

# Cottonwood Air Monitoring

## Air Quality Division Update

Daniel Czecholinski, Director  
Air Quality Division

September 12, 2024



Clean Air, Safe Water,  
Healthy Land for Everyone



During our December 13, 2023 Cottonwood community meeting, ADEQ committed to a follow-up meeting when the air quality monitoring was completed.

The purpose of this presentation is to update the Cottonwood community on the results of the monitoring.

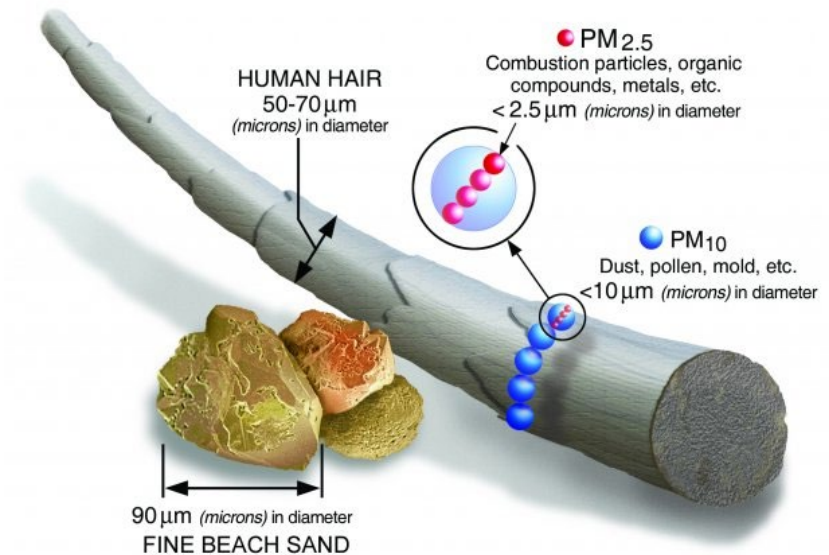
# Cottonwood Air Monitoring Study

- ADEQ conducted an extended air monitoring study at two locations in Cottonwood:
  - Cottonwood Kid's Park
  - VFW Post
- Study period of 2/15/2024 – 6/9/2024
- PM<sub>10</sub> filter data was gathered at each site approx. every 3 days
- ADEQ used a 3<sup>rd</sup> party private lab for the metals and PM10 analysis





- PM stands for particulate matter (also called particle or dust pollution)
- PM<sub>10</sub>: inhalable particles, with diameters that are generally 10 micrometers and smaller
- The 24-hour average PM<sub>10</sub> National Ambient Air Standard (NAAQS) is 150 micrograms per cubic meter ( $\mu\text{g}/\text{m}^3$ )

