THE SOUTHERN NEVADA HEALTH DISTRICT'S WEEKLY WASTEWATER SURVEILLANCE REPORT

December 31, 2025

Prepared by:
Jeremiah Zablon
Epidemiologist
Office of Epidemiology
Southern Nevada Health District

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, Boulder City, 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 December 31, 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, Human Metapneumovirus (HMPV)), 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 December 31, 2025)
Wastewater surveillance across Nevada, California, and Utah reveals mixed pathogen activity with notable localized increases. SARS-CoV-2 concentrations are rising in most locations, with Boulder City reporting the highest level (621.00 GC/L), followed by Mesquite (392.00 GC/L) and Flamingo (98.36 GC/L). California sites range from 4.06 GC/L to 41.15 GC/L, and Utah sites show moderate increases (Central Valley: 62.54 GC/L; Provo: 54.12 GC/L). Sequencing indicates XFG as the dominant lineage early, with later diversity including JN.1 and XDV.1.

Influenza A shows significant activity, peaking at Boulder City (186.21 GC/L) and Provo (143.19 GC/L), while Influenza B remains nearly undetectable except for localized increases in Utah. RSV trends upward regionally, with Boulder City highest at 53.20 GC/L. Influenza H5 was not detected.

Gastrointestinal pathogens exhibit strong activity. Norovirus concentrations are extremely high, notably Provo (22,579.91 GC/L) and Flamingo (18,698.32 GC/L). Rotavirus levels are mixed, with Flamingo leading at 179.47 GC/L. Hepatitis A and Candida auris remain largely undetectable, though Riverside shows a spike (291.31 GC/L for Hepatitis A). Adenovirus Group F is persistently high, especially at RP-1 Ontario (26,171.04 GC/L). Parvovirus and Human Metapneumovirus show low levels with minor increases.

No detections were recorded for Influenza H5, West Nile virus, or Mpox Clades I & II, except isolated detections of Mpox Clade II and measles at Provo.

Summary: High-concern pathogens remain largely absent, except for measles and Mpox Clade II, which were detected at the Provo City Water Reclamation Facility. However, rising trends in Norovirus, Rotavirus, Enterovirus D68, Adenovirus F, and RSV are evident, particularly in Utah and California.

Methodological Notes: Sampling methods varied across sites. FWRF in Nevada, all California facilities (A.K. Warren, Hyperion, RP-1, Riverside, Valley Sanitary District), and Utah facilities (Central Valley and Provo City) collected 24-hour composite solid samples analyzed by WastewaterSCAN. In contrast, Mesquite and Boulder City relied on liquid grab samples analyzed by Verily. These methodological differences likely influenced pathogen measurements.

Summary of Select Pathogen Concentrations in three wastewater treatment facilities in Neveda

- Latest data point for Flamingo Water reclamation district plant December 29, 2025
- Latest data point for City of Mesquite Wastewater Treatment Plant is December 30, 2025
- Latest data point for Boulder City Wastewater Treatment Plant December 29, 2025

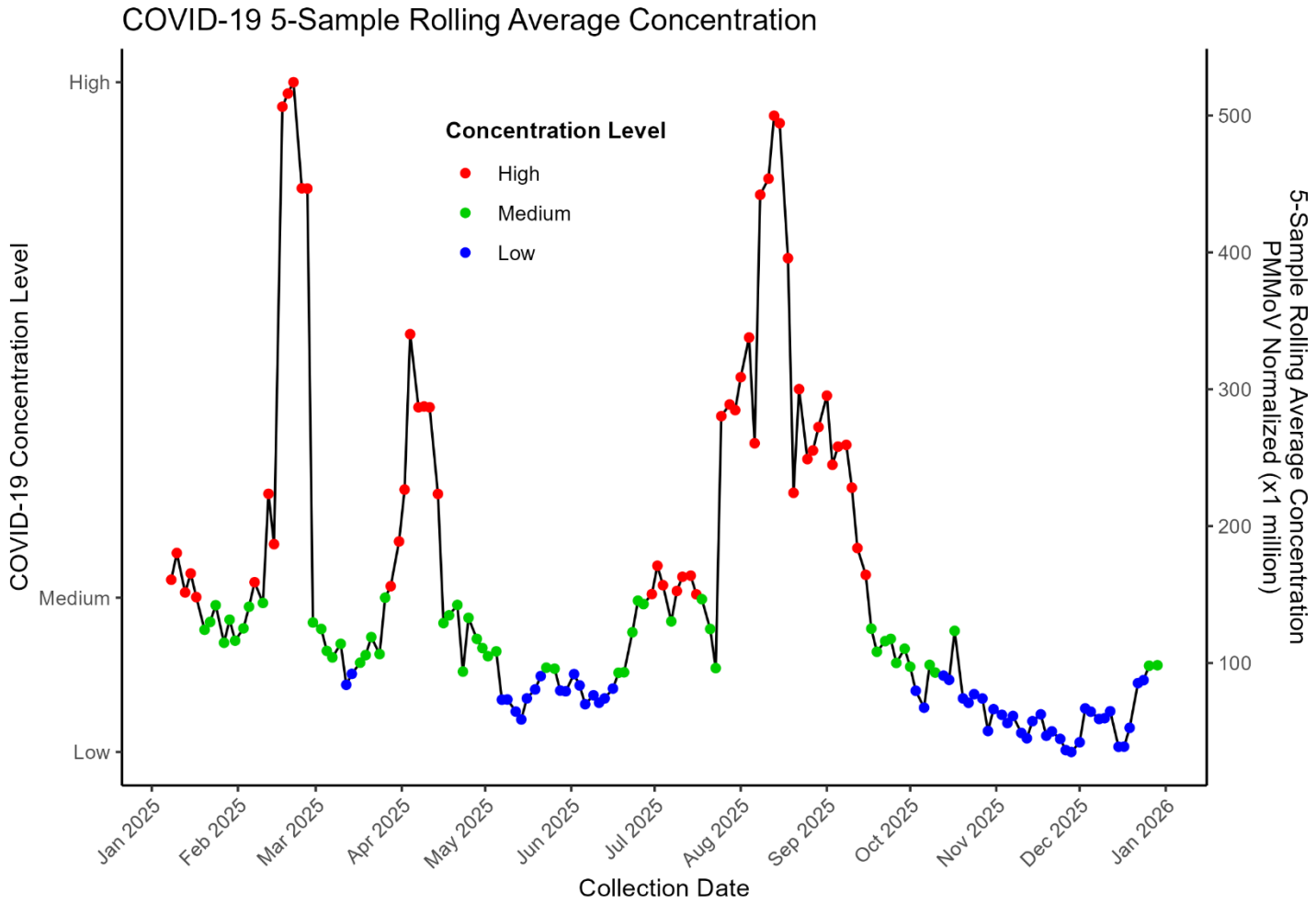
Pathogen	Concentration Level / Presence- Flamingo	Concentration Level / Presence- Boulder	Concentration Level / Presence - Mesquite
SARS-CoV-2	Medium	Medium	High
Influenza A	High	High	High
Influenza B	Medium	Low	Low
Respiratory Syncytial virus (RSV)	High	High	High
Norovirus	Medium	Not Tested	Not Tested
Rotavirus	High	Not Tested	Not Tested
Enterovirus D68	Low	Not Tested	Not Tested
Hepatitis A	Low	Not Tested	Not Tested
Candida Auris	Low	Not Tested	Not Tested
Adenovirus Group F	Medium	Not Tested	Not Tested
Parvovirus	High	Not Tested	Not Tested
Metapneumovirus	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 were 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 Boulder City were 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 three 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

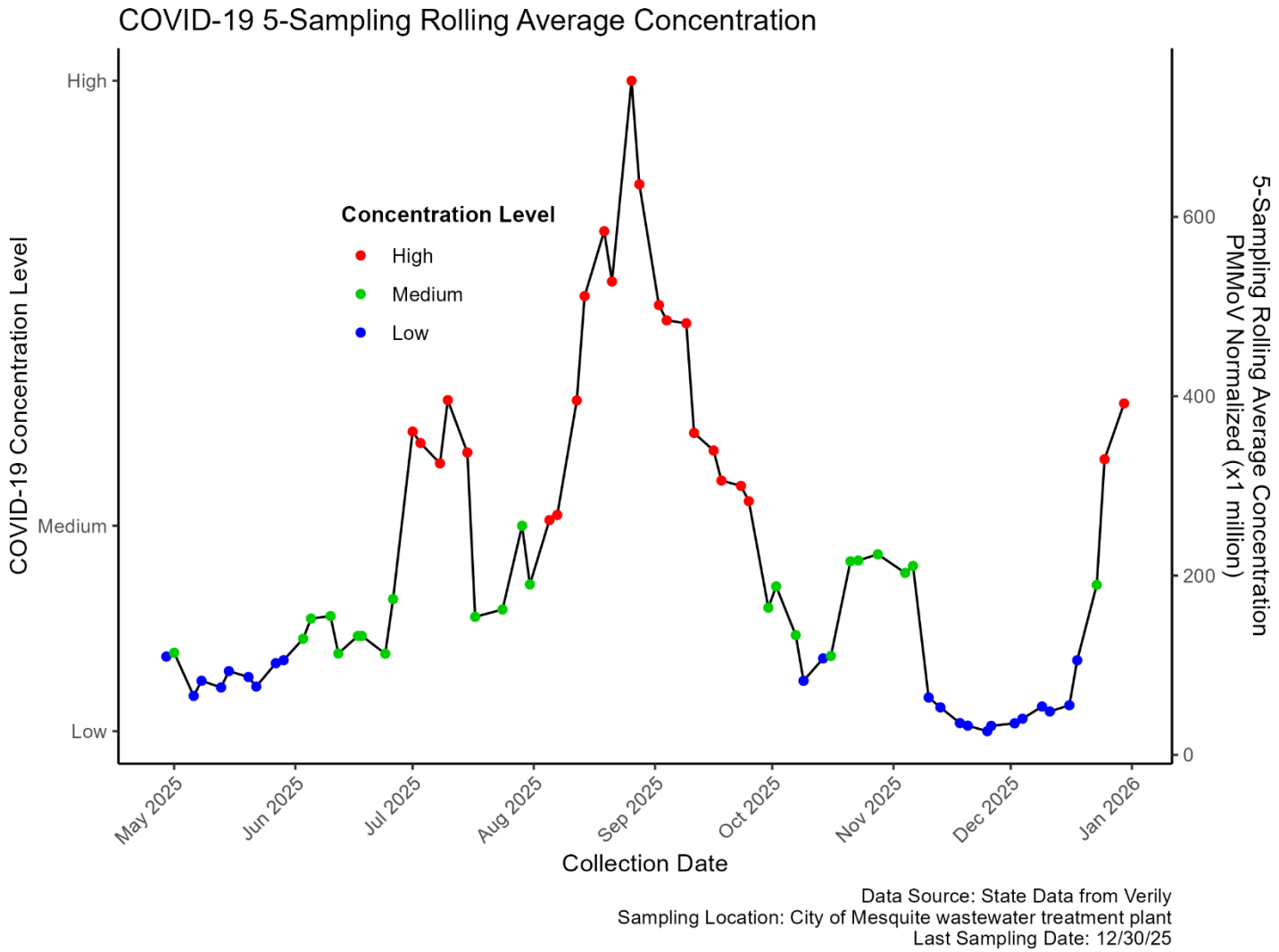
Flamingo Water Reclamation District Plant

The chart shows COVID-19 concentrations at the Flamingo Water Resource Center from January through December 2025, using a 5-sample rolling average. Levels fluctuated substantially throughout the year, with three notable peaks: a sharp rise in February, another in late April, and the highest spike in September. Each of these reached high concentration levels. Between peaks, concentrations declined to medium and then low especially from May to July and again from October into early December. By late December, levels rose slightly into the medium range before returning to consistently low concentrations, indicating reduced viral activity overall.



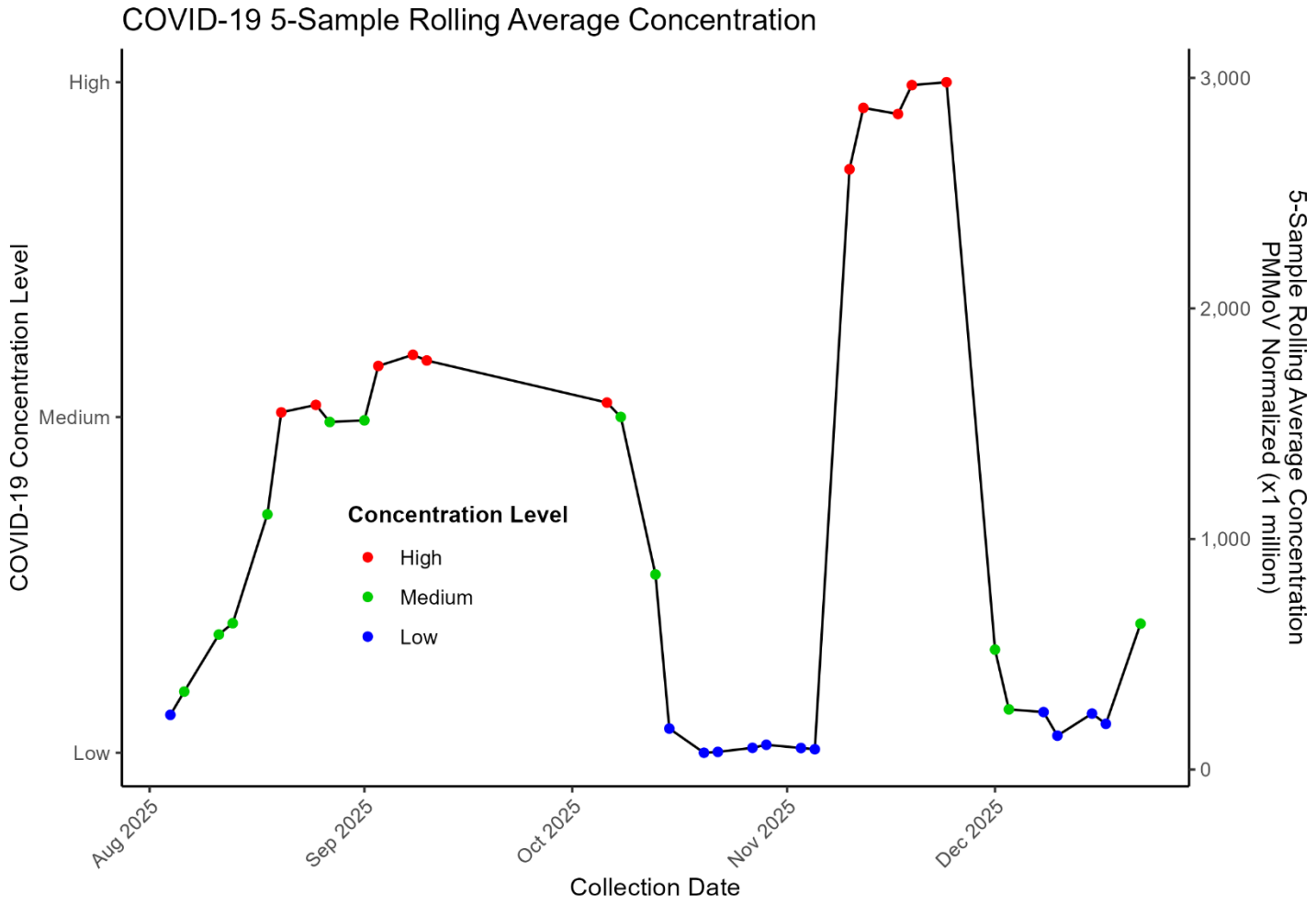
City of Mesquite Wastewater Treatment Plant

The chart shows COVID-19 concentrations at the Mesquite wastewater treatment plant from May to December 2025, based on a 5-sample rolling average normalized to PMMoV. Levels were low in May and June before rising to medium. In July, concentrations increased to high, then dropped back to medium. In August, levels surged again, reaching the yearly peak of nearly 700 GC/L, followed by declines to medium and then low in October. Levels remained low in November, then rose to medium and finally high in late December.



Boulder City Wastewater Treatment Plant

The chart shows COVID-19 concentrations at the Boulder City wastewater treatment plant from August to December 2025 using a 5-sample rolling average normalized to PMMoV. Levels increased from low to medium in August, then fluctuated between medium and high through September. Concentrations dropped to low in October and early November before sharply rising in late November, peaking at nearly 3,000 GC/L. Levels then declined to low in early December and rose again to medium by late December.



