

## Eastern Band of Cherokee Indians Water Quality Program's Hydro-Met Stations

Michael Bolt, Eastern Band of Cherokee Indians; NTWC Member

The lands of the Eastern Band of Cherokee Indians have three major watersheds that flow into the Mississippi River. They are the Little Tennessee, the Cheoah, and the Hiawassee. These river systems are comprised of many headwater streams. This being so, it is important that we preserve the integrity of our tribal waters, not only for the health of our river systems, but to maintain the cultural value they have.



One method that we use to monitor water quality on the reservation is by utilizing Hydro-Met Stations. These stations monitor multiple parameters of water quality and meteorological data in real time. This differs from traditional grab sampling, which only takes a very small snapshot of what the chemistry of the stream is at the second the sample was collected. Each parameter is measured and transmitted into a database every few seconds. This allows us to see changes within a stream at pinpointed times and to address water quality issues in a timely manner. Having these capabilities gives us an advantage by being aware of the quality of our waters 100% of the time.

The stations are housed in 10-foot-by-10-foot chain linked fences. Within these areas are the electrical components for the entire Hydro-Met Station, a precipitation gauge, and meteorological equipment. These stations are powered with a solar panel. Outside of the gated area are multiple water quality sensors. Each sensor is retained on an instrument called a sonde. This sonde, while holding each water quality sensor, sends the data collected to the station computer through an electrical cable. Alongside the sonde is another piece of equipment called a bubbler. The bubbler calculates the stream depth and flow.



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## EBCI's Water Quality Program's Hydro-Met Stations (*continued*)

The Hydro-Met Stations collect the following aquatic parameters and meteorological parameters.

### Aquatic Parameters

- Turbidity
- pH
- Dissolved Oxygen
- Water Temperature
- Water Depth

### Meteorological Parameters

- Total Precipitation
- Air Temperature
- Humidity
- Barometric Pressure



Water Quality Sonde

For more information, please visit: [Water Quality | Cherokee Natural Resources](#)

## Updates and Announcements

### **NEW!** EPA Office of Water Announce New Website - Clean and Safe Water in Indian Country

The EPA Office of Water launched a new website, *Clean and Safe Water in Indian Country*, that will provide resources for tribal environmental professionals. The website will provide information on the EPA's national tribal water program, tools, training opportunities, and funding programs available to tribes.

To access the website, please visit: [Clean and Safe Water in Indian Country | US EPA](#)

### National Tribal Water Council is Seeking Applications for New Members

**Deadline: August 13, 2021**

The National Tribal Water Council is currently accepting applications from tribal water professionals to fill two (2) open membership positions:

- **Region 2 Representative:** Open to tribal water professionals employed by a federally recognized Tribe or tribally authorized organization from Region 2, which includes the following states: New Jersey and New York.
- **Region 10 Representative:** Open to tribal water professionals employed by a federally recognized Tribe or tribally authorized organization from Region 10, which includes the following states: Alaska, Idaho, Oregon, and Washington.

Member duties include but are not limited to:

- Reviewing and discussing water-related issues in Indian Country
- Assisting the NTWC in informing tribes on a wide variety of water issues
- Participating in crafting response documents to policy and/or rulemaking actions
- Participating in monthly conference calls and attending bi-annual meetings

We are seeking individuals that are passionate and vocal about tribal water issues. Interested candidates must submit an application form, letter of interest and professional resume. The application deadline is August 13, 2021. For additional information, the application packet is available on the NTWC website: <http://www7.nau.edu/itep/main/ntwc/>

### Registration Now Open - ITEP 2021 Virtual Tribal Lands and Environment Forum

Registration is now open for the ITEP 2021 Tribal Lands and Environment Forum (TLEF). This year's forum will be virtual and held during the week of August 16-20, 2021. You may register at: [Tribal Lands and Environment Forum - \(secure-platform.com\)](#)

## Tribal Consultation and Public Comment Opportunities

### **Tribal Consultation Opportunity: Notice of Intention to Reconsider and Revise the Clean Water Act Section 401 Rule**

**Ends: September 7, 2021**

The U.S. Environmental Protection Agency (EPA) is initiating consultation and coordination with federally recognized Indian Tribes on the Notice of Intention to Reconsider and Revise the Clean Water Act Section (CWA) 401 Rule. CWA Section 401 provides states and tribes with a powerful tool to protect the quality of their waters from adverse impacts resulting from federally licensed or permitted projects.

