



MISSOURI DEPARTMENT OF  
**HEALTH &  
SENIOR SERVICES**

**PROTECTING HEALTH AND  
KEEPING PEOPLE SAFE**

# Childhood Lead Poisoning Prevention Program

- Population served: Children under age 6
- Services:
  - Nursing consultation and education
  - Case Management training
  - In-home Risk Assessments
  - Data collection and analysis
- Local Public Health Agency responsibilities:
  - Case management for children under age 6
  - Reporting of lead tests conducted at the LPHA
  - Education to providers/parents
- Additional information:
  - All lead tests are reportable to DHSS regardless of the results





## WIIN GRANT: Lead Testing in Schools and Child Care Facilities

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- DHSS awarded Water Infrastructure Improvements for the Nation (WIIN) Grant from EPA
- Priority to elementary schools and child care facilities
  - Children under 6 years of age
  - Low income areas, 50% of children receiving free and/or reduced lunches
  - Age of building (constructed before 1996)
- Funding to assist in voluntary water testing for lead in drinking water
  - Covers sample test kits and sample analysis
  - \$400 per sample plan and \$5 per sample

Contact Information:

Melissa May, Health Drinking Water Unit Chief

573-751-6430

HealthyDrinkingWater@health.mo.gov



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## Get the Lead Out of Schools Drinking Water Act – RSMo160.077

- **Signed into law 2022**
- **Requires schools to provide drinking water with a lead concentration level below 5 ppb before the 2023-2024 school year**
- **By August 1, 2024, all schools must:**
  - **Test all water outlets used for drinking and cooking**
  - **Make test results and remediation plans available to the public**
  - **Remediate all lead contamination before by August 2024**
- **DHSS to disperse \$27 Million in American Rescue Plan Act (ARPA) funding to reimburse school districts for testing, filtration, and remediation**

Contact Information:  
Coy King, Program Coordinator  
573-526-4012



## Environmental Public Health Tracking

Bureau of Environmental Epidemiology

EPHT is a nationwide network of programs that deliver a core set of environmental health, exposure, and hazards data, information, and tools to enable analysis, visualization and reporting of insights on environmental public health

### Health of Environment ↔ Human Health

Web-based network of nationally consistent data and measures

- Data query systems
  - Missouri Public Health Information Management System (MOPHIMS)
  - CDC-EPHT Data Explorer

Data important to Missouri

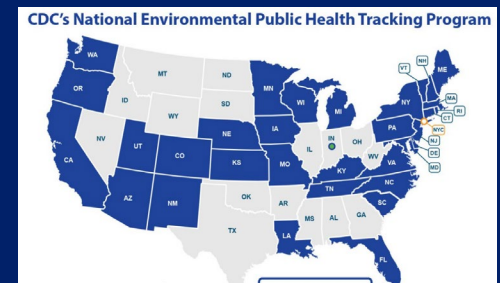
- Maps and dashboards

Data analysis, data visualization, technical assistance

Community education and outreach

Public health actions

Contact Information:  
Elizabeth Semkiw, Program Manager  
573-526-6649  
[EPHTN@health.mo.gov](mailto:EPHTN@health.mo.gov)



## EPHT Data and Tools

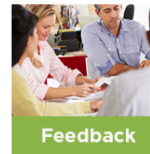
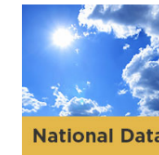
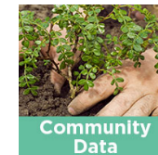
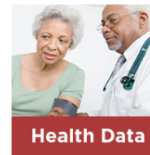
- Health Data
  - Respiratory Disease – Asthma, COPD
  - Heart Disease
  - Blood Lead Levels
  - Birth Defects
  - Cancer
  - Hyperthermia/Hypothermia
  - Carbon Monoxide Poisoning
- Community Data
  - Community Profiles
  - Community Design
- Environmental Data
  - Public Water Quality
  - Air Quality
  - Radon
- Data Queries – generate maps, charts, tables
  - Missouri Public Health Information Management System (MOPHIMS)
  - Maps and Dashboards
  - CDC Data Explorer

### Environmental Public Health Tracking

DHSS Home » EPHTN Data Portal » Home



**Focus On** | Learn how to protect your family from carbon monoxide (CO) poisoning.



The environment plays an important role in health and human development. Research links specific diseases with exposures to environmental hazards. We know from research, for example, that one cause of lung cancer is exposure to asbestos. Another example is the link between exposure to lead and the decreased mental function of children. Other suspected links remain unproven without adequate data and research. Environmental Public Health Tracking (EPHT) is one way to collect data for analysis and research to establish other links between disease and exposure to environmental hazards. The goal of EPHT is to provide information that can be used to plan, apply and evaluate ways to prevent and control environmentally-related diseases. As a result, scientists, communities, policymakers, and the public are now better equipped to answer fundamental questions about the relationships between environmental exposures and health effects and can use this information to plan, apply, and evaluate public health actions to prevent and control environmentally related diseases.

