Year in Review

2014

World Water Monitoring Challenge

Test. Share. Protect.

Take the Challenge!

World Water Monitoring Challenge(TM) (WWMC) is an international education and outreach program that builds public awareness and involvement in protecting water resources around the world by engaging citizens in the monitoring of their local waterbodies.

WWMC grew out of a program known as World Water Monitoring Day, which has been observed each year on September 18 ; the broader Challenge encourages people everywhere to test the quality of their waterways, share their findings, and protect our most precious resource. The WWMC program runs annually from March 22 (the United Nations' World Water Day) through the end of the year. Per WWMC co-owners the Water Environment Federation and the International Water Association, EarthEcho International, a leading environmental education non-profit organization, assumed ownership effective January 1, 2015 to pave the way for continued program growth through an educational model known as service learning.

The primary goal of the World Water Monitoring Challenge is to educate and engage citizens in the protection of the world's water resources. Many people are unaware of the impact their behaviors can have on water quality. Conducting simple monitoring tests teaches participants about some of the most common indicators of water health and encourages further participation in more formal citizen monitoring efforts. To register and participate, visit www.monitorwater.org.

WWMC monitoring period for 2015 runs through December. Check www.monitorwater.org for the latest details.

As of January 2015, WWMC ownership is transferred to EarthEcho International at www.earthecho.org. Visit www.monitorwater.org often for up-to-date information on the program.

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Executive Summary

World Water Monitoring Challenge activities took place from March 22 (The United Nations' World Water Day) throughout the year. October 31 was the deadline for reporting data to the WWMC online database for inclusion in this report.

WWMC participants sampled their local lakes, streams, rivers, ponds, reservoirs, and other waterbodies for four key water quality indicators: dissolved oxygen, pH, temperature, and turbidity. Some groups went beyond measuring the four indicators and monitored for the presence of macroinvertebrates such as dragonflies, mayflies, and scuds. Samples were taken in a range of settings--agricultural, commercial, residential, and industrial--on six continents.

A total of 89,903 visits[1] were made by participants to monitoring sites worldwide. Taiwan took top honors for the number of monitoring site visits with 37,285 individual efforts made. Groups and individuals from 41 countries reported WWMC data in 2014. After China (2,080), Taiwan (2,019), United States (1,880), Mexico (212), and Canada (105) led global WWMC efforts in the number of sites monitored.

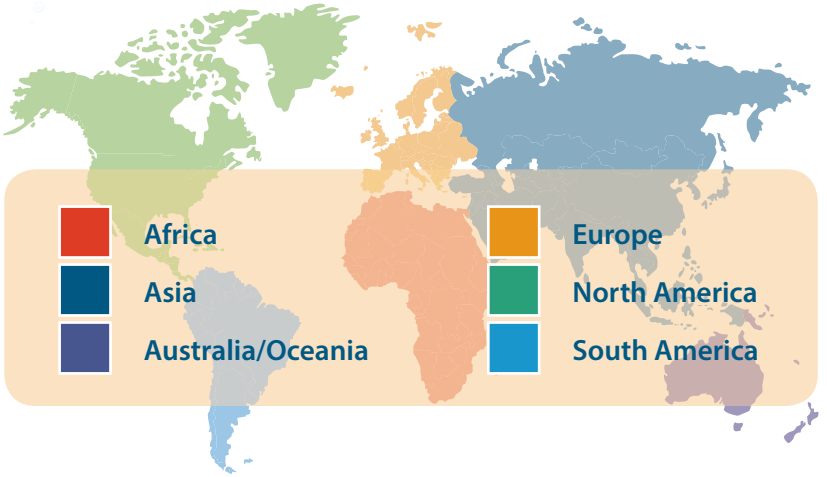
In 2014, 10,371 WWMC test kits were distributed[2].

