2016 - NOAA B-WET Teacher MWEE Survey

This is a voluntary survey.

Our records indicate that some time ago you participated in a Meaningful Watershed Educational Experience (MWEE) professional development (PD) funded by the National Oceanic and Atmospheric Administration's Bay Watershed Education and Training program (NOAA B-WET). We would like to get your feedback on implementing MWEEs with your students, if you did so since the PD.

MWEEs are multi-stage activities that include learning both outdoors and in the classroom, and aim to increase the understanding and stewardship of watersheds and related ocean, coastal, riverine, estuarine, and Great Lakes ecosystems of all participants. MWEEs for students consist of multiple components: issue definition and background research, outdoor field activities, stewardship action projects, synthesis and conclusions. In addition, MWEEs should include teacher participation for the duration of the MWEE, be integrated with classroom curriculum, use the local context for learning, consist of a set of activities over time, and incorporate NOAA assets. (For more detail, see MWEE Definition 2015)

You will be asked about a range of practices and outcomes that represent the diversity of MWEEs, some of which may not apply directly to your experience. It is acceptable to answer "not applicable" (NA) in those instances.

Your responses will be entered anonymously and will not be associated with you as an individual. THANK YOU in advance for your candor and thoughtfulness in answering the questions. Your responses will be aggregated with other teachers' responses, and will be used by NOAA B-WET and B-WET-funded organizations to improve MWEE PD and student programs.

It will take about 20-30 minutes to complete this survey, depending on the nature of your MWEE implementation experience.

Note: On some computers, you may be able to close the survey and return at a later time to the same place as long as you use the same computer and that computer will save and retain the Qualtrics survey cookie. However, note that some work and public computers do not save and/or retain cookies. Therefore, we recommend that you complete the survey in one sitting, if possible, to avoid issues with saving your data upon returning to the survey.

Thank you. If you have technical issues or questions about this survey, please contact Bronwen Rice, NOAA B-WET National Coordinator, Bronwen.Rice@noaa.gov

OMB Control Number: 0648-0658 Expires: 01/31/2019 Paperwork Reduction Act Statement Public reporting burden for this collection of information is estimated to average 30 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other suggestions for reducing this burden to Bronwen Rice, NOAA Office of Education, Herbert C. Hoover Building, Room 6863, 14th and Constitution Avenue, NW Washington, DC 20230. Responses are voluntary and collected and maintained as anonymous data. Information will be treated in accordance with the Freedom of Information Act (5 USC 552). Notwithstanding any other provision of the law, no person is required to respond to, nor shall any person be subject to a penalty for failure to comply with, a collection of information subject to the requirements of the Paperwork Reduction Act, unless that collection of information displays a currently valid OMB Control Number.

How long ago did you complete a NOAA-BWET-funded professional development focused on watersheds (ocean, coastal, riverine, estuarine, Great Lakes) (also known as a Meaningful Watershed Educational Experience professional development or MWEE PD)? (For an expanded definition of a MWEE, view this file: MWEE Definition 2015)

- ❍ I did not complete a MWEE PD.
- ❍ Less than a year ago
- ❍ A year or more ago

Are you currently a PreK-12 teacher or educator?

- ❍ No
- ❍ Yes

Thank you for completing this survey! Please click on the Submit button below.

In what setting do you teach primarily? (select one)

- ❍ Public school
- ❍ Private school
- ❍ Non-formal education (e.g., environmental centers, zoos, museums, interpretive programs at local or state level parks, youth organizations, summer camps, after school programs)
- ❍ Home-school
- ❍ Other

To allow us to compare your past, current, and future responses, please create a unique 8-digit ID number using the 2 digits of your birth month, the 2 digits of your birth day, and the last 4 digits of most often used phone number. If you were born on March 9 and your home phone is 410.719.1234, your ID number would be 03091234.

In which region did you teach this past year? (check one)

- ❍ California
- ❍ Chesapeake Bay watershed (Maryland, Virginia, Delaware, West Virginia, Pennsylvania, New York, and the District of Columbia)
- ❍ Great Lakes (Ohio, Michigan, Indiana, Illinois, Minnesota, Wisconsin, New York, and Pennsylvania)
- ❍ Gulf of Mexico (Texas, Louisiana, Mississippi, Alabama, and Florida)
- ❍ Hawaii
- ❍ New England (Maine, New Hampshire, Vermont, Massachusetts, Connecticut, and Rhode Island)
- ❍ Pacific Northwest (Oregon and Washington)
- ❍ Other (please describe) _____

How many years have you been an educator? (select one)
- ❍ 0 to 5 years
- ❍ 6 to 10 years
- ❍ 11 to 20 years
- ❍ More than 20 years