Data on this site is used for a range of public health policy development and program planning purposes, including hazard and disease surveillance (e.g., estimating the magnitude of a problem, analyzing trends over time, identifying high-risk groups), identifying and targeting effective interventions, and for public health research. Data and information on this network also serves as a "knowledge base" of critical monitoring and surveillance systems, and information resources.

#### The National Environmental Public Health Tracking Program

Missouri Environmental Public Health Tracking (EPHT) is a program within the Missouri Department of Health and Senior Services and is funded by the Centers for Disease Control and Prevention. EPHT is part of a larger initiative to establish Environmental Public Health Tracking systems at the national and state levels.



### Healthy Living

Environmental Factors
Chronic Diseases
Communicable Diseases
Healthy Families
Organ/Tissue Donation and Registry
Women, Infants & Children (WIC)
Genetic Disease & Early Childhood
Food Programs
Wellness & Prevention
Local Public Health Agencies
Immunizations

### Related Links

- Environmental Public Health Tracking Program
- Community Profiles
- Environmental Public Health Videos
- Childhood Lead Poisoning Prevention
- Adult Blood Lead Epidemiology and Surveillance
- Lead Licensing
- WIIN Grant
- Hazardous Substances and Sites
- Private Drinking Water
- Choose Safe Places
- Missouri Fish Advisory

### Contact Information



#### Environmental Public Health Tracking Program

Missouri Department of Health and Senior Services  
PO Box 570  
Jefferson City, MO 65102-0570

Telephone: 573-751-6102 or  
(toll-free) 866-628-9891  
Fax: 573-526-6946  
Email: [EPHTN@health.mo.gov](mailto:EPHTN@health.mo.gov)



The Missouri Public Health Information Management System (MOPHIMS) provides a common means for users to access public health related data to assist in defining the health status and needs of Missourians.



### Community Data Profiles

Community Data Profiles are available on various subject areas and provide data on 15-30 indicators for each geography selected.

- Maternal, Infant and Child Health Profiles
- Chronic Disease Profiles
- Injury Profiles
- Death Profile
- Hospital and Emergency Room Visit Profiles
- Special Demographic Profiles
- County-Level Study Profiles



### Data MICAs

The Missouri Information for Community Assessment (MICA) allows users to summarize data, calculate rates, and prepare information in a graphic format.

- Maternal, Infant and Child Health MICAs
- Chronic Disease MICAs
- Injury MICA
- Death MICA
- Hospital and Emergency Room Visit MICAs
- Population MICA
- Medicaid/TANF MICAs



### Environmental Tracking

The Missouri Environment Public Health Tracking (EPHT) program was developed to assist the public, communities, policymakers, and scientists, answer fundamental questions about the relationships between environmental exposures and health effects. Data on this site also include hazard and disease surveillance.

- Health Data
  - Blood Lead Levels
  - Asthma
  - Birth Defects
  - Myocardial Infarction
  - Carbon Monoxide Poisoning
- Environmental Data
  - Agriculture
  - Air Quality
  - Water Quality
- Community Data
- National Data

# MOPHIMS Data Query

## EPHT

The Missouri Environmental Public Health Tracking (EPHT) is a tracking system that was developed to assist scientists, communities, policymakers, and the public answer fundamental questions about the relationships between environmental exposures and health effects. Data on this site also include hazard and disease surveillance. Data may be used to create charts, tables, and maps. Most forms of output are available for download.



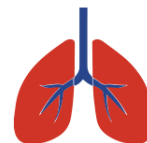
### Agriculture

- Interactive Map
- More Information



### Blood Lead Levels

- Tables, Charts, & Maps
- More Information



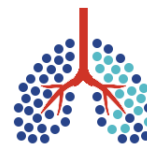
### Asthma

- Tables, Charts, & Maps
- More Information



### Carbon Monoxide

- Tables, Charts, & Maps
- More Information



### Chronic Obstructive Pulmonary Disease (COPD)

- Tables
- More Information



### Birth Defects

- Tables, Charts, & Maps
- More Information



### Myocardial Infarction

- Tables, Charts, & Maps
- More Information



### Air Quality

- Tables
- More Information



### Water Quality

- Tables
- More Information



### Community Data

- Community & Infrastructure
- Occupational Health
- Health, Environment, & Community Profiles



### National Data

- Tables, Charts, & Maps

### Choose Your Data

**Year:**  Single Year(s)  Multi-Year Groups 2019

**Geography:** County **Show State Totals:**

**County:** All selected (115)

**Client Type:**  0-5 Years (< 72 Months)  6 Years and Over (≥ 72 Months)

**Age:**  Single Age  Basic  Custom Group All selected (6)

**Sex:** All selected (2)

**Race:**  Basic  Expanded All selected (2)

**Ethnicity:** All selected (2)

**Test Outcome:**  5 ug per dL Test Level  10 ug per dL Test Level  Expanded Groupings All selected (2)

**Confirmed Test:** All selected (2)

**Reset Your Data**

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### Build Your Results

Build a Table **Make a Map** Create a Chart Documentation / Metadata

**Main Row:** Geography **Row Totals:**  **Main Column:** Statistics **Column Totals:**

**Statistics:** Counts and Percents of Population

**Confidence Intervals:** 95% Confidence Intervals

**Submit Query**

### Map Results

Read metadata for more information regarding the content and appropriate use of this data.