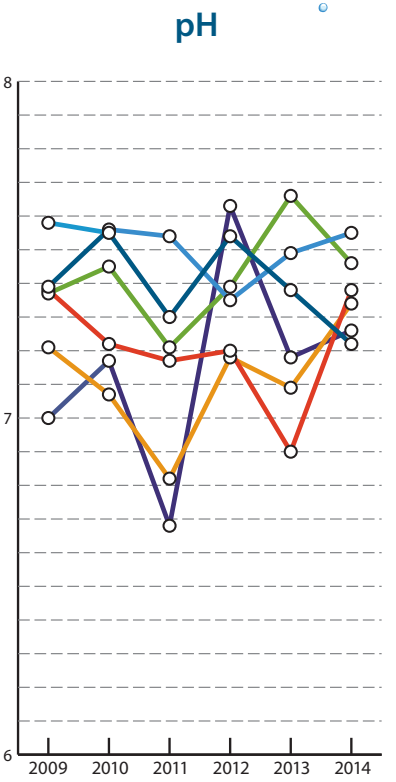
The Water Environment Federation (WEF) and the International Water Association (IWA), coordinators of WWMC, received financial and in-kind support in 2014 from Xylem Inc., Smithfield Foods, and the CH2M HILL Foundation.

1. Many participants have committed to ongoing monitoring of their local waterways and have tested at more than one site and/or at more than one time. Thus, the metric "visits" has been adopted in lieu of the previous metric "participants".

2. The total number of test kits distributed was calculated from the combined total of hardware sets (i.e., sample jars and test tubes) that were distributed through the Basic Kits (one set) and Classroom Kits (five sets).

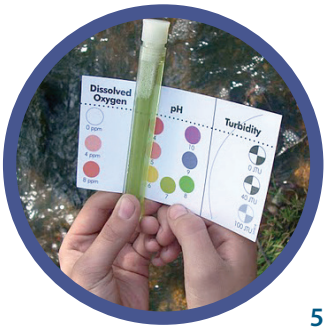
World's Water at a Glance





The data on these pages represent the mean average results for the regions listed in the legend above. Data displayed spans the years 2009 to 2014. Participation data and water quality indicator averages by country and by U.S. state or territory can be found in the appendices of this report.

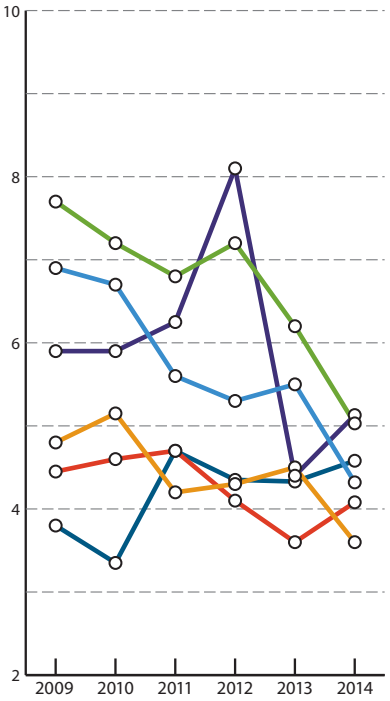
Please bear in mind that the results reported for WWMC do not constitute a completely thorough and accurate portrayal of the health of the world's water. Credible water sampling requires the use of standard quality assurance protocols and is conducted by trained volunteer monitoring groups and professionals around the world.



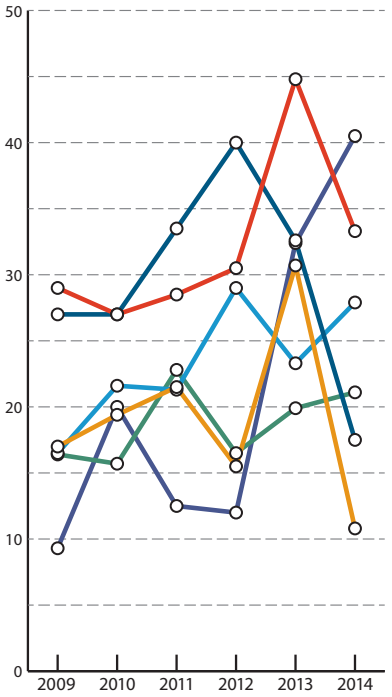
On the Web!