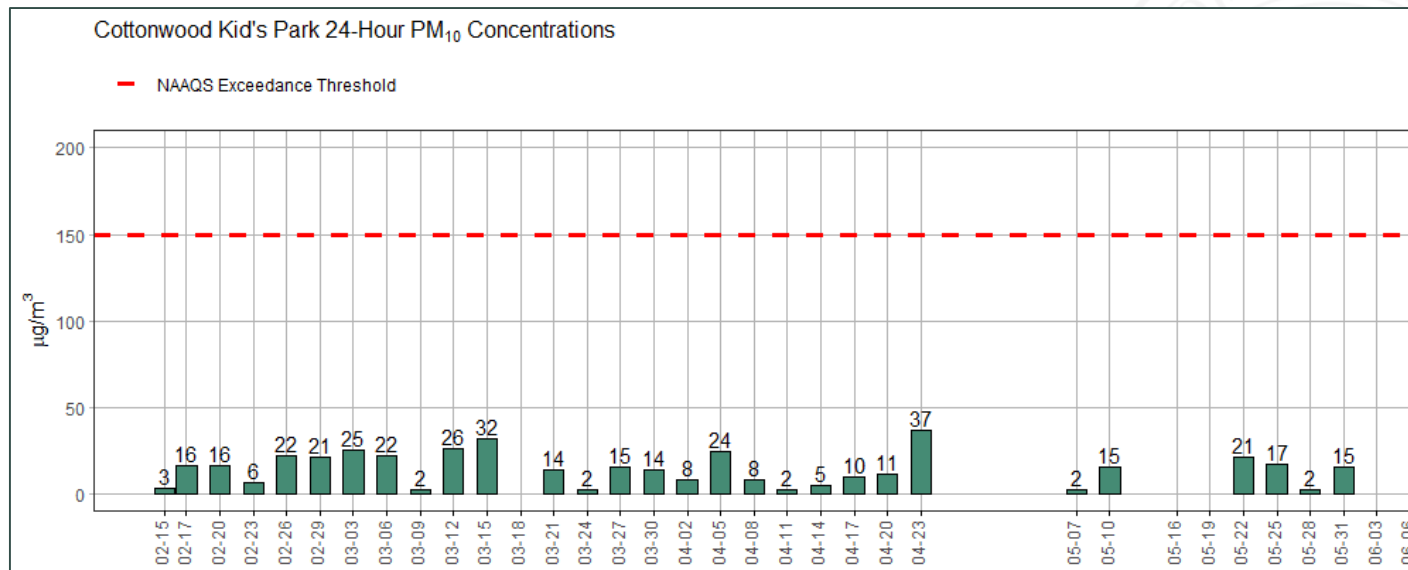


Monitor	Valid Samples Out of 36 Total
VFW Post (PM <sub>10</sub> Filter)	35
VFW Post (Metals)	31
Cottonwood Kid's Park (PM <sub>10</sub> Filter)	29
Cottonwood Kid's Park (Metals)	25

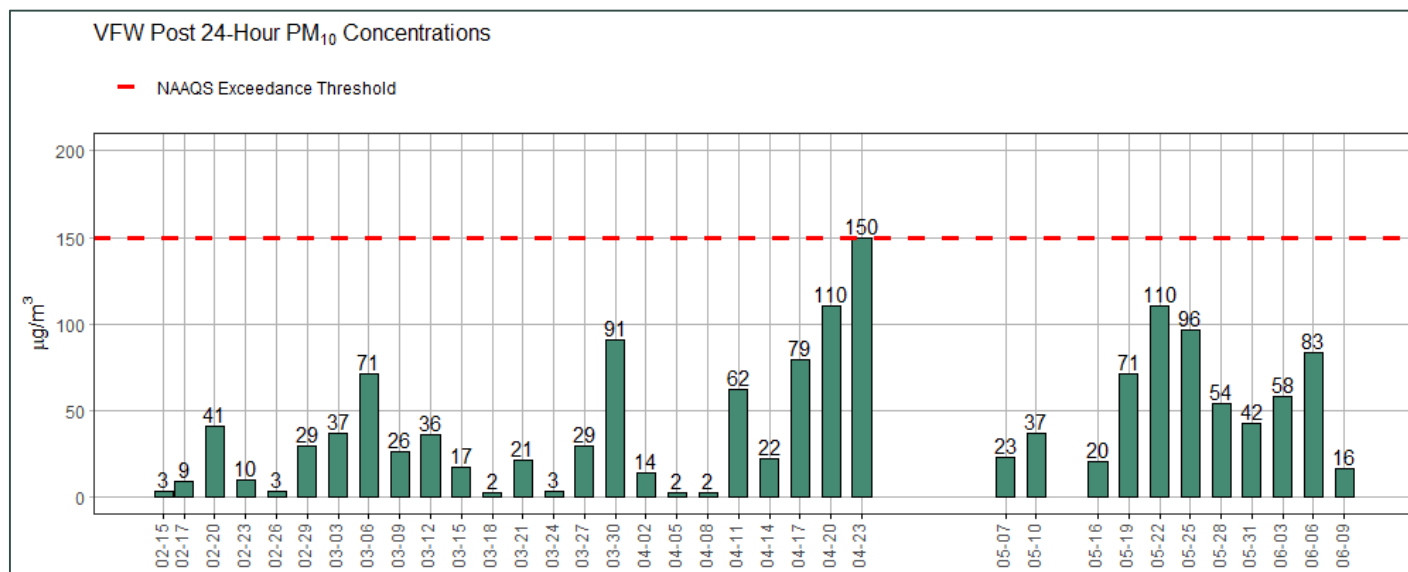
- ADEQ staff and volunteers collected a total of 72 PM<sub>10</sub> filters
  - 64 of those were analyzed for particulate matter and 56 of those filters were successfully analyzed for metals.
  - Due to solar power issues at Cottonwood Kid's Park, and external lab errors, some sample runs were unsuccessful or failed to have metals data extracted

# Cottonwood - PM<sub>10</sub> Results

## Cottonwood Kid's Park



## VFW Post



- Average PM<sub>10</sub> Concentrations during the study:
  - Cottonwood Kid’s Park = 14 µg/m<sup>3</sup>
  - VFW Post = 42 µg/m<sup>3</sup>
  