**Legend**

**Missouri EPHT Blood Lead**

Client Type: 0-5 Years (< 72 Months); Single Year(s): 2019, 2018, 2017, 2016; Numerator: Number Tested; Denominator: Population As of 5/26/2023 7:47:04 AM

**Legend**

Intensity (2 cases)

- 640 - 719
- 720 - 800
- 801 - 880
- 881 - 960
- 961 - 1040
- 1041 - 1120
- 1121 - 1200
- 1201 - 1280
- 1281 - 1360
- 1361 - 1440
- 1441 - 1520
- 1521 - 1600
- 1601 - 1680
- 1681 - 1760
- 1761 - 1840
- 1841 - 1920
- 1921 - 2000
- 2001 - 2080
- 2081 - 2160
- 2161 - 2240
- 2241 - 2320
- 2321 - 2400
- 2401 - 2480
- 2481 - 2560
- 2561 - 2640
- 2641 - 2720
- 2721 - 2800
- 2801 - 2880
- 2881 - 2960
- 2961 - 3040
- 3041 - 3120
- 3121 - 3200
- 3201 - 3280
- 3281 - 3360
- 3361 - 3440
- 3441 - 3520
- 3521 - 3600
- 3601 - 3680
- 3681 - 3760
- 3761 - 3840
- 3841 - 3920
- 3921 - 4000
- 4001 - 4080
- 4081 - 4160
- 4161 - 4240
- 4241 - 4320
- 4321 - 4400
- 4401 - 4480
- 4481 - 4560
- 4561 - 4640
- 4641 - 4720
- 4721 - 4800
- 4801 - 4880
- 4881 - 4960
- 4961 - 5040
- 5041 - 5120
- 5121 - 5200
- 5201 - 5280
- 5281 - 5360
- 5361 - 5440
- 5441 - 5520
- 5521 - 5600
- 5601 - 5680
- 5681 - 5760
- 5761 - 5840
- 5841 - 5920
- 5921 - 6000
- 6001 - 6080
- 6081 - 6160
- 6161 - 6240
- 6241 - 6320
- 6321 - 6400
- 6401 - 6480
- 6481 - 6560
- 6561 - 6640
- 6641 - 6720
- 6721 - 6800
- 6801 - 6880
- 6881 - 6960
- 6961 - 7040
- 7041 - 7120
- 7121 - 7200
- 7201 - 7280
- 7281 - 7360
- 7361 - 7440
- 7441 - 7520
- 7521 - 7600
- 7601 - 7680
- 7681 - 7760
- 7761 - 7840
- 7841 - 7920
- 7921 - 8000
- 8001 - 8080
- 8081 - 8160
- 8161 - 8240
- 8241 - 8320
- 8321 - 8400
- 8401 - 8480
- 8481 - 8560
- 8561 - 8640
- 8641 - 8720
- 8721 - 8800
- 8801 - 8880
- 8881 - 8960
- 8961 - 9040
- 9041 - 9120
- 9121 - 9200
- 9201 - 9280
- 9281 - 9360
- 9361 - 9440
- 9441 - 9520
- 9521 - 9600
- 9601 - 9680
- 9681 - 9760
- 9761 - 9840
- 9841 - 9920
- 9921 - 10000