In which grade level do you teach primarily? (select one)
- ❍ PreK
- ❍ Elementary
- ❍ Middle
- ❍ High
- ❍ Other

Which of these categories best describes your school's community (during the school year)?
- ❍ Rural (population of less than 10,000)
- ❍ Town/Suburban (population 10,000-99,999)
- ❍ Small urban (population 100,000-250,000)
- ❍ Urban (population greater than 250,000)

About what percent of your students are (percent should equal 100):
_____ American Indian or Alaska Native
_____ Middle Eastern or North African
_____ Asian
_____ Black or African American
_____ Hispanic, Latino, or Spanish Origin
_____ Native Hawaiian or Other Pacific Islander
_____ White
_____ Multi-racial
_____ Other
_____ Don't know

Is the school where you teach a Title I school?
- ❍ No
- ❍ Yes
- ❍ NA

In the past 12 months, did you implement a Meaningful Watershed Educational Experience (MWEE) with your students?
- ❍ No
- ❍ Yes

Answer If In the past 12 months, did you implement a Meaningful Watershed Educational Experience (MWEE) with your students? No Is Selected
Why were you not able to implement a MWEE with your students?

How many of your students participated in a MWEE during the most recent school year? (Please provide your best estimate, NOT a range)
About ___ students

On average, did students participate in a MWEE over the course of:
- ❍ Less than a week
- ❍ A week
- ❍ Multiple weeks
- ❍ Multiple months
- ❍ A full school year
- ❍ Multiple years

On average during the last school year, about how many hours did a typical student spend involved in MWEE activities? (check one)
- ❍ 1-5 hours
- ❍ 6-9 hours
- ❍ 10-24 hours
- ❍ 25-40 hours
- ❍ More than 40 hours

On average during the last school year, about how many hours did a typical student spend outdoors during MWEE activities? (check one)
- ❍ None
- ❍ 1-5 hours
- ❍ 6-9 hours
- ❍ 10-24 hours
- ❍ 25-40 hours
- ❍ More than 40 hours

In what subject(s) were your typical MWEEs implemented? (select all that apply):
- ❑ Science
- ❑ Technology
- ❑ Engineering
- ❑ Math
- ❑ Social studies
- ❑ English language arts
- ❑ Fine arts
- ❑ Music
- ❑ Other (please describe) _____

To what extent was the content of your students' MWEEs aligned with:

	NA	Don't know	To no extent 1	2	3	4	To a great extent 5
State education standards	❍	❍	❍	❍	❍	❍	❍
State environmental education standards	❍	❍	❍	❍	❍	❍	❍
Next Generation Science Standards	❍	❍	❍	❍	❍	❍	❍
Common Core Standards - Mathematics	❍	❍	❍	❍	❍	❍	❍
Common Core Standards - English Literature Arts	❍	❍	❍	❍	❍	❍	❍
Regional environmental/natural resources management priorities	❍	❍	❍	❍	❍	❍	❍

Did students participate in any of these actions to protect or restore watersheds (ocean, coastal, riverine, estuarine, Great Lakes) during your students' MWEEs? (select all categories that apply)

- ❑ The students did NOT participate in any watershed protection or restoration actions as part of their MWEE.
- ❑ Watershed Restoration or Protection (e.g., create schoolyard habitat, planting trees or grasses, invasive species removal, cleanup [e.g., beach, stream, school, community), raise & release (e.g., fish, oysters, turtles), stormwater management (e.g., rain garden, paint storm drains] Briefly describe the actions: _____
- ❑ Everyday Choices [e.g., reduce/reuse/recycle/upcycle, transportation (e.g., carpooling, bike riding, mass transit, walking), composting, energy conservation, water conservation] Briefly describe the actions: _____
- ❑ Community Engagement [e.g., outreach, presentations, social media, messaging at community events/fairs/festivals, event-organizing, mentoring, PSAs, flyers, posters] Briefly describe the actions: _____
- ❑ Civic Action [e.g., town meetings, voting, writing elected officials/decision makers, advocating for policy change] Briefly describe the actions: _____
- ❑ Other Briefly describe the actions: _____

Which NOAA resources were used as part of your student MWEEs? (check all that apply)

