



# Tool Kit

## #MonitorWater

[www.monitorwater.org](http://www.monitorwater.org)

# Why Participate

Water covers about 70 percent of the Earth's surface, therefore it may appear that we have an abundant supply. It is important to realize, however, that 97 percent of that supply is salt water, and 2 percent is fresh water frozen in glaciers. That leaves only 1 percent as a readily useable resource to support drinking, cooking, bathing, agriculture, industry, recreation, and other needs.

The limited supply of fresh water, and our dependency on it, means that we must use this resource wisely. Every human being plays an important role in caring for water. Throughout each of the world's watersheds, people are the consumers of and the advocates for water resources. It is our responsibility to respectfully manage these resources. Government efforts alone cannot provide the range and variety of information needed to assess water quality in each watershed. Therefore, it is essential that citizens become involved in protecting the health of their local waterbodies. Citizens who are willing to build upon governmental efforts play an important role in helping to protect local watersheds.

All living things—plants, animals, and human beings—require clean water. As users of water and citizens of planet Earth, we must take responsibility for our impact on water quality. Recognizing that education and awareness are important first steps toward action, we challenge you to test the quality of your waterways, share your findings, and protect our most precious resource.



# What is the EARTHECHO Water Challenge

The **EarthEcho Water Challenge** provides a relevant and easy entry point to understanding and protecting the water we depend on for our daily needs. The simple action of testing and sharing data about your community's water connects you to a growing movement of citizens who are working to conserve and protect water resources around the globe.

The **EarthEcho Water Challenge** employs a basic test kit that includes enough materials to conduct up to 50 rounds of testing for pH, dissolved oxygen, temperature, and turbidity. Participants can also purchase a 50 test Classroom Kit that includes five sampling jars and vials so that multiple small groups of individuals can perform testing concurrently.

## THE FOUR WATER MONITORING INDICATORS:

- 1 pH (Acidity)**—Measures how acidic or basic a liquid is. pH is measured on a scale from 0-14, where 0 is most acidic, 14 is most basic, and 7 is neutral. A pH between 6.5 and 8.5 is favorable for supporting life in natural waters.
- 2 Dissolved Oxygen (DO)**—Measures how many molecules of oxygen are in the water. Since oxygen is important to fish and other aquatic life, higher DO readings support more diverse species and a healthier ecosystem. Low levels of DO can weaken or kill fish and other aquatic life.
- 3 Turbidity (Clarity)**—Measures the water's clarity. Debris, sand, silt, and other materials can make the water less clear (more turbid). Turbidity can impact the aquatic ecosystem by affecting photosynthesis, respiration, and reproduction of aquatic life.
- 4 Temperature**—Measures the warmth or coldness of the water. This indicator is important because it affects dissolved oxygen, photosynthesis, and the food supply. Waters that are too hot or too cold can have severe effects on fish and other aquatic life.

Test Kits can be ordered by visiting this page: <http://monitorwater.org/order-kits>.

Participate today and join over 1.5 million people in 146 countries who have tested rivers, lakes, streams, bays, and the ocean in their communities, shared their results with the world, and taken action to protect their local water resources.



# How to Participate:

TAKE THE CHALLENGE TODAY WITH THREE EASY STEPS:

TEST

Plan a Monitoring Event

SHARE

Tell the World

PROTECT

Take Action



# TEST: Plan a Monitoring Event

## BEFORE AN EVENT:

- **Determine your target audience.** Are you hoping to involve students, a club, a community service group, an entire community, etc.? Remember, EEWC is a program suitable for people of all ages and backgrounds.
- **Determine the date and time of your event.** Choose a date and time that will be convenient for you and your fellow participants.
- **Create a user account.** Download the EEWC App through the Google Play Store or visit the EEWC web portal at [app.monitorwater.org](http://app.monitorwater.org) and follow the instructions to create your account.
- **Select a site.** Choose any lake, stream, bay, or other water body where you can safely monitor (see Safety Tips at <http://monitorwater.org/tools/event-resources>).
- **Register a site through EEWC App or Web Portal.** Once you have determined where you will monitor, log into your account to locate an existing site or “Create New Site.”
- **Order monitoring kits.** Visit <http://monitorwater.org/order-kits> to order kits. You can also consider using water testing probes or other kits if you already have access to this equipment.



# TEST: Plan a Monitoring Event

## BEFORE AN EVENT:

■ **Promote your event.** See promotion resources at <http://monitorwater.org/tools/event-resources>

■ **Alert the media.** Contact your local media outlets and invite them to cover your event. Be sure to include a media advisory containing the details in your outreach to media contacts. You can find press material templates at <http://monitorwater.org/tools/event-resources>

### ■ **Be prepared.**

- Organize Your Materials
- Monitoring kit(s)
- Pencils/pens (for recording data)
- Data sheet or mobile device for data entry (download the data sheet at <http://monitorwater.org/tools/event-resources> or enter data directly at [app.monitorwater.org](http://app.monitorwater.org))
- Kit instructions for each group (printable instructions: <https://goo.gl/HDnm3T>)
- Beverages (water preferred)
- Trash and recycling receptacles
- First aid kit
- Sunscreen
- Camera (for documentation)
- Nametags (optional)