**Select Color Shade of Map:**

**Change** **Opacity Transparency**

**Map Overlay:** None

**Show County Names**

**Show Data Table**

**Background Map**

**Find a Location / County**

**Change Map Background**

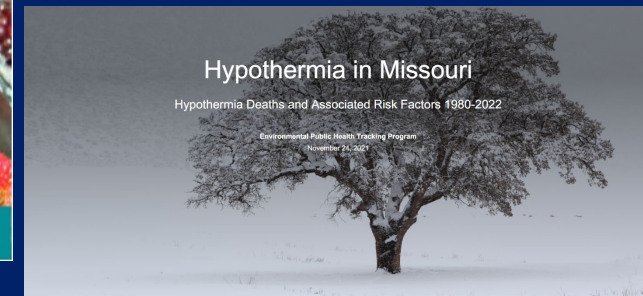
**Export/Print Map**

**More Information**

# Maps, StoryMaps, and Dashboards

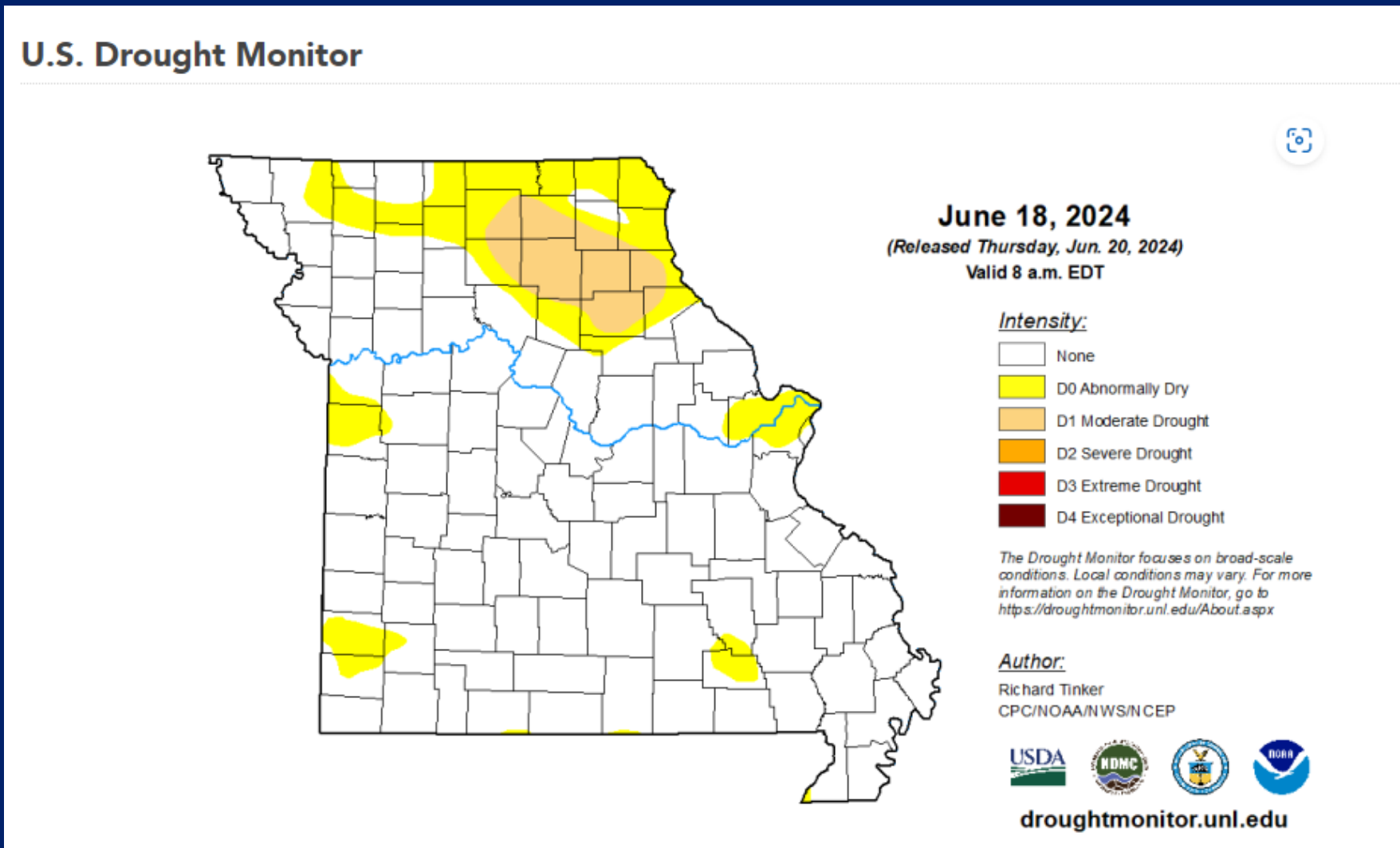


- Lead Exposure Risk Tool
- Tickborne Disease StoryMap
- Food Access StoryMap
- Radon Maps
- Hyperthermia/Hypothermia
  - Warming and Cooling Centers Maps
- Missouri Fish Advisory
- Community Profiles
- Sewershed Surveillance Tool
- Harmful Algal Bloom
  - Reporting Tool
  - Map Viewer





# Moderate Drought in Some Missouri Counties



Report signs of drought here: <https://dnr.mo.gov/water/how-water/state-water/drought>



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# Harmful Algal Bloom (HAB) Reporting Tools

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Bureau of Environmental Epidemiology

# Development Team



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**MISSOURI**



**NATURAL  
RESOURCES**



# What are Harmful Algal Blooms (HABS)?

- Rapid growth of Algae or cyanobacteria that may produce toxins
- Driven by nutrients, sunlight, warm temperatures, low flow
- Exposure may cause illness to people or animals
- Paint-like, clumped, pea soup appearance
- Varying colors: Green, teal, white, red, brown



Chaumiere Lake, Clay Co. 2021

# When in Doubt, REPORT and stay out!



<https://dnr.mo.gov/water/how-water/pollutants-sources/cyanobacteria-harmful-algal-blooms-blue-green-algae/report-algal-bloom>

## Harmful Algal Bloom Reporting Form



If you believe you have observed a potentially Harmful Algal Bloom (HAB), please use this form to notify the HAB response team. The HAB response team will review all reports submitted. Please provide contact information so that a staff member can follow up on a report. You may also report potential HABs anonymously by calling the Department of Natural Resources environmental response line at (573) 634-2436 or Department of Health and Senior Services health emergency line at (800) 392-0272.