- ❑ None
- ❑ Information from NOAA websites or reports (e.g., NOAA website, NOAA Education Resources webpage, NOAA Climate Portal, Marine Debris Program Education webpage, NOAA FishWatch, NERRS education website) IF YES, Name the websites or reports: _____
- ❑ Data sets collected by and accessible through NOAA (e.g., NOAA View, NOAA Digital Coast, NOAA Buoys, Real-time Tides and Currents, NERRS SWMP data) IF YES, Name the NOAA data sets: _____
- ❑ NOAA experts (e.g., scientist, educator, Sea Grant staff member, policy expert) IF YES, Name the NOAA experts: _____
- ❑ NOAA curricula and education programs (e.g., Data in the Classroom, Estuaries 101 curriculum, Ocean Exploration) IF YES, Name the curricula or programs: _____
- ❑ NOAA labs or facilities (e.g., Northeast Fisheries Science Center Milford Lab, NOAA Chesapeake Bay Office Oxford Lab, Southeast Fisheries Science Center in Pascagoula MS, NOAA Science On a Sphere sites, Sea Grant floating classroom vessel) IF YES, Name the labs or facilities: _____
- ❑ NOAA National Marine Sanctuary, http://sanctuaries.noaa.gov/about/welcome.html IF YES, Name the sanctuary: _____
- ❑ NOAA National Estuarine Research Reserve, http://www.nerrs.noaa.gov IF YES, Name the reserve: _____

What education methods were used during your students' MWEEs? (select a response for each method)

	Not sure	No	Yes
Outdoor field trip or field work (i.e., excursion to learn about natural history and ecology in the outdoors, may or may not include data collection)	❍	❍	❍
STEM education (i.e., an approach to teaching that integrates the content and skills of science, technology, engineering, and math to inspire students and prepare them for 21st century jobs)	❍	❍	❍
Place-based education (i.e., an interdisciplinary instructional strategy that uses the local environment and community as the context for teaching and learning)	❍	❍	❍
Scientific-inquiry-based learning (i.e., an instructional strategy that gives students the opportunity to explore an idea or question. To arrive at an answer or to better understand the concept, students often collect and analyze data)	❍	❍	❍
Issue investigation (i.e., an interdisciplinary instructional strategy that engages learners in investigating complex, real-world environmental issues and problem-solving as the context for teaching and learning)	❍	❍	❍
Service learning (i.e., an instructional strategy that integrates meaningful community service with instruction and reflection to enrich the learning experience, teach civic responsibility, and strengthen communities)	❍	❍	❍

Answer If What education methods were used during your students' MWEEs? (select a response for each method) Scientific-inquiry-based learning (i.e., an instructional strategy that gives students the opportunity to explore an idea or question. To arrive at an answer or to better understand the concept, students often collect and analyze data) - Yes Is Selected

In which of the following science practices did students engage during the MWEE? (choose No or Yes for each practice)

	No	Yes
Asking questions	❍	❍
Developing and using models	❍	❍
Planning and carrying out investigations	❍	❍
Analyzing and interpreting data	❍	❍
Using mathematics and computational thinking	❍	❍
Constructing explanations	❍	❍
Engaging in argument from evidence	❍	❍
Obtaining, evaluating, and communicating information	❍	❍

Where did the outdoor component of your students' MWEEs occur? (select all that apply)

- ❑ On school grounds
- ❑ Off school grounds, within walking distance
- ❑ Off school grounds, requiring transportation

About how many separate outdoor learning experiences did students have during their MWEE? (check one for each row)

	I don't know	None	One	Two	Three or more
Led by your organization	❍	❍	❍	❍	❍
Led by a teacher	❍	❍	❍	❍	❍
Led by another provider	❍	❍	❍	❍	❍

To what extent do you agree or disagree with the following:

	NA	Strongly disagree 1	2	3	4	5	6	Strongly agree 7
Overall, what I taught my students about watersheds in the classroom was closely integrated with students' outdoor learning experience(s).	❍	❍	❍	❍	❍	❍	❍	❍
My students' outdoor learning experiences were designed to help them understand what they had been introduced to during regular class	❍	❍	❍	❍	❍	❍	❍	❍
My students' outdoor learning experiences were designed to reinforce what students learned during regular class	❍	❍	❍	❍	❍	❍	❍	❍

BEFORE students participated in their outdoor learning experience:

	NA	Strongly disagree 1	2	3	4	5	6	Strongly agree 7
I provided them with detailed information about what they were going to do	❍	❍	❍	❍	❍	❍	❍	❍
I let students know what activities they were going to do	❍	❍	❍	❍	❍	❍	❍	❍
I spent a lot of time preparing students for what to expect	❍	❍	❍	❍	❍	❍	❍	❍

During the MWEE (outdoors or in the community), my students: (select all that apply)

- ❑ Did NOT collect data or make observations
- ❑ Conducted a one-time data collection or observation
- ❑ Conducted multiple data collections or observations over a period of time