MonitorWater.org/ReviewReports.aspx

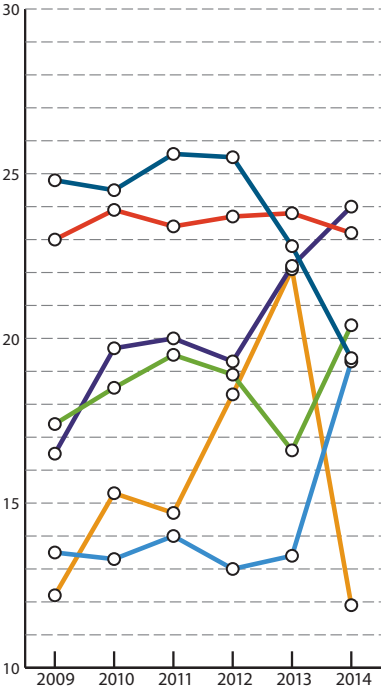
DO (ppm)



Turbidity (JTU)



Temperature (°C)



Tell us what you think of these results online at www.Facebook.com/WorldWaterMonitoringChallenge.

- Africa
- Asia
- Australia/Oceania
- Europe
- North America
- South America

Worldwide Leaders 2014

The coordinators of WWMC appreciate the contributions of every person who took part in the 2014 program. A full account of each country's participation is located in the appendices of this report. WEF and IWA would like to acknowledge the numerical leaders in participation both globally and within the United States.

Leaders in Sites Monitored	
China	2,080
Taiwan	2,019
United States	1,880
Mexico	212
Canada	105
All Others	548
TOTAL	**6,844**

Leaders in Participant Visits	
Taiwan	37,285
United States	15,923
Cameroon	14,776
Mexico	11,424
Ghana	2,960
All Others	7,535
TOTAL	**89,903**

United States Leaders 2014

A full account of each state's participation is located in the appendices of this report. WEF and IWA would like to acknowledge the following numerical leaders in participation with the United States.

Leaders in Sites Monitored	
Colorado	424
Florida	337
California	136
Georgia	108
Texas	92
All Others	783
TOTAL	**1,880**

Leaders in Participant Visits	
Florida	5,266
North Carolina	1,195
Colorado	1,011
Tennessee	761
Georgia	703
All Others	6,895
TOTAL	**15,923**

2014

Coordinators, Sponsors, Partners

Coordinators

Water Environment Federation
the water quality people®

Water Environment Federation

Founded in 1928, the Water Environment Federation (WEF) is a not-for-profit technical and educational organization of 36,000 individual members and 75 affiliated Member Associations representing water quality professionals around the world. WEF members, Member Associations, and staff proudly work to achieve our mission to provide bold leadership, champion innovation, connect water professionals, and leverage knowledge to support clean and safe water worldwide.

Together, WEF and its members work toward fulfilling three critical objectives:

- Drive innovation in the water sector
- Enrich the expertise of global water professionals
- Increase awareness of the value of water

On the Web!

Facebook.com/WaterEnvironmentFederation
Twitter.com/WEForg
www.WEF.org

IWA
the international water association

International Water Association

The International Water Association (IWA) is the global reference point and network for water professionals, spanning research and practice and covering all facets of the water cycle. Through its network of members and experts in research, practice, regulation, industry, consulting, and manufacturing, IWA is in a better position than any other organization to lead and support water professionals to create innovative, pragmatic, and sustainable solutions for current and future global water challenges.

IWA has approximately 10,000 individual and over 500 corporate members in 130 countries. The strength of IWA lies in the professional and geographical diversity of its members. This global mosaic of national, corporate, and individual member communities allows multilevel collaboration, generating knowledge and expertise exchange on all aspects of the science, research, practice, and management of water.

www.IWAhq.org

Sponsors

In 2014, WWMC received financial and in-kind support from sponsors Xylem Inc. and Smithfield Foods.

xylem watermark®

Because Every Drop Counts

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Twitter.com/XylemWatermark
XylemWatermark.com

Xylem Inc.
At Xylem, we are committed to solving water and preserving the future of our planet through responsible use of our most precious natural resource. Our work with the World Water Monitoring Challenge (WWMC) helps us prepare ourselves, our employees, and our communities to address the water challenges that lay ahead.

Throughout our company, our employees are passionate about making their mark on the global water crisis. As a supporter of the World Water Monitoring Challenge, we encourage our employees, at every level, to roll up their sleeves, engage their communities, and take part in local water projects.

