

Barriers and Challenges in Tribal Water System PFAS Testing in the Bemidji Area



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Introduction

The Great Lakes Inter-Tribal Epidemiology Center (GLITEC), a program of the Great Lakes Inter-Tribal Council, Inc., has compiled research and data on PFAS (per and polyfluoroalkyl substances). This data helps communicate the PFAS public health risk to Tribal Nations and their community members in the Bemidji Area (Michigan, Minnesota, Wisconsin, and Chicago).

In the Bemidji Area, Native Americans face unique challenges that PFAS contamination poses. Native Americans have a sacred relationship with water, which is central to their culture, spiritual practices, and livelihoods. PFAS contamination represents a significant threat not only to their physical health but also to their cultural and traditional practices. Addressing barriers and challenges associated with PFAS testing and contamination in the Bemidji Area is essential for protecting the health, well-being, and cultural integrity of Tribal communities.

Aim

To explore the disparities of PFAS related work for Tribal communities in the Bemidji Area by analyzing PFAS contamination sites near or on Tribal land and understanding the differences in water testing in Tribal and non-Tribal public water systems.

Objectives

- Identify disparities in testing between Tribal and non-Tribal public water systems.
- Identify the unique challenges faced by Tribal communities in conducting PFAS testing.
- Explore the gaps and barriers that prevent timely PFAS testing.
- Assess the impact of PFAS contamination on Tribal communities' health and access to clean water.

