

Winnebago Tribe Community Summary: Mercury in Rainwater

The Winnebago Tribe of Nebraska tracks mercury in rain and snow at our Mercury Deposition Network site (NE25) with support from the National Atmospheric Deposition Program (NADP) and our Clean Air Act Section 103 grant. This monitoring protects our land, water, fish, and people.

Two Main Numbers We Measure

1. **Concentration** — how much mercury is in each liter of rainwater (nanograms per liter, ng/L).
2. **Wet Deposition** — the total mercury that actually falls onto the ground over time (micrograms per square meter, $\mu\text{g}/\text{m}^2$). This combines concentration with how much rain or snow we get.

What Our Data Show (2022–2025) - At our site, mercury concentration in rainwater averages about 15.4 ng/L, usually between 4 and 30 ng/L. This matches patterns seen across the Midwest. Annual mercury landing on the ground here is moderate compared to some other parts of the country.

Where the Mercury Comes From - Most mercury in our rain comes from human activities, especially coal-burning power plants, factories, and certain mining operations. A large amount travels long distances through the air from places in the United States (like the Ohio River Valley) and from other countries, particularly China and developing nations where controls on mercury are weaker or not in place.

Why Rainfall Matters - More rain or snow means more total mercury reaches our soil, rivers, lakes, and fish—even if the amount in each drop stays about the same. Wetter seasons deliver a bigger mercury load to the environment we rely on for food, medicine, and ceremony.

Why We Care - Mercury builds up in fish and can affect health, especially for children, elders, and families who eat traditional foods caught locally. Our monitoring gives the Tribe real data to:

- Understand risks,
- Share accurate information with the community,
- Help guide fish consumption advice, and
- Protect clean air and water for future generations.

We will keep monitoring and reporting results. Contact the Environmental Protection Department if you have questions about mercury, fish safety, or how this affects our ways of life.

EPD – Air Quality

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