### Illnesses Possibly Related to Suspected HAB ▼

Are you aware of any person having symptoms that may be attributed to the suspected HAB?\*

Yes

No

# Public Map Viewer

**Harmful Algal Bloom Public Viewer**

Find address or place

**Legend**

**Harmful Algal Blooms (Public Water Bodies)**

- Custom
  - Waterbody is CLOSED
  - Harmful Algal Bloom Present
  - Harmful Algal Bloom Suspected
  - Harmful Algal Bloom Not Verified or Non-Threatening
  - Harmful Algal Bloom Dissipated
  - Expired (Older Than 2 Weeks)

**Harmful Algal Bloom Counts (Private Water Bodies)**

PrivateCount

- 15-20
- 10-14
- 7-9
- 5-6
- 4
- 3
- 2
- 1
- 0

**(1 of 2)**

**Harmful Algal Bloom (Public Water Body):**  
Stockton Lake

**Waterbody Name:** Stockton Lake

**Observation Date:** Monday, 3 Oct 2022

**County:** Cedar County

**Bloom Status:** Other: Pending Investigation or Unknown Bloom Status

**Public Information:** No additional information

**Waterbody Info:**  
**Waterbody Type:** Lake or Pond  
**Waterbody Use:** Recreation (Not Specified)  
**Waterbody Owner:** Army Corps. of Engineers  
**Waterbody Size:** 2176 acres

[Zoom to](#)

Map data © OpenStreetMap



# When in Doubt, **REPORT** and **Stay Out!**

- Links on MO DNR webpage:  
<https://dnr.mo.gov/water/hows-water/pollutants-sources/cyanobacteria-harmful-algal-blooms-blue-green-algae>
- Call MO DNR Environmental Response Spill Line:  
573-634-2436
- Call MO DHSS Public Health Emergency 24/7 Hotline:  
800-392-0272



## BEE – Health and Risk Assessment Program (HRAP)

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Responsible for evaluating human exposure to hazardous substances in the environment and for making health-protective recommendations regarding actions needed.

### Primary Functions

- **Health Assessment** - Public document used to identify possible harmful exposures and to recommend actions needed to protect public health.
- **Risk Assessment** - Technical document used in decision-making for site cleanups and other risk management strategies.

### Other Program Functions

- Radon Program
- EPA Superfund Cooperative Agreements and County Contracts
- Choose Safe Places for Early Care and Education (CSPECE) Program
- Health Assessments for Missouri's Registry for Confirmed Abandoned or Uncontrolled Hazardous Waste Disposal Sites
- Annual Fish Advisories
- Methamphetamine Labs Exposure and Cleanup Recommendations
- Pesticide Exposure and other Chemical Exposure Inquiries
- Community Education and Outreach



# HRAP Program

## Key Statistical Data and Key Facts

- The HRAP team typically completes over 200 reviews of risk assessment and related documents each year on a variety of hazardous waste sites in the state. HRAP estimates that the recommended actions in health assessments in the past 3 years may prevent or mitigate exposures to nearly 400,000 Missourians once they are fully implemented. Risk assessment has determined the need for remedial actions that have protected the health of many more Missourians.
- 33 EPA National Priority List (NPL) sites are located in Missouri and we have the 14th highest number of active NPL sites in the country.
- Missouri has a long history of widespread lead mining and associated operations. Sixty of Missouri's 114 counties are impacted by historical lead mining and 9 of Missouri's lead-contaminated sites are on EPA's NPL as a result of these historical mining operations.
- Missouri is also one of 10 states in the country with active Formerly Utilized Sites Remedial Action Program (FUSRAP) sites. These sites are impacted by radioactive contamination from the World War II and Cold War eras. Four of the 25 active FUSRAP sites are located in Missouri.
- Approximately 2.22 million Missourians live in counties that have been extensively impacted by contamination at current NPL sites, including lead-mining sites (e.g., Jasper, Jefferson, Madison, Newton, St. Francois, and Washington Counties) and World War II and Cold War-era radiological contamination sites (e.g., St. Charles and St. Louis Counties and St. Louis City).



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# Wastewater Surveillance Program

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Funded by CDC ELC, NIH, and Environmental Public Health Tracking.