- Average Lead Concentrations during the study:
  - Cottonwood Kid’s Park = 0.002 µg/m<sup>3</sup>
  - VFW Post = 0.10 µg/m<sup>3</sup>
  - ❖ These Lead Values were extracted from the PM<sub>10</sub> filters.
  - ❖ This methodology differs from NAAQS compliance Lead monitoring, which utilizes Total Suspended Particles (TSP) to measure Lead.
  - ❖ NAAQS for lead: 0.15 ug/ m<sup>3</sup> averaged over a three-month period

- Arizona Dept. of Health Services (ADHS) will conduct a Health Consultation using data from this air monitoring study
  - ADHS consultation expected in late 2024 or early 2025
- ADEQ plans to conduct Lead specific air monitoring in the near future at the VFW Post
  - Focusing on the VFW Post due to elevated concentrations seen there during this study
  - Lead monitoring will utilize Total Suspended Particles (TSP) methodology to allow for more direct comparisons to the EPA National Ambient Air Quality Standards (NAAQS) for Lead



- Application submitted by consent order required deadline of October 31, 2023
- ADEQ is currently prioritizing the air monitoring data collection and forthcoming health consultation by ADHS
- When the permit is ready for public comment, ADEQ will follow up with our commitment for an informal community meeting in addition to the required formal public hearing

# Contacts for Questions

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and Compliance

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Community Liaison

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# 6<sup>th</sup> Street & Birch Street - Cottonwood Preliminary Investigation Site

Julie Riemenschneider  
Director, Waste Programs Division

Tina LePage  
Manager, Remedial Projects Section

September 12, 2024



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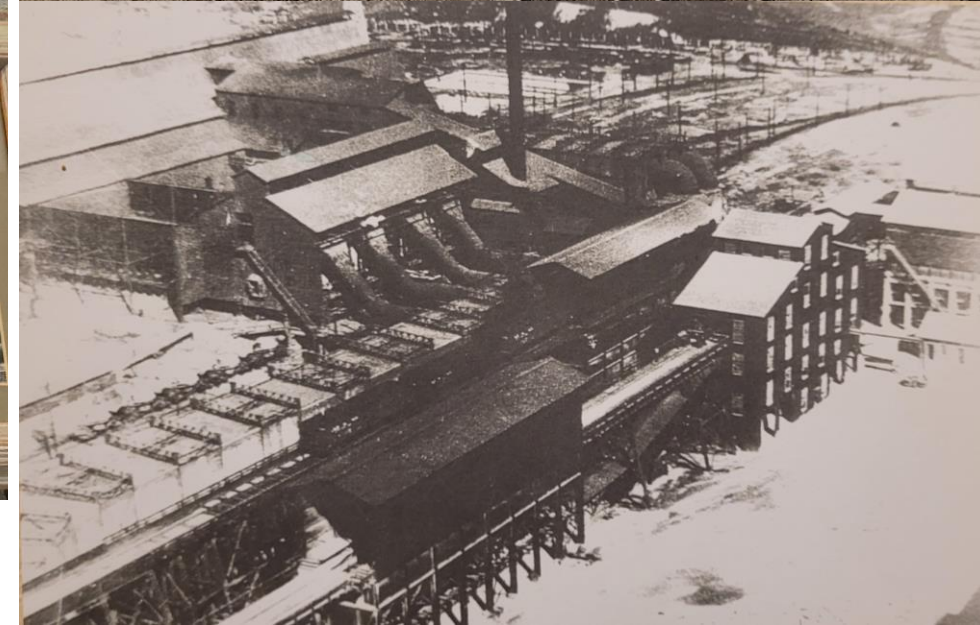
# 6<sup>th</sup> Street & Birch Street - Site Location





# 6<sup>th</sup> Street & Birch Street - Background

- Former Clemenceau smelter operated 1917/18 to 1936/37
- Slag pile and some buildings remained – City of Cottonwood expanded to encompass former Clemenceau area





# 6<sup>th</sup> Street & Birch Street - Background

- Stack demolished 1948

ADEQ field photo March 2024



Photos courtesy of Clemenceau Heritage Museum



# 6<sup>th</sup> Street & Birch Street - Background

- Minerals Research Inc. (MRI) started processing slag pile, crushing for use in consumer products
- January 2024 – Preliminary Investigation (PI) in WQARF initiated
  - PI is a screening-level investigation to provide information of a possible release or threatened release of a hazardous substance