SARS-CoV-2 Concentrations Interpretation

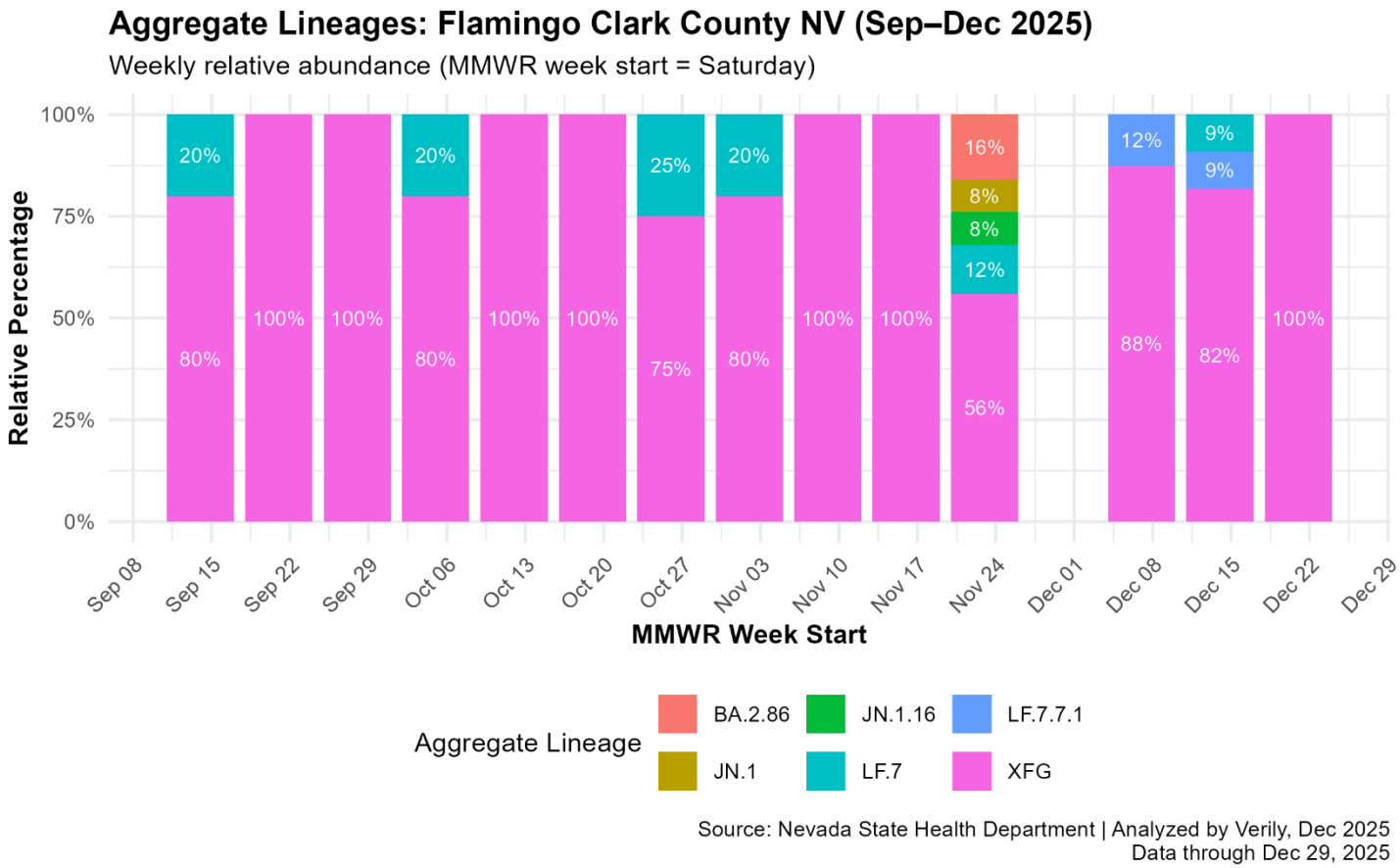
As of December 31, 2025, SARS-CoV-2 wastewater levels show mixed trends across Nevada, California, and Utah. Boulder City recorded the highest concentration at 621.00 GC/L, followed by Mesquite at 392.00 GC/L and Flamingo at 98.36 GC/L, all trending upward. California sites ranged from 4.06 GC/L (Valley Sanitary District, decreasing) to 41.15 GC/L (Riverside, increasing). Utah sites showed moderate increases, with Central Valley at 62.54 GC/L and Provo at 54.12 GC/L. Overall, most locations indicate rising viral activity.

Plant Name	City	Time frame	5 Sample Rolling Mean	14 Day Trend	Last Sampling Dates
Flamingo Water Resource Center	Las Vegas, NV	Current	98.36	↑	December 29 2025
Mesquite Wastewater Treatment Plant	City of Mesquite, NV	Current	392.00	↑	December 30 2025
Boulder Wastewater Treatment Plant	Boulder City, NV	Current	621.00	↑	December 29 2025
A.K. Warren Water Resource Facility	Los Angeles County, CA	Current	17.84	↑	December 29 2025
Hyperion Water Reclamation Plant (HWRP)	Los Angeles, CA	Current	17.57	↑	December 29 2025
Central Valley Water Reclamation Facility	Central Salt Lake Valley, UT	Current	62.54	↑	December 29 2025
Provo City Water Reclamation Facility	Provo, UT	Current	54.12	↑	December 29 2025
Regional Water Recycling Plant No.1 (RP-1)	Ontario, CA	Current	31.66	↑	December 31 2025
Riverside Water Quality Control Plant	Riverside, CA	Current	41.15	↑	December 31 2025
Valley Sanitary District	Indio, CA	Current	4.06	↓	December 31 2025

SARS-CoV-2 Variants Circulating

Flamingo Water Reclamation District Plant

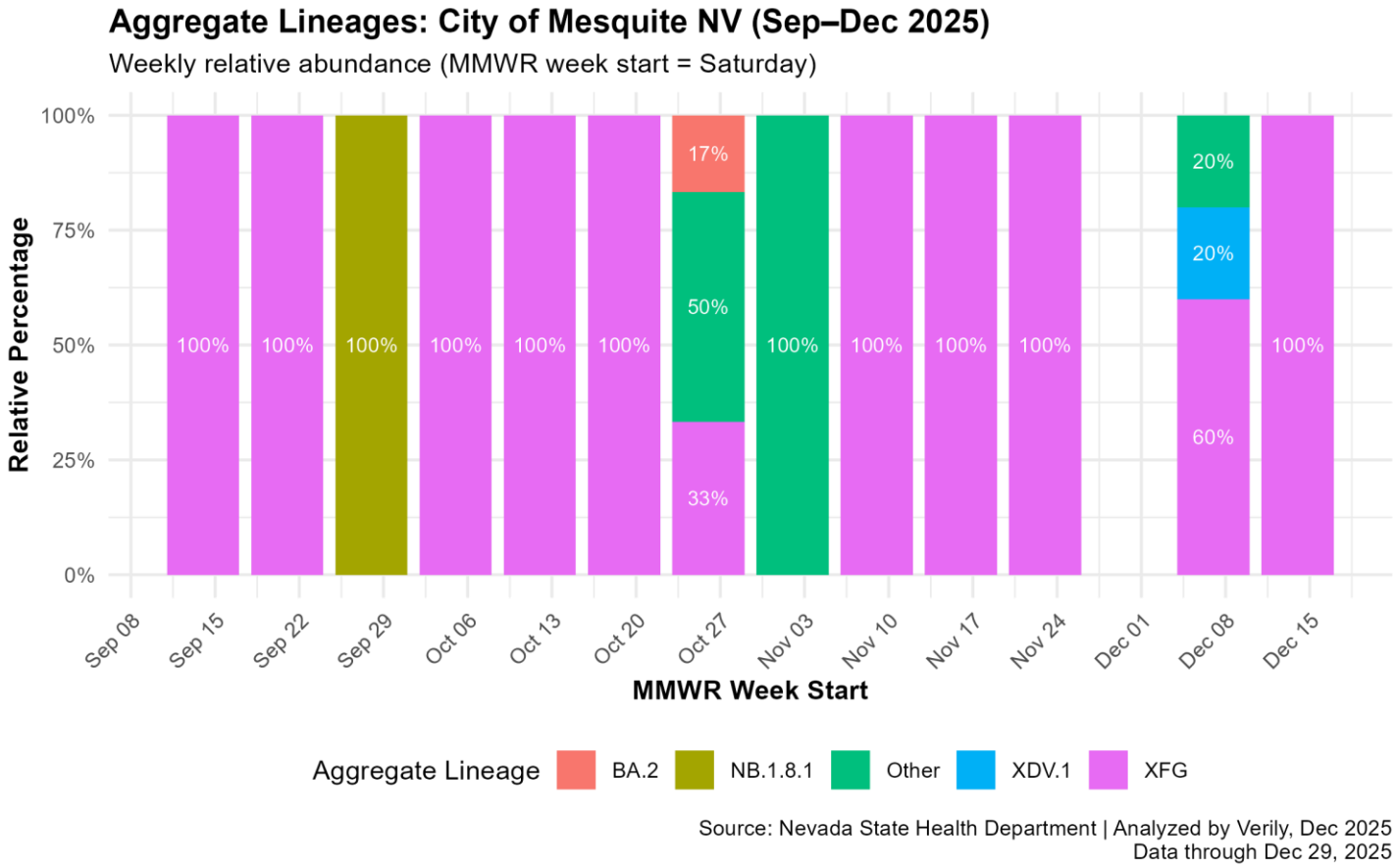
The chart shows SARS-CoV-2 lineage composition at Flamingo Water Reclamation District from September to December 2025. XFG dominated most weeks, accounting for 80–100% of detections. LF.7 appeared intermittently, reaching 20–25% in mid-September and late October. On November 24, diversity increased: XFG dropped to 56%, BA.2.86 rose to 16%, LF.7 to 12%, and JN.1/JN.1.16 each at 8%. In December, LF.7.7.1 reached 12% on December 8, while XFG was 88%. By December 15, XFG fell to 82%, LF.7.7.1 and LF.7 each at 9%, before XFG returned to 100% on December 22.



Note: Data for the week of December 1, is missing and not represented in the dataset.

Mesquite Wastewater Treatment Plant

The chart shows SARS-CoV-2 lineage composition in Mesquite wastewater from September to December 2025. XFG dominated most of the period, maintaining 100% prevalence for several weeks. NB.1.8.1 briefly reached 100% on September 29. On October 27, diversity increased: XFG dropped to 33%, minor lineages collectively made up 50%, and BA.2 appeared at 17%. From November 3–24, XFG regained full dominance. By December, XFG held 60%, XDV and XDV.1 each about 20%, with XFG returning to 100% mid-month. Overall, variation was minimal and short-lived.

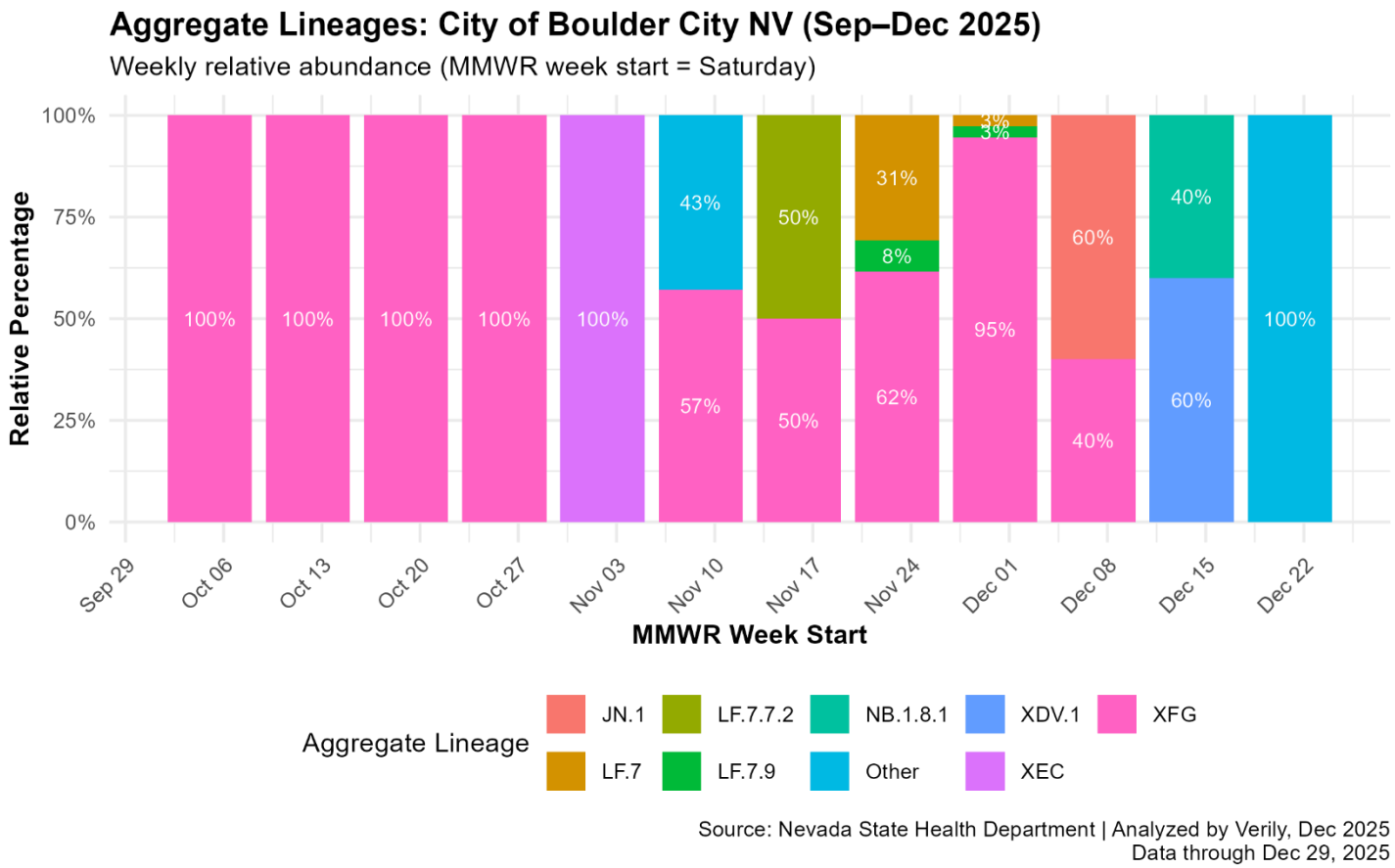


Source: Nevada State Health Department | Analyzed by Verily, Dec 2025
Data through Dec 29, 2025

Note: Data for the week of December 1, is missing and not represented in the dataset.