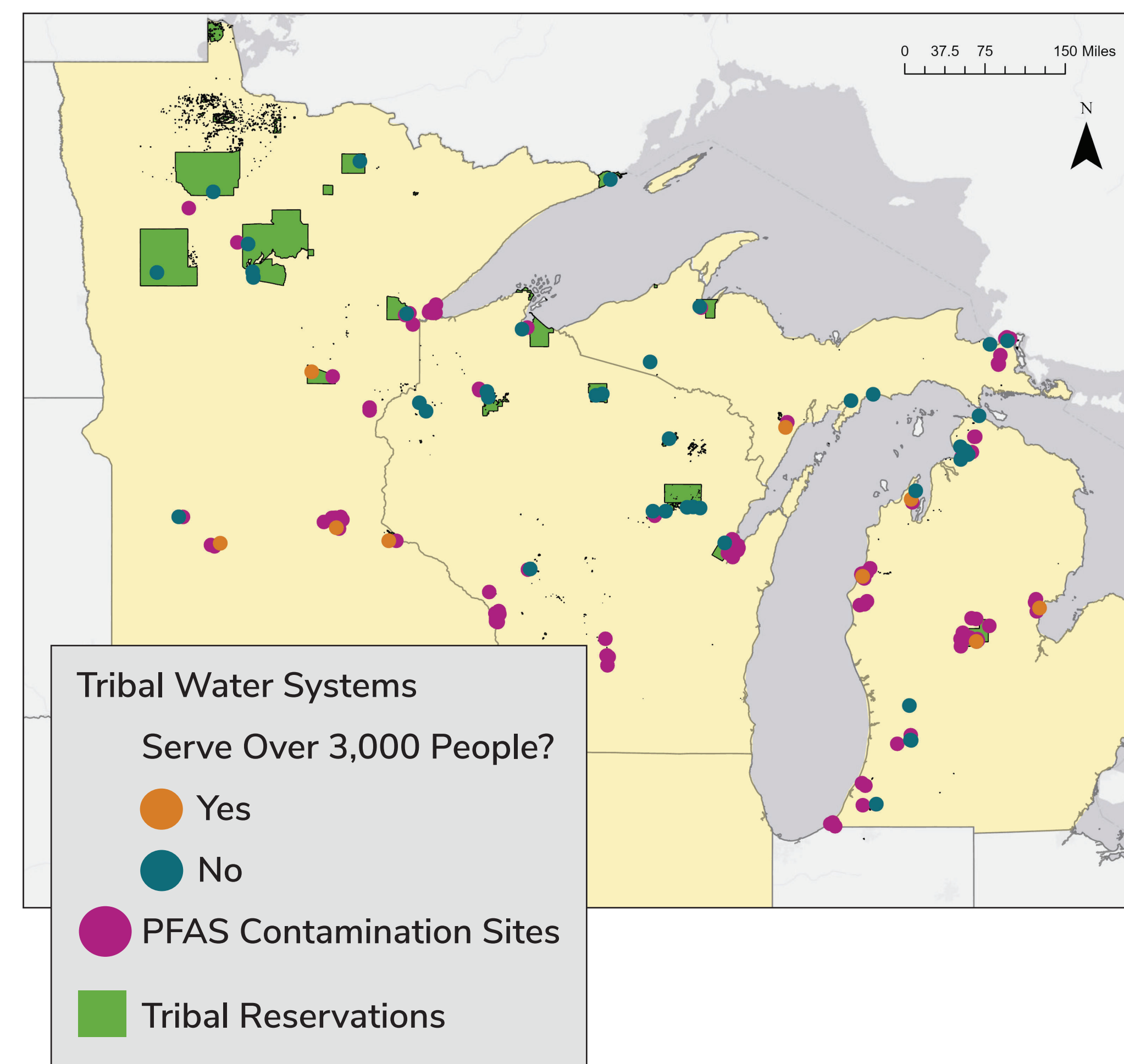
Methods

Data on public water systems (PWS) were collected from the Environmental Protection Agency's (EPA) Safe Drinking Water Information System (SDWIS) and Northeastern University's PFAS Project Lab. Tribal PWS are identified by owner type, not by population served. Known and suspected PFAS contamination sites were collected from the Environmental Working Group (EWG).

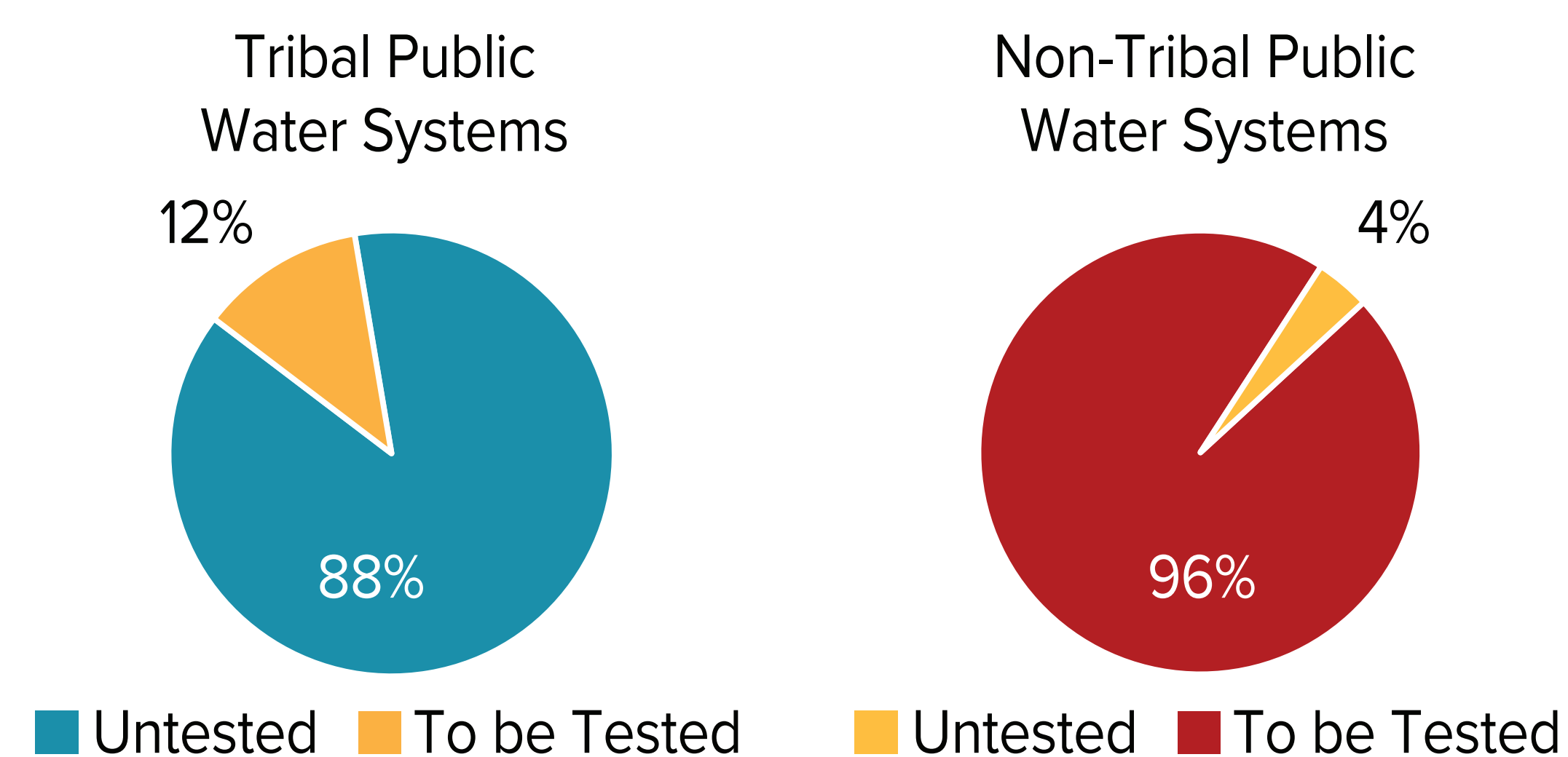
The map was made using ArcGIS Pro and corresponding shapefiles were found through publicly available data from Esri.

