



**Tribal Pesticide Program Council**

**Fall 2024**

## **Pesticides and Drinking Water Contamination and TPPC Fall Meeting Summary**

### **Introduction**

Water is regarded as sacred by many indigenous cultures and is essential for all human life. Pesticide contamination of drinking water presents many risks for human health and disproportionately impacts native peoples due to various factors. There are numerous regulatory safeguards in place from the Environmental Protection Agency (EPA), tribal, state, local and foreign governments but safe drinking water remains out of reach for many people when regulations fail to

protect water. As pest pressures increase with climate change and more pesticides are applied in response, this topic is a growing concern for many people.



### **Sources**

Contamination of drinking water with pesticides can occur in a variety of ways. Acute contamination may occur from accidents, illegal dumping, and misuse of products. This form of contamination can be addressed through education, training and certification, waste disposal systems, and consequences for illegal

actions. Even when all of the aforementioned means of regulation are employed, widespread environmental contamination can still occur through normal environmental processes. Runoff due to heavy rains can cause pesticides to leach into nearby waterways and surface water, spray drift can occur as high winds blow pesticides to non-target areas, and pesticides can build up in the soil

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**OR VISIT US ON THE WEB AT:** [tppcwebsite.org](http://tppcwebsite.org)

## Pesticides and Drinking Water Contamination (continued)

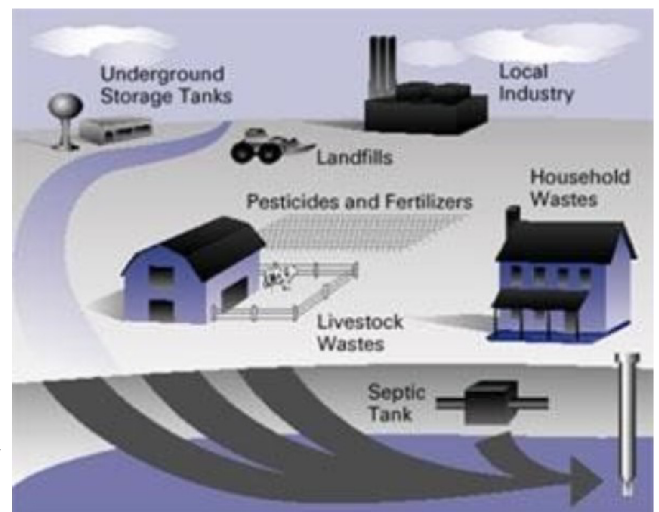
impacting the water table.

### Unidentified Issues

There are many problems related to water contamination that impact tribal communities in ways not experienced by the general population. According to a fact sheet on tribal water issues 48% of tribal homes do not have access to reliable water sources, clean drinking water, or basic sanitation. This can look like lack of piped water to homes, or water may be available but is known to be contaminated, or deteriorating water infrastructure. Known sources of water contamination are often the legacy impacts of irresponsible mining practices on tribal lands that occurred without regard for tribal community welfare. Beyond this, often water is not tested so it is unknown what other sources of contamination are present. Recent research by Arizona State University found that under 3% of tribal public water systems have been included in government-mandated monitoring. The same study also identified PFAS as emerging threats to water safety with the discovery of elevated levels.

### The PFAS Problem

Per- and polyfluoroalkyl substances and perfluorooctanoic acids, collectively known as PFAS, have been found in pesticides and pesticide containers. The National Institute of Health (NIH) has investigated PFAS in drinking water extensively in the recent past. These are considered forever chemicals due to their chemical structure causing them to accumulate in living organisms, including people. One study found that almost all girls ages 6-8 in Northern Kentucky had serum levels of PFAS above the 95th percentile for US children ages 12-19 years old. It was found that drinking water was the primary pathway of exposure. Research has demonstrated that PFAS exposure is associated with lower body



mass index, reduced insulin resistance, delayed breast development, and lower levels of reproductive hormones. Mice studies have shown that prenatal exposure to PFAS altered mammary gland structure early in life and the abnormalities persisted later into life. With these findings NIH partnered with a local city government and drinking water authorities. They implemented new filtration strategies and the girls' PFAS levels dropped by 40-60%. Tribal communities may not benefit from filtration implementations such as these as they may reside outside of cities or areas with treated water.

### Private Well Woes

Many tribal community members live off of private wells. Initially, installing a well can be a major financial barrier for some with wells being quoted anywhere up to \$15,000 for site selection, drilling,

## *Pesticides and Drinking Water Contamination (continued)*

installation, and piping to the home. Annual maintenance and water quality testing can cost hundreds of dollars. Organic chemicals used in household products and agriculture, which can make their way into well water, have been found to increase the risk of damage to the kidneys, liver, circulatory system, nervous system, and the reproductive system when consumed at high levels. People who live near agricultural areas such as crops and livestock and those who live near timber processing plants should be especially careful.

