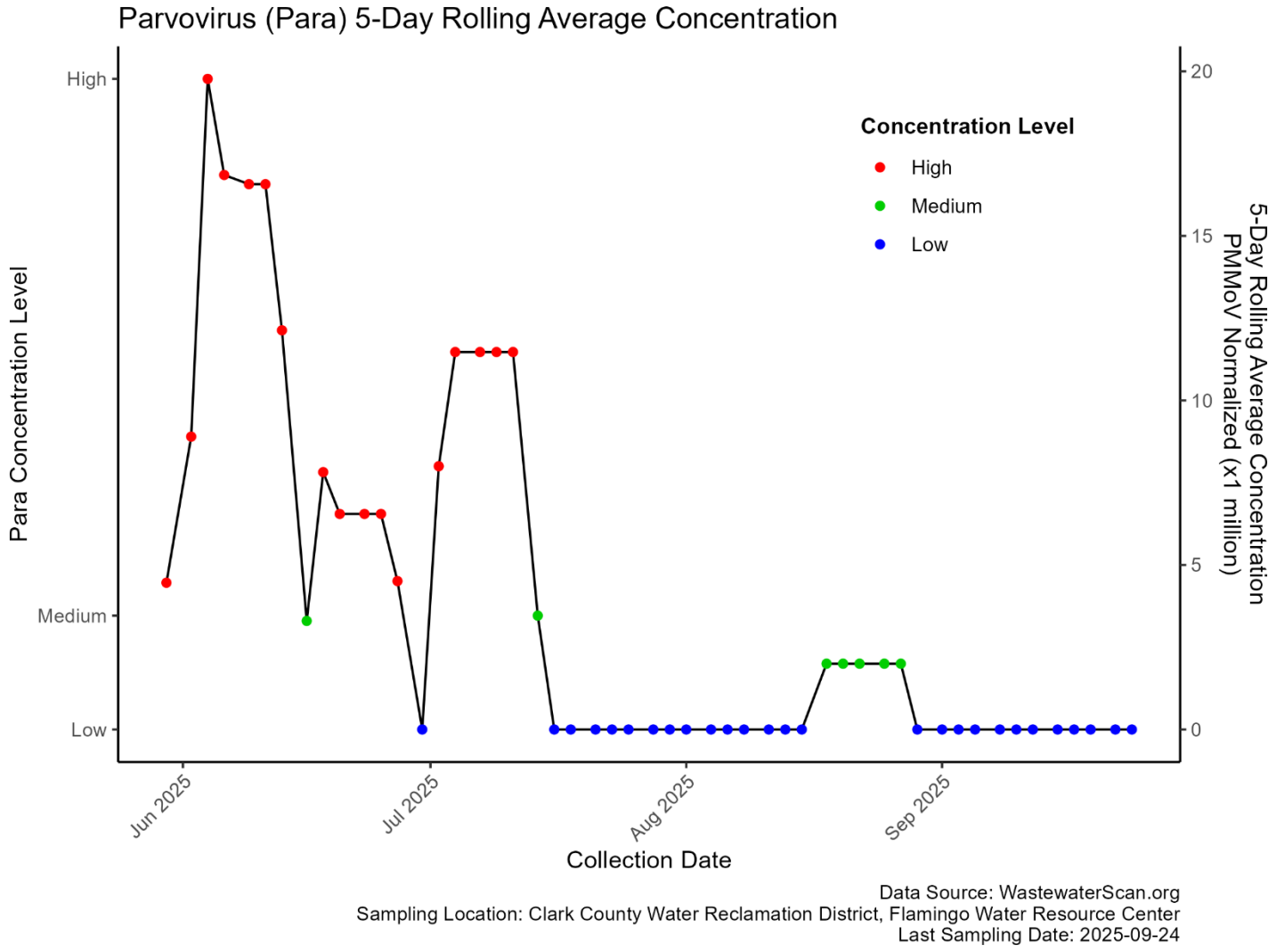
As of September 24, 2025, wastewater surveillance for Adenovirus Group F across Nevada, California, and Utah showed elevated but varied levels. Rising concentrations were observed in Las Vegas (Flamingo, 11,570.57 ↑), Los Angeles County's A.K. Warren (8,326.88 ↑), Hyperion (4,625.91 ↑), Provo UT (11,553.92 ↑), Ontario RP-1 (16,375.62 ↑), and Riverside (11,658.93 ↑). Central Valley UT reported 13,249.41 (↓), while Indio recorded 874.79 (↓). Mesquite and Boulder were not tested.