Boulder City Wastewater Treatment Plant

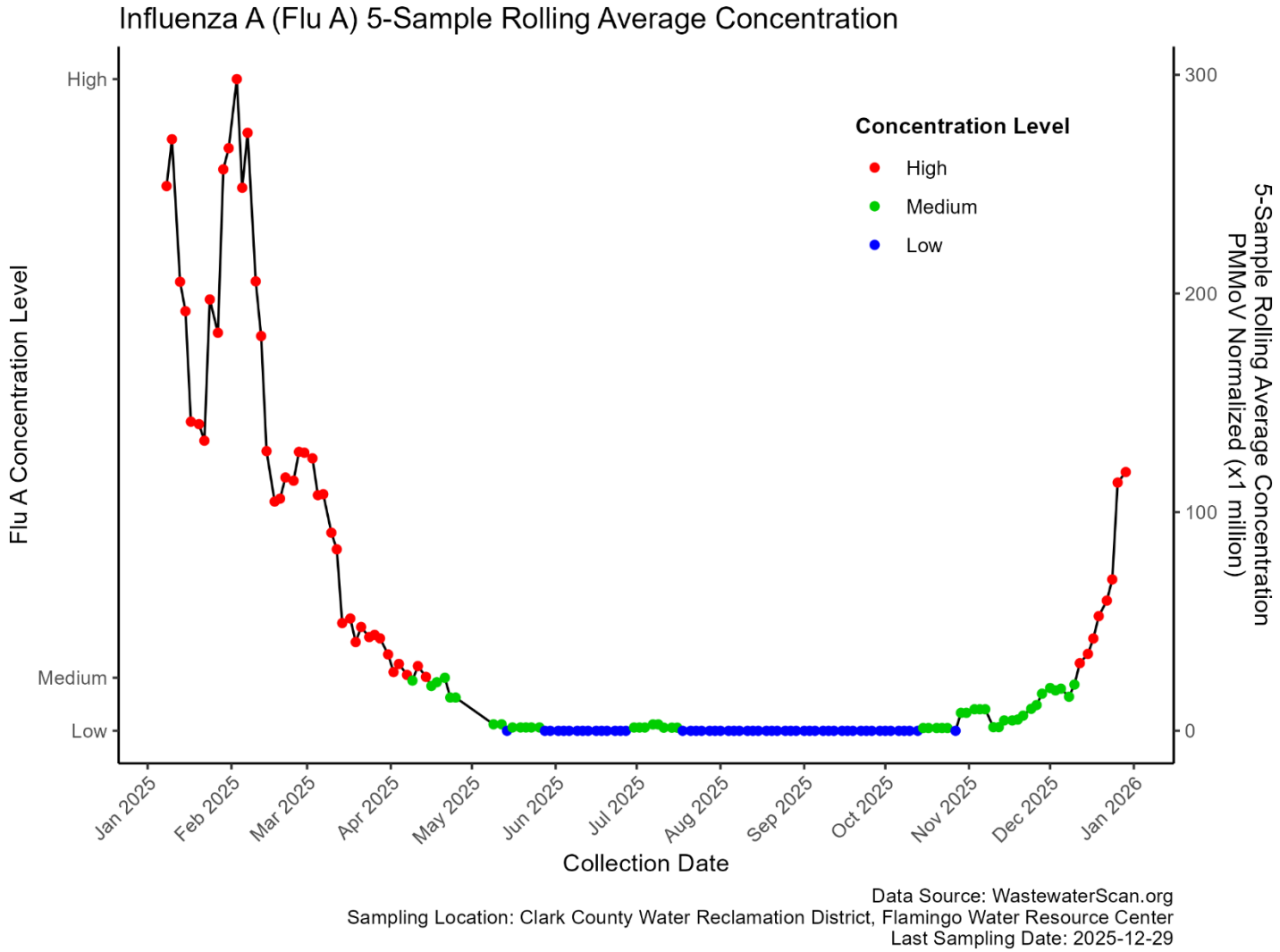
The chart shows SARS-CoV-2 lineage composition in Boulder City wastewater from October 6 to December 22, 2025. Initially, XFG dominated with 100% prevalence until late October. XEC briefly reached 100% on November 2. Diversity increased in November, with XFG dropping to 57% and LF.7.7.2 emerging. By December, JN.1 rose to 60%, later replaced by NB.1.8.1 (40%) and XDV.1 (60%). Minor lineages appeared intermittently, and by December 22, “Others” accounted for 100%, indicating transient but notable variation.



Influenza A Viral Concentration Trends in Clark County

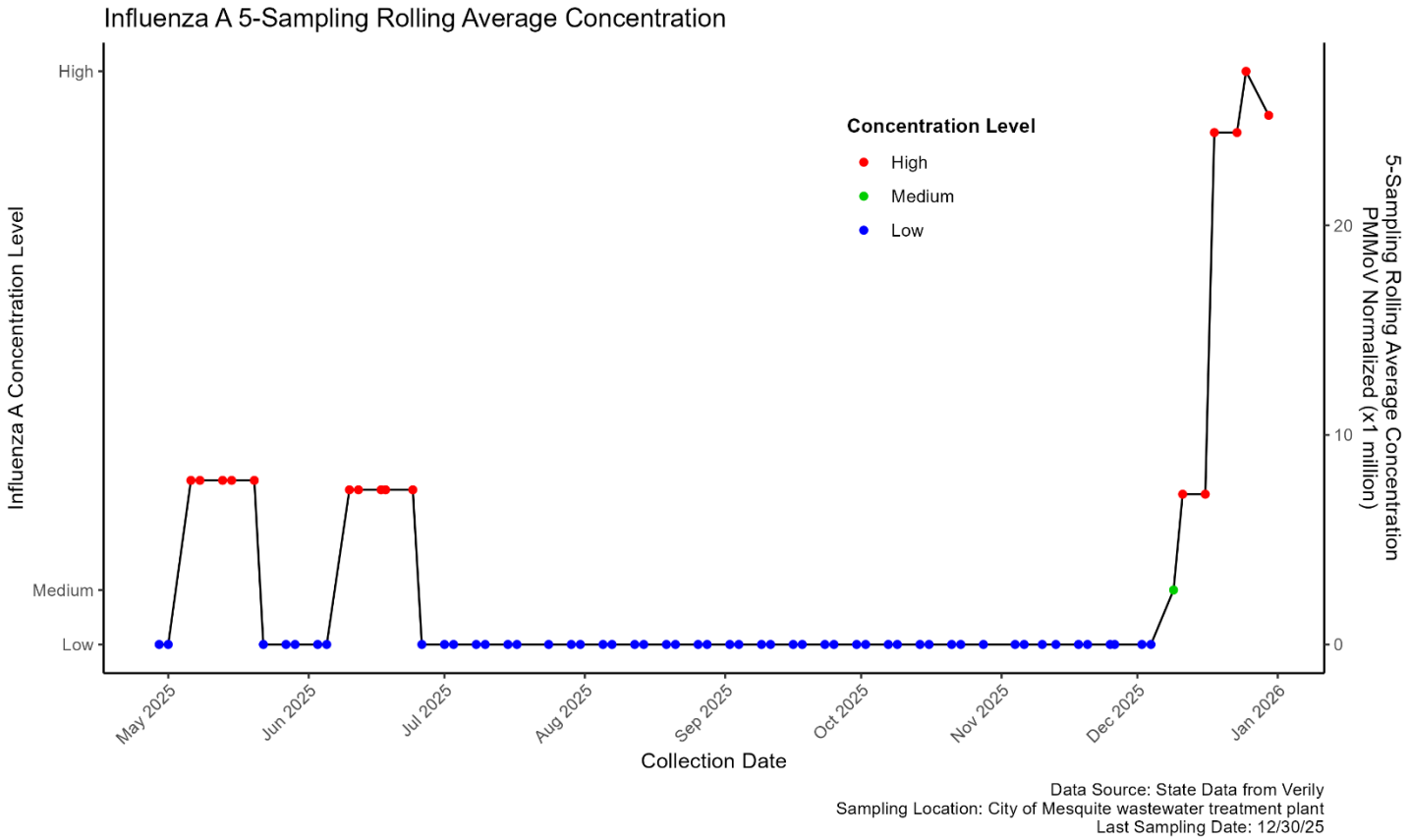
Flamingo Water Reclamation District Plant

The chart shows Influenza A concentrations at the Flamingo Water Resource Center from January to December 2025 using a 5-sample rolling average normalized to PMMoV. Levels were high from January through April, then dropped to medium and later to low by mid-May. A brief rise to medium occurred in July, followed by consistently low levels from August to mid-October. Concentrations increased to medium in late October and rose again to high by mid-December.



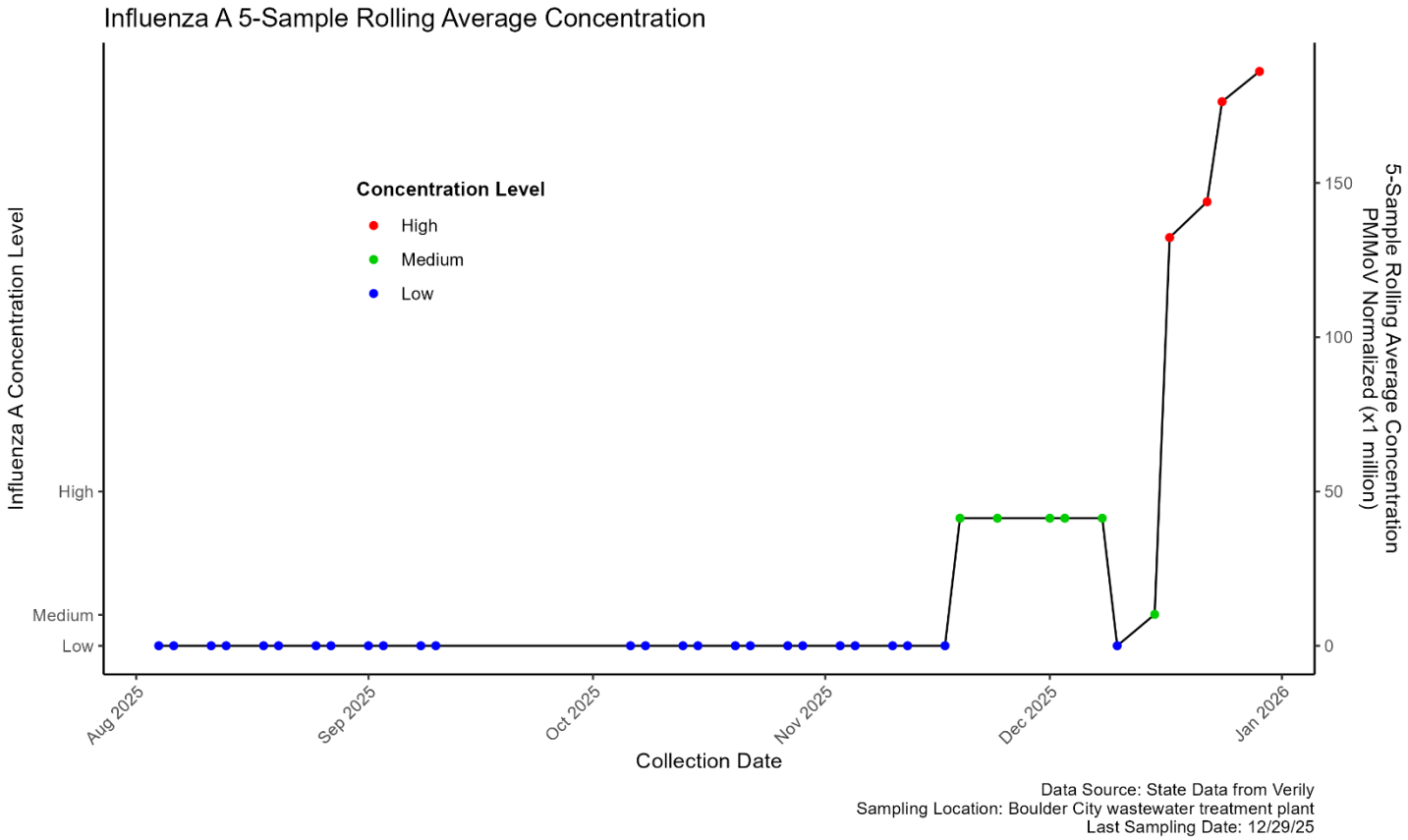
City of Mesquite Wastewater Treatment Plant

The chart shows Influenza A concentrations at the Mesquite wastewater treatment plant from May to December 2025 using a 5-sample rolling average normalized to PMMoV. Levels were low in May, surged to high, then dropped back to low in June before rising to high again. From July through November, concentrations remained low. In December, levels increased to medium and then peaked at high by the end of the month.



Boulder City Wastewater Treatment Plant

The chart shows Influenza A concentrations at the Boulder City wastewater treatment plant from August to December 2025 using a 5-sample rolling average normalized to PMMoV. Levels stayed low from August through mid-November, then rose to medium before briefly dropping back to low. In late December, concentrations increased again, rising from medium to high.



Interpretation of Influenza A Concentrations

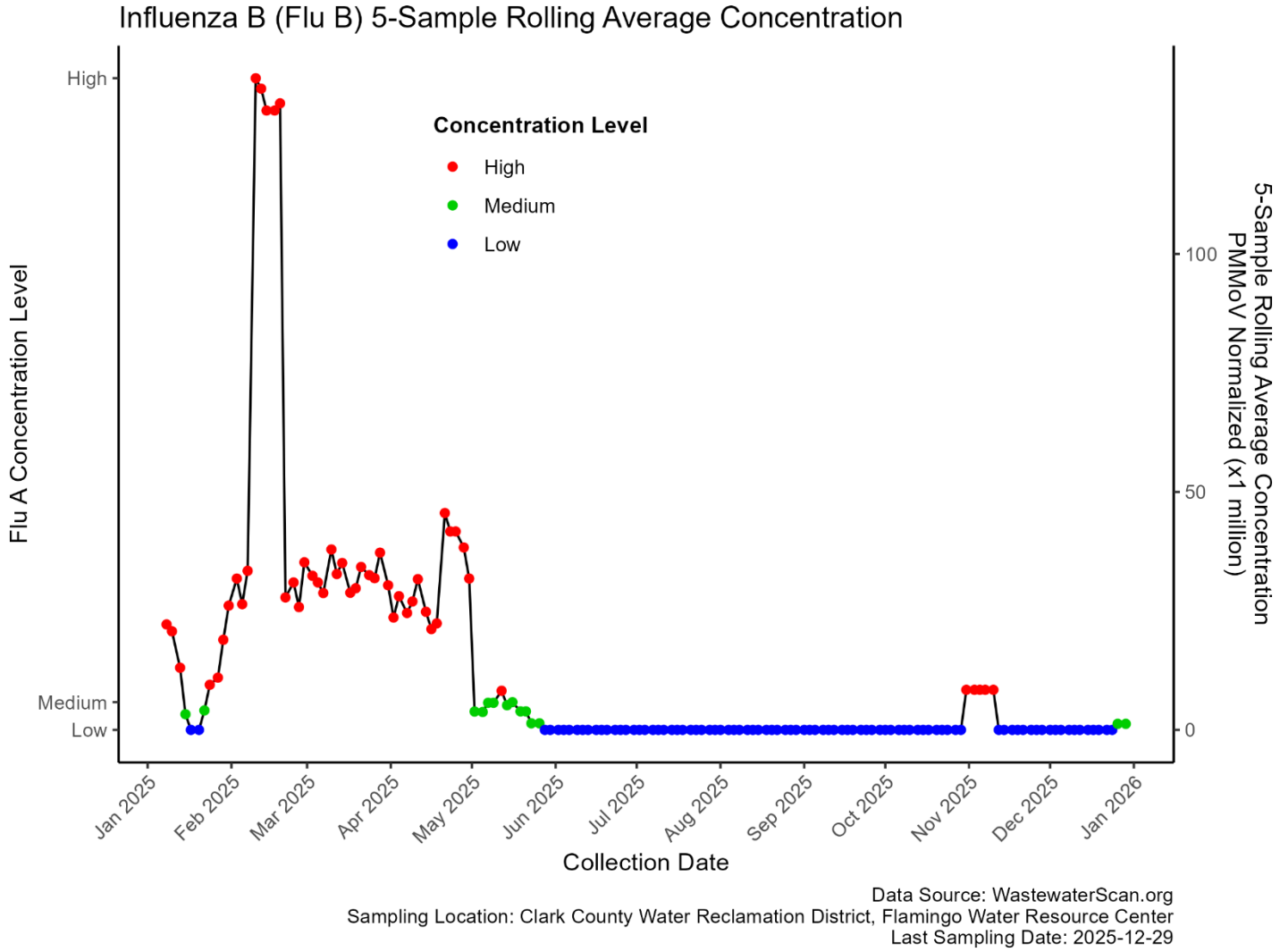
As of December 31, 2025, Influenza A concentrations in wastewater show significant activity across Nevada, California, and Utah. Boulder City recorded the highest level at 186.21 GC/L (↑), followed by Flamingo at 118.34 GC/L (↑) and Provo at 143.19 GC/L (↑). Mesquite reported 25.25 GC/L (↑). California sites showed mixed trends, with A.K. Warren at 14.99 GC/L (↑) and Hyperion at 13.99 GC/L (↓).