### **Indigenous Resilience and Solutions**

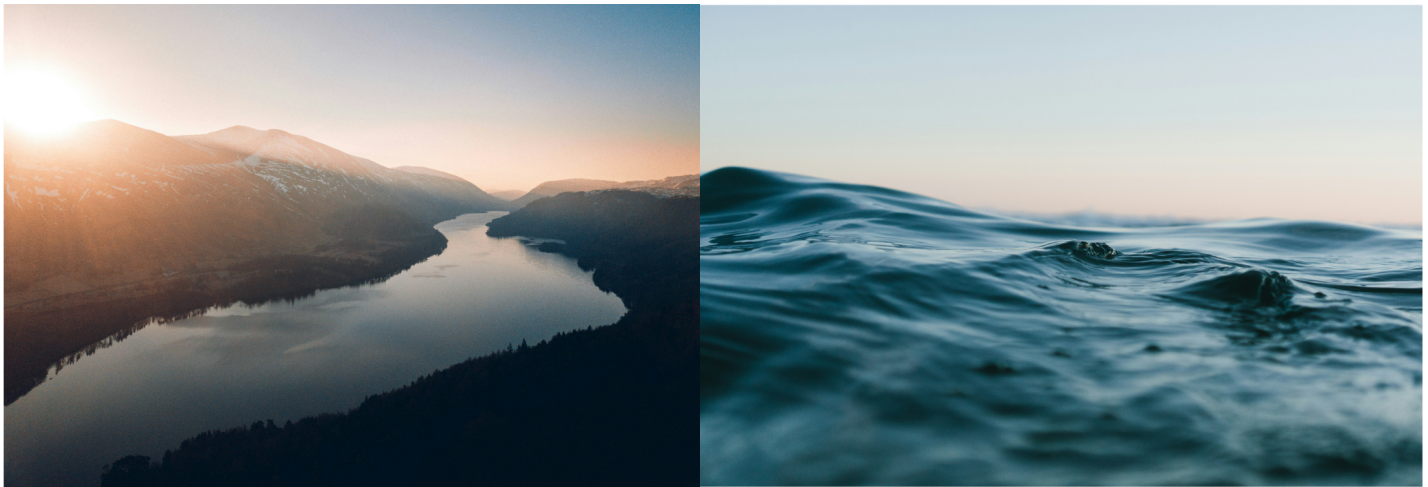
In the Navajo Nation where up to 35% of residents do not have running water in their homes, and many people must drive long distances across the reservation (which is the size of West Virginia) to haul water home. There are thousands of unregulated water sources and the safety of many is unknown. Arizona State University graduate students in collaboration with the Indigenous Food, Energy, and Water Security and Sovereignty program also known as Indigie-FEWSS, created a mobile solar powered water filtration system. The system is designed to provide 30 families with 50 gallons of water per day. The system was built using mainly supplies found at the hardware store and is hauled on a flatbed trailer. The end product is pure water with levels of pollutants below drinking water standards. The system cost only \$25,000 to build, though the Indian Health Service estimates it would cost up to \$200 million to provide access to safe drinking water to all of the sparsely distributed Navajo Nation population. However creative projects such as this may be a solution for tribal communities.



Image: A Diné College student demonstrates use of the water filtration system. Photo by Torran Anderson/Institute for Energy Solutions

### **Links**

- [Read more about reducing PFAS in drinking water here](#)
- [Visit the EPA private well water guidance page here](#)
- [This laboratory offers well water testing for 107 items including various pesticides for under \\$300](#)



## Vacant Executive Committee Representative Positions

The Executive Committee consists of TPPC Members elected by their peers to represent their regions on the Council. When fully staffed the Executive Committee includes the Chair and Vice-Chair, representatives from each of the ten EPA regions as well as one from Alaska, and four At-Large positions. Executive Committee members are responsible for ensuring that their region's tribes are represented at TPPC meetings in order to determine and raise issues of importance to these tribes, and relay information back to them. Executive Committee members are encouraged to communicate with their Regional Tribal Operations Committee (RTOCs) and EPA Regional Offices prior to TPPC meetings in order to identify pesticide program needs and issues.