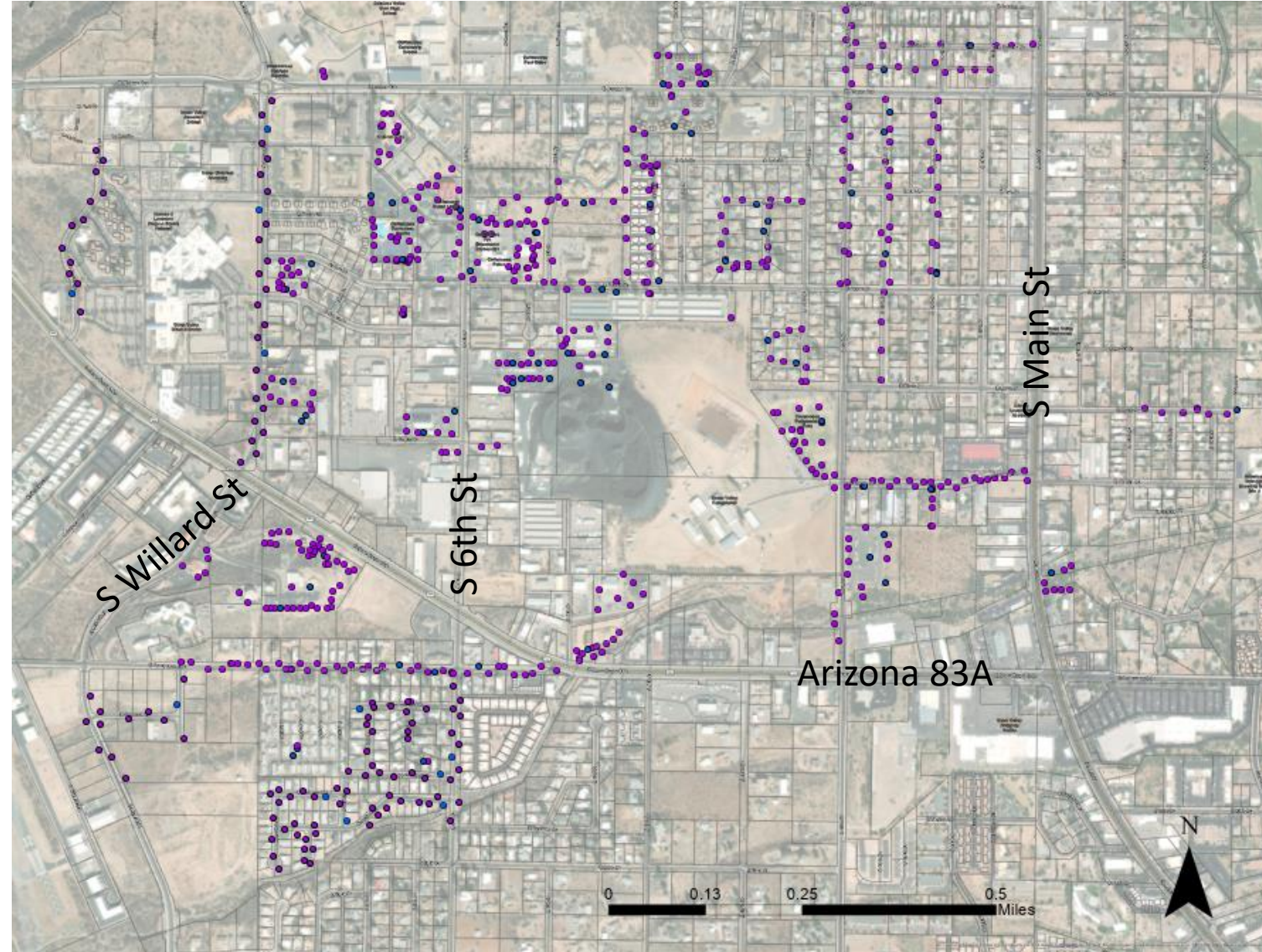
# 6<sup>th</sup> Street & Birch Street - Site Map





# 6<sup>th</sup> Street & Birch Street - Soil Sampling

- Over 750 locations sampled by X-Ray Fluorescence (XRF) field instrument
- ~10% confirmatory samples sent to the stationary lab





# 6<sup>th</sup> Street & Birch Street - Current Status

- Statistical analysis being performed to
  - Determine background concentrations of metals naturally present in the soil
  - Correlate confirmation samples to XRF data
  - Determine possible fingerprints – background, former smelter, crushed slag





- Determine if samples are above regulatory standards
- Complete WQARF Preliminary Investigation (PI) Report
- Provide PI report to ADHS for Health Consultation
- Score the site or portion of site for potential placement on WQARF Registry using the Eligibility and Evaluation (E&E) site scoring model (Arizona Administrative Code R18-16-202)

# Questions?

Tina LePage

Email:

[LePage.Tina@azdeq.gov](mailto:LePage.Tina@azdeq.gov)