Plant Name	City	Time frame	5 Day Rolling Mean	14 Day Trend	Last Sampling Dates
Flamingo Water Resource Center	Las Vegas, NV	Current	11,570.57	↑	September 24 2025
Mesquite Wastewater Treatment Plant	City of Mesquite, NV	Current	Not Tested		September 23 2025
Boulder Wastewater Treatment Plant	City of Boulder, NV	Current	Not Tested		September 10 2025
A.K. Warren Water Resource Facility	Los Angeles County, CA	Current	8,326.88	↑	September 24 2025
Hyperion Water Reclamation Plant (HWRP)	Los Angeles, CA	Current	4,625.91	↑	September 24 2025
Central Valley Water Reclamation Facility	Central Salt Lake Valley, UT	Current	13,249.41	↓	September 24 2025
Provo City Water Reclamation Facility	Provo, UT	Current	11,553.92	↑	September 24 2025
Regional Water Recycling Plant No.1 (RP-1)	Ontario, CA	Current	16,375.62	↑	September 23 2025
Riverside Water Quality Control Plant	Riverside, CA	Current	11,658.93	↑	September 23 2025
Valley Sanitary District	Indio, CA	Current	874.79	↓	September 23 2025

Parvovirus Concentration Trends in Clark County

Flamingo Water Reclamation District Plant

The graph presents Parvovirus 5-day rolling average concentrations at the Flamingo Water Resource Center from June to September 24, 2025. Concentrations peaked in early June at high levels (red) and gradually declined through mid-June. After a brief resurgence of high levels in early July, the concentration dropped sharply. From mid-July to the end of the month, levels remained consistently low (blue). The trend shows two distinct spikes followed by a sustained decline. The last sample, taken on September 24, 2025, showed medium concentration.



Parvovirus Concentrations Interpretation

As of September 24, 2025, wastewater surveillance for Parvovirus across Nevada, California, and Utah showed largely non-detectable levels. Most facilities—including Las Vegas (Flamingo), Hyperion (Los Angeles), Provo, Ontario RP-1, and Indio—reported 0.00 with stable trends (→). Minimal detections were observed at Los Angeles County's A.K. Warren (0.42 →), Central Valley UT (1.92 →), and Riverside (0.78 →), all stable with no upward change. Mesquite and Boulder were not tested in the latest round.

Plant Name	City	Time frame	5 Day Rolling Mean	14 Day Trend	Last Sampling Dates
Flamingo Water Resource Center	Las Vegas, NV	Current	0.00	→	September 24 2025
Mesquite Wastewater Treatment Plant	City of Mesquite, NV	Current	Not Tested		September 23 2025
Boulder Wastewater Treatment Plant	City of Boulder, NV	Current	Not Tested		September 10 2025
A.K. Warren Water Resource Facility	Los Angeles County, CA	Current	0.42	→	September 24 2025
Hyperion Water Reclamation Plant (HWRP)	Los Angeles, CA	Current	0.00	→	September 24 2025
Central Valley Water Reclamation Facility	Central Salt Lake Valley, UT	Current	1.92	→	September 24 2025
Provo City Water Reclamation Facility	Provo, UT	Current	0.00	→	September 24 2025
Regional Water Recycling Plant No.1 (RP-1)	Ontario, CA	Current	0.00	→	September 23 2025
Riverside Water Quality Control Plant	Riverside, CA	Current	0.78	→	September 23 2025
Valley Sanitary District	Indio, CA	Current	0.00	→	September 23 2025

Influenza H5 Viral Detection Comparing to Neighboring States

As of September 24, 2025, wastewater surveillance from ten treatment facilities in California, Nevada, and Utah detected no Influenza H5 activity. All sites reported a five-day rolling average of zero with no change in the 14-day trend, indicating stable conditions and no current evidence of Influenza H5.