The TPPC is currently seeking regional representatives to fill several vacancies on the Executive Committee and represent their Tribes' and/or Tribal Organizations interests' related to pesticides and environmental concerns. Representatives must be nominated by a TPPC member from their region or may nominate themselves, and the representative must have an authorization letter on file. If you are interested in representing your region or have questions about participating in the Executive Committee, please contact TPPC Coordinator Mark Daniels at [mark.daniels@nau.edu](mailto:mark.daniels@nau.edu) or (928) 523-8897. Current vacancies include: **Region 1, Region 3, Region 4, Region 7, Region 8, and Alaska.**

## Updates and Announcements

### TPPC Fall Meeting 2024 Recap

This year's TPPC Fall Meeting was hosted by the Kashi Band of Pomo Indians TPPC member and Vice Chairperson Nina Hapner. The council gathered in person at the Laguna de Santa Rosa Environmental Center and virtually via Zoom. Hannah Banuelos, an elder of the Kashia Band of Pomo Indians, welcomed the group and blessed the meeting with an opening prayer. Anne Morkill who works for the Laguna de Santa Rosa introduced the goals of managing and conserving the Laguna de Santa Rosa watershed and environmental education about the Laguna de Santa Rosa Wetlands. TPPC members gathered for two and one half days to observe presentations from

environmental groups, EPA and federal partners, and other TPPC members. On the final day of the meeting attendees joined a field trip to the Fort Ross Visitor Center, part of the California State Park. Members met with California State Park employees to discuss and learn about the history of the land from pre colonization, through Russian occupation, and current restoration goals and challenges and hopes of collaboration between the Kashi Band of Pomo Indians and state management.

## Links

- [Meeting notes, presentation slides, and attendee/speaker contact information will be available soon on the TPPC Website](#)
- [Watch Hannah Banuelos and Nina Haper share about Kashia Band of Pomo Indian traditions on Youtube](#)
- [Fort Ross Visitors Center](#)



Meeting attendees enjoying the local scenery after hours



In person TPPC Fall Meeting 2024 attendees at the Laguna de Santa Rosa Environmental Center where the meeting was held

## Updates and Announcements *(continued)*

### Conferences and Meetings:

#### SFIREG Winter Meeting

The State FIFRA Issues Research & Evaluation Group (SFIREG) will be holding its winter meeting December 9-10 in Alexandria, VA. for more information see <https://aapco.org/2015/07/30/sfireg-3/>

#### AAPCO Spring Meeting

The Association of American Pesticide Control Officials (AAPCO) will hold their spring Meeting **March 2-5, 2025** in Alexandria, VA. For more information visit <https://aapco.org/wp-content/uploads/2024/07/2025-SAVE-THE-DATE.pdf>

#### TPPC Spring Meeting

The TPPC will hold its spring meeting **March 5-7, 2025** in Washington, DC. For more information contact TPPC coordinator Mark Daniels at [mark.daniels@nau.edu](mailto:mark.daniels@nau.edu).

#### ASPCRO Mid-Year Board of Directors Meeting

The Association of Structural Pest Control Regulatory Officials (ASPCRO) will hold their mid-year board of directors meeting **April 22, 2025** in Portland, ME. For details see <https://aspcro.org/meetings/>

### Trainings and Courses:

#### Pesticide Labels PREP Course

Training for Private Applicators Under the EPA Plan: EPA will be holding their quarterly training for private applicators in Indian Country under the EPA plan for restricted use pesticides (RUPs) November 6-7 online. To learn more visit <https://www.epa.gov/pesticide-applicator-certificationindian-country/training-private-applicators-under-epa-plan>

### Tribal Consultation and Public Comment Opportunities

#### Assessing Tribal Exposures in TSCA Risk Assessments **(Ends January 17, 2025)**

EPA's Office of Pollution Prevention and Toxics is initiating consultation on their recently released Draft Considerations and Resources for Assessing Tribal Exposures in TSCA Risk Evaluations document. For more information contact Irina Myers at [myers.irina@epa.gov](mailto:myers.irina@epa.gov)

## TPPC Executive Committee Members

**Jasmine Courville**

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(Vacant)  
At-Large Representative

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The TPPC is a member-based organization with more than 100 members from 62 Tribes and tribal organizations as of January 2024, whose activities are funded by a cooperative agreement with the EPA. The Council serves as a tribal technical resource, and provides a forum for dialogue between Tribes and the EPA on program and policy development relating to pesticides issues and concerns. Assistance provided to Tribes includes support in building tribal pesticide programs and conducting pesticide education and training, and the preparation of resources for Tribes interested in specialized issues such as Integrated Pest Management and pollinators. Through its interaction with the EPA, the TPPC keeps Tribes informed of developments in the regulation of pesticides and pesticide use, and provides feedback to the EPA on such matters from a tribal perspective (though it is important to note that communication between the EPA and the TPPC does not substitute for direct government-to-government consultation).

**For information about how to join the TPPC, contact Mark Daniels at [mark.daniels@nau.edu](mailto:mark.daniels@nau.edu) or (928) 523-8897.**