Smithfield

Good food. Responsibly.™

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Twitter.com/SmithfieldFoods
SmithfieldCommitments.com

Smithfield Foods
As part of its social responsibility efforts, Smithfield Foods continued its participation in and sponsorship of World Water Monitoring Challenge for 2013. This program provides an opportunity for plant level personnel to interact with their local communities in a very positive way. Joining with local groups to learn about water quality in a hands-on manner generates interest and understanding that is difficult to create through written materials or the Internet alone.

The opportunity to help raise the understanding of water quality and the factors that influence it will continue to be an important and integral part of Smithfield Foods' social responsibility efforts.

CH2M. FOUNDATION

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CH2MHILLblogs.com/foundation

CH2M HILL Foundation
The CH2M HILL Foundation is proud to partner with organizations to develop sustainable communities and inspire the next generation of socially and environmentally responsible leaders. We focus our support in three strategic areas: STEM education; environmental stewardship; and employee engagement. CH2M HILL first launched the Foundation in 1992 to honor the firm's founders and to support their legacy of strengthening communities through engineering excellence and community engagement.

Today, the CH2M HILL Foundation is a robust philanthropic organization with strategic giving pillars and a full-time staff. We appreciate the World Water Monitoring Challenge opportunity to support environmental stewardship for the world's precious water resources.

Partners

World Water Monitoring Challenge partners are organizations—national or local—that support the program via a combination of activities including, but not limited to: promotion, communication, and advocacy; kit sponsorship; event hosting; and connections and networking.

www.GreatSwamp.org

2014

Appendices

2014 Data Came from 41 Countries!

- Argentina
- Australia
- Brazil
- Cameroon
- Canada
- Chile
- China
- Costa Rica
- France
- Germany
- Ghana
- Greece
- Guatemala
- Guinea
- Hong Kong
- India
- Indonesia
- Ireland
- Israel
- Italy
- Jordan
- Malaysia
- Mali
- Mexico
- Mongolia
- Niger
- Nigeria
- Norway
- Paraguay
- Poland
- Romania
- Russian Federation
- Serbia and Montenegro
- Slovakia
- South Africa
- Spain
- Switzerland
- Taiwan
- United States
- Uruguay
- Vietnam

Participation and Averages by Country

Country	Sites	Participant Visits	Turbidity (JTU)	Temperature (Celsius)	Disolved Oxygen (DO)	pH
Argentina	4	108	55.00	18.00	4.00	7.25
Australia	10	420	3.02	17.92	9.68	7.30
Brazil	2	60	0.00	18.00	4.00	7.00
Cameroon	49	14,776	20.82	22.67	3.61	7.23
Canada	105	333	9.80	15.28	5.05	7.15
Chile	6	35	36.67	19.00	6.33	7.58
China	2,080	1,830	0.29	21.08	8.51	7.26
Costa Rica	3	59	20.00	22.17	2.96	7.00
France	1	1	-	-	-	-
Germany	2	34	30.00	16.00	4.00	7.75
Ghana	75	2,960	40.80	27.92	2.99	7.29
Greece	1	16	-	13.00	-	7.50
Guatemala	1	1	-	-	-	-
Guinea	74	148	10.00	23.73	3.92	7.09
Hong Kong	1	50	0.00	20.00	4.00	8.00
India	3	3	-	-	-	-
Indonesia	8	281	48.57	28.43	3.43	7.50
Ireland	1	1	-	-	-	-
Israel	2	42	80.00	16.50	8.50	7.00
Italy	35	237	16.10	14.84	6.24	8.28
Jordan	2	32	12.00	15.00	-	-
Malaysia	49	1,401	69.79	25.67	2.29	6.99
Mali	3	24	20.00	27.33	4.00	7.00
Mexico	212	11,424	9.77	22.40	4.20	7.40
Mongolia	2	31	40.00	22.00	4.00	8.00
Niger	3	16	33.33	23.33	4.00	8.33
Nigeria	4	54	40.00	32.00	3.33	7.67
Norway	1	24	0.00	3.00	0.00	6.00
Paraguay	1	1	-	-	-	-