Plant Name	City	Time frame	5 Day Rolling Mean	14 Day Trend	Last Sampling Dates
Flamingo Water Resource Center	Las Vegas, NV	Current	0	→	September 24 2025
Mesquite Wastewater Treatment Plant	City of Mesquite, NV	Current	0	→	September 23 2025
Boulder Wastewater Treatment Plant	City of Boulder, NV	Current	0	→	September 10 2025
A.K. Warren Water Resource Facility	Los Angeles County, CA	Current	0	→	September 24 2025
Hyperion Water Reclamation Plant (HWRP)	Los Angeles, CA	Current	0	→	September 24 2025
Central Valley Water Reclamation Facility	Central Salt Lake Valley, UT	Current	0	→	September 24 2025
Provo City Water Reclamation Facility	Provo, UT	Current	0	→	September 24 2025
Regional Water Recycling Plant No.1 (RP-1)	Ontario, CA	Current	0	→	September 23 2025
Riverside Water Quality Control Plant	Riverside, CA	Current	0	→	September 23 2025
Valley Sanitary District	Indio, CA	Current	0	→	September 23 2025

MPOX Clade 1b Viral Detection Comparing to Neighboring States

As of September 24, 2025, wastewater surveillance from ten facilities in California, Nevada, and Utah detected no Mpox clade 1b. Across all sites, monitoring within the past 90 days reported no recent presence. These findings indicate continued absence of detectable Mpox clade 1b in sampled wastewater across the three states

Plant Name	City	Time frame	Detect/ Non-detect	Last Sampling Dates
Flamingo Water Resource Center	Las Vegas, NV	Current	Non-detect	September 24 2025
Mesquite Wastewater Treatment Plant	City of Mesquite, NV	Current	Non-detect	September 23 2025
Boulder Wastewater Treatment Plant	City of Boulder, NV	Current	Non-detect	September 10 2025
A.K. Warren Water Resource Facility	Los Angeles County, CA	Current	Non-detect	September 24 2025
Hyperion Water Reclamation Plant (HWRP)	Los Angeles, CA	Current	Non-detect	September 24 2025
Central Valley Water Reclamation Facility	Central Salt Lake Valley, UT	Current	Non-detect	September 24 2025
Provo City Water Reclamation Facility	Provo, UT	Current	Non-detect	September 24 2025
Regional Water Recycling Plant No.1 (RP-1)	Ontario, CA	Current	Non-detect	September 23 2025
Riverside Water Quality Control Plant	Riverside, CA	Current	Non-detect	September 23 2025
Valley Sanitary District	Indio, CA	Current	Non-detect	September 23 2025

Measles Viral Detection Comparing to Neighboring States

As of September 24, 2025, wastewater monitoring at ten facilities in California, Nevada, and Utah shows no signs of measles activity. The only recent detection occurred at the Flamingo Water Resource Center in Las Vegas on August 1, but a follow-up sample on August 6 was negative. All other sites, including Los Angeles County, Ontario, Riverside, Indio, and Central Salt Lake Valley, reported non-detectable levels in their most recent samples.

Plant Name	City	Time frame	Detect/ Non-detect	Last Sampling Dates
Flamingo Water Resource Center	Las Vegas, NV	Current	Non-detect	September 24 2025
Mesquite Wastewater Treatment Plant	City of Mesquite, NV	Current	Non-detect	September 23 2025
Boulder Wastewater Treatment Plant	City of Boulder, NV	Current	Non-detect	September 10 2025
A.K. Warren Water Resource Facility	Los Angeles County, CA	Current	Non-detect	September 24 2025
Hyperion Water Reclamation Plant (HWRP)	Los Angeles, CA	Current	Non-detect	September 24 2025
Central Valley Water Reclamation Facility	Central Salt Lake Valley, UT	Current	Non-detect	September 24 2025
Provo City Water Reclamation Facility	Provo, UT	Current	Non-detect	September 24 2025
Regional Water Recycling Plant No.1 (RP-1)	Ontario, CA	Current	Non-detect	September 23 2025
Riverside Water Quality Control Plant	Riverside, CA	Current	Non-detect	September 23 2025
Valley Sanitary District	Indio, CA	Current	Non-detect	September 23 2025

