Monitoring Driftless Area Trout Streams with the WiseH2O Mobile Application
Get Started: A Guide for Participants

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Background:

Poor water quality and degraded habitat are major detriments to the health of coldwater resources. Lack of data on these conditions often hinders an understanding of where trout streams need protection and restoration. Trout Unlimited (TU) is placing a high priority on Community Science, given its benefits for angler education and engagement in trout management. Through community science and crowdsourced monitoring, resource managers have access to more relevant data, allowing them to better address needs for trout stream protection and restoration.

WiseH2O Mobile Application:

Using patented mobile phone technology and chemical test strips, MobileH2O, LLC has developed the WiseH2O Mobile Application (WiseH2O App), a water quality screening tool that is fast, inexpensive, and easy for use by anglers wanting to understand water quality and ensure the health of their trout streams. TU and MobileH2O, LLC are partnering to promote angler use of the WiseH2O App for monitoring water quality and habitat conditions in Driftless Area (WI, MN, IA, and IL) trout streams. Via the WiseH2O App, anglers can quickly make water chemistry measurements of alkalinity, hardness, nitrate-nitrogen, nitrite-nitrogen, pH, and orthophosphate. The WiseH2O App also allows anglers to record water temperatures, stream disturbances, weather conditions, and water level/clarity.

2019 WiseH2O App Pilot Project:

In 2019, the Kiap-TU-Wish Chapter of Trout Unlimited participated in a WiseH2O App pilot project in Pierce County, WI (Driftless Area). Kiap-TU-Wish created a monitoring plan that was used by their anglers to make 83 WiseH2O App observations in 10 targeted trout streams throughout the county. TU and MobileH2O, LLC produced a 2019 pilot project report and a data visualization tool, available at: https://www.mobileh2o.com/anglerscience.

Interested in Monitoring with the WiseH2O App?

Contact Kent Johnson, TUDARE's Coordinator for the WiseH2O App Project. Kent can provide project information and details (d.kent.johnson@gmail.com).

Get Started:

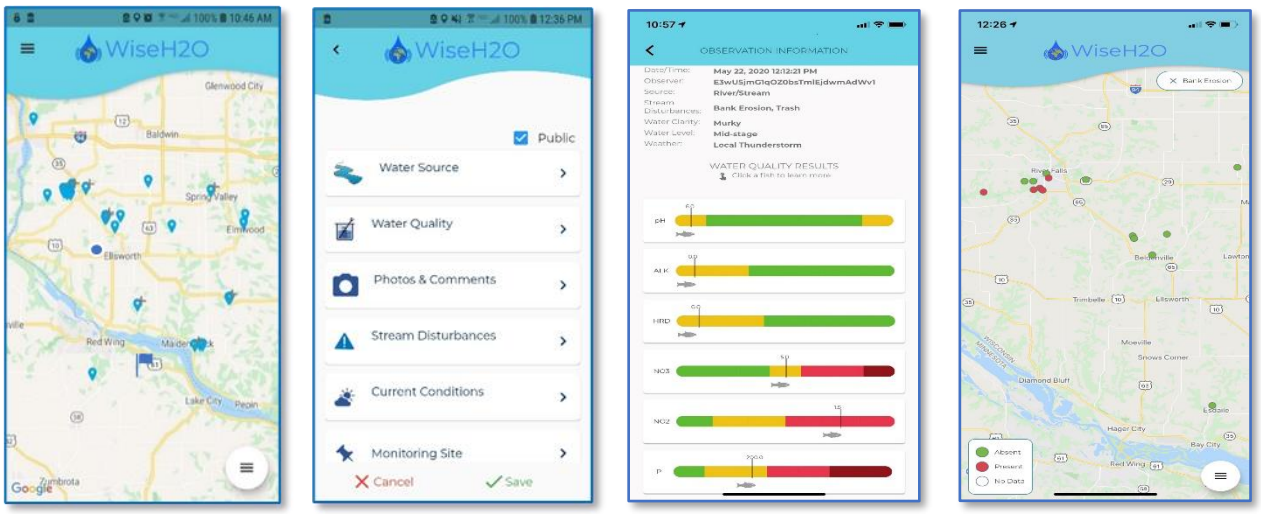
1. Select a Group Liaison:

For each participating group (Trout Unlimited Chapter or non-profit organization), we are looking for a liaison to support the project. Liaison responsibilities would include: a) providing project information to group members; b) recruiting and coordinating participants; c) ensuring that participants are adequately trained; d) ensuring that participants have water chemistry test kits and/or working with Kent Johnson to acquire them (see Step 4 below); and e) determining the group's interest in developing a local monitoring plan. Kent Johnson, TUDARE WiseH2O App Project Coordinator, is available to support the group liaison with all project aspects, including on-site communication, training, acquisition of test kits, and monitoring plan development, as needed.