Country	Sites	Participant Visits	Turbidity (JTU)	Temperature (Celsius)	Disolved Oxygen (DO)	pH
Poland	1	7	1.80	9.90	8.26	7.95
Romania	75	1,295	9.39	14.78	3.88	7.07
Russian Federation	27	315	11.00	5.35	3.34	7.31
Serbia and Montenegro	50	200	40.00	15.34	4.00	7.40
Slovakia	1	42	0.00	6.00	0.00	7.00
South Africa	9	144	21.11	12.11	2.25	7.44
Spain	6	7	0.00	22.00	4.00	7.00
Switzerland	1	2	0.00	4.00	2.00	7.50
Taiwan	2,019	37,285	26.68	26.37	3.87	7.54
United States	1,880	15,923	25.21	16.64	5.83	7.41
Uruguay	1	1	-	-	-	-
Vietnam	29	280	32.79	26.10	3.76	7.21
Totals/Averages	**6,839**	**89,903**	**21.83**	**17.88**	**4.12**	**7.15**

Participation and Averages by U.S. State or Territory

State	Sites	Participant Visits	Turbidity (JTU)	Temperature (Celsius)	Disolved Oxygen (DO)	pH
Alabama	1	1	-	-	-	-
Alaska	-	-	-	-	-	-
Arizona	2	4	0.00	12.00	-	7.50
Arkansas	1	130	28.75	16.63	22.22	6.30
California	136	683	22.00	15.96	5.01	7.50
Colorado	424	1,011	10.33	13.84	4.64	8.24
Connecticut	4	26	5.00	23.75	4.50	7.38
Delaware	1	20	40.00	22.00	4.00	8.00
Florida	337	5,266	8.98	23.04	5.75	7.37
Georgia	108	703	11.90	16.53	8.78	7.05
Hawaii	23	108	24.00	29.13	2.49	7.27
Idaho	-	-	-	-	-	-
Illinois	17	640	36.25	17.86	5.25	7.42
Indiana	17	50	100.00	16.00	4.00	7.00
Iowa	3	130	7.23	21.63	3.70	7.40
Kansas	34	29	64.28	19.39	0.98	7.91
Kentucky	10	173	14.68	17.37	6.86	7.66
Louisiana	4	28	95.00	16.75	5.00	7.75
Maine	-	-	-	-	-	-
Maryland	20	19	37.78	11.55	7.77	6.97
Massachusetts	86	689	18.72	16.27	4.96	7.04
Michigan	32	75	3.20	17.48	6.07	8.15
Minnesota	24	522	13.83	16.35	6.20	7.72
Mississippi	4	18	20.00	29.44	5.60	6.50
Missouri	8	91	30.67	17.98	7.00	7.56
Montana	1	31	40.00	15.00	4.00	7.00
Nebraska	21	93	65.96	15.22	2.21	7.86
Nevada	-	-	-	-	-	-
New Hampshire	1	25	3.20	12.90	10.20	6.70
New Jersey	71	67	10.90	16.64	5.68	7.31

State	Sites	Participant Visits	Turbidity (JTU)	Temperature (Celsius)	Disolved Oxygen (DO)	pH
New Mexico	2	4	0.00	6.50	-	8.20
New York	59	636	24.76	17.38	4.97	7.45
North Carolina	63	1,195	23.00	15.58	5.51	6.74
North Dakota	-	-	-	-	-	-
Ohio	37	456	16.11	14.64	5.87	7.14
Oklahoma	-	-	-	-	-	-
Oregon	18	230	39.47	8.60	4.85	7.34
Pennslyvania	13	159	42.00	17.36	7.65	7.28
Puerto Rico	5	92	40	27.6	5	7.9
Rhode Island	1	2	40.00	22.00	8.00	8.00
South Carolina	46	272	10.90	21.56	4.23	6.26
South Dakota	25	269	19.11	15.41	5.01	7.59
Tennessee	33	761	21.66	15.29	4.81	7.40
Texas	92	171	12.07	10.67	10.80	7.79
Utah	21	95	15.00	14.46	4.46	8.15
Vermont	11	51	1.40	5.10	4.10	7.45
Virginia	36	219	20.75	17.04	4.50	7.33
Washington	5	51	25.50	11.50	8.00	7.00
Washington, D.C.	3	66	10.00	16.67	4.33	6.91
West Virginia	-	-	-	-	-	-
Wisconsin	7	4	10.00	11.50	7.00	8.28
Wyoming	13	558	25.00	12.48	2.80	7.20
Total/Averages	**1,880**	**15,923**	**25.21**	**16.64**	**5.83**	**7.41**

EARTHECHO INTERNATIONAL
www.earthecho.org

xylem
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Because Every Drop Counts

Want to take the Challenge Yourself?