The consultation ends on **September 7, 2021**. For additional information, please visit <https://tcots.epa.gov> for the consultation materials. For more information on the CWA Section 401, please visit: [Section 401 of the Clean Water Act | US EPA](#)

### **Tribal Consultation Opportunity: Potential Promulgation of Tribal Baseline Water Quality Standards under the Clean Water Act**

**Ends: September 13, 2021**

The U.S. Environmental Protection Agency (EPA) is initiating consultation and coordination with federally recognized Indian Tribes on an upcoming rulemaking that would establish tribal baseline water quality standards (WQS) under the Clean Water Act for waters on Indian reservations that currently do not have EPA-approved WQS in place.

Water quality standards define the goals for water bodies and establish the criteria that must be met to support those goals, serving as the foundation for controlling pollution as mandated by the CWA. With the proposed rulemaking, the EPA will be better equipped to work with tribal governments to improve water quality in impaired waters and prevent future degradation of tribal waters.

The consultation ends on **September 13, 2021**. For additional information, please visit <https://tcots.epa.gov> for the consultation materials. For additional information on this forthcoming rulemaking, please visit: <https://www.epa.gov/wqs-tech/promulgation-tribal-baseline-water-quality-standards-under-clean-water-act>.

### **Tribal Consultation Opportunity: Potential Revisions to the Clean Water Act Water Quality Standards Regulations to Protect Tribal Reserved Rights**

**Ends: September 13, 2021**

The U.S. Environmental Protection Agency (EPA) is initiating consultation and coordination with federally recognized Indian Tribes to inform of potential revisions to the federal Clean Water Act (CWA) water quality standards (WQS) regulations. Many tribes, through treaties and equivalent agreements with the U.S. government, hold reserved rights to aquatic or aquatic-dependent resources in waters outside the boundaries of federal Indian reservations, or in areas otherwise subject to state and federal jurisdiction. EPA's Office of Water is considering pursuing a change to the federal WQS regulations at 40 CFR Part 131 to explicitly and sustainably protect tribal reserved rights in state waters, consistent with existing legal obligations. This action is separate from and complementary to the EPA's action to establish baseline WQS under the CWA for waters on Indian reservations that do not have EPA-approved WQS currently in place.

The consultation ends on **September 13, 2021**. For additional information, please visit <https://tcots.epa.gov> for the consultation materials. For additional information about this forthcoming rulemaking, please visit: <https://www.epa.gov/wqs-tech/revising-federal-water-quality-standards-regulations-protect-tribal-reserved-rights>.

## Tribal Consultation and Public Comment Opportunities (*continued*)

### EPA/AIEO Tribal Consultation on GAP Funding Allocation

**Ends: November 17, 2021**

The EPA's American Indian Environmental Office (AIEO) initiated a 120-day tribal consultation with federally recognized tribes to receive input on how to improve the national allocation of the Indian Environmental General Assistance (GAP) funds. In the current national allocation methodology, EPA provides \$110,000 per federally recognized tribe. However, a 2008 OIG report included a recommendation that AIEO revise its allocation methodology to take into account tribes' environmental needs and prior progress.

The AIEO is conducting an introductory call and a series of regional webinars/listening sessions.

- August 3 (3:00-4:30 PM EDT): [National Notification Call to Tribal Leaders](#)
- August 10 (10:30 AM-12:00 PM EDT): [Webinar with Tribes in Regions 1-5](#)
- August 17 (3:00-4:30 PM EDT): [Webinar with Alaska Tribes and Native Villages](#)
- August 19 (11:00 AM-12:30 PM EDT): [Webinar with Tribes in Regions 6-8](#)
- August 26 (3:00-4:30 PM EDT): [Webinar with Tribes in Region 9](#)
- August 31 (3:00-4:30 PM EDT): [Webinar with Tribes in Region 10](#)
- September 2 (3:30-5:00 PM EDT): [Webinar for Intertribal Consortia](#)

The consultation ends on **November 17, 2021**. Please visit <https://tcots.epa.gov> for more detailed information on the webinars/listening session and consultation materials.