2. Download the WiseH2O App:

Android and iPhone versions of the WiseH2O App are available for **free** download at the Google Play Store and Apple Store. Instructions for downloading the WiseH2O App can be found in the ***WiseH20 App User Guide***, located on the MobileH2O website: https://www.mobileh2o.com/mh2oapp.

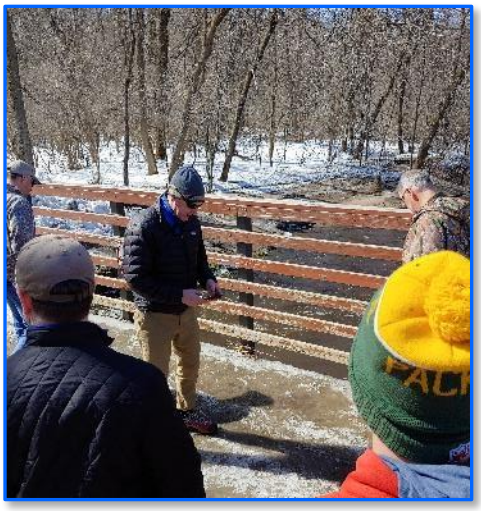
A. Base Map B. Observation Entry C. Observation Data D. Results Map



Key interfaces for the WiseH2O mApp

3. Complete On-Line Training:

Detailed on-line instructions for use of the WiseH2O App can be found in the ***WiseH20 App User Guide*** and the ***Video Tutorial for Using the WiseH2O App***, both located on the MobileH2O website: https://www.mobileh2o.com/mh2oapp.



Angler training is key for using the WiseH2O App

4. Obtain Water Chemistry Test Kits:

Depending on each participant's level of interest and desired extent of involvement with water chemistry monitoring, 3 types of test kits are available:

- Basic ($12): 5 5-in-1 test strips; 5 2-in-1 test strips; color card for test strip photos
- Advanced ($20): 10 5-in-1 test strips; 10 2-in-1 test strips; color card for test strip photos
- Premium ($60): 25 5-in-1 test strips; 25 2-in-1 test strips; 25 orthophosphate test strips; color card for test strip photos