Plant Name	City	Time frame	5 Sample Rolling Mean	14 Day Trend	Last Sampling Dates
Flamingo Water Resource Center	Las Vegas, NV	Current	118.34	↑	December 29 2025
Mesquite Wastewater Treatment Plant	City of Mesquite, NV	Current	25.25	↑	December 30 2025
Boulder Wastewater Treatment Plant	Boulder City, NV	Current	186.21	↑	December 29 2025
A.K. Warren Water Resource Facility	Los Angeles County, CA	Current	14.99	↑	December 29 2025
Hyperion Water Reclamation Plant (HWRP)	Los Angeles, CA	Current	13.99	↓	December 29 2025
Central Valley Water Reclamation Facility	Central Salt Lake Valley, UT	Current	110.29	↑	December 29 2025
Provo City Water Reclamation Facility	Provo, UT	Current	143.19	↑	December 29 2025
Regional Water Recycling Plant No.1 (RP-1)	Ontario, CA	Current	9.10	↑	December 31 2025
Riverside Water Quality Control Plant	Riverside, CA	Current	37.79	↑	December 31 2025
Valley Sanitary District	Indio, CA	Current	4.22	↑	December 31 2025

Influenza B Viral Concentration Trends in Clark County

Flamingo Water Reclamation District Plant

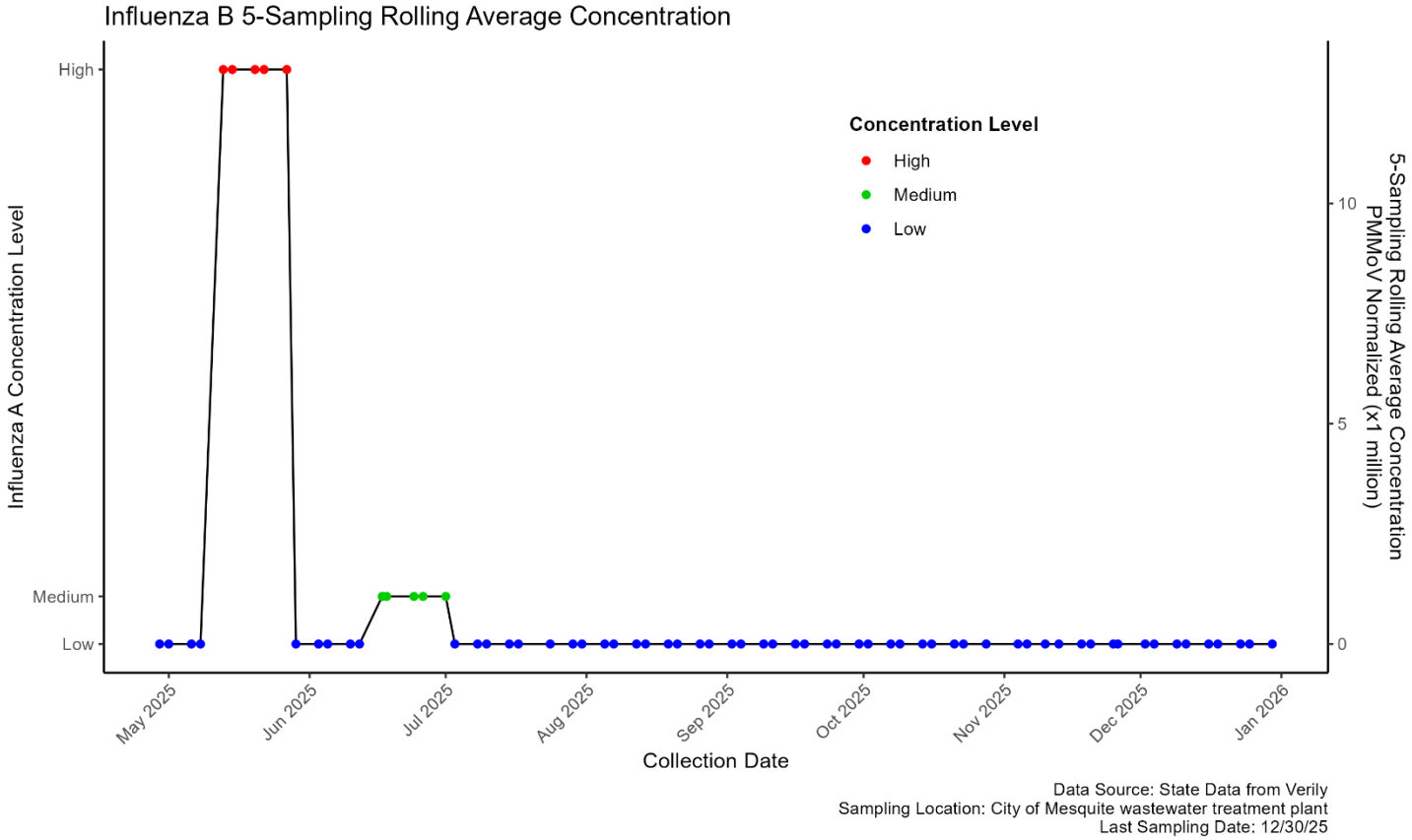
The chart shows Influenza B concentrations at the Flamingo Water Reclamation District from January to December 2025 using a 5-sample rolling average normalized to PMMoV. Levels were high in January, dropped to medium and low, then rose again to a high peak in February before gradually declining. Concentrations fell to medium in May and to low by June, remaining low through October. In November, levels briefly increased to high, dropped back to low, and then rose to medium in late December.



Data Source: WastewaterScan.org
Sampling Location: Clark County Water Reclamation District, Flamingo Water Resource Center
Last Sampling Date: 2025-12-29

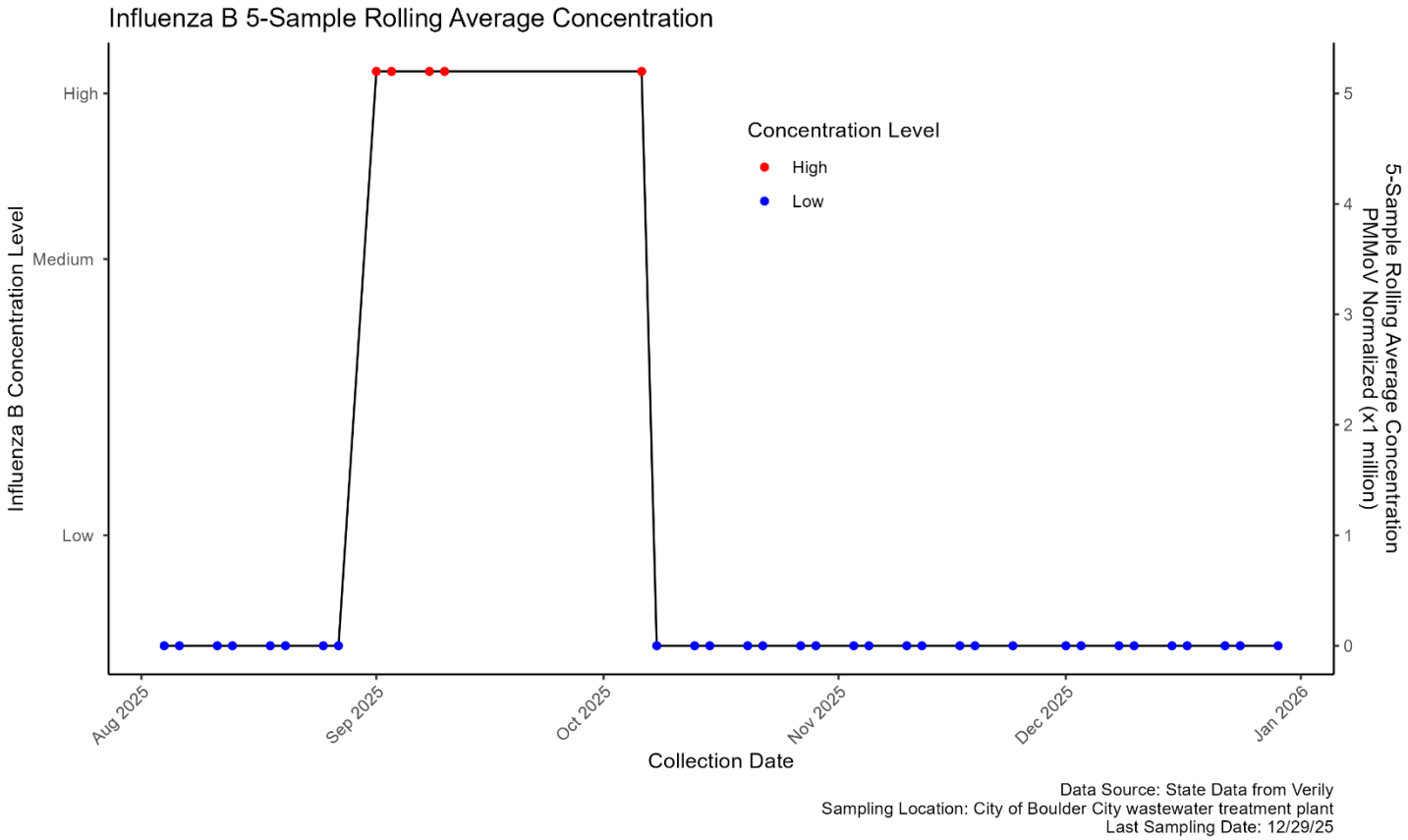
City of Mesquite Wastewater Treatment Plant

The chart shows Influenza B concentrations at the Mesquite wastewater treatment plant from May to December 2025 using a 5-sample rolling average normalized to PMMoV. Levels were low in May, then rose sharply to high before dropping to low in June. Mid-June saw a brief increase to medium, followed by another decline to low, where concentrations remained through late December.



Boulder City Wastewater Treatment Plant

The chart shows Influenza B concentrations at the Boulder City wastewater treatment plant from August to December 2025 using a 5-sample rolling average normalized to PMMoV. Levels remained consistently low through late August, then surged to high in early September and stayed elevated until early October. Afterward, concentrations declined back to low and remained stable at low levels throughout November and December.



Interpretation of Influenza B Concentrations

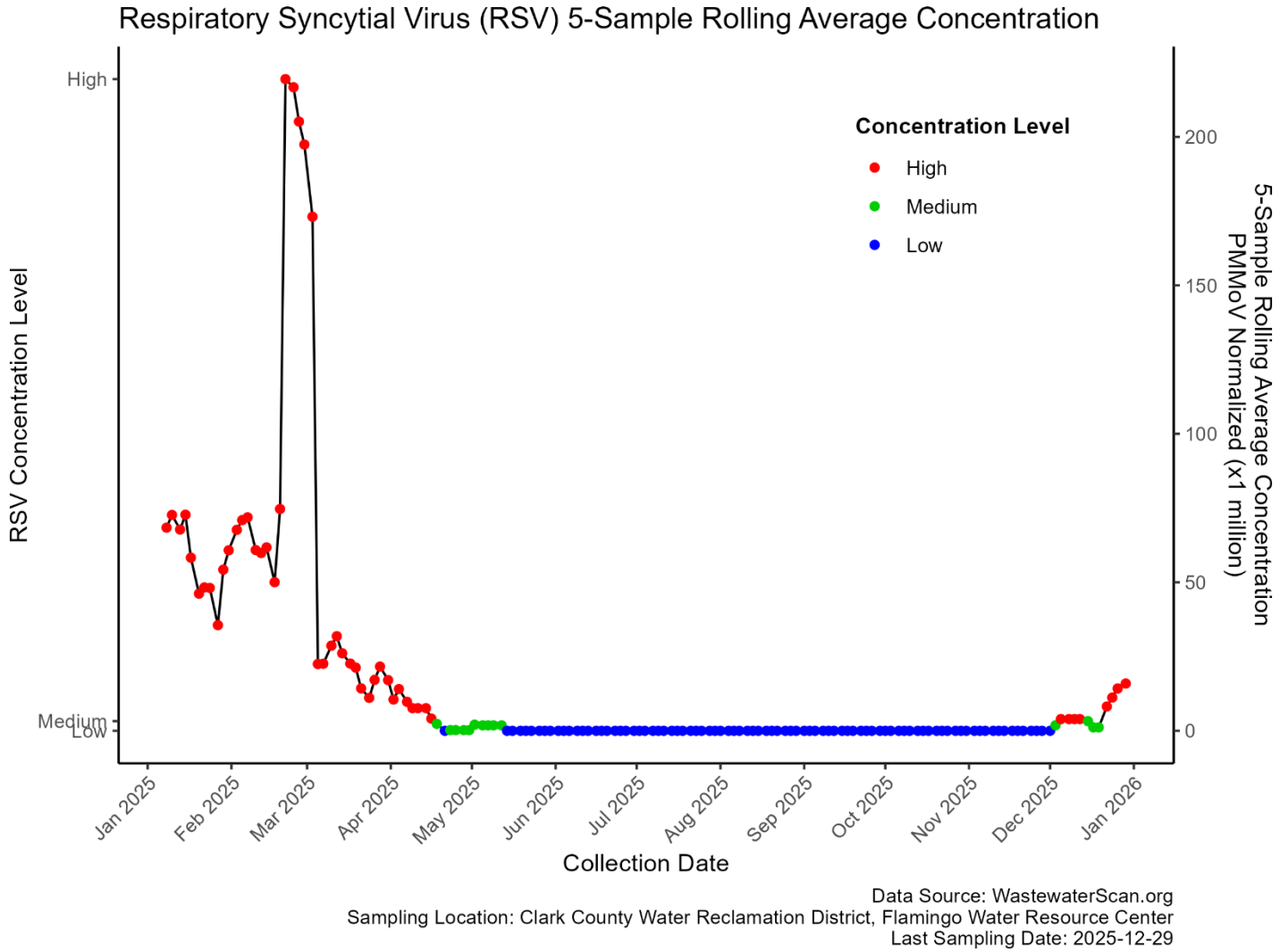
As of December 31, 2025, Influenza B remains nearly undetectable across most wastewater facilities in Nevada, California, and Utah. Nevada and California sites, including Las Vegas, Mesquite, Boulder City, and Los Angeles, reported levels near zero. However, Utah showed localized increases, with Central Valley at 32.27 GC/L (↑) and Provo City at 68.12 GC/L (↑), indicating minimal but rising activity in Utah.

Plant Name	City	Time frame	5 Sample Rolling Mean	14 Day Trend	Last Sampling Dates
Flamingo Water Resource Center	Las Vegas, NV	Current	1.27	↑	December 29 2025
Mesquite Wastewater Treatment Plant	City of Mesquite, NV	Current	0.00	→	December 30 2025
Boulder Wastewater Treatment Plant	Boulder City, NV	Current	0.00	→	December 29 2025
A.K. Warren Water Resource Facility	Los Angeles County, CA	Current	0.00	→	December 29 2025
Hyperion Water Reclamation Plant (HWRP)	Los Angeles, CA	Current	0.00	→	December 29 2025
Central Valley Water Reclamation Facility	Central Salt Lake Valley, UT	Current	32.27	↑	December 29 2025
Provo City Water Reclamation Facility	Provo, UT	Current	68.12	↑	December 29 2025
Regional Water Recycling Plant No.1 (RP-1)	Ontario, CA	Current	0.51	→	December 31 2025
Riverside Water Quality Control Plant	Riverside, CA	Current	0.00	→	December 31 2025
Valley Sanitary District	Indio, CA	Current	0.00	→	December 31 2025

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

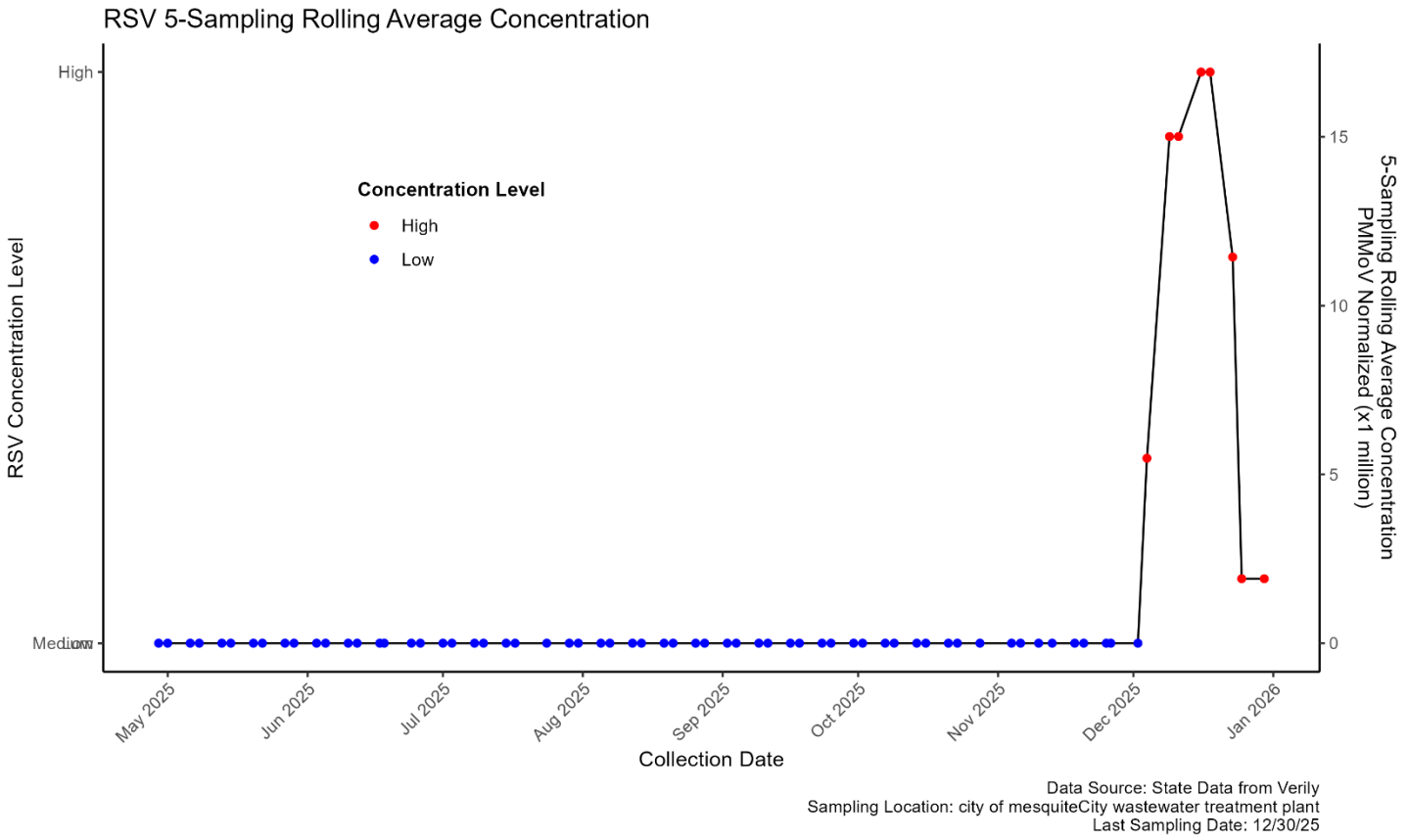
Flamingo Water Reclamation District Plant

The chart shows RSV concentrations at the Flamingo Water Resource Center from January through December 2025 using a 5-sample rolling average normalized to PMMoV. Levels were high at the start of the year, peaking in mid-February at around 200 GC/L. Concentrations declined afterward but stayed high until April, then shifted to medium before dropping to low in mid-May. RSV levels remained low through most of the year, rising briefly to medium and then fluctuating between high and medium in December.