# TEST: Plan a Monitoring Event

## DAY OF EVENT:

- **Provide overview of activities.** Once participants have arrived, give them a brief introduction to the EEWC program and run through the day's agenda.
- **Acquaint participants with the monitoring kit.** Open a kit and briefly explain the four tests that participants will be conducting—temperature, pH, dissolved oxygen, and turbidity.
- **Divide participants into groups.** The number of participants per group will depend on the number of kits available but aim for 4-6 participants per group.
- **Assign group roles.** Appoint one person in each group to act as the “facilitator” who will guide the group through the tests. Appoint another person as the “recorder” who is responsible for recording the results. All members can take turns actually conducting the tests. If carrying out the program with younger participants, adult mentors or older youth may need to serve as the facilitators in each group.
- **Document activities.** As the groups get to work, play reporter by taking photographs and jotting down items of interest. Make sure you record the number of participants and any actions taken beyond monitoring to protect local water resources (i.e. river cleanups, education programs, tree planting, invasive species removal etc...).
- **Discuss results.** Once testing has concluded, conduct a short debriefing. Be sure to tell participants to check the EEWC data map to view their site and keep an eye out for the program results in the Year in Review report (<http://monitorwater.org/tools/reports>). Consider working with your group to share the data directly in the EarthEcho Water Challenge database at [app.monitorwater.org](http://app.monitorwater.org).
- **Gather data.** Prior to participant departure, be sure to collect all data sheets.
- **Clean-up.** Leave your site in the same—or better—condition in which you entered it.
- **Submit your data.** If you didn't enter your data while on site, log into the EEWC App or web portal at [app.monitorwater.org](http://app.monitorwater.org). Select the site to which you would like to add data and then click “Add Visit.”



# SHARE: Tell the World

## SHARE YOUR STORY

Organizing and participating in a water monitoring event can provide interesting and relevant story angles for local print, broadcast, and digital media outlets that cover community news. Check with the organizations and individuals participating in your monitoring event to see who has contacts with local media. Use the customizable press material templates at <http://monitorwater.org/tools/event-resources> to share important details and background about your event with local media contacts and outlets.

## TELL EARTHECHO YOUR STORY

Email photos and a short description of your event to [wwmc@earthecho.org](mailto:wwmc@earthecho.org) for the EEWC blog and/or add details and photos along with your data directly through the web portal ([app.monitorwater.org](http://app.monitorwater.org)). Visit [www.monitorwater.org/news](http://www.monitorwater.org/news) to learn about the work of EEWC participants around the world.

## JOIN THE SOCIAL MOVEMENT

Share your EEWC pictures, videos, and experiences with other action-minded citizens around the globe who are working to conserve and protect critical water resources. Get connected using the following EEWC social media tools and share your photos and story using hashtag #MonitorWater.

f @earthecho • t @earthecho • i @earthecho

### Suggested Social Media posts:

Join me in taking action to #MonitorWater quality with the @EarthEcho Water Challenge!

How healthy is your water? Take action with the @EarthEcho Water Challenge to find out. Together we can improve the quality of our #WaterPlanet #MonitorWater

Have you heard? September 18th is World Water Monitoring Day. Join the movement and participate today at [monitorwater.org](http://monitorwater.org). #MonitorWater





# PROTECT: Take Action

## UNDERSTAND YOUR IMPACT

Now that you've tested your water, it's important to understand what the results mean for the health of your local water resources. Turbidity, pH, temperature, and dissolved oxygen are indicators that help us understand what's happening in our waterways and they provide us with information on what needs to be done to improve water quality. For example, if you have found consistently high turbidity at your site a new riparian buffer could help. Low dissolved oxygen concentrations can be increased by reintroducing or adding structures that aid in creating turbulence. Low pH levels can be increased by restoring surrounding degraded wetlands. Learn more at <http://monitorwater.org/tools>.

## ACT

From the products we use, to the food we eat, the things we do every day have an impact on our water and the environment. Taking steps to understand that impact can help you identify and make simple changes to improve water quality and health. Levels of action can include litter pick-ups, contacting government officials to encourage them to protect local waterways, carrying out a habitat restoration project, removing invasive species, or launching a school wide water education campaign. Find ways you can take action at <http://monitorwater.org/tools/action-guides-lesson-plans> and gain inspiration from the work of other EarthEcho Water Challenge participants at [www.monitorwater.org/news](http://www.monitorwater.org/news).

## PARTNER

Many communities have local organizations that are involved in efforts to improve water quality and health. They can be great allies in identifying ways to improve your local water resources.

“It was interesting for us to see the actual effects of pollution and misuse.”

—TREVERTON POST MATRIC STUDENTS, SOUTH AFRICA



# EARTHECHO Water Challenge

The **EarthEcho Water Challenge** is a program coordinated by EarthEcho International that equips anyone to combat the global water crisis starting in their own communities. Through the simple acts of testing their local water, sharing the results, and taking action to restore and protect this resource, anyone can play a critical role in ensuring the overall health of the environment and our communities.

**EarthEcho International's** mission is to inspire young people worldwide to act now for a sustainable future. We are a nonprofit 501c3 organization founded in 2000 by siblings Philippe and Alexandra Cousteau in honor of their father Philippe Cousteau Sr., son of the legendary explorer Jacques Yves Cousteau. Philippe Sr.'s belief in "a world where every single child can breathe fresh air, drink clean water, and walk on green grass under a blue sky" serves as our vision to this day.

Our approach is simple; EarthEcho's 21st century tools and interactive resources equip youth to identify and solve environmental challenges starting in their own communities.

“ We have participated in EEWC with students from basic to secondary levels and even with parents. Participants feel motivated and become aware of the importance of water not only in our daily life but also for the planet ”

-TEACHER, PORTUGAL



# How healthy is your water?

DISCOVER FOR YOURSELF IN THREE EASY STEPS:

TEST

Get an EEWC kit from [www.monitorwater.org](http://www.monitorwater.org)  
and test a water source in your community

SHARE

Tell the world through social media and the  
EEWC web portal: [app.monitorwater.org](http://app.monitorwater.org)

PROTECT

Make a difference and ACT NOW to monitor  
and protect your local water resources



[www.monitorwater.org](http://www.monitorwater.org)