WiseH2O Water Quality Kit - Basic

$12.00

WiseH2O Water Quality Kit - Advanced

$20.00

WiseH2O Water Quality Kit - Premium

$60.00

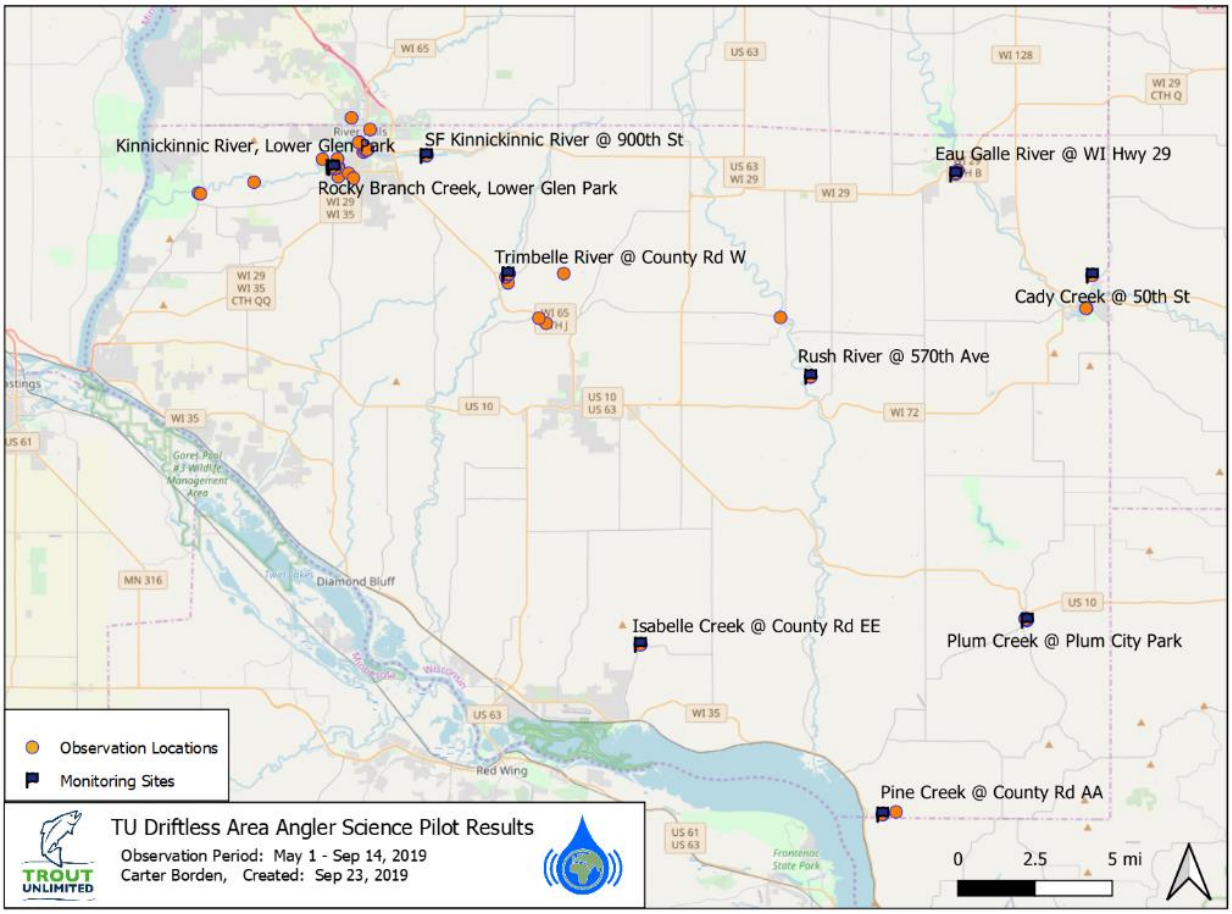
Test kits can be ordered directly from MobileH2O, at: https://www.mobileh2o.com/shop

To help offset the start-up cost of test kits for TU chapters and their participants in 2020, Trout Unlimited can offer a limited number of free starter kits (up to 5 Basic Kits and 3 Premium Kits) for each TU chapter, with funding provided by TU's Coldwater Conservation Fund. Kent Johnson can work with the TU chapter liaison to provide the kits, based on chapter needs.

A reliable thermometer for WiseH2O App temperature measurements can also be purchased at: https://www.mobileh2o.com/shop.

5. Consider a Monitoring Plan:

If your group is interested in monitoring particular streams and their water quality and/or habitat conditions within your locale, you may want to prepare a short monitoring plan to guide participants to these special locations. For the 2019 WiseH2O App pilot project, the Kiap-TU -Wish Chapter of TU prepared a monitoring plan that can be used as a reference and/or customized to serve your group's needs. This plan, prepared by Kent Johnson, can be found on the MobileH2O website: https://www.mobileh2o.com/anglerscience. Kent is also available to provide support for monitoring plan preparation.



Angler observation locations in Pierce County, WI trout streams, based on the 2019 Kiap-TU-Wish monitoring plan.

6. Start Monitoring with the WiseH2O App:

Collect water quality information on Driftless Area trout streams, to contribute to a broader understanding and management of local and regional water quality. This can be done anytime while fishing and recreating on regional trout streams. However, monitoring can also be more deliberate, such as collecting data after rainfall and subsequent runoff events, when many water quality issues arise. If your group has a monitoring plan (see Step 5 above), collect data according to your plan.

Monitoring during runoff events can identify water quality problems

For more information on the Angler Science Driftless Area Program and how to get involved, please visit: https://www.mobileh2o.com/driftlessprogram.

Also follow the program on social media:

Instagram: @mobileh2o
https://www.instagram.com/mobileh2o/

Facebook:@mobileh2o
https://www.facebook.com/mobileh2o

Twitter: @mobile_h2o
https://twitter.com/mobile_h2o

LinkedIn: https://www.linkedin.com/company/mobileh2o-llc/

Youtube: https://www.youtube.com/channel/UCCeBOI1Fk747ds4iJBfc3yw/featured

We greatly appreciate the support and funding provided by our partners, who make the WiseH2O App Project possible:

Trout Unlimited

Driftless Area Restoration Effort

Coldwater Conservation Fund

National Fish and Wildlife Foundation

National Fish Habitat Partnership