## Grant Opportunities

### EPA FY 2021 Building Partner Capacity and Promoting Resiliency and Equity under Clean Water Act Wetlands, Nonpoint Source, Monitoring, Assessment and Listing Programs

**Deadline: August 10, 2021**

The EPA's Office of Wetlands, Oceans, and Watersheds (OWOW) is accepting applications for the Fiscal Year (FY) 2021 Building Partner Capacity and Promoting Resiliency and Equity under Clean Water Act Wetlands, Nonpoint Source, Monitoring, Assessment and Listing Programs. The funding covers a range of opportunities across OWOW programs, including agricultural water quality, connecting Clean Water Act programs with natural hazard mitigation, training for state and tribal water quality professionals, and more. EPA will make awards under 11 priority topic areas, which include tribal water programs and tribal-specific workshops.

For more information, please visit: [View Opportunity | GRANTS.GOV](#).

### NOAA/NIDIS FY 2022 Coping with Drought Grants

**Deadline: October 18, 2021**

For Fiscal Year (FY) 2022, NIDIS is hosting two separate Coping with Drought competitions: Ecological Drought and Building Tribal Drought Resilience. Both competitions are currently open and accepting letters of intent.

1. The Ecological Drought competition is focused on research and tools to improve our understanding and management of drought risk in terrestrial and aquatic ecosystems to inform more deliberate and expanded decision-making that supports sustainable, healthy and resilient ecosystems.
2. The Tribal Drought Resilience competition is focused on the implementation of actions - together with research on those actions - to build tribal drought resilience contained in existing plans and strategies.

For more information, please visit: [View Opportunity | GRANTS.GOV](#) or [NIDIS Coping with Drought Research Competition | Drought.gov](#)

### **Inter Tribal Council of Arizona, Inc. - National Tribal Water & Wastewater Operator Training & Certification Program**

The Inter Tribal Council of Arizona, Inc. National Tribal Water and Wastewater Operator Training and Certification Program is providing live online training. Each course consists of sequential lessons that are provided in a series of live online classes that are 3-hours in length.

Upcoming courses include, but are not limited to:

- Wastewater Collection – Level 1: August 30 to September 24, 2021
- Water Treatment – Level 1: October 5 to November 9, 2021

For more information, training schedule, and to register, please visit: <https://itcaonline.com/programs/environmental-quality-programs/tws-tmap/tws-training-events/>

### **EPA Drinking Water Training**

- July 28, 2021 (2:00 PM – 3:00 PM ET): DWSRF Building Capacity in Action: Source Water Protection

To register, please visit: [Drinking Water Training | US EPA](#)

### **U.S. Fish and Wildlife Freshwater Mussel Conservation Webinar**

- August 10, 2021 (2:00 PM EDT): Assessing the Water Quality Effects of Freshwater and Saltwater Bivalves

To register, please visit: [DOI Talent WebEx Enterprise Site](#)

### **EPA Tools and Resources Webinar Series**

- August 18, 2021: PFAS Technical Support and Scientific Advancements

To register, please visit: [EPA Tools and Resources Webinar Series | EPA Research to Support States | US EPA](#)

### **EPA Water Research Webinar Series**

- August 25, 2021: Valuing Aquatic Ecosystem Health at a National Scale: Modeling Biological Indicators Across Space/Time

To register, please visit: [Water Research Webinar Series | US EPA](#)

### **EPA Small Systems Monthly Webinar Series**

- August 30 - September 2, 2021: 18<sup>th</sup> Annual EPA Drinking Water Virtual Workshop
- October 26, 2021: Tribal Community Water Systems

To register, please visit: <https://www.epa.gov/water-research/small-systems-monthly-webinar-series>

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