References

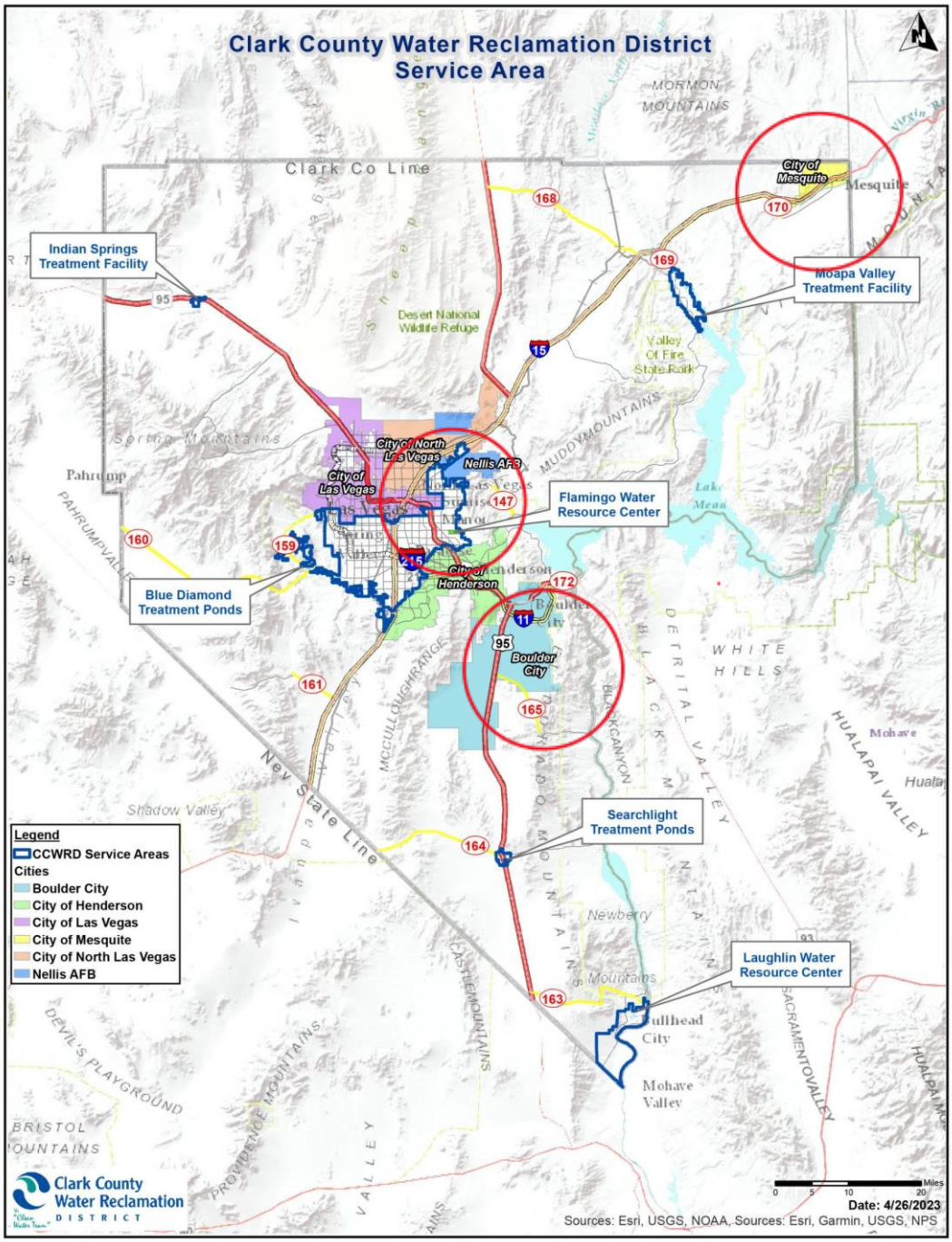
1) Verily Laboratories. *Public health: wastewater-based epidemiology (WBE)*. https://verily.com/solutions/sightline/wastewater. Published 2025. Accessed January 1, 2024.

2) WastewaterSCAN. WastewaterSCAN: wastewater surveillance for community-level disease monitoring. https://www.wastewaterscan.org. Accessed July 3, 2025.

3. Boehm, A. B., Wolfe, M. K., Bidwell, A. L., Zulli, A., Vikram-Chan-Herur, V., White, B. J., Shelden, B., & Duong, D. (2024). *Human pathogen nucleic acids in wastewater solids from 191 wastewater treatment plants in the United States*. *Scientific Data*, 11, 1141.

Appendix

Wastewater Sampling Sites in Clark County, Nevada (red circles).



Source: Clark County Water Reclamation District