# The Partnership



DNR works with the wastewater treatment sector, municipalities and congregate facilities to coordinate sample collection and distribute supplies and equipment.



University of Missouri–Columbia conducts sample analysis.



DHSS administers project funding and conducts data analysis to inform public health strategy.

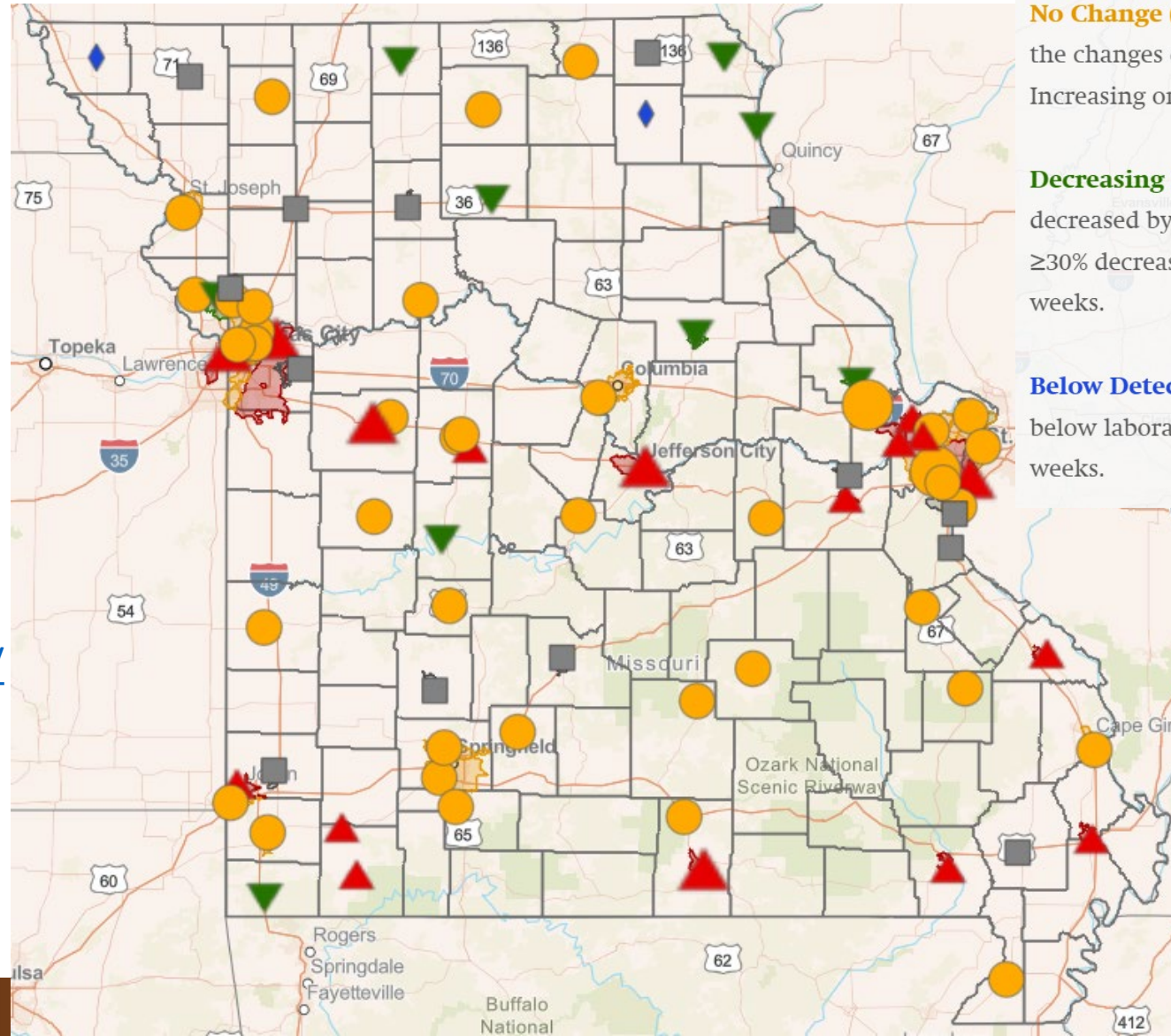


# SARS-CoV-2 (COVID-19) Tracking Tool Public Storymap



Health.mo.gov

<https://storymaps.arcgis.com/stories/f7f5492486114da6b5d6fdc07f81aacf>



## Wastewater Trends

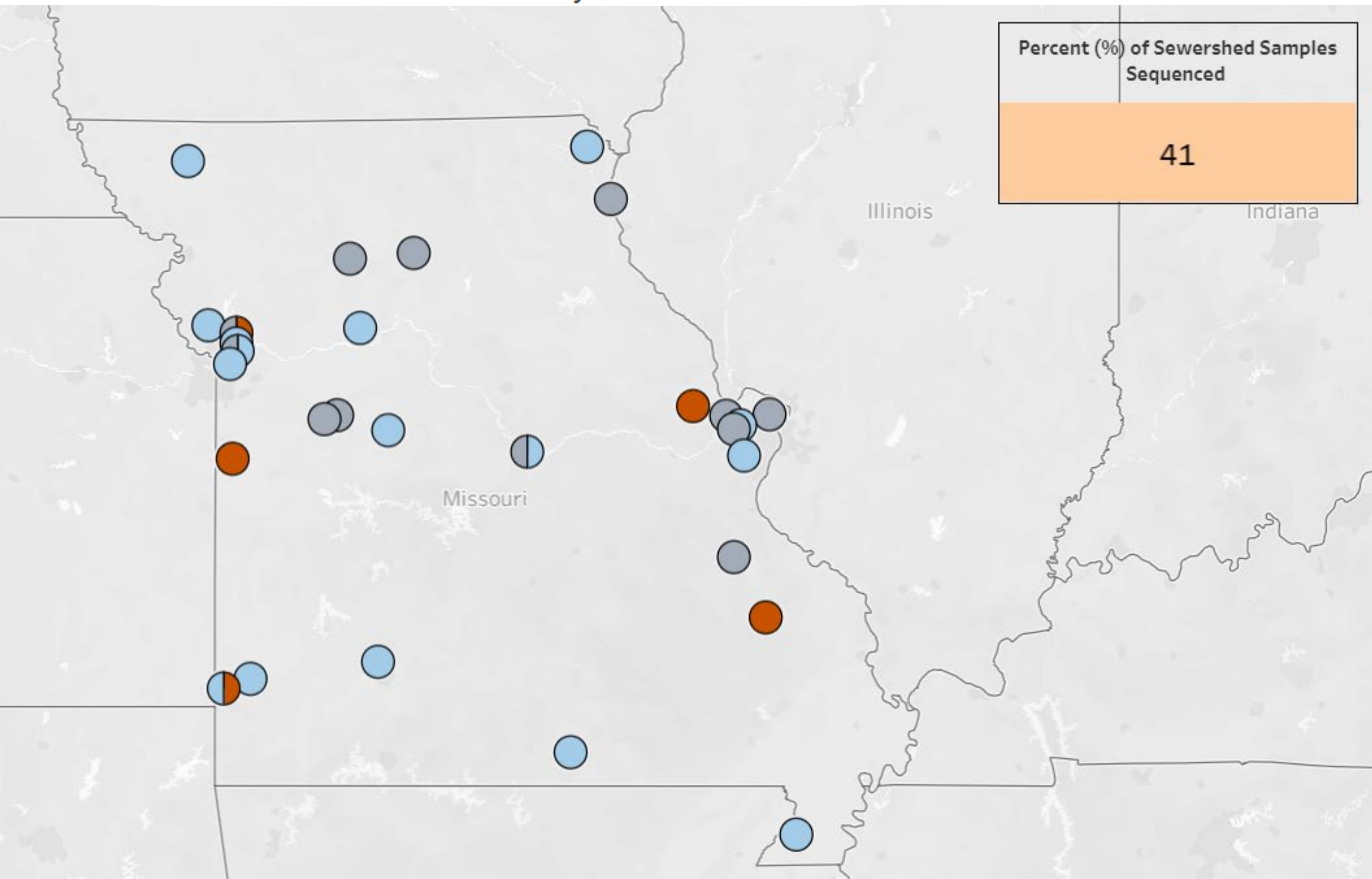
**Increasing (triangle):** Viral load either increased by 40% or more from last week, *or* increased by 25% or more for the last two weeks.

**No Change (circle):** Viral load did not change or the changes did not meet the criteria for Increasing or Decreasing status.

**Decreasing (inverted triangle):** Viral load decreased by three consecutive  $\geq 25\%$  decreases or  $\geq 30\%$  decreases in two of the previous three weeks.

**Below Detection (diamond):** Viral load was below laboratory detection limits for the last two weeks.

# Presumed SARS-CoV-2 Variants by Date and Sewershed



Percent (%) of Sewershed Samples Sequenced

41

Presumed Variant

- Omicron JN.1
- Omicron KP.2-equiva...
- Omicron KP.3

Time Frame

Previous 3 Months



# Internal Tableau Dashboards

SARS-CoV-2



[https://results.mo.gov/t/DHSS/views/Sewersheddashboard\\_16643862549820/MissouriCoronavirusSewershedSurveillanceProjectCSSP?%3Adisplay\\_count=n&%3Aembed=y&%3AisGuestRedirectFromVizportal=y&%3Aorigin=viz share link&%3AshowAppBanner=false&%3AshowVizHome=n](https://results.mo.gov/t/DHSS/views/Sewersheddashboard_16643862549820/MissouriCoronavirusSewershedSurveillanceProjectCSSP?%3Adisplay_count=n&%3Aembed=y&%3AisGuestRedirectFromVizportal=y&%3Aorigin=viz%20share%20link&%3AshowAppBanner=false&%3AshowVizHome=n)