Results

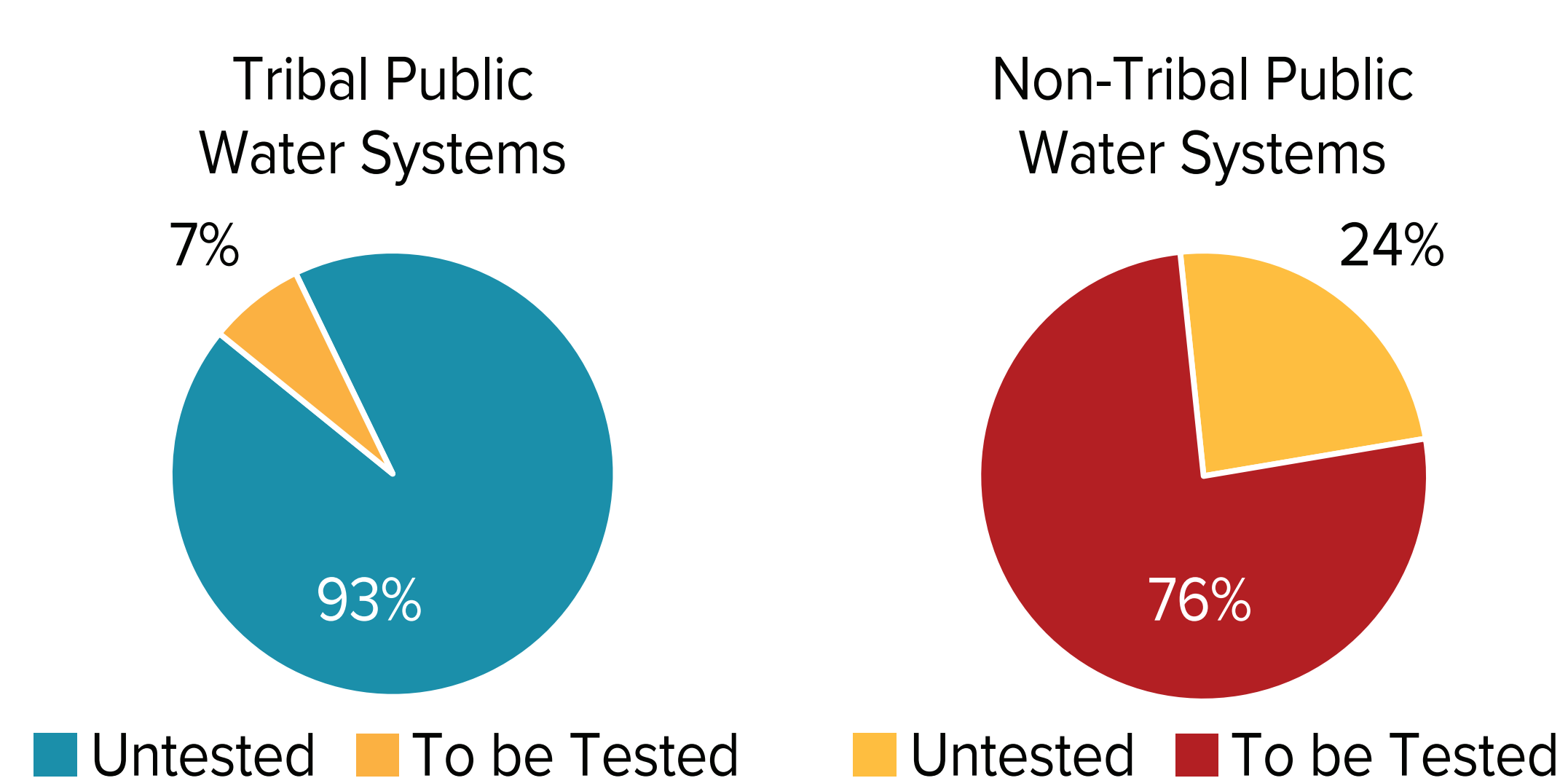
PFAS Contamination Sites and Tribal Water Systems in the Bemidji Area¹