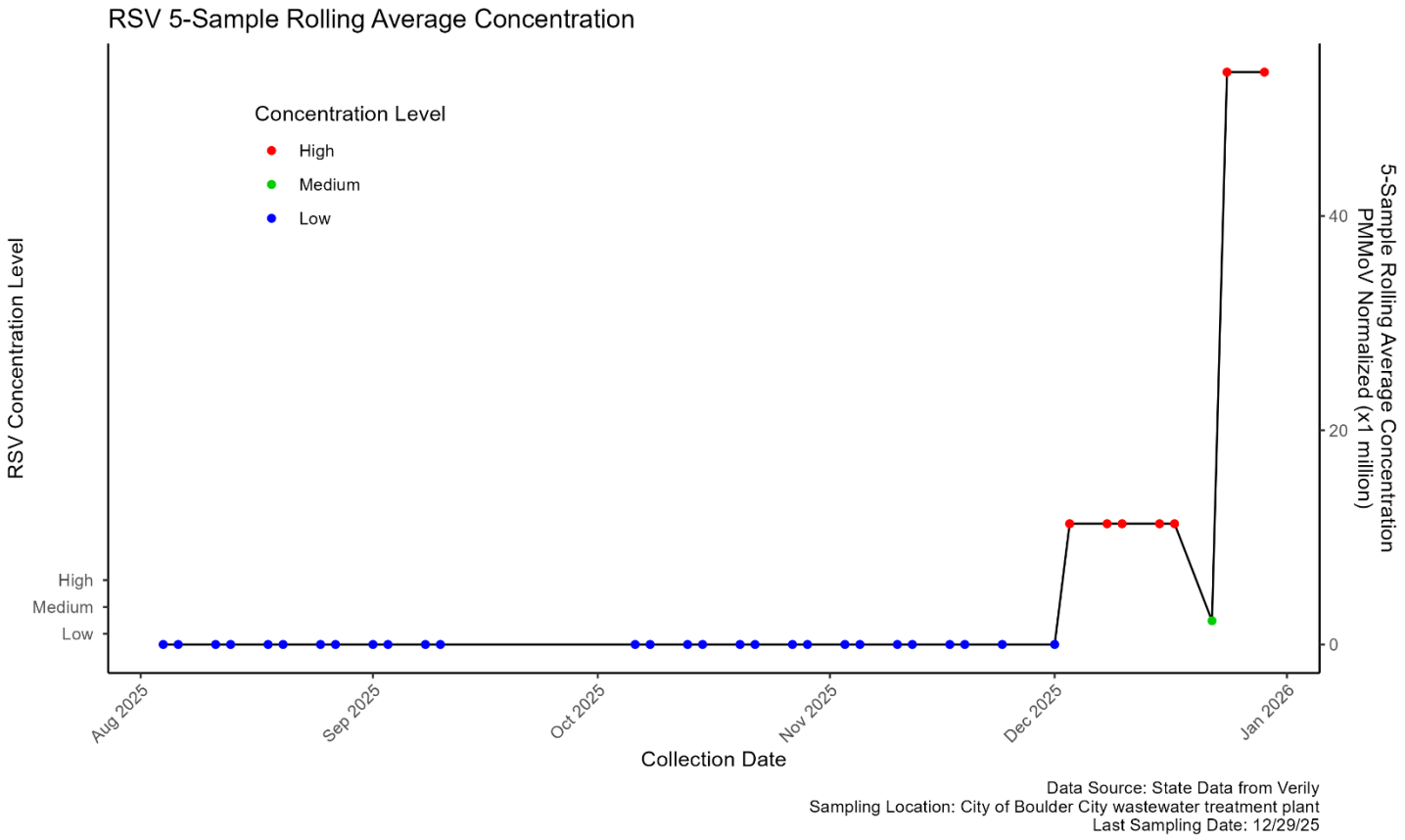
City of Mesquite Wastewater Treatment Plant

The chart shows RSV concentrations at the Mesquite wastewater treatment plant from May through December 2025 using a 5-sample rolling average normalized to PMMoV. Levels remained low from May through November, then rose sharply to high in December. Although concentrations dipped slightly in late December, they remained within the high range overall.



Boulder City Wastewater Treatment Plant

The chart shows RSV concentrations at the Boulder City wastewater treatment plant from August through December 2025 using a 5-sample rolling average normalized to PMMoV. Levels remained low from August until late November. In early December, concentrations spiked to high, briefly dipped to medium, and then surged again to high by late December.



Respiratory Syncytial Virus (RSV) Concentrations Interpretation

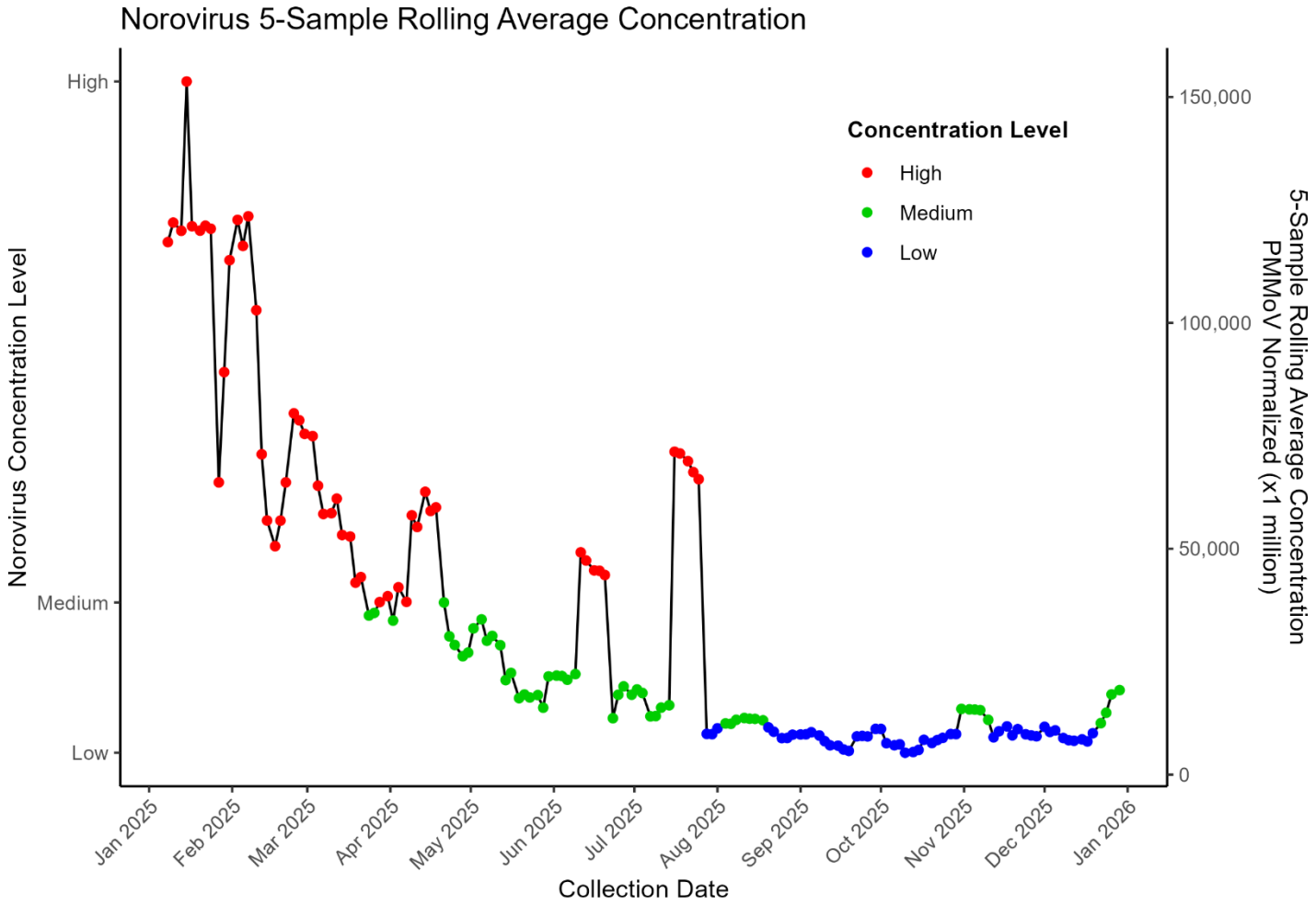
As of December 31, 2025, RSV levels in wastewater remain generally low but show upward trends at most sites. Boulder City recorded the highest concentration at 53.20 GC/L (↑), while Flamingo in Las Vegas reported 8.18 GC/L (↑). Mesquite showed a slight decline at 1.92 GC/L (↓). California and Utah sites, including Hyperion (11.34 GC/L ↑) and Provo (6.64 GC/L ↑), also indicate rising activity, suggesting increased RSV circulation regionally.

Plant Name	City	Time frame	5 Sample Rolling Mean	14 Day Trend	Last Sampling Dates
Flamingo Water Resource Center	Las Vegas, NV	Current	8.18		December 29 2025
Mesquite Wastewater Treatment Plant	City of Mesquite, NV	Current	1.92		December 30 2025
Boulder Wastewater Treatment Plant	Boulder City, NV	Current	53.20		December 29 2025
A.K. Warren Water Resource Facility	Los Angeles County, CA	Current	5.94		December 29 2025
Hyperion Water Reclamation Plant (HWRP)	Los Angeles, CA	Current	11.34		December 29 2025
Central Valley Water Reclamation Facility	Central Salt Lake Valley, UT	Current	4.61		December 29 2025
Provo City Water Reclamation Facility	Provo, UT	Current	6.64		December 29 2025
Regional Water Recycling Plant No.1 (RP-1)	Ontario, CA	Current	6.68		December 31 2025
Riverside Water Quality Control Plant	Riverside, CA	Current	3.93		December 31 2025
Valley Sanitary District	Indio, CA	Current	2.67		December 31 2025

Norovirus Viral Concentration Trends in Clark County

Flamingo Water Reclamation District Plant

The chart shows Norovirus concentrations at the Flamingo Water Resource Center from January through December 2025 using a 5-sample rolling average normalized to PMMoV. Levels were extremely high in January and February before steadily declining to medium by April. Concentrations briefly rose to high in June, then shifted to medium in July. In August, levels spiked again to high, dropped to low, and briefly returned to medium midmonth. From September to October, concentrations remained low, increased to medium in November, dipped again, and rose back to medium in mid-December.



Data Source: WastewaterScan.org
Sampling Location: Clark County Water Reclamation District, Flamingo Water Resource Center
Last Sampling Date: 12/29/25

Interpretation of Norovirus Concentrations

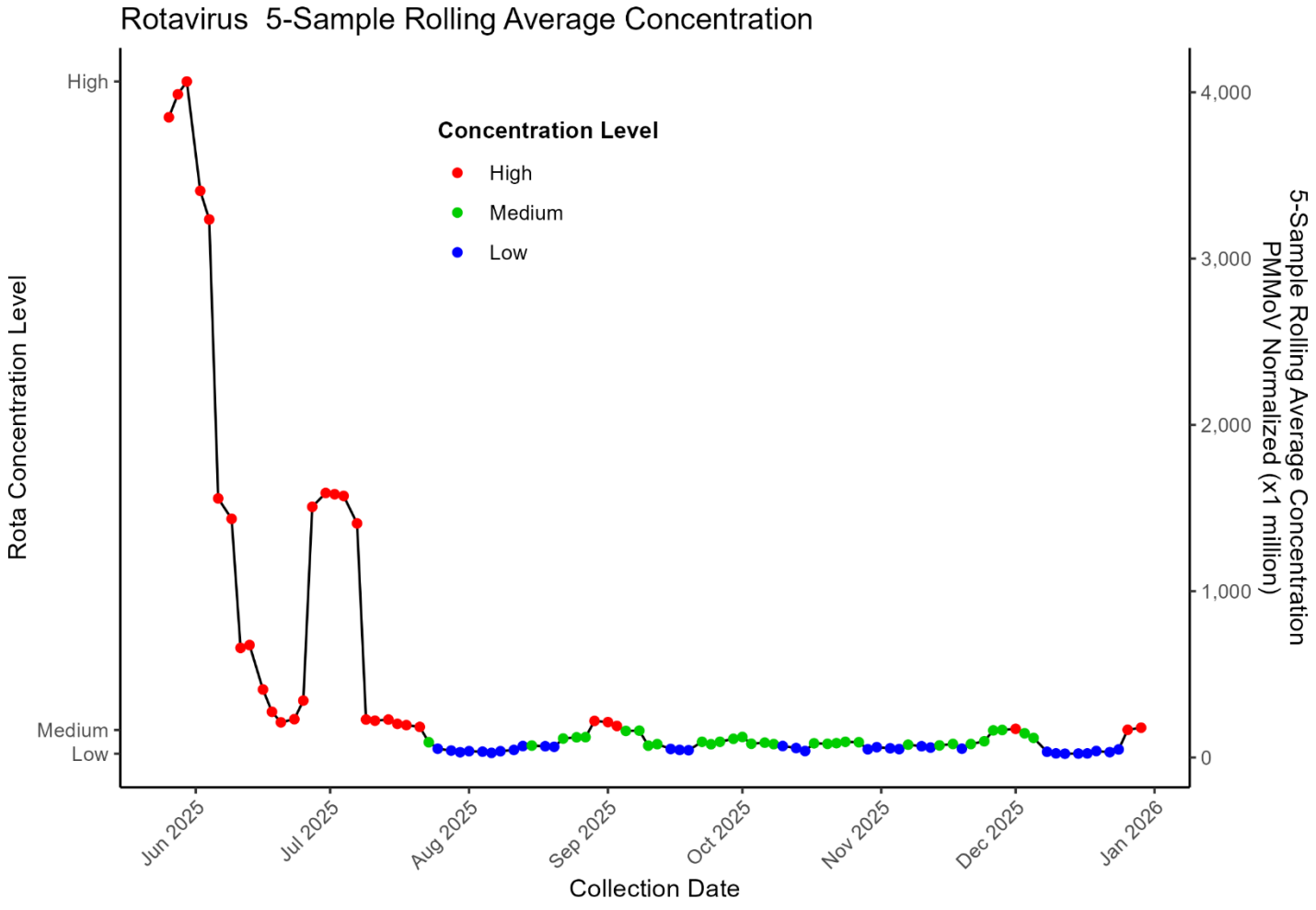
As of December 31, 2025, Norovirus concentrations in wastewater across Nevada, California, and Utah show widespread and elevated activity with increasing trends. Provo City recorded the highest level at 22,579.91 GC/L (↑), followed by RP-1 Ontario at 17,521.47 GC/L (↑) and Central Valley at 16,935.71 GC/L (↑). Flamingo in Las Vegas reported 18,698.32 GC/L (↑), while California sites like Hyperion (15,571.81 GC/L ↑) and Riverside (14,476.73 GC/L ↑) also showed significant levels.

