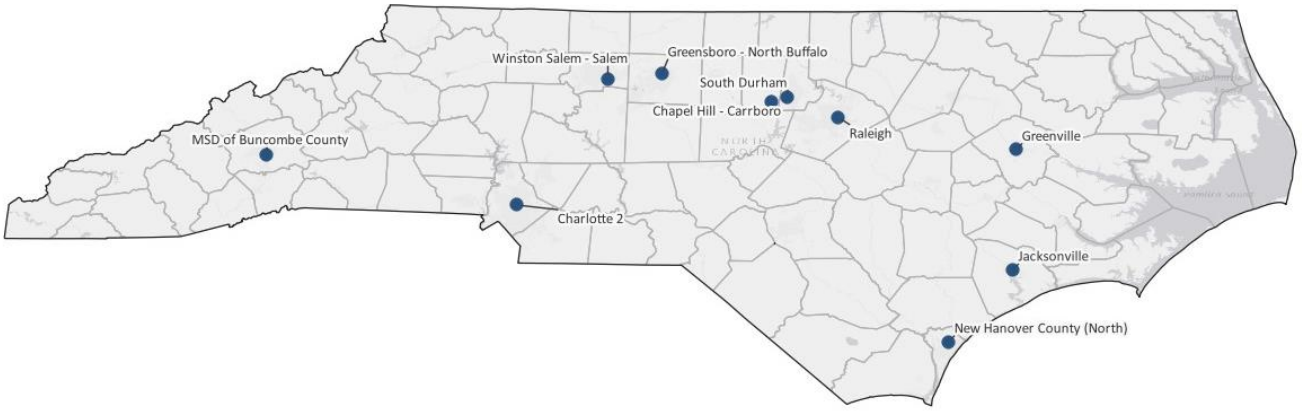
North Carolina Wastewater Monitoring Network Report: Respiratory Syncytial Virus (RSV), Influenza A (Flu A), and Influenza B (Flu B)

Report Date: May 07, 2024

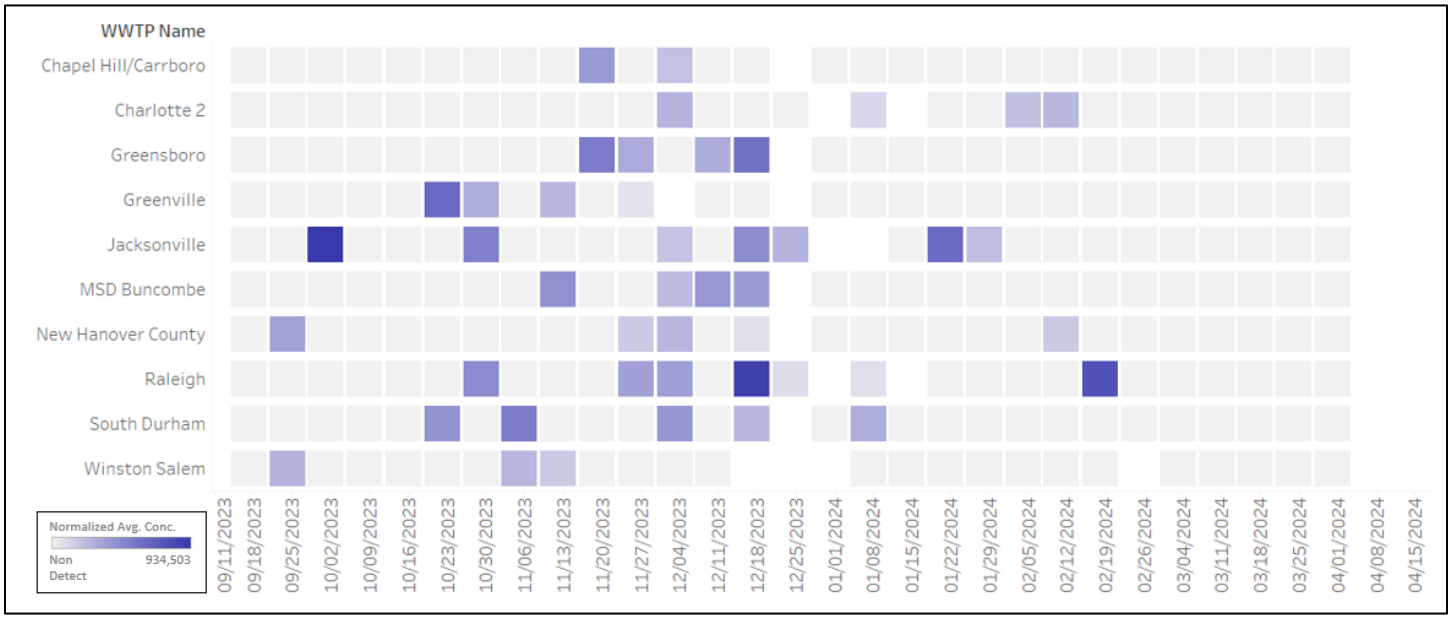
Summary:

- From September 2023 until April 2024, the North Carolina Wastewater Monitoring Network (NCWMN) measured Respiratory Syncytial Virus (RSV), Influenza A (Flu A), and Influenza B (Flu B) levels in wastewater influent samples across 10 initial sites.
- RSV detections peaked the week of 12/04/2023 with 7/9 sites reporting a detection. Testing was paused for RSV on 04/07/2024 after six weeks of non-detects.
- Flu A detections peaked the week of 12/18/2023 with 8/9 sites reporting a detection. After 4 weeks of non-detects, additional detections were observed across several sites in early April.
- Flu B detections peaked the week of 01/29/2024 with 6/10 sites reporting a detection. Detections decreased starting in mid-May with only a single detection in April.

NC Wastewater Monitoring Locations for Flu A, Flu B, and RSV Sampling

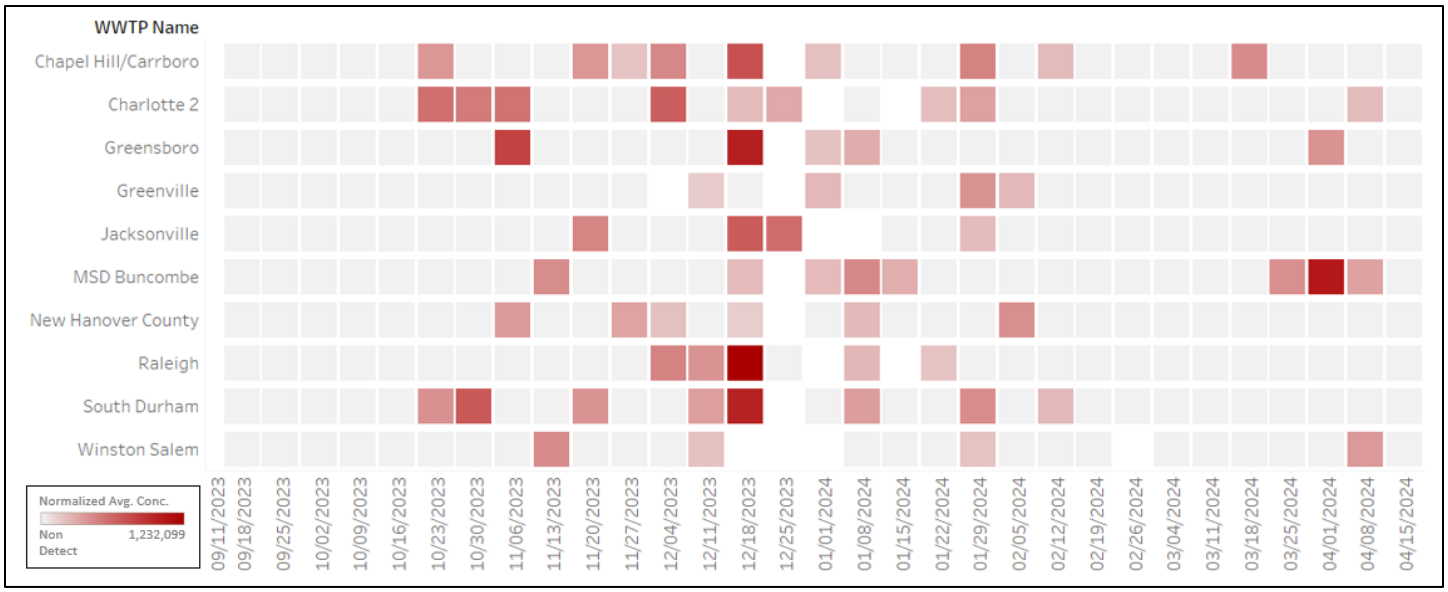


RSV Detections* at Ten Initial Sites

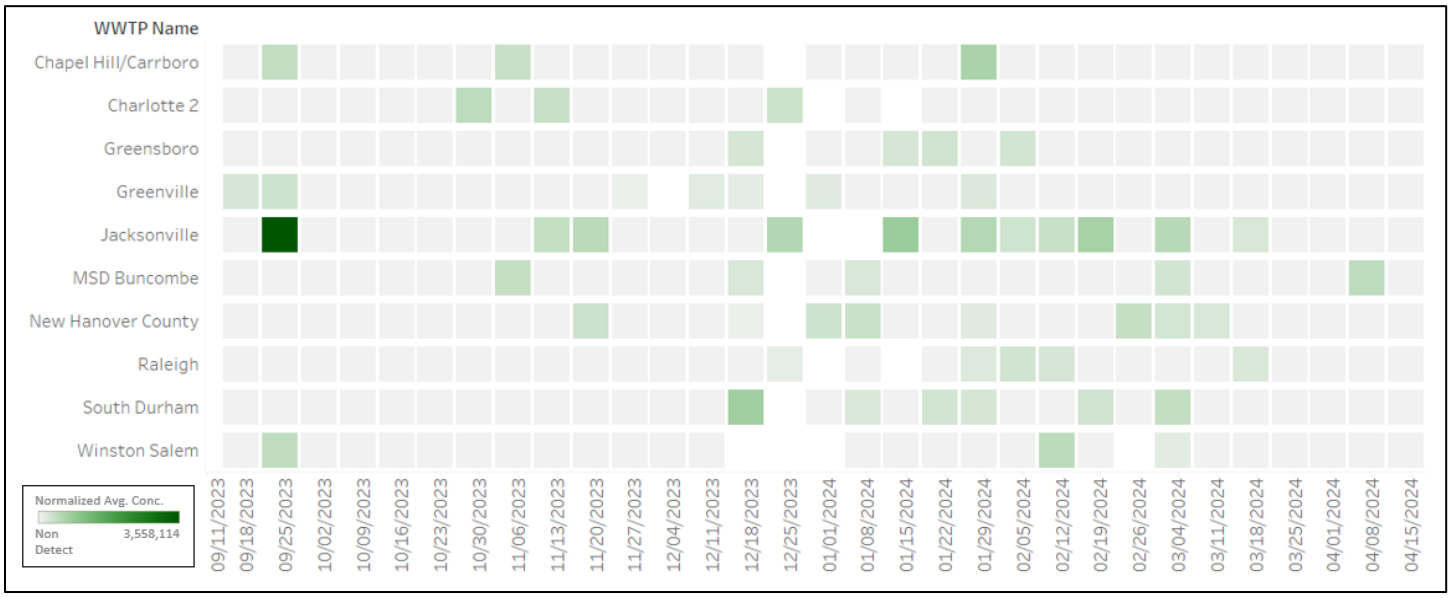


*Note: Testing has been paused for RSV as of 04/07/2024 due to the seasonal nature of this pathogen and the number of recent non-detects.

FLUA Detections at Ten Initial Sites



FLUB Detections at Ten Initial Sites



Methodology:

- One influent sample per site per week is collected for analysis.
- Samples are shipped from the State Lab for Public Health to the University of North Carolina at Chapel Hill for Flu A, Flu B, or RSV RNA analysis by digital PCR.
- Samples are batched – new results are available every other week.
- Influent data are normalized by the wastewater flow rate measured during the sampling period (typically 24- hours) and the estimated population served by that wastewater system. The calculation is (concentration*flow rate)/(population served).
- Wastewater data are being displayed as detections over time with darker colors indicating higher concentrations of virus in wastewater. Non-detects are colored light gray.