Water System Testing Under UCMR5 in the Bemidji Area^{2,3}



Population Served Under UCMR5 in the Bemidji Area^{2,3}



Discussion

The lack of PFAS testing for Tribal PWS poses a significant threat to Tribal populations, not only in the Bemidji Area, but across the United States. A study by the EWG estimated that there are nearly 3,000 PFAS contamination sites within a five-mile radius of federally recognized Tribal lands in the US, with 157 of them being in the Bemidji Area.

The population served by Tribal PWS in both the Bemidji Area and the US are much less likely to be covered by the EPA's fifth Unregulated Contaminant Monitoring Rule (UCMR5) testing regulations. UCMR5 mandates testing PWS that serve more than 3,300 people and randomly sample 800 PWS that serve less than 3,300 people. It is estimated that 12% of Tribal systems serving 7% of the total Tribal population will be tested under UCMR5, compared to 4% of non-Tribal PWS serving 76% of the rest of the population in the Bemidji Area.

Conclusion

The data presented highlights key disparities between PFAS testing in Tribal and non-Tribal PWS, as shown in our pie charts. The map of the Bemidji Area further illustrates the potential risk of widespread contamination, explaining the need for comprehensive testing and remediation efforts in Indian Country.

Limitations

- Lack of testing on Tribal lands leads to large gaps in data.
- Untested and to be tested PWS are based off estimates from the PFAS Project Lab and does not represent actual testing data from the EPA.
- There is limited data availability and resources for comprehensive monitoring and remediation efforts.

Next Steps

- Collaborate with government agencies and local organizations to secure funding and resources for PFAS remediation efforts.
- Advocate for regulations that better address the unique needs of Tribal communities in the Bemidji Area.
- Continue culturally tailored outreach to build trust and encourage participation in PFAS mitigation strategies.
- Continue to offer water testing services and community educational opportunities.

Resources:

- 1) PFAS contamination across Tribal Lands. Environmental Working Group (EWG). Published August 16, 2021. Accessed September 6, 2024. [ewg.org/interactive-maps/pfas_tribal_lands/](https://www.ewg.org/interactive-maps/pfas_tribal_lands/)
- 2) Mok K, Salvatore D, Powers M, et al. Federal PFAS testing and tribal public water systems. *Environmental Health Perspectives*. 2022;130(12). doi: 10.1289/EHP11652
- 3) Safe Drinking Water Information System. Environmental Protection Agency (EPA). Accessed September 6, 2024. enviro.epa.gov/envirofacts/sdwis/search