Plant Name	City	Time frame	5 Sample Rolling Mean	14 Day Trend	Last Sampling Dates
Flamingo Water Resource Center	Las Vegas, NV	Current	18,698.32	↑	December 29 2025
Mesquite Wastewater Treatment Plant	City of Mesquite, NV	Current	Not Tested		December 30 2025
Boulder Wastewater Treatment Plant	Boulder City, NV	Current	Not Tested		December 29 2025
A.K. Warren Water Resource Facility	Los Angeles County, CA	Current	10,016.61	↑	December 29 2025
Hyperion Water Reclamation Plant (HWRP)	Los Angeles, CA	Current	15,571.81	↑	December 29 2025
Central Valley Water Reclamation Facility	Central Salt Lake Valley, UT	Current	16,935.71	↑	December 29 2025
Provo City Water Reclamation Facility	Provo, UT	Current	22,579.91	↑	December 29 2025
Regional Water Recycling Plant No.1 (RP-1)	Ontario, CA	Current	17,521.47	↑	December 31 2025
Riverside Water Quality Control Plant	Riverside, CA	Current	14,476.73	↑	December 31 2025
Valley Sanitary District	Indio, CA	Current	5,902.06	↑	December 31 2025

Rotavirus Viral Concentration Trends in Clark County

Flamingo Water Reclamation District Plant

The chart shows Rotavirus concentrations at the Flamingo Water Resource Center from June through December 2025 using a 5-sample rolling average normalized to PMMoV. Levels peaked at high levels in early June, then dropped to medium and later to low by late July. In late August, concentrations rose again to medium and briefly reached high in September before returning to medium. Levels fluctuated between medium and low through the fall, rising again to high in late December.



Data Source: WastewaterScan.org
Sampling Location: Clark County Water Reclamation District, Flamingo Water Resource Center
Last Sampling Date: 2025-12-29

Interpretation of Rotavirus Concentrations

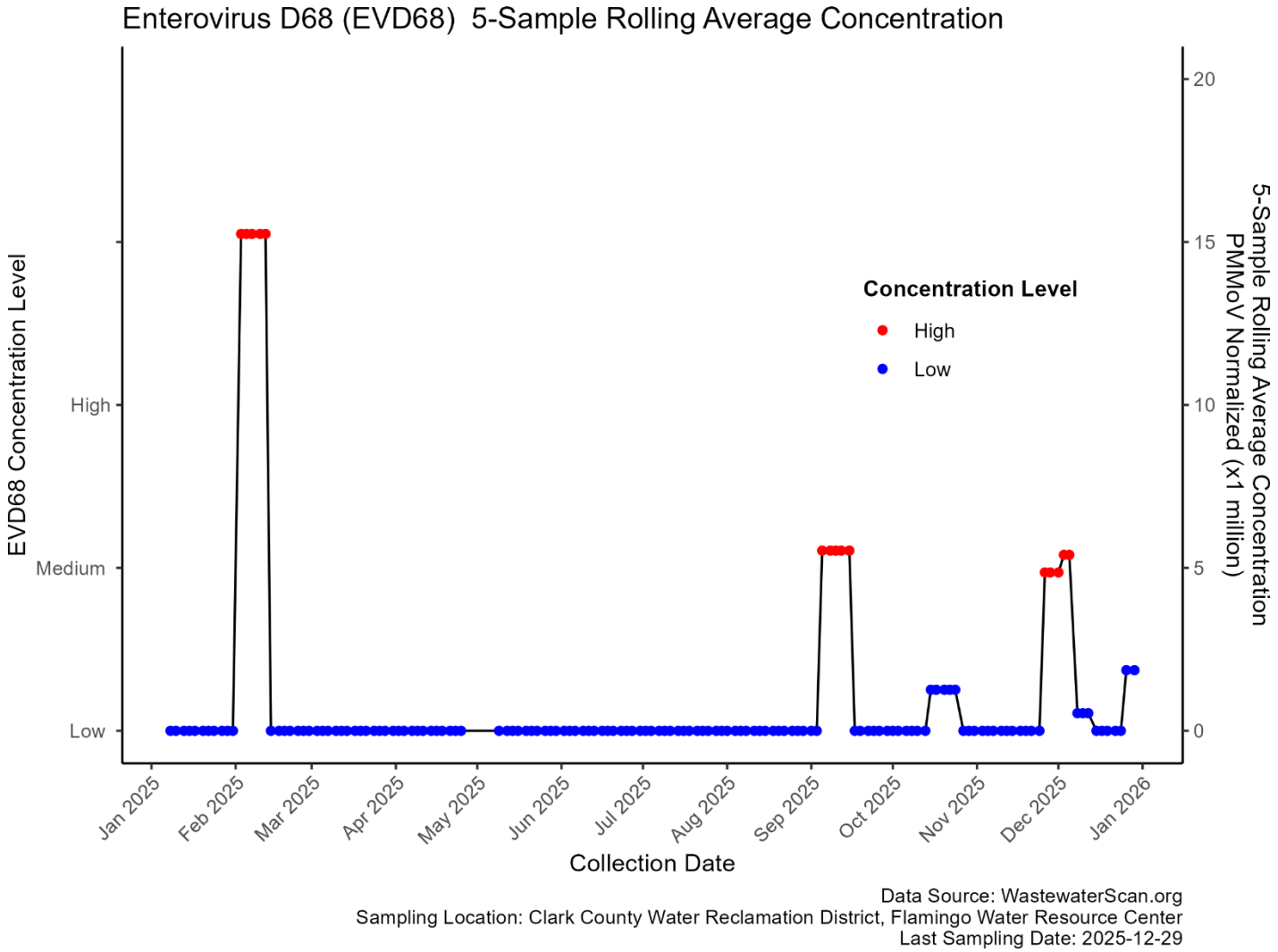
As of December 31, 2025, Rotavirus concentrations in wastewater across Nevada, California, and Utah show mixed trends. Flamingo in Las Vegas recorded the highest level at 179.47 GC/L (↑). California sites reported elevated levels: A.K. Warren at 111.90 GC/L (↑), Hyperion at 49.85 GC/L (↑), RP-1 Ontario at 96.81 GC/L (↑), and Riverside at 34.79 GC/L (↓). Utah sites showed Central Valley at 41.15 GC/L (↑) and Provo at 59.83 GC/L (↓), while Valley Sanitary District remained low at 2.71 GC/L (↓).

Plant Name	City	Time frame	5 Sample Rolling Mean	14 Day Trend	Last Sampling Dates
Flamingo Water Resource Center	Las Vegas, NV	Current	179.47	↑	December 29 2025
Mesquite Wastewater Treatment Plant	City of Mesquite, NV	Current	Not Tested		December 30 2025
Boulder Wastewater Treatment Plant	Boulder City, NV	Current	Not Tested		December 29 2025
A.K. Warren Water Resource Facility	Los Angeles County, CA	Current	111.90	↑	December 29 2025
Hyperion Water Reclamation Plant (HWRP)	Los Angeles, CA	Current	49.85	↑	December 29 2025
Central Valley Water Reclamation Facility	Central Salt Lake Valley, UT	Current	41.15	↑	December 29 2025
Provo City Water Reclamation Facility	Provo, UT	Current	59.83	↓	December 29 2025
Regional Water Recycling Plant No.1 (RP-1)	Ontario, CA	Current	96.81	↑	December 31 2025
Riverside Water Quality Control Plant	Riverside, CA	Current	34.79	↓	December 31 2025
Valley Sanitary District	Indio, CA	Current	2.71	↓	December 31 2025

Enterovirus D68 Viral Concentration Trends in Clark County

Flamingo Water Reclamation District Plant

The chart shows *Enterovirus D68* concentrations at the Flamingo Water Resource Center from January through December 2025 using a 5-sample rolling average normalized to PMMoV. Levels were low at the start of the year, spiking to high in February before dropping back to low by midmonth. Concentrations then remained low throughout most of the year, with two notable increases, one in September and another in December when levels rose to high again.



Interpretation of *Enterovirus D68* Concentrations

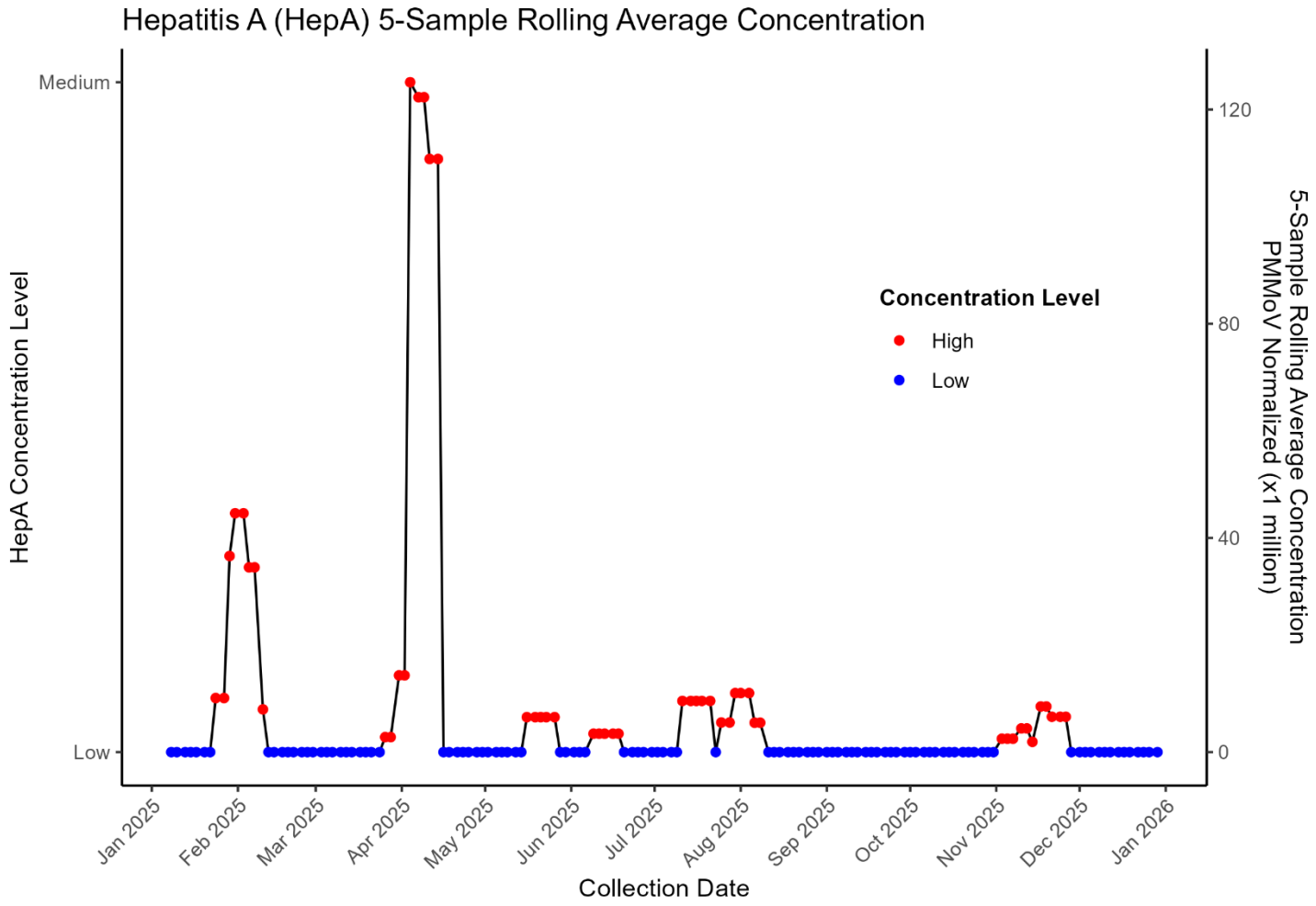
As of December 31, 2025, *Enterovirus D68* levels in wastewater across Nevada, California, and Utah remain low to moderate with mixed trends. Flamingo reported 1.86 GC/L (↑), while Mesquite and Boulder City were not tested. California sites showed variability: Riverside had the highest at 15.44 GC/L (↑), RP-1 Ontario 14.46 GC/L (↓), Hyperion 10.59 GC/L (↓), and A.K. Warren 8.75 GC/L (↓). Utah sites recorded minimal levels, with Central Valley at 1.77 GC/L (↓) and Provo at 0.00 GC/L (→).

Plant Name	City	Time frame	5 Sample Rolling Mean	14 Day Trend	Last Sampling Dates
Flamingo Water Resource Center	Las Vegas, NV	Current	1.86	↑	December 29 2025
Mesquite Wastewater Treatment Plant	City of Mesquite, NV	Current	Not Tested		December 30 2025
Boulder Wastewater Treatment Plant	Boulder City, NV	Current	Not Tested		December 29 2025
A.K. Warren Water Resource Facility	Los Angeles County, CA	Current	8.75	↓	December 29 2025
Hyperion Water Reclamation Plant (HWRP)	Los Angeles, CA	Current	10.59	↓	December 29 2025
Central Valley Water Reclamation Facility	Central Salt Lake Valley, UT	Current	1.77	↓	December 29 2025
Provo City Water Reclamation Facility	Provo, UT	Current	0.00	→	December 29 2025
Regional Water Recycling Plant No.1 (RP-1)	Ontario, CA	Current	14.46	↓	December 31 2025
Riverside Water Quality Control Plant	Riverside, CA	Current	15.44	↑	December 31 2025
Valley Sanitary District	Indio, CA	Current	5.97	↓	December 31 2025

Hepatitis A (HepA) Viral Concentration Trends in Clark County

Flamingo Water Reclamation District Plant

The chart shows Hepatitis A concentrations at the Flamingo Water Resource Center from January to December 2025 using a 5-sample rolling average. Two major spikes occurred in February and April, reaching high levels above 120 million PMMoV-normalized units, indicating significant transmission during these periods. After April, concentrations dropped sharply to low levels, with occasional minor upticks in summer and early fall. November showed a slight increase, but overall, HepA activity remained minimal for most of the year. The last sample, collected on December 29, confirms continued low levels.



Data Source: WastewaterScan.org
Sampling Location: Clark County Water Reclamation District, Flamingo Water Resource Center
Last Sampling Date: 2025-12-29

Interpretation of Hepatitis A Concentrations

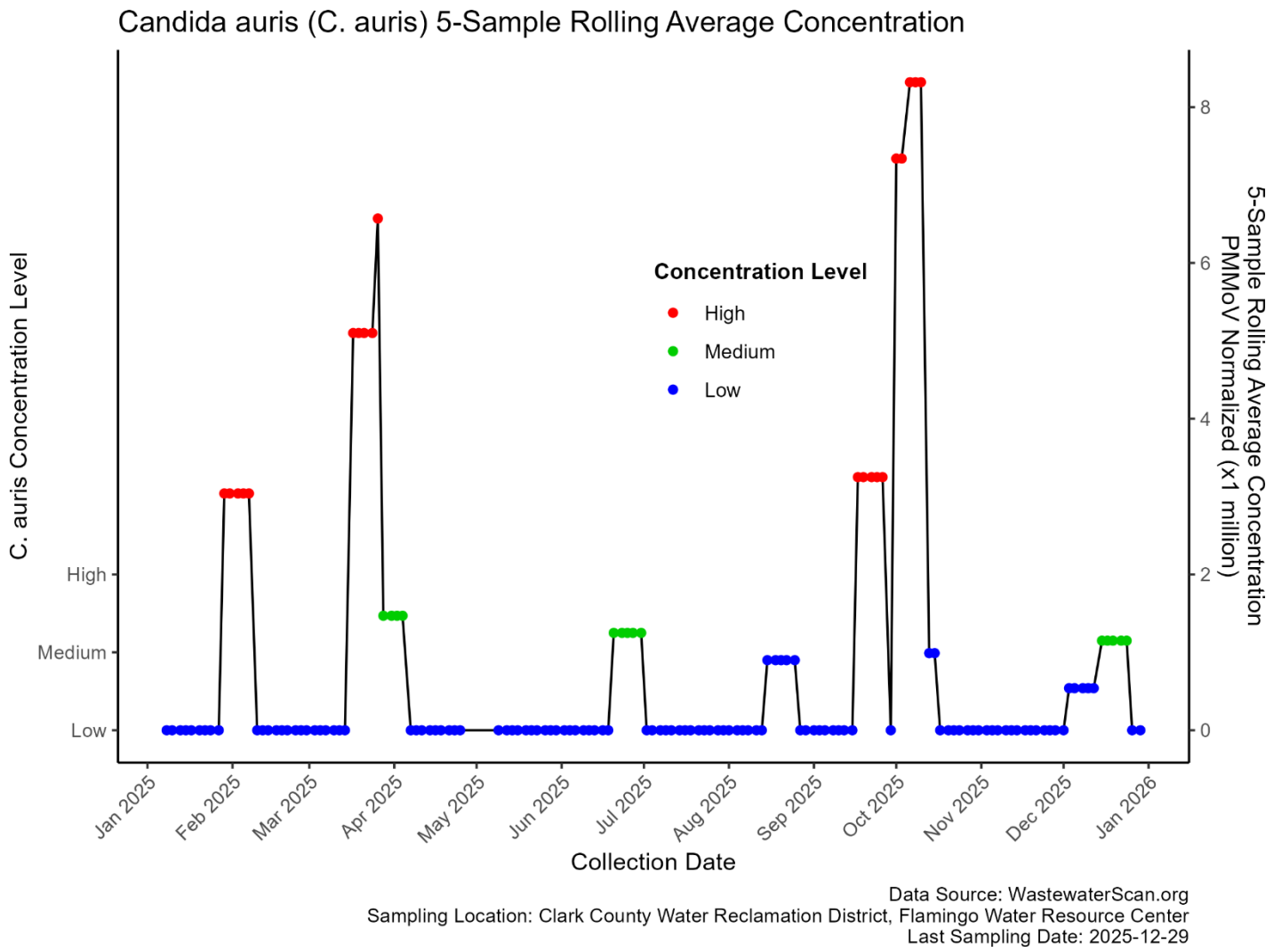
As of December 31, 2025, Hepatitis A concentrations in wastewater across Nevada, California, and Utah were mostly low or undetectable. Flamingo reported 0.00 GC/L (→), while Mesquite and Boulder City were not tested. California showed localized spikes, with Riverside at 291.31 GC/L (↓) and RP-1 Ontario at 12.34 GC/L (↓). A.K. Warren recorded 32.19 GC/L (↑), and minor increases occurred at Hyperion (6.34 GC/L), Central Valley (1.26 GC/L), and Provo (0.76 GC/L).