Phone:

520-770-3127



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ARIZONA DEPARTMENT  
OF HEALTH SERVICES

# ADHS Environmental Toxicology Program Public Health Assessment (PHA) Program

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Cottonwood Community Meeting | Cottonwood, AZ  
September 12, 2024

**Mya Davis**, MPH, Environmental Toxicology Program Manager  
**Breanna Gately**, MS, Environmental Scientist

# Outline

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- 1 About the Environmental Toxicology Program
- 2 Health Consultation Overview
- 3 Cottonwood Health Consultation
- 4 Next Steps
- 5 Contact Information

# About the Environmental Toxicology Program





# Environmental Toxicology Program (ETP)

**Goal:** Protect Arizonans from exposure to environmental hazards and chemicals in their community so they have a safe place to live, work, and play.

Program Director



Hsini Lin, MSPH, ScD

Program Manager



Mya Davis, MPH

Environmental Scientist



Breanna Gately, MS

# Relationship between ADHS and ATSDR

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**Funded by** a cooperative agreement with the U.S. Department of Health and Human Services, Agency for Toxic Substances and Disease Registry (ATSDR).

- provides ADHS with the necessary resources to investigate environmental health concerns and report findings

# Relationship between ETP and ADEQ

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We work together in an effort to reach our common goal of protecting public health and the environment

- ADEQ: Assess, investigate, remediate, monitor, and regulate to improve environmental quality
- ETP: Evaluate, educate, promote, and advise to improve health and wellness of communities

# How we get involved in a community

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01

A site is on or proposed for the U.S. EPA's Superfund National Priorities List (NPL)

02

Other federal, state, or local agencies request our help

03

A community member requests assistance

# What we can do to help the community

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## Facilitate Community Engagement

- Respond to community requests
- Identify community concerns
- Engage in ongoing communication with the community



## Conduct Public Health Assessments

- Identify ways people might come in contact with hazards
- Evaluate the effects of contact with hazards
- Determine how hazardous a site is or has been



## Recommend Feasible and Effective Strategies

- Suggest ways stakeholders and other agencies can safeguard the health of the community
- Provide education and connect the community to additional resources
- Communicate results, recommendations, and provide continued support





# Health Consultation Overview

# What is a health consultation?

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A health consultation uses available environmental data from the site to answer a specific question. It includes:

- Identifying how people living in the area might be exposed to hazardous substances in the environment.
- Assessing exposures to chemicals and determining if the exposures could harm people.
- Making recommendations to agencies, stakeholders, and residents to protect the community's health.

# Health consultation process

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# Who is considered in a health consultation?

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- People who are (potentially) exposed to environmental hazards
  - Consider the general public and vulnerable groups such as:



Children



Older adults



Pregnant people

## Health Consultation

EVALUATION OF PRIMARY METALS IN PRIVATE DRINKING  
WATER WELLS IN THE WALKER AREA

PRESCOTT, YAVAPAI COUNTY, ARIZONA

EPA FACILITY ID: AZ5120090068

MARCH 6, 2007

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES  
Public Health Service  
Agency for Toxic Substances and Disease Registry  
Division of Health Assessment and Consultation  
Atlanta, Georgia 30333

# How the findings can help address community concerns

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- A report includes:
  - Conclusions
  - Recommendations
- Recommendations may include:
  - Recommended actions for regulatory agencies
  - Exposure reduction strategies for community members to implement
  - Health education for health care providers and community members

# What is not included in the Public Health Assessment process?

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- Collect and analyze samples
- Health studies (collection of community health information and evaluation of the possible association between the occurrence and exposure to hazardous substances)
- Regulate facility activity
- Provide medical services





# Cottonwood Health Consultation

# How we got involved

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# Information being considered

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- Environmental data collected by ADEQ



- Identified community concerns



- Information collected from community members on how the area is used



- ADHS collected data



- Health survey or health study



# Next Steps

# Cottonwood health consultation evaluation

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## Continue engaging with the community

- Please reach out to us if you have any additional information or concerns you would like to share with us



We estimate the finalized report can be expected in late 2024 - early 2025

# What happens after the health consultation is finalized?

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The report will be published on the ADHS website:

- [azdhs.gov/ EnvironmentalToxicology](https://azdhs.gov/EnvironmentalToxicology)



ADHS will share the results with the community and partners

- We will be available to discuss any questions or concerns and communicate information and results

# Contact us

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We want to hear from you.

Please contact us at:



[EnvironmentalToxicology@azdhs.gov](mailto:EnvironmentalToxicology@azdhs.gov)



480-670-1833