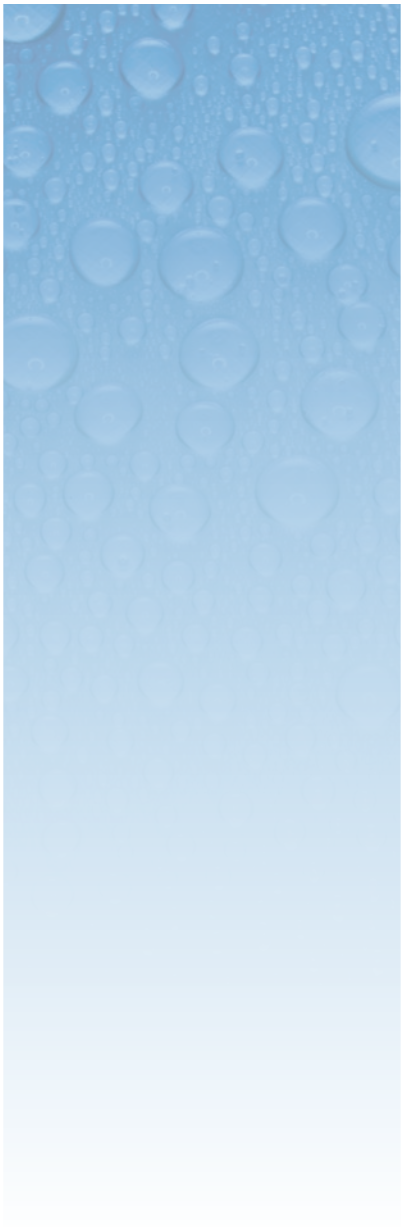
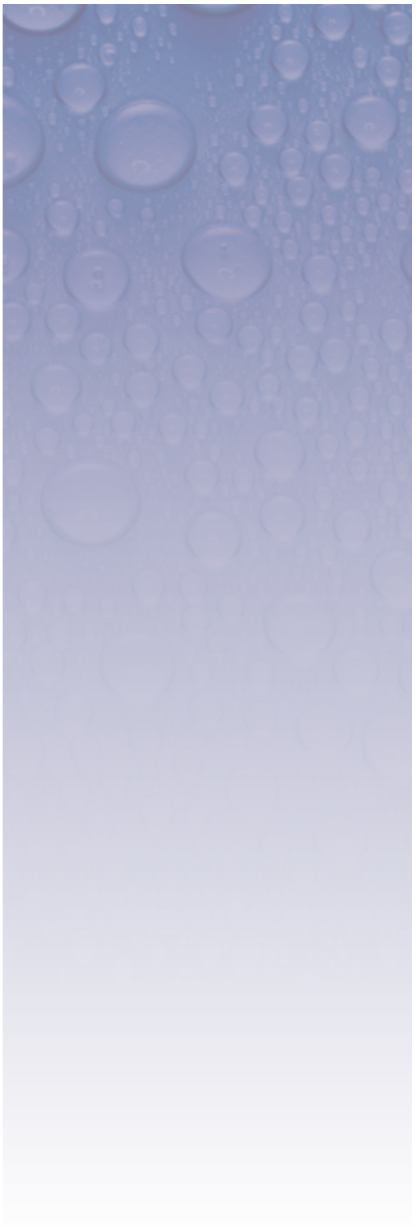
Learn how to engage your coworkers, local classrooms, or community groups throughout the year at

www.monitorwater.org

World Water Monitoring Challenge™ (WWMC) is an international education and outreach program that builds public awareness and involvement in protecting water resources around the world by engaging citizens to conduct basic monitoring of their local water bodies.

WWMC is a program of EarthEcho International. Founded by explorer and environmental advocate Philippe Cousteau Jr., EarthEcho International is a leading environmental education organization dedicated to building and activating a new generation of youth who will solve the most critical problems facing people and the planet. EarthEcho provides inspired and relevant educational content to make learning about our world an adventure; our 21st century tools and resources empower and equip youth to take action to solve environmental issues starting in their own communities.

As of January 2015, WWMC ownership is transferred to EarthEcho International. Visit www.monitorwater.org often for up-to-date information on the program.

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