Plant Name	City	Time frame	5 Sample Rolling Mean	14 Day Trend	Last Sampling Dates
Flamingo Water Resource Center	Las Vegas, NV	Current	0.00	→	December 29 2025
Mesquite Wastewater Treatment Plant	City of Mesquite, NV	Current	Not Tested		December 30 2025
Boulder Wastewater Treatment Plant	Boulder City, NV	Current	Not Tested		December 29 2025
A.K. Warren Water Resource Facility	Los Angeles County, CA	Current	32.19	↑	December 29 2025
Hyperion Water Reclamation Plant (HWRP)	Los Angeles, CA	Current	6.34	↑	December 29 2025
Central Valley Water Reclamation Facility	Central Salt Lake Valley, UT	Current	1.26	↑	December 29 2025
Provo City Water Reclamation Facility	Provo, UT	Current	0.76	↑	December 29 2025
Regional Water Recycling Plant No.1 (RP-1)	Ontario, CA	Current	12.34	↓	December 31 2025
Riverside Water Quality Control Plant	Riverside, CA	Current	291.31	↓	December 31 2025
Valley Sanitary District	Indio, CA	Current	0.73	↑	December 31 2025

Candida Auris Fungal Concentration Trends in Clark County

Flamingo Water Reclamation District Plant

The chart shows *Candida auris* concentrations at the Flamingo Water Resource Center from January to December 2025 using a 5-sample rolling average. High levels occurred in February, April, September, and October, with the most pronounced peaks in April and October. Medium concentrations appeared briefly in April, July, and again in December.



Interpretation of *Candida Auris* Concentrations

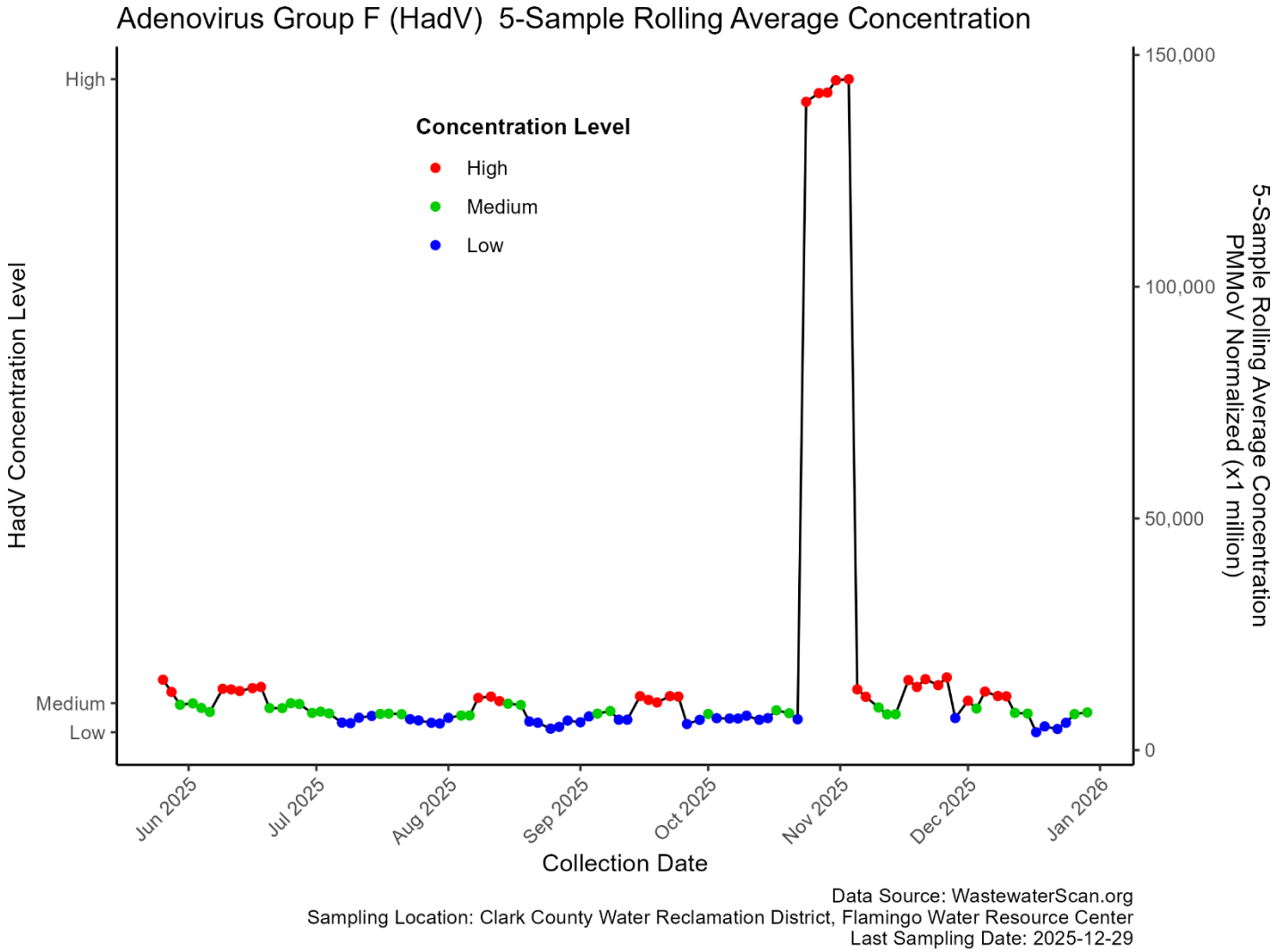
As of December 31, 2025, *Candida auris* concentrations in wastewater across Nevada, California, and Utah remain extremely low or undetectable. Flamingo and A.K. Warren reported 0.00 GC/L (↓), while Hyperion showed the highest level at 3.57 GC/L (→). Provo recorded 1.77 GC/L (↓), and RP-1 Ontario 1.91 GC/L (↑). Most other sites, including Riverside and Valley Sanitary District, reported 0.00 GC/L, indicating minimal regional activity.

Plant Name	City	Time frame	5 Sample Rolling Mean	14 Day Trend	Last Sampling Dates
Flamingo Water Resource Center	Las Vegas, NV	Current	0.00	↓	December 29 2025
Mesquite Wastewater Treatment Plant	City of Mesquite, NV	Current	Not Tested		December 30 2025
Boulder Wastewater Treatment Plant	Boulder City, NV	Current	Not Tested		December 29 2025
A.K. Warren Water Resource Facility	Los Angeles County, CA	Current	0.00	↓	December 29 2025
Hyperion Water Reclamation Plant (HWRP)	Los Angeles, CA	Current	3.57	→	December 29 2025
Central Valley Water Reclamation Facility	Central Salt Lake Valley, UT	Current	0.00	→	December 29 2025
Provo City Water Reclamation Facility	Provo, UT	Current	1.77	↓	December 29 2025
Regional Water Recycling Plant No.1 (RP-1)	Ontario, CA	Current	1.91	↑	December 31 2025
Riverside Water Quality Control Plant	Riverside, CA	Current	0.00	→	December 31 2025
Valley Sanitary District	Indio, CA	Current	0.00	→	December 31 2025

Adenovirus Group F Concentration Trends in Clark County

Flamingo Water Reclamation District Plant

The chart shows Adenovirus Group F (HadV) concentrations at the Flamingo Water Resource Center from June to December 2025 using a 5-sample rolling average. Levels fluctuated between high, medium, and low from June through October. A sharp increase occurred later in the period, with concentrations rising rapidly and peaking at approximately 150,000 GC/L. Levels then declined to medium and low before rising again to high. By late December, concentrations were low but increased once more to medium.



Interpretation of Adenovirus Group F Concentrations

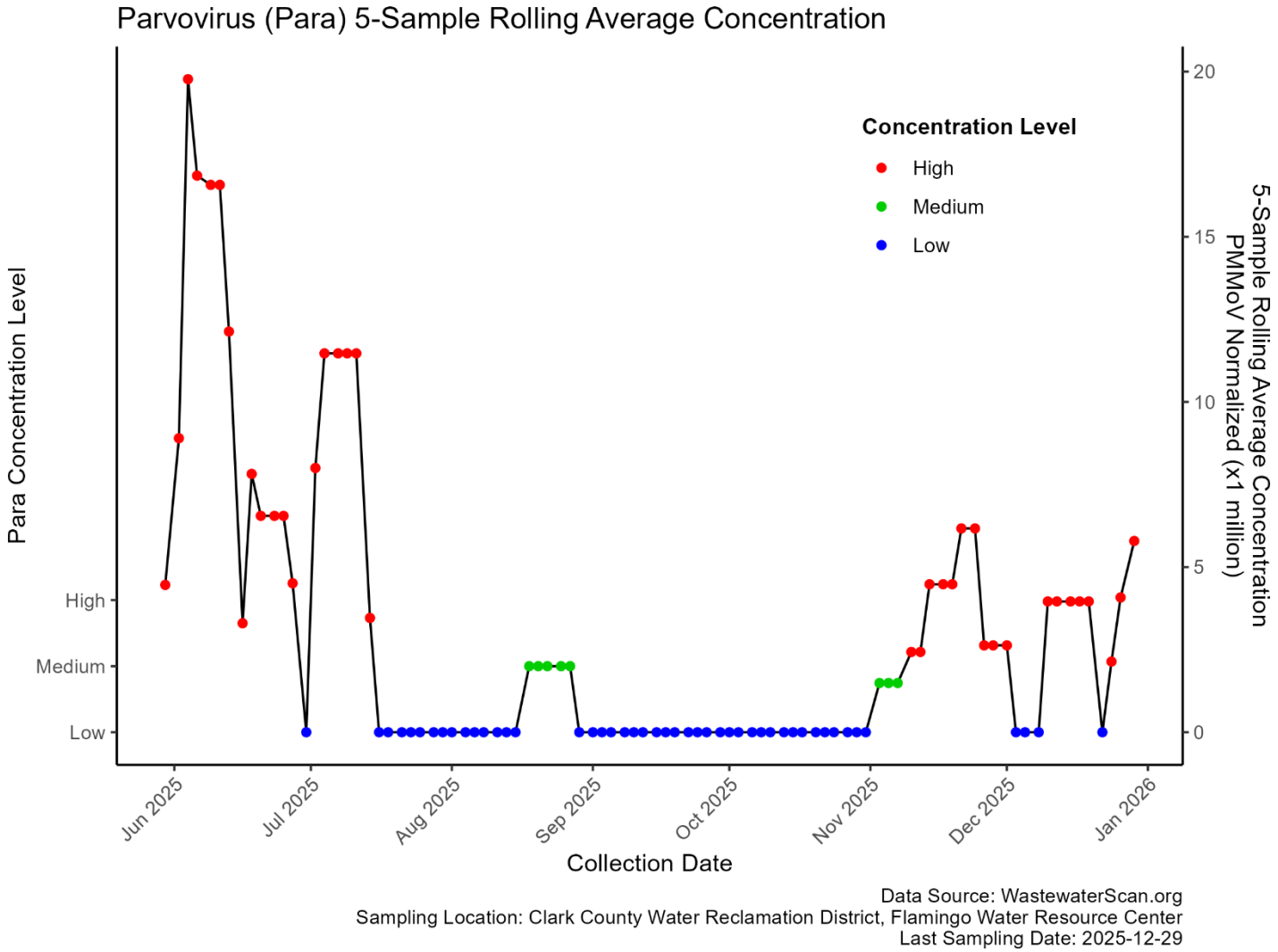
As of December 31, 2025, Adenovirus Group F concentrations remain high across Nevada, California, and Utah with mixed trends. RP-1 Ontario recorded the highest level at 26,171.04 GC/L (↑), followed by Riverside at 16,628.72 GC/L (↓) and Provo at 16,123.08 GC/L (↑). Other sites, including Flamingo (8,148.65 GC/L ↑) and A.K. Warren (11,997.83 GC/L ↑), also showed elevated activity, while Hyperion and Valley Sanitary District reported declines.

Plant Name	City	Time frame	5 Sample Rolling Mean	14 Day Trend	Last Sampling Dates
Flamingo Water Resource Center	Las Vegas, NV	Current	8,148.65	↑	December 29 2025
Mesquite Wastewater Treatment Plant	City of Mesquite, NV	Current	Not Tested		December 30 2025
Boulder Wastewater Treatment Plant	Boulder City, NV	Current	Not Tested		December 29 2025
A.K. Warren Water Resource Facility	Los Angeles County, CA	Current	11,997.83	↑	December 29 2025
Hyperion Water Reclamation Plant (HWRP)	Los Angeles, CA	Current	4,835.38	↓	December 29 2025
Central Valley Water Reclamation Facility	Central Salt Lake Valley, UT	Current	11,773.55	↑	December 29 2025
Provo City Water Reclamation Facility	Provo, UT	Current	16,123.08	↑	December 29 2025
Regional Water Recycling Plant No.1 (RP-1)	Ontario, CA	Current	26,171.04	↑	December 31 2025
Riverside Water Quality Control Plant	Riverside, CA	Current	16,628.72	↓	December 31 2025
Valley Sanitary District	Indio, CA	Current	6,634.22	↓	December 31 2025

Parvovirus Concentration Trends in Clark County

Flamingo Water Reclamation District Plant

The chart shows Parvovirus concentrations at the Flamingo Water Resource Center from June to December 2025 using a 5-sample rolling average. Levels were high in June and early July before dropping to low in August. Mid-August saw a brief rise to medium, followed by a return to low levels through mid-November. Concentrations then increased to medium and high. In December, levels dipped briefly to low before rising again to high, followed by another short drop and rebound to high.