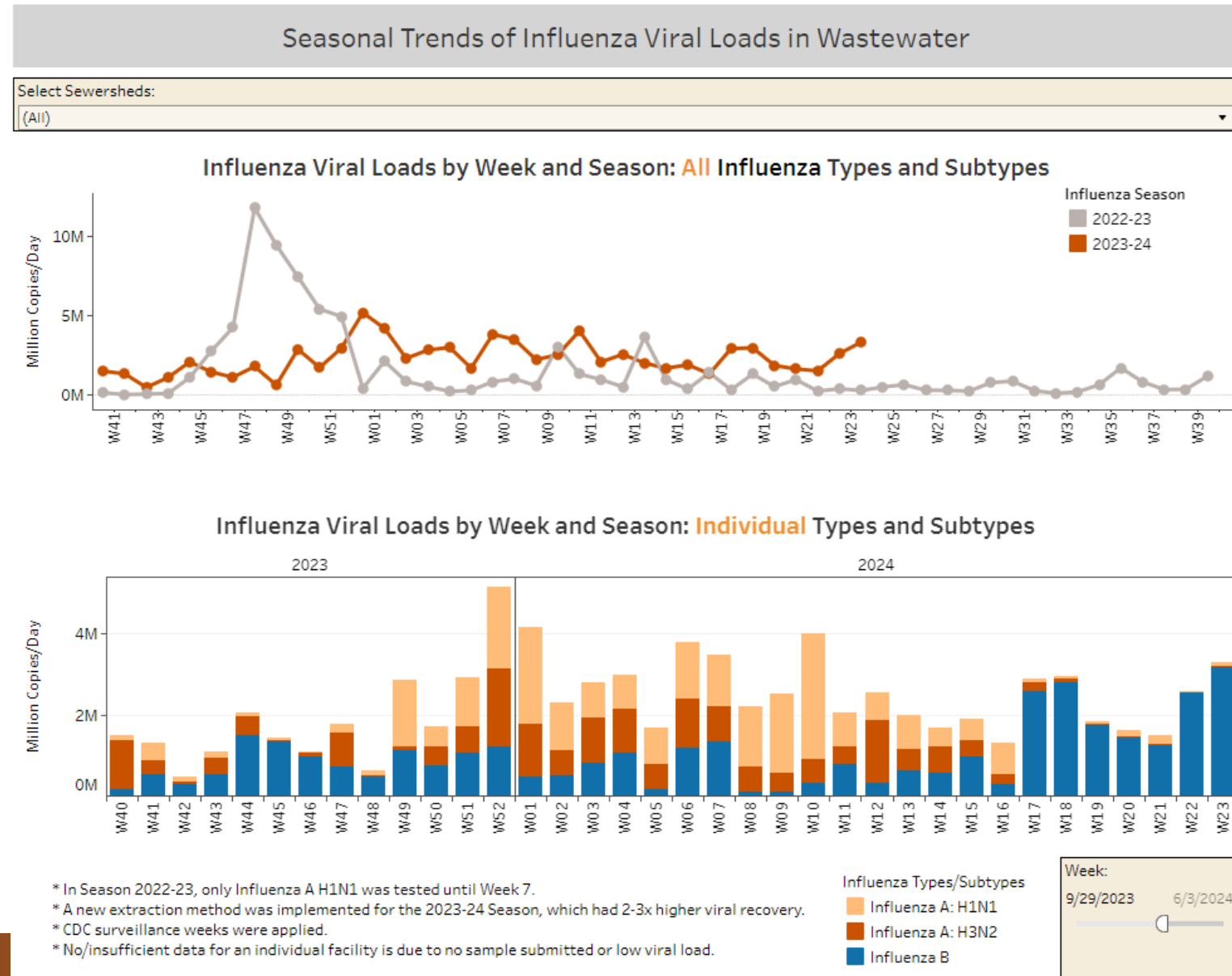
Influenza



<https://results.mo.gov/t/DHSS/views/InfluenzaDashboard/InfluenzaDashboard?%3Aembed=y&%3AisGuestRedirectFromVizportal=y>

# Influenza Data soon to be on Public Storymap

- Wastewater Influenza data will be made public soon.
- The public storymap link will change once Influenza data is incorporated.







# Future of Wastewater Surveillance

- Current targets for Missouri wastewater
  - SARS-CoV-2 (COVID-19)
  - Influenza
  - RSV
  - Conducted pilot studies for mpox, *C. auris*, and Opioids
- Possible additional targets for Missouri
  - Emerging infectious diseases of concern
  - Opioids/Illicit drugs
- Source of additional information
  - <https://www.cdc.gov/nwss/index.html>