Back in the classroom AFTER students participated in the outdoor learning experience(s):

	NA	Strongly disagree 1	2	3	4	5	6	Strongly agree 7
They discussed results based on their observations	❍	❍	❍	❍	❍	❍	❍	❍
They offered explanations for what they observed	❍	❍	❍	❍	❍	❍	❍	❍
They were expected to draw on what had been learned	❍	❍	❍	❍	❍	❍	❍	❍

As a result of participating in MWEEs, students are better able to:

	NA	Strongly disagree 1	2	3	4	5	6	Strongly agree 7
Define the term "watershed"	❍	❍	❍	❍	❍	❍	❍	❍
Identify their local watershed(s) (ocean, coastal, riverine, estuarine, Great Lakes)	❍	❍	❍	❍	❍	❍	❍	❍
Identify how watersheds are connected to the ocean via streams, rivers, and human-made structures	❍	❍	❍	❍	❍	❍	❍	❍
Identify the functions that occur in a watershed (transport, store, and cycle water)	❍	❍	❍	❍	❍	❍	❍	❍
Recognize that both natural processes and human activities affect water flow and water quality in watersheds	❍	❍	❍	❍	❍	❍	❍	❍
Identify connections between human welfare and water flow and quality	❍	❍	❍	❍	❍	❍	❍	❍
Identify possible point and non-point sources of water pollution	❍	❍	❍	❍	❍	❍	❍	❍
Identify actions individuals can take to protect or restore watersheds	❍	❍	❍	❍	❍	❍	❍	❍

What is the most important benefit of MWEEs for your students?

As a result of participating in MWEEs, students:

	NA	Strongly disagree 1	2	3	4	5	6	Strongly agree 7
Know more about the ocean	❍	❍	❍	❍	❍	❍	❍	❍
Know more about climate change	❍	❍	❍	❍	❍	❍	❍	❍
Know more about watersheds	❍	❍	❍	❍	❍	❍	❍	❍
Express greater caring and concern for their local watershed (ocean, coastal, riverine, estuarine, Great Lakes)	❍	❍	❍	❍	❍	❍	❍	❍
Are more confident in their ability to protect or restore watersheds	❍	❍	❍	❍	❍	❍	❍	❍
Are more likely to act to protect or restore watersheds	❍	❍	❍	❍	❍	❍	❍	❍
Are better able to make informed decisions about how to protect or restore watersheds	❍	❍	❍	❍	❍	❍	❍	❍
Are better able to conduct scientific investigations	❍	❍	❍	❍	❍	❍	❍	❍
Are better able to understand the nature of scientific research	❍	❍	❍	❍	❍	❍	❍	❍
Are more likely to express an interest in pursuing science careers	❍	❍	❍	❍	❍	❍	❍	❍
Perform better in science	❍	❍	❍	❍	❍	❍	❍	❍
Perform better on state standardized tests	❍	❍	❍	❍	❍	❍	❍	❍
Are more engaged in their learning	❍	❍	❍	❍	❍	❍	❍	❍

As a result of participating in MWEEs, students are more likely to take these types of actions to protect or restore watersheds (ocean, coastal, riverine, estuarine, Great Lakes).

	NA	Strongly disagree 1	2	3	4	5	6	Strongly agree 7
Watershed Restoration or Protection (e.g., create schoolyard habitat, planting trees or grasses, invasive species removal, cleanup [e.g., beach, stream, school, community), raise & release (e.g., fish, oysters, turtles), stormwater management (e.g., rain garden, paint storm drains]	❍	❍	❍	❍	❍	❍	❍	❍
Everyday Choices [e.g., reduce/reuse/recycle/upcycle, transportation (e.g., carpooling, bike riding, mass transit, walking), composting, energy conservation, water conservation]	❍	❍	❍	❍	❍	❍	❍	❍
Community Engagement [e.g., outreach, presentations, social media, messaging at community events/fairs/festivals, event-organizing, mentoring, PSAs, flyers, posters]	❍	❍	❍	❍	❍	❍	❍	❍
Civic Action [e.g., town meetings, voting, writing elected officials/decision makers, advocating for policy change]	❍	❍	❍	❍	❍	❍	❍	❍
Other (please describe)	❍	❍	❍	❍	❍	❍	❍	❍

What could be done by your professional development provider to help you develop and implement improved MWEEs?

The questionnaire was ... (select one for each line)

	1	2	3	4	5	6	7
Difficult to complete:Easy to complete	❍	❍	❍	❍	❍	❍	❍
Long:Short	❍	❍	❍	❍	❍	❍	❍

How can this questionnaire be improved?

What final comments would you like to share about MWEEs?