Parvovirus Concentrations Interpretation

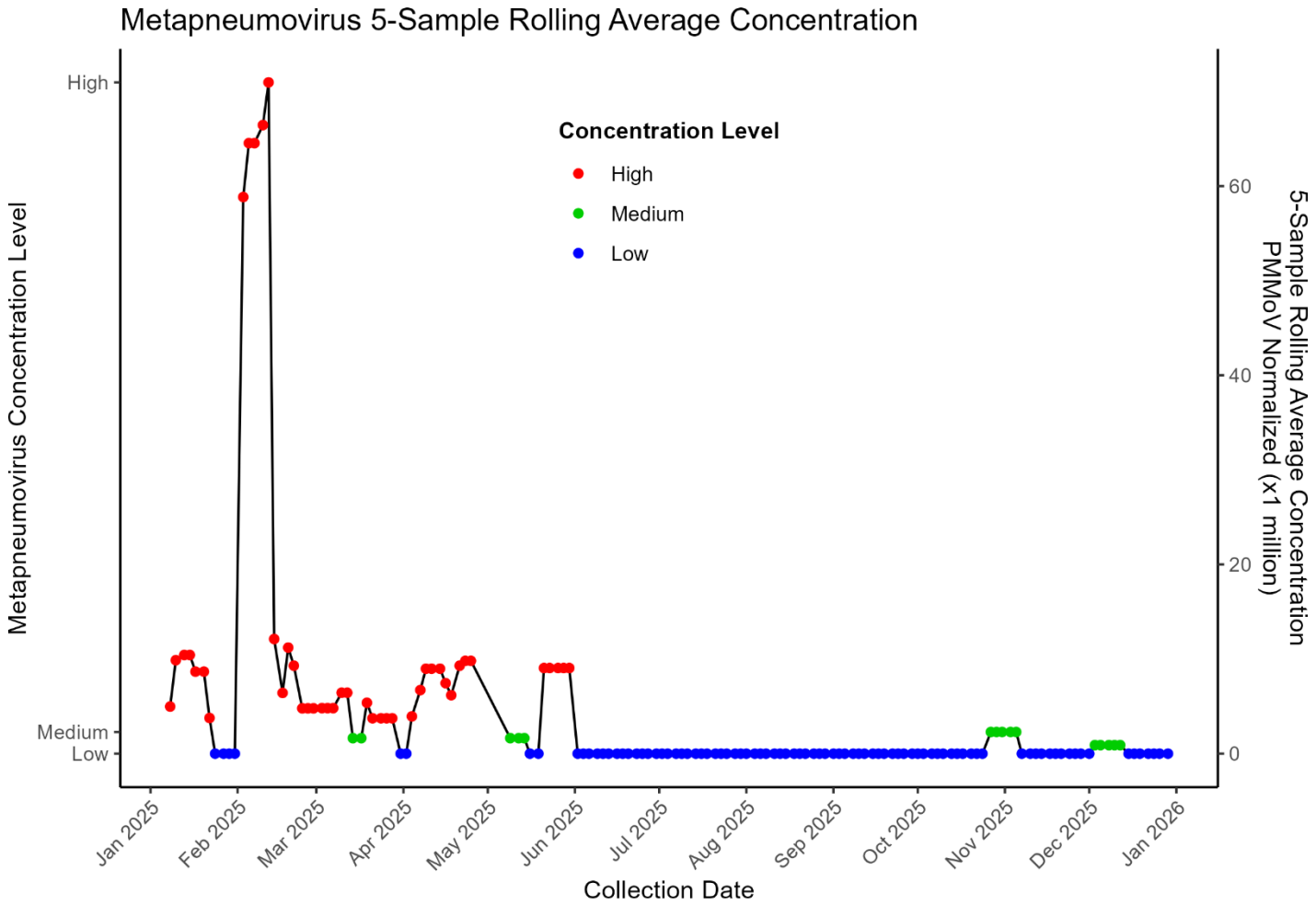
As of December 31, 2025, Parvovirus levels in wastewater across Nevada, California, and Utah remain generally low, with minor variations. Flamingo (Las Vegas) recorded 3.96 GC/L (↑), A.K. Warren 3.86 GC/L (↑), and Hyperion the highest at 10.54 GC/L (↑). Other sites showed minimal concentrations: Riverside 1.76 GC/L (↑), RP-1 Ontario 1.16 GC/L (↓), while Valley Sanitary District reported 0.00 GC/L (→).

Plant Name	City	Time frame	5 Sample Rolling Mean	14 Day Trend	Last Sampling Dates
Flamingo Water Resource Center	Las Vegas, NV	Current	3.96	↑	December 29 2025
Mesquite Wastewater Treatment Plant	City of Mesquite, NV	Current	Not Tested		December 30 2025
Boulder Wastewater Treatment Plant	Boulder City, NV	Current	Not Tested		December 29 2025
A.K. Warren Water Resource Facility	Los Angeles County, CA	Current	3.86	↑	December 29 2025
Hyperion Water Reclamation Plant (HWRP)	Los Angeles, CA	Current	10.54	↑	December 29 2025
Central Valley Water Reclamation Facility	Central Salt Lake Valley, UT	Current	0.98	↓	December 29 2025
Provo City Water Reclamation Facility	Provo, UT	Current	0.32	↓	December 29 2025
Regional Water Recycling Plant No.1 (RP-1)	Ontario, CA	Current	1.16	↓	December 31 2025
Riverside Water Quality Control Plant	Riverside, CA	Current	1.76	↑	December 31 2025
Valley Sanitary District	Indio, CA	Current	0.00	→	December 31 2025

Human Metapneumovirus Concentration Trends in Clark County

Flamingo Water Reclamation District Plant

The chart shows Metapneumovirus concentrations at the Flamingo Water Resource Center from January to December 2025 using a 5-sample rolling average. Levels start high in early January, drop to low by late January, then rise sharply in February to high, peaking above 60 GC/L. After a steep decline in late February, concentrations remain high through April before dropping to low. Levels rise again to high later in April, then fall to medium and subsequently to low. In mid-May, concentrations increase once more to high before decreasing to low in June. Levels stay low through November, briefly rise to medium, fall back to low, and then rise slightly to medium in early December before dropping again to low by late December.



Human Metapneumovirus Concentrations Interpretation

As of December 31, 2025, Human Metapneumovirus (HMPV) levels in wastewater were mostly low or undetectable across Nevada, California, and Utah. Flamingo and Hyperion reported 0.00 GC/L, while Mesquite and Boulder City were not tested. Central Valley showed the highest level at 7.82 GC/L, with moderate increases at RP-1 Ontario (5.73 GC/L), Riverside (4.11 GC/L), and smaller rises at other sites.

Plant Name	City	Time frame	5 Sample Rolling Mean	14 Day Trend	Last Sampling Dates
Flamingo Water Resource Center	Las Vegas, NV	Current	0.00	→	December 29 2025
Mesquite Wastewater Treatment Plant	City of Mesquite, NV	Current	Not Tested		December 30 2025
Boulder Wastewater Treatment Plant	Boulder City, NV	Current	Not Tested		December 29 2025
A.K. Warren Water Resource Facility	Los Angeles County, CA	Current	2.60	↑	December 29 2025
Hyperion Water Reclamation Plant (HWRP)	Los Angeles, CA	Current	0.00	→	December 29 2025
Central Valley Water Reclamation Facility	Central Salt Lake Valley, UT	Current	7.82	↑	December 29 2025
Provo City Water Reclamation Facility	Provo, UT	Current	2.61	↓	December 29 2025
Regional Water Recycling Plant No.1 (RP-1)	Ontario, CA	Current	5.73	↑	December 31 2025
Riverside Water Quality Control Plant	Riverside, CA	Current	4.11	↑	December 31 2025
Valley Sanitary District	Indio, CA	Current	2.00	↑	December 31 2025

Influenza H5 Viral Detection Comparing to Neighboring States

As of December 31, 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 Sample Rolling Mean	14 Day Trend	Last Sampling Dates
Flamingo Water Resource Center	Las Vegas, NV	Current	0	→	December 29 2025
Mesquite Wastewater Treatment Plant	City of Mesquite, NV	Current	0	→	December 30 2025
Boulder Wastewater Treatment Plant	Boulder City, NV	Current	0	→	December 29 2025
A.K. Warren Water Resource Facility	Los Angeles County, CA	Current	0	→	December 29 2025
Hyperion Water Reclamation Plant (HWRP)	Los Angeles, CA	Current	0	→	December 29 2025
Central Valley Water Reclamation Facility	Central Salt Lake Valley, UT	Current	0	→	December 29 2025
Provo City Water Reclamation Facility	Provo, UT	Current	0	→	December 29 2025
Regional Water Recycling Plant No.1 (RP-1)	Ontario, CA	Current	0	→	December 31 2025
Riverside Water Quality Control Plant	Riverside, CA	Current	0	→	December 31 2025
Valley Sanitary District	Indio, CA	Current	0	→	December 31 2025

West Nile Virus Viral Detection Comparing to Neighboring States

As of December 31, 2025, wastewater surveillance across ten facilities in California, Nevada, and Utah detected no West Nile virus. All sites with sampling in the past 30 days reported non-detectable levels, indicating no recent viral activity. Mesquite and Boulder City were not tested during this period.

Plant Name	City	Time frame	Detect/ Non-detect	Last Sampling Dates
Flamingo Water Resource Center	Las Vegas, NV	Current	Non-detect	December 29 2025
Mesquite Wastewater Treatment Plant	City of Mesquite, NV	Current	Not Tested	December 30 2025
Boulder Wastewater Treatment Plant	Boulder City, NV	Current	Not Tested	December 29 2025
A.K. Warren Water Resource Facility	Los Angeles County, CA	Current	Non-detect	December 29 2025
Hyperion Water Reclamation Plant (HWRP)	Los Angeles, CA	Current	Non-detect	December 29 2025
Central Valley Water Reclamation Facility	Central Salt Lake Valley, UT	Current	Non-detect	December 29 2025
Provo City Water Reclamation Facility	Provo, UT	Current	Non-detect	December 29 2025
Regional Water Recycling Plant No.1 (RP-1)	Ontario, CA	Current	Non-detect	December 31 2025
Riverside Water Quality Control Plant	Riverside, CA	Current	Non-detect	December 31 2025
Valley Sanitary District	Indio, CA	Current	Non-detect	December 31 2025

MPOX Clade 1b Viral Detection Comparing to Neighboring States

As of December 31, 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	December 29 2025
Mesquite Wastewater Treatment Plant	City of Mesquite, NV	Current	Non-detect	December 30 2025
Boulder Wastewater Treatment Plant	Boulder City, NV	Current	Non-detect	December 29 2025
A.K. Warren Water Resource Facility	Los Angeles County, CA	Current	Non-detect	December 29 2025
Hyperion Water Reclamation Plant (HWRP)	Los Angeles, CA	Current	Non-detect	December 29 2025
Central Valley Water Reclamation Facility	Central Salt Lake Valley, UT	Current	Non-detect	December 29 2025
Provo City Water Reclamation Facility	Provo, UT	Current	Non-detect	December 29 2025
Regional Water Recycling Plant No.1 (RP-1)	Ontario, CA	Current	Non-detect	December 31 2025
Riverside Water Quality Control Plant	Riverside, CA	Current	Non-detect	December 31 2025
Valley Sanitary District	Indio, CA	Current	Non-detect	December 31 2025

MPOX Clade II Viral Detection Comparing to Neighboring States

As of December 31, 2025, wastewater surveillance across ten facilities in Nevada, California, and Utah showed no detection of Mpox Clade II at nine sites. However, Provo City Water Reclamation Facility reported a positive detection on December 29, while all other plants including Las Vegas, Mesquite, Boulder City, Los Angeles, Riverside, and Indio remained non-detect, indicating isolated activity.

Plant Name	City	Time frame	Detect/ Non-detect	Last Sampling Dates
Flamingo Water Resource Center	Las Vegas, NV	Current	Non-detect	December 29 2025
Mesquite Wastewater Treatment Plant	City of Mesquite, NV	Current	Non-detect	December 30 2025
Boulder Wastewater Treatment Plant	Boulder City, NV	Current	Non-detect	December 29 2025
A.K. Warren Water Resource Facility	Los Angeles County, CA	Current	Non-detect	December 29 2025
Hyperion Water Reclamation Plant (HWRP)	Los Angeles, CA	Current	Non-detect	December 29 2025
Central Valley Water Reclamation Facility	Central Salt Lake Valley, UT	Current	Non-detect	December 29 2025
Provo City Water Reclamation Facility	Provo, UT	Current	**Detected**	December 29 2025
Regional Water Recycling Plant No.1 (RP-1)	Ontario, CA	Current	Non-detect	December 31 2025
Riverside Water Quality Control Plant	Riverside, CA	Current	Non-detect	December 31 2025
Valley Sanitary District	Indio, CA	Current	Non-detect	December 31 2025

Measles Viral Detection Comparing to Neighboring States

As of December 31, 2025, measles remained undetected at nine of the ten wastewater facilities monitored across Nevada, California, and Utah. Only the Provo City Water Reclamation Facility showed a measles detection on December 29, while all other sites including major plants in Las Vegas, Los Angeles, and Riverside reported non-detect results, indicating minimal regional measles activity.

Plant Name	City	Time frame	Detect/ Non-detect	Last Sampling Dates
Flamingo Water Resource Center	Las Vegas, NV	Current	Non-detect	December 29 2025
Mesquite Wastewater Treatment Plant	City of Mesquite, NV	Current	Non-detect	December 30 2025
Boulder Wastewater Treatment Plant	Boulder City, NV	Current	Non-detect	December 29 2025
A.K. Warren Water Resource Facility	Los Angeles County, CA	Current	Non-detect	December 29 2025
Hyperion Water Reclamation Plant (HWRP)	Los Angeles, CA	Current	Non-detect	December 29 2025
Central Valley Water Reclamation Facility	Central Salt Lake Valley, UT	Current	Non-detect	December 29 2025
Provo City Water Reclamation Facility	Provo, UT	Current	**Detected**	December 29 2025
Regional Water Recycling Plant No.1 (RP-1)	Ontario, CA	Current	Non-detect	December 31 2025
Riverside Water Quality Control Plant	Riverside, CA	Current	Non-detect	December 31 2025
Valley Sanitary District	Indio, CA	Current	Non-detect	December 31 2025

References

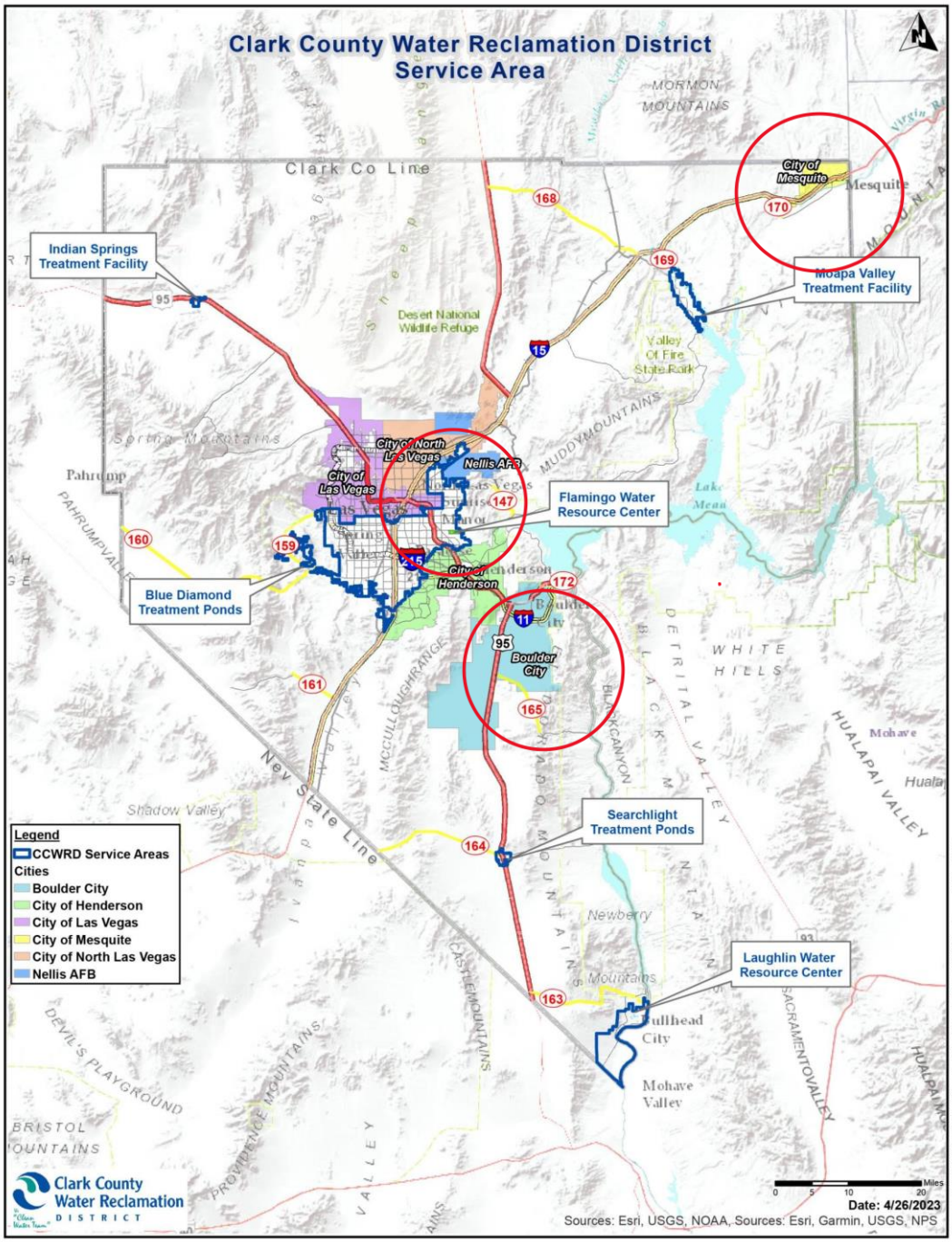
1) Verily Laboratories. *Public health: wastewater-based epidemiology (WBE)*. https://verily.com/solutions/sightline/wastewater. Published 2025. Accessed